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GTG Global Testing Group

Test Report Of ANSI/IES LM-79-19

APPROVED METHOD FOR OPTICAL AND ELECTRICAL MEASUREMENTS OF SOLID-STATE LIGHTING PRODUCTS

Report Number	:	N02A23090145L01001
Client	:	Luci Pte. Ltd.
Address	:	52A Tanjong Pagar Road, Singapore 088473
Test Model	:	LFUAY-1000-L27-DF-I-6, LFUAY-1000-L27-DF-I-10 LFUAY-1000-L27-DF-I-15, LFUAY-1000-L27-DF-I-20 LFUAY-1000-L27-DF-O-5, LFUAY-1000-L27-DF-O-9 LFUAY-1000-L27-DF-O-14, LFUAY-1000-L27-DF-O-19
Brand Name	:	N/A
Testing Laboratory	:	Guangdong Meide Testing Technology Co., Ltd.
Address	:	1st floor, B Area, Jinbaisheng Industrial Park, Headquarters 2 Road,Songshan Lake Hi-tech Industrial Development Zone,Dongguan City,Guangdong Pr., China.
Testing Location	:	As above
Date of receipt	:	Sep. 18, 2023
Date of test	:	Sep. 18, 2023 – Sep. 26, 2023
Date of report	:	Sep. 26, 2023

Tested by:	**Checked by:**	**Approved by:**
Jarvis Zhang	Sandy Chen	
Jarvis Zhang/ Test Engineer	Sandy Chen/ Project Engineer	Jessie Li/ Technical Manager

Note 1: The test data was only valid for the test sample(s).This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or use in part without prior written consent from Guangdong Meide Testing Technology Co., Ltd. This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP,NIST, or any agency of the Federal Government.
Note 2: This report does not imply product certification, approval, or endorsement by NVLAP, NIST,or any agency of the Federal Government.
Note 3: This report contains data that are not covered by the NVLAP accreditation. It is marked * in the title.

1. Product Description for Equipment under Test (EUT)

Representative (Tested) Model:	LFUAY-1000-L27-DF-I-6, LFUAY-1000-L27-DF-I-10 LFUAY-1000-L27-DF-I-15, LFUAY-1000-L27-DF-I-20 LFUAY-1000-L27-DF-O-5, LFUAY-1000-L27-DF-O-9 LFUAY-1000-L27-DF-O-14, LFUAY-1000-L27-DF-O-19
Manufacturer:	
Product Type:	SHIN UQ FLEX α
Rated Voltage/Frequency:	DC24V
Rated Power:	5W, 6W, 9W, 10W, 14W, 15W, 19W, 20W
Rated luminous flux:	/
Nominal CCT:	2700K

2. Standards Used

- ANSI/IES LM-79-19:APPROVED METHOD:OPTICAL AND ELECTRICAL MEASUREMENTS OF SOLID-STATE LIGHTING PRODUCTS
- IES TM-30-18 IES Method for Evaluating Light Source Color Rendition (This Method is not in Nvlap accreditation scope)

3. Test equipment list

Test Equipment	Serial No.	Model No.	Calibration due date
Full-field Speed Goniophotometer	MD-E028	GO-R5000	2024/09/17
Digital Power Meter	MD-E001	PF2010	2024/09/17
AC Testing Power Source	MD-E002	DPS1060	2024/09/17
Total Spectral Radiant Flux Standard Lamp	MD-E007	D908S	2023/10/13
Integrating Sphere System	MD-E029	2M	2024/09/17
High Accuracy Array Spectroradio Meter	MD-E011	HAAS-3000	2024/09/17
Digital Power Meter	MD-E008	PF310	2024/09/17
AC Testing Power Source	MD-E010	DPS1010	2024/09/17
Standard Lamp	MD-E036	D204	2023/10/13

Statement of Traceability: Guangdong Meide Testing Technology Co., Ltd. attested that all calibration has been performed using suitable standards traceable to national primary standards and International System of Unit(SI).

4. Test Method

Requirements of Ambient Condition
Product was tested with no seasoning. All stabilization and measurements were made in compliance with ANSI/IES LM-79-19. The product was operated at rated voltage or at voltage required by manufacturer. The ambient temperature of the sample was maintained at 25°C±1.2°C during measurement. And relative humidity between 10% and 65%.

Goniophotometer System
The sample was tested according to the ANSI/IES LM-79-19.

Photometric paramters were measured using a type C goniophotometer and software. The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, Luminous efficacy, zonal flux were calculated from the software taken at 1° vertical intervals and 22.5°horizontal intervals.Photometric distance was more than five times of the Largest dimension of the test SSL product.

Integrating Sphere System
The sample was tested according to the ANSI/IES LM-79-19.

The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. Coating reflectance of the integrating sphere was 90% to 98%. Photometric measurement conditions was using 4π geometry. The self-absorption factor is applied in the final test result. The sample was operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.

Fidelity Index (R_f) and Gamut Index (R_g) Calculation
The R_f, R_g was calculated according to IES TM-30-18 by using calculation tools. The calculation was based on the measured SPD from 380nm to 780nm with 1nm intervals. All the colors in this report is for reference only.

5. Integrating Sphere Test Results for LFUAY-1000-L27-DF-I-6

5.1 Test Data

Test Ambient Temperature (Integrating sphere internal temperature)	25.1℃	Test orientation	Downward
Operate time(Min.)	30	stabilization time(Min.)	0

Optical and Electrical Measurement Result

Number	Time	Current (A)	Voltage (V)	Power (W)	Flux(lm)	x	y	u'	v'	CCT (K)	Ra
0	00h00m00s	0.2526	23.998	6.0619	462.34	0.4669	0.4088	0.2679	0.5277	2591	94.4
1	00h00m10s	0.2529	23.998	6.0691	462.26	0.4667	0.4085	0.2678	0.5276	2592	94.4
2	00h00m20s	0.253	23.998	6.0715	462.1	0.467	0.4087	0.268	0.5277	2589	94.4
3	00h00m30s	0.2532	23.998	6.0763	462.02	0.467	0.4087	0.268	0.5277	2589	94.5
4	00h00m40s	0.2533	23.998	6.0787	462.22	0.4669	0.4087	0.2679	0.5277	2590	94.5
5	00h00m50s	0.2534	23.998	6.0811	462.62	0.467	0.4087	0.268	0.5277	2589	94.5
6	00h01m00s	0.2535	23.998	6.0835	462.59	0.4667	0.4084	0.2679	0.5275	2590	94.4
7	00h01m10s	0.2536	23.998	6.0859	462.61	0.4669	0.4084	0.268	0.5276	2589	94.4
8	00h01m20s	0.2537	23.998	6.0883	462.66	0.4669	0.4085	0.268	0.5276	2589	94.5
9	00h01m30s	0.2538	23.998	6.0907	462.8	0.467	0.4085	0.2681	0.5276	2587	94.4
10	00h01m40s	0.2538	23.998	6.0907	462.84	0.4671	0.4085	0.2681	0.5276	2587	94.4
11	00h01m50s	0.2539	23.998	6.0931	462.89	0.4669	0.4084	0.2681	0.5276	2588	94.4
12	00h02m00s	0.254	23.998	6.0955	462.86	0.467	0.4083	0.2682	0.5276	2586	94.4
13	00h02m10s	0.254	23.998	6.0955	463.17	0.4668	0.4082	0.2681	0.5275	2587	94.4
14	00h02m20s	0.2541	23.998	6.0979	463.11	0.4668	0.4083	0.2681	0.5275	2588	94.4
15	00h02m30s	0.2542	23.998	6.1003	463.2	0.4669	0.4084	0.2681	0.5276	2588	94.4
16	00h02m40s	0.2542	23.998	6.1003	463.58	0.4671	0.4084	0.2682	0.5276	2586	94.4
17	00h02m50s	0.2543	23.998	6.1027	463.14	0.467	0.4083	0.2682	0.5276	2585	94.4
18	00h03m00s	0.2543	23.998	6.1027	463.26	0.467	0.4083	0.2682	0.5275	2586	94.4
19	00h03m10s	0.2544	23.998	6.1051	463.6	0.4669	0.4082	0.2681	0.5275	2587	94.4
20	00h03m20s	0.2544	23.998	6.1051	463.37	0.4669	0.4083	0.2681	0.5275	2587	94.4
21	00h03m30s	0.2545	23.998	6.1075	463.4	0.4672	0.4082	0.2683	0.5275	2583	94.3

22	00h03m40s	0.2545	23.998	6.1075	463.62	0.4669	0.408	0.2683	0.5274	2584	94.3
23	00h03m50s	0.2545	23.998	6.1075	463.5	0.4668	0.4082	0.2681	0.5275	2587	94.4
24	00h04m00s	0.2546	23.998	6.1099	463.58	0.467	0.4084	0.2681	0.5276	2586	94.4
25	00h04m10s	0.2546	23.998	6.1099	463.66	0.4669	0.408	0.2683	0.5274	2585	94.4
26	00h04m20s	0.2546	23.998	6.1099	463.68	0.467	0.4082	0.2682	0.5275	2585	94.3
27	00h04m30s	0.2547	23.998	6.1123	463.8	0.4669	0.4082	0.2682	0.5275	2586	94.4
28	00h04m40s	0.2547	23.998	6.1123	464.11	0.467	0.4083	0.2682	0.5275	2585	94.4
29	00h04m50s	0.2547	23.998	6.1123	463.77	0.4671	0.4082	0.2683	0.5275	2583	94.4
30	00h05m00s	0.2548	23.998	6.1147	463.76	0.467	0.4081	0.2683	0.5275	2584	94.4
31	00h05m10s	0.2548	23.998	6.1147	463.73	0.4671	0.4083	0.2682	0.5275	2585	94.4
32	00h05m20s	0.2548	23.998	6.1147	463.95	0.467	0.4084	0.2682	0.5276	2586	94.4
33	00h05m30s	0.2548	23.998	6.1147	463.82	0.4672	0.4082	0.2683	0.5275	2583	94.4
34	00h05m40s	0.2549	23.998	6.1171	463.54	0.4671	0.4082	0.2683	0.5275	2584	94.4
35	00h05m50s	0.2549	23.998	6.1171	464.02	0.4672	0.4083	0.2683	0.5276	2583	94.3
36	00h06m00s	0.2549	23.998	6.1171	463.95	0.4672	0.4082	0.2683	0.5276	2583	94.4
37	00h06m10s	0.255	23.998	6.1195	463.81	0.4671	0.408	0.2684	0.5275	2582	94.4
38	00h06m20s	0.255	23.998	6.1195	464.24	0.4672	0.4082	0.2683	0.5275	2583	94.4
39	00h06m30s	0.255	23.998	6.1195	464.16	0.4671	0.4082	0.2683	0.5275	2583	94.4
40	00h06m40s	0.255	23.998	6.1195	464.38	0.4673	0.4083	0.2684	0.5276	2582	94.4
41	00h06m50s	0.255	23.998	6.1195	464.45	0.4669	0.4083	0.2681	0.5275	2587	94.4
42	00h07m00s	0.2551	23.998	6.1219	464.17	0.4671	0.4081	0.2684	0.5275	2582	94.4
43	00h07m10s	0.2551	23.998	6.1219	464.29	0.4672	0.4082	0.2683	0.5275	2583	94.3
44	00h07m20s	0.2551	23.998	6.1219	463.99	0.4671	0.4081	0.2684	0.5275	2582	94.4
45	00h07m30s	0.2551	23.998	6.1219	464.23	0.4671	0.4081	0.2683	0.5275	2583	94.4
46	00h07m40s	0.2551	23.998	6.1219	464.18	0.4672	0.4083	0.2683	0.5276	2583	94.3
47	00h07m50s	0.2552	23.998	6.1243	464.4	0.4671	0.4082	0.2683	0.5275	2584	94.4
48	00h08m00s	0.2552	23.998	6.1243	464.39	0.4672	0.4082	0.2684	0.5275	2582	94.3
49	00h08m10s	0.2552	23.998	6.1243	464.32	0.467	0.4082	0.2683	0.5275	2584	94.4
50	00h08m20s	0.2552	23.998	6.1243	464.32	0.4673	0.4083	0.2684	0.5276	2582	94.3
51	00h08m30s	0.2552	23.998	6.1243	464.18	0.4671	0.408	0.2684	0.5275	2582	94.3
52	00h08m40s	0.2552	23.998	6.1243	464.12	0.4672	0.4079	0.2685	0.5274	2580	94.3

53	00h08m50s	0.2552	23.998	6.1243	464.33	0.4673	0.4082	0.2685	0.5275	2580	94.4
54	00h09m00s	0.2553	23.998	6.1267	464.86	0.4671	0.4081	0.2684	0.5275	2582	94.3
55	00h09m10s	0.2553	23.998	6.1267	464.32	0.4672	0.408	0.2684	0.5275	2581	94.3
56	00h09m20s	0.2553	23.998	6.1267	464.21	0.4672	0.408	0.2684	0.5275	2581	94.3
57	00h09m30s	0.2553	23.998	6.1267	464.26	0.4671	0.4082	0.2683	0.5275	2584	94.4
58	00h09m40s	0.2553	23.998	6.1267	464.21	0.4671	0.408	0.2684	0.5275	2582	94.4
59	00h09m50s	0.2553	23.998	6.1267	464.63	0.4671	0.4081	0.2684	0.5275	2582	94.4
60	00h10m00s	0.2553	23.998	6.1267	464.17	0.467	0.4079	0.2684	0.5274	2582	94.4
61	00h10m10s	0.2554	23.998	6.1291	464.38	0.4673	0.4082	0.2684	0.5276	2581	94.4
62	00h10m20s	0.2554	23.998	6.1291	464.71	0.4671	0.4081	0.2683	0.5275	2583	94.4
63	00h10m30s	0.2554	23.998	6.1291	464.57	0.4674	0.4081	0.2685	0.5275	2579	94.3
64	00h10m40s	0.2554	23.998	6.1291	464.41	0.4672	0.4081	0.2684	0.5275	2582	94.4
65	00h10m50s	0.2554	23.998	6.1291	464.58	0.4672	0.4081	0.2684	0.5275	2582	94.4
66	00h11m00s	0.2554	23.998	6.1291	464.8	0.467	0.4082	0.2682	0.5275	2584	94.4
67	00h11m10s	0.2554	23.998	6.1291	464.58	0.4671	0.4081	0.2683	0.5275	2583	94.3
68	00h11m20s	0.2554	23.998	6.1291	464.79	0.4672	0.4079	0.2684	0.5274	2581	94.3
69	00h11m30s	0.2554	23.998	6.1291	464.58	0.4672	0.4082	0.2684	0.5275	2582	94.4
70	00h11m40s	0.2554	23.998	6.1291	464.68	0.4672	0.408	0.2684	0.5275	2581	94.3
71	00h11m50s	0.2555	23.998	6.1315	464.63	0.4673	0.4081	0.2685	0.5275	2580	94.4
72	00h12m00s	0.2555	23.998	6.1315	464.68	0.4672	0.4082	0.2684	0.5275	2582	94.4
73	00h12m10s	0.2555	23.998	6.1315	464.6	0.4671	0.4079	0.2684	0.5274	2581	94.4
74	00h12m20s	0.2555	23.998	6.1315	464.76	0.467	0.4081	0.2683	0.5275	2583	94.3
75	00h12m30s	0.2555	23.998	6.1315	464.66	0.4673	0.4081	0.2685	0.5275	2580	94.4
76	00h12m40s	0.2555	23.998	6.1315	464.43	0.4674	0.4082	0.2685	0.5276	2580	94.3
77	00h12m50s	0.2555	23.998	6.1315	464.45	0.4672	0.4081	0.2684	0.5275	2581	94.3
78	00h13m00s	0.2555	23.998	6.1315	464.5	0.4674	0.4081	0.2685	0.5275	2579	94.3
79	00h13m10s	0.2555	23.998	6.1315	464.63	0.467	0.4077	0.2684	0.5273	2581	94.3
80	00h13m20s	0.2555	23.998	6.1315	464.49	0.4671	0.4078	0.2684	0.5274	2581	94.3
81	00h13m30s	0.2555	23.998	6.1315	464.65	0.4672	0.4081	0.2684	0.5275	2582	94.3
82	00h13m40s	0.2555	23.998	6.1315	464.54	0.4672	0.4081	0.2684	0.5275	2581	94.3
83	00h13m50s	0.2555	23.998	6.1315	464.74	0.4673	0.4079	0.2685	0.5274	2579	94.4

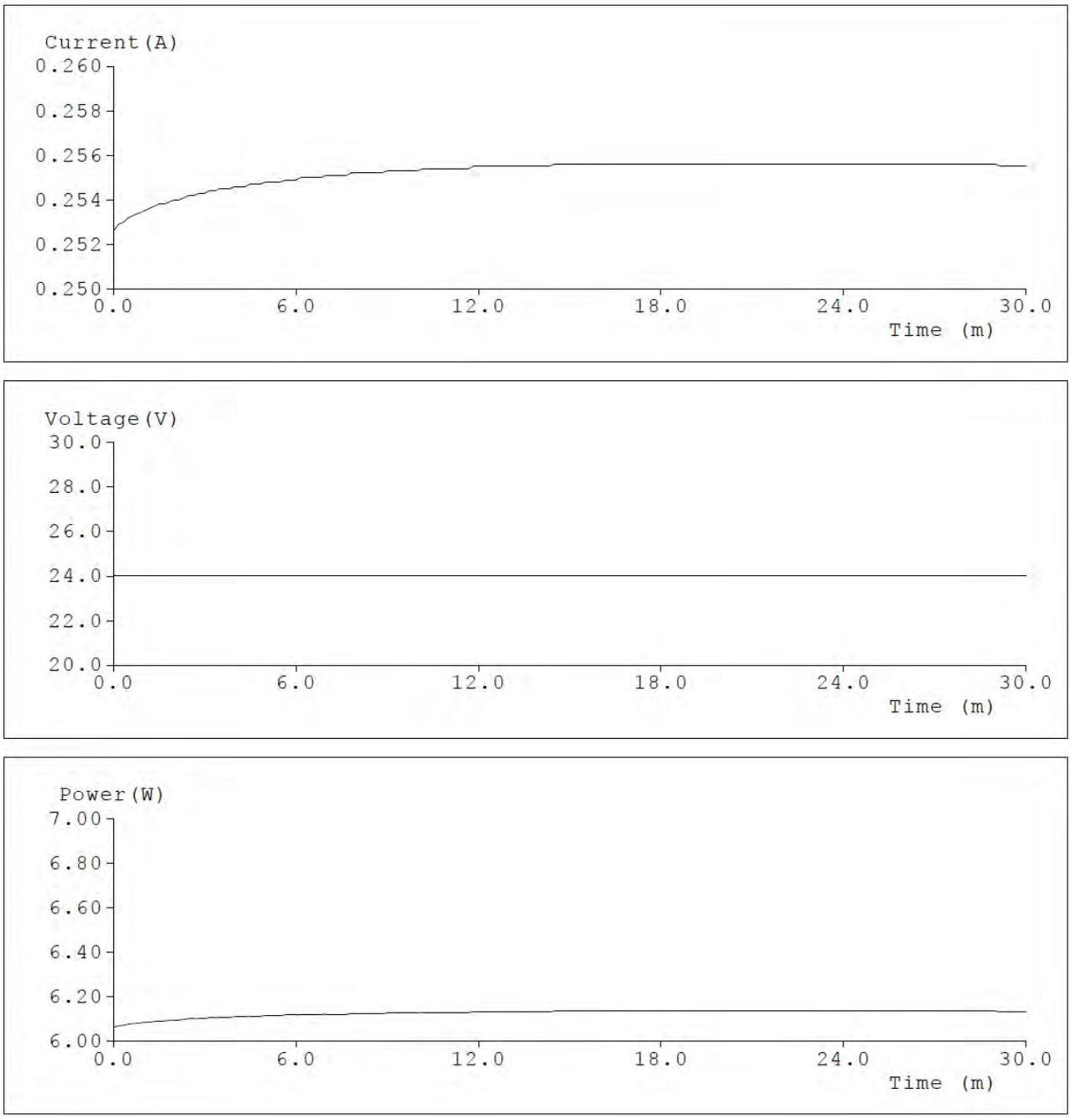
84	00h14m00s	0.2555	23.998	6.1315	464.86	0.4673	0.4082	0.2684	0.5275	2581	94.4
85	00h14m10s	0.2555	23.998	6.1315	465.16	0.4671	0.4081	0.2683	0.5275	2583	94.3
86	00h14m20s	0.2555	23.998	6.1315	464.95	0.4672	0.4081	0.2684	0.5275	2581	94.3
87	00h14m30s	0.2556	23.998	6.1339	464.84	0.4672	0.4081	0.2684	0.5275	2582	94.3
88	00h14m40s	0.2556	23.998	6.1339	464.78	0.4672	0.4081	0.2684	0.5275	2581	94.4
89	00h14m50s	0.2556	23.998	6.1339	464.75	0.4673	0.4081	0.2685	0.5275	2580	94.3
90	00h15m00s	0.2556	23.998	6.1339	464.83	0.4674	0.4082	0.2685	0.5276	2580	94.3
91	00h15m10s	0.2556	23.998	6.1339	464.85	0.4673	0.408	0.2685	0.5275	2579	94.3
92	00h15m20s	0.2556	23.998	6.1339	464.67	0.4672	0.408	0.2684	0.5274	2581	94.3
93	00h15m30s	0.2556	23.998	6.1339	464.53	0.4673	0.408	0.2685	0.5275	2579	94.3
94	00h15m40s	0.2556	23.998	6.1339	464.54	0.4674	0.4083	0.2685	0.5276	2580	94.3
95	00h15m50s	0.2556	23.998	6.1339	464.7	0.4672	0.4081	0.2684	0.5275	2581	94.4
96	00h16m00s	0.2556	23.998	6.1339	464.36	0.4672	0.408	0.2685	0.5275	2580	94.3
97	00h16m10s	0.2556	23.998	6.1339	464.94	0.4674	0.4081	0.2685	0.5275	2579	94.4
98	00h16m20s	0.2556	23.998	6.1339	464.58	0.4671	0.4078	0.2684	0.5274	2581	94.4
99	00h16m30s	0.2556	23.998	6.1339	464.77	0.4672	0.408	0.2684	0.5275	2581	94.3
100	00h16m40s	0.2556	23.998	6.1339	465.2	0.4674	0.4082	0.2684	0.5276	2581	94.3
101	00h16m50s	0.2556	23.998	6.1339	464.96	0.4672	0.4081	0.2684	0.5275	2581	94.3
102	00h17m00s	0.2556	23.998	6.1339	464.84	0.4672	0.4081	0.2684	0.5275	2582	94.4
103	00h17m10s	0.2556	23.998	6.1339	464.94	0.4672	0.4079	0.2685	0.5275	2580	94.3
104	00h17m20s	0.2556	23.998	6.1339	464.74	0.4673	0.408	0.2685	0.5275	2580	94.4
105	00h17m30s	0.2556	23.998	6.1339	464.68	0.4672	0.4079	0.2685	0.5274	2580	94.3
106	00h17m40s	0.2556	23.998	6.1339	464.96	0.4672	0.408	0.2685	0.5275	2580	94.3
107	00h17m50s	0.2556	23.998	6.1339	464.77	0.4673	0.408	0.2685	0.5275	2579	94.3
108	00h18m00s	0.2556	23.998	6.1339	464.82	0.4674	0.4081	0.2686	0.5275	2578	94.3
109	00h18m10s	0.2556	23.998	6.1339	464.59	0.4673	0.408	0.2686	0.5275	2579	94.4
110	00h18m20s	0.2556	23.998	6.1339	465.02	0.4671	0.4081	0.2683	0.5275	2583	94.4
111	00h18m30s	0.2556	23.998	6.1339	464.9	0.4673	0.4081	0.2685	0.5275	2580	94.3
112	00h18m40s	0.2556	23.998	6.1339	464.89	0.4673	0.4081	0.2685	0.5275	2580	94.4
113	00h18m50s	0.2556	23.998	6.1339	464.89	0.4672	0.4081	0.2684	0.5275	2582	94.4
114	00h19m00s	0.2556	23.998	6.1339	465.3	0.4672	0.408	0.2685	0.5275	2581	94.3

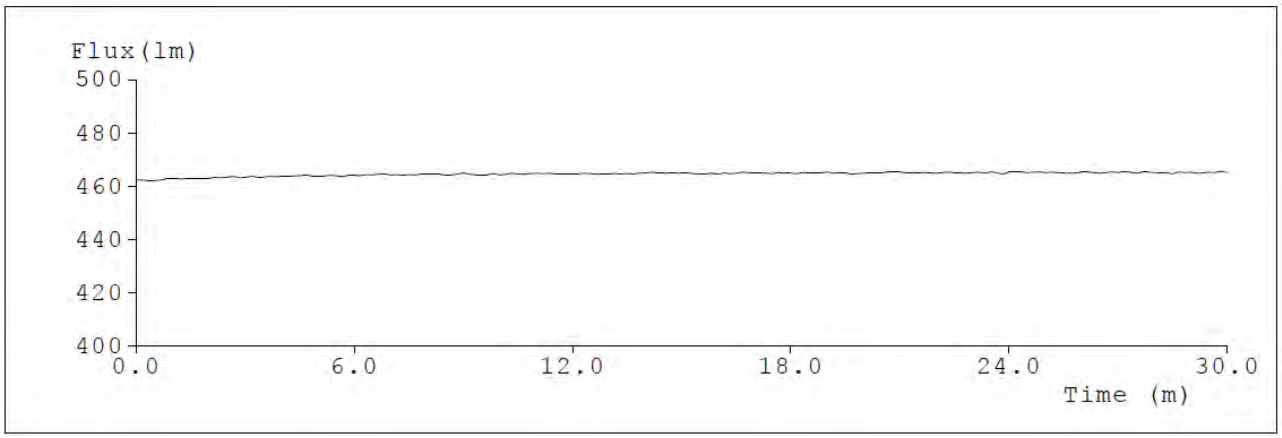
115	00h19m10s	0.2556	23.998	6.1339	464.78	0.4675	0.4082	0.2685	0.5276	2579	94.3
116	00h19m20s	0.2556	23.998	6.1339	464.96	0.4673	0.408	0.2685	0.5275	2580	94.4
117	00h19m30s	0.2556	23.998	6.1339	465.06	0.4673	0.4081	0.2685	0.5275	2580	94.3
118	00h19m40s	0.2556	23.998	6.1339	464.35	0.4674	0.4079	0.2686	0.5275	2578	94.3
119	00h19m50s	0.2556	23.998	6.1339	464.68	0.4672	0.4081	0.2684	0.5275	2581	94.3
120	00h20m00s	0.2556	23.998	6.1339	464.79	0.4675	0.4082	0.2686	0.5276	2578	94.3
121	00h20m10s	0.2556	23.998	6.1339	465.02	0.4672	0.4081	0.2684	0.5275	2581	94.4
122	00h20m20s	0.2556	23.998	6.1339	464.99	0.4671	0.408	0.2684	0.5275	2582	94.3
123	00h20m30s	0.2556	23.998	6.1339	465.02	0.4672	0.408	0.2685	0.5275	2581	94.3
124	00h20m40s	0.2556	23.998	6.1339	465.13	0.4673	0.408	0.2685	0.5275	2580	94.3
125	00h20m50s	0.2556	23.998	6.1339	465.14	0.4672	0.4082	0.2683	0.5275	2583	94.4
126	00h21m00s	0.2556	23.998	6.1339	465.12	0.4672	0.4082	0.2684	0.5275	2582	94.4
127	00h21m10s	0.2556	23.998	6.1339	465.06	0.4672	0.408	0.2684	0.5275	2581	94.3
128	00h21m20s	0.2556	23.998	6.1339	464.96	0.4673	0.4081	0.2685	0.5275	2580	94.3
129	00h21m30s	0.2556	23.998	6.1339	464.94	0.4674	0.4081	0.2685	0.5275	2579	94.4
130	00h21m40s	0.2556	23.998	6.1339	465.01	0.4672	0.4081	0.2684	0.5275	2581	94.4
131	00h21m50s	0.2556	23.998	6.1339	464.89	0.4674	0.4082	0.2685	0.5276	2580	94.3
132	00h22m00s	0.2556	23.998	6.1339	464.75	0.4673	0.4081	0.2685	0.5275	2580	94.4
133	00h22m10s	0.2556	23.998	6.1339	464.96	0.4673	0.408	0.2685	0.5275	2580	94.3
134	00h22m20s	0.2556	23.998	6.1339	465.14	0.4672	0.4082	0.2684	0.5275	2582	94.4
135	00h22m30s	0.2556	23.998	6.1339	464.97	0.4672	0.4081	0.2684	0.5275	2582	94.4
136	00h22m40s	0.2556	23.998	6.1339	465.04	0.4671	0.4081	0.2683	0.5275	2583	94.4
137	00h22m50s	0.2556	23.998	6.1339	464.77	0.4674	0.4079	0.2686	0.5275	2578	94.3
138	00h23m00s	0.2556	23.998	6.1339	465.03	0.4672	0.4081	0.2684	0.5275	2582	94.4
139	00h23m10s	0.2556	23.998	6.1339	465.17	0.4673	0.4081	0.2685	0.5275	2580	94.3
140	00h23m20s	0.2556	23.998	6.1339	464.71	0.4672	0.408	0.2684	0.5275	2581	94.4
141	00h23m30s	0.2556	23.998	6.1339	465.25	0.4672	0.408	0.2685	0.5275	2581	94.4
142	00h23m40s	0.2556	23.998	6.1339	465.06	0.4672	0.4081	0.2684	0.5275	2581	94.3
143	00h23m50s	0.2556	23.998	6.1339	464.43	0.4673	0.4079	0.2686	0.5275	2579	94.3
144	00h24m00s	0.2556	23.998	6.1339	465.24	0.4672	0.4081	0.2684	0.5275	2582	94.3
145	00h24m10s	0.2556	23.998	6.1339	465.3	0.4671	0.4079	0.2684	0.5274	2581	94.3

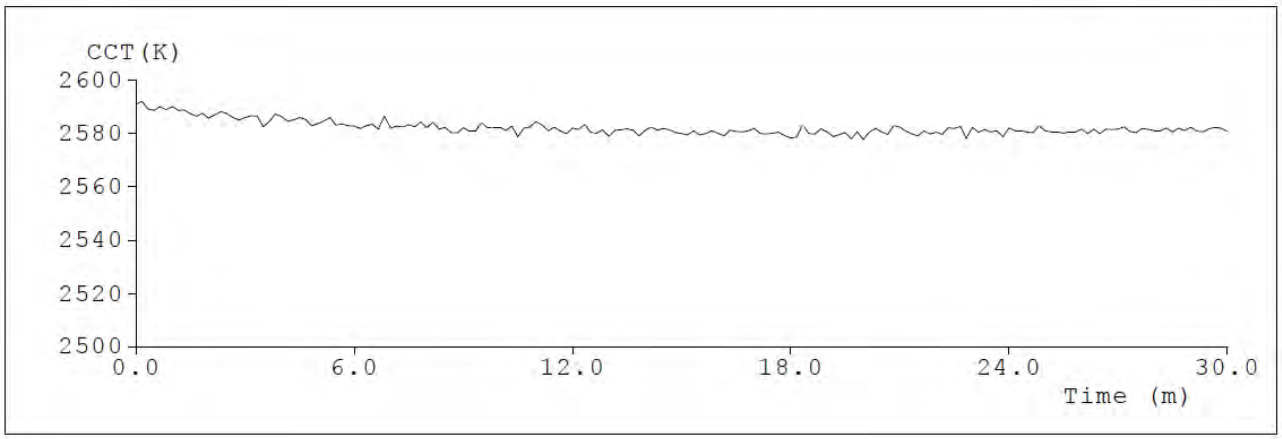
146	00h24m20s	0.2556	23.998	6.1339	465.29	0.4673	0.4081	0.2684	0.5275	2581	94.3
147	00h24m30s	0.2556	23.998	6.1339	465.06	0.4672	0.408	0.2685	0.5275	2580	94.3
148	00h24m40s	0.2556	23.998	6.1339	465.19	0.4672	0.408	0.2685	0.5275	2580	94.3
149	00h24m50s	0.2556	23.998	6.1339	465.22	0.4671	0.4082	0.2683	0.5275	2583	94.3
150	00h25m00s	0.2556	23.998	6.1339	465.03	0.4672	0.4081	0.2684	0.5275	2581	94.4
151	00h25m10s	0.2556	23.998	6.1339	465.21	0.4672	0.4079	0.2685	0.5274	2581	94.4
152	00h25m20s	0.2556	23.998	6.1339	465.04	0.4672	0.408	0.2685	0.5275	2581	94.3
153	00h25m30s	0.2556	23.998	6.1339	464.9	0.4673	0.408	0.2685	0.5275	2580	94.3
154	00h25m40s	0.2556	23.998	6.1339	464.74	0.4672	0.4079	0.2685	0.5274	2581	94.3
155	00h25m50s	0.2556	23.998	6.1339	464.93	0.4672	0.408	0.2685	0.5274	2581	94.4
156	00h26m00s	0.2556	23.998	6.1339	465.16	0.4672	0.4081	0.2684	0.5275	2582	94.4
157	00h26m10s	0.2556	23.998	6.1339	465.18	0.4672	0.4079	0.2685	0.5274	2580	94.3
158	00h26m20s	0.2556	23.998	6.1339	464.99	0.4672	0.408	0.2684	0.5275	2582	94.3
159	00h26m30s	0.2556	23.998	6.1339	464.81	0.4673	0.408	0.2685	0.5275	2580	94.3
160	00h26m40s	0.2556	23.998	6.1339	465.07	0.4672	0.408	0.2684	0.5275	2582	94.3
161	00h26m50s	0.2556	23.998	6.1339	465.22	0.4672	0.4082	0.2684	0.5275	2581	94.4
162	00h27m00s	0.2556	23.998	6.1339	465.03	0.4671	0.4079	0.2684	0.5274	2582	94.3
163	00h27m10s	0.2556	23.998	6.1339	465.44	0.4672	0.4082	0.2683	0.5275	2583	94.4
164	00h27m20s	0.2556	23.998	6.1339	465.14	0.4673	0.4081	0.2684	0.5275	2581	94.4
165	00h27m30s	0.2556	23.998	6.1339	464.82	0.4673	0.408	0.2685	0.5275	2580	94.3
166	00h27m40s	0.2556	23.998	6.1339	465.12	0.4672	0.4081	0.2684	0.5275	2582	94.4
167	00h27m50s	0.2556	23.998	6.1339	465.15	0.4672	0.408	0.2684	0.5275	2581	94.3
168	00h28m00s	0.2556	23.998	6.1339	465.07	0.4672	0.4081	0.2684	0.5275	2581	94.3
169	00h28m10s	0.2556	23.998	6.1339	464.86	0.4672	0.4081	0.2684	0.5275	2581	94.3
170	00h28m20s	0.2556	23.998	6.1339	465.02	0.4672	0.4081	0.2684	0.5275	2582	94.4
171	00h28m30s	0.2556	23.998	6.1339	464.56	0.4672	0.4079	0.2685	0.5274	2581	94.4
172	00h28m40s	0.2556	23.998	6.1339	465.31	0.4672	0.4082	0.2684	0.5275	2582	94.4
173	00h28m50s	0.2556	23.998	6.1339	465.07	0.4672	0.4081	0.2684	0.5275	2581	94.4
174	00h29m00s	0.2556	23.998	6.1339	465.14	0.4672	0.4081	0.2684	0.5275	2582	94.4
175	00h29m10s	0.2555	23.998	6.1315	464.73	0.4673	0.4081	0.2684	0.5275	2581	94.4
176	00h29m20s	0.2555	23.998	6.1315	464.87	0.4672	0.408	0.2684	0.5275	2581	94.4

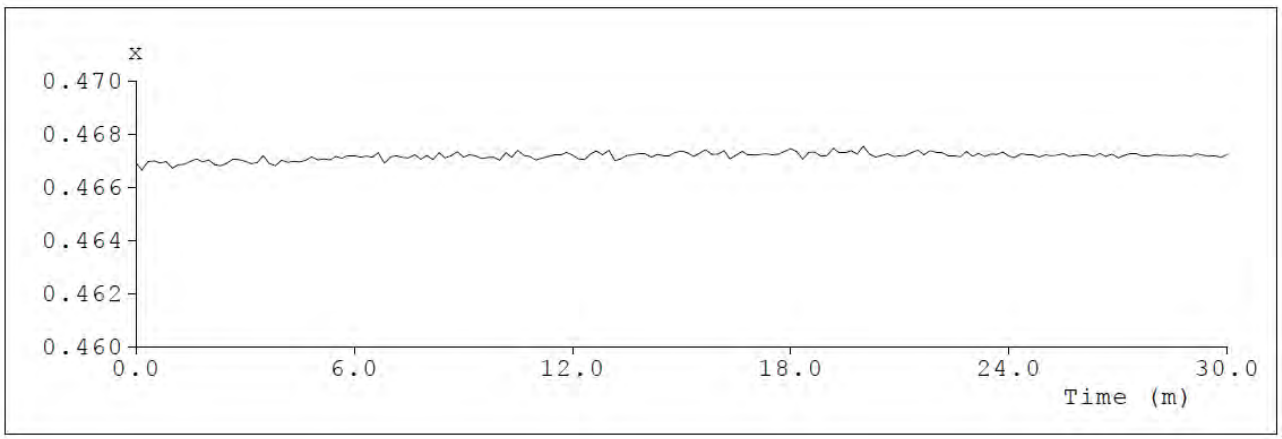
177	00h29m30s	0.2555	23.998	6.1315	465.16	0.4672	0.4081	0.2684	0.5275	2582	94.4
178	00h29m40s	0.2555	23.998	6.1315	465.03	0.4672	0.4082	0.2684	0.5275	2582	94.4
179	00h29m50s	0.2555	23.998	6.1315	465.49	0.4671	0.408	0.2684	0.5275	2582	94.3
180	00h30m00s	0.2555	23.998	6.1315	465.06	0.4672	0.4081	0.2684	0.5275	2581	94.4

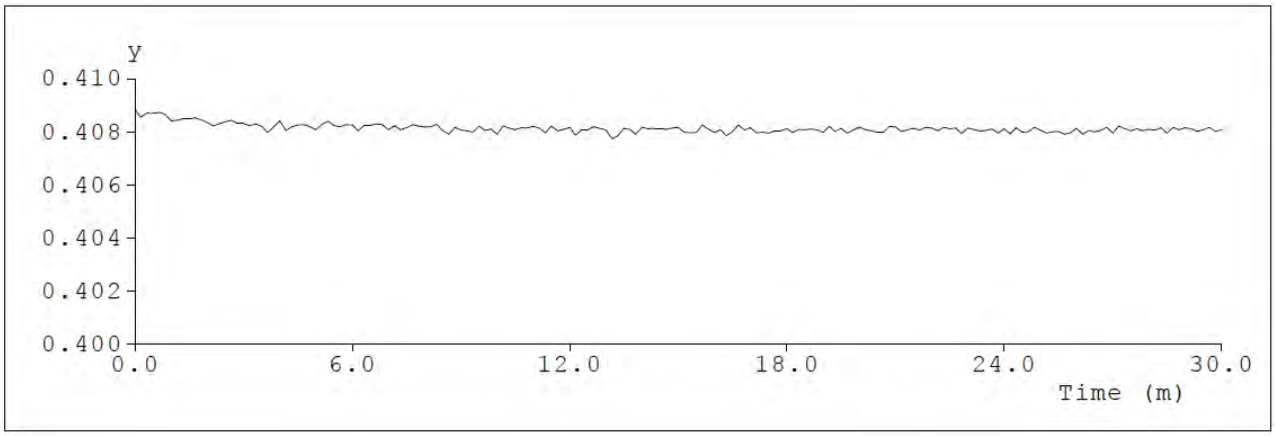
Test curves

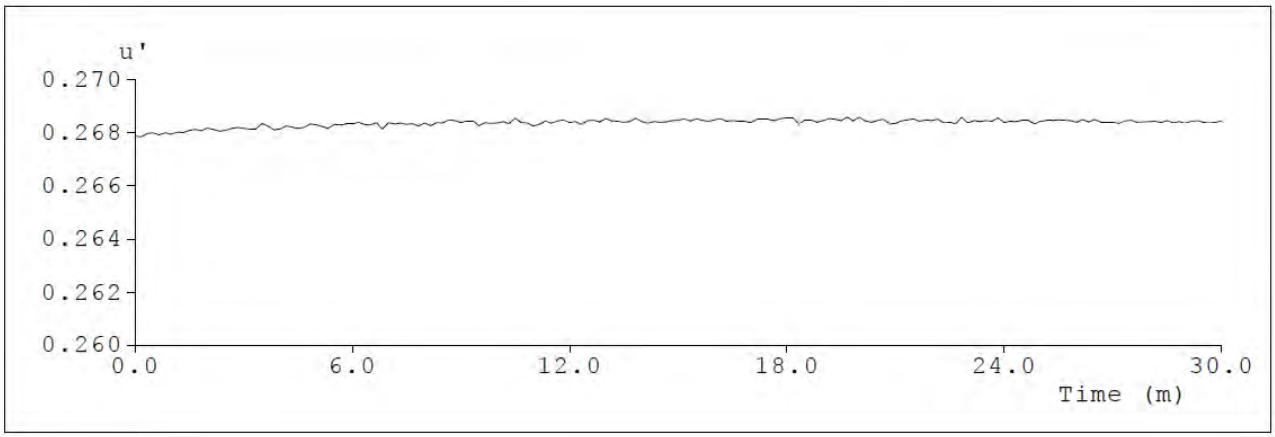


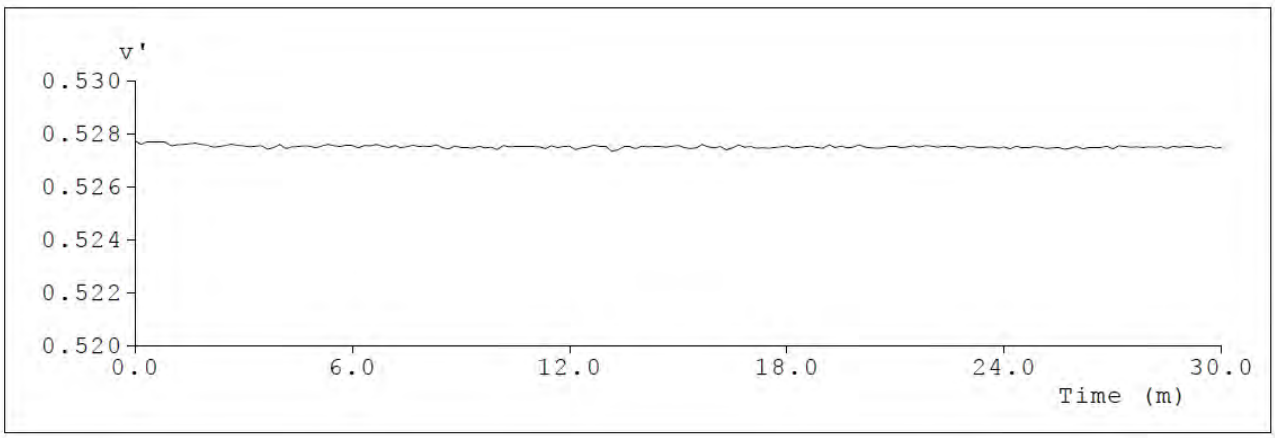

Flux(lm)
500
480
460
440
420
400
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


CCT(K)
2600
2580
2560
2540
2520
2500
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


x
0.470
0.468
0.466
0.464
0.462
0.460
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


y
0.410
0.408
0.406
0.404
0.402
0.400
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


u'
0.270
0.268
0.266
0.264
0.262
0.260
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

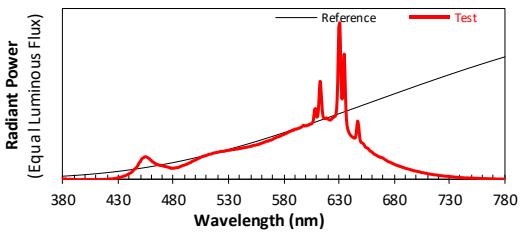

v'
0.530
0.528
0.526
0.524
0.522
0.520
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

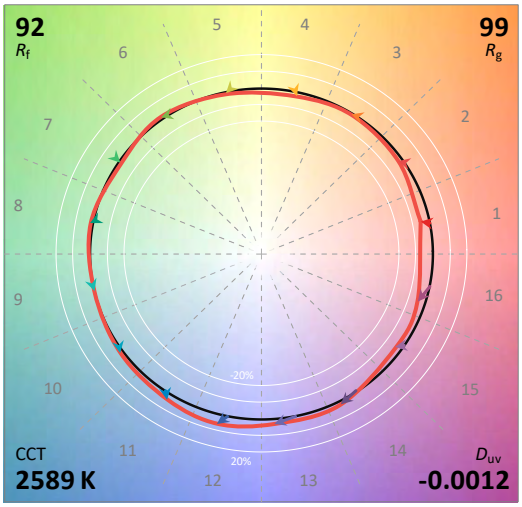
*5.2 ANSI/IES TM-30-18 Color Rendition Report

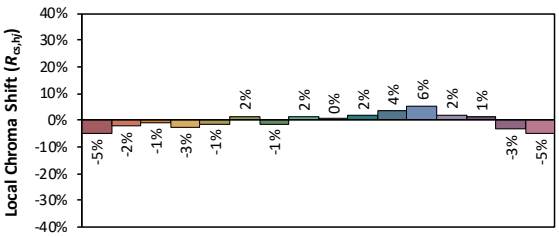
ANSI/IES TM-30-18 Color Rendition Report

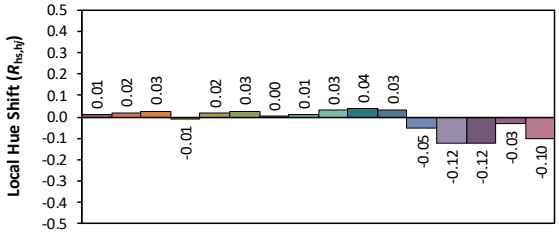
Source: Manufacturer:

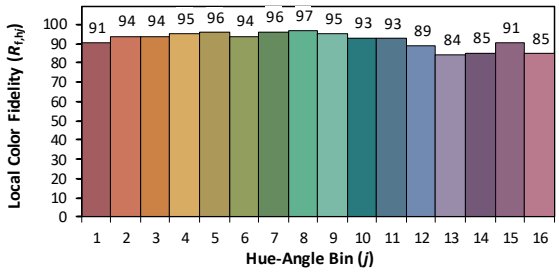
Date: 2023/9/26 Model: LFUAY-1000-L27-DF-I-6

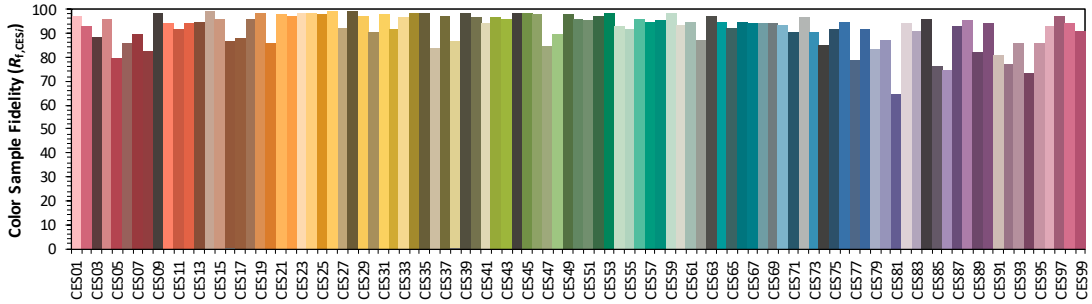












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

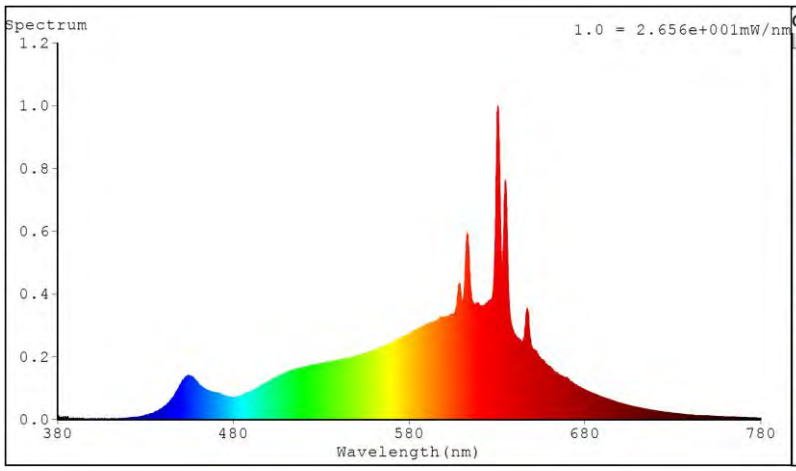
x	0.4670
y	0.4088
u'	0.2680
v'	0.5278

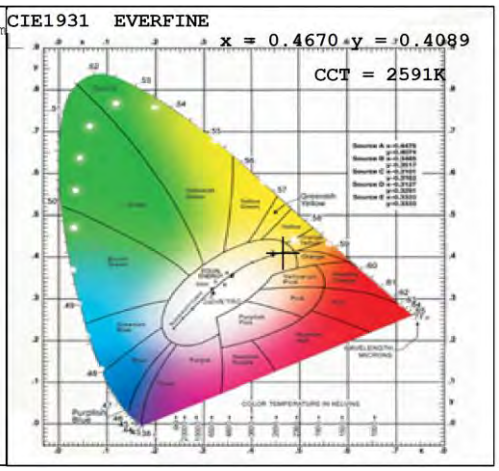
CIE 13.3-1995 (CRI)

R_a	94
R_9	62

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

5.3 Relative Spectral Power Distribution





nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0071	414	0.0007	448	0.0905	482	0.0729	516	0.1611
381	0	415	0.0034	449	0.1033	483	0.0738	517	0.1607
382	0.0077	416	0.0019	450	0.1095	484	0.0736	518	0.1628
383	0.0031	417	0.0027	451	0.1232	485	0.0761	519	0.1649
384	0.0011	418	0.0037	452	0.13	486	0.0797	520	0.1654
385	0.0008	419	0.0026	453	0.1334	487	0.0819	521	0.1666
386	0.0052	420	0.0042	454	0.1382	488	0.0852	522	0.1692
387	0.0032	421	0.0047	455	0.1385	489	0.0873	523	0.1705
388	0	422	0.0066	456	0.1359	490	0.089	524	0.1704
389	0.0035	423	0.0062	457	0.1319	491	0.0916	525	0.1718
390	0.0034	424	0.0056	458	0.1288	492	0.0943	526	0.1709
391	0.0006	425	0.007	459	0.1206	493	0.0972	527	0.1744
392	0.002	426	0.0083	460	0.1164	494	0.1008	528	0.175
393	0	427	0.0097	461	0.1078	495	0.1031	529	0.1759
394	0.001	428	0.0092	462	0.106	496	0.1057	530	0.1773
395	0	429	0.0115	463	0.0999	497	0.112	531	0.178
396	0.0018	430	0.0126	464	0.0974	498	0.1143	532	0.1789
397	0.0017	431	0.015	465	0.0919	499	0.1165	533	0.181
398	0.0021	432	0.0162	466	0.0918	500	0.1201	534	0.1834
399	0.0032	433	0.0183	467	0.0892	501	0.1232	535	0.1816
400	0.0012	434	0.0198	468	0.0862	502	0.126	536	0.1842
401	0.0022	435	0.0239	469	0.0878	503	0.1297	537	0.1849
402	0.0022	436	0.0242	470	0.0835	504	0.1326	538	0.1847
403	0.0019	437	0.0269	471	0.0853	505	0.136	539	0.1869
404	0.0024	438	0.0311	472	0.081	506	0.1394	540	0.1893
405	0.0025	439	0.0336	473	0.0799	507	0.1404	541	0.1883
406	0.0007	440	0.0389	474	0.0785	508	0.1447	542	0.1914
407	0.0001	441	0.0406	475	0.0767	509	0.1446	543	0.1918
408	0.0015	442	0.0465	476	0.0749	510	0.1466	544	0.1936
409	0.0015	443	0.0519	477	0.0729	511	0.1495	545	0.1953
410	0.0033	444	0.0596	478	0.0691	512	0.1532	546	0.1948
411	0.0021	445	0.066	479	0.0705	513	0.154	547	0.197
412	0.0025	446	0.072	480	0.0703	514	0.1551	548	0.1983
413	0.0014	447	0.0792	481	0.0706	515	0.1573	549	0.199

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.201	599	0.323	648	0.3222	697	0.0581	746	0.012
551	0.2019	600	0.3234	649	0.2532	698	0.0546	747	0.0123
552	0.2059	601	0.3256	650	0.2271	699	0.0544	748	0.0117
553	0.2077	602	0.3291	651	0.2225	700	0.0529	749	0.0114
554	0.2076	603	0.3289	652	0.2184	701	0.0519	750	0.0117
555	0.2095	604	0.3352	653	0.2101	702	0.0491	751	0.0111
556	0.2111	605	0.3354	654	0.1973	703	0.0491	752	0.0103
557	0.2123	606	0.342	655	0.1934	704	0.0465	753	0.0107
558	0.2152	607	0.3598	656	0.1904	705	0.0443	754	0.0101
559	0.2176	608	0.4195	657	0.1851	706	0.0437	755	0.0098
560	0.2205	609	0.4267	658	0.176	707	0.0429	756	0.0098
561	0.222	610	0.3766	659	0.1714	708	0.0402	757	0.0093
562	0.2254	611	0.3864	660	0.167	709	0.0407	758	0.0089
563	0.2265	612	0.4781	661	0.1617	710	0.0389	759	0.0088
564	0.2309	613	0.5901	662	0.155	711	0.0369	760	0.0084
565	0.2321	614	0.5245	663	0.1513	712	0.0359	761	0.0082
566	0.2323	615	0.4177	664	0.1485	713	0.0348	762	0.0076
567	0.2374	616	0.374	665	0.1443	714	0.0337	763	0.008
568	0.2375	617	0.3677	666	0.1403	715	0.0336	764	0.0081
569	0.2401	618	0.3681	667	0.1388	716	0.0313	765	0.0073
570	0.2428	619	0.3714	668	0.1338	717	0.0302	766	0.0072
571	0.2481	620	0.3653	669	0.134	718	0.0304	767	0.0072
572	0.2501	621	0.3609	670	0.131	719	0.029	768	0.0069
573	0.2536	622	0.3584	671	0.1258	720	0.0285	769	0.0068
574	0.2572	623	0.3612	672	0.1216	721	0.0267	770	0.0068
575	0.2577	624	0.3703	673	0.118	722	0.0259	771	0.0064
576	0.2604	625	0.3734	674	0.1133	723	0.0254	772	0.0063
577	0.2626	626	0.3801	675	0.1092	724	0.0245	773	0.0059
578	0.2664	627	0.3835	676	0.1073	725	0.0237	774	0.0054
579	0.2697	628	0.4217	677	0.1042	726	0.0232	775	0.0057
580	0.2719	629	0.5852	678	0.1006	727	0.0222	776	0.0055
581	0.2749	630	0.9113	679	0.0988	728	0.0221	777	0.0053
582	0.2777	631	0.938	680	0.0947	729	0.0216	778	0.0052
583	0.2809	632	0.6178	681	0.0919	730	0.0207	779	0.0053
584	0.2854	633	0.4844	682	0.0887	731	0.02	780	0.0053
585	0.288	634	0.6298	683	0.0863	732	0.02		
586	0.2913	635	0.7507	684	0.0857	733	0.0187		
587	0.294	636	0.5192	685	0.0814	734	0.0184		
588	0.2988	637	0.3567	686	0.0808	735	0.0171		
589	0.2968	638	0.3077	687	0.0774	736	0.0168		
590	0.3032	639	0.2877	688	0.0761	737	0.0162		
591	0.305	640	0.2737	689	0.0725	738	0.0154		
592	0.3043	641	0.2643	690	0.0712	739	0.0148		
593	0.3074	642	0.2587	691	0.0687	740	0.0145		
594	0.3102	643	0.2548	692	0.067	741	0.0136		
595	0.3125	644	0.2507	693	0.0653	742	0.0139		
596	0.3162	645	0.2527	694	0.0639	743	0.013		
597	0.3212	646	0.2919	695	0.0616	744	0.0124		
598	0.3277	647	0.3513	696	0.0594	745	0.0124		

6. Goniophotometer Test results for LFUAY-1000-L27-DF-I-6

6.1 Test Data

Test Ambient Temperature	25.2℃	Test orientation	Downward
Operate time(Min.)	90	stabilization time(Min.)	30

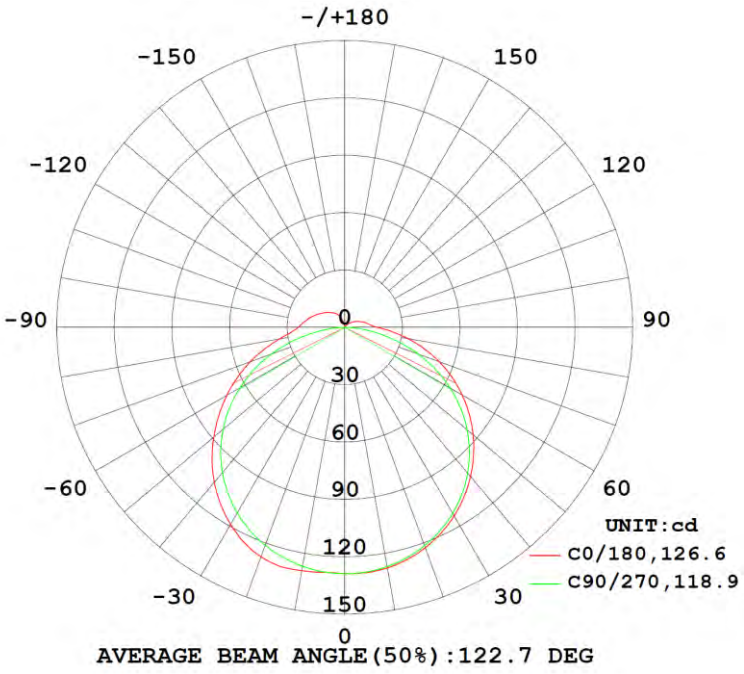
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
23.993	--	0.26493	1.0000	6.3563

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	Imax (cd)	η up (%)	η down (%)
474.404	74.64	129.6	8.6	91.4

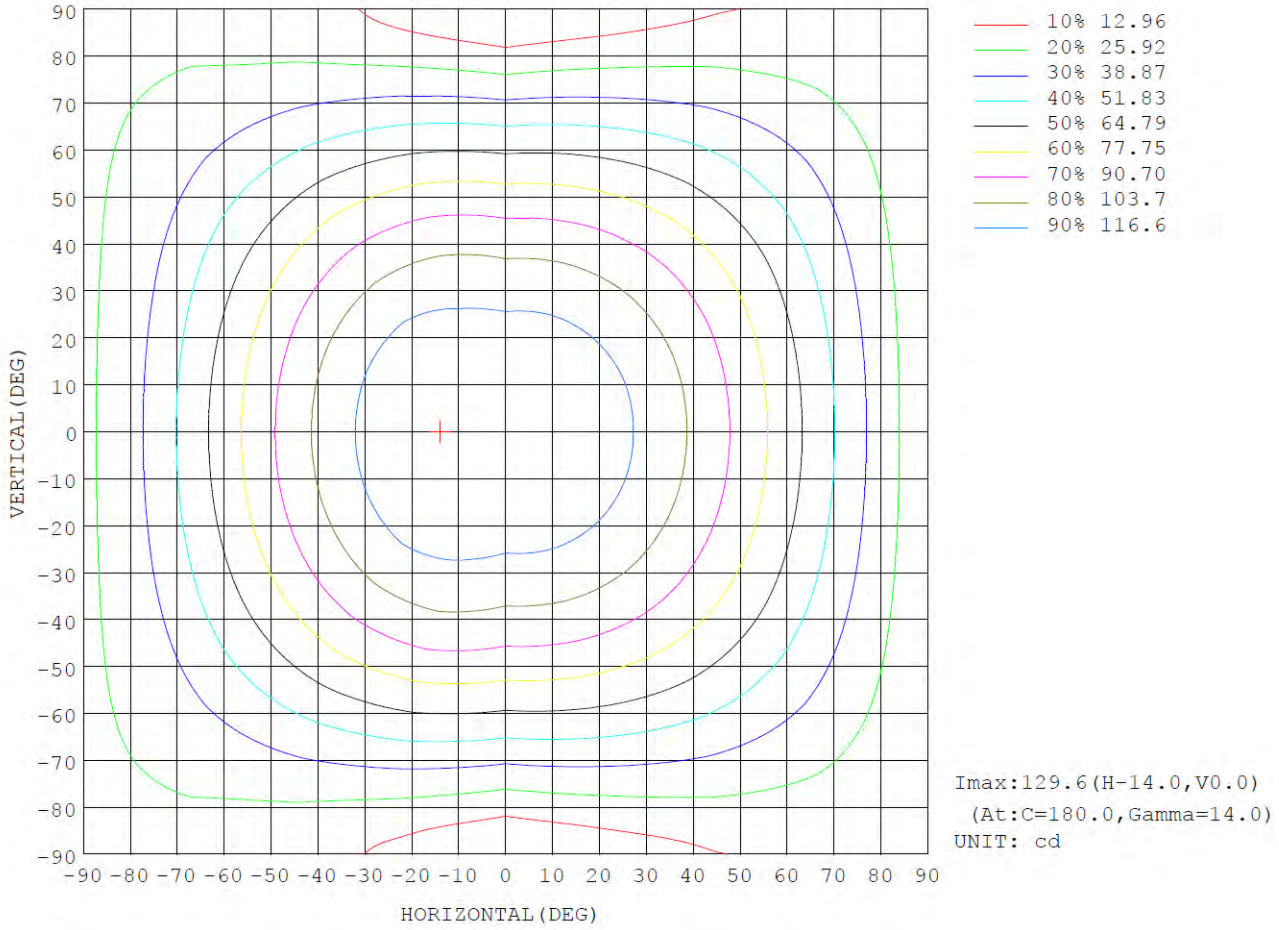
6.2 Luminous Intensity Distribution



6.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	127.8	127.7	127.1	128.4	129.2	127.2	126.9	127.7	0- 10	12.25	12.25	2.58,2.58
20	122.7	122.6	121.5	126.4	127.7	125.8	121.3	122.5	10- 20	35.69	47.94	10.1,10.1
30	113.9	113.8	112.4	118.9	119.0	118.1	112.0	113.7	20- 30	55.37	103.3	21.8,21.8
40	101.9	101.6	99.56	106.2	105.8	105.4	99.14	101.4	30- 40	68.56	171.9	36.2,36.2
50	87.29	86.47	83.19	89.72	89.09	89.11	82.74	86.21	40- 50	73.53	245.4	51.7,51.7
60	70.62	68.74	63.40	70.60	70.97	69.98	63.01	68.52	50- 60	69.73	315.1	66.4,66.4
70	52.23	49.04	40.64	49.72	52.28	49.23	40.39	48.87	60- 70	57.80	372.9	78.6,78.6
80	33.08	28.53	16.99	29.57	34.40	29.31	16.84	28.40	70- 80	39.72	412.6	87,87
90	17.22	12.61	1.610	18.07	24.35	17.66	1.402	12.21	80- 90	21.16	433.8	91.4,91.4
100	12.03	8.126	0.0630	14.82	20.76	14.56	0.1552	7.899	90-100	12.53	446.3	94.1,94.1
110	8.908	5.532	0.0796	12.40	17.52	12.36	0.1678	5.310	100-110	9.495	455.8	96.1,96.1
120	6.183	3.432	0.1400	10.36	14.67	10.44	0.1730	3.244	110-120	7.018	462.8	97.6,97.6
130	3.926	1.983	0.1657	8.823	12.21	8.917	0.1874	1.859	120-130	4.962	467.8	98.6,98.6
140	2.199	1.066	0.1795	7.410	10.05	7.675	0.2352	0.9716	130-140	3.316	471.1	99.3,99.3
150	1.040	0.5788	0.1656	5.009	8.042	5.919	0.2696	0.4855	140-150	2.005	473.1	99.7,99.7
160	0.4937	0.2695	0.1770	2.142	4.802	3.624	0.3087	0.2330	150-160	0.9759	474.1	99.9,99.9
170	0.2466	0.2352	0.2617	0.4313	0.8337	0.6486	0.3100	0.2570	160-170	0.2642	474.4	100,100
180	0.2083	0.2901	0.2791	0.2913	0.2391	0.2995	0.2813	0.2835	170-180	0.0312	474.4	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

6.4 Isocandela Diagram



6.5 Luminous Distribution Intensity Data

Table--1 UNIT: cd

C(DEG) / γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129
5	129	129	129	129	128	128	128	129	129	128	128	128	128	129	129	129
10	128	128	128	127	127	127	128	129	129	128	127	127	127	127	128	128
15	126	126	126	125	125	126	128	129	129	129	127	125	125	125	126	126
20	123	123	123	122	122	123	126	128	128	127	126	122	121	122	123	123
25	119	119	119	118	117	120	123	124	124	124	123	119	117	118	119	119
30	114	114	114	113	112	116	119	119	119	119	118	115	112	113	114	114
35	108	108	108	108	106	111	113	113	113	113	112	110	106	107	108	108
40	102	102	102	101	99.6	104	106	106	106	106	105	103	99.1	101	101	102
45	94.8	94.8	94.4	93.3	91.8	96.8	98.4	98.0	97.8	97.9	97.7	95.6	91.4	93.0	94.2	94.9
50	87.3	87.1	86.5	85.0	83.2	88.2	89.7	89.4	89.1	89.2	89.1	87.0	82.7	84.7	86.2	87.2
55	79.2	78.9	77.9	75.9	73.7	78.7	80.4	80.3	80.2	80.1	79.8	77.6	73.3	75.5	77.7	79.0
60	70.6	70.2	68.7	66.1	63.4	68.4	70.6	70.8	71.0	70.6	70.0	67.4	63.0	65.7	68.5	70.2
65	61.6	61.0	59.1	55.6	52.3	57.5	60.3	61.2	61.6	61.0	59.7	56.6	52.0	55.4	58.9	61.1
70	52.2	51.5	49.0	44.7	40.6	46.2	49.7	51.5	52.3	51.4	49.2	45.3	40.4	44.4	48.9	51.6
75	42.6	41.7	38.7	33.6	28.6	34.6	39.3	42.0	43.0	41.9	38.9	34.0	28.5	33.3	38.6	41.8
80	33.1	32.0	28.5	22.7	17.0	23.8	29.6	33.0	34.4	33.0	29.3	23.1	16.8	22.4	28.4	32.1
85	24.2	23.0	19.3	13.2	7.15	14.8	21.8	26.2	27.8	26.2	21.5	14.4	7.19	12.8	19.0	23.0
90	17.2	16.0	12.6	6.80	1.61	10.3	18.1	22.8	24.3	22.6	17.7	9.90	1.40	6.53	12.2	16.0
95	13.8	12.7	9.67	4.87	0.06	8.76	16.3	20.9	22.5	20.7	16.0	8.56	0.13	4.56	9.44	12.6
100	12.0	11.1	8.13	3.71	0.06	7.70	14.8	19.2	20.8	19.1	14.6	7.69	0.16	3.34	7.90	11.0
105	10.4	9.49	6.76	2.65	0.08	6.87	13.5	17.7	19.1	17.5	13.4	7.02	0.16	2.40	6.53	9.43
110	8.91	8.03	5.53	2.03	0.08	6.29	12.4	16.2	17.5	16.1	12.4	6.53	0.17	1.69	5.31	7.97
115	7.49	6.69	4.45	1.47	0.11	5.91	11.3	14.8	16.1	14.8	11.4	6.14	0.17	1.18	4.13	6.63
120	6.18	5.47	3.43	1.07	0.14	5.58	10.4	13.5	14.7	13.5	10.4	5.79	0.17	0.84	3.24	5.41
125	4.99	4.37	2.56	0.81	0.15	4.99	9.54	12.4	13.4	12.4	9.60	5.33	0.18	0.63	2.49	4.12
130	3.93	3.41	1.98	0.63	0.17	4.35	8.82	11.3	12.2	11.3	8.92	4.76	0.19	0.49	1.86	3.28
135	2.99	2.57	1.47	0.51	0.18	3.65	8.24	10.3	11.1	10.3	8.33	4.09	0.21	0.39	1.36	2.50
140	2.20	1.76	1.07	0.42	0.18	2.91	7.41	9.38	10.1	9.47	7.67	3.37	0.24	0.33	0.97	1.82
145	1.52	1.27	0.78	0.32	0.18	2.03	6.24	8.54	9.16	8.71	6.79	2.75	0.25	0.25	0.67	1.26
150	1.04	0.89	0.58	0.24	0.17	1.26	5.01	7.23	8.04	7.64	5.92	2.29	0.27	0.21	0.49	0.86
155	0.70	0.63	0.45	0.19	0.17	0.71	3.70	5.72	6.50	6.32	4.93	1.84	0.29	0.22	0.31	0.58
160	0.49	0.46	0.27	0.18	0.18	0.46	2.14	4.04	4.80	4.75	3.62	1.30	0.31	0.24	0.23	0.37
165	0.32	0.28	0.21	0.20	0.19	0.29	0.83	2.01	2.63	2.63	1.85	0.70	0.30	0.25	0.24	0.26
170	0.25	0.22	0.24	0.24	0.26	0.30	0.43	0.58	0.83	0.86	0.65	0.41	0.31	0.28	0.26	0.26
175	0.26	0.26	0.26	0.26	0.27	0.29	0.31	0.34	0.36	0.37	0.35	0.32	0.30	0.28	0.27	0.27
180	0.21	0.30	0.29	0.28	0.28	0.29	0.29	0.30	0.24	0.24	0.30	0.29	0.28	0.28	0.28	0.29

7. Integrating Sphere Test Results for LFUAY-1000-L27-DF-I-10

7.1 Test Data

Test Ambient Temperature (Integrating sphere internal temperature)	25.1℃	Test orientation	Downward
Operate time(Min.)	30	stabilization time(Min.)	0

Optical and Electrical Measurement Result

Number	Time	Current (A)	Voltage (V)	Power (W)	Flux(lm)	x	y	u'	v'	CCT (K)	Ra
0	00h00m00s	0.3828	23.998	9.1864	701.01	0.4667	0.4096	0.2673	0.528	2600	94.4
1	00h00m10s	0.3834	23.998	9.2008	701.2	0.4668	0.4098	0.2674	0.5281	2600	94.4
2	00h00m20s	0.3837	23.998	9.208	701.6	0.4667	0.4099	0.2672	0.5281	2602	94.5
3	00h00m30s	0.3841	23.998	9.2176	701.53	0.4668	0.4097	0.2674	0.5281	2600	94.5
4	00h00m40s	0.3844	23.998	9.2248	702.03	0.4665	0.4095	0.2673	0.5279	2601	94.4
5	00h00m50s	0.3846	23.998	9.2296	701.9	0.4666	0.4095	0.2674	0.5279	2600	94.4
6	00h01m00s	0.3849	23.998	9.2368	702.02	0.4668	0.4096	0.2674	0.528	2598	94.4
7	00h01m10s	0.3851	23.998	9.2416	702.13	0.4667	0.4095	0.2674	0.528	2599	94.4
8	00h01m20s	0.3853	23.998	9.2464	702.67	0.4669	0.4095	0.2675	0.528	2597	94.4
9	00h01m30s	0.3855	23.998	9.2512	702.52	0.4668	0.4095	0.2675	0.528	2598	94.5
10	00h01m40s	0.3856	23.998	9.2536	702.27	0.4669	0.4094	0.2676	0.528	2596	94.4
11	00h01m50s	0.3858	23.998	9.2584	702.76	0.4668	0.4093	0.2676	0.5279	2596	94.4
12	00h02m00s	0.386	23.998	9.2632	702.56	0.4669	0.4093	0.2676	0.5279	2595	94.4
13	00h02m10s	0.3861	23.998	9.2656	703.33	0.4667	0.4092	0.2675	0.5279	2597	94.4
14	00h02m20s	0.3862	23.998	9.268	702.76	0.4668	0.4092	0.2676	0.5279	2596	94.4
15	00h02m30s	0.3864	23.998	9.2728	702.87	0.4669	0.4093	0.2676	0.5279	2595	94.4
16	00h02m40s	0.3865	23.998	9.2752	703.39	0.4668	0.4092	0.2676	0.5279	2596	94.4
17	00h02m50s	0.3866	23.998	9.2776	703.08	0.4667	0.4091	0.2676	0.5278	2595	94.4
18	00h03m00s	0.3867	23.998	9.28	703.13	0.4669	0.4091	0.2677	0.5278	2594	94.4
19	00h03m10s	0.3868	23.998	9.2824	703.02	0.4667	0.409	0.2677	0.5278	2594	94.4
20	00h03m20s	0.3869	23.998	9.2848	703.37	0.4667	0.4092	0.2676	0.5278	2596	94.5
21	00h03m30s	0.387	23.998	9.2872	703.36	0.4667	0.4091	0.2676	0.5278	2596	94.4

22	00h03m40s	0.3871	23.998	9.2896	703.66	0.467	0.4092	0.2678	0.5279	2593	94.4
23	00h03m50s	0.3872	23.998	9.292	703.51	0.4669	0.4091	0.2677	0.5278	2593	94.3
24	00h04m00s	0.3873	23.998	9.2944	703.16	0.4667	0.4089	0.2677	0.5277	2594	94.4
25	00h04m10s	0.3874	23.998	9.2968	703.85	0.4669	0.4091	0.2677	0.5279	2593	94.4
26	00h04m20s	0.3874	23.998	9.2968	703.37	0.4669	0.409	0.2678	0.5278	2592	94.3
27	00h04m30s	0.3875	23.998	9.2992	703.39	0.4669	0.409	0.2678	0.5278	2593	94.4
28	00h04m40s	0.3876	23.998	9.3016	703.34	0.4668	0.409	0.2677	0.5278	2593	94.4
29	00h04m50s	0.3876	23.998	9.3016	703.54	0.4668	0.4088	0.2678	0.5277	2592	94.4
30	00h05m00s	0.3877	23.998	9.304	703.3	0.4669	0.4091	0.2678	0.5278	2592	94.4
31	00h05m10s	0.3878	23.998	9.3064	703.98	0.467	0.409	0.2679	0.5278	2591	94.3
32	00h05m20s	0.3878	23.998	9.3064	703.68	0.4667	0.4089	0.2677	0.5277	2594	94.4
33	00h05m30s	0.3879	23.998	9.3088	703.99	0.4667	0.409	0.2677	0.5278	2595	94.4
34	00h05m40s	0.3879	23.998	9.3088	703.97	0.4669	0.4091	0.2677	0.5278	2593	94.4
35	00h05m50s	0.388	23.998	9.3112	703.54	0.4669	0.4089	0.2678	0.5278	2592	94.3
36	00h06m00s	0.388	23.998	9.3112	703.4	0.4669	0.4088	0.2679	0.5277	2591	94.4
37	00h06m10s	0.3881	23.998	9.3136	703.91	0.4669	0.4088	0.2679	0.5277	2591	94.3
38	00h06m20s	0.3881	23.998	9.3136	704.05	0.4669	0.4089	0.2679	0.5278	2591	94.4
39	00h06m30s	0.3882	23.998	9.316	703.87	0.4669	0.4089	0.2678	0.5278	2592	94.4
40	00h06m40s	0.3882	23.998	9.316	704.35	0.467	0.4091	0.2678	0.5278	2591	94.3
41	00h06m50s	0.3883	23.998	9.3184	704.5	0.4669	0.4091	0.2677	0.5278	2593	94.4
42	00h07m00s	0.3883	23.998	9.3184	703.69	0.4671	0.4088	0.268	0.5277	2589	94.3
43	00h07m10s	0.3884	23.998	9.3208	704.04	0.467	0.4088	0.2679	0.5278	2590	94.4
44	00h07m20s	0.3884	23.998	9.3208	703.11	0.4668	0.4086	0.2679	0.5276	2590	94.3
45	00h07m30s	0.3884	23.998	9.3208	703.87	0.4671	0.4089	0.268	0.5278	2588	94.3
46	00h07m40s	0.3885	23.998	9.3232	703.89	0.467	0.4088	0.268	0.5277	2589	94.3
47	00h07m50s	0.3885	23.998	9.3232	704.09	0.4669	0.4087	0.2679	0.5277	2591	94.4
48	00h08m00s	0.3885	23.998	9.3232	704.06	0.4668	0.4087	0.2679	0.5277	2591	94.4
49	00h08m10s	0.3886	23.998	9.3256	703.94	0.4668	0.4086	0.2679	0.5276	2591	94.3
50	00h08m20s	0.3886	23.998	9.3256	703.95	0.4669	0.4087	0.2679	0.5277	2590	94.4
51	00h08m30s	0.3886	23.998	9.3256	703.9	0.467	0.4087	0.268	0.5277	2589	94.3
52	00h08m40s	0.3887	23.998	9.328	704.9	0.4669	0.4091	0.2677	0.5278	2593	94.4

53	00h08m50s	0.3887	23.998	9.328	704.36	0.4669	0.4088	0.2679	0.5278	2591	94.4
54	00h09m00s	0.3887	23.998	9.328	704.28	0.467	0.4088	0.268	0.5277	2589	94.3
55	00h09m10s	0.3888	23.998	9.3304	704.81	0.4668	0.4088	0.2678	0.5277	2592	94.4
56	00h09m20s	0.3888	23.998	9.3304	704.35	0.4669	0.4088	0.2679	0.5277	2591	94.4
57	00h09m30s	0.3888	23.998	9.3304	704.32	0.467	0.4088	0.268	0.5277	2589	94.3
58	00h09m40s	0.3888	23.998	9.3304	704.62	0.4671	0.4089	0.268	0.5278	2589	94.3
59	00h09m50s	0.3889	23.998	9.3328	704.47	0.467	0.4088	0.268	0.5277	2589	94.3
60	00h10m00s	0.3889	23.998	9.3328	704.09	0.467	0.4087	0.268	0.5277	2589	94.3
61	00h10m10s	0.3889	23.998	9.3328	704.28	0.467	0.4088	0.268	0.5278	2589	94.4
62	00h10m20s	0.3889	23.998	9.3328	704.02	0.4669	0.4087	0.268	0.5277	2589	94.3
63	00h10m30s	0.389	23.998	9.3352	704.02	0.467	0.4087	0.268	0.5277	2588	94.3
64	00h10m40s	0.389	23.998	9.3352	704.23	0.4671	0.4088	0.268	0.5278	2589	94.4
65	00h10m50s	0.389	23.998	9.3352	704.6	0.4668	0.4087	0.2679	0.5277	2591	94.4
66	00h11m00s	0.389	23.998	9.3352	704.83	0.467	0.4087	0.268	0.5277	2589	94.3
67	00h11m10s	0.3891	23.998	9.3376	704.24	0.4669	0.4087	0.268	0.5277	2589	94.4
68	00h11m20s	0.3891	23.998	9.3376	704.24	0.4668	0.4086	0.2679	0.5276	2590	94.4
69	00h11m30s	0.3891	23.998	9.3376	704.15	0.467	0.4087	0.268	0.5277	2588	94.3
70	00h11m40s	0.3891	23.998	9.3376	704.23	0.467	0.4088	0.268	0.5277	2589	94.3
71	00h11m50s	0.3891	23.998	9.3376	704.87	0.4667	0.4087	0.2678	0.5277	2592	94.4
72	00h12m00s	0.3891	23.998	9.3376	704.69	0.4669	0.4087	0.2679	0.5277	2590	94.4
73	00h12m10s	0.3892	23.998	9.34	704.29	0.467	0.4086	0.268	0.5276	2588	94.3
74	00h12m20s	0.3892	23.998	9.34	704.6	0.4669	0.4088	0.2679	0.5277	2590	94.3
75	00h12m30s	0.3892	23.998	9.34	704.88	0.4669	0.4088	0.2679	0.5277	2591	94.3
76	00h12m40s	0.3892	23.998	9.34	703.83	0.4669	0.4086	0.268	0.5276	2589	94.3
77	00h12m50s	0.3892	23.998	9.34	704.66	0.467	0.4088	0.268	0.5277	2589	94.3
78	00h13m00s	0.3893	23.998	9.3424	704.8	0.4669	0.4087	0.2679	0.5277	2591	94.4
79	00h13m10s	0.3893	23.998	9.3424	704.58	0.467	0.4086	0.268	0.5277	2589	94.3
80	00h13m20s	0.3893	23.998	9.3424	704.72	0.4669	0.4086	0.2679	0.5277	2590	94.3
81	00h13m30s	0.3893	23.998	9.3424	704.7	0.467	0.4087	0.268	0.5277	2588	94.3
82	00h13m40s	0.3893	23.998	9.3424	705.1	0.467	0.4087	0.268	0.5277	2589	94.3
83	00h13m50s	0.3893	23.998	9.3424	704.49	0.467	0.4087	0.268	0.5277	2589	94.3

84	00h14m00s	0.3893	23.998	9.3424	704.53	0.4671	0.4088	0.268	0.5277	2589	94.4
85	00h14m10s	0.3893	23.998	9.3424	704.69	0.467	0.4085	0.2681	0.5276	2588	94.4
86	00h14m20s	0.3894	23.998	9.3448	704.37	0.467	0.4085	0.2681	0.5276	2588	94.3
87	00h14m30s	0.3894	23.998	9.3448	704.45	0.467	0.4086	0.268	0.5277	2589	94.4
88	00h14m40s	0.3894	23.998	9.3448	704.64	0.4668	0.4085	0.268	0.5276	2589	94.3
89	00h14m50s	0.3894	23.998	9.3448	704.62	0.4668	0.4085	0.268	0.5276	2590	94.3
90	00h15m00s	0.3894	23.998	9.3448	704.7	0.467	0.4088	0.268	0.5277	2589	94.4
91	00h15m10s	0.3894	23.998	9.3448	705.04	0.467	0.4086	0.268	0.5277	2589	94.3
92	00h15m20s	0.3894	23.998	9.3448	704.68	0.4671	0.4086	0.2681	0.5277	2587	94.3
93	00h15m30s	0.3894	23.998	9.3448	705.14	0.467	0.4086	0.268	0.5277	2588	94.3
94	00h15m40s	0.3894	23.998	9.3448	704.89	0.467	0.4089	0.2679	0.5278	2590	94.4
95	00h15m50s	0.3895	23.998	9.3472	704.76	0.4669	0.4086	0.268	0.5276	2590	94.3
96	00h16m00s	0.3895	23.998	9.3472	704.91	0.4669	0.4086	0.268	0.5276	2589	94.3
97	00h16m10s	0.3895	23.998	9.3472	705.01	0.4671	0.4088	0.268	0.5277	2588	94.3
98	00h16m20s	0.3895	23.998	9.3472	704.76	0.4671	0.4088	0.268	0.5278	2589	94.3
99	00h16m30s	0.3895	23.998	9.3472	704.44	0.467	0.4084	0.2681	0.5276	2587	94.3
100	00h16m40s	0.3895	23.998	9.3472	704.97	0.467	0.4087	0.268	0.5277	2589	94.4
101	00h16m50s	0.3895	23.998	9.3472	705.09	0.467	0.4086	0.268	0.5277	2588	94.3
102	00h17m00s	0.3895	23.998	9.3472	704.93	0.467	0.4087	0.268	0.5277	2588	94.3
103	00h17m10s	0.3895	23.998	9.3472	704.75	0.4668	0.4085	0.268	0.5276	2590	94.3
104	00h17m20s	0.3895	23.998	9.3472	704.96	0.467	0.4086	0.268	0.5277	2588	94.3
105	00h17m30s	0.3895	23.998	9.3472	704.7	0.467	0.4084	0.2681	0.5276	2587	94.3
106	00h17m40s	0.3896	23.998	9.3496	704.68	0.4669	0.4085	0.268	0.5276	2588	94.3
107	00h17m50s	0.3896	23.998	9.3496	705.2	0.467	0.4086	0.268	0.5277	2589	94.4
108	00h18m00s	0.3896	23.998	9.3496	705.19	0.4671	0.4087	0.2681	0.5277	2587	94.4
109	00h18m10s	0.3896	23.998	9.3496	704.97	0.467	0.4086	0.268	0.5277	2589	94.3
110	00h18m20s	0.3896	23.998	9.3496	705.54	0.467	0.4088	0.268	0.5278	2589	94.3
111	00h18m30s	0.3896	23.998	9.3496	705.07	0.4671	0.4086	0.2681	0.5277	2587	94.3
112	00h18m40s	0.3896	23.998	9.3496	704.84	0.467	0.4087	0.268	0.5277	2589	94.3
113	00h18m50s	0.3896	23.998	9.3496	704.89	0.467	0.4086	0.268	0.5276	2588	94.3
114	00h19m00s	0.3896	23.998	9.3496	705.42	0.467	0.4087	0.268	0.5277	2588	94.4

115	00h19m10s	0.3896	23.998	9.3496	705.38	0.467	0.4086	0.268	0.5276	2588	94.4
116	00h19m20s	0.3896	23.998	9.3496	705.25	0.4669	0.4086	0.268	0.5276	2590	94.4
117	00h19m30s	0.3896	23.998	9.3496	705.29	0.4668	0.4085	0.268	0.5276	2589	94.3
118	00h19m40s	0.3896	23.998	9.3496	705.35	0.4669	0.4084	0.268	0.5276	2588	94.3
119	00h19m50s	0.3896	23.998	9.3496	705.71	0.467	0.4085	0.2681	0.5276	2587	94.3
120	00h20m00s	0.3896	23.998	9.3496	705.13	0.467	0.4086	0.268	0.5277	2588	94.4
121	00h20m10s	0.3897	23.998	9.352	705.37	0.467	0.4087	0.268	0.5277	2589	94.3
122	00h20m20s	0.3897	23.998	9.352	705.35	0.467	0.4086	0.2681	0.5277	2587	94.3
123	00h20m30s	0.3897	23.998	9.352	705.59	0.467	0.4085	0.2681	0.5276	2588	94.3
124	00h20m40s	0.3897	23.998	9.352	705.4	0.4672	0.4086	0.2681	0.5277	2586	94.3
125	00h20m50s	0.3897	23.998	9.352	705.37	0.4669	0.4085	0.268	0.5276	2589	94.3
126	00h21m00s	0.3897	23.998	9.352	705.57	0.467	0.4086	0.268	0.5277	2588	94.3
127	00h21m10s	0.3897	23.998	9.352	705.39	0.4669	0.4084	0.2681	0.5276	2587	94.3
128	00h21m20s	0.3897	23.998	9.352	705.21	0.467	0.4086	0.268	0.5277	2588	94.3
129	00h21m30s	0.3897	23.998	9.352	705.86	0.4671	0.4086	0.2681	0.5277	2586	94.3
130	00h21m40s	0.3897	23.998	9.352	705.56	0.4669	0.4085	0.268	0.5276	2588	94.3
131	00h21m50s	0.3897	23.998	9.352	705.59	0.467	0.4084	0.2681	0.5276	2587	94.3
132	00h22m00s	0.3897	23.998	9.352	705.87	0.467	0.4085	0.2681	0.5276	2587	94.3
133	00h22m10s	0.3897	23.998	9.352	705.8	0.467	0.4086	0.268	0.5277	2588	94.3
134	00h22m20s	0.3897	23.998	9.352	705.24	0.467	0.4086	0.268	0.5276	2588	94.3
135	00h22m30s	0.3897	23.998	9.352	705.48	0.4668	0.4086	0.2679	0.5276	2591	94.4
136	00h22m40s	0.3897	23.998	9.352	705.41	0.4671	0.4086	0.2681	0.5277	2587	94.3
137	00h22m50s	0.3897	23.998	9.352	705.68	0.467	0.4085	0.268	0.5276	2588	94.3
138	00h23m00s	0.3897	23.998	9.352	705.6	0.4669	0.4086	0.268	0.5276	2589	94.3
139	00h23m10s	0.3898	23.998	9.3544	705.62	0.467	0.4085	0.2681	0.5276	2588	94.3
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144	00h24m00s	0.3898	23.998	9.3544	705.7	0.4668	0.4084	0.268	0.5275	2589	94.3
145	00h24m10s	0.3898	23.998	9.3544	705.68	0.4672	0.4087	0.2681	0.5277	2586	94.3

146	00h24m20s	0.3898	23.998	9.3544	705.53	0.4669	0.4084	0.2681	0.5276	2588	94.3
147	00h24m30s	0.3898	23.998	9.3544	705.86	0.467	0.4087	0.268	0.5277	2588	94.3
148	00h24m40s	0.3898	23.998	9.3544	705.69	0.4671	0.4086	0.2681	0.5277	2587	94.3
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151	00h25m10s	0.3898	23.998	9.3544	705.7	0.4669	0.4086	0.268	0.5276	2589	94.3
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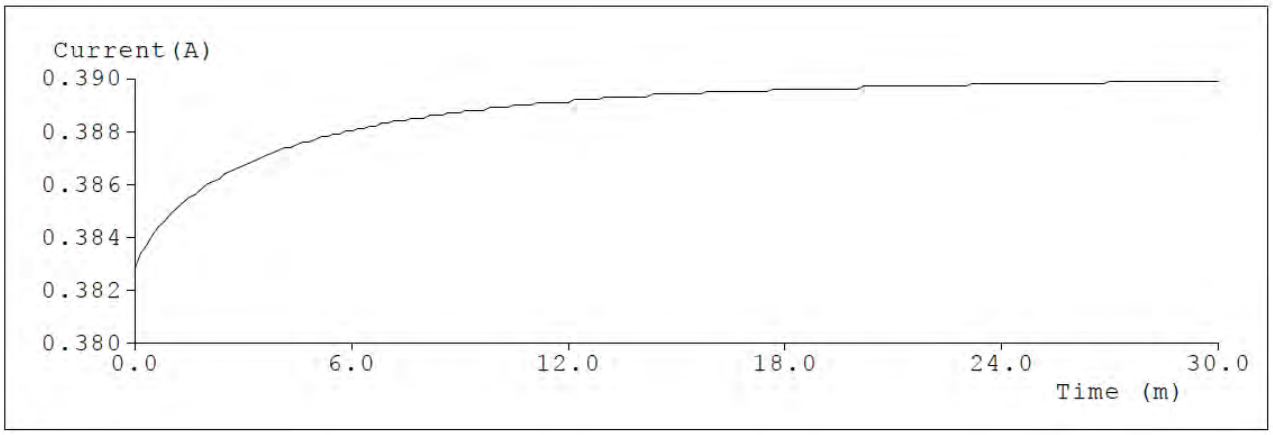
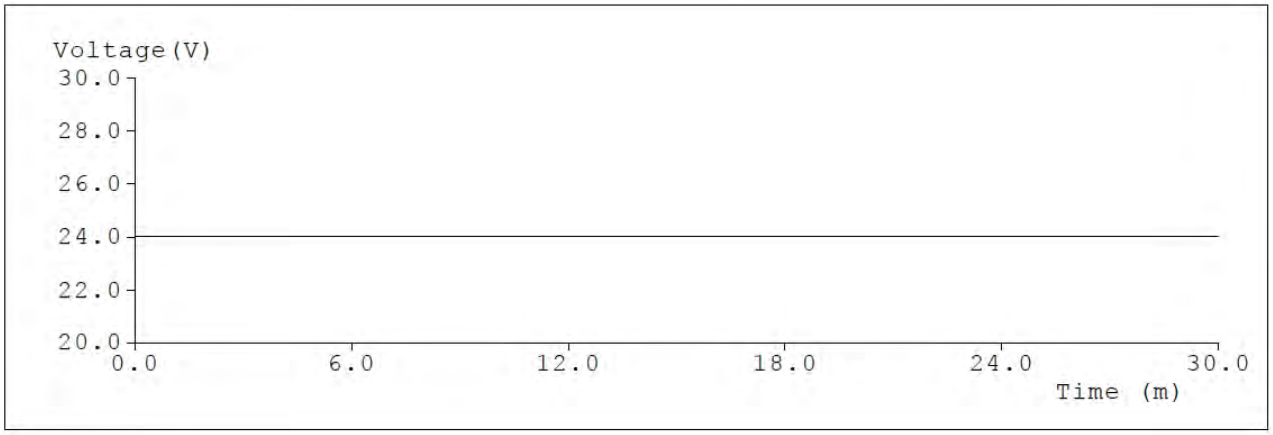
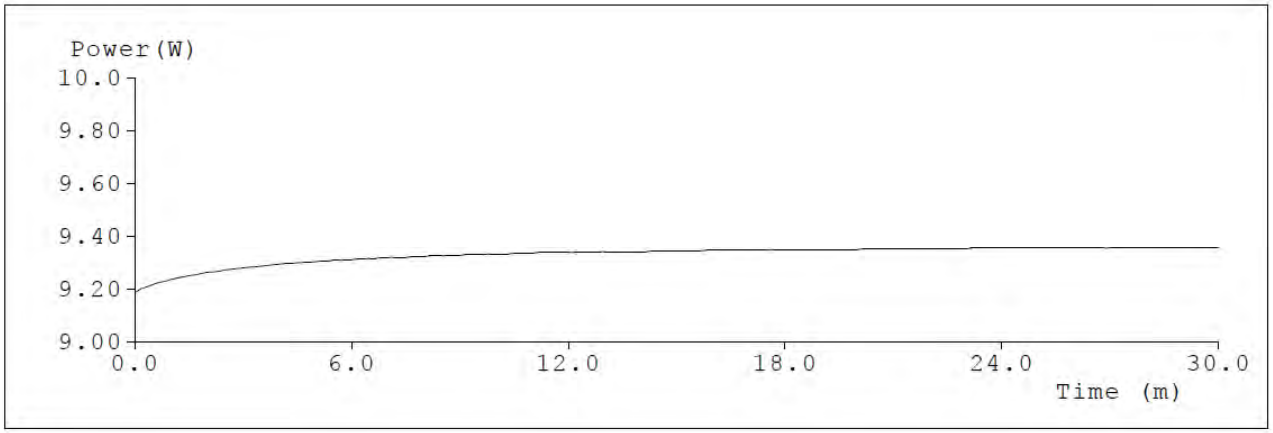
153	00h25m30s	0.3898	23.998	9.3544	706.12	0.467	0.4087	0.268	0.5277	2588	94.3
154	00h25m40s	0.3898	23.998	9.3544	705.37	0.4669	0.4085	0.268	0.5276	2588	94.3
155	00h25m50s	0.3898	23.998	9.3544	705.76	0.4669	0.4082	0.2682	0.5275	2586	94.3
156	00h26m00s	0.3898	23.998	9.3544	705.67	0.4671	0.4085	0.2681	0.5276	2586	94.3
157	00h26m10s	0.3898	23.998	9.3544	705.63	0.467	0.4084	0.2681	0.5276	2587	94.3
158	00h26m20s	0.3898	23.998	9.3544	706.01	0.467	0.4084	0.2681	0.5276	2587	94.2
159	00h26m30s	0.3898	23.998	9.3544	705.57	0.4668	0.4085	0.268	0.5276	2590	94.3
160	00h26m40s	0.3898	23.998	9.3544	705.42	0.467	0.4085	0.2681	0.5276	2587	94.3
161	00h26m50s	0.3898	23.998	9.3544	706.15	0.467	0.4086	0.268	0.5277	2589	94.3
162	00h27m00s	0.3899	23.998	9.3568	705.76	0.467	0.4086	0.268	0.5277	2588	94.3
163	00h27m10s	0.3899	23.998	9.3568	705.58	0.4669	0.4086	0.268	0.5276	2589	94.4
164	00h27m20s	0.3899	23.998	9.3568	705.6	0.4672	0.4088	0.2681	0.5278	2587	94.3
165	00h27m30s	0.3899	23.998	9.3568	705.72	0.4668	0.4084	0.268	0.5276	2589	94.3
166	00h27m40s	0.3899	23.998	9.3568	705.84	0.4668	0.4085	0.2679	0.5276	2590	94.3
167	00h27m50s	0.3899	23.998	9.3568	706	0.4669	0.4085	0.268	0.5276	2589	94.3
168	00h28m00s	0.3899	23.998	9.3568	705.92	0.4669	0.4084	0.2681	0.5276	2587	94.3
169	00h28m10s	0.3899	23.998	9.3568	705.68	0.4669	0.4086	0.2679	0.5277	2590	94.3
170	00h28m20s	0.3899	23.998	9.3568	706.05	0.4669	0.4085	0.268	0.5276	2589	94.3
171	00h28m30s	0.3899	23.998	9.3568	705.88	0.4668	0.4086	0.2679	0.5276	2590	94.3
172	00h28m40s	0.3899	23.998	9.3568	705.8	0.4668	0.4083	0.268	0.5275	2589	94.3
173	00h28m50s	0.3899	23.998	9.3568	705.98	0.4668	0.4086	0.268	0.5276	2590	94.4
174	00h29m00s	0.3899	23.998	9.3568	705.7	0.4671	0.4086	0.2681	0.5277	2587	94.3
175	00h29m10s	0.3899	23.998	9.3568	706.06	0.467	0.4085	0.2681	0.5276	2587	94.3
176	00h29m20s	0.3899	23.998	9.3568	706.27	0.4669	0.4085	0.268	0.5276	2588	94.3

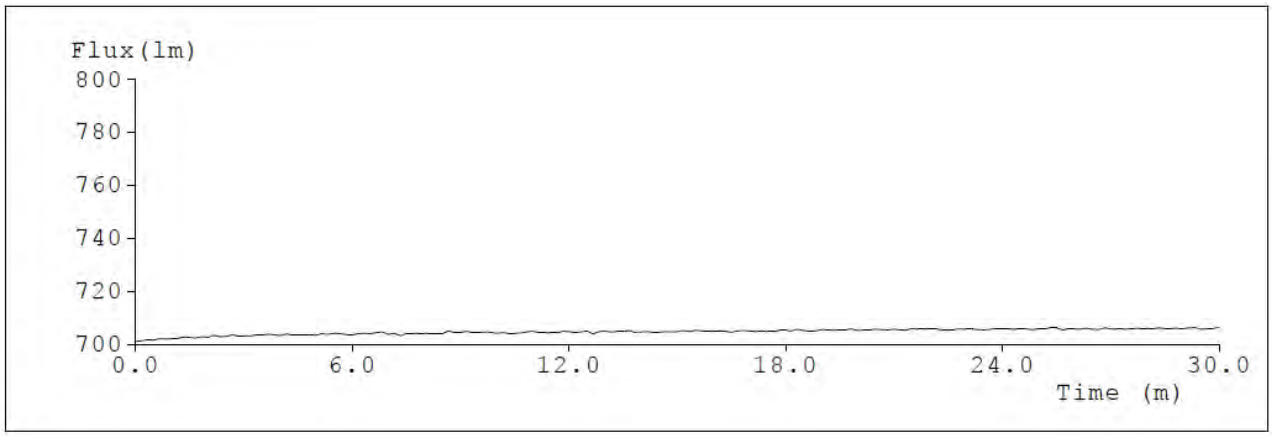
177	00h29m30s	0.3899	23.998	9.3568	705.65	0.467	0.4086	0.2681	0.5277	2587	94.3
178	00h29m40s	0.3899	23.998	9.3568	705.7	0.467	0.4085	0.2681	0.5276	2587	94.3
179	00h29m50s	0.3899	23.998	9.3568	705.85	0.4669	0.4085	0.268	0.5276	2589	94.4
180	00h30m00s	0.3899	23.998	9.3568	706.36	0.4667	0.4085	0.2679	0.5276	2591	94.3

Test curves





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720
700
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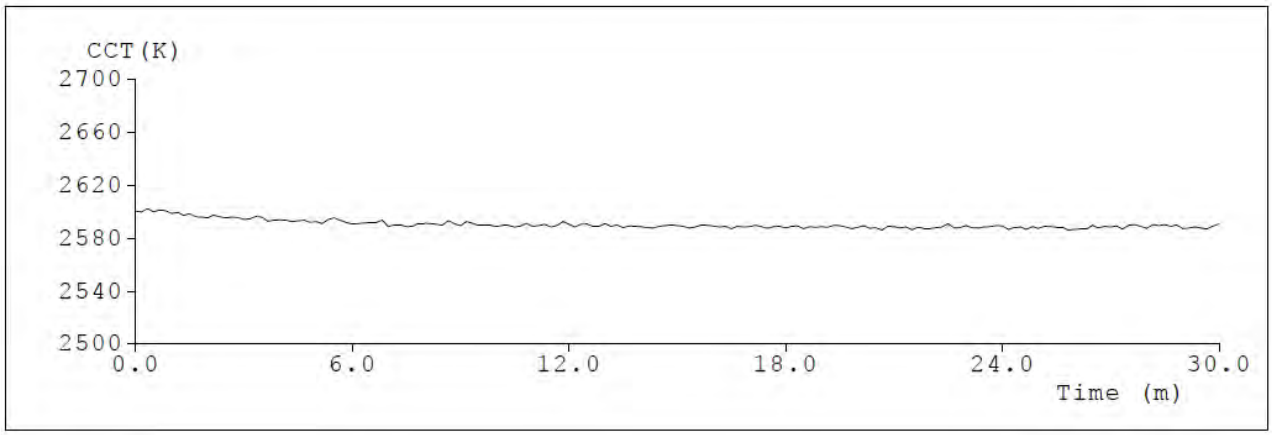
24.0
30.0
Time (m)


CCT(K)
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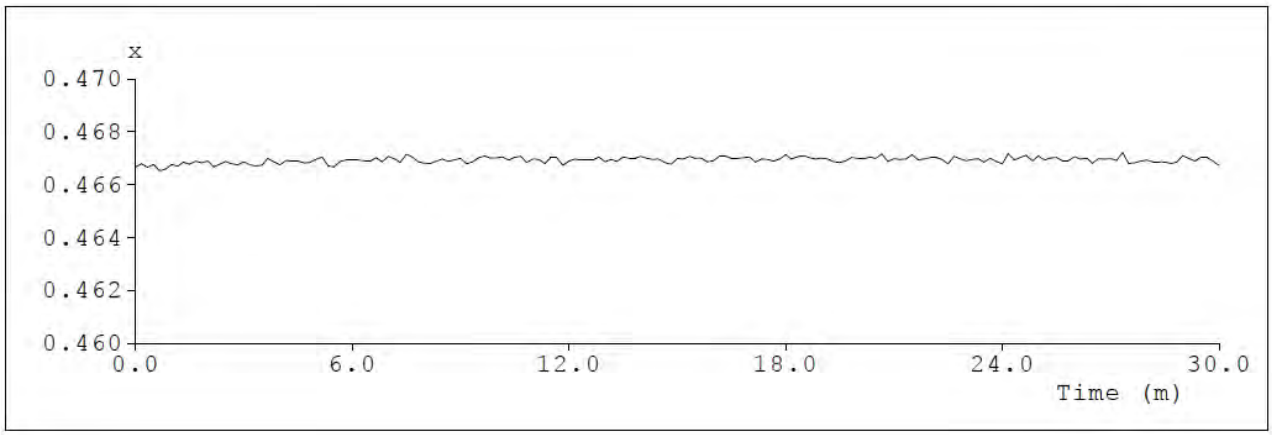
2620
2580
2540
2500
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)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0.460
0.0
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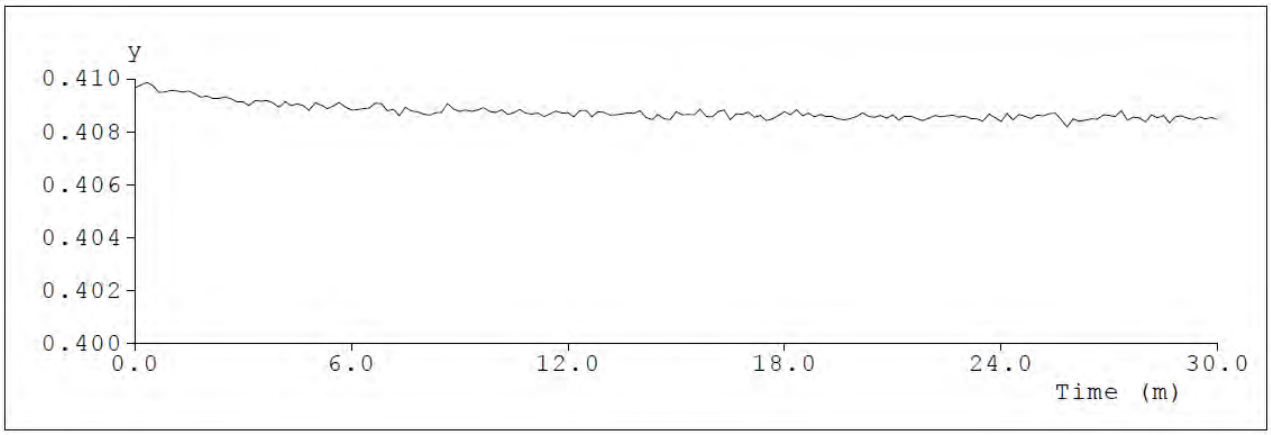
24.0
30.0
Time (m)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6.0
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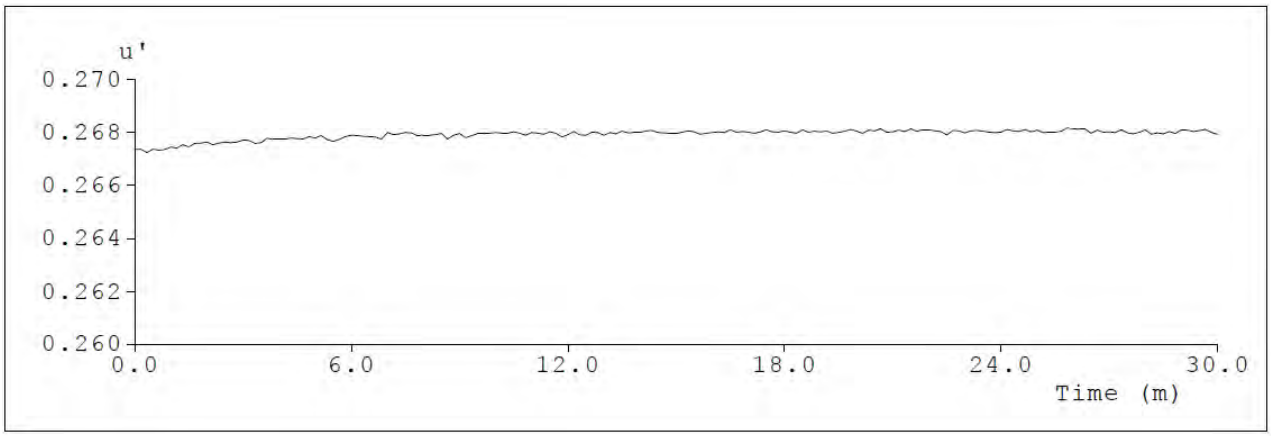
30.0
Time (m)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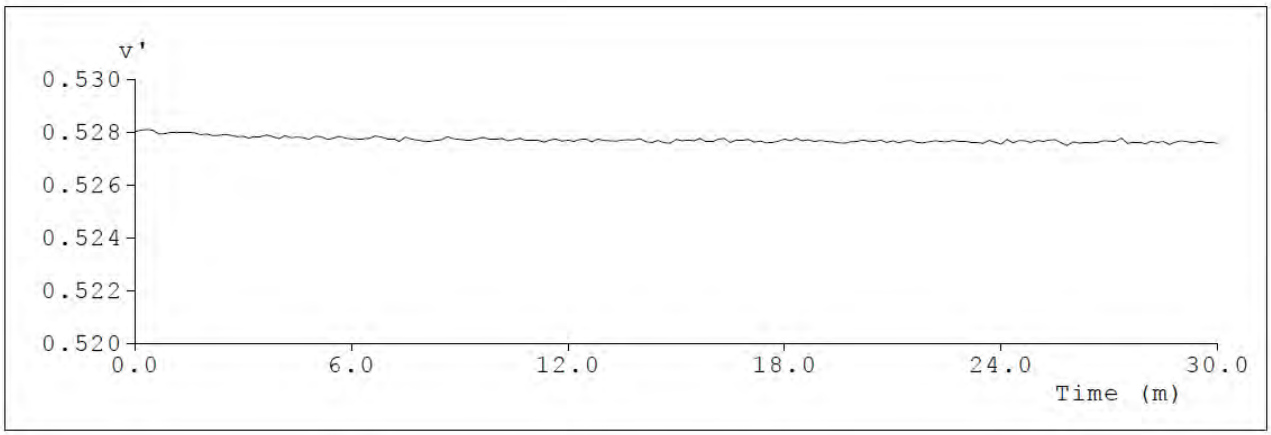
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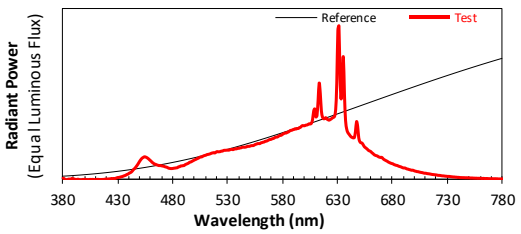
6.0
12.0
18.0
24.0
30.0
Time (m)

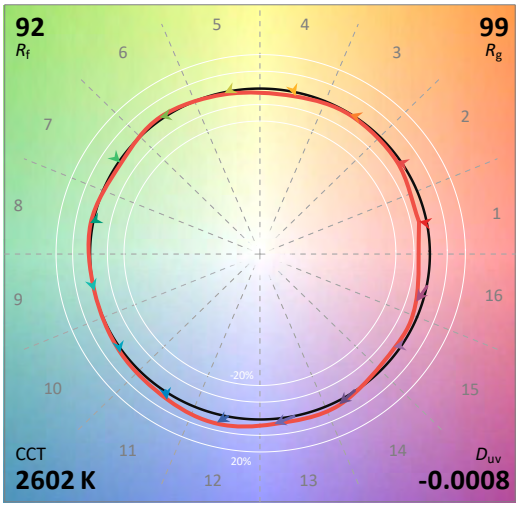
*7.2 ANSI/IES TM-30-18 Color Rendition Report

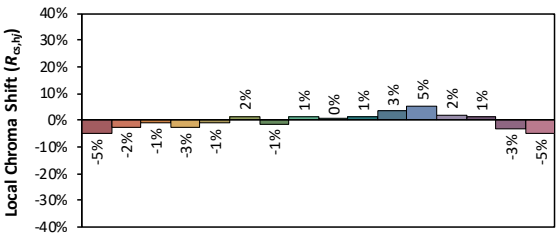
ANSI/IES TM-30-18 Color Rendition Report

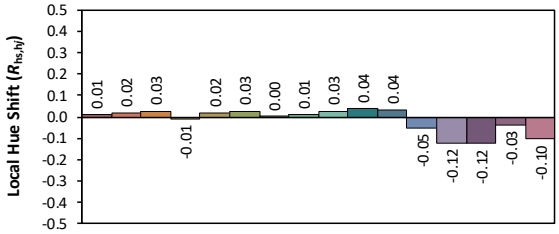
Source: Manufacturer:

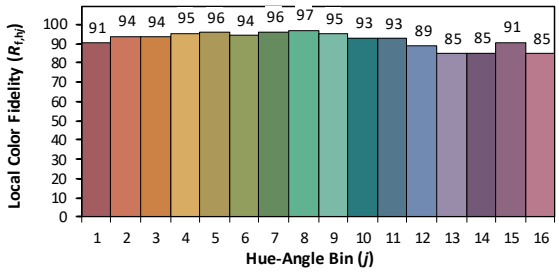
Date: 2023/9/26 Model: LFUAY-1000-L27-DF-I-10

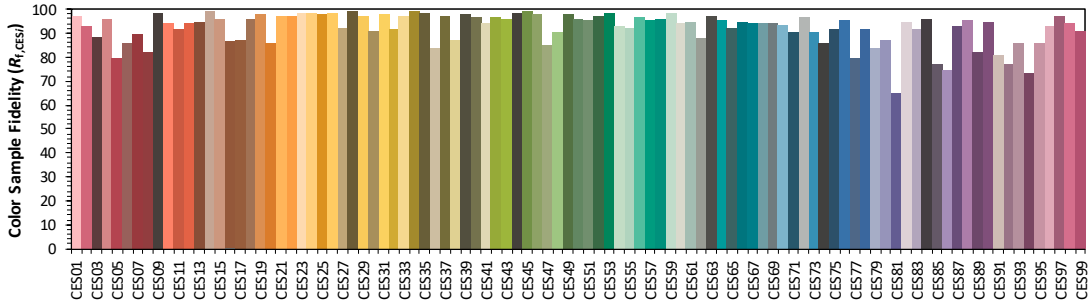












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

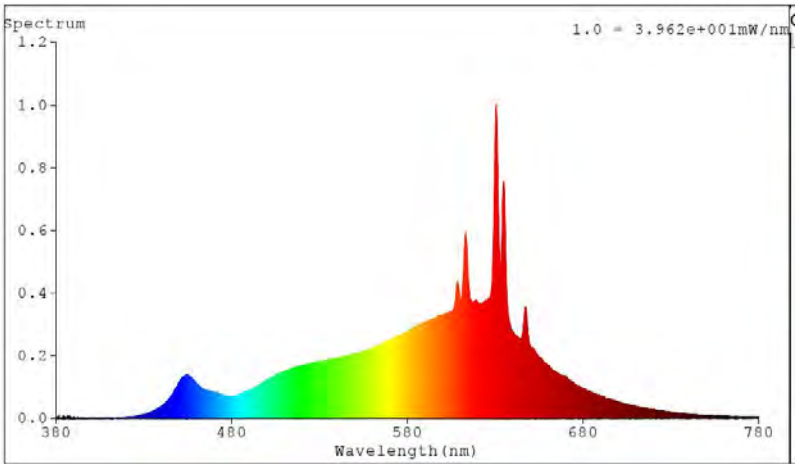
x	0.4667
y	0.4099
u'	0.2672
v'	0.5281

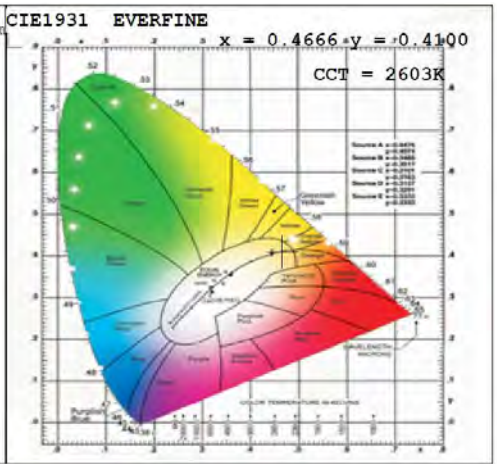
CIE 13.3-1995 (CRI)

R_a	95
R_9	61

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

7.3 Relative Spectral Power Distribution





nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.01	414	0.0015	448	0.095	482	0.0717	516	0.1637
381	0.007	415	0.0019	449	0.106	483	0.073	517	0.1655
382	0.0002	416	0.0024	450	0.1166	484	0.0741	518	0.1634
383	0	417	0.0026	451	0.1255	485	0.0793	519	0.1678
384	0.002	418	0.0039	452	0.1325	486	0.0799	520	0.1718
385	0.0046	419	0.0046	453	0.1367	487	0.0844	521	0.1707
386	0.004	420	0.0048	454	0.1402	488	0.0847	522	0.171
387	0.002	421	0.005	455	0.1387	489	0.0864	523	0.1719
388	0.0086	422	0.0057	456	0.1358	490	0.0868	524	0.1749
389	0.0014	423	0.0063	457	0.1313	491	0.0922	525	0.1748
390	0.0058	424	0.008	458	0.1259	492	0.0952	526	0.1788
391	0.0017	425	0.0074	459	0.1195	493	0.0982	527	0.1798
392	0.0017	426	0.0083	460	0.1137	494	0.1012	528	0.1799
393	0.0034	427	0.0081	461	0.1064	495	0.1065	529	0.1807
394	0.0033	428	0.01	462	0.102	496	0.1084	530	0.1806
395	0	429	0.0126	463	0.0961	497	0.1116	531	0.1809
396	0.0003	430	0.0141	464	0.0948	498	0.1156	532	0.1836
397	0.0001	431	0.015	465	0.0915	499	0.1191	533	0.1858
398	0.003	432	0.017	466	0.0894	500	0.1226	534	0.1844
399	0.001	433	0.0188	467	0.087	501	0.1253	535	0.1845
400	0.0037	434	0.0204	468	0.0869	502	0.1292	536	0.1885
401	0.0009	435	0.0233	469	0.0864	503	0.1317	537	0.1883
402	0.0014	436	0.0256	470	0.0845	504	0.1359	538	0.1892
403	0.0008	437	0.0283	471	0.0834	505	0.1393	539	0.1922
404	0.0022	438	0.0326	472	0.0815	506	0.1394	540	0.1918
405	0.0024	439	0.0348	473	0.0788	507	0.143	541	0.1942
406	0.0021	440	0.04	474	0.0775	508	0.1466	542	0.1951
407	0.0028	441	0.0432	475	0.0745	509	0.1484	543	0.1981
408	0.0015	442	0.0472	476	0.071	510	0.1504	544	0.1988
409	0.0015	443	0.0541	477	0.0696	511	0.1539	545	0.1984
410	0.0016	444	0.0623	478	0.0686	512	0.1548	546	0.1994
411	0.0027	445	0.0686	479	0.0687	513	0.1567	547	0.2013
412	0.0027	446	0.0763	480	0.0696	514	0.1589	548	0.2044
413	0.002	447	0.0854	481	0.0709	515	0.1622	549	0.2037

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.2051	599	0.3291	648	0.3256	697	0.0583	746	0.0125
551	0.2076	600	0.3301	649	0.2561	698	0.0588	747	0.0126
552	0.2085	601	0.3332	650	0.2323	699	0.0566	748	0.0124
553	0.2085	602	0.3341	651	0.2259	700	0.0536	749	0.012
554	0.2119	603	0.3375	652	0.2236	701	0.0522	750	0.0119
555	0.2158	604	0.3416	653	0.214	702	0.0501	751	0.0107
556	0.2176	605	0.3402	654	0.2025	703	0.0496	752	0.0114
557	0.2206	606	0.3452	655	0.1963	704	0.0475	753	0.0105
558	0.2207	607	0.3681	656	0.1911	705	0.046	754	0.0104
559	0.2206	608	0.4186	657	0.1851	706	0.0446	755	0.0098
560	0.2252	609	0.4314	658	0.1786	707	0.0436	756	0.0101
561	0.2269	610	0.3829	659	0.1754	708	0.0414	757	0.0093
562	0.2292	611	0.3913	660	0.1718	709	0.0402	758	0.0095
563	0.2306	612	0.4823	661	0.1648	710	0.0401	759	0.0092
564	0.235	613	0.5895	662	0.1598	711	0.0384	760	0.0094
565	0.2355	614	0.5261	663	0.1532	712	0.0373	761	0.0079
566	0.2387	615	0.4201	664	0.1495	713	0.0366	762	0.0088
567	0.2422	616	0.3823	665	0.1471	714	0.0353	763	0.0085
568	0.2455	617	0.3721	666	0.1449	715	0.0338	764	0.0077
569	0.246	618	0.3731	667	0.1401	716	0.0325	765	0.008
570	0.2494	619	0.3785	668	0.1378	717	0.0319	766	0.0079
571	0.2513	620	0.3705	669	0.1361	718	0.031	767	0.0073
572	0.254	621	0.3663	670	0.1368	719	0.0303	768	0.007
573	0.2589	622	0.3632	671	0.1294	720	0.0293	769	0.0068
574	0.2601	623	0.3671	672	0.1237	721	0.0275	770	0.0069
575	0.261	624	0.371	673	0.1199	722	0.0271	771	0.007
576	0.2654	625	0.3768	674	0.1162	723	0.0266	772	0.0063
577	0.2701	626	0.3804	675	0.1127	724	0.0253	773	0.0069
578	0.2705	627	0.3865	676	0.1081	725	0.0242	774	0.0064
579	0.2736	628	0.4264	677	0.1049	726	0.024	775	0.0064
580	0.2786	629	0.5876	678	0.1017	727	0.023	776	0.0056
581	0.2822	630	0.9099	679	0.0992	728	0.0221	777	0.0055
582	0.2848	631	0.9355	680	0.0975	729	0.0216	778	0.0057
583	0.2851	632	0.618	681	0.0934	730	0.0206	779	0.0056
584	0.289	633	0.4922	682	0.0908	731	0.0209	780	0.0056
585	0.2915	634	0.634	683	0.0885	732	0.0201		
586	0.2966	635	0.7479	684	0.0872	733	0.0191		
587	0.301	636	0.5202	685	0.0841	734	0.0183		
588	0.3014	637	0.3606	686	0.0813	735	0.0175		
589	0.3053	638	0.3104	687	0.0797	736	0.0173		
590	0.3064	639	0.2889	688	0.0768	737	0.0162		
591	0.3111	640	0.2795	689	0.0737	738	0.016		
592	0.3092	641	0.27	690	0.0722	739	0.015		
593	0.3126	642	0.2621	691	0.0722	740	0.015		
594	0.3126	643	0.2581	692	0.069	741	0.0139		
595	0.3173	644	0.2555	693	0.0661	742	0.0136		
596	0.32	645	0.2574	694	0.0648	743	0.0133		
597	0.3269	646	0.2933	695	0.0622	744	0.0131		
598	0.3303	647	0.3542	696	0.0608	745	0.013		

8. Goniophotometer Test results for LFUAY-1000-L27-DF-I-10

8.1 Test Data

Test Ambient Temperature	25.2℃	Test orientation	Downward
Operate time(Min.)	90	stabilization time(Min.)	30

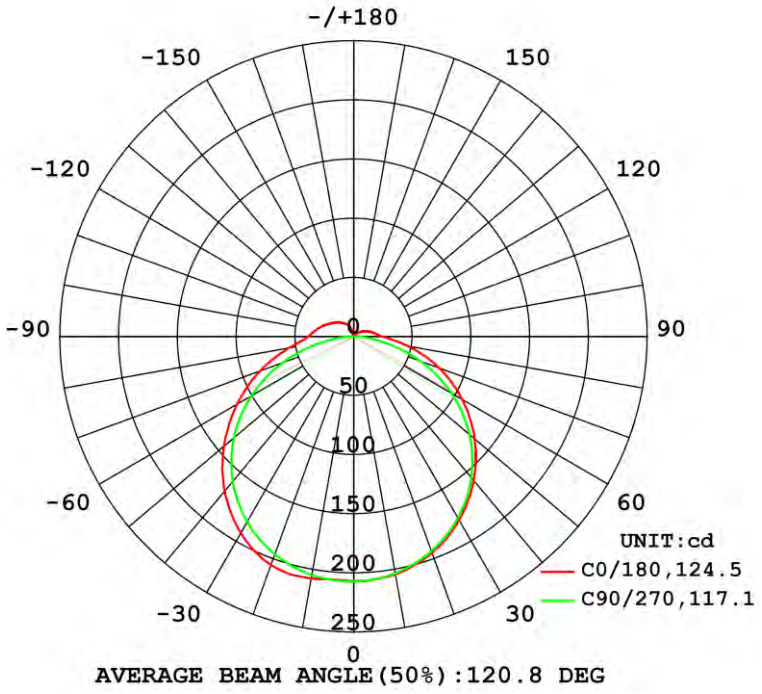
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
24.003	--	0.42324	1.0000	10.159

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	Imax (cd)	η up (%)	η down (%)
744.831	73.32	208.2	8.3	91.7

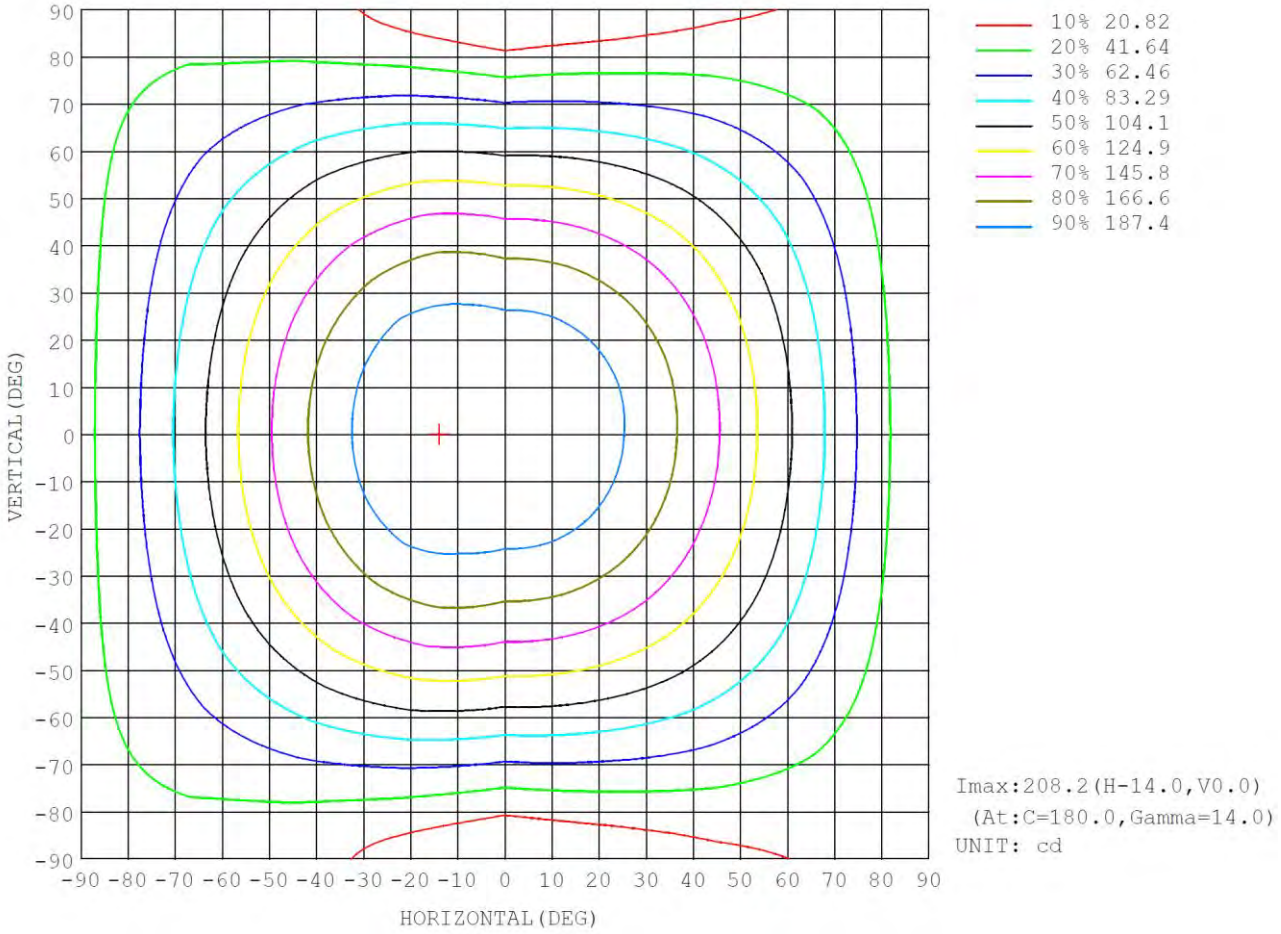
8.2 Luminous Intensity Distribution



8.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	204.3	204.0	203.4	205.4	207.6	206.0	204.7	205.2	0- 10	19.67	19.67	2.64,2.64
20	194.9	194.4	193.4	201.6	205.6	203.3	196.1	196.6	10- 20	57.21	76.87	10.3,10.3
30	179.5	178.8	177.5	189.3	192.0	191.9	181.2	181.7	20- 30	88.56	165.4	22.2,22.2
40	159.0	157.9	155.9	168.7	170.9	171.8	160.2	161.2	30- 40	109.3	274.7	36.9,36.9
50	134.5	132.4	128.7	142.2	144.2	145.5	133.2	135.9	40- 50	116.6	391.3	52.5,52.5
60	107.0	103.3	96.50	111.3	114.7	114.5	100.7	106.6	50- 60	109.8	501.1	67.3,67.3
70	77.04	71.50	60.03	77.86	84.50	80.77	63.54	74.34	60- 70	89.95	591.1	79.4,79.4
80	46.80	39.56	23.23	45.90	55.68	48.05	25.40	41.52	70- 80	60.64	651.7	87.5,87.5
90	24.48	17.18	2.039	27.69	38.77	28.67	1.942	17.91	80- 90	31.61	683.3	91.7,91.7
100	17.96	11.74	0.1803	22.57	32.71	23.22	0.1344	12.06	90-100	19.21	702.5	94.3,94.3
110	13.08	7.795	0.2143	18.80	27.35	19.26	0.1448	7.711	100-110	14.48	717.0	96.3,96.3
120	8.922	4.562	0.2582	15.69	22.61	16.03	0.1561	4.801	110-120	10.57	727.6	97.7,97.7
130	5.555	2.632	0.2934	13.30	18.61	13.53	0.1923	2.691	120-130	7.429	735.0	98.7,98.7
140	3.032	1.373	0.3052	10.96	15.28	11.45	0.3086	1.372	130-140	4.936	740.0	99.3,99.3
150	1.420	0.7399	0.3143	7.807	12.01	9.038	0.3560	0.6971	140-150	2.964	742.9	99.7,99.7
160	0.6665	0.4093	0.3312	2.907	7.161	5.207	0.3749	0.3633	150-160	1.463	744.4	99.9,99.9
170	0.3531	0.3417	0.3734	0.7930	1.504	1.130	0.4960	0.3926	160-170	0.3923	744.8	100,100
180	0.3186	0.4261	0.4108	0.4207	0.3804	0.4447	0.4143	0.4134	170-180	0.0516	744.8	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

8.4 Isocandela Diagram



8.5 Luminous Distribution Intensity Data

Table--1 UNIT: cd

C (DEG) / γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207
5	206	206	206	206	206	206	206	207	206	206	206	206	207	207	207	207
10	204	204	204	204	203	203	205	207	208	207	206	205	205	205	205	205
15	200	200	200	200	199	200	204	207	208	208	205	202	201	202	202	201
20	195	195	194	194	193	196	202	205	206	206	203	198	196	197	197	196
25	188	187	187	187	186	190	197	199	200	200	199	193	189	190	190	189
30	180	179	179	178	178	183	189	192	192	193	192	187	181	182	182	181
35	170	169	169	168	167	175	180	182	182	183	183	178	171	172	172	171
40	159	158	158	157	156	164	169	170	171	172	172	168	160	161	161	161
45	147	146	146	144	143	152	156	158	158	159	159	156	147	149	149	149
50	135	134	132	131	129	138	142	144	144	145	146	142	133	135	136	136
55	121	120	118	115	113	122	127	129	130	131	130	127	118	120	122	122
60	107	106	103	99.5	96.5	106	111	113	115	115	115	110	101	104	107	108
65	92.2	90.7	87.6	82.6	78.7	88.4	94.7	97.9	99.6	99.5	97.8	92.5	82.6	86.4	90.7	92.8
70	77.0	75.3	71.5	65.2	60.0	70.3	77.9	82.3	84.5	83.9	80.8	74.0	63.5	68.6	74.3	77.2
75	61.7	59.8	55.2	47.7	41.2	52.1	61.2	66.9	69.5	68.4	63.9	55.5	44.1	50.6	57.7	61.5
80	46.8	44.7	39.6	31.0	23.2	35.2	45.9	52.7	55.7	54.0	48.1	37.9	25.4	33.2	41.5	46.2
85	33.6	31.5	25.9	17.0	8.98	21.7	33.7	41.5	44.7	42.5	35.3	23.4	9.88	18.4	27.5	32.6
90	24.5	22.5	17.2	9.14	2.04	15.3	27.7	35.7	38.8	36.4	28.7	16.1	1.94	9.58	17.9	23.1
95	20.6	18.9	14.1	6.84	0.13	13.0	24.9	32.5	35.6	33.2	25.7	13.6	0.10	7.01	14.5	19.2
100	18.0	16.3	11.7	4.75	0.18	11.5	22.6	29.8	32.7	30.4	23.2	11.9	0.13	5.08	12.1	16.6
105	15.5	13.9	9.65	3.57	0.20	10.4	20.5	27.2	30.0	27.8	21.1	10.7	0.15	3.75	9.90	14.1
110	13.1	11.6	7.80	2.50	0.21	9.59	18.8	24.8	27.3	25.2	19.3	9.80	0.14	2.68	7.71	11.9
115	10.9	9.61	6.10	1.74	0.24	8.98	17.1	22.7	24.8	23.0	17.6	9.16	0.15	1.87	6.18	9.78
120	8.92	7.78	4.56	1.24	0.26	8.30	15.7	20.7	22.6	21.0	16.0	8.52	0.16	1.31	4.80	7.61
125	7.13	6.16	3.55	0.93	0.28	7.59	14.4	18.8	20.5	19.1	14.7	7.80	0.17	0.96	3.65	6.09
130	5.56	4.74	2.63	0.72	0.29	6.98	13.3	17.1	18.6	17.3	13.5	7.06	0.19	0.74	2.69	4.71
135	4.19	3.54	1.90	0.58	0.30	5.74	12.2	15.5	16.9	15.8	12.5	6.02	0.23	0.60	1.92	3.53
140	3.03	2.51	1.37	0.47	0.31	4.10	11.0	14.1	15.3	14.4	11.5	4.90	0.31	0.50	1.37	2.51
145	2.08	1.72	1.00	0.39	0.31	2.80	9.53	12.6	13.7	13.0	10.2	3.97	0.34	0.41	0.97	1.74
150	1.42	1.17	0.74	0.31	0.31	1.88	7.81	10.9	12.0	11.5	9.04	3.19	0.36	0.32	0.70	1.19
155	0.96	0.84	0.55	0.27	0.32	1.33	5.34	8.91	9.99	9.71	7.43	2.52	0.36	0.32	0.51	0.82
160	0.67	0.60	0.41	0.28	0.33	0.88	2.91	5.99	7.16	7.15	5.21	1.86	0.37	0.34	0.36	0.58
165	0.49	0.44	0.32	0.32	0.35	0.66	1.47	2.80	3.67	3.68	2.61	1.24	0.38	0.35	0.36	0.42
170	0.35	0.34	0.34	0.35	0.37	0.52	0.79	1.18	1.50	1.52	1.13	0.69	0.50	0.42	0.39	0.39
175	0.38	0.39	0.38	0.37	0.40	0.45	0.53	0.63	0.69	0.70	0.60	0.56	0.47	0.42	0.40	0.41
180	0.32	0.44	0.43	0.41	0.41	0.41	0.42	0.43	0.38	0.40	0.44	0.43	0.41	0.41	0.41	0.42

9. Integrating Sphere Test Results for LFUAY-1000-L27-DF-I-15

9.1 Test Data

Test Ambient Temperature (Integrating sphere internal temperature)	25.1℃	Test orientation	Downward
Operate time(Min.)	30	stabilization time(Min.)	0

Optical and Electrical Measurement Result

Number	Time	Current (A)	Voltage (V)	Power (W)	Flux(lm)	x	y	u'	v'	CCT (K)	Ra
0	00h00m00s	0.5454	23.998	13.089	999.39	0.4662	0.4101	0.2668	0.5281	2611	94.3
1	00h00m10s	0.547	23.998	13.127	998.88	0.4662	0.4102	0.2668	0.5281	2611	94.4
2	00h00m20s	0.5476	23.998	13.141	999.38	0.4662	0.41	0.2668	0.5281	2610	94.3
3	00h00m30s	0.548	23.998	13.151	999.77	0.4661	0.41	0.2668	0.5281	2611	94.3
4	00h00m40s	0.5485	23.998	13.163	1000	0.4661	0.4097	0.2669	0.528	2609	94.3
5	00h00m50s	0.5491	23.998	13.177	1000.2	0.4662	0.41	0.2669	0.5281	2609	94.3
6	00h01m00s	0.5491	23.998	13.177	999.84	0.4661	0.4098	0.2669	0.528	2609	94.4
7	00h01m10s	0.5494	23.998	13.184	999.21	0.4663	0.4098	0.267	0.528	2607	94.3
8	00h01m20s	0.5502	23.998	13.204	1001.2	0.4661	0.4097	0.2669	0.528	2609	94.4
9	00h01m30s	0.5509	23.998	13.22	1001.8	0.4662	0.4097	0.267	0.528	2608	94.3
10	00h01m40s	0.5513	23.998	13.23	1001.6	0.4661	0.4096	0.267	0.5279	2607	94.3
11	00h01m50s	0.5516	23.998	13.237	1002.2	0.4661	0.4095	0.267	0.5279	2608	94.3
12	00h02m00s	0.5517	23.998	13.24	1002	0.4663	0.4094	0.2672	0.5279	2603	94.3
13	00h02m10s	0.5521	23.998	13.249	1002	0.4661	0.4094	0.2671	0.5279	2606	94.3
14	00h02m20s	0.5525	23.998	13.259	1001.9	0.4662	0.4096	0.2671	0.5279	2605	94.3
15	00h02m30s	0.5528	23.998	13.266	1002.7	0.4661	0.4094	0.2671	0.5278	2606	94.3
16	00h02m40s	0.5532	23.998	13.276	1002.2	0.4663	0.4094	0.2672	0.5279	2604	94.3
17	00h02m50s	0.5536	23.998	13.285	1003.1	0.4661	0.4093	0.2671	0.5278	2606	94.3
18	00h03m00s	0.554	23.998	13.295	1003.9	0.4664	0.4095	0.2672	0.5279	2603	94.3
19	00h03m10s	0.5544	23.998	13.304	1004.1	0.4663	0.4093	0.2673	0.5278	2603	94.3
20	00h03m20s	0.5546	23.998	13.309	1002.9	0.4664	0.4092	0.2674	0.5278	2601	94.3
21	00h03m30s	0.5548	23.998	13.314	1003.4	0.4663	0.4093	0.2673	0.5278	2603	94.3

22	00h03m40s	0.5551	23.998	13.321	1004.2	0.4664	0.4093	0.2674	0.5278	2601	94.2
23	00h03m50s	0.5552	23.998	13.324	1004.8	0.4662	0.4093	0.2672	0.5278	2604	94.3
24	00h04m00s	0.5552	23.998	13.324	1004	0.4663	0.4093	0.2673	0.5278	2603	94.3
25	00h04m10s	0.5553	23.998	13.326	1004.5	0.4664	0.4093	0.2673	0.5278	2602	94.3
26	00h04m20s	0.5554	23.998	13.328	1004	0.4664	0.4093	0.2673	0.5278	2601	94.3
27	00h04m30s	0.5556	23.998	13.333	1004.2	0.4664	0.4091	0.2674	0.5278	2599	94.2
28	00h04m40s	0.5558	23.998	13.338	1004.4	0.4664	0.4092	0.2674	0.5278	2600	94.2
29	00h04m50s	0.5559	23.998	13.34	1004.7	0.4663	0.4093	0.2673	0.5278	2602	94.3
30	00h05m00s	0.556	23.998	13.343	1004.6	0.4662	0.4091	0.2673	0.5277	2602	94.2
31	00h05m10s	0.5562	23.998	13.348	1005.3	0.4663	0.4092	0.2673	0.5278	2601	94.2
32	00h05m20s	0.5563	23.998	13.35	1004.6	0.4664	0.4092	0.2674	0.5278	2600	94.3
33	00h05m30s	0.5564	23.998	13.352	1005.3	0.4664	0.4091	0.2674	0.5278	2600	94.2
34	00h05m40s	0.5565	23.998	13.355	1004.8	0.4664	0.4091	0.2674	0.5277	2600	94.2
35	00h05m50s	0.5568	23.998	13.362	1005	0.4663	0.4089	0.2674	0.5277	2599	94.2
36	00h06m00s	0.5568	23.998	13.362	1005.6	0.4666	0.4092	0.2675	0.5278	2598	94.2
37	00h06m10s	0.5568	23.998	13.362	1005.1	0.4663	0.4091	0.2673	0.5277	2601	94.3
38	00h06m20s	0.5568	23.998	13.362	1004.9	0.4665	0.4091	0.2675	0.5278	2598	94.2
39	00h06m30s	0.5569	23.998	13.364	1005	0.4664	0.409	0.2675	0.5277	2598	94.3
40	00h06m40s	0.5572	23.998	13.372	1005.6	0.4665	0.4092	0.2674	0.5278	2599	94.3
41	00h06m50s	0.5573	23.998	13.374	1005.4	0.4664	0.4089	0.2675	0.5277	2598	94.3
42	00h07m00s	0.5575	23.998	13.379	1004.9	0.4665	0.4089	0.2676	0.5277	2597	94.2
43	00h07m10s	0.5576	23.998	13.381	1005.3	0.4663	0.4088	0.2675	0.5276	2598	94.2
44	00h07m20s	0.5578	23.998	13.386	1006	0.4665	0.409	0.2676	0.5277	2597	94.3
45	00h07m30s	0.5579	23.998	13.388	1005.2	0.4664	0.4088	0.2676	0.5276	2597	94.2
46	00h07m40s	0.5579	23.998	13.388	1006	0.4664	0.4089	0.2675	0.5277	2598	94.2
47	00h07m50s	0.5579	23.998	13.388	1005.9	0.4664	0.409	0.2675	0.5277	2598	94.2
48	00h08m00s	0.558	23.998	13.391	1005.4	0.4664	0.409	0.2675	0.5277	2599	94.2
49	00h08m10s	0.5581	23.998	13.393	1006.7	0.4663	0.4089	0.2674	0.5277	2600	94.2
50	00h08m20s	0.5581	23.998	13.393	1005.6	0.4665	0.4091	0.2675	0.5278	2598	94.3
51	00h08m30s	0.5582	23.998	13.396	1006.5	0.4665	0.409	0.2675	0.5278	2598	94.2
52	00h08m40s	0.5583	23.998	13.398	1006.8	0.4664	0.409	0.2675	0.5277	2599	94.3

53	00h08m50s	0.5584	23.998	13.4	1006.3	0.4664	0.4089	0.2675	0.5277	2598	94.2
54	00h09m00s	0.5585	23.998	13.403	1006.8	0.4664	0.409	0.2675	0.5277	2598	94.3
55	00h09m10s	0.5585	23.998	13.403	1006.1	0.4664	0.4087	0.2676	0.5276	2597	94.3
56	00h09m20s	0.5585	23.998	13.403	1006.2	0.4665	0.409	0.2675	0.5277	2598	94.2
57	00h09m30s	0.5586	23.998	13.405	1006.3	0.4664	0.4089	0.2675	0.5277	2599	94.3
58	00h09m40s	0.5586	23.998	13.405	1006	0.4665	0.4088	0.2676	0.5277	2596	94.2
59	00h09m50s	0.5587	23.998	13.408	1005.7	0.4665	0.4088	0.2676	0.5277	2596	94.2
60	00h10m00s	0.5588	23.998	13.41	1006.7	0.4665	0.4092	0.2675	0.5278	2599	94.3
61	00h10m10s	0.5588	23.998	13.41	1007	0.4666	0.409	0.2676	0.5277	2596	94.2
62	00h10m20s	0.5589	23.998	13.412	1006.1	0.4665	0.4089	0.2676	0.5277	2597	94.2
63	00h10m30s	0.559	23.998	13.415	1006.4	0.4665	0.4089	0.2675	0.5277	2597	94.2
64	00h10m40s	0.559	23.998	13.415	1006.8	0.4665	0.4088	0.2676	0.5277	2596	94.2
65	00h10m50s	0.5589	23.998	13.412	1006.3	0.4664	0.4087	0.2676	0.5276	2597	94.2
66	00h11m00s	0.5588	23.998	13.41	1005.9	0.4666	0.409	0.2676	0.5278	2597	94.2
67	00h11m10s	0.5587	23.998	13.408	1006.1	0.4666	0.4089	0.2676	0.5277	2596	94.2
68	00h11m20s	0.5587	23.998	13.408	1006	0.4666	0.4088	0.2677	0.5277	2595	94.3
69	00h11m30s	0.5588	23.998	13.41	1006	0.4665	0.4088	0.2676	0.5277	2596	94.2
70	00h11m40s	0.5588	23.998	13.41	1005.9	0.4664	0.4087	0.2676	0.5276	2597	94.2
71	00h11m50s	0.5588	23.998	13.41	1005.6	0.4665	0.4088	0.2676	0.5277	2596	94.2
72	00h12m00s	0.5587	23.998	13.408	1006.1	0.4666	0.4089	0.2677	0.5277	2595	94.2
73	00h12m10s	0.5586	23.998	13.405	1004.9	0.4666	0.4087	0.2677	0.5277	2595	94.3
74	00h12m20s	0.5587	23.998	13.408	1005.8	0.4666	0.4089	0.2676	0.5277	2596	94.2
75	00h12m30s	0.5587	23.998	13.408	1005.4	0.4666	0.409	0.2676	0.5277	2596	94.2
76	00h12m40s	0.5587	23.998	13.408	1005.4	0.4666	0.4087	0.2677	0.5276	2594	94.1
77	00h12m50s	0.5587	23.998	13.408	1005.4	0.4664	0.4088	0.2676	0.5276	2597	94.2
78	00h13m00s	0.5587	23.998	13.408	1005.5	0.4665	0.4089	0.2676	0.5277	2597	94.2
79	00h13m10s	0.5587	23.998	13.408	1005.1	0.4665	0.4088	0.2677	0.5277	2596	94.2
80	00h13m20s	0.5587	23.998	13.408	1005.5	0.4664	0.4088	0.2676	0.5276	2597	94.3
81	00h13m30s	0.5587	23.998	13.408	1005.8	0.4665	0.4089	0.2676	0.5277	2597	94.2
82	00h13m40s	0.5586	23.998	13.405	1005.5	0.4665	0.4087	0.2677	0.5276	2595	94.2
83	00h13m50s	0.5585	23.998	13.403	1005.3	0.4667	0.409	0.2676	0.5278	2596	94.3

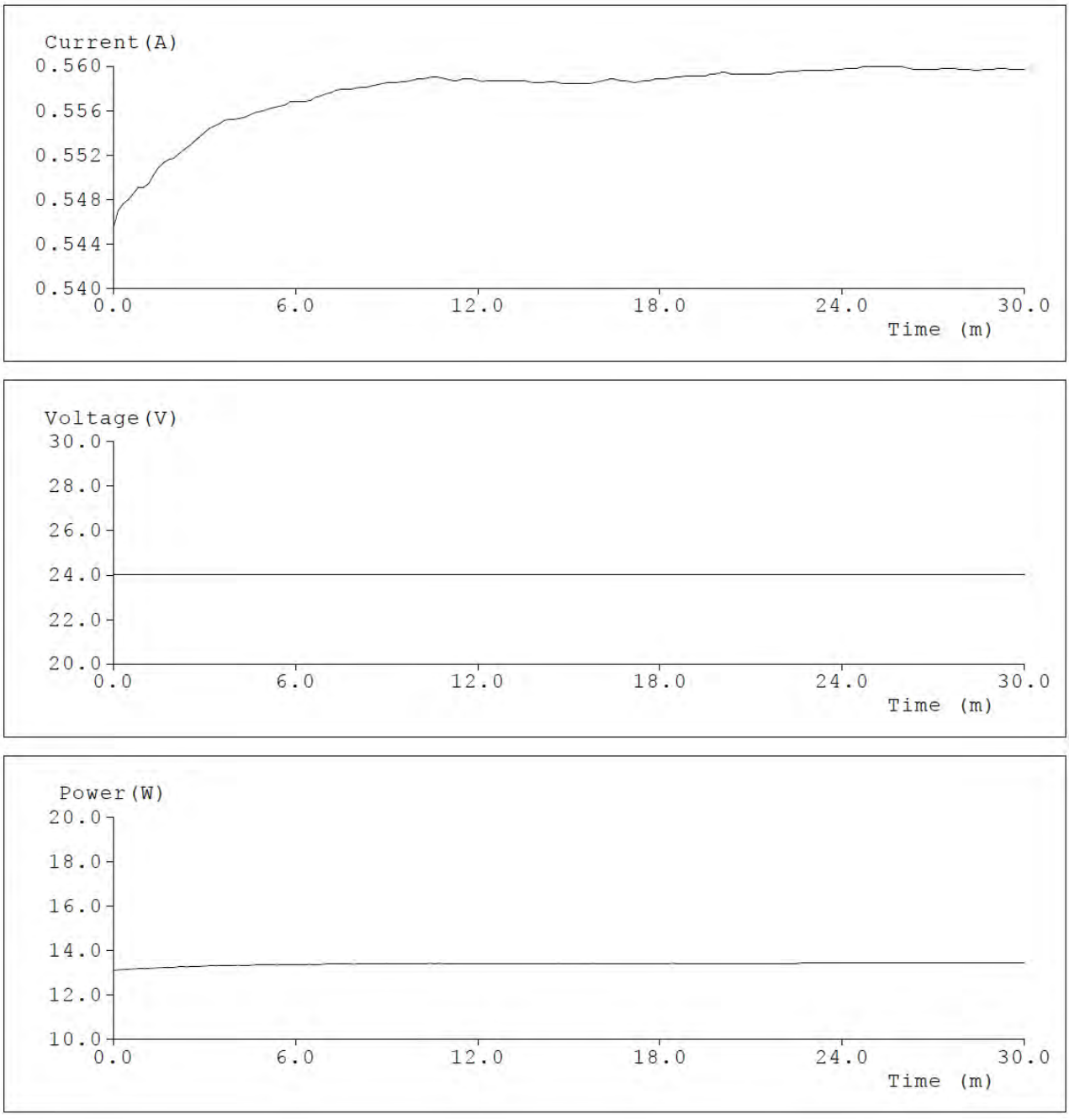
84	00h14m00s	0.5585	23.998	13.403	1005.4	0.4667	0.4089	0.2677	0.5277	2594	94.2
85	00h14m10s	0.5585	23.998	13.403	1004.4	0.4666	0.4088	0.2677	0.5277	2595	94.2
86	00h14m20s	0.5586	23.998	13.405	1005.4	0.4666	0.4088	0.2677	0.5277	2595	94.2
87	00h14m30s	0.5586	23.998	13.405	1005	0.4665	0.4087	0.2677	0.5276	2595	94.2
88	00h14m40s	0.5585	23.998	13.403	1005.2	0.4665	0.4088	0.2676	0.5277	2596	94.2
89	00h14m50s	0.5584	23.998	13.4	1004.7	0.4665	0.4087	0.2677	0.5276	2596	94.3
90	00h15m00s	0.5584	23.998	13.4	1004.7	0.4665	0.4087	0.2677	0.5276	2595	94.3
91	00h15m10s	0.5584	23.998	13.4	1004.5	0.4667	0.4089	0.2677	0.5277	2595	94.2
92	00h15m20s	0.5584	23.998	13.4	1004.4	0.4666	0.4088	0.2677	0.5277	2595	94.2
93	00h15m30s	0.5584	23.998	13.4	1004.5	0.4666	0.4089	0.2676	0.5277	2595	94.2
94	00h15m40s	0.5584	23.998	13.4	1004.3	0.4667	0.4087	0.2678	0.5277	2593	94.2
95	00h15m50s	0.5585	23.998	13.403	1004.9	0.4666	0.4088	0.2677	0.5277	2595	94.2
96	00h16m00s	0.5586	23.998	13.405	1004.8	0.4664	0.4087	0.2676	0.5276	2596	94.2
97	00h16m10s	0.5587	23.998	13.408	1005.3	0.4665	0.4088	0.2676	0.5277	2596	94.2
98	00h16m20s	0.5588	23.998	13.41	1005.2	0.4665	0.4089	0.2676	0.5277	2597	94.2
99	00h16m30s	0.5588	23.998	13.41	1005	0.4666	0.4086	0.2678	0.5276	2593	94.2
100	00h16m40s	0.5587	23.998	13.408	1005.5	0.4666	0.4087	0.2677	0.5276	2594	94.2
101	00h16m50s	0.5587	23.998	13.408	1004.8	0.4665	0.4087	0.2676	0.5276	2596	94.3
102	00h17m00s	0.5586	23.998	13.405	1004.9	0.4665	0.4088	0.2676	0.5277	2596	94.2
103	00h17m10s	0.5585	23.998	13.403	1004.1	0.4666	0.4087	0.2677	0.5276	2595	94.2
104	00h17m20s	0.5586	23.998	13.405	1004.6	0.4665	0.4086	0.2677	0.5276	2595	94.2
105	00h17m30s	0.5587	23.998	13.408	1004.3	0.4666	0.4086	0.2678	0.5276	2594	94.2
106	00h17m40s	0.5587	23.998	13.408	1005	0.4666	0.4088	0.2676	0.5277	2596	94.2
107	00h17m50s	0.5588	23.998	13.41	1004.7	0.4667	0.4089	0.2677	0.5277	2595	94.2
108	00h18m00s	0.5588	23.998	13.41	1004.6	0.4667	0.4087	0.2678	0.5277	2593	94.2
109	00h18m10s	0.5588	23.998	13.41	1005.2	0.4665	0.4087	0.2677	0.5276	2594	94.2
110	00h18m20s	0.5589	23.998	13.412	1005.6	0.4666	0.4086	0.2677	0.5276	2594	94.2
111	00h18m30s	0.559	23.998	13.415	1006	0.4665	0.4087	0.2677	0.5276	2596	94.2
112	00h18m40s	0.559	23.998	13.415	1005.5	0.4665	0.4086	0.2677	0.5276	2594	94.2
113	00h18m50s	0.5591	23.998	13.417	1005.3	0.4666	0.4085	0.2678	0.5276	2592	94.2
114	00h19m00s	0.5591	23.998	13.417	1005.7	0.4667	0.4088	0.2677	0.5277	2594	94.2

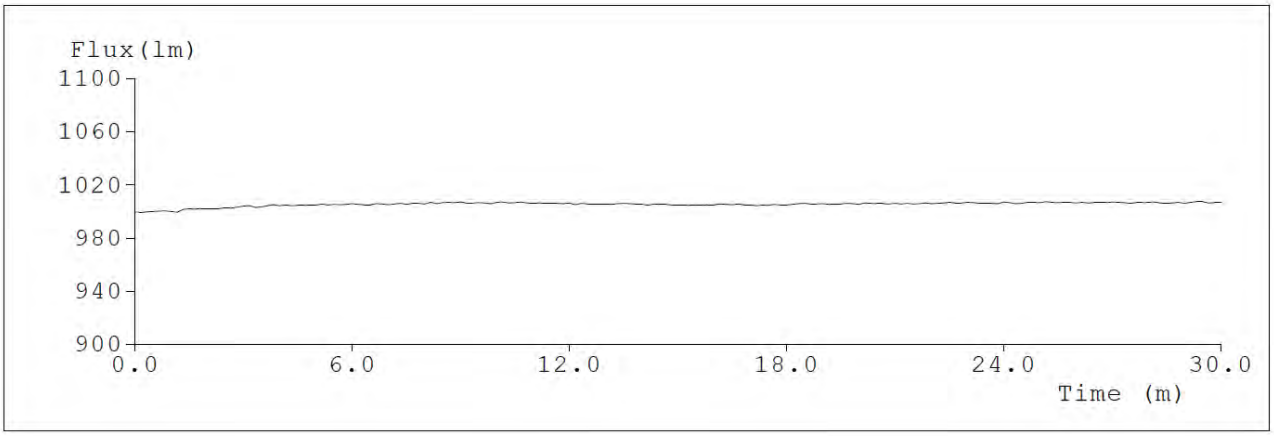
115	00h19m10s	0.5591	23.998	13.417	1005.1	0.4665	0.4087	0.2677	0.5276	2595	94.3
116	00h19m20s	0.5591	23.998	13.417	1005.4	0.4667	0.4089	0.2677	0.5277	2594	94.2
117	00h19m30s	0.5591	23.998	13.417	1005.4	0.4666	0.4087	0.2677	0.5276	2594	94.2
118	00h19m40s	0.5593	23.998	13.422	1005.8	0.4666	0.4087	0.2677	0.5277	2594	94.2
119	00h19m50s	0.5593	23.998	13.422	1005.6	0.4664	0.4085	0.2677	0.5275	2596	94.2
120	00h20m00s	0.5594	23.998	13.424	1005.2	0.4664	0.4086	0.2677	0.5276	2595	94.2
121	00h20m10s	0.5594	23.998	13.424	1006.2	0.4665	0.4087	0.2677	0.5276	2595	94.2
122	00h20m20s	0.5593	23.998	13.422	1006	0.4666	0.4087	0.2677	0.5276	2594	94.2
123	00h20m30s	0.5593	23.998	13.422	1005.7	0.4666	0.4088	0.2677	0.5277	2595	94.2
124	00h20m40s	0.5593	23.998	13.422	1005.7	0.4664	0.4087	0.2676	0.5276	2597	94.2
125	00h20m50s	0.5593	23.998	13.422	1005.3	0.4666	0.4087	0.2677	0.5276	2594	94.2
126	00h21m00s	0.5593	23.998	13.422	1005.9	0.4665	0.4087	0.2677	0.5276	2596	94.2
127	00h21m10s	0.5593	23.998	13.422	1005.5	0.4666	0.4087	0.2677	0.5276	2594	94.2
128	00h21m20s	0.5593	23.998	13.422	1005.8	0.4665	0.4086	0.2677	0.5276	2594	94.2
129	00h21m30s	0.5593	23.998	13.422	1005.4	0.4666	0.4088	0.2677	0.5277	2594	94.2
130	00h21m40s	0.5593	23.998	13.422	1005.6	0.4665	0.4086	0.2677	0.5276	2596	94.2
131	00h21m50s	0.5594	23.998	13.424	1006.1	0.4665	0.4087	0.2677	0.5276	2595	94.2
132	00h22m00s	0.5594	23.998	13.424	1005.5	0.4666	0.4087	0.2677	0.5276	2594	94.2
133	00h22m10s	0.5595	23.998	13.427	1005.8	0.4666	0.4087	0.2677	0.5276	2594	94.2
134	00h22m20s	0.5595	23.998	13.427	1006.1	0.4666	0.4088	0.2677	0.5277	2595	94.2
135	00h22m30s	0.5595	23.998	13.427	1006.7	0.4666	0.4087	0.2677	0.5276	2594	94.2
136	00h22m40s	0.5596	23.998	13.429	1006.2	0.4665	0.4087	0.2677	0.5276	2595	94.2
137	00h22m50s	0.5596	23.998	13.429	1006.2	0.4665	0.4086	0.2677	0.5276	2595	94.2
138	00h23m00s	0.5596	23.998	13.429	1006.6	0.4664	0.4087	0.2676	0.5276	2596	94.2
139	00h23m10s	0.5596	23.998	13.429	1006.4	0.4666	0.4088	0.2677	0.5277	2595	94.2
140	00h23m20s	0.5596	23.998	13.429	1006	0.4665	0.4087	0.2677	0.5276	2595	94.2
141	00h23m30s	0.5596	23.998	13.429	1005.9	0.4665	0.4085	0.2678	0.5276	2593	94.2
142	00h23m40s	0.5596	23.998	13.429	1005.9	0.4665	0.4087	0.2677	0.5276	2596	94.2
143	00h23m50s	0.5597	23.998	13.432	1005.7	0.4665	0.4085	0.2678	0.5276	2594	94.2
144	00h24m00s	0.5597	23.998	13.432	1006.9	0.4663	0.4085	0.2676	0.5275	2596	94.2
145	00h24m10s	0.5598	23.998	13.434	1006.5	0.4666	0.4088	0.2677	0.5277	2594	94.2

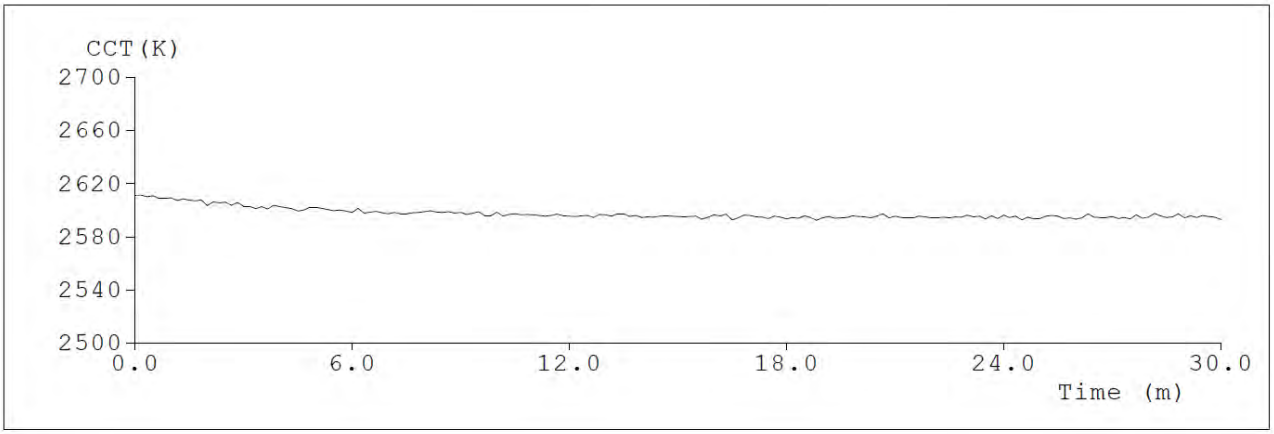
146	00h24m20s	0.5598	23.998	13.434	1005.7	0.4664	0.4086	0.2677	0.5276	2595	94.2
147	00h24m30s	0.5598	23.998	13.434	1006	0.4666	0.4085	0.2678	0.5276	2593	94.2
148	00h24m40s	0.5599	23.998	13.436	1006.6	0.4665	0.4086	0.2677	0.5276	2595	94.3
149	00h24m50s	0.5599	23.998	13.436	1006.8	0.4666	0.4086	0.2678	0.5276	2593	94.2
150	00h25m00s	0.5599	23.998	13.436	1006.5	0.4666	0.4087	0.2677	0.5276	2594	94.2
151	00h25m10s	0.5599	23.998	13.436	1007.2	0.4664	0.4086	0.2677	0.5276	2596	94.2
152	00h25m20s	0.5599	23.998	13.436	1006.6	0.4665	0.4087	0.2676	0.5276	2596	94.2
153	00h25m30s	0.5599	23.998	13.436	1006.4	0.4666	0.4088	0.2676	0.5277	2596	94.2
154	00h25m40s	0.5599	23.998	13.436	1006.8	0.4666	0.4087	0.2678	0.5276	2594	94.2
155	00h25m50s	0.5599	23.998	13.436	1006.7	0.4666	0.4088	0.2677	0.5277	2594	94.2
156	00h26m00s	0.5599	23.998	13.436	1006.2	0.4666	0.4085	0.2678	0.5276	2593	94.2
157	00h26m10s	0.5598	23.998	13.434	1006.7	0.4666	0.4087	0.2677	0.5277	2594	94.2
158	00h26m20s	0.5597	23.998	13.432	1006.2	0.4663	0.4086	0.2676	0.5276	2597	94.2
159	00h26m30s	0.5597	23.998	13.432	1006.4	0.4666	0.4088	0.2677	0.5277	2595	94.2
160	00h26m40s	0.5597	23.998	13.432	1006.4	0.4665	0.4086	0.2677	0.5276	2594	94.2
161	00h26m50s	0.5597	23.998	13.432	1006.4	0.4665	0.4086	0.2677	0.5276	2594	94.2
162	00h27m00s	0.5597	23.998	13.432	1006.8	0.4665	0.4087	0.2677	0.5276	2595	94.2
163	00h27m10s	0.5597	23.998	13.432	1006.7	0.4666	0.4086	0.2678	0.5276	2594	94.2
164	00h27m20s	0.5598	23.998	13.434	1006.4	0.4664	0.4085	0.2677	0.5275	2594	94.2
165	00h27m30s	0.5598	23.998	13.434	1005.9	0.4665	0.4084	0.2678	0.5275	2593	94.2
166	00h27m40s	0.5598	23.998	13.434	1006.5	0.4664	0.4087	0.2676	0.5276	2596	94.2
167	00h27m50s	0.5597	23.998	13.432	1006.3	0.4665	0.4086	0.2678	0.5276	2594	94.2
168	00h28m00s	0.5597	23.998	13.432	1006.6	0.4665	0.4086	0.2677	0.5276	2595	94.2
169	00h28m10s	0.5597	23.998	13.432	1007	0.4664	0.4088	0.2676	0.5277	2597	94.2
170	00h28m20s	0.5596	23.998	13.429	1006.1	0.4664	0.4086	0.2677	0.5276	2596	94.2
171	00h28m30s	0.5596	23.998	13.429	1005.9	0.4665	0.4086	0.2677	0.5276	2594	94.2
172	00h28m40s	0.5597	23.998	13.432	1006.2	0.4665	0.4086	0.2677	0.5276	2595	94.2
173	00h28m50s	0.5597	23.998	13.432	1006.6	0.4663	0.4087	0.2676	0.5276	2597	94.3
174	00h29m00s	0.5597	23.998	13.432	1005.9	0.4666	0.4087	0.2677	0.5277	2594	94.2
175	00h29m10s	0.5598	23.998	13.434	1006.7	0.4664	0.4086	0.2677	0.5276	2596	94.2
176	00h29m20s	0.5598	23.998	13.434	1007.1	0.4666	0.4087	0.2677	0.5276	2594	94.2

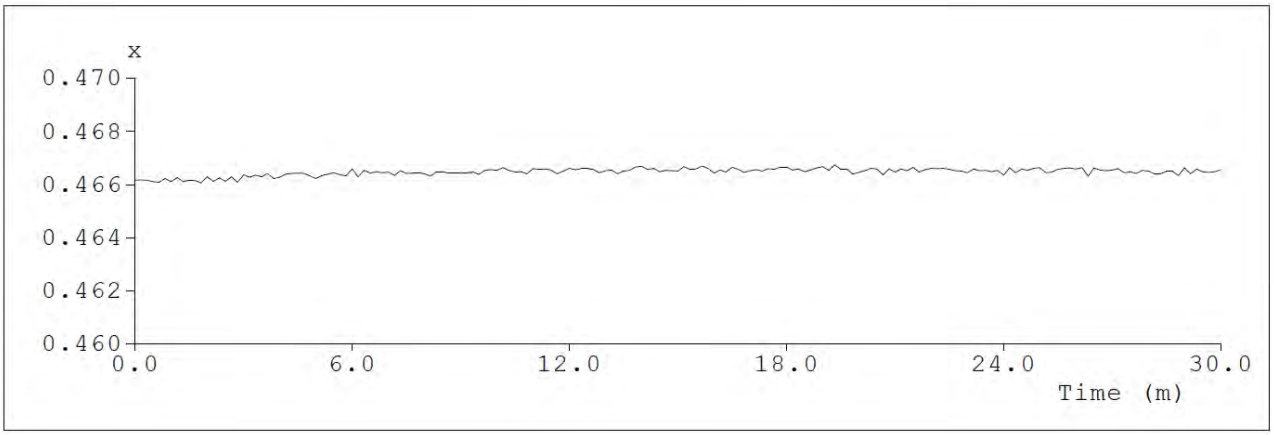
177	00h29m30s	0.5597	23.998	13.432	1007.1	0.4665	0.4087	0.2676	0.5276	2596	94.2
178	00h29m40s	0.5597	23.998	13.432	1006.1	0.4664	0.4086	0.2677	0.5276	2595	94.2
179	00h29m50s	0.5597	23.998	13.432	1006.4	0.4665	0.4085	0.2677	0.5276	2595	94.2
180	00h30m00s	0.5597	23.998	13.432	1006.3	0.4666	0.4085	0.2678	0.5275	2593	94.2

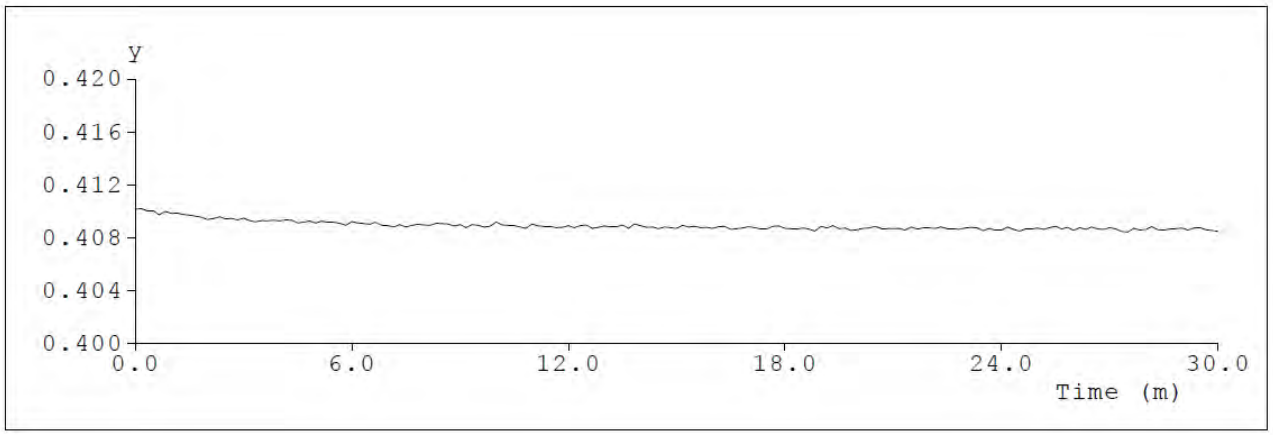
Test curves

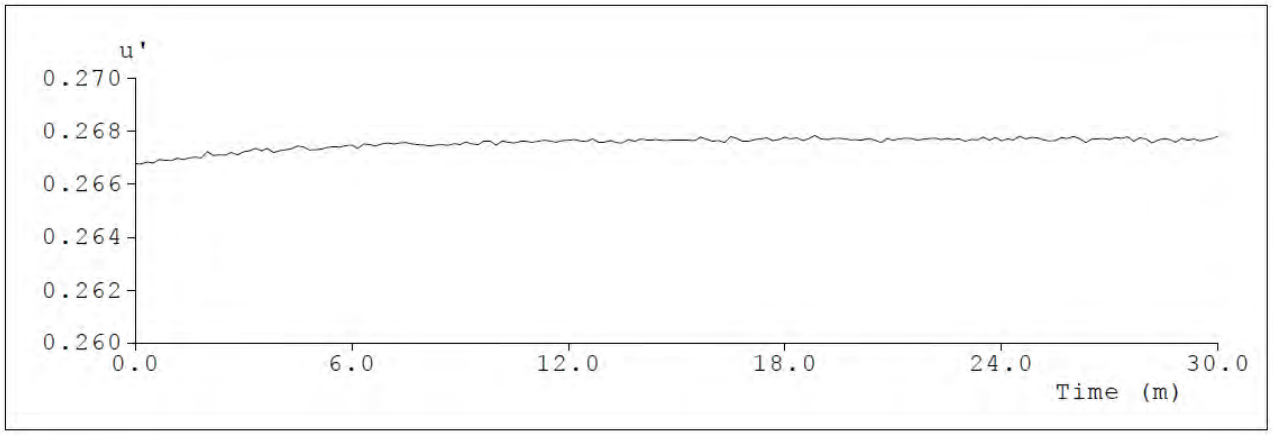


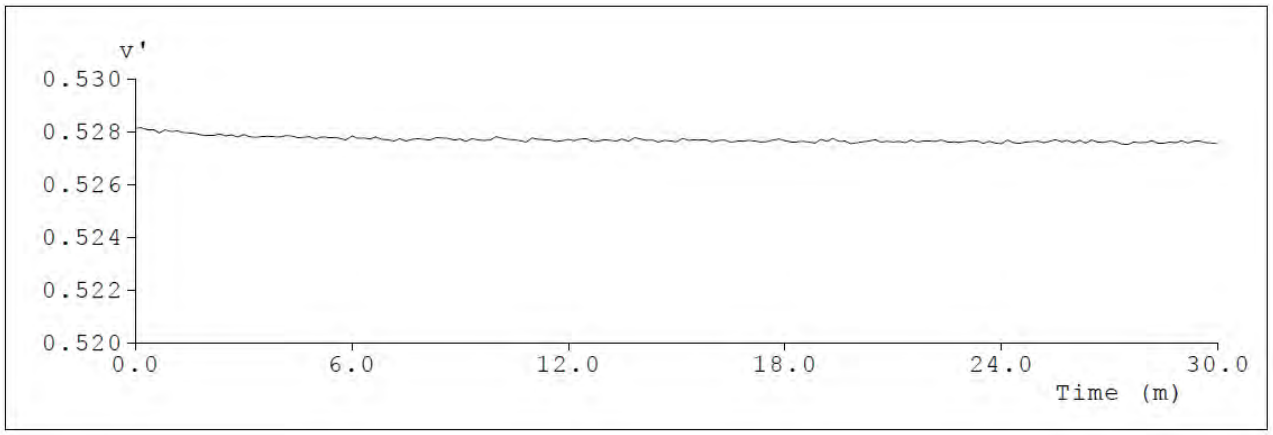

Flux(lm)
1100
1060
1020
980
940
900
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


CCT(K)
2700
2660
2620
2580
2540
2500
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


x
0.470
0.468
0.466
0.464
0.462
0.460
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


y
0.420
0.416
0.412
0.408
0.404
0.400
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


u'
0.270
0.268
0.266
0.264
0.262
0.260
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

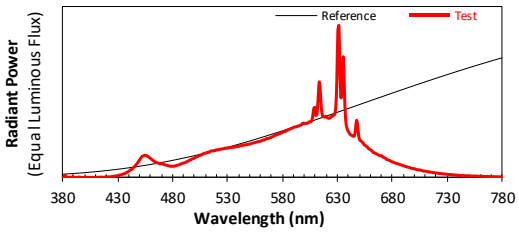

v'
0.530
0.528
0.526
0.524
0.522
0.520
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

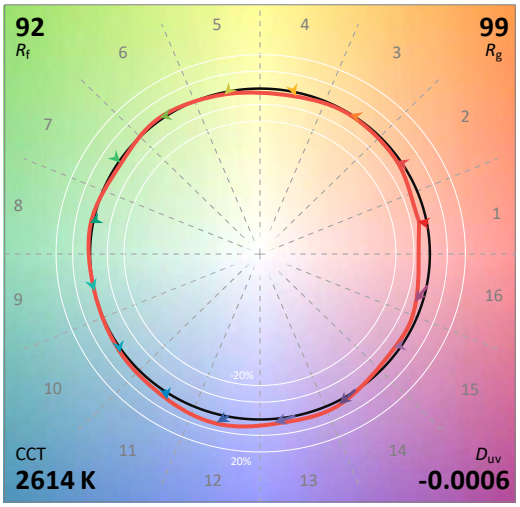
*9.2 ANSI/IES TM-30-18 Color Rendition Report

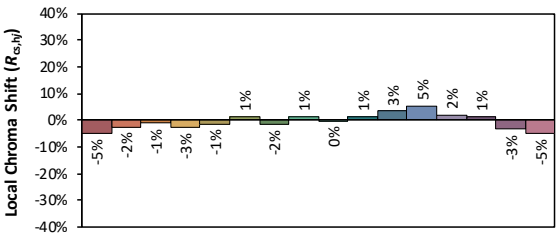
ANSI/IES TM-30-18 Color Rendition Report

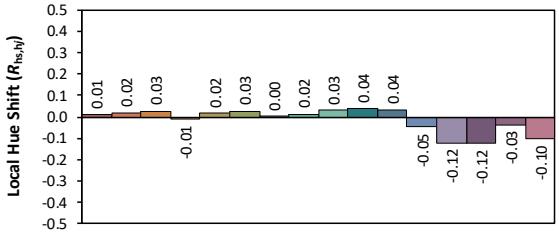
Source: Manufacturer:

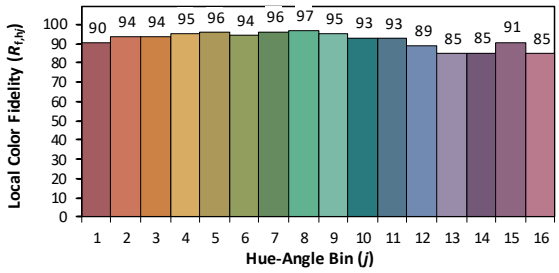
Date: 2023/9/26 Model: LFUAY-1000-L27-DF-I-15

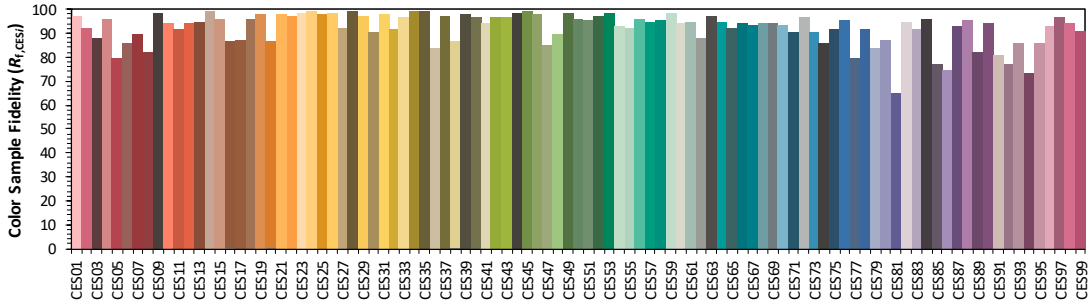












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

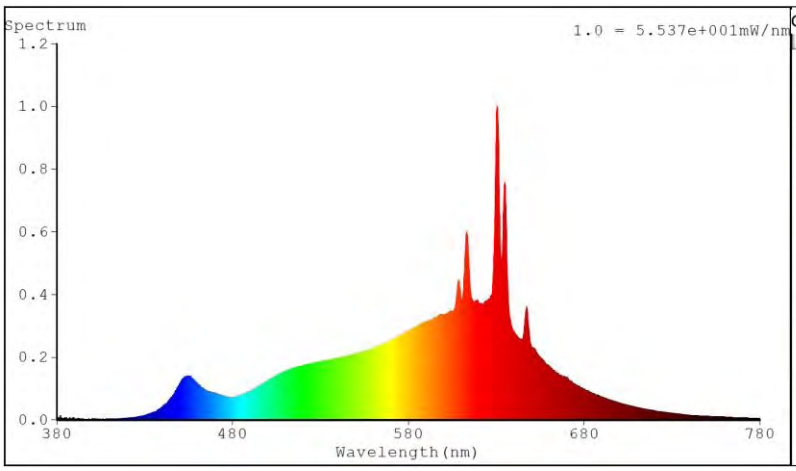
x	0.4660
y	0.4103
u'	0.2666
v'	0.5282

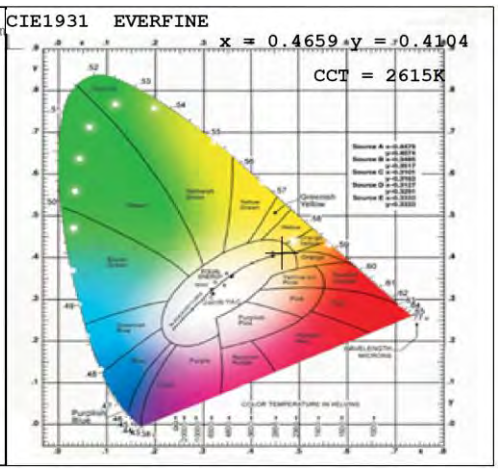
CIE 13.3-1995 (CRI)

R_a	94
R_9	60

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

9.3 Relative Spectral Power Distribution





nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0	414	0.0039	448	0.0948	482	0.0738	516	0.1668
381	0.0088	415	0.0039	449	0.105	483	0.076	517	0.1678
382	0.0147	416	0.0028	450	0.1153	484	0.0782	518	0.1673
383	0.001	417	0.0027	451	0.125	485	0.0795	519	0.1722
384	0	418	0.0044	452	0.133	486	0.0819	520	0.1726
385	0.0037	419	0.0046	453	0.1356	487	0.0856	521	0.1734
386	0	420	0.0042	454	0.1386	488	0.088	522	0.1763
387	0.0041	421	0.0055	455	0.1383	489	0.0905	523	0.176
388	0.002	422	0.0056	456	0.1367	490	0.0925	524	0.1774
389	0.007	423	0.0054	457	0.1319	491	0.0941	525	0.1799
390	0.002	424	0.007	458	0.1281	492	0.0978	526	0.179
391	0.0017	425	0.0079	459	0.1225	493	0.1002	527	0.1826
392	0.0021	426	0.0092	460	0.1174	494	0.1048	528	0.1839
393	0.0018	427	0.0101	461	0.1116	495	0.1086	529	0.1831
394	0.004	428	0.0114	462	0.1056	496	0.1115	530	0.1847
395	0.0037	429	0.0119	463	0.1023	497	0.1152	531	0.186
396	0.0023	430	0.0137	464	0.0967	498	0.1184	532	0.1869
397	0.0011	431	0.0157	465	0.0936	499	0.1201	533	0.1889
398	0.0012	432	0.0182	466	0.0915	500	0.1245	534	0.1876
399	0.0013	433	0.0185	467	0.0904	501	0.1283	535	0.1897
400	0.0023	434	0.0222	468	0.0865	502	0.1323	536	0.1904
401	0.0025	435	0.0244	469	0.0862	503	0.1339	537	0.1927
402	0.003	436	0.0254	470	0.0869	504	0.1394	538	0.1925
403	0.001	437	0.0294	471	0.0845	505	0.1399	539	0.1952
404	0.0016	438	0.0329	472	0.0818	506	0.1416	540	0.1954
405	0.0004	439	0.037	473	0.0793	507	0.1474	541	0.1986
406	0.0022	440	0.0416	474	0.078	508	0.1493	542	0.1993
407	0.0019	441	0.047	475	0.0769	509	0.1519	543	0.1993
408	0.0021	442	0.0509	476	0.073	510	0.1536	544	0.2018
409	0.0016	443	0.0548	477	0.0732	511	0.1566	545	0.2031
410	0.0029	444	0.0639	478	0.0711	512	0.1579	546	0.2044
411	0.0016	445	0.0688	479	0.0714	513	0.1586	547	0.2055
412	0.0032	446	0.078	480	0.0719	514	0.1646	548	0.2073
413	0.0024	447	0.0859	481	0.0711	515	0.1659	549	0.2087

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.2095	599	0.3379	648	0.324	697	0.0585	746	0.0123
551	0.2115	600	0.336	649	0.258	698	0.0574	747	0.012
552	0.2146	601	0.3374	650	0.2331	699	0.0563	748	0.012
553	0.2159	602	0.3374	651	0.2294	700	0.0549	749	0.0121
554	0.2169	603	0.342	652	0.2221	701	0.0519	750	0.0121
555	0.2196	604	0.3469	653	0.2151	702	0.0507	751	0.0105
556	0.2209	605	0.3466	654	0.2043	703	0.0488	752	0.011
557	0.223	606	0.3512	655	0.2	704	0.0491	753	0.0105
558	0.2256	607	0.3744	656	0.1943	705	0.0473	754	0.0104
559	0.2255	608	0.4264	657	0.1892	706	0.0453	755	0.0104
560	0.2285	609	0.436	658	0.1801	707	0.0437	756	0.0104
561	0.231	610	0.3866	659	0.1769	708	0.0413	757	0.0098
562	0.2347	611	0.396	660	0.1721	709	0.0411	758	0.0091
563	0.2343	612	0.4873	661	0.1666	710	0.0404	759	0.0091
564	0.2383	613	0.5933	662	0.1582	711	0.0389	760	0.0093
565	0.2421	614	0.5356	663	0.1555	712	0.0371	761	0.009
566	0.2435	615	0.4301	664	0.1518	713	0.0364	762	0.0084
567	0.2439	616	0.385	665	0.1489	714	0.0349	763	0.0083
568	0.248	617	0.3769	666	0.1448	715	0.0341	764	0.0082
569	0.2487	618	0.377	667	0.1413	716	0.0337	765	0.0076
570	0.2536	619	0.3812	668	0.1368	717	0.0311	766	0.0081
571	0.2562	620	0.3734	669	0.1366	718	0.0307	767	0.0076
572	0.2592	621	0.37	670	0.136	719	0.0298	768	0.0073
573	0.2648	622	0.369	671	0.1283	720	0.0291	769	0.0069
574	0.2645	623	0.3713	672	0.1257	721	0.0282	770	0.0066
575	0.27	624	0.3792	673	0.1221	722	0.027	771	0.0063
576	0.2702	625	0.3829	674	0.1159	723	0.0264	772	0.0067
577	0.2738	626	0.3869	675	0.1122	724	0.0258	773	0.0065
578	0.2767	627	0.3924	676	0.1099	725	0.0247	774	0.0061
579	0.2794	628	0.43	677	0.1072	726	0.024	775	0.0058
580	0.2824	629	0.5888	678	0.1035	727	0.0231	776	0.0061
581	0.2872	630	0.91	679	0.0992	728	0.0227	777	0.0057
582	0.2863	631	0.9412	680	0.0985	729	0.022	778	0.0056
583	0.2924	632	0.6246	681	0.0942	730	0.0207	779	0.0055
584	0.2947	633	0.495	682	0.092	731	0.0202	780	0.0056
585	0.2978	634	0.6369	683	0.0894	732	0.0198		
586	0.3014	635	0.748	684	0.0873	733	0.019		
587	0.3039	636	0.5281	685	0.0856	734	0.0186		
588	0.3068	637	0.3669	686	0.0831	735	0.0181		
589	0.3097	638	0.3153	687	0.0803	736	0.0168		
590	0.3135	639	0.2932	688	0.0786	737	0.017		
591	0.3153	640	0.2823	689	0.0757	738	0.0166		
592	0.3161	641	0.2703	690	0.0738	739	0.016		
593	0.3182	642	0.2645	691	0.0711	740	0.0148		
594	0.3208	643	0.2615	692	0.0694	741	0.0146		
595	0.3234	644	0.2576	693	0.0671	742	0.0138		
596	0.3257	645	0.2596	694	0.0649	743	0.0135		
597	0.3304	646	0.2947	695	0.0639	744	0.0133		
598	0.3374	647	0.3553	696	0.0615	745	0.0131		

10. Goniophotometer Test results for LFUAY-1000-L27-DF-I-15

10.1 Test Data

Test Ambient Temperature	25.2℃	Test orientation	Downward
Operate time(Min.)	90	stabilization time(Min.)	30

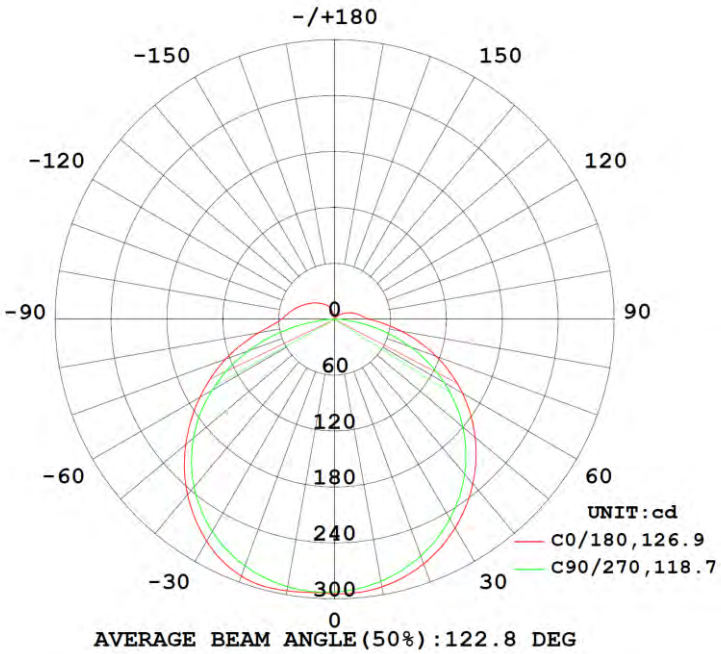
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
24	--	0.59715	1.0000	14.332

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	Imax (cd)	η up (%)	η down (%)
1080.99	75.42	296.4	8.5	91.5

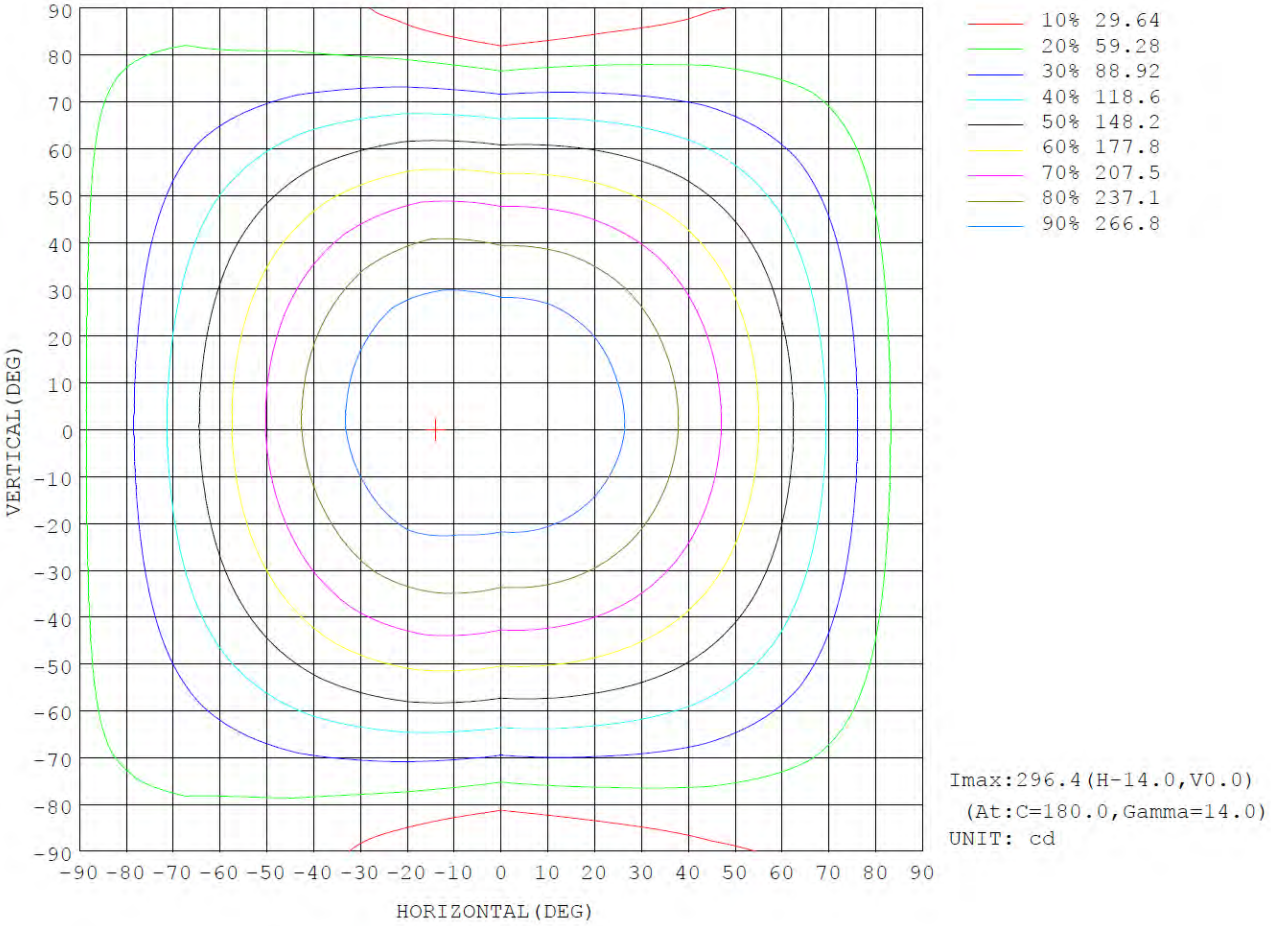
10.2 Luminous Intensity Distribution



10.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	291.6	288.1	285.4	288.3	295.9	293.7	291.4	291.2	0- 10	27.84	27.84	2.58,2.58
20	279.2	274.1	270.3	281.3	293.2	291.0	281.5	281.0	10- 20	81.10	108.9	10.1,10.1
30	258.5	252.2	247.3	264.4	275.0	277.0	262.8	262.1	20- 30	125.9	234.9	21.7,21.7
40	230.6	223.4	217.0	236.1	245.8	250.2	234.9	235.0	30- 40	156.1	391.0	36.2,36.2
50	196.9	188.5	179.7	199.6	208.7	213.7	198.0	200.5	40- 50	167.8	558.8	51.7,51.7
60	158.4	148.5	135.8	157.1	167.1	170.0	152.0	159.6	50- 60	159.4	718.1	66.4,66.4
70	116.0	104.6	86.24	111.3	124.3	121.5	98.04	113.4	60- 70	132.2	850.4	78.7,78.7
80	72.28	59.82	35.50	66.68	82.71	73.49	39.94	65.07	70- 80	90.87	941.2	87.1,87.1
90	37.91	26.24	3.319	39.67	57.39	43.75	2.981	28.61	80- 90	48.18	989.4	91.5,91.5
100	27.32	17.56	0.1272	31.77	48.33	35.40	0.1817	18.68	90-100	28.65	1018	94.2,94.2
110	20.17	11.84	0.1649	26.02	40.50	29.20	0.2243	12.48	100-110	21.53	1040	96.2,96.2
120	13.86	7.263	0.2339	22.20	33.42	24.02	0.2430	7.613	110-120	15.73	1055	97.6,97.6
130	8.723	4.188	0.2926	18.82	27.42	19.96	0.2884	4.301	120-130	11.02	1066	98.6,98.6
140	4.806	2.151	0.3238	15.82	22.34	16.67	0.3883	2.123	130-140	7.324	1074	99.3,99.3
150	2.143	1.034	0.3558	11.93	17.59	13.60	0.4716	0.9005	140-150	4.400	1079	99.7,99.7
160	0.8635	0.5383	0.3998	4.699	11.66	9.140	0.5466	0.5368	150-160	2.232	1080	99.9,99.9
170	0.5342	0.4979	0.4725	0.6311	1.783	1.360	0.5739	0.5404	160-170	0.6121	1081	100,100
180	0.4976	0.5485	0.5356	0.5614	0.5351	0.5629	0.5323	0.5385	170-180	0.0596	1081	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

10.4 Isocandela Diagram



10.5 Luminous Distribution Intensity Data

Table--1 UNIT: cd

C (DEG) / γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	295	294	293	293	293	292	292	292	295	294	293	293	293	292	292	292			
5	294	293	292	291	290	290	290	291	294	294	293	293	293	293	293	292			
10	292	290	288	287	285	285	288	291	296	296	294	291	291	292	291	290			
15	286	284	282	280	279	280	286	291	296	296	293	289	287	288	287	286			
20	279	276	274	272	270	273	281	287	293	294	291	285	282	282	281	279			
25	270	267	264	262	260	265	274	280	286	287	286	279	273	274	273	270			
30	258	255	252	250	247	255	264	269	275	277	277	270	263	264	262	260			
35	245	242	239	236	233	243	252	255	261	264	265	260	250	251	250	247			
40	231	227	223	220	217	228	236	240	246	248	250	246	235	236	235	232			
45	214	211	207	203	199	211	218	223	228	231	233	230	218	219	219	216			
50	197	193	188	184	180	192	200	203	209	212	214	211	198	200	201	199			
55	178	174	169	163	159	171	179	183	188	191	192	189	176	179	181	180			
60	158	154	149	141	136	149	157	162	167	169	170	165	152	156	160	160			
65	138	133	127	118	112	125	134	140	146	147	146	140	126	132	137	139			
70	116	112	105	94.5	86.2	100	111	118	124	125	122	113	98.0	106	113	117			
75	94.0	89.9	82.0	70.3	60.5	75.2	88.3	96.6	103	102	96.9	85.6	68.6	79.0	89.1	93.9			
80	72.3	68.3	59.8	47.1	35.5	51.7	66.7	76.5	82.7	81.1	73.5	59.3	39.9	52.8	65.1	71.6			
85	52.5	48.7	40.0	26.9	13.9	32.3	49.1	60.3	66.5	64.0	54.2	37.2	15.4	30.2	43.5	51.1			
90	37.9	34.5	26.2	14.6	3.32	21.8	39.7	51.4	57.4	54.5	43.7	25.1	2.98	15.2	28.6	36.0			
95	31.2	28.2	20.9	10.2	0.12	17.8	35.3	46.8	52.5	49.6	39.1	21.1	0.17	10.9	22.3	29.4			
100	27.3	24.5	17.6	7.74	0.13	15.4	31.8	42.8	48.3	45.5	35.4	18.4	0.18	8.07	18.7	25.4			
105	23.6	21.0	14.5	5.53	0.14	14.0	28.8	39.2	44.4	41.6	32.1	16.4	0.20	5.95	15.4	21.7			
110	20.2	17.8	11.8	4.20	0.16	12.9	26.0	35.7	40.5	37.9	29.2	14.9	0.22	4.35	12.5	18.3			
115	16.9	14.7	9.51	3.07	0.20	12.1	24.1	32.4	36.9	34.5	26.4	13.6	0.23	3.07	9.70	15.2			
120	13.9	12.0	7.26	2.21	0.23	11.4	22.2	29.7	33.4	31.3	24.0	12.6	0.24	2.15	7.61	12.3			
125	11.1	9.54	5.38	1.60	0.26	10.7	20.4	27.1	30.4	28.4	21.8	11.5	0.26	1.52	5.82	9.34			
130	8.72	7.41	4.19	1.18	0.29	9.96	18.8	24.7	27.4	25.6	20.0	10.5	0.29	1.11	4.30	7.38			
135	6.62	5.56	3.05	0.89	0.31	8.69	17.4	22.4	24.8	23.3	18.3	9.48	0.33	0.84	3.08	5.58			
140	4.81	3.82	2.15	0.71	0.32	6.92	15.8	20.3	22.3	21.0	16.7	8.17	0.39	0.68	2.12	4.00			
145	3.31	2.62	1.49	0.59	0.34	4.18	14.0	18.3	20.0	19.0	15.1	6.97	0.45	0.58	1.41	2.72			
150	2.14	1.76	1.03	0.49	0.36	2.36	11.9	16.0	17.6	16.9	13.6	5.89	0.47	0.51	0.90	1.76			
155	1.35	1.15	0.70	0.44	0.38	1.30	9.05	13.5	14.9	14.5	11.8	4.76	0.51	0.49	0.67	1.12			
160	0.86	0.77	0.54	0.43	0.40	0.71	4.70	10.0	11.7	11.5	9.14	3.33	0.55	0.50	0.54	0.77			
165	0.64	0.56	0.49	0.45	0.43	0.52	1.83	4.66	6.22	6.25	4.52	1.66	0.54	0.51	0.54	0.57			
170	0.53	0.50	0.50	0.46	0.47	0.50	0.63	1.33	1.78	1.84	1.36	0.76	0.57	0.54	0.54	0.58			
175	0.52	0.52	0.51	0.50	0.51	0.53	0.56	0.61	0.61	0.62	0.62	0.59	0.56	0.55	0.54	0.55			
180	0.50	0.56	0.55	0.53	0.54	0.54	0.56	0.59	0.54	0.53	0.56	0.54	0.53	0.53	0.54	0.56			

11. Integrating Sphere Test Results for LFUAY-1000-L27-DF-I-20

11.1 Test Data

Test Ambient Temperature (Integrating sphere internal temperature)	25.1℃	Test orientation	Downward
Operate time(Min.)	30	stabilization time(Min.)	0

Optical and Electrical Measurement Result

Number	Time	Current (A)	Voltage (V)	Power (W)	Flux(lm)	x	y	u'	v'	CCT (K)	Ra
0	00h00m00s	0.7361	23.998	17.665	1319.7	0.466	0.4104	0.2666	0.5282	2615	94.3
1	00h00m10s	0.7393	23.998	17.742	1319.1	0.466	0.4102	0.2666	0.5281	2614	94.2
2	00h00m20s	0.7406	23.998	17.773	1320.5	0.4662	0.4103	0.2667	0.5282	2612	94.2
3	00h00m30s	0.7417	23.998	17.799	1320.4	0.4662	0.4101	0.2668	0.5281	2610	94.2
4	00h00m40s	0.7427	23.998	17.823	1320.2	0.4663	0.4101	0.2669	0.5281	2608	94.2
5	00h00m50s	0.7435	23.998	17.843	1320.7	0.4663	0.41	0.267	0.5281	2608	94.2
6	00h01m00s	0.7443	23.998	17.862	1320.4	0.4664	0.4099	0.267	0.5281	2607	94.1
7	00h01m10s	0.745	23.998	17.879	1321.2	0.4662	0.4099	0.2669	0.528	2608	94.2
8	00h01m20s	0.7457	23.998	17.895	1321.6	0.4664	0.4098	0.2671	0.528	2606	94.2
9	00h01m30s	0.7462	23.998	17.907	1320.7	0.4663	0.4097	0.2671	0.528	2605	94.2
10	00h01m40s	0.7468	23.998	17.922	1321.1	0.4664	0.4098	0.2671	0.528	2605	94.2
11	00h01m50s	0.7473	23.998	17.934	1321.5	0.4663	0.4098	0.2671	0.528	2606	94.1
12	00h02m00s	0.7478	23.998	17.946	1321.3	0.4663	0.4095	0.2671	0.5279	2605	94.2
13	00h02m10s	0.7483	23.998	17.958	1322	0.4664	0.4096	0.2672	0.528	2603	94.1
14	00h02m20s	0.7487	23.998	17.967	1321.9	0.4664	0.4097	0.2672	0.528	2604	94.2
15	00h02m30s	0.7492	23.998	17.979	1321.9	0.4663	0.4094	0.2673	0.5279	2603	94.2
16	00h02m40s	0.7495	23.998	17.986	1322.6	0.4665	0.4094	0.2673	0.5279	2601	94.1
17	00h02m50s	0.7499	23.998	17.996	1322.2	0.4666	0.4096	0.2673	0.528	2601	94.1
18	00h03m00s	0.7503	23.998	18.006	1321.2	0.4664	0.4093	0.2673	0.5279	2601	94.2
19	00h03m10s	0.7506	23.998	18.013	1321.7	0.4666	0.4095	0.2673	0.5279	2601	94.1
20	00h03m20s	0.7509	23.998	18.02	1322.2	0.4664	0.4092	0.2673	0.5278	2601	94.1
21	00h03m30s	0.7512	23.998	18.027	1322.8	0.4664	0.4094	0.2673	0.5279	2602	94.1

22	00h03m40s	0.7515	23.998	18.034	1323.2	0.4665	0.4094	0.2674	0.5279	2600	94.1
23	00h03m50s	0.7518	23.998	18.042	1322.4	0.4666	0.4093	0.2674	0.5279	2599	94.1
24	00h04m00s	0.752	23.998	18.046	1321.7	0.4666	0.4093	0.2675	0.5279	2598	94.1
25	00h04m10s	0.7523	23.998	18.054	1322.3	0.4664	0.4091	0.2674	0.5278	2599	94.1
26	00h04m20s	0.7525	23.998	18.058	1322.4	0.4664	0.4091	0.2674	0.5278	2599	94.1
27	00h04m30s	0.7527	23.998	18.063	1322.9	0.4665	0.4093	0.2674	0.5279	2599	94.1
28	00h04m40s	0.753	23.998	18.07	1321.9	0.4665	0.4091	0.2675	0.5278	2599	94.1
29	00h04m50s	0.7532	23.998	18.075	1322.6	0.4666	0.4091	0.2675	0.5278	2597	94.1
30	00h05m00s	0.7534	23.998	18.08	1322.9	0.4668	0.4093	0.2676	0.5279	2597	94.1
31	00h05m10s	0.7536	23.998	18.085	1322.1	0.4665	0.409	0.2675	0.5278	2598	94.1
32	00h05m20s	0.7538	23.998	18.09	1321.9	0.4665	0.4089	0.2676	0.5277	2597	94.1
33	00h05m30s	0.754	23.998	18.094	1323.1	0.4667	0.4091	0.2676	0.5278	2597	94.1
34	00h05m40s	0.7541	23.998	18.097	1322.3	0.4667	0.4091	0.2676	0.5278	2596	94.1
35	00h05m50s	0.7543	23.998	18.102	1321.9	0.4665	0.4089	0.2676	0.5277	2597	94.1
36	00h06m00s	0.7545	23.998	18.106	1322.3	0.4667	0.409	0.2676	0.5278	2595	94
37	00h06m10s	0.7546	23.998	18.109	1322.8	0.4669	0.4091	0.2677	0.5278	2594	94.1
38	00h06m20s	0.7548	23.998	18.114	1322.2	0.4667	0.4091	0.2676	0.5278	2596	94.1
39	00h06m30s	0.7549	23.998	18.116	1322.8	0.4667	0.4091	0.2677	0.5278	2595	94.1
40	00h06m40s	0.7551	23.998	18.121	1322.7	0.4667	0.409	0.2677	0.5278	2594	94.1
41	00h06m50s	0.7552	23.998	18.123	1323.1	0.4667	0.409	0.2677	0.5278	2595	94.1
42	00h07m00s	0.7554	23.998	18.128	1322.5	0.4667	0.409	0.2677	0.5278	2595	94.1
43	00h07m10s	0.7555	23.998	18.13	1323.1	0.4666	0.4089	0.2677	0.5277	2595	94.1
44	00h07m20s	0.7556	23.998	18.133	1322.5	0.4667	0.4089	0.2677	0.5278	2594	94.1
45	00h07m30s	0.7558	23.998	18.138	1323	0.4668	0.4091	0.2677	0.5278	2594	94.1
46	00h07m40s	0.7559	23.998	18.14	1323.2	0.4667	0.4089	0.2677	0.5277	2594	94.1
47	00h07m50s	0.756	23.998	18.142	1323	0.4668	0.409	0.2678	0.5278	2593	94.1
48	00h08m00s	0.7561	23.998	18.145	1322.9	0.4669	0.409	0.2678	0.5278	2593	94.1
49	00h08m10s	0.7562	23.998	18.147	1322.7	0.4667	0.4088	0.2677	0.5277	2594	94
50	00h08m20s	0.7563	23.998	18.15	1323.6	0.4668	0.4089	0.2678	0.5277	2593	94.1
51	00h08m30s	0.7564	23.998	18.152	1322.6	0.4667	0.4089	0.2677	0.5277	2594	94.1
52	00h08m40s	0.7565	23.998	18.154	1322.6	0.4667	0.4089	0.2677	0.5277	2594	94.1

53	00h08m50s	0.7567	23.998	18.159	1323.7	0.4668	0.4089	0.2677	0.5277	2593	94
54	00h09m00s	0.7568	23.998	18.162	1322.8	0.4669	0.409	0.2678	0.5278	2593	94.1
55	00h09m10s	0.7569	23.998	18.164	1323.2	0.4666	0.4088	0.2677	0.5277	2594	94.1
56	00h09m20s	0.7569	23.998	18.164	1322.4	0.4668	0.4088	0.2678	0.5277	2592	94.1
57	00h09m30s	0.757	23.998	18.166	1323	0.4669	0.4089	0.2679	0.5278	2591	94
58	00h09m40s	0.7571	23.998	18.169	1323.7	0.4668	0.4087	0.2679	0.5277	2591	94.1
59	00h09m50s	0.7572	23.998	18.171	1322.6	0.4668	0.4086	0.2679	0.5276	2590	94
60	00h10m00s	0.7573	23.998	18.174	1323.5	0.4668	0.4087	0.2679	0.5277	2591	94
61	00h10m10s	0.7574	23.998	18.176	1323	0.4668	0.4088	0.2678	0.5277	2592	94
62	00h10m20s	0.7575	23.998	18.178	1323.7	0.4668	0.4088	0.2679	0.5277	2591	94
63	00h10m30s	0.7575	23.998	18.178	1323.9	0.4668	0.409	0.2677	0.5278	2594	94.1
64	00h10m40s	0.7576	23.998	18.181	1322.8	0.4669	0.4087	0.2679	0.5277	2591	94
65	00h10m50s	0.7577	23.998	18.183	1323.1	0.4669	0.4086	0.2679	0.5277	2590	94
66	00h11m00s	0.7578	23.998	18.186	1323.3	0.4669	0.4088	0.2679	0.5277	2591	94
67	00h11m10s	0.7578	23.998	18.186	1323.6	0.4668	0.4089	0.2677	0.5278	2593	94.1
68	00h11m20s	0.7579	23.998	18.188	1324.3	0.4667	0.4088	0.2678	0.5277	2593	94.1
69	00h11m30s	0.758	23.998	18.19	1323.4	0.4667	0.4088	0.2678	0.5277	2593	94
70	00h11m40s	0.758	23.998	18.19	1323.8	0.4668	0.4087	0.2678	0.5277	2592	94
71	00h11m50s	0.7581	23.998	18.193	1323.5	0.467	0.4087	0.2679	0.5277	2590	94
72	00h12m00s	0.7582	23.998	18.195	1323.7	0.4669	0.4088	0.2679	0.5277	2591	94
73	00h12m10s	0.7582	23.998	18.195	1323.3	0.467	0.4088	0.268	0.5277	2590	94
74	00h12m20s	0.7583	23.998	18.198	1324.4	0.4668	0.4088	0.2678	0.5277	2593	94.1
75	00h12m30s	0.7583	23.998	18.198	1323.9	0.4668	0.4089	0.2678	0.5277	2592	94.1
76	00h12m40s	0.7584	23.998	18.2	1324.3	0.467	0.4088	0.2679	0.5277	2590	94
77	00h12m50s	0.7584	23.998	18.2	1323.3	0.4669	0.4087	0.2679	0.5277	2590	94
78	00h13m00s	0.7585	23.998	18.202	1323.9	0.4669	0.4088	0.2679	0.5277	2591	94.1
79	00h13m10s	0.7585	23.998	18.202	1323.1	0.4668	0.4086	0.2679	0.5276	2590	94
80	00h13m20s	0.7586	23.998	18.205	1323.9	0.4668	0.4089	0.2678	0.5277	2592	94.1
81	00h13m30s	0.7586	23.998	18.205	1323.7	0.4669	0.4086	0.2679	0.5277	2590	94.1
82	00h13m40s	0.7587	23.998	18.207	1323.2	0.467	0.4088	0.2679	0.5278	2590	94
83	00h13m50s	0.7587	23.998	18.207	1324	0.467	0.4089	0.2679	0.5278	2590	94

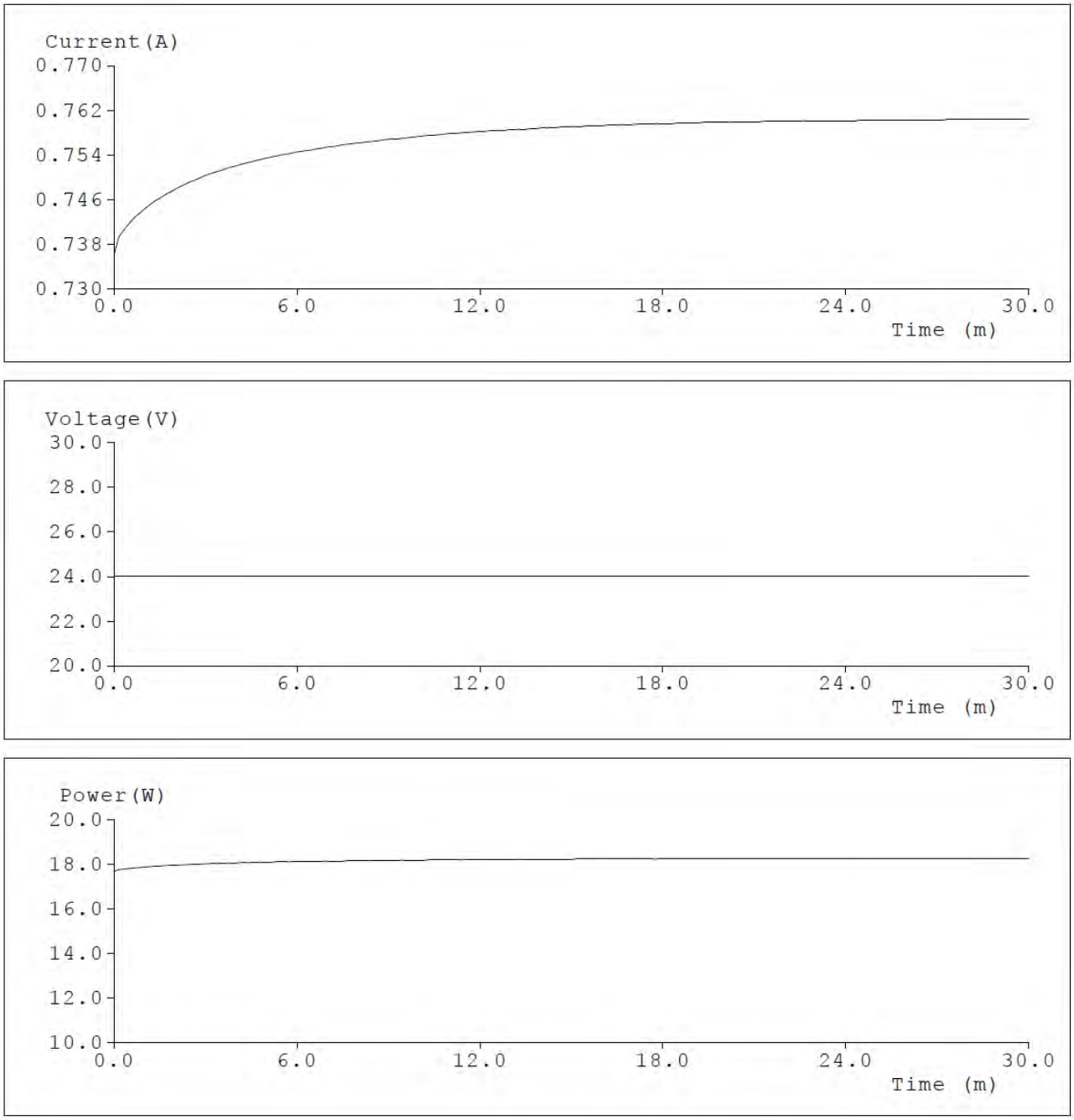
84	00h14m00s	0.7588	23.998	18.21	1323.9	0.4669	0.4086	0.268	0.5276	2590	94
85	00h14m10s	0.7588	23.998	18.21	1323.7	0.4669	0.4087	0.2679	0.5277	2590	94
86	00h14m20s	0.7589	23.998	18.212	1324.5	0.4669	0.4087	0.2679	0.5277	2590	94
87	00h14m30s	0.7589	23.998	18.212	1324.2	0.4667	0.4087	0.2678	0.5276	2593	94
88	00h14m40s	0.759	23.998	18.214	1323.1	0.4669	0.4087	0.2679	0.5277	2590	94.1
89	00h14m50s	0.759	23.998	18.214	1323.1	0.4668	0.4086	0.2679	0.5277	2591	94
90	00h15m00s	0.759	23.998	18.214	1323.4	0.4668	0.4086	0.2679	0.5277	2591	94.1
91	00h15m10s	0.7591	23.998	18.217	1324.4	0.4671	0.4086	0.2681	0.5277	2587	94
92	00h15m20s	0.7591	23.998	18.217	1324.5	0.4669	0.4086	0.268	0.5277	2590	94.1
93	00h15m30s	0.7592	23.998	18.219	1324.8	0.4669	0.4087	0.2679	0.5277	2590	94
94	00h15m40s	0.7592	23.998	18.219	1323.9	0.467	0.4087	0.268	0.5277	2590	94
95	00h15m50s	0.7592	23.998	18.219	1324.3	0.467	0.4088	0.268	0.5277	2589	94
96	00h16m00s	0.7592	23.998	18.219	1324.8	0.467	0.4087	0.268	0.5277	2589	94
97	00h16m10s	0.7593	23.998	18.222	1324.3	0.4671	0.4087	0.268	0.5277	2588	94
98	00h16m20s	0.7593	23.998	18.222	1323.4	0.4668	0.4085	0.2679	0.5276	2590	94
99	00h16m30s	0.7593	23.998	18.222	1323.9	0.4669	0.4087	0.2679	0.5277	2590	94
100	00h16m40s	0.7594	23.998	18.224	1324.5	0.4669	0.4086	0.2679	0.5277	2590	94
101	00h16m50s	0.7594	23.998	18.224	1324.2	0.4669	0.4087	0.2679	0.5277	2590	94
102	00h17m00s	0.7594	23.998	18.224	1323.7	0.4671	0.4087	0.268	0.5277	2588	94
103	00h17m10s	0.7595	23.998	18.226	1324.3	0.4669	0.4086	0.268	0.5277	2589	94
104	00h17m20s	0.7595	23.998	18.226	1323.4	0.467	0.4088	0.268	0.5277	2589	94
105	00h17m30s	0.7595	23.998	18.226	1323.6	0.4669	0.4086	0.2679	0.5277	2590	94
106	00h17m40s	0.7595	23.998	18.226	1324.3	0.467	0.4087	0.268	0.5277	2589	94.1
107	00h17m50s	0.7596	23.998	18.229	1324.5	0.467	0.4087	0.268	0.5277	2589	94
108	00h18m00s	0.7596	23.998	18.229	1323.5	0.4669	0.4086	0.268	0.5277	2589	94
109	00h18m10s	0.7596	23.998	18.229	1324	0.4669	0.4086	0.268	0.5277	2589	94
110	00h18m20s	0.7596	23.998	18.229	1323.7	0.4669	0.4087	0.2679	0.5277	2590	94.1
111	00h18m30s	0.7597	23.998	18.231	1323.7	0.4671	0.4087	0.268	0.5277	2588	94
112	00h18m40s	0.7597	23.998	18.231	1324	0.4671	0.4087	0.268	0.5277	2588	94
113	00h18m50s	0.7597	23.998	18.231	1324.2	0.4671	0.4087	0.268	0.5277	2588	94
114	00h19m00s	0.7597	23.998	18.231	1324.9	0.4671	0.4088	0.268	0.5278	2588	94

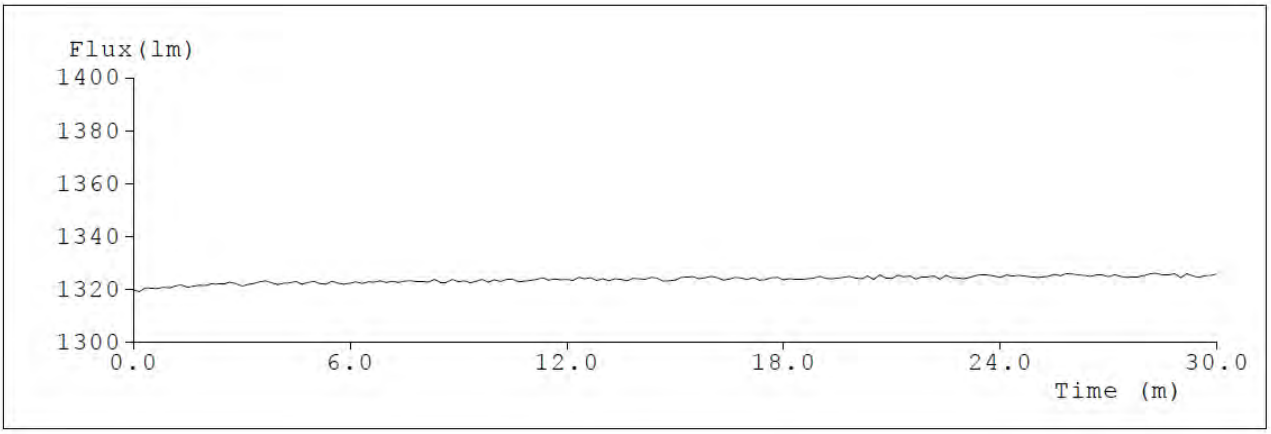
115	00h19m10s	0.7597	23.998	18.231	1324	0.4669	0.4086	0.268	0.5276	2588	94
116	00h19m20s	0.7598	23.998	18.234	1324	0.4668	0.4086	0.268	0.5276	2590	94
117	00h19m30s	0.7598	23.998	18.234	1324.1	0.467	0.4088	0.268	0.5277	2589	94
118	00h19m40s	0.7598	23.998	18.234	1324.4	0.4669	0.4087	0.2679	0.5277	2590	94
119	00h19m50s	0.7598	23.998	18.234	1324.8	0.467	0.4086	0.268	0.5277	2589	94
120	00h20m00s	0.7598	23.998	18.234	1324.1	0.4671	0.4088	0.268	0.5278	2588	94
121	00h20m10s	0.7598	23.998	18.234	1323.9	0.4669	0.4087	0.2679	0.5277	2590	94
122	00h20m20s	0.7599	23.998	18.236	1325	0.4669	0.4088	0.2679	0.5277	2590	94
123	00h20m30s	0.7599	23.998	18.236	1323.7	0.4668	0.4086	0.2679	0.5276	2590	94.1
124	00h20m40s	0.7599	23.998	18.236	1325.3	0.467	0.4086	0.2681	0.5277	2587	94
125	00h20m50s	0.7599	23.998	18.236	1324.1	0.4669	0.4086	0.268	0.5276	2589	94.1
126	00h21m00s	0.7599	23.998	18.236	1324.1	0.467	0.4087	0.268	0.5277	2589	94
127	00h21m10s	0.7599	23.998	18.236	1325.3	0.4668	0.4086	0.2679	0.5277	2590	94
128	00h21m20s	0.76	23.998	18.238	1324.7	0.4669	0.4086	0.2679	0.5277	2590	94
129	00h21m30s	0.76	23.998	18.238	1325	0.4669	0.4086	0.268	0.5277	2589	94
130	00h21m40s	0.76	23.998	18.238	1323.9	0.467	0.4086	0.2681	0.5276	2588	94
131	00h21m50s	0.76	23.998	18.238	1324.7	0.4669	0.4085	0.268	0.5276	2589	94
132	00h22m00s	0.76	23.998	18.238	1324.7	0.467	0.4087	0.268	0.5277	2589	94
133	00h22m10s	0.76	23.998	18.238	1325	0.4668	0.4086	0.2679	0.5276	2591	94
134	00h22m20s	0.76	23.998	18.238	1323.8	0.467	0.4087	0.268	0.5277	2588	94
135	00h22m30s	0.76	23.998	18.238	1325.3	0.467	0.4087	0.268	0.5277	2589	94
136	00h22m40s	0.7601	23.998	18.241	1324.3	0.467	0.4088	0.2679	0.5277	2590	94
137	00h22m50s	0.7601	23.998	18.241	1324.2	0.467	0.4087	0.268	0.5277	2588	94
138	00h23m00s	0.7601	23.998	18.241	1324	0.4671	0.4088	0.268	0.5277	2588	94
139	00h23m10s	0.7601	23.998	18.241	1324.5	0.4671	0.4087	0.268	0.5277	2588	94
140	00h23m20s	0.7601	23.998	18.241	1325.2	0.4669	0.4086	0.268	0.5276	2589	94
141	00h23m30s	0.7601	23.998	18.241	1325.4	0.4671	0.4088	0.268	0.5277	2588	94
142	00h23m40s	0.7601	23.998	18.241	1325.3	0.467	0.4086	0.268	0.5277	2588	94
143	00h23m50s	0.7601	23.998	18.241	1324.9	0.4669	0.4086	0.2679	0.5277	2590	94
144	00h24m00s	0.7601	23.998	18.241	1324.4	0.467	0.4087	0.268	0.5277	2589	94
145	00h24m10s	0.7601	23.998	18.241	1325.3	0.4669	0.4086	0.268	0.5277	2590	94

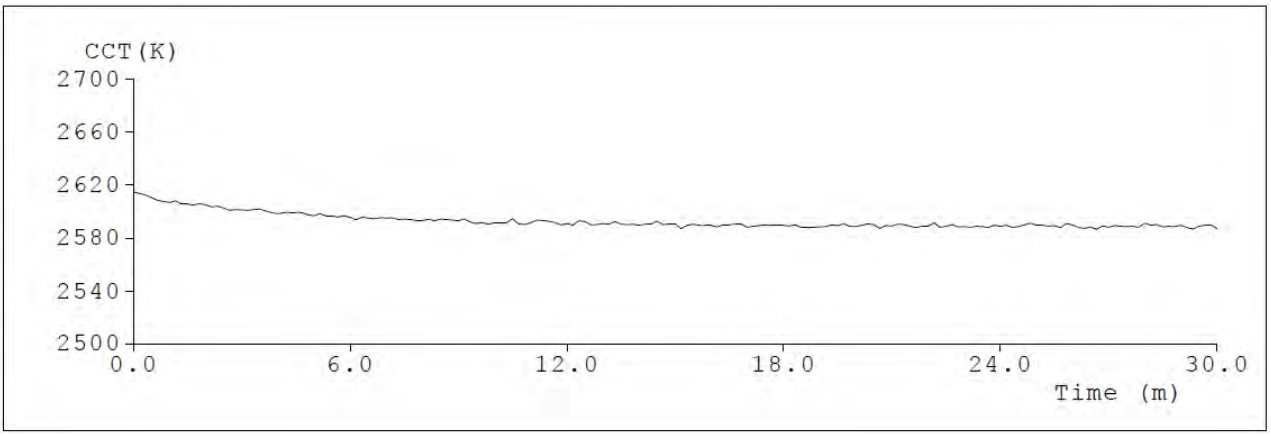
146	00h24m20s	0.7601	23.998	18.241	1325	0.467	0.4086	0.268	0.5277	2588	94
147	00h24m30s	0.7602	23.998	18.243	1325.2	0.467	0.4086	0.268	0.5277	2588	94
148	00h24m40s	0.7602	23.998	18.243	1325	0.4669	0.4086	0.2679	0.5276	2590	94
149	00h24m50s	0.7602	23.998	18.243	1324.7	0.4668	0.4086	0.2679	0.5276	2591	94
150	00h25m00s	0.7602	23.998	18.243	1324.5	0.4669	0.4086	0.268	0.5276	2589	94
151	00h25m10s	0.7602	23.998	18.243	1324.5	0.4668	0.4086	0.2679	0.5276	2590	94
152	00h25m20s	0.7602	23.998	18.243	1324.8	0.467	0.4087	0.268	0.5277	2589	94
153	00h25m30s	0.7602	23.998	18.243	1325.6	0.467	0.4087	0.268	0.5277	2589	94
154	00h25m40s	0.7602	23.998	18.243	1325.1	0.467	0.4086	0.268	0.5277	2588	94
155	00h25m50s	0.7602	23.998	18.243	1325.8	0.4669	0.4087	0.2679	0.5277	2591	94
156	00h26m00s	0.7602	23.998	18.243	1325.8	0.4669	0.4087	0.2679	0.5277	2590	93.9
157	00h26m10s	0.7602	23.998	18.243	1325.4	0.4671	0.4087	0.268	0.5277	2588	94
158	00h26m20s	0.7602	23.998	18.243	1325.2	0.4672	0.4088	0.2681	0.5278	2587	94
159	00h26m30s	0.7602	23.998	18.243	1324.8	0.467	0.4086	0.268	0.5277	2588	94
160	00h26m40s	0.7602	23.998	18.243	1325.4	0.4672	0.4087	0.2681	0.5277	2586	94
161	00h26m50s	0.7602	23.998	18.243	1325.3	0.467	0.4087	0.268	0.5277	2589	94
162	00h27m00s	0.7602	23.998	18.243	1324.7	0.467	0.4087	0.268	0.5277	2588	94
163	00h27m10s	0.7602	23.998	18.243	1325.5	0.467	0.4087	0.268	0.5277	2589	94
164	00h27m20s	0.7603	23.998	18.246	1324.8	0.4668	0.4084	0.268	0.5276	2589	94
165	00h27m30s	0.7603	23.998	18.246	1324.5	0.467	0.4087	0.268	0.5277	2588	94
166	00h27m40s	0.7603	23.998	18.246	1324.7	0.467	0.4087	0.268	0.5277	2589	94
167	00h27m50s	0.7603	23.998	18.246	1324.7	0.467	0.4087	0.268	0.5277	2588	94
168	00h28m00s	0.7603	23.998	18.246	1325.2	0.4668	0.4087	0.2679	0.5277	2591	94
169	00h28m10s	0.7603	23.998	18.246	1325.9	0.4669	0.4086	0.268	0.5277	2589	94
170	00h28m20s	0.7603	23.998	18.246	1326	0.4669	0.4086	0.2679	0.5277	2590	94
171	00h28m30s	0.7603	23.998	18.246	1325.3	0.4671	0.4087	0.268	0.5277	2588	94
172	00h28m40s	0.7603	23.998	18.246	1325.3	0.467	0.4086	0.268	0.5277	2589	94
173	00h28m50s	0.7603	23.998	18.246	1325.9	0.4671	0.4088	0.268	0.5278	2589	94
174	00h29m00s	0.7603	23.998	18.246	1324.3	0.467	0.4087	0.2679	0.5277	2590	94.1
175	00h29m10s	0.7603	23.998	18.246	1325.9	0.4671	0.4087	0.268	0.5277	2588	94
176	00h29m20s	0.7603	23.998	18.246	1325	0.4671	0.4087	0.2681	0.5277	2587	94

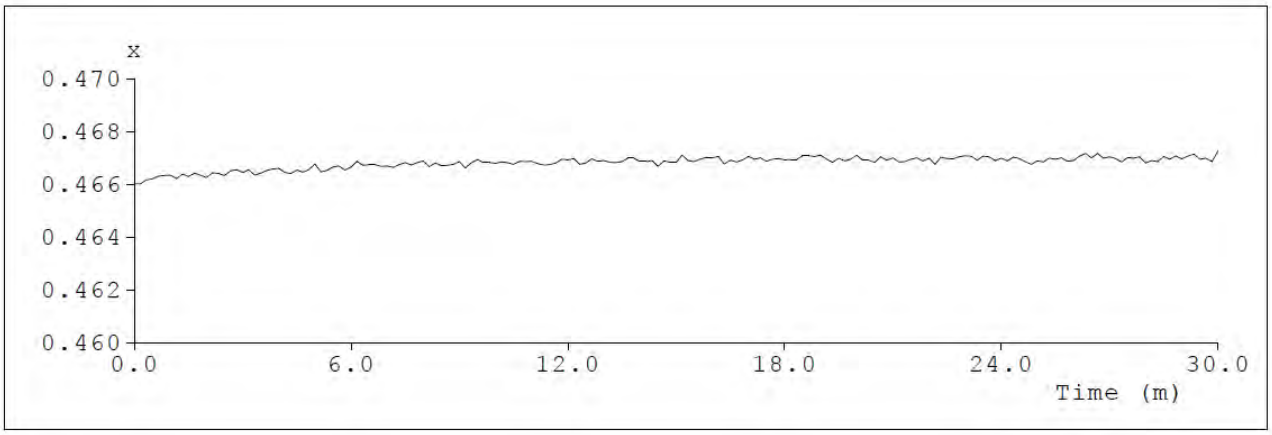
177	00h29m30s	0.7603	23.998	18.246	1324.5	0.4669	0.4086	0.268	0.5277	2589	94
178	00h29m40s	0.7603	23.998	18.246	1325.1	0.467	0.4088	0.2679	0.5277	2589	94
179	00h29m50s	0.7603	23.998	18.246	1325.2	0.4669	0.4086	0.2679	0.5276	2590	94
180	00h30m00s	0.7603	23.998	18.246	1325.8	0.4673	0.4089	0.2681	0.5278	2587	94

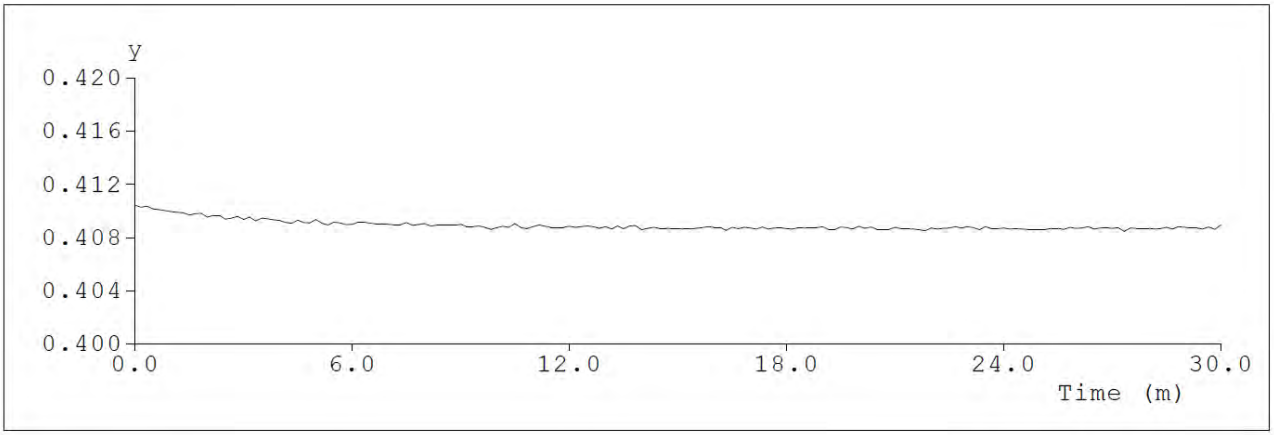
Test curves

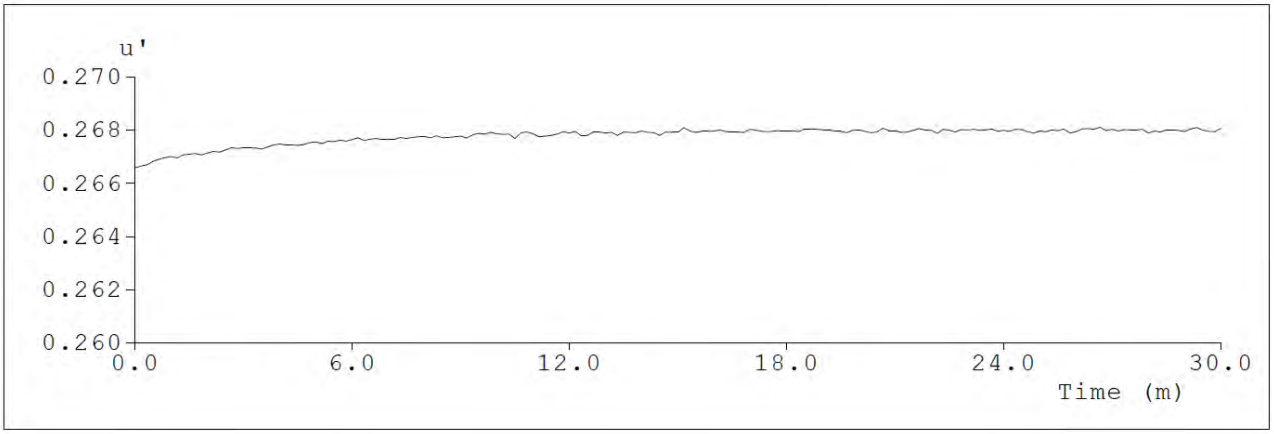


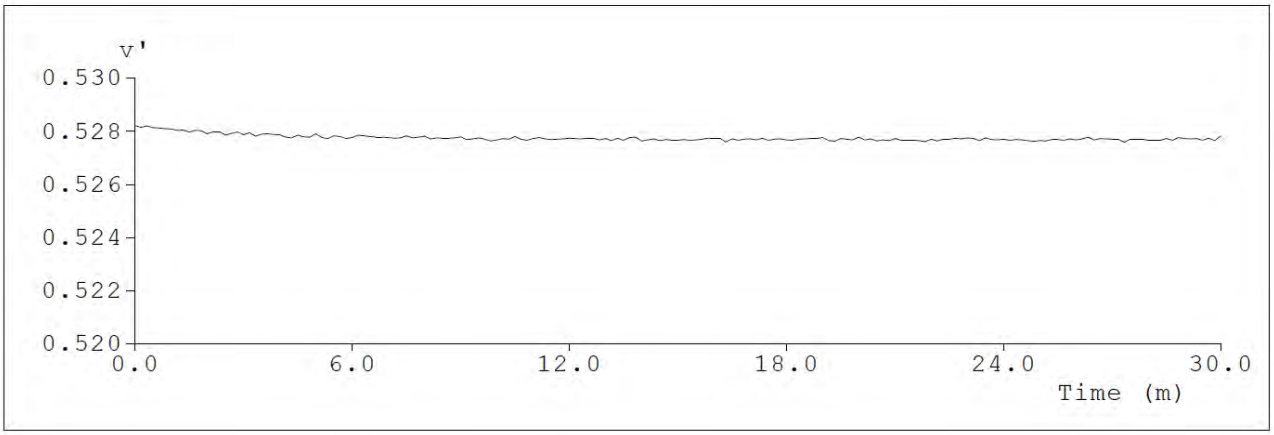

Flux(lm)
1400
1380
1360
1340
1320
1300
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


CCT(K)
2700
2660
2620
2580
2540
2500
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


x
0.470
0.468
0.466
0.464
0.462
0.460
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


y
0.420
0.416
0.412
0.408
0.404
0.400
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


u'
0.270
0.268
0.266
0.264
0.262
0.260
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

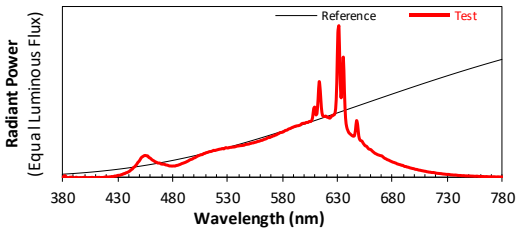

v'
0.530
0.528
0.526
0.524
0.522
0.520
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

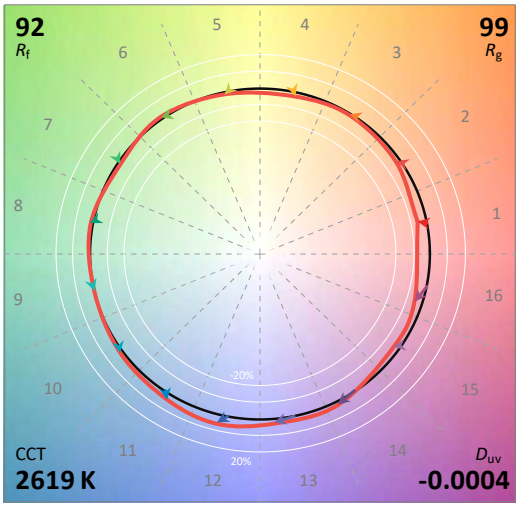
*11.2 ANSI/IES TM-30-18 Color Rendition Report

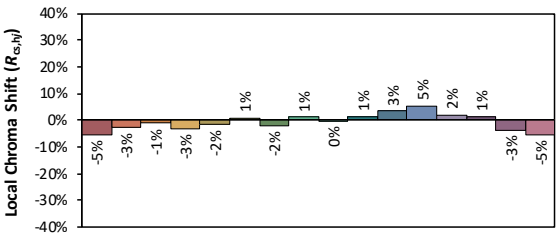
ANSI/IES TM-30-18 Color Rendition Report

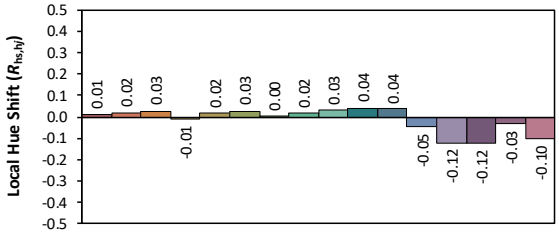
Source: Manufacturer:

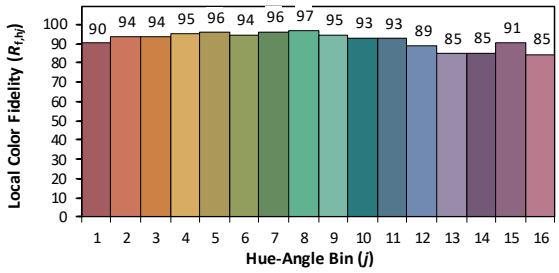
Date: 2023/9/26 Model: LFUAY-1000-L27-DF-I-20

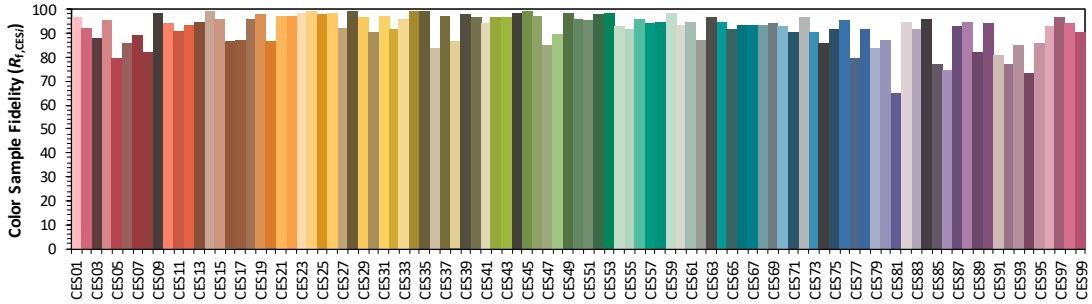












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

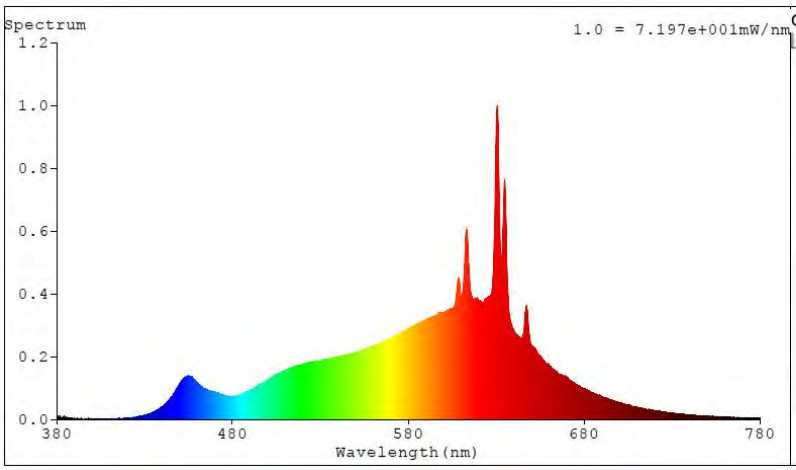
x	0.4659
y	0.4107
u'	0.2663
v'	0.5283

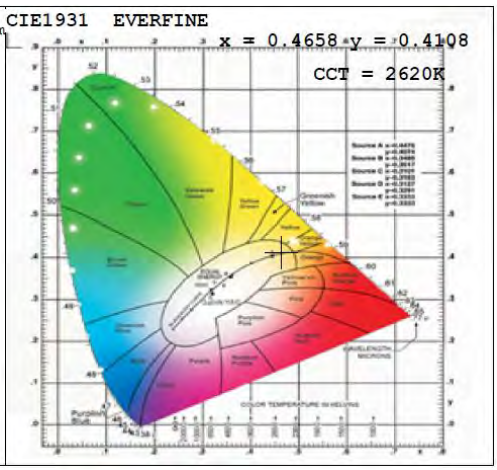
CIE 13.3-1995 (CRI)

R_a	94
R_9	59

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

11.3 Relative Spectral Power Distribution





nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0046	414	0.0009	448	0.0967	482	0.0743	516	0.169
381	0.013	415	0.0023	449	0.1034	483	0.0777	517	0.1724
382	0.0124	416	0.0023	450	0.1137	484	0.0782	518	0.1713
383	0.0039	417	0.0033	451	0.1253	485	0.0808	519	0.1731
384	0.0005	418	0.005	452	0.1313	486	0.0831	520	0.1751
385	0.0003	419	0.0059	453	0.1356	487	0.086	521	0.1771
386	0.0044	420	0.0058	454	0.1397	488	0.0896	522	0.179
387	0.0034	421	0.0047	455	0.1401	489	0.0916	523	0.1801
388	0.0049	422	0.0063	456	0.1378	490	0.0942	524	0.1813
389	0.0005	423	0.0065	457	0.1373	491	0.0967	525	0.1841
390	0	424	0.0083	458	0.1278	492	0.0998	526	0.1812
391	0.0011	425	0.0081	459	0.1248	493	0.1034	527	0.1851
392	0.0045	426	0.0088	460	0.1188	494	0.1068	528	0.1893
393	0	427	0.0119	461	0.1126	495	0.1115	529	0.1876
394	0.0002	428	0.0102	462	0.1087	496	0.1146	530	0.1872
395	0.0006	429	0.0139	463	0.1044	497	0.1167	531	0.189
396	0.0018	430	0.0158	464	0.0999	498	0.1198	532	0.191
397	0.0003	431	0.0162	465	0.0976	499	0.1249	533	0.1911
398	0.0023	432	0.0171	466	0.0931	500	0.1263	534	0.1926
399	0.0035	433	0.0204	467	0.0929	501	0.1311	535	0.193
400	0.0037	434	0.0219	468	0.0922	502	0.1347	536	0.1938
401	0.0021	435	0.0261	469	0.0876	503	0.1386	537	0.1957
402	0	436	0.0267	470	0.0861	504	0.1407	538	0.1982
403	0.0013	437	0.0312	471	0.0856	505	0.1445	539	0.1994
404	0.0016	438	0.0331	472	0.0857	506	0.145	540	0.2002
405	0.002	439	0.0363	473	0.0819	507	0.1472	541	0.2014
406	0.0029	440	0.0399	474	0.0805	508	0.1528	542	0.2021
407	0.0028	441	0.045	475	0.0792	509	0.1532	543	0.2027
408	0.0007	442	0.0516	476	0.0764	510	0.1574	544	0.2037
409	0.0011	443	0.0556	477	0.0744	511	0.1588	545	0.2054
410	0.0017	444	0.0645	478	0.0746	512	0.1608	546	0.2096
411	0.003	445	0.0691	479	0.0737	513	0.1641	547	0.2095
412	0.0026	446	0.0771	480	0.0743	514	0.1648	548	0.211
413	0.0034	447	0.0856	481	0.0745	515	0.1663	549	0.2117

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.2148	599	0.3421	648	0.3315	697	0.0605	746	0.0125
551	0.2159	600	0.3417	649	0.2639	698	0.0585	747	0.0126
552	0.2188	601	0.3465	650	0.2388	699	0.0577	748	0.0122
553	0.2189	602	0.347	651	0.2328	700	0.0547	749	0.0123
554	0.2214	603	0.3476	652	0.2296	701	0.0532	750	0.0118
555	0.2229	604	0.3535	653	0.2175	702	0.0525	751	0.0115
556	0.2249	605	0.3526	654	0.208	703	0.0501	752	0.0112
557	0.2281	606	0.3575	655	0.2003	704	0.0484	753	0.011
558	0.2288	607	0.3783	656	0.1983	705	0.0476	754	0.0103
559	0.2312	608	0.4326	657	0.1898	706	0.0457	755	0.0099
560	0.2341	609	0.4423	658	0.1817	707	0.0444	756	0.0106
561	0.2349	610	0.3945	659	0.1789	708	0.043	757	0.0105
562	0.2381	611	0.4031	660	0.1766	709	0.0417	758	0.0093
563	0.2411	612	0.493	661	0.1699	710	0.0406	759	0.009
564	0.243	613	0.6017	662	0.1636	711	0.0385	760	0.0094
565	0.2457	614	0.5445	663	0.158	712	0.0375	761	0.0084
566	0.2501	615	0.4409	664	0.1528	713	0.0359	762	0.0086
567	0.2532	616	0.3925	665	0.1499	714	0.0357	763	0.008
568	0.2524	617	0.385	666	0.1456	715	0.034	764	0.0076
569	0.2565	618	0.3847	667	0.1434	716	0.0333	765	0.0082
570	0.2586	619	0.3871	668	0.1409	717	0.0337	766	0.0078
571	0.2625	620	0.3807	669	0.1388	718	0.0321	767	0.0071
572	0.2636	621	0.3786	670	0.1376	719	0.0306	768	0.0069
573	0.268	622	0.3754	671	0.1317	720	0.0288	769	0.007
574	0.2692	623	0.3746	672	0.1258	721	0.0283	770	0.0068
575	0.2742	624	0.3855	673	0.1213	722	0.0275	771	0.0069
576	0.2766	625	0.3879	674	0.1183	723	0.0269	772	0.0069
577	0.2816	626	0.3942	675	0.1137	724	0.0265	773	0.0066
578	0.2838	627	0.3974	676	0.1118	725	0.025	774	0.0056
579	0.2848	628	0.4336	677	0.1083	726	0.024	775	0.0062
580	0.2871	629	0.5921	678	0.1047	727	0.0235	776	0.0065
581	0.2907	630	0.9089	679	0.1018	728	0.0226	777	0.0059
582	0.2962	631	0.9488	680	0.0984	729	0.0217	778	0.0057
583	0.2978	632	0.6398	681	0.0968	730	0.0218	779	0.0055
584	0.3	633	0.501	682	0.094	731	0.0215	780	0.0055
585	0.3053	634	0.6342	683	0.0917	732	0.0203		
586	0.3076	635	0.7563	684	0.0874	733	0.019		
587	0.3098	636	0.5378	685	0.0858	734	0.0189		
588	0.3141	637	0.3744	686	0.0833	735	0.0178		
589	0.3168	638	0.3203	687	0.082	736	0.0176		
590	0.3196	639	0.2983	688	0.0784	737	0.0178		
591	0.3225	640	0.2831	689	0.0786	738	0.017		
592	0.3244	641	0.2764	690	0.0742	739	0.0159		
593	0.326	642	0.2699	691	0.0711	740	0.015		
594	0.3267	643	0.2645	692	0.0709	741	0.015		
595	0.329	644	0.2611	693	0.0678	742	0.0147		
596	0.3315	645	0.2631	694	0.0668	743	0.0136		
597	0.3385	646	0.2975	695	0.0643	744	0.0139		
598	0.3411	647	0.3578	696	0.062	745	0.0137		

12. Goniophotometer Test results for LFUAY-1000-L27-DF-I-20

12.1 Test Data

Test Ambient Temperature	25.2℃	Test orientation	Downward
Operate time(Min.)	90	stabilization time(Min.)	30

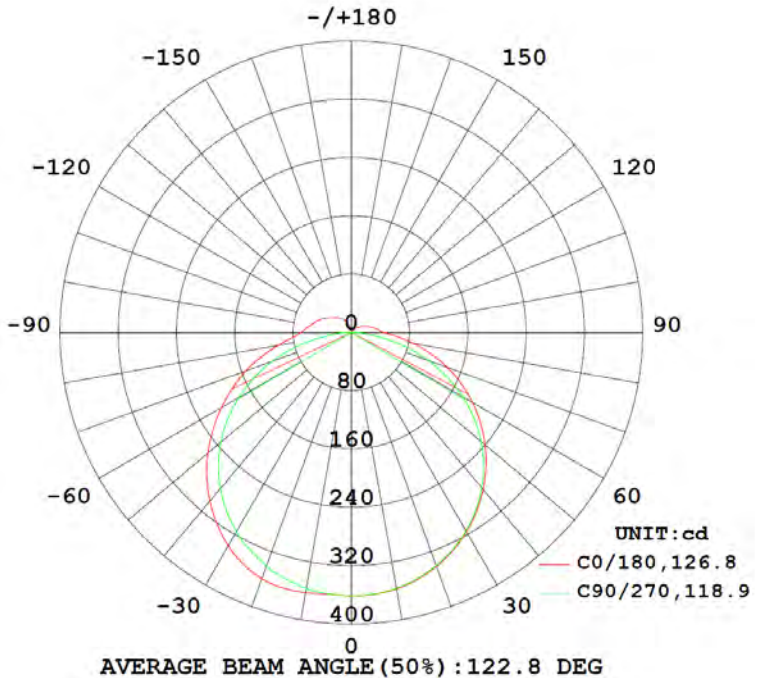
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
23.993	--	0.7825	1.0000	18.774

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	Imax (cd)	η up (%)	η down (%)
1324.94	70.57	363	8.2	91.8

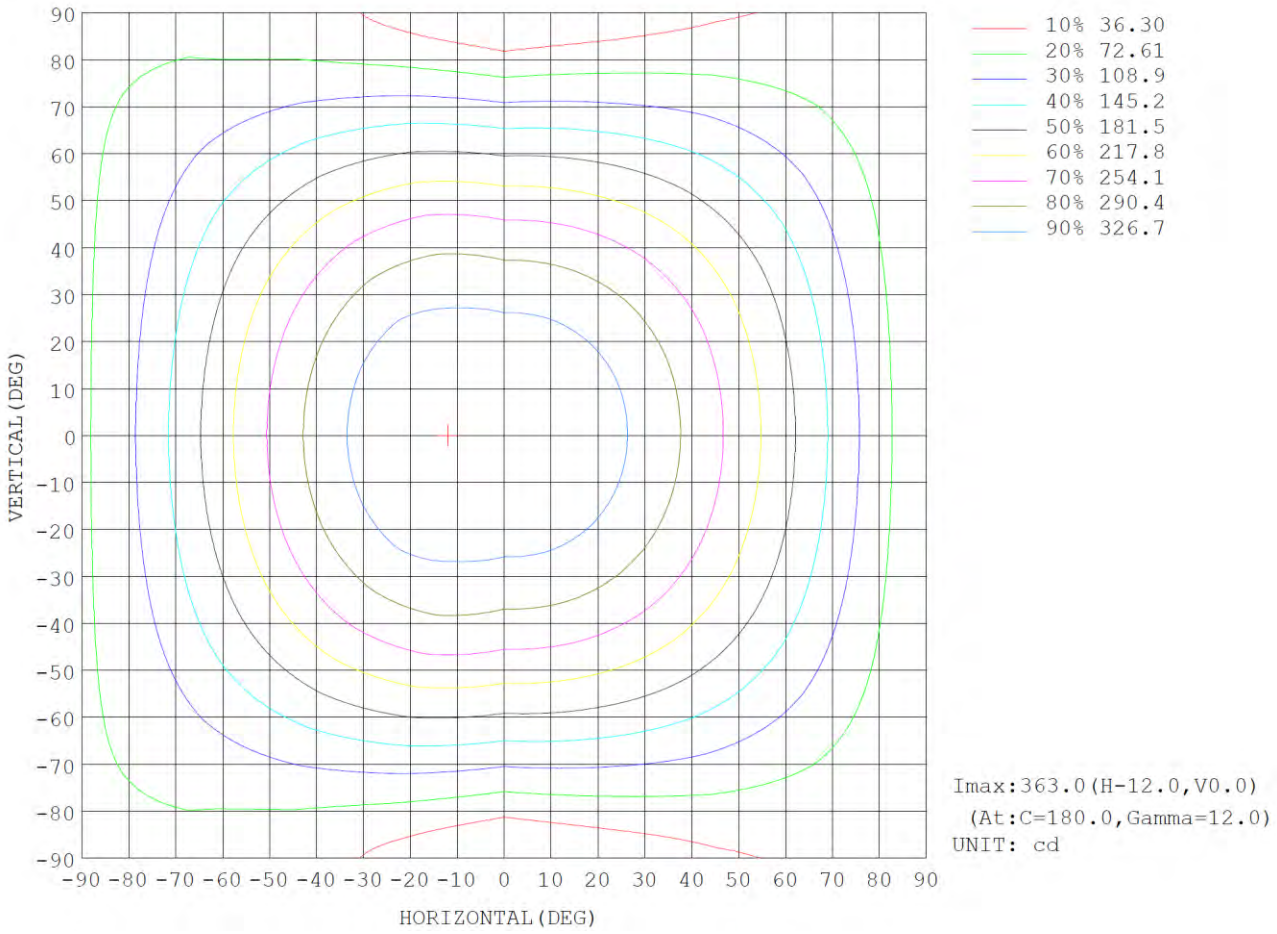
12.2 Luminous Intensity Distribution



12.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	357.4	357.4	356.4	359.1	362.5	359.1	356.6	357.4	0- 10	34.34	34.34	2.59,2.59
20	341.7	342.0	340.5	352.9	359.6	353.3	341.1	342.3	10- 20	99.97	134.3	10.1,10.1
30	315.9	316.4	314.7	334.0	338.0	334.6	315.5	316.8	20- 30	155.2	289.5	21.9,21.9
40	281.4	281.4	278.6	299.9	302.2	301.2	279.9	282.1	30- 40	192.4	481.9	36.4,36.4
50	239.7	238.1	232.4	255.0	257.2	256.3	233.8	239.0	40- 50	206.7	688.6	52,52
60	192.0	187.7	176.6	201.5	206.0	202.8	178.3	188.7	50- 60	196.1	884.7	66.8,66.8
70	139.8	131.9	112.4	143.2	153.5	144.9	114.4	133.0	60- 70	162.4	1047	79,79
80	86.05	74.41	44.48	85.82	102.0	87.53	47.31	75.52	70- 80	111.2	1158	87.4,87.4
90	44.88	32.25	3.568	50.45	69.22	50.42	3.715	32.57	80- 90	58.30	1217	91.8,91.8
100	32.87	21.85	0.2000	40.41	57.37	39.74	0.2785	21.66	90-100	34.32	1251	94.4,94.4
110	24.12	14.65	0.2604	33.24	48.39	33.20	0.3468	14.36	100-110	25.72	1277	96.4,96.4
120	16.52	8.811	0.3415	26.98	39.86	26.82	0.3952	8.602	110-120	18.70	1295	97.8,97.8
130	10.25	5.073	0.4218	22.67	31.99	22.68	0.4736	4.796	120-130	12.88	1308	98.7,98.7
140	5.555	2.491	0.4661	18.48	26.11	19.09	0.6586	2.368	130-140	8.452	1317	99.4,99.4
150	2.419	1.160	0.4996	12.20	20.34	14.97	0.7310	1.070	140-150	5.014	1322	99.8,99.8
160	0.9874	0.6465	0.5583	4.864	12.03	9.221	0.8014	0.6621	150-160	2.418	1324	99.9,99.9
170	0.6791	0.6402	0.7313	0.9035	1.879	1.398	0.9134	0.7568	160-170	0.6528	1325	100,100
180	0.6188	0.8609	0.8234	0.8546	0.6999	0.8869	0.8291	0.8243	170-180	0.0834	1325	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

12.4 Isocandela Diagram



12.5 Luminous Distribution Intensity Data

Table--1 UNIT: cd

C (DEG) / γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	361	361	362	362	361	362	361	362	361	361	362	362	361	362	361	362
5	361	361	361	361	360	360	360	361	361	360	360	360	360	361	361	361
10	357	357	357	357	356	356	359	362	363	362	359	356	357	357	357	358
15	351	351	351	351	350	351	357	362	363	361	357	351	350	351	351	351
20	342	342	342	342	341	344	353	358	360	358	353	345	341	342	342	342
25	330	330	330	330	329	335	345	350	351	350	346	336	330	331	331	331
30	316	316	316	316	315	324	334	337	338	338	335	324	316	317	317	317
35	300	300	300	300	298	310	319	321	321	321	320	310	299	300	301	300
40	281	281	281	281	279	292	300	302	302	302	301	293	280	281	282	282
45	261	261	261	259	257	272	279	280	281	281	280	273	258	260	262	262
50	240	239	238	236	232	248	255	256	257	257	256	250	234	236	239	240
55	216	216	214	210	206	222	229	231	232	232	230	223	207	211	215	217
60	192	191	188	182	177	193	202	204	206	206	203	195	178	183	189	192
65	166	165	160	152	145	163	173	177	180	179	174	164	147	153	161	166
70	140	138	132	121	112	130	143	150	153	151	145	132	114	123	133	139
75	113	110	103	90.0	78.4	98.2	114	123	127	124	116	100	80.7	91.3	104	111
80	86.0	83.1	74.4	59.5	44.5	67.3	85.8	97.1	102	98.5	87.5	69.0	47.3	60.8	75.5	84.4
85	61.9	58.7	49.1	33.2	16.5	41.5	62.9	76.0	81.3	76.9	64.0	42.8	18.8	34.3	50.0	59.7
90	44.9	41.7	32.3	17.2	3.57	28.0	50.4	64.3	69.2	64.4	50.4	28.0	3.71	17.4	32.6	42.2
95	37.6	34.8	26.2	12.6	0.16	23.3	44.7	58.0	62.7	57.7	44.0	22.7	0.19	12.4	26.1	34.9
100	32.9	30.1	21.8	9.50	0.20	20.2	40.4	52.9	57.4	52.6	39.7	20.1	0.28	9.05	21.7	30.2
105	28.4	25.7	18.0	6.79	0.25	17.6	36.7	48.5	52.8	48.3	36.4	17.7	0.32	6.47	17.8	25.8
110	24.1	21.6	14.6	5.18	0.26	15.9	33.2	44.3	48.4	44.2	33.2	16.1	0.35	4.56	14.4	21.7
115	20.1	17.9	11.6	3.75	0.30	14.8	29.8	40.4	44.2	40.3	29.7	15.1	0.37	3.12	11.0	17.9
120	16.5	14.5	8.81	2.68	0.34	13.7	27.0	36.2	39.9	36.2	26.8	14.1	0.40	2.15	8.60	14.5
125	13.2	11.4	6.83	1.94	0.38	12.2	24.6	32.5	35.6	32.5	24.6	13.0	0.43	1.53	6.56	10.9
130	10.3	8.80	5.07	1.44	0.42	10.1	22.7	29.5	32.0	29.5	22.7	11.7	0.47	1.16	4.80	8.56
135	7.72	6.53	3.63	1.08	0.45	8.54	20.7	26.7	29.0	26.8	20.9	10.2	0.54	0.90	3.42	6.44
140	5.55	4.61	2.49	0.85	0.47	6.77	18.5	24.2	26.1	24.3	19.1	8.47	0.66	0.74	2.37	4.58
145	3.78	3.06	1.70	0.68	0.48	4.50	15.3	21.5	23.4	22.0	17.0	7.05	0.73	0.67	1.58	3.08
150	2.42	2.01	1.16	0.61	0.50	2.45	12.2	18.2	20.3	19.4	15.0	5.93	0.73	0.60	1.07	1.99
155	1.54	1.31	0.84	0.54	0.52	1.25	8.94	14.3	16.4	16.0	12.4	4.80	0.77	0.65	0.75	1.27
160	0.99	0.89	0.65	0.54	0.56	0.87	4.86	10.00	12.0	11.9	9.22	3.34	0.80	0.70	0.66	0.83
165	0.76	0.69	0.59	0.57	0.60	0.76	1.72	4.67	6.59	6.61	4.70	1.66	0.80	0.73	0.72	0.69
170	0.68	0.63	0.64	0.66	0.73	0.84	0.90	1.21	1.88	1.92	1.40	1.03	0.91	0.84	0.76	0.74
175	0.74	0.74	0.72	0.73	0.79	0.85	0.90	0.93	0.99	1.00	0.99	0.94	0.89	0.84	0.79	0.77
180	0.62	0.89	0.86	0.84	0.82	0.83	0.85	0.89	0.70	0.73	0.89	0.85	0.83	0.82	0.82	0.84

13. Integrating Sphere Test Results for LFUAY-1000-L27-DF-O-5

13.1 Test Data

Test Ambient Temperature (Integrating sphere internal temperature)	25.1℃	Test orientation	Downward
Operate time(Min.)	30	stabilization time(Min.)	0

Optical and Electrical Measurement Result

Number	Time	Current (A)	Voltage (V)	Power (W)	Flux(lm)	x	y	u'	v'	CCT (K)	Ra
0	00h00m00s	0.259	23.997	6.2152	391.02	0.4759	0.4121	0.2722	0.5304	2502	94.3
1	00h00m10s	0.2591	23.997	6.2176	390.77	0.4757	0.4122	0.272	0.5303	2505	94.3
2	00h00m20s	0.2591	23.997	6.2176	390.72	0.4759	0.4121	0.2722	0.5304	2502	94.3
3	00h00m30s	0.2592	23.997	6.22	390.21	0.4757	0.4119	0.2722	0.5303	2503	94.3
4	00h00m40s	0.2592	23.997	6.22	390.28	0.4757	0.4119	0.2722	0.5303	2502	94.3
5	00h00m50s	0.2593	23.997	6.2224	390.17	0.4758	0.412	0.2722	0.5303	2502	94.3
6	00h01m00s	0.2593	23.997	6.2224	389.76	0.4761	0.4121	0.2724	0.5304	2499	94.3
7	00h01m10s	0.2593	23.997	6.2224	390.16	0.4759	0.4121	0.2722	0.5304	2502	94.3
8	00h01m20s	0.2594	23.997	6.2248	389.88	0.4758	0.4117	0.2723	0.5302	2500	94.3
9	00h01m30s	0.2594	23.997	6.2248	389.75	0.4759	0.4118	0.2723	0.5302	2500	94.3
10	00h01m40s	0.2594	23.997	6.2248	389.42	0.4759	0.4118	0.2723	0.5302	2500	94.3
11	00h01m50s	0.2595	23.997	6.2272	389.51	0.476	0.4119	0.2724	0.5303	2499	94.3
12	00h02m00s	0.2595	23.997	6.2272	389.3	0.476	0.4117	0.2724	0.5302	2498	94.3
13	00h02m10s	0.2595	23.997	6.2272	389.46	0.476	0.4118	0.2724	0.5302	2498	94.3
14	00h02m20s	0.2596	23.997	6.2296	389.26	0.4759	0.4117	0.2724	0.5302	2499	94.3
15	00h02m30s	0.2596	23.997	6.2296	389.37	0.476	0.4119	0.2723	0.5303	2500	94.3
16	00h02m40s	0.2596	23.997	6.2296	389.12	0.4759	0.4118	0.2723	0.5302	2500	94.3
17	00h02m50s	0.2596	23.997	6.2296	389.2	0.4759	0.4117	0.2724	0.5302	2499	94.3
18	00h03m00s	0.2597	23.997	6.232	389.1	0.4758	0.4117	0.2723	0.5302	2500	94.3
19	00h03m10s	0.2597	23.997	6.232	388.85	0.476	0.4117	0.2724	0.5302	2498	94.3
20	00h03m20s	0.2597	23.997	6.232	388.71	0.4761	0.4117	0.2725	0.5302	2497	94.3
21	00h03m30s	0.2597	23.997	6.232	388.77	0.4759	0.4118	0.2724	0.5302	2499	94.3

22	00h03m40s	0.2598	23.997	6.2344	389.06	0.4758	0.4116	0.2724	0.5301	2499	94.3
23	00h03m50s	0.2598	23.997	6.2344	388.58	0.4762	0.4117	0.2726	0.5302	2496	94.3
24	00h04m00s	0.2598	23.997	6.2344	388.76	0.476	0.4117	0.2724	0.5302	2498	94.3
25	00h04m10s	0.2598	23.997	6.2344	388.36	0.476	0.4114	0.2726	0.5301	2495	94.2
26	00h04m20s	0.2599	23.997	6.2368	388.69	0.476	0.4117	0.2724	0.5302	2498	94.3
27	00h04m30s	0.2599	23.997	6.2368	388.5	0.4757	0.4115	0.2724	0.5301	2499	94.3
28	00h04m40s	0.2599	23.997	6.2368	388.8	0.4759	0.4115	0.2725	0.5301	2497	94.3
29	00h04m50s	0.2599	23.997	6.2368	388.66	0.476	0.4115	0.2725	0.5301	2497	94.2
30	00h05m00s	0.2599	23.997	6.2368	388.33	0.4761	0.4116	0.2726	0.5302	2496	94.3
31	00h05m10s	0.2599	23.997	6.2368	388.5	0.4759	0.4118	0.2724	0.5302	2499	94.3
32	00h05m20s	0.26	23.997	6.2392	388.54	0.4761	0.4117	0.2725	0.5302	2496	94.3
33	00h05m30s	0.26	23.997	6.2392	388.64	0.4762	0.4117	0.2726	0.5303	2495	94.2
34	00h05m40s	0.26	23.997	6.2392	388.25	0.4759	0.4115	0.2725	0.5301	2497	94.3
35	00h05m50s	0.26	23.997	6.2392	388.27	0.4759	0.4115	0.2725	0.5301	2498	94.3
36	00h06m00s	0.26	23.997	6.2392	388.37	0.4758	0.4115	0.2724	0.5301	2498	94.3
37	00h06m10s	0.26	23.997	6.2392	388.61	0.476	0.4116	0.2725	0.5302	2497	94.3
38	00h06m20s	0.2601	23.997	6.2416	388.19	0.4759	0.4114	0.2725	0.5301	2497	94.3
39	00h06m30s	0.2601	23.997	6.2416	388.41	0.4761	0.4117	0.2725	0.5302	2496	94.3
40	00h06m40s	0.2601	23.997	6.2416	388.34	0.4761	0.4117	0.2725	0.5302	2497	94.2
41	00h06m50s	0.2601	23.997	6.2416	388.16	0.4761	0.4114	0.2726	0.5301	2494	94.3
42	00h07m00s	0.2601	23.997	6.2416	388.15	0.4761	0.4117	0.2725	0.5302	2496	94.3
43	00h07m10s	0.2602	23.997	6.244	388.14	0.476	0.4115	0.2725	0.5301	2496	94.2
44	00h07m20s	0.2602	23.997	6.244	388.18	0.476	0.4116	0.2725	0.5302	2497	94.3
45	00h07m30s	0.2602	23.997	6.244	388.37	0.4761	0.4117	0.2725	0.5302	2497	94.3
46	00h07m40s	0.2602	23.997	6.244	388.31	0.4761	0.4117	0.2725	0.5302	2497	94.3
47	00h07m50s	0.2602	23.997	6.244	388.24	0.4762	0.4116	0.2726	0.5302	2495	94.3
48	00h08m00s	0.2602	23.997	6.244	388.16	0.476	0.4114	0.2726	0.5301	2496	94.3
49	00h08m10s	0.2602	23.997	6.244	388.15	0.4762	0.4116	0.2726	0.5302	2494	94.2
50	00h08m20s	0.2602	23.997	6.244	388.19	0.476	0.4115	0.2725	0.5301	2497	94.2
51	00h08m30s	0.2602	23.997	6.244	387.89	0.4761	0.4114	0.2726	0.5301	2495	94.3
52	00h08m40s	0.2603	23.997	6.2464	388.26	0.476	0.4117	0.2725	0.5302	2497	94.3

53	00h08m50s	0.2603	23.997	6.2464	388.18	0.4761	0.4114	0.2726	0.5301	2494	94.2
54	00h09m00s	0.2603	23.997	6.2464	388.24	0.4761	0.4117	0.2725	0.5302	2497	94.3
55	00h09m10s	0.2603	23.997	6.2464	388.15	0.4761	0.4116	0.2725	0.5302	2496	94.3
56	00h09m20s	0.2603	23.997	6.2464	388.03	0.4761	0.4116	0.2726	0.5302	2496	94.3
57	00h09m30s	0.2603	23.997	6.2464	388.21	0.476	0.4114	0.2726	0.5301	2496	94.3
58	00h09m40s	0.2603	23.997	6.2464	387.88	0.476	0.4115	0.2725	0.5301	2496	94.3
59	00h09m50s	0.2603	23.997	6.2464	387.81	0.4761	0.4115	0.2726	0.5302	2495	94.3
60	00h10m00s	0.2603	23.997	6.2464	388.02	0.476	0.4115	0.2725	0.5301	2496	94.3
61	00h10m10s	0.2604	23.997	6.2488	387.52	0.4761	0.4114	0.2727	0.5301	2494	94.2
62	00h10m20s	0.2604	23.997	6.2488	387.89	0.4761	0.4116	0.2726	0.5302	2495	94.3
63	00h10m30s	0.2604	23.997	6.2488	387.88	0.4761	0.4114	0.2727	0.5301	2494	94.2
64	00h10m40s	0.2604	23.997	6.2488	387.87	0.4761	0.4114	0.2727	0.5301	2494	94.2
65	00h10m50s	0.2604	23.997	6.2488	388	0.4761	0.4114	0.2726	0.5301	2494	94.2
66	00h11m00s	0.2604	23.997	6.2488	387.89	0.4761	0.4114	0.2727	0.5301	2494	94.2
67	00h11m10s	0.2604	23.997	6.2488	387.9	0.4762	0.4116	0.2726	0.5302	2494	94.3
68	00h11m20s	0.2604	23.997	6.2488	387.78	0.4761	0.4116	0.2725	0.5302	2496	94.2
69	00h11m30s	0.2604	23.997	6.2488	388.02	0.4761	0.4115	0.2726	0.5302	2495	94.3
70	00h11m40s	0.2604	23.997	6.2488	387.88	0.4761	0.4115	0.2726	0.5301	2494	94.3
71	00h11m50s	0.2604	23.997	6.2488	387.87	0.476	0.4114	0.2726	0.5301	2495	94.3
72	00h12m00s	0.2604	23.997	6.2488	387.67	0.4762	0.4116	0.2726	0.5302	2494	94.3
73	00h12m10s	0.2604	23.997	6.2488	387.94	0.4759	0.4113	0.2726	0.5301	2495	94.3
74	00h12m20s	0.2604	23.997	6.2488	387.73	0.4762	0.4114	0.2727	0.5301	2493	94.2
75	00h12m30s	0.2604	23.997	6.2488	387.89	0.4762	0.4115	0.2727	0.5302	2494	94.3
76	00h12m40s	0.2605	23.997	6.2512	387.74	0.4761	0.4115	0.2726	0.5302	2495	94.2
77	00h12m50s	0.2605	23.997	6.2512	388.06	0.4761	0.4115	0.2726	0.5302	2495	94.3
78	00h13m00s	0.2605	23.997	6.2512	387.87	0.4762	0.4115	0.2727	0.5302	2494	94.3
79	00h13m10s	0.2605	23.997	6.2512	387.68	0.476	0.4113	0.2726	0.5301	2495	94.3
80	00h13m20s	0.2605	23.997	6.2512	387.56	0.476	0.4112	0.2727	0.53	2494	94.3
81	00h13m30s	0.2605	23.997	6.2512	387.85	0.4761	0.4114	0.2726	0.5301	2495	94.3
82	00h13m40s	0.2605	23.997	6.2512	387.71	0.4761	0.4115	0.2726	0.5302	2495	94.2
83	00h13m50s	0.2605	23.997	6.2512	387.94	0.4762	0.4116	0.2726	0.5302	2495	94.3

84	00h14m00s	0.2605	23.997	6.2512	387.9	0.4759	0.4114	0.2726	0.5301	2496	94.2
85	00h14m10s	0.2605	23.997	6.2512	387.86	0.4761	0.4111	0.2727	0.53	2493	94.2
86	00h14m20s	0.2605	23.997	6.2512	387.73	0.4762	0.4114	0.2727	0.5301	2493	94.3
87	00h14m30s	0.2605	23.997	6.2512	387.73	0.476	0.4114	0.2726	0.5301	2495	94.3
88	00h14m40s	0.2605	23.997	6.2512	387.81	0.4763	0.4115	0.2727	0.5302	2493	94.2
89	00h14m50s	0.2605	23.997	6.2512	387.92	0.4761	0.4115	0.2726	0.5301	2494	94.2
90	00h15m00s	0.2605	23.997	6.2512	387.89	0.4762	0.4115	0.2727	0.5302	2494	94.3
91	00h15m10s	0.2606	23.997	6.2536	387.82	0.4761	0.4114	0.2727	0.5301	2494	94.2
92	00h15m20s	0.2605	23.997	6.2512	387.99	0.476	0.4114	0.2726	0.5301	2495	94.3
93	00h15m30s	0.2605	23.997	6.2512	387.43	0.4762	0.4115	0.2727	0.5301	2493	94.3
94	00h15m40s	0.2606	23.997	6.2536	387.66	0.4763	0.4114	0.2728	0.5301	2492	94.3
95	00h15m50s	0.2605	23.997	6.2512	387.93	0.4761	0.4114	0.2727	0.5301	2494	94.2
96	00h16m00s	0.2605	23.997	6.2512	387.65	0.4761	0.4113	0.2727	0.5301	2494	94.2
97	00h16m10s	0.2606	23.997	6.2536	387.76	0.476	0.4116	0.2725	0.5301	2497	94.3
98	00h16m20s	0.2605	23.997	6.2512	387.53	0.4761	0.4113	0.2727	0.5301	2494	94.2
99	00h16m30s	0.2606	23.997	6.2536	387.34	0.4764	0.4115	0.2728	0.5302	2492	94.3
100	00h16m40s	0.2606	23.997	6.2536	387.84	0.4761	0.4114	0.2727	0.5301	2494	94.3
101	00h16m50s	0.2606	23.997	6.2536	387.79	0.476	0.4115	0.2726	0.5301	2496	94.3
102	00h17m00s	0.2606	23.997	6.2536	387.71	0.4761	0.4115	0.2726	0.5301	2495	94.3
103	00h17m10s	0.2606	23.997	6.2536	387.62	0.4762	0.4114	0.2727	0.5301	2493	94.2
104	00h17m20s	0.2606	23.997	6.2536	387.84	0.476	0.4115	0.2726	0.5301	2496	94.2
105	00h17m30s	0.2606	23.997	6.2536	387.5	0.4761	0.4113	0.2727	0.5301	2494	94.3
106	00h17m40s	0.2606	23.997	6.2536	387.61	0.4763	0.4115	0.2727	0.5302	2492	94.2
107	00h17m50s	0.2606	23.997	6.2536	387.78	0.4759	0.4114	0.2725	0.5301	2496	94.3
108	00h18m00s	0.2606	23.997	6.2536	387.57	0.4761	0.4114	0.2727	0.5301	2494	94.2
109	00h18m10s	0.2606	23.997	6.2536	387.68	0.476	0.4113	0.2727	0.53	2494	94.3
110	00h18m20s	0.2606	23.997	6.2536	387.87	0.4759	0.4114	0.2725	0.5301	2497	94.3
111	00h18m30s	0.2606	23.997	6.2536	387.18	0.4761	0.4111	0.2728	0.53	2493	94.2
112	00h18m40s	0.2606	23.997	6.2536	387.56	0.476	0.4113	0.2727	0.53	2494	94.3
113	00h18m50s	0.2606	23.997	6.2536	387.36	0.4761	0.4115	0.2726	0.5302	2495	94.3
114	00h19m00s	0.2606	23.997	6.2536	387.3	0.476	0.4112	0.2727	0.53	2494	94.2

115	00h19m10s	0.2606	23.997	6.2536	387.72	0.4761	0.4114	0.2726	0.5301	2495	94.2
116	00h19m20s	0.2606	23.997	6.2536	387.68	0.4761	0.4115	0.2727	0.5301	2494	94.3
117	00h19m30s	0.2606	23.997	6.2536	387.57	0.476	0.4113	0.2726	0.5301	2495	94.2
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119	00h19m50s	0.2606	23.997	6.2536	387.41	0.4763	0.4115	0.2727	0.5302	2493	94.2
120	00h20m00s	0.2606	23.997	6.2536	387.59	0.476	0.4113	0.2726	0.5301	2496	94.3
121	00h20m10s	0.2606	23.997	6.2536	387.65	0.476	0.4115	0.2726	0.5301	2495	94.3
122	00h20m20s	0.2606	23.997	6.2536	387.43	0.4761	0.4112	0.2727	0.53	2493	94.3
123	00h20m30s	0.2606	23.997	6.2536	387.62	0.4761	0.4114	0.2726	0.5301	2494	94.2
124	00h20m40s	0.2606	23.997	6.2536	387.58	0.4761	0.4116	0.2726	0.5302	2495	94.3
125	00h20m50s	0.2606	23.997	6.2536	387.55	0.4759	0.4114	0.2725	0.5301	2497	94.3
126	00h21m00s	0.2606	23.997	6.2536	387.51	0.4761	0.4113	0.2727	0.5301	2493	94.3
127	00h21m10s	0.2606	23.997	6.2536	387.48	0.476	0.4113	0.2726	0.5301	2495	94.3
128	00h21m20s	0.2606	23.997	6.2536	387.56	0.476	0.4114	0.2726	0.5301	2496	94.3
129	00h21m30s	0.2606	23.997	6.2536	387.46	0.4762	0.4113	0.2728	0.5301	2492	94.2
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132	00h22m00s	0.2606	23.997	6.2536	387.53	0.476	0.4112	0.2727	0.53	2494	94.2
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135	00h22m30s	0.2606	23.997	6.2536	387.74	0.4761	0.4112	0.2727	0.53	2493	94.2
136	00h22m40s	0.2606	23.997	6.2536	387.55	0.4761	0.4114	0.2726	0.5301	2494	94.2
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153	00h25m30s	0.2606	23.997	6.2536	387.26	0.4761	0.4113	0.2727	0.5301	2494	94.2
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158	00h26m20s	0.2606	23.997	6.2536	387.2	0.4761	0.4112	0.2727	0.53	2493	94.3
159	00h26m30s	0.2606	23.997	6.2536	387.07	0.4761	0.4113	0.2727	0.5301	2493	94.3
160	00h26m40s	0.2606	23.997	6.2536	387.38	0.4761	0.4112	0.2727	0.53	2493	94.2
161	00h26m50s	0.2606	23.997	6.2536	387.34	0.476	0.4113	0.2727	0.5301	2494	94.2
162	00h27m00s	0.2606	23.997	6.2536	387.54	0.4761	0.4115	0.2726	0.5301	2494	94.3
163	00h27m10s	0.2606	23.997	6.2536	387.52	0.4761	0.4113	0.2727	0.5301	2494	94.2
164	00h27m20s	0.2606	23.997	6.2536	387.66	0.4759	0.4113	0.2726	0.53	2496	94.3
165	00h27m30s	0.2606	23.997	6.2536	387.5	0.4759	0.4114	0.2725	0.5301	2496	94.3
166	00h27m40s	0.2606	23.997	6.2536	387.29	0.476	0.4111	0.2727	0.53	2494	94.3
167	00h27m50s	0.2606	23.997	6.2536	387.52	0.4761	0.4112	0.2728	0.53	2492	94.2
168	00h28m00s	0.2606	23.997	6.2536	387.51	0.4761	0.4114	0.2727	0.5301	2494	94.2
169	00h28m10s	0.2606	23.997	6.2536	386.95	0.476	0.4111	0.2727	0.53	2493	94.2
170	00h28m20s	0.2606	23.997	6.2536	387.24	0.4761	0.4114	0.2727	0.5301	2494	94.3
171	00h28m30s	0.2606	23.997	6.2536	387.27	0.4761	0.4113	0.2727	0.5301	2494	94.3
172	00h28m40s	0.2606	23.997	6.2536	387.38	0.476	0.4113	0.2726	0.5301	2495	94.2
173	00h28m50s	0.2606	23.997	6.2536	387.63	0.476	0.4113	0.2726	0.53	2495	94.3
174	00h29m00s	0.2606	23.997	6.2536	387.23	0.4761	0.4113	0.2727	0.5301	2494	94.3
175	00h29m10s	0.2606	23.997	6.2536	387.51	0.4759	0.4111	0.2727	0.53	2494	94.2
176	00h29m20s	0.2606	23.997	6.2536	387.53	0.4759	0.4112	0.2726	0.53	2495	94.3

177	00h29m30s	0.2606	23.997	6.2536	387.69	0.4759	0.4112	0.2726	0.53	2496	94.3
178	00h29m40s	0.2606	23.997	6.2536	387.56	0.4759	0.4112	0.2726	0.53	2495	94.3
179	00h29m50s	0.2606	23.997	6.2536	387.42	0.476	0.4112	0.2727	0.53	2494	94.3
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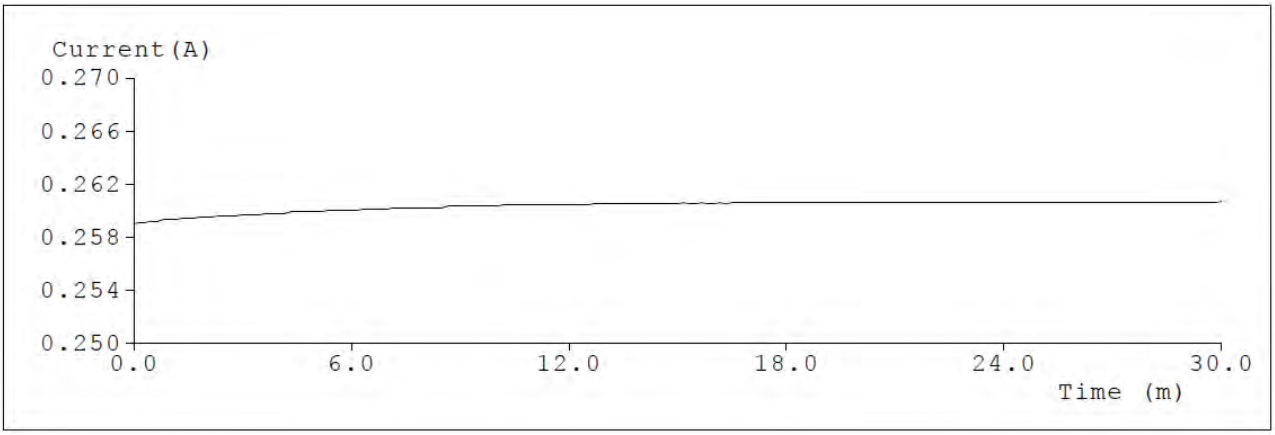
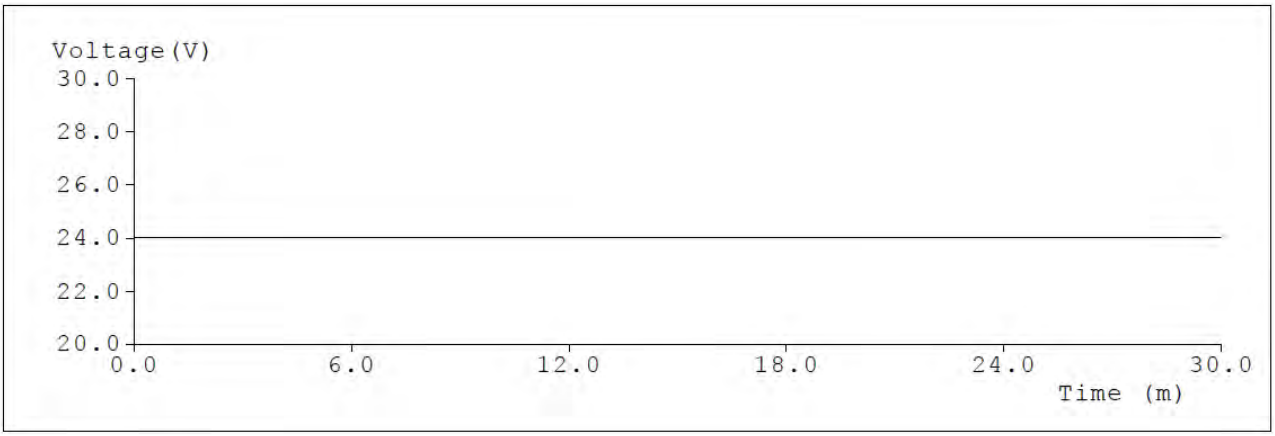
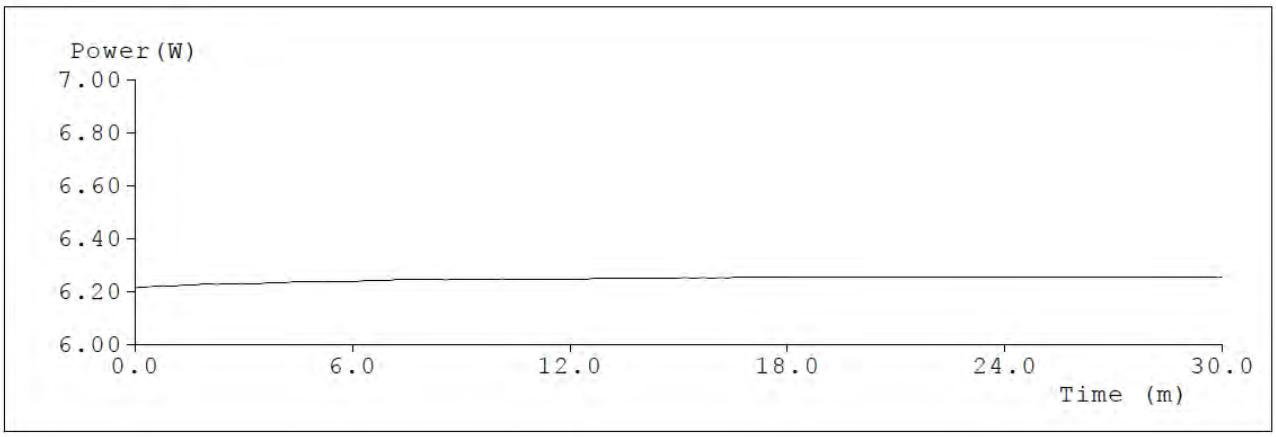
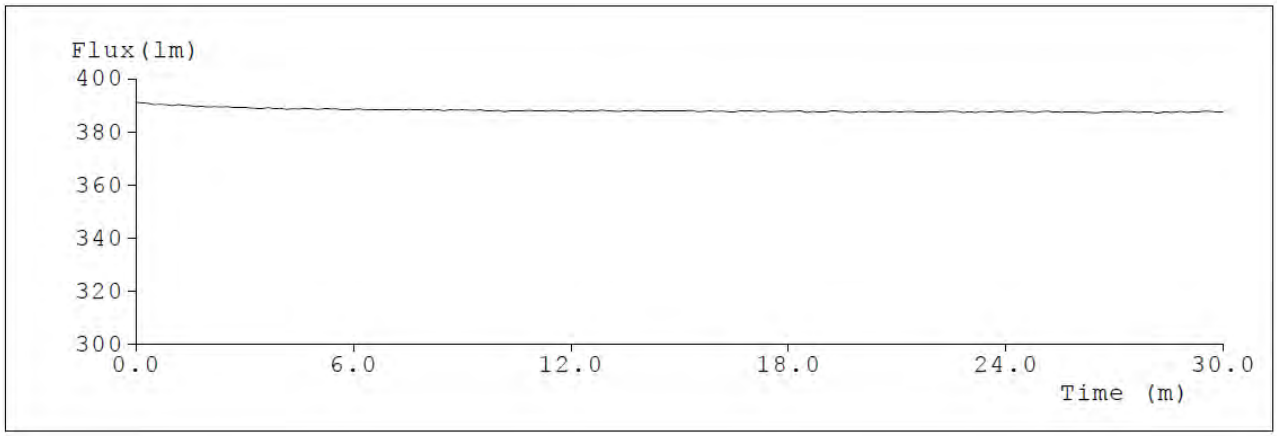
Test curves





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320
300
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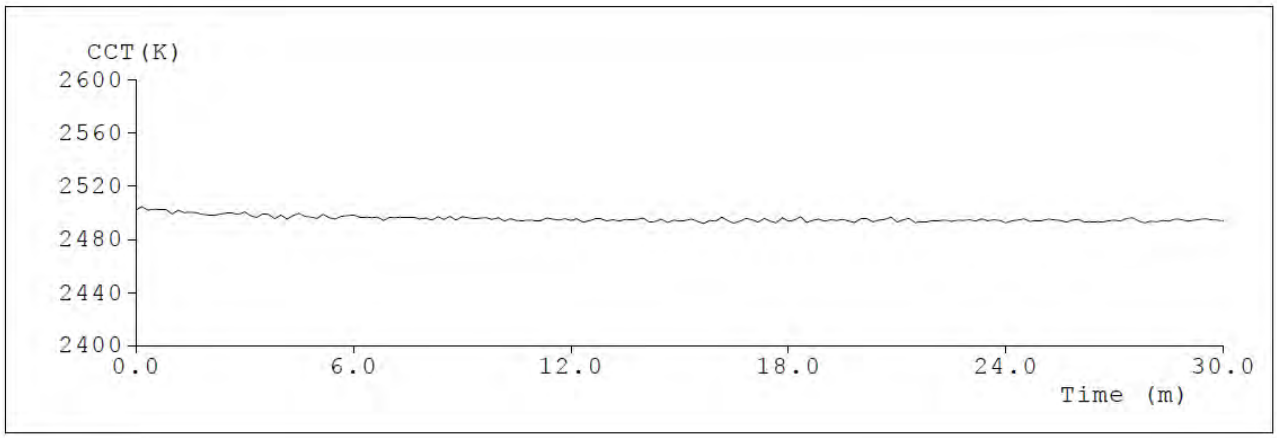
6.0
12.0
18.0
24.0
30.0
Time (m)


CCT(K)
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2440
2400
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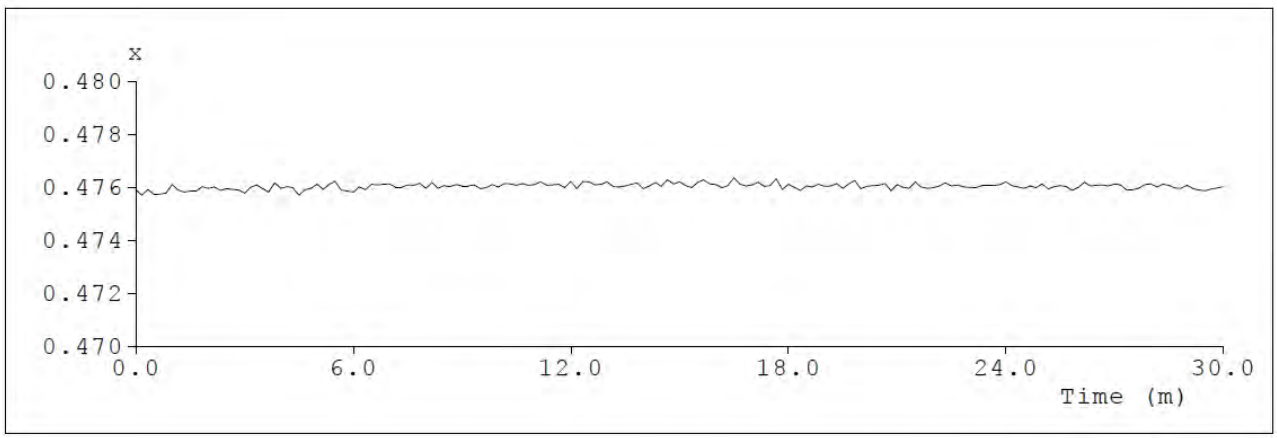
6.0
12.0
18.0
24.0
30.0
Time (m)


x
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0.476
0.474
0.472
0.470
0.0
6.0
12.0
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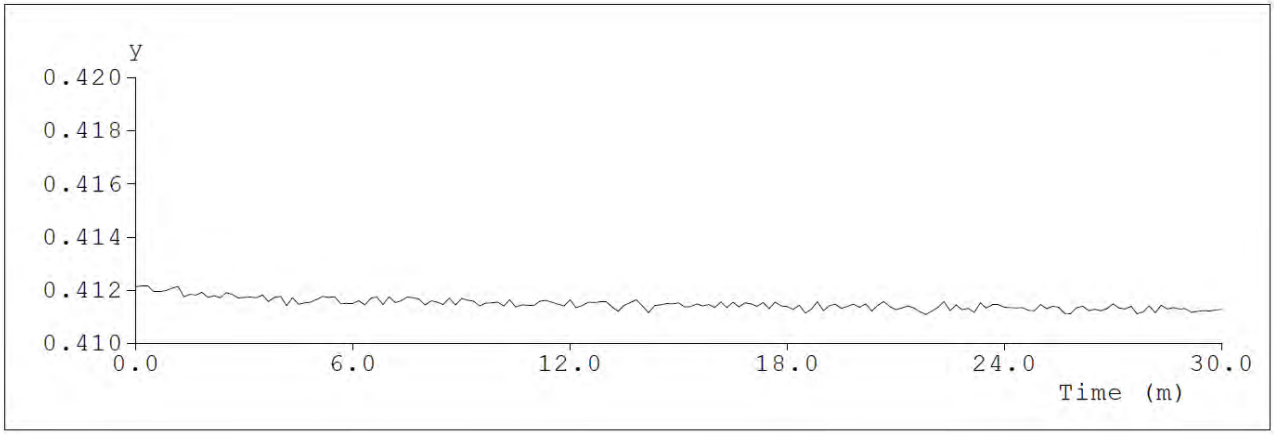
30.0
Time (m)


y
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0.410
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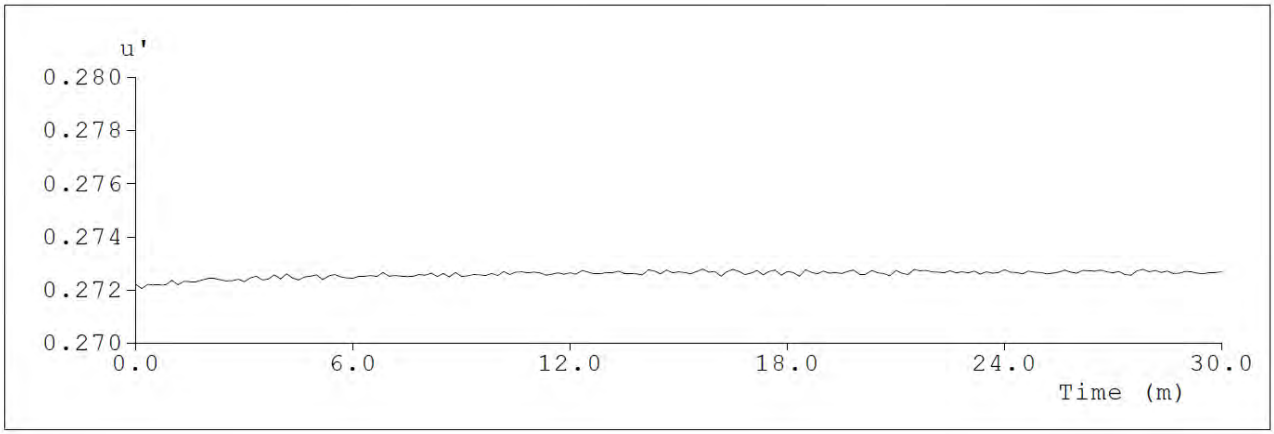
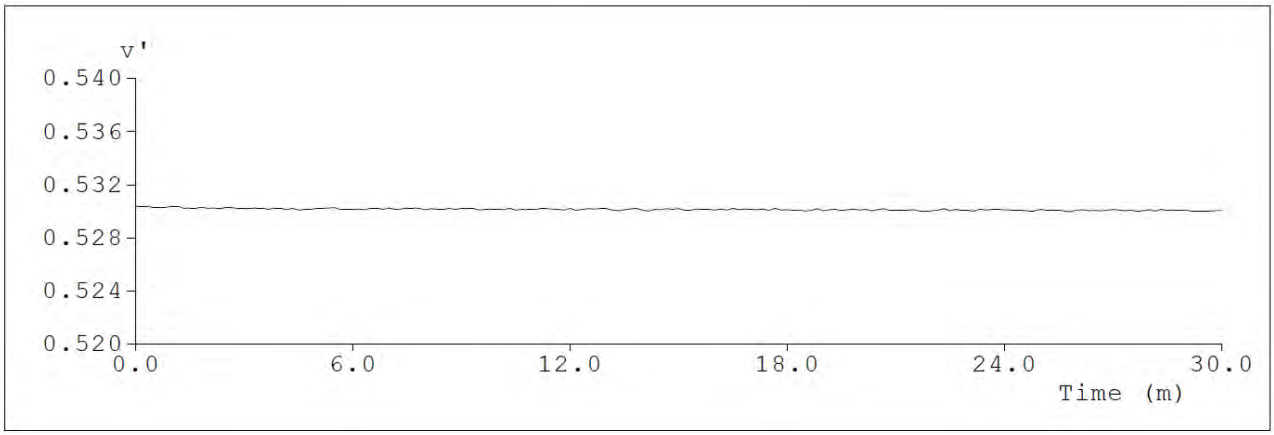
6.0
12.0
18.0
24.0
30.0
Time (m)


u'
0.280
0.278
0.276
0.274
0.272
0.270
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

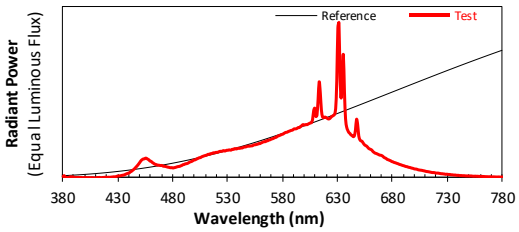

v'
0.540
0.536
0.532
0.528
0.524
0.520
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

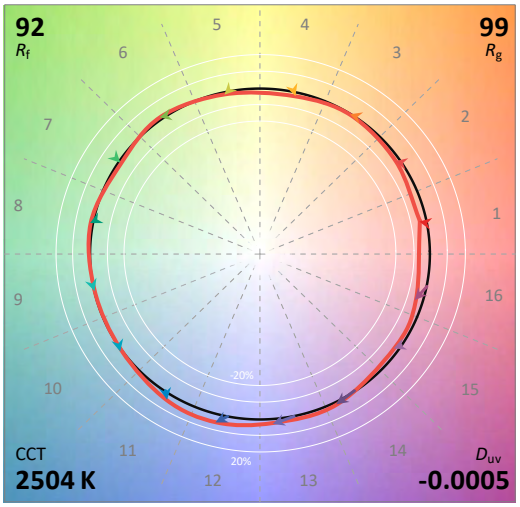
*13.2 ANSI/IES TM-30-18 Color Rendition Report

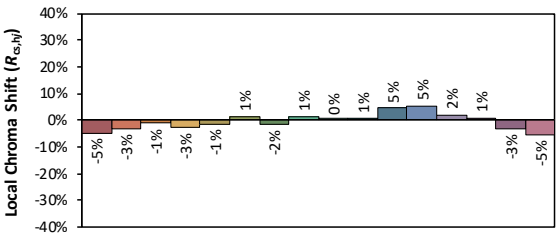
ANSI/IES TM-30-18 Color Rendition Report

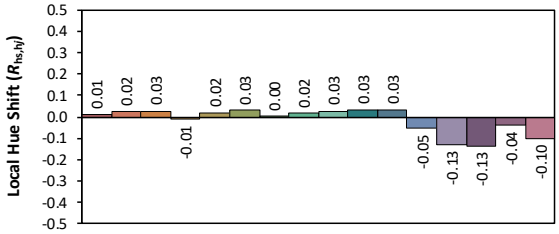
Source: Manufacturer:

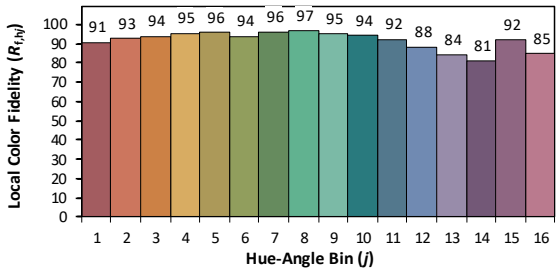
Date: 2023/9/26 Model: LFUAY-1000-L27-DF-0-5

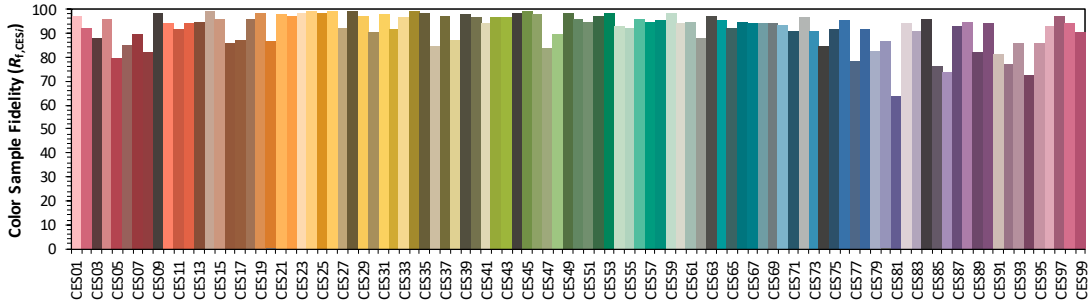












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

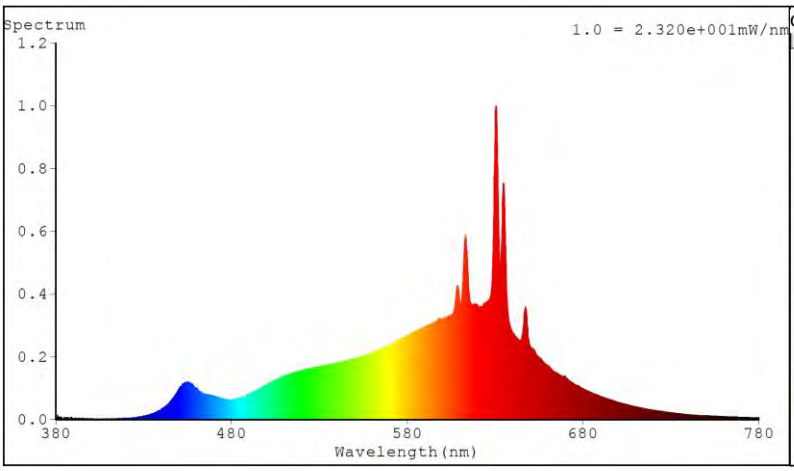
x	0.4757
y	0.4121
u'	0.2721
v'	0.5303

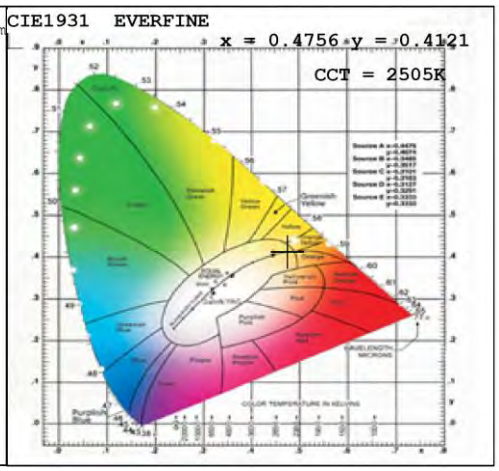
CIE 13.3-1995 (CRI)

R_a	94
R_9	60

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

13.3 Relative Spectral Power Distribution





nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.009	414	0.0015	448	0.0784	482	0.0635	516	0.1502
381	0.014	415	0.0012	449	0.0872	483	0.0657	517	0.1524
382	0.0024	416	0.0028	450	0.0965	484	0.0679	518	0.1518
383	0.0038	417	0.0031	451	0.1055	485	0.0693	519	0.1549
384	0.0014	418	0.0039	452	0.1112	486	0.0701	520	0.1547
385	0.0013	419	0.0044	453	0.115	487	0.0734	521	0.1563
386	0.0059	420	0.003	454	0.1158	488	0.0758	522	0.1594
387	0.0065	421	0.0046	455	0.1199	489	0.0802	523	0.1613
388	0.0031	422	0.004	456	0.118	490	0.0812	524	0.1612
389	0.0073	423	0.0044	457	0.1135	491	0.0848	525	0.1628
390	0.0009	424	0.0052	458	0.1098	492	0.0861	526	0.1658
391	0.0026	425	0.0059	459	0.1024	493	0.0878	527	0.1629
392	0.0029	426	0.0069	460	0.1008	494	0.0911	528	0.1651
393	0.0014	427	0.0068	461	0.0944	495	0.0953	529	0.1679
394	0.0046	428	0.0079	462	0.0901	496	0.098	530	0.1674
395	0.0004	429	0.0102	463	0.0851	497	0.1002	531	0.1701
396	0.0038	430	0.0117	464	0.0821	498	0.1041	532	0.1687
397	0.0001	431	0.0123	465	0.0803	499	0.1084	533	0.169
398	0.0017	432	0.0133	466	0.0772	500	0.1094	534	0.1739
399	0.0019	433	0.0146	467	0.0774	501	0.113	535	0.1724
400	0.0027	434	0.0164	468	0.0756	502	0.1162	536	0.1776
401	0.0022	435	0.0174	469	0.0753	503	0.1194	537	0.1762
402	0.0011	436	0.0198	470	0.0753	504	0.1226	538	0.1761
403	0.0021	437	0.023	471	0.0714	505	0.1232	539	0.1794
404	0.0013	438	0.0259	472	0.0707	506	0.1278	540	0.1792
405	0.0013	439	0.0283	473	0.0695	507	0.1306	541	0.1798
406	0.0019	440	0.03	474	0.068	508	0.133	542	0.1818
407	0.0016	441	0.0359	475	0.0657	509	0.1352	543	0.1815
408	0.0008	442	0.0394	476	0.0647	510	0.137	544	0.1855
409	0	443	0.0449	477	0.0627	511	0.1395	545	0.1873
410	0.001	444	0.0502	478	0.0619	512	0.1433	546	0.1878
411	0.0026	445	0.0562	479	0.0623	513	0.1423	547	0.19
412	0.0019	446	0.0635	480	0.0603	514	0.1467	548	0.1926
413	0.0033	447	0.0707	481	0.0621	515	0.1473	549	0.1922

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.1929	599	0.3222	648	0.3238	697	0.0598	746	0.0127
551	0.1942	600	0.3208	649	0.2553	698	0.0587	747	0.0123
552	0.1945	601	0.3236	650	0.2319	699	0.0562	748	0.0123
553	0.1979	602	0.3226	651	0.2246	700	0.0543	749	0.012
554	0.2009	603	0.3265	652	0.2219	701	0.0538	750	0.0114
555	0.201	604	0.3301	653	0.2119	702	0.0524	751	0.0123
556	0.2033	605	0.3332	654	0.2026	703	0.0496	752	0.0114
557	0.2045	606	0.3354	655	0.197	704	0.0483	753	0.0106
558	0.2083	607	0.3548	656	0.1935	705	0.0472	754	0.0103
559	0.2077	608	0.4076	657	0.1868	706	0.0465	755	0.0109
560	0.2116	609	0.422	658	0.1792	707	0.0451	756	0.0101
561	0.2143	610	0.372	659	0.1752	708	0.0434	757	0.0103
562	0.2178	611	0.3806	660	0.1724	709	0.0422	758	0.0096
563	0.2196	612	0.4748	661	0.1678	710	0.0399	759	0.0094
564	0.2197	613	0.5826	662	0.1594	711	0.039	760	0.0094
565	0.2257	614	0.5169	663	0.1544	712	0.0381	761	0.0093
566	0.2245	615	0.4123	664	0.1498	713	0.0368	762	0.0089
567	0.2292	616	0.3711	665	0.1481	714	0.0354	763	0.0086
568	0.2304	617	0.3646	666	0.1448	715	0.0338	764	0.008
569	0.2337	618	0.3686	667	0.1419	716	0.0326	765	0.0077
570	0.2364	619	0.3669	668	0.1383	717	0.0327	766	0.0076
571	0.2384	620	0.363	669	0.1375	718	0.0318	767	0.0071
572	0.2419	621	0.3581	670	0.1352	719	0.03	768	0.0073
573	0.2448	622	0.3575	671	0.1307	720	0.0292	769	0.0072
574	0.2467	623	0.3621	672	0.1243	721	0.0295	770	0.0066
575	0.2524	624	0.3696	673	0.121	722	0.0282	771	0.0067
576	0.2547	625	0.3744	674	0.1175	723	0.027	772	0.0066
577	0.2576	626	0.379	675	0.1118	724	0.0256	773	0.0062
578	0.2603	627	0.385	676	0.11	725	0.0255	774	0.0059
579	0.2635	628	0.4193	677	0.1066	726	0.0243	775	0.0056
580	0.2655	629	0.5864	678	0.1041	727	0.0238	776	0.0061
581	0.2698	630	0.9079	679	0.0996	728	0.0219	777	0.0059
582	0.2743	631	0.9382	680	0.0978	729	0.0227	778	0.0053
583	0.2762	632	0.6099	681	0.0943	730	0.0218	779	0.0057
584	0.2774	633	0.4836	682	0.0925	731	0.0209	780	0.0057
585	0.2818	634	0.631	683	0.0902	732	0.021		
586	0.2834	635	0.7463	684	0.0876	733	0.0191		
587	0.287	636	0.5202	685	0.0855	734	0.0192		
588	0.2884	637	0.3574	686	0.0821	735	0.0179		
589	0.2909	638	0.3081	687	0.0805	736	0.0175		
590	0.2966	639	0.2885	688	0.078	737	0.0175		
591	0.2972	640	0.2754	689	0.0755	738	0.0159		
592	0.2977	641	0.2694	690	0.0739	739	0.016		
593	0.3008	642	0.2601	691	0.0713	740	0.0156		
594	0.3054	643	0.2574	692	0.069	741	0.0142		
595	0.3051	644	0.2498	693	0.0682	742	0.0146		
596	0.3115	645	0.2554	694	0.0654	743	0.0137		
597	0.3155	646	0.2899	695	0.0638	744	0.0136		
598	0.3223	647	0.355	696	0.0625	745	0.0135		

14. Goniophotometer Test results for LFUAY-1000-L27-DF-O-5

14.1 Test Data

Test Ambient Temperature	25.2℃	Test orientation	Downward
Operate time(Min.)	90	stabilization time(Min.)	30

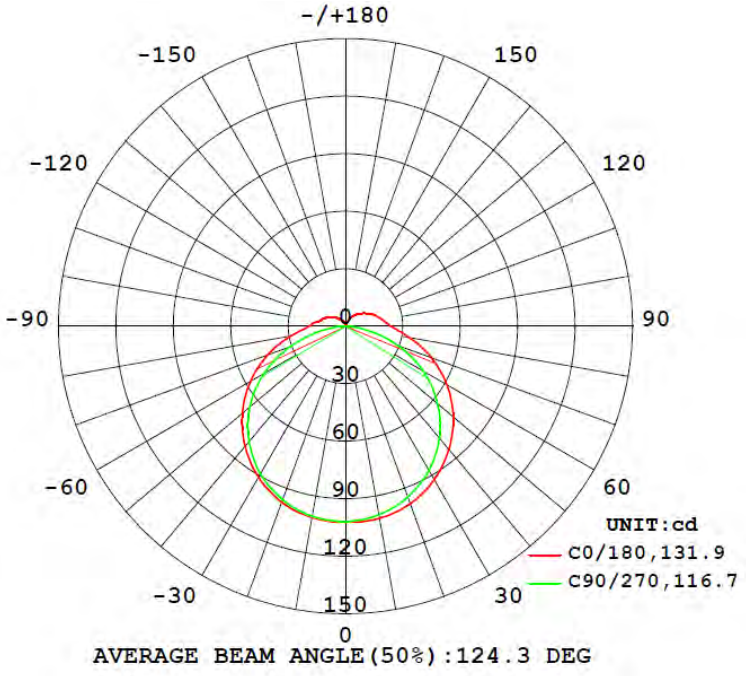
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
24.002	--	0.25352	1.0000	6.085

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	Imax (cd)	η up (%)	η down (%)
387.748	63.72	102.3	10.6	89.4

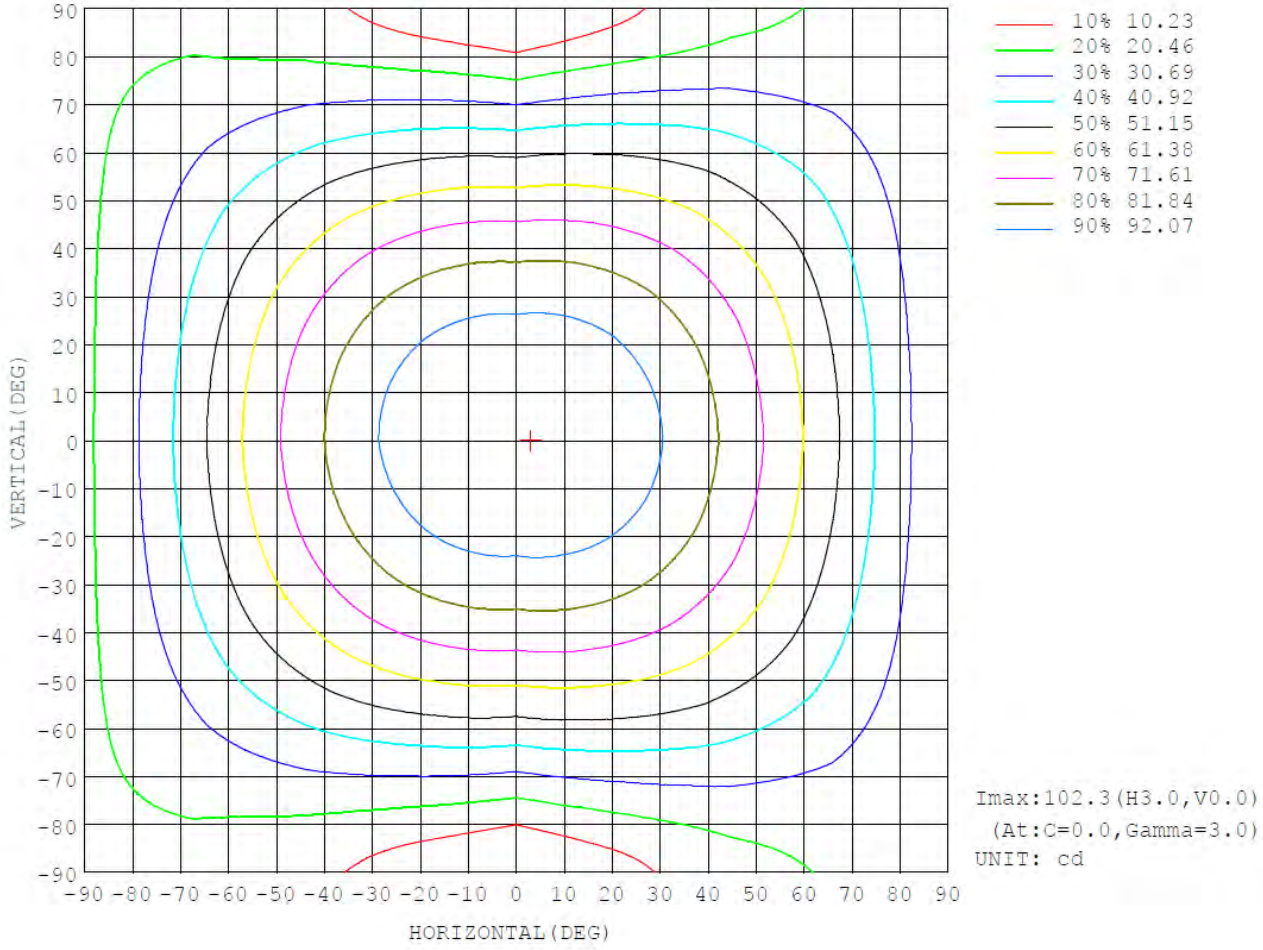
14.2 Luminous Intensity Distribution



14.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	101.7	100.8	99.87	100.3	101.3	101.1	100.6	101.1	0- 10	9.681	9.681	2.5,2.5
20	98.53	96.95	94.89	96.14	97.65	97.40	96.33	97.79	10- 20	28.05	37.73	9.73,9.73
30	92.49	90.27	87.01	89.06	91.03	90.69	88.97	91.55	20- 30	43.31	81.04	20.9,20.9
40	83.94	81.04	76.24	79.29	81.85	81.21	78.60	82.60	30- 40	53.66	134.7	34.7,34.7
50	73.37	69.59	62.80	67.24	70.53	69.25	65.38	71.29	40- 50	57.86	192.6	49.7,49.7
60	61.11	56.23	46.94	53.26	57.48	55.19	49.35	57.98	50- 60	55.44	248.0	64,64
70	47.60	41.52	28.70	37.89	43.23	39.54	30.56	43.12	60- 70	46.67	294.7	76,76
80	33.76	26.57	10.31	22.62	29.01	23.68	11.68	27.85	70- 80	33.02	327.7	84.5,84.5
90	23.86	16.31	0.3185	12.95	19.31	13.30	0.3906	17.06	80- 90	19.12	346.8	89.4,89.4
100	19.76	13.02	0.0552	8.891	14.80	8.829	0.0848	13.60	90-100	12.57	359.4	92.7,92.7
110	16.69	10.63	0.0722	7.410	12.28	7.524	0.0913	11.07	100-110	9.668	369.1	95.2,95.2
120	13.58	8.232	0.0987	5.690	9.704	5.733	0.1013	8.712	110-120	7.358	376.4	97.1,97.1
130	10.66	6.443	0.1209	4.204	7.248	4.219	0.1169	6.507	120-130	5.185	381.6	98.4,98.4
140	7.989	4.718	0.1330	2.961	5.120	3.061	0.1478	4.797	130-140	3.325	384.9	99.3,99.3
150	5.291	2.504	0.1339	1.965	3.344	2.267	0.1778	2.287	140-150	1.844	386.8	99.7,99.7
160	2.199	0.8383	0.1465	1.139	1.929	1.557	0.2309	0.5562	150-160	0.7629	387.5	99.9,99.9
170	0.4759	0.2576	0.1761	0.3156	0.5896	0.4960	0.2235	0.2087	160-170	0.1989	387.7	100,100
180	0.1824	0.2026	0.1996	0.2035	0.1848	0.2039	0.1987	0.1987	170-180	0.0243	387.7	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

14.4 Isocandela Diagram



14.5 Luminous Distribution Intensity Data

Table--1 UNIT: cd

C(DEG) / γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102			
5	102	102	102	101	101	101	101	101	102	102	102	102	102	102	102	102			
10	102	101	101	100	99.9	100	100	101	101	101	101	101	101	101	101	101			
15	100	100.0	99.3	98.4	97.8	98.1	98.6	99.1	99.9	99.9	99.6	99.3	98.9	99.4	99.9	100			
20	98.5	97.9	97.0	95.8	94.9	95.4	96.1	96.7	97.6	97.7	97.4	96.9	96.3	97.1	97.8	98.1			
25	95.8	95.2	94.0	92.5	91.3	92.0	92.9	93.7	94.7	94.7	94.4	93.7	93.0	94.0	95.0	95.5			
30	92.5	91.7	90.3	88.5	87.0	87.9	89.1	89.9	91.0	91.1	90.7	89.9	89.0	90.3	91.6	92.1			
35	88.5	87.6	86.0	83.8	81.9	83.1	84.5	85.6	86.7	86.8	86.3	85.2	84.2	85.8	87.4	88.2			
40	83.9	82.9	81.0	78.5	76.2	77.6	79.3	80.6	81.8	81.8	81.2	79.9	78.6	80.7	82.6	83.6			
45	78.9	77.8	75.6	72.5	69.8	71.5	73.5	75.1	76.4	76.4	75.5	73.8	72.4	74.8	77.2	78.5			
50	73.4	72.1	69.6	65.9	62.8	64.7	67.2	69.1	70.5	70.4	69.2	67.1	65.4	68.3	71.3	72.9			
55	67.4	66.1	63.1	58.8	55.2	57.5	60.5	62.7	64.2	63.9	62.5	59.8	57.7	61.2	64.9	66.9			
60	61.1	59.6	56.2	51.2	46.9	49.7	53.3	55.9	57.5	57.1	55.2	52.0	49.4	53.6	58.0	60.4			
65	54.5	52.9	49.0	43.2	38.1	41.5	45.7	48.7	50.4	49.9	47.5	43.5	40.1	45.4	50.7	53.7			
70	47.6	45.9	41.5	34.8	28.7	33.0	37.9	41.4	43.2	42.5	39.5	34.8	30.6	36.9	43.1	46.6			
75	40.6	38.7	33.9	26.4	19.3	24.4	30.0	34.0	35.9	34.9	31.5	25.9	20.7	28.3	35.4	39.5			
80	33.8	31.8	26.6	18.4	10.3	16.3	22.6	26.9	29.0	27.8	23.7	17.4	11.7	19.9	27.9	32.5			
85	27.9	25.8	20.2	11.6	3.63	9.68	16.5	21.1	23.1	21.7	17.2	10.3	4.27	12.7	21.2	26.5			
90	23.9	21.8	16.3	7.85	0.32	6.24	12.9	17.5	19.3	17.8	13.3	6.37	0.39	8.60	17.1	22.2			
95	21.5	19.6	14.4	6.55	0.06	4.00	10.7	15.5	17.4	16.0	11.3	3.88	0.08	7.15	15.0	19.9			
100	19.8	18.0	13.0	5.66	0.06	3.85	8.89	13.0	14.8	13.2	8.83	3.80	0.08	6.16	13.6	18.3			
105	18.2	16.5	11.8	4.59	0.06	3.31	8.27	11.8	13.1	11.8	8.47	3.27	0.08	5.26	12.3	16.8			
110	16.7	15.1	10.6	4.29	0.07	2.85	7.41	10.8	12.3	11.1	7.52	2.83	0.09	4.27	11.1	15.3			
115	15.2	13.6	9.42	3.89	0.09	2.50	6.54	9.68	11.0	9.81	6.60	2.45	0.10	3.93	9.82	13.8			
120	13.6	12.2	8.23	3.47	0.10	2.19	5.69	8.52	9.70	8.60	5.73	2.14	0.10	3.57	8.71	12.3			
125	12.1	10.9	7.21	3.00	0.11	1.91	4.91	7.39	8.44	7.45	4.94	1.85	0.11	3.12	7.76	10.9			
130	10.7	9.60	6.44	2.40	0.12	1.66	4.20	6.33	7.25	6.39	4.22	1.62	0.12	2.63	6.51	9.67			
135	9.32	8.37	5.59	1.71	0.13	1.44	3.55	5.35	6.14	5.42	3.60	1.43	0.13	2.03	5.68	8.44			
140	7.99	7.16	4.72	1.21	0.13	1.24	2.96	4.45	5.12	4.55	3.06	1.29	0.15	1.46	4.80	7.19			
145	6.66	5.94	3.66	0.92	0.13	1.03	2.43	3.63	4.19	3.78	2.63	1.19	0.16	0.89	3.56	5.38			
150	5.29	4.58	2.50	0.62	0.13	0.74	1.96	2.89	3.34	3.11	2.27	1.14	0.18	0.45	2.29	4.28			
155	3.66	3.03	1.57	0.37	0.14	0.49	1.54	2.24	2.59	2.48	1.92	1.06	0.21	0.22	1.16	2.75			
160	2.20	1.80	0.84	0.25	0.15	0.34	1.14	1.66	1.93	1.90	1.56	0.82	0.23	0.19	0.56	1.46			
165	1.14	0.90	0.46	0.18	0.15	0.23	0.58	1.13	1.33	1.33	1.11	0.52	0.23	0.19	0.27	0.65			
170	0.48	0.35	0.26	0.18	0.18	0.20	0.32	0.47	0.59	0.59	0.50	0.33	0.22	0.21	0.21	0.31			
175	0.19	0.20	0.19	0.19	0.19	0.19	0.22	0.25	0.28	0.28	0.25	0.24	0.21	0.21	0.21	0.21			
180	0.18	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.18	0.18	0.20	0.20	0.20	0.20	0.20	0.20			

15. Integrating Sphere Test Results for LFUAY-1000-L27-DF-O-9

15.1 Test Data

Test Ambient Temperature (Integrating sphere internal temperature)	25.1℃	Test orientation	Downward
Operate time(Min.)	30	stabilization time(Min.)	0

Optical and Electrical Measurement Result

Number	Time	Current (A)	Voltage (V)	Power (W)	Flux(lm)	x	y	u'	v'	CCT (K)	Ra
0	00h00m00s	0.4455	23.999	10.692	658.95	0.4724	0.4113	0.2703	0.5295	2539	94.3
1	00h00m10s	0.446	23.999	10.704	660.02	0.4723	0.4115	0.2702	0.5296	2541	94.3
2	00h00m20s	0.4462	23.999	10.708	659.25	0.4726	0.4115	0.2703	0.5296	2538	94.4
3	00h00m30s	0.4465	23.999	10.716	658.75	0.4725	0.4113	0.2704	0.5295	2538	94.3
4	00h00m40s	0.4467	23.999	10.72	658.54	0.4724	0.4112	0.2704	0.5295	2538	94.3
5	00h00m50s	0.4469	23.999	10.725	657.99	0.4726	0.4112	0.2705	0.5295	2536	94.3
6	00h01m00s	0.4471	23.998	10.73	657.63	0.4726	0.4111	0.2705	0.5295	2535	94.2
7	00h01m10s	0.4472	23.998	10.732	657.54	0.4726	0.4111	0.2705	0.5295	2536	94.3
8	00h01m20s	0.4474	23.998	10.737	656.9	0.4724	0.4111	0.2704	0.5294	2538	94.3
9	00h01m30s	0.4475	23.998	10.739	656.74	0.4725	0.4111	0.2705	0.5295	2536	94.3
10	00h01m40s	0.4477	23.998	10.744	656.58	0.4726	0.411	0.2705	0.5294	2535	94.3
11	00h01m50s	0.4478	23.998	10.746	656.51	0.4724	0.411	0.2704	0.5294	2537	94.3
12	00h02m00s	0.448	23.998	10.751	656.7	0.4726	0.4111	0.2705	0.5295	2536	94.3
13	00h02m10s	0.4481	23.998	10.754	655.84	0.4725	0.4108	0.2706	0.5293	2534	94.3
14	00h02m20s	0.4482	23.998	10.756	655.54	0.4725	0.4109	0.2706	0.5294	2534	94.3
15	00h02m30s	0.4483	23.998	10.758	655.21	0.4725	0.4109	0.2706	0.5294	2535	94.3
16	00h02m40s	0.4485	23.998	10.763	655.1	0.4727	0.4108	0.2707	0.5294	2531	94.3
17	00h02m50s	0.4486	23.998	10.766	654.82	0.4727	0.4107	0.2708	0.5293	2531	94.3
18	00h03m00s	0.4488	23.998	10.77	655.13	0.4728	0.4109	0.2707	0.5294	2531	94.2
19	00h03m10s	0.4488	23.998	10.77	654.41	0.4726	0.4108	0.2707	0.5293	2532	94.3
20	00h03m20s	0.449	23.998	10.775	654.31	0.4726	0.4107	0.2707	0.5293	2533	94.3
21	00h03m30s	0.4491	23.998	10.778	654.03	0.4727	0.4107	0.2708	0.5293	2531	94.3

22	00h03m40s	0.4492	23.998	10.78	654.34	0.4726	0.4107	0.2707	0.5293	2532	94.2
23	00h03m50s	0.4493	23.998	10.782	653.89	0.4727	0.4108	0.2708	0.5294	2531	94.3
24	00h04m00s	0.4494	23.998	10.785	653.93	0.4727	0.4107	0.2708	0.5293	2531	94.3
25	00h04m10s	0.4495	23.998	10.787	653.56	0.4728	0.4107	0.2708	0.5293	2530	94.3
26	00h04m20s	0.4495	23.998	10.787	653.04	0.4729	0.4106	0.2709	0.5293	2528	94.2
27	00h04m30s	0.4497	23.998	10.792	653.03	0.4727	0.4106	0.2708	0.5293	2530	94.2
28	00h04m40s	0.4497	23.998	10.792	653.27	0.4728	0.4105	0.271	0.5293	2528	94.2
29	00h04m50s	0.4498	23.998	10.794	653.12	0.4728	0.4106	0.2709	0.5293	2529	94.3
30	00h05m00s	0.4499	23.998	10.797	652.89	0.4726	0.4106	0.2708	0.5293	2531	94.3
31	00h05m10s	0.4499	23.998	10.797	652.87	0.4728	0.4107	0.2709	0.5293	2529	94.2
32	00h05m20s	0.4499	23.998	10.797	652.71	0.4728	0.4105	0.2709	0.5293	2528	94.3
33	00h05m30s	0.4501	23.998	10.801	652.52	0.4727	0.4105	0.2709	0.5293	2529	94.2
34	00h05m40s	0.4501	23.998	10.801	652.47	0.4728	0.4106	0.2708	0.5293	2530	94.2
35	00h05m50s	0.4501	23.998	10.801	652.67	0.4729	0.4107	0.2709	0.5294	2528	94.2
36	00h06m00s	0.4502	23.998	10.804	652.52	0.4729	0.4106	0.2709	0.5293	2528	94.3
37	00h06m10s	0.4502	23.998	10.804	652.57	0.4727	0.4105	0.2709	0.5293	2529	94.3
38	00h06m20s	0.4503	23.998	10.806	651.92	0.4728	0.4103	0.271	0.5292	2526	94.2
39	00h06m30s	0.4503	23.998	10.806	651.82	0.473	0.4106	0.271	0.5293	2527	94.2
40	00h06m40s	0.4504	23.998	10.809	651.91	0.4729	0.4104	0.271	0.5293	2527	94.2
41	00h06m50s	0.4504	23.998	10.809	651.65	0.4729	0.4106	0.2709	0.5293	2528	94.2
42	00h07m00s	0.4504	23.998	10.809	651.74	0.4729	0.4106	0.2709	0.5293	2528	94.3
43	00h07m10s	0.4505	23.998	10.811	651.44	0.4728	0.4106	0.2709	0.5293	2528	94.3
44	00h07m20s	0.4505	23.998	10.811	651.33	0.4728	0.4105	0.2709	0.5293	2528	94.3
45	00h07m30s	0.4505	23.998	10.811	650.9	0.4729	0.4104	0.271	0.5293	2527	94.2
46	00h07m40s	0.4506	23.998	10.813	651.63	0.473	0.4106	0.271	0.5293	2527	94.2
47	00h07m50s	0.4506	23.998	10.813	651.11	0.4727	0.4103	0.271	0.5292	2528	94.2
48	00h08m00s	0.4506	23.998	10.813	650.98	0.4728	0.4102	0.271	0.5292	2526	94.2
49	00h08m10s	0.4506	23.998	10.813	650.89	0.473	0.4108	0.2709	0.5294	2528	94.3
50	00h08m20s	0.4506	23.998	10.813	650.54	0.4732	0.4106	0.2711	0.5294	2524	94.2
51	00h08m30s	0.4506	23.998	10.813	650.55	0.4729	0.4104	0.2711	0.5292	2526	94.3
52	00h08m40s	0.4506	23.998	10.813	650.4	0.4728	0.4104	0.271	0.5292	2527	94.3

53	00h08m50s	0.4506	23.998	10.813	649.82	0.473	0.4103	0.2711	0.5292	2524	94.2
54	00h09m00s	0.4507	23.998	10.816	650.19	0.4729	0.4106	0.271	0.5293	2527	94.3
55	00h09m10s	0.4507	23.998	10.816	650.36	0.4728	0.4105	0.271	0.5293	2528	94.2
56	00h09m20s	0.4507	23.998	10.816	650.46	0.4729	0.4105	0.271	0.5293	2526	94.2
57	00h09m30s	0.4507	23.998	10.816	650.59	0.4731	0.4105	0.2711	0.5293	2524	94.2
58	00h09m40s	0.4507	23.998	10.816	649.82	0.473	0.4104	0.2711	0.5292	2525	94.2
59	00h09m50s	0.4508	23.998	10.818	650.21	0.4732	0.4105	0.2712	0.5293	2524	94.2
60	00h10m00s	0.4508	23.998	10.818	649.88	0.4731	0.4104	0.2712	0.5293	2523	94.2
61	00h10m10s	0.4507	23.998	10.816	650	0.4729	0.4103	0.2711	0.5292	2526	94.3
62	00h10m20s	0.4508	23.998	10.818	649.89	0.4731	0.4104	0.2711	0.5293	2524	94.2
63	00h10m30s	0.4508	23.998	10.818	650.21	0.4729	0.4105	0.271	0.5293	2526	94.2
64	00h10m40s	0.4508	23.998	10.818	649.35	0.473	0.4102	0.2712	0.5292	2523	94.2
65	00h10m50s	0.4508	23.998	10.818	649.87	0.473	0.4104	0.2711	0.5293	2525	94.2
66	00h11m00s	0.4509	23.998	10.821	649.91	0.4729	0.4104	0.271	0.5292	2526	94.3
67	00h11m10s	0.4508	23.998	10.818	649.56	0.4731	0.4104	0.2711	0.5293	2524	94.2
68	00h11m20s	0.4508	23.998	10.818	649.68	0.473	0.4105	0.2711	0.5293	2525	94.2
69	00h11m30s	0.4509	23.998	10.821	649.19	0.4732	0.4105	0.2712	0.5293	2524	94.2
70	00h11m40s	0.4509	23.998	10.821	649.25	0.473	0.4103	0.2712	0.5292	2524	94.2
71	00h11m50s	0.4508	23.998	10.818	648.93	0.473	0.4103	0.2711	0.5292	2524	94.2
72	00h12m00s	0.4508	23.997	10.818	649.25	0.473	0.4105	0.2711	0.5293	2525	94.3
73	00h12m10s	0.4509	23.998	10.821	648.92	0.4728	0.4101	0.2711	0.5291	2526	94.2
74	00h12m20s	0.4508	23.998	10.818	649.46	0.473	0.4105	0.2711	0.5293	2525	94.3
75	00h12m30s	0.4508	23.998	10.818	648.75	0.473	0.4103	0.2712	0.5292	2524	94.2
76	00h12m40s	0.4509	23.998	10.821	649.08	0.473	0.4105	0.2711	0.5293	2526	94.3
77	00h12m50s	0.4509	23.997	10.82	649.02	0.4731	0.4102	0.2713	0.5292	2522	94.1
78	00h13m00s	0.4509	23.997	10.82	648.87	0.4732	0.4105	0.2712	0.5293	2523	94.2
79	00h13m10s	0.4509	23.998	10.821	649.07	0.473	0.4104	0.2711	0.5293	2524	94.2
80	00h13m20s	0.4509	23.997	10.82	648.95	0.4732	0.4103	0.2713	0.5293	2522	94.2
81	00h13m30s	0.4509	23.997	10.82	648.89	0.4731	0.4103	0.2712	0.5292	2523	94.2
82	00h13m40s	0.4509	23.997	10.82	648.71	0.473	0.4104	0.2711	0.5292	2525	94.2
83	00h13m50s	0.4509	23.998	10.821	648.98	0.473	0.4105	0.2711	0.5293	2525	94.2

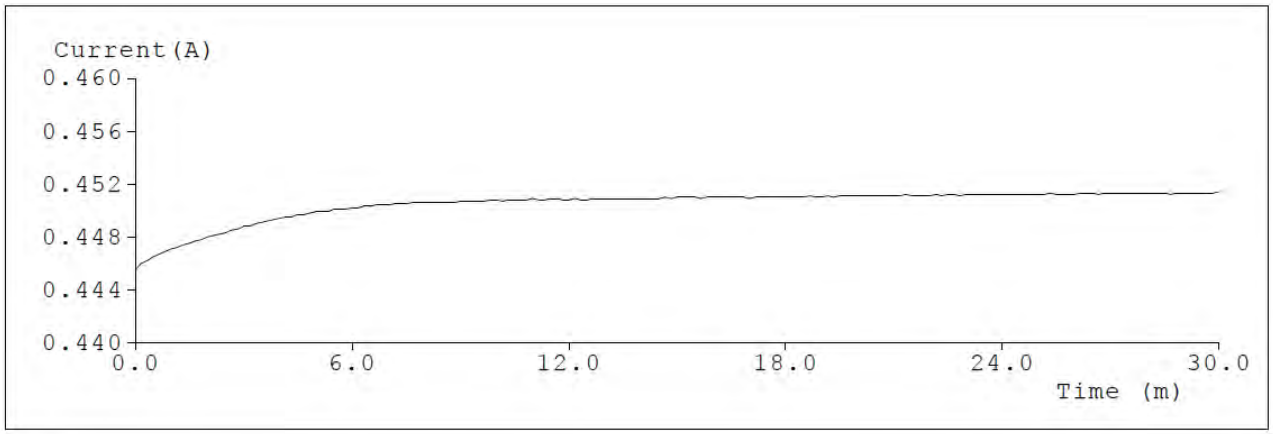
84	00h14m00s	0.4509	23.998	10.821	648.18	0.473	0.4101	0.2712	0.5292	2524	94.3
85	00h14m10s	0.4509	23.997	10.82	648.65	0.4732	0.4104	0.2712	0.5293	2523	94.2
86	00h14m20s	0.4509	23.997	10.82	648.79	0.4729	0.4102	0.2711	0.5291	2525	94.2
87	00h14m30s	0.4509	23.997	10.82	648.43	0.4731	0.4103	0.2712	0.5292	2523	94.2
88	00h14m40s	0.451	23.997	10.823	648.31	0.4732	0.4104	0.2712	0.5293	2522	94.2
89	00h14m50s	0.4509	23.997	10.82	648.37	0.473	0.4104	0.2711	0.5293	2525	94.3
90	00h15m00s	0.451	23.997	10.823	648.56	0.4732	0.4103	0.2713	0.5293	2522	94.2
91	00h15m10s	0.451	23.997	10.823	648.22	0.473	0.4104	0.2711	0.5293	2525	94.3
92	00h15m20s	0.451	23.997	10.823	648.49	0.473	0.4102	0.2712	0.5292	2524	94.2
93	00h15m30s	0.451	23.997	10.823	648.05	0.4731	0.4102	0.2712	0.5292	2523	94.2
94	00h15m40s	0.4509	23.997	10.82	648.29	0.4731	0.4103	0.2712	0.5292	2522	94.2
95	00h15m50s	0.451	23.997	10.823	648.38	0.4732	0.4104	0.2712	0.5293	2523	94.2
96	00h16m00s	0.451	23.997	10.823	648.06	0.473	0.4103	0.2712	0.5292	2524	94.3
97	00h16m10s	0.451	23.997	10.823	648.18	0.4728	0.4102	0.2711	0.5292	2525	94.2
98	00h16m20s	0.451	23.997	10.823	647.71	0.473	0.4101	0.2713	0.5292	2522	94.2
99	00h16m30s	0.451	23.997	10.823	648.2	0.4733	0.4104	0.2713	0.5293	2521	94.2
100	00h16m40s	0.451	23.997	10.823	647.98	0.4729	0.4101	0.2712	0.5291	2524	94.2
101	00h16m50s	0.451	23.997	10.823	647.33	0.4732	0.4103	0.2713	0.5293	2522	94.2
102	00h17m00s	0.4509	23.997	10.82	647.42	0.4731	0.4101	0.2713	0.5292	2521	94.2
103	00h17m10s	0.451	23.997	10.823	647.67	0.473	0.4103	0.2712	0.5292	2524	94.2
104	00h17m20s	0.451	23.997	10.823	648.26	0.4731	0.4104	0.2712	0.5293	2523	94.2
105	00h17m30s	0.451	23.997	10.823	647.87	0.473	0.4103	0.2712	0.5292	2524	94.2
106	00h17m40s	0.451	23.997	10.823	648.01	0.4729	0.4102	0.2711	0.5292	2525	94.2
107	00h17m50s	0.451	23.997	10.823	647.46	0.4732	0.4103	0.2713	0.5293	2521	94.2
108	00h18m00s	0.451	23.997	10.823	647.91	0.473	0.4103	0.2712	0.5292	2524	94.2
109	00h18m10s	0.451	23.997	10.823	647.78	0.473	0.4102	0.2712	0.5292	2523	94.2
110	00h18m20s	0.451	23.997	10.823	647.66	0.4732	0.4104	0.2713	0.5293	2522	94.2
111	00h18m30s	0.451	23.997	10.823	647.67	0.4731	0.4103	0.2713	0.5292	2522	94.2
112	00h18m40s	0.4511	23.997	10.825	647.27	0.4731	0.4104	0.2712	0.5293	2523	94.2
113	00h18m50s	0.451	23.997	10.823	647.37	0.4732	0.4103	0.2713	0.5292	2522	94.2
114	00h19m00s	0.451	23.997	10.823	647.49	0.4732	0.4103	0.2713	0.5293	2521	94.2

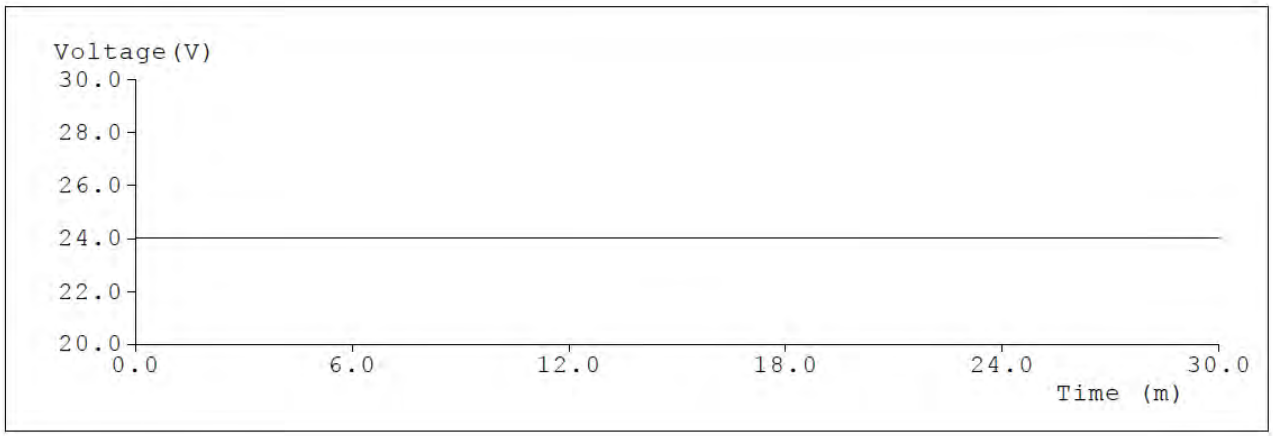
115	00h19m10s	0.4511	23.997	10.825	647.73	0.4731	0.4103	0.2712	0.5292	2522	94.2
116	00h19m20s	0.451	23.997	10.823	647.17	0.4732	0.4102	0.2713	0.5292	2521	94.2
117	00h19m30s	0.4511	23.997	10.825	647.69	0.4732	0.4104	0.2713	0.5293	2522	94.3
118	00h19m40s	0.4511	23.997	10.825	647.57	0.4731	0.4103	0.2712	0.5292	2523	94.2
119	00h19m50s	0.4511	23.997	10.825	647.41	0.473	0.4102	0.2712	0.5292	2523	94.2
120	00h20m00s	0.4511	23.997	10.825	647.31	0.473	0.4102	0.2712	0.5292	2523	94.2
121	00h20m10s	0.4511	23.997	10.825	647.39	0.4732	0.4103	0.2713	0.5293	2521	94.3
122	00h20m20s	0.4511	23.997	10.825	647.99	0.4732	0.4104	0.2713	0.5293	2522	94.2
123	00h20m30s	0.4511	23.997	10.825	647.17	0.4731	0.4102	0.2713	0.5292	2522	94.2
124	00h20m40s	0.4511	23.997	10.825	647.69	0.4732	0.4102	0.2714	0.5292	2520	94.2
125	00h20m50s	0.4511	23.997	10.825	647.28	0.473	0.4102	0.2712	0.5292	2523	94.2
126	00h21m00s	0.4511	23.997	10.825	646.85	0.4731	0.4103	0.2712	0.5292	2523	94.2
127	00h21m10s	0.4511	23.997	10.825	647.3	0.4732	0.4103	0.2713	0.5293	2522	94.2
128	00h21m20s	0.4512	23.997	10.827	646.89	0.4732	0.4102	0.2714	0.5292	2520	94.2
129	00h21m30s	0.4511	23.997	10.825	647.29	0.4731	0.4102	0.2713	0.5292	2522	94.2
130	00h21m40s	0.4511	23.997	10.825	647.12	0.4733	0.4103	0.2713	0.5293	2521	94.2
131	00h21m50s	0.4511	23.997	10.825	647.41	0.4731	0.4101	0.2713	0.5292	2521	94.2
132	00h22m00s	0.4511	23.997	10.825	646.9	0.4734	0.4102	0.2714	0.5293	2519	94.2
133	00h22m10s	0.4512	23.997	10.827	647.01	0.4732	0.4103	0.2713	0.5292	2522	94.2
134	00h22m20s	0.4511	23.997	10.825	646.99	0.473	0.4102	0.2712	0.5292	2523	94.2
135	00h22m30s	0.4512	23.997	10.827	647.28	0.4732	0.4103	0.2712	0.5293	2522	94.2
136	00h22m40s	0.4512	23.997	10.827	647.26	0.4731	0.4101	0.2713	0.5292	2521	94.2
137	00h22m50s	0.4511	23.997	10.825	647.08	0.4734	0.4104	0.2714	0.5293	2520	94.1
138	00h23m00s	0.4512	23.997	10.827	646.81	0.4732	0.4102	0.2713	0.5292	2521	94.2
139	00h23m10s	0.4512	23.997	10.827	646.68	0.4732	0.4103	0.2713	0.5293	2522	94.2
140	00h23m20s	0.4512	23.997	10.827	646.35	0.4733	0.4102	0.2714	0.5292	2520	94.2
141	00h23m30s	0.4512	23.997	10.827	647.64	0.4732	0.4104	0.2712	0.5293	2523	94.2
142	00h23m40s	0.4512	23.997	10.827	647.07	0.473	0.41	0.2713	0.5291	2522	94.2
143	00h23m50s	0.4512	23.997	10.827	646.84	0.4732	0.4102	0.2713	0.5292	2521	94.2
144	00h24m00s	0.4512	23.997	10.827	647.25	0.4732	0.4103	0.2713	0.5292	2522	94.2
145	00h24m10s	0.4512	23.997	10.827	647	0.4732	0.4103	0.2713	0.5292	2522	94.2

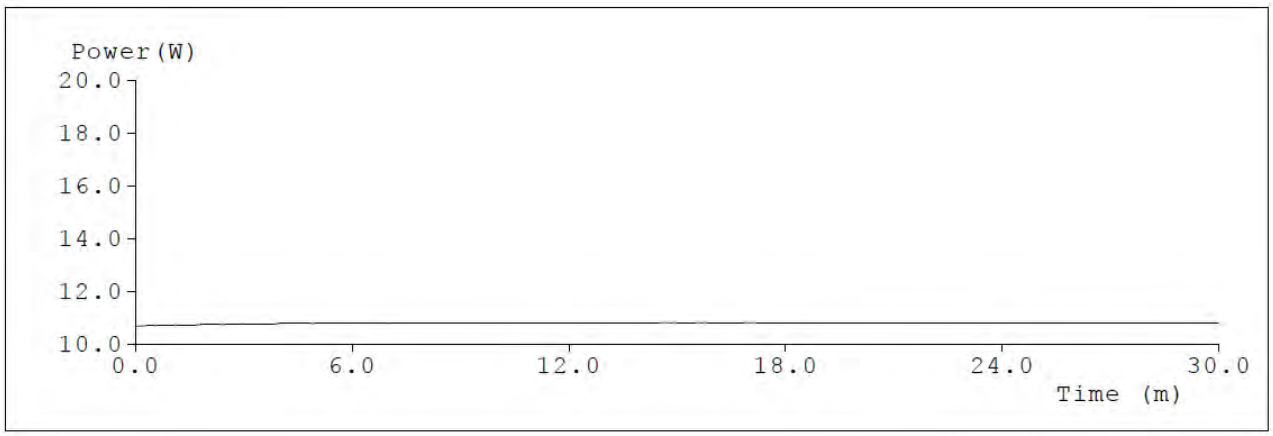
146	00h24m20s	0.4512	23.997	10.827	646.94	0.4733	0.4103	0.2714	0.5293	2520	94.2
147	00h24m30s	0.4512	23.997	10.827	646.6	0.4733	0.4104	0.2713	0.5293	2521	94.3
148	00h24m40s	0.4512	23.997	10.827	646.81	0.4731	0.4103	0.2712	0.5292	2522	94.3
149	00h24m50s	0.4512	23.997	10.827	646.87	0.4733	0.4104	0.2713	0.5293	2521	94.2
150	00h25m00s	0.4512	23.997	10.827	646.52	0.4732	0.4102	0.2714	0.5292	2520	94.2
151	00h25m10s	0.4512	23.997	10.827	646.36	0.4733	0.4103	0.2714	0.5293	2520	94.2
152	00h25m20s	0.4513	23.997	10.83	645.99	0.4732	0.41	0.2714	0.5291	2520	94.2
153	00h25m30s	0.4512	23.997	10.827	646.53	0.4731	0.4101	0.2713	0.5292	2522	94.2
154	00h25m40s	0.4512	23.997	10.827	646.54	0.4733	0.4103	0.2713	0.5292	2521	94.2
155	00h25m50s	0.4512	23.997	10.827	646.71	0.4732	0.4102	0.2714	0.5292	2520	94.2
156	00h26m00s	0.4512	23.997	10.827	646.97	0.4732	0.4102	0.2713	0.5292	2521	94.2
157	00h26m10s	0.4513	23.997	10.83	647.15	0.4733	0.4103	0.2713	0.5293	2521	94.2
158	00h26m20s	0.4513	23.997	10.83	646.88	0.4734	0.4102	0.2714	0.5293	2519	94.2
159	00h26m30s	0.4513	23.997	10.83	646.78	0.4733	0.4102	0.2714	0.5292	2520	94.2
160	00h26m40s	0.4512	23.997	10.827	647.29	0.4733	0.4104	0.2713	0.5293	2521	94.2
161	00h26m50s	0.4513	23.997	10.83	646.92	0.4732	0.4102	0.2714	0.5292	2520	94.2
162	00h27m00s	0.4513	23.997	10.83	646.98	0.4732	0.4103	0.2713	0.5292	2522	94.2
163	00h27m10s	0.4513	23.997	10.83	646.78	0.4732	0.4104	0.2712	0.5293	2522	94.3
164	00h27m20s	0.4513	23.997	10.83	646.53	0.4733	0.4102	0.2713	0.5292	2521	94.2
165	00h27m30s	0.4513	23.997	10.83	646.36	0.4731	0.4101	0.2713	0.5292	2521	94.1
166	00h27m40s	0.4513	23.997	10.83	646.52	0.4733	0.4103	0.2713	0.5293	2520	94.2
167	00h27m50s	0.4513	23.997	10.83	647.25	0.4733	0.4104	0.2713	0.5293	2521	94.2
168	00h28m00s	0.4513	23.997	10.83	646.6	0.4735	0.4103	0.2715	0.5293	2518	94.2
169	00h28m10s	0.4513	23.997	10.83	646.04	0.4733	0.4102	0.2714	0.5292	2520	94.2
170	00h28m20s	0.4513	23.997	10.83	646.5	0.4733	0.4103	0.2714	0.5293	2520	94.2
171	00h28m30s	0.4513	23.997	10.83	646.6	0.4733	0.4104	0.2713	0.5293	2521	94.2
172	00h28m40s	0.4512	23.997	10.827	646.52	0.4732	0.4103	0.2713	0.5292	2521	94.2
173	00h28m50s	0.4513	23.997	10.83	646.8	0.4733	0.4103	0.2714	0.5293	2520	94.2
174	00h29m00s	0.4513	23.997	10.83	646.79	0.4734	0.4102	0.2715	0.5292	2518	94.1
175	00h29m10s	0.4513	23.997	10.83	646.98	0.4734	0.4103	0.2714	0.5293	2520	94.2
176	00h29m20s	0.4513	23.997	10.83	646.9	0.4731	0.4103	0.2712	0.5292	2523	94.2

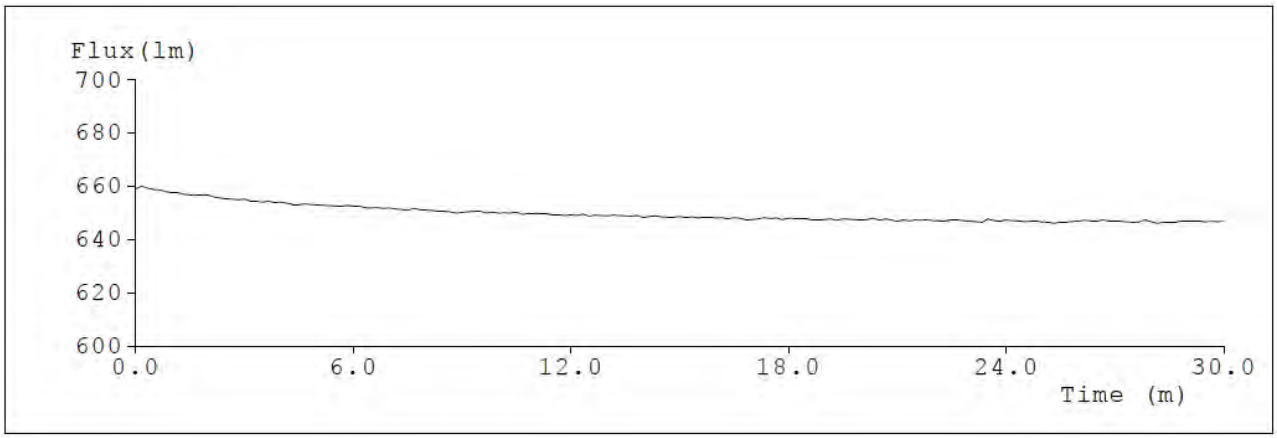
177	00h29m30s	0.4513	23.997	10.83	646.58	0.4733	0.4103	0.2714	0.5293	2520	94.2
178	00h29m40s	0.4513	23.997	10.83	646.74	0.4734	0.4103	0.2714	0.5293	2519	94.2
179	00h29m50s	0.4513	23.997	10.83	646.72	0.4732	0.41	0.2714	0.5291	2519	94.2
180	00h30m00s	0.4514	23.997	10.832	646.74	0.4731	0.4102	0.2713	0.5292	2522	94.2

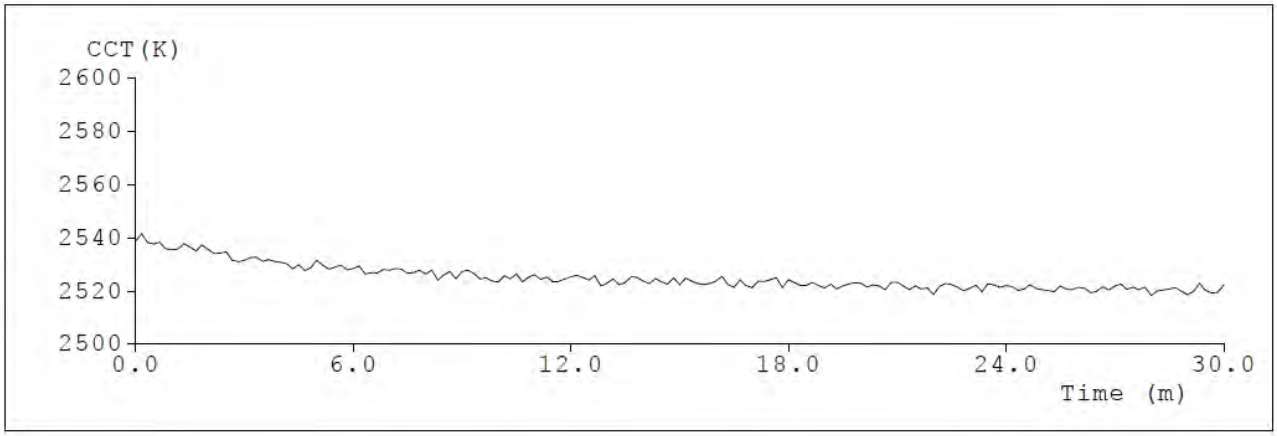
Test curves

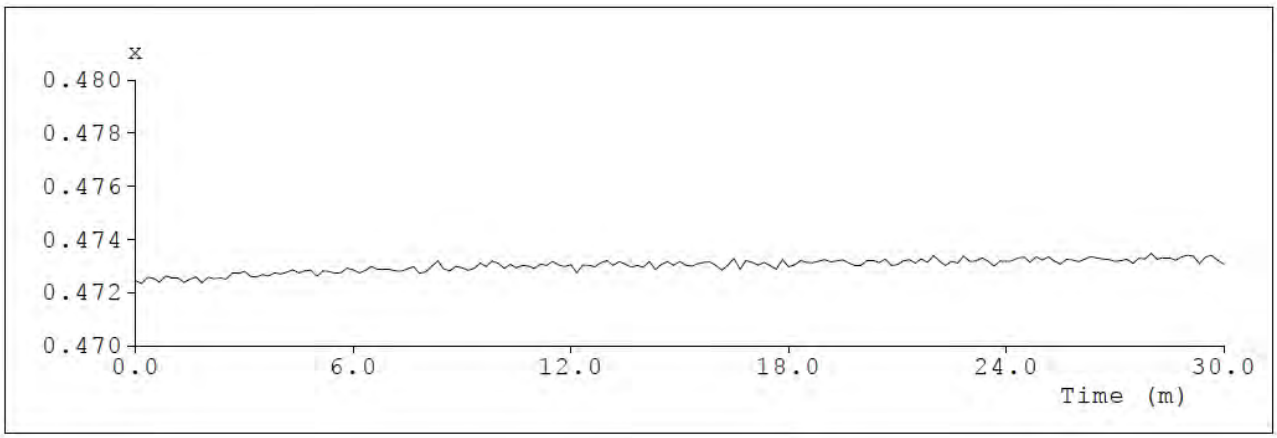


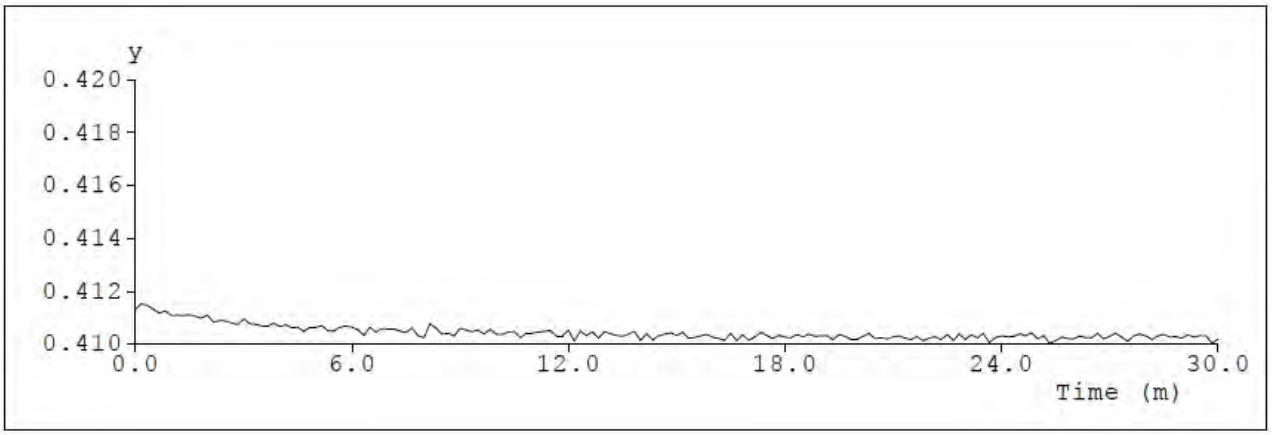


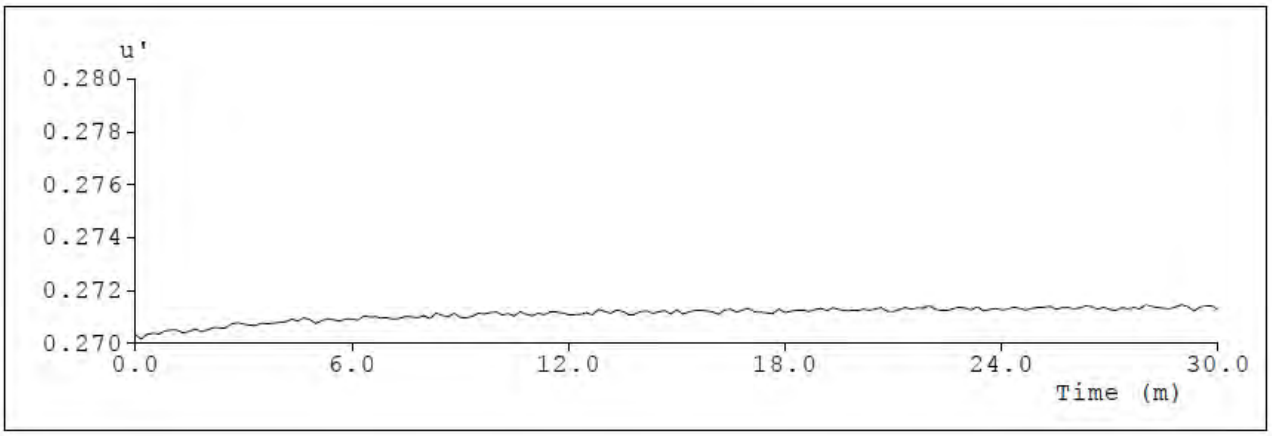


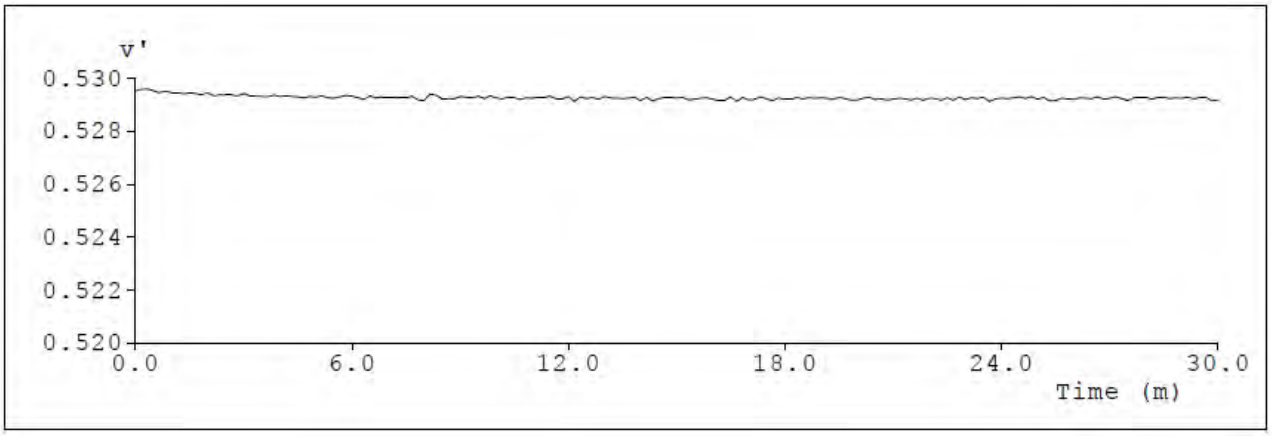

Flux(lm)
700
680
660
640
620
600
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


CCT(K)
2600
2580
2560
2540
2520
2500
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


x
0.480
0.478
0.476
0.474
0.472
0.470
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


y
0.420
0.418
0.416
0.414
0.412
0.410
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


u'
0.280
0.278
0.276
0.274
0.272
0.270
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

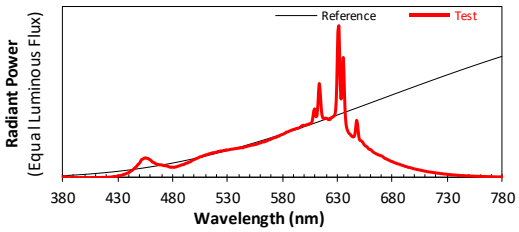

v'
0.530
0.528
0.526
0.524
0.522
0.520
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

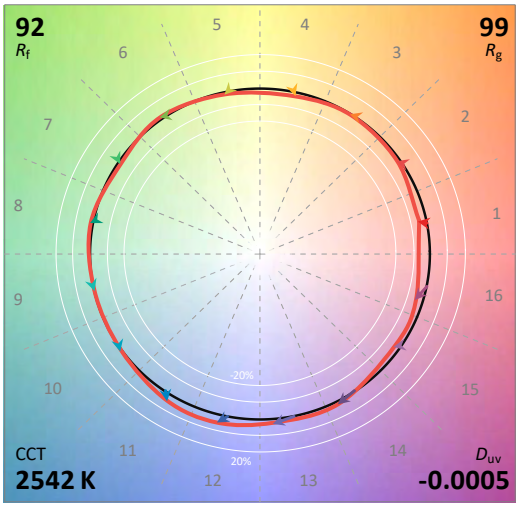
*15.2 ANSI/IES TM-30-18 Color Rendition Report

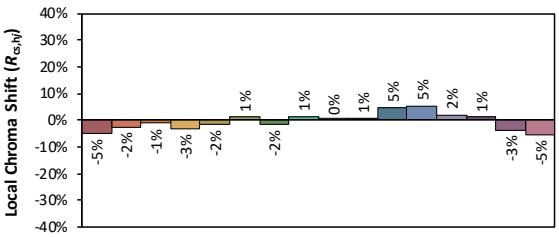
ANSI/IES TM-30-18 Color Rendition Report

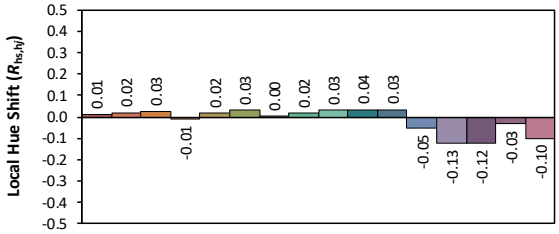
Source: Manufacturer:

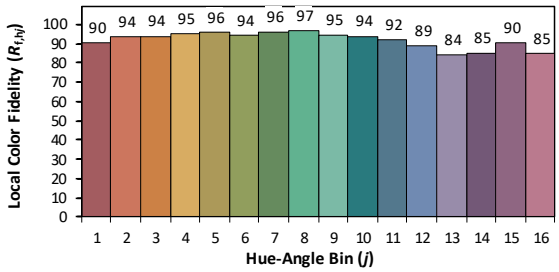
Date: 2023/9/26 Model: LFUAY-1000-L27-DF-0-9

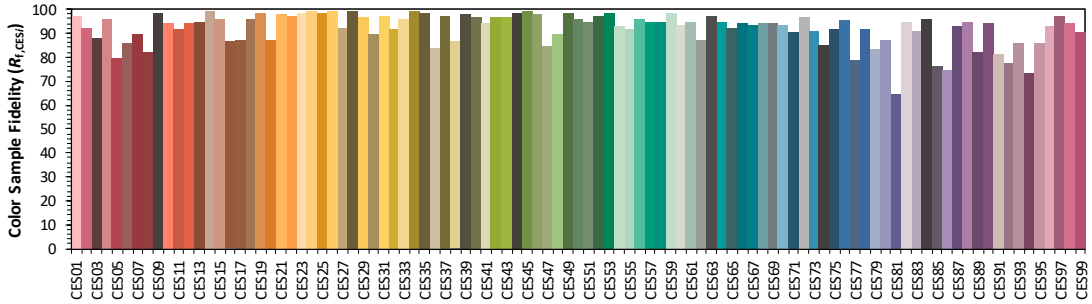












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

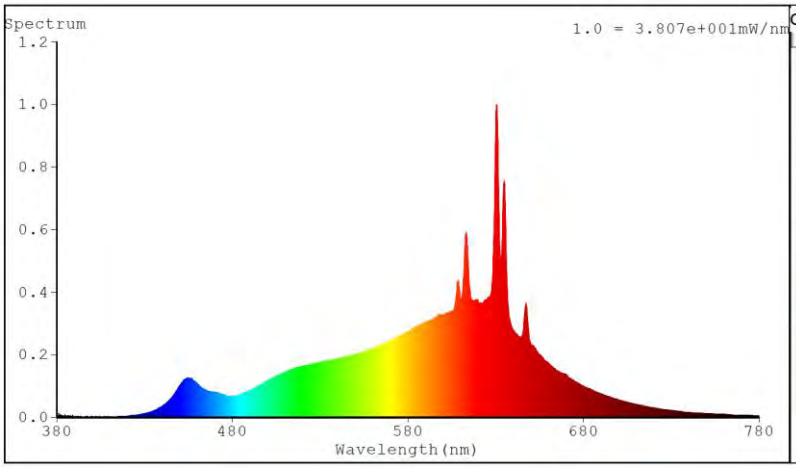
x	0.4723
y	0.4115
u'	0.2702
v'	0.5296

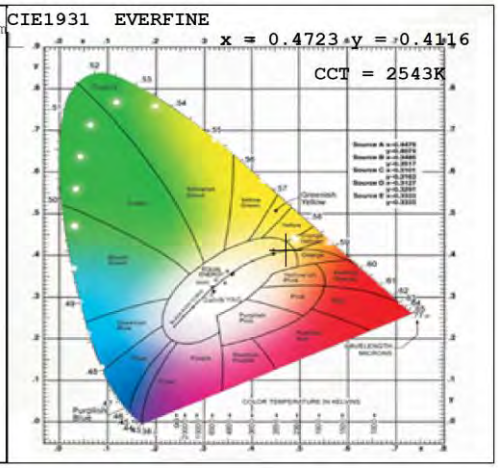
CIE 13.3-1995 (CRI)

R_a	94
R_9	60

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

15.3 Relative Spectral Power Distribution





nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0075	414	0.0019	448	0.083	482	0.0685	516	0.1566
381	0.0064	415	0.0029	449	0.0887	483	0.0685	517	0.1572
382	0.0092	416	0.0029	450	0.0968	484	0.0715	518	0.1578
383	0.0058	417	0.0028	451	0.1106	485	0.0737	519	0.1597
384	0.0003	418	0.0026	452	0.116	486	0.0759	520	0.1612
385	0.0006	419	0.0033	453	0.1195	487	0.0789	521	0.1652
386	0.0013	420	0.0032	454	0.1236	488	0.0815	522	0.1649
387	0	421	0.0043	455	0.125	489	0.0827	523	0.1676
388	0.0029	422	0.0049	456	0.1219	490	0.084	524	0.1681
389	0.0073	423	0.005	457	0.1214	491	0.0887	525	0.1682
390	0.0005	424	0.0055	458	0.1173	492	0.0919	526	0.1711
391	0.0006	425	0.0069	459	0.1136	493	0.0923	527	0.1702
392	0.0014	426	0.0084	460	0.1084	494	0.0962	528	0.1747
393	0.0021	427	0.0088	461	0.1006	495	0.0991	529	0.1729
394	0	428	0.0082	462	0.0972	496	0.1015	530	0.175
395	0	429	0.0106	463	0.0937	497	0.1068	531	0.1754
396	0.002	430	0.0127	464	0.09	498	0.1109	532	0.1774
397	0.0028	431	0.0133	465	0.0863	499	0.1132	533	0.1786
398	0.0004	432	0.0146	466	0.0835	500	0.1169	534	0.1793
399	0.0002	433	0.016	467	0.0832	501	0.1201	535	0.1809
400	0.0022	434	0.0182	468	0.0809	502	0.1222	536	0.1819
401	0	435	0.0213	469	0.0818	503	0.1257	537	0.1824
402	0.0017	436	0.0228	470	0.0805	504	0.1297	538	0.1838
403	0.0014	437	0.0255	471	0.0768	505	0.1325	539	0.1845
404	0	438	0.0291	472	0.0772	506	0.1319	540	0.1861
405	0.0012	439	0.0309	473	0.0758	507	0.1359	541	0.1864
406	0.0016	440	0.0351	474	0.0742	508	0.1397	542	0.1902
407	0.0025	441	0.0385	475	0.0742	509	0.1407	543	0.1874
408	0.001	442	0.044	476	0.0695	510	0.1444	544	0.1895
409	0.0017	443	0.0477	477	0.0682	511	0.1442	545	0.1924
410	0.0022	444	0.054	478	0.0658	512	0.1483	546	0.195
411	0.0022	445	0.0606	479	0.0673	513	0.1506	547	0.1953
412	0.0016	446	0.0667	480	0.0669	514	0.152	548	0.1976
413	0.0013	447	0.0728	481	0.0653	515	0.1539	549	0.1999

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.2007	599	0.3281	648	0.3283	697	0.0618	746	0.0137
551	0.2034	600	0.3265	649	0.2606	698	0.0589	747	0.0125
552	0.2046	601	0.3303	650	0.2348	699	0.0574	748	0.0133
553	0.2059	602	0.3323	651	0.2319	700	0.0555	749	0.0124
554	0.2065	603	0.3331	652	0.2273	701	0.0548	750	0.0123
555	0.2088	604	0.3375	653	0.2176	702	0.0522	751	0.0118
556	0.2101	605	0.3382	654	0.2072	703	0.0517	752	0.0115
557	0.2123	606	0.3432	655	0.2001	704	0.0492	753	0.0115
558	0.2154	607	0.3664	656	0.1958	705	0.0482	754	0.0103
559	0.2174	608	0.4148	657	0.1902	706	0.0475	755	0.0103
560	0.2196	609	0.4296	658	0.181	707	0.045	756	0.0106
561	0.2225	610	0.3822	659	0.178	708	0.044	757	0.0101
562	0.2244	611	0.3891	660	0.1757	709	0.0423	758	0.0099
563	0.2241	612	0.477	661	0.1692	710	0.0414	759	0.0096
564	0.2287	613	0.5876	662	0.1622	711	0.0393	760	0.0096
565	0.2295	614	0.5279	663	0.1575	712	0.0381	761	0.009
566	0.2333	615	0.423	664	0.1536	713	0.0374	762	0.0089
567	0.2369	616	0.3806	665	0.1502	714	0.0362	763	0.0089
568	0.2381	617	0.3699	666	0.1465	715	0.0352	764	0.0088
569	0.2417	618	0.3715	667	0.1433	716	0.0347	765	0.0081
570	0.2452	619	0.3731	668	0.1411	717	0.0332	766	0.0082
571	0.2478	620	0.3706	669	0.1387	718	0.0323	767	0.0079
572	0.2503	621	0.3654	670	0.1368	719	0.031	768	0.0074
573	0.2526	622	0.3632	671	0.1317	720	0.0304	769	0.0075
574	0.2536	623	0.3653	672	0.1259	721	0.029	770	0.0071
575	0.2599	624	0.3754	673	0.121	722	0.0289	771	0.0068
576	0.2597	625	0.3776	674	0.119	723	0.0273	772	0.007
577	0.2634	626	0.3847	675	0.1144	724	0.0263	773	0.0066
578	0.2675	627	0.3889	676	0.1128	725	0.0259	774	0.0066
579	0.27	628	0.4256	677	0.1082	726	0.025	775	0.006
580	0.272	629	0.5841	678	0.1049	727	0.0236	776	0.0065
581	0.2758	630	0.9061	679	0.1023	728	0.0238	777	0.006
582	0.2788	631	0.9455	680	0.1004	729	0.0226	778	0.0061
583	0.2853	632	0.6257	681	0.0959	730	0.0214	779	0.0059
584	0.286	633	0.4921	682	0.0938	731	0.0213	780	0.0059
585	0.2889	634	0.6349	683	0.0916	732	0.0202		
586	0.2923	635	0.7488	684	0.0884	733	0.0197		
587	0.2952	636	0.5292	685	0.0874	734	0.0189		
588	0.2981	637	0.3668	686	0.0846	735	0.0183		
589	0.3009	638	0.3139	687	0.0822	736	0.0181		
590	0.3021	639	0.2931	688	0.0797	737	0.0176		
591	0.3045	640	0.2793	689	0.0774	738	0.0167		
592	0.3079	641	0.2735	690	0.0756	739	0.0165		
593	0.3092	642	0.2651	691	0.0722	740	0.0158		
594	0.3106	643	0.2581	692	0.0704	741	0.0156		
595	0.313	644	0.2556	693	0.0689	742	0.0146		
596	0.3172	645	0.2609	694	0.0657	743	0.0142		
597	0.3237	646	0.2946	695	0.0652	744	0.0143		
598	0.3273	647	0.3578	696	0.0632	745	0.0139		

16. Goniophotometer Test results for LFUAY-1000-L27-DF-O-9

16.1 Test Data

Test Ambient Temperature	25.2℃	Test orientation	Downward
Operate time(Min.)	90	stabilization time(Min.)	30

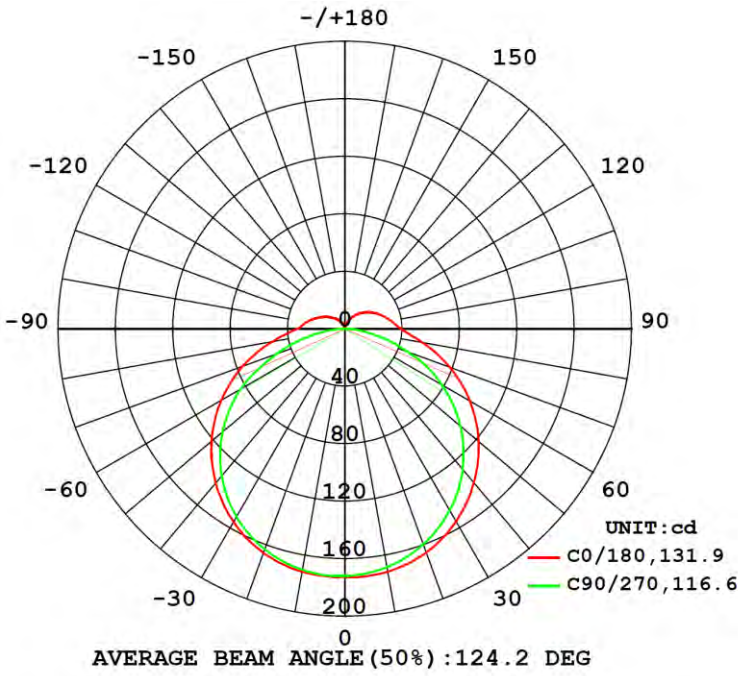
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
24.002	--	0.42549	1.0000	10.213

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	Imax (cd)	η up (%)	η down (%)
655.363	64.17	172.9	10.6	89.4

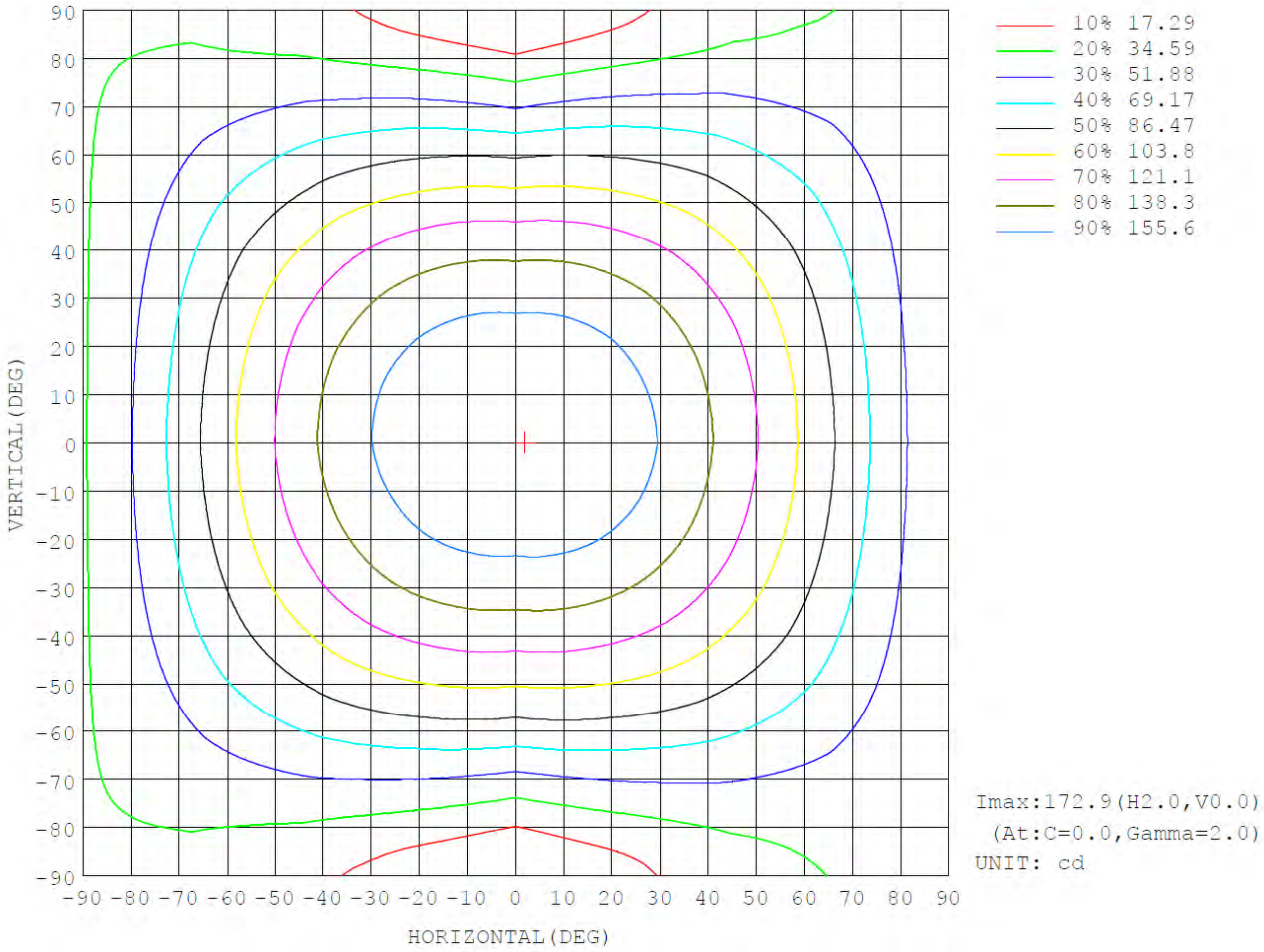
16.2 Luminous Intensity Distribution



16.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	171.6	170.0	168.5	169.4	171.6	171.3	170.3	170.8	0- 10	16.36	16.36	2.5,2.5
20	165.7	162.9	159.7	162.5	166.0	165.6	163.4	165.0	10- 20	47.39	63.74	9.73,9.73
30	155.0	151.0	146.2	150.8	155.3	154.8	151.2	154.3	20- 30	73.19	136.9	20.9,20.9
40	140.0	134.9	127.9	134.6	140.3	139.1	133.9	139.0	30- 40	90.67	227.6	34.7,34.7
50	121.8	115.1	105.1	114.6	121.4	119.2	111.4	119.7	40- 50	97.77	325.4	49.6,49.6
60	100.8	92.29	78.38	91.28	99.69	95.59	84.07	96.90	50- 60	93.65	419.0	63.9,63.9
70	77.76	67.36	46.39	65.61	75.71	69.12	50.37	71.54	60- 70	78.72	497.7	75.9,75.9
80	54.75	42.53	16.87	39.75	51.40	42.21	19.40	45.78	70- 80	55.64	553.4	84.4,84.4
90	39.28	26.73	0.4852	21.96	33.58	23.40	0.6015	27.35	80- 90	32.25	585.6	89.4,89.4
100	32.75	21.51	0.1257	16.51	27.29	17.85	0.1574	22.25	90-100	21.35	607.0	92.6,92.6
110	27.58	17.61	0.1539	12.48	21.84	13.30	0.1722	18.23	100-110	16.63	623.6	95.2,95.2
120	22.63	14.13	0.1848	9.604	16.78	10.15	0.1817	14.59	110-120	12.45	636.1	97.1,97.1
130	17.83	10.44	0.2139	7.100	12.52	7.505	0.2017	11.32	120-130	8.773	644.8	98.4,98.4
140	13.21	7.849	0.2287	4.551	8.893	5.258	0.2435	8.149	130-140	5.662	650.5	99.3,99.3
150	8.680	5.029	0.2248	3.204	5.442	3.956	0.2713	4.372	140-150	3.137	653.6	99.7,99.7
160	4.524	2.069	0.2452	1.587	3.232	2.561	0.3494	1.088	150-160	1.351	655.0	99.9,99.9
170	1.061	0.5348	0.2826	0.3585	0.6268	0.5624	0.3248	0.3366	160-170	0.3432	655.3	100,100
180	0.2762	0.3232	0.3126	0.3169	0.2917	0.3230	0.3156	0.3117	170-180	0.0363	655.4	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

16.4 Isocandela Diagram



16.5 Luminous Distribution Intensity Data

Table--1 UNIT: cd

C(DEG) / γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	173	173	172	172	172	172	172	172	173	173	172	172	172	172	172	172			
5	173	172	172	171	171	171	171	171	173	173	172	172	172	172	172	172			
10	172	171	170	169	168	169	169	170	172	172	171	171	170	171	171	171			
15	169	168	167	166	165	165	167	168	169	170	169	168	168	168	169	169			
20	166	164	163	161	160	161	163	164	166	166	166	164	163	164	165	165			
25	161	159	158	155	154	155	157	159	161	162	161	159	158	159	160	160			
30	155	153	151	148	146	148	151	153	155	156	155	153	151	153	154	155			
35	148	146	143	140	138	140	143	146	148	149	148	145	143	145	147	148			
40	140	138	135	131	128	131	135	138	140	140	139	136	134	137	139	140			
45	131	129	125	121	117	121	125	128	131	131	130	126	123	127	130	131			
50	122	119	115	110	105	109	115	118	121	121	119	115	111	116	120	122			
55	112	109	104	97.5	92.2	97.2	103	108	111	111	108	103	98.4	103	109	111			
60	101	97.8	92.3	84.6	78.4	84.1	91.3	96.4	99.7	99.1	95.6	89.6	84.1	90.3	96.9	100			
65	89.4	86.3	80.0	71.0	63.5	70.4	78.6	84.4	87.9	87.0	82.6	75.4	66.9	76.4	84.5	88.7			
70	77.8	74.5	67.4	57.0	46.4	56.2	65.6	72.1	75.7	74.4	69.1	60.6	50.4	61.8	71.5	76.7			
75	66.0	62.5	54.6	42.9	31.0	41.8	52.4	59.6	63.4	61.7	55.5	45.5	34.7	47.1	58.4	64.6			
80	54.7	51.1	42.5	29.6	16.9	28.1	39.8	47.6	51.4	49.3	42.2	30.9	19.4	32.9	45.8	53.0			
85	45.3	41.6	32.5	18.7	6.25	16.7	28.9	37.2	40.9	38.6	30.8	18.5	7.48	20.8	35.0	42.6			
90	39.3	35.8	26.7	13.2	0.49	10.3	22.0	30.0	33.6	31.2	23.4	11.4	0.60	14.1	27.3	35.0			
95	35.6	32.3	23.7	10.9	0.11	7.80	19.1	26.6	29.9	27.7	20.3	8.91	0.14	11.7	24.5	31.9			
100	32.8	29.6	21.5	9.52	0.13	6.20	16.5	24.1	27.3	25.0	17.8	6.83	0.16	10.1	22.2	29.5			
105	30.1	27.2	19.5	8.38	0.14	5.42	14.2	21.4	24.5	22.4	15.4	5.88	0.17	8.94	20.2	27.2			
110	27.6	24.8	17.6	7.38	0.15	4.73	12.5	18.9	21.8	19.8	13.3	5.13	0.17	7.93	18.2	25.1			
115	25.1	22.5	15.8	6.16	0.17	4.13	11.0	16.6	19.2	17.2	11.6	4.46	0.18	6.53	16.4	22.7			
120	22.6	20.3	14.1	5.76	0.18	3.31	9.60	14.6	16.8	15.0	10.1	3.86	0.18	5.81	14.6	20.4			
125	20.2	18.1	12.2	5.14	0.20	2.88	8.29	12.6	14.6	13.0	8.75	3.32	0.19	5.14	12.9	18.2			
130	17.8	15.9	10.4	4.32	0.21	2.66	7.10	10.8	12.5	11.2	7.50	2.93	0.20	4.61	11.3	16.0			
135	15.5	13.8	9.24	3.68	0.22	2.27	6.02	9.16	10.6	9.52	6.41	2.54	0.22	3.57	9.75	13.9			
140	13.2	11.8	7.85	2.90	0.23	1.89	4.55	7.64	8.89	8.01	5.26	2.20	0.24	2.78	8.15	11.8			
145	10.8	9.81	6.40	2.25	0.22	1.43	3.97	5.92	7.30	6.51	4.59	1.98	0.26	1.77	6.14	9.71			
150	8.68	7.77	5.03	1.61	0.22	0.88	3.20	4.74	5.44	5.20	3.96	1.81	0.27	0.91	4.37	7.53			
155	6.55	5.58	3.60	0.99	0.24	0.50	2.45	3.74	4.42	4.29	3.29	1.55	0.31	0.39	2.54	4.91			
160	4.52	3.84	2.07	0.61	0.25	0.36	1.59	2.71	3.23	3.20	2.56	1.10	0.35	0.31	1.09	2.99			
165	2.59	2.09	1.14	0.37	0.26	0.30	0.67	1.56	1.88	2.04	1.57	0.65	0.34	0.31	0.50	1.35			
170	1.06	0.78	0.53	0.30	0.28	0.28	0.36	0.52	0.63	0.63	0.56	0.43	0.32	0.32	0.34	0.59			
175	0.33	0.33	0.31	0.30	0.30	0.30	0.31	0.33	0.36	0.37	0.38	0.33	0.32	0.32	0.32	0.34			
180	0.28	0.32	0.32	0.32	0.31	0.31	0.32	0.32	0.29	0.29	0.32	0.32	0.32	0.31	0.31	0.32			

17. Integrating Sphere Test Results for LFUAY-1000-L27-DF-O-14

17.1 Test Data

Test Ambient Temperature (Integrating sphere internal temperature)	25.1℃	Test orientation	Downward
Operate time(Min.)	30	stabilization time(Min.)	0

Optical and Electrical Measurement Result

Number	Time	Current (A)	Voltage (V)	Power (W)	Flux(lm)	x	y	u'	v'	CCT (K)	Ra
0	00h00m00s	0.6682	24	16.037	993.39	0.4715	0.4118	0.2695	0.5296	2555	94.3
1	00h00m10s	0.6697	24	16.073	992.51	0.4714	0.4117	0.2695	0.5295	2555	94.3
2	00h00m20s	0.6705	24	16.092	991.54	0.4716	0.4117	0.2696	0.5295	2553	94.3
3	00h00m30s	0.6711	23.999	16.106	989.71	0.4716	0.4116	0.2697	0.5295	2551	94.3
4	00h00m40s	0.6715	23.999	16.115	988.32	0.4715	0.4115	0.2696	0.5294	2552	94.3
5	00h00m50s	0.672	23.999	16.127	986.6	0.4717	0.4113	0.2699	0.5294	2548	94.2
6	00h01m00s	0.6725	23.999	16.139	985.34	0.4717	0.4111	0.2699	0.5293	2547	94.2
7	00h01m10s	0.6729	23.999	16.149	984.91	0.4718	0.4112	0.2699	0.5294	2547	94.2
8	00h01m20s	0.6734	23.999	16.161	983.4	0.4717	0.4113	0.2699	0.5294	2548	94.3
9	00h01m30s	0.6738	23.999	16.171	982.37	0.4717	0.4111	0.2699	0.5293	2547	94.3
10	00h01m40s	0.6743	23.999	16.183	981.55	0.4718	0.4109	0.2701	0.5293	2543	94.2
11	00h01m50s	0.6747	23.999	16.192	980.26	0.4718	0.4107	0.2702	0.5292	2543	94.2
12	00h02m00s	0.675	23.999	16.199	980.26	0.4718	0.4109	0.2701	0.5293	2544	94.2
13	00h02m10s	0.6754	23.999	16.209	979.62	0.4719	0.4109	0.2701	0.5293	2543	94.2
14	00h02m20s	0.6757	23.998	16.215	978.25	0.4721	0.4108	0.2703	0.5293	2540	94.2
15	00h02m30s	0.6759	23.998	16.22	977.66	0.4719	0.4107	0.2703	0.5292	2541	94.2
16	00h02m40s	0.6761	23.998	16.225	976.75	0.4719	0.4103	0.2704	0.5291	2538	94.2
17	00h02m50s	0.6763	23.998	16.23	975.77	0.4721	0.4105	0.2704	0.5292	2537	94.2
18	00h03m00s	0.6765	23.998	16.235	975.39	0.472	0.4107	0.2704	0.5292	2539	94.2
19	00h03m10s	0.6767	23.998	16.239	974.23	0.4718	0.4102	0.2704	0.529	2539	94.2
20	00h03m20s	0.6768	23.998	16.242	973.86	0.4722	0.4105	0.2705	0.5292	2536	94.2
21	00h03m30s	0.6769	23.998	16.244	973.45	0.4722	0.4104	0.2706	0.5291	2535	94.2

22	00h03m40s	0.677	23.998	16.247	972.8	0.4721	0.4104	0.2705	0.5291	2536	94.2
23	00h03m50s	0.6771	23.998	16.249	972.16	0.4721	0.4102	0.2706	0.529	2535	94.1
24	00h04m00s	0.6772	23.998	16.251	972.17	0.4722	0.4104	0.2706	0.5291	2535	94.2
25	00h04m10s	0.6773	23.998	16.254	971.49	0.4721	0.4103	0.2706	0.5291	2535	94.1
26	00h04m20s	0.6774	23.998	16.256	971.21	0.4722	0.4104	0.2706	0.5291	2534	94.2
27	00h04m30s	0.6775	23.998	16.259	969.73	0.4722	0.4102	0.2707	0.5291	2533	94.2
28	00h04m40s	0.6776	23.998	16.261	969.12	0.4723	0.41	0.2708	0.529	2531	94.1
29	00h04m50s	0.6776	23.998	16.261	969.31	0.4724	0.4103	0.2707	0.5291	2532	94.2
30	00h05m00s	0.6777	23.998	16.263	968.54	0.4721	0.4101	0.2707	0.529	2534	94.2
31	00h05m10s	0.6777	23.998	16.263	968.35	0.4724	0.4101	0.2708	0.5291	2531	94.1
32	00h05m20s	0.6778	23.998	16.266	967.68	0.4723	0.4102	0.2707	0.5291	2533	94.2
33	00h05m30s	0.6779	23.998	16.268	967.97	0.4723	0.4103	0.2707	0.5291	2533	94.2
34	00h05m40s	0.6779	23.998	16.268	966.89	0.4723	0.41	0.2709	0.529	2530	94.1
35	00h05m50s	0.6779	23.998	16.268	966.92	0.4724	0.41	0.2709	0.529	2530	94.1
36	00h06m00s	0.6781	23.998	16.273	966.41	0.4723	0.41	0.2708	0.529	2531	94.2
37	00h06m10s	0.6781	23.998	16.273	965.71	0.4724	0.41	0.2709	0.529	2530	94.2
38	00h06m20s	0.6781	23.998	16.273	965.17	0.4724	0.41	0.2709	0.529	2530	94.2
39	00h06m30s	0.6781	23.998	16.273	965.21	0.4723	0.4099	0.2709	0.529	2530	94.1
40	00h06m40s	0.6782	23.998	16.275	965.48	0.4723	0.41	0.2708	0.529	2531	94.2
41	00h06m50s	0.6782	23.998	16.275	964.94	0.4724	0.41	0.2709	0.529	2530	94.1
42	00h07m00s	0.6783	23.998	16.278	964.8	0.4725	0.4099	0.271	0.529	2528	94.1
43	00h07m10s	0.6783	23.998	16.278	964.44	0.4724	0.41	0.2709	0.529	2529	94.1
44	00h07m20s	0.6784	23.997	16.28	964.73	0.4722	0.4098	0.2709	0.5289	2531	94.1
45	00h07m30s	0.6784	23.997	16.28	964.2	0.4725	0.41	0.271	0.529	2528	94.1
46	00h07m40s	0.6785	23.997	16.282	964.15	0.4723	0.4099	0.2709	0.529	2530	94.2
47	00h07m50s	0.6785	23.997	16.282	963.87	0.4724	0.41	0.2709	0.529	2530	94.1
48	00h08m00s	0.6785	23.997	16.282	963.42	0.4723	0.4098	0.2709	0.5289	2529	94.1
49	00h08m10s	0.6785	23.997	16.282	963.29	0.4724	0.41	0.2709	0.529	2529	94.1
50	00h08m20s	0.6785	23.997	16.282	962.39	0.4725	0.4098	0.2711	0.5289	2527	94.1
51	00h08m30s	0.6786	23.997	16.284	963.37	0.4725	0.41	0.271	0.529	2528	94.1
52	00h08m40s	0.6787	23.997	16.287	962.74	0.4726	0.4097	0.2711	0.5289	2525	94

53	00h08m50s	0.6787	23.997	16.287	963.05	0.4725	0.4101	0.2709	0.5291	2529	94.2
54	00h09m00s	0.6787	23.997	16.287	962.09	0.4724	0.4099	0.271	0.529	2528	94.2
55	00h09m10s	0.6788	23.997	16.289	961.73	0.4726	0.4097	0.2711	0.5289	2525	94.1
56	00h09m20s	0.6788	23.997	16.289	961.51	0.4726	0.4098	0.2711	0.529	2526	94.1
57	00h09m30s	0.6789	23.997	16.292	962.19	0.4725	0.41	0.271	0.529	2528	94.2
58	00h09m40s	0.6789	23.997	16.292	961.92	0.4726	0.4098	0.2711	0.529	2526	94.1
59	00h09m50s	0.6789	23.997	16.292	961.19	0.4725	0.4099	0.2711	0.529	2527	94.1
60	00h10m00s	0.679	23.997	16.294	960.73	0.4725	0.4098	0.2711	0.529	2527	94.1
61	00h10m10s	0.6789	23.997	16.292	961.5	0.4725	0.4099	0.271	0.529	2527	94.1
62	00h10m20s	0.679	23.997	16.294	961.59	0.4725	0.4099	0.271	0.529	2528	94.1
63	00h10m30s	0.679	23.997	16.294	960.73	0.4726	0.4098	0.2711	0.529	2525	94.1
64	00h10m40s	0.6791	23.997	16.296	960.8	0.4726	0.4098	0.2711	0.529	2525	94.1
65	00h10m50s	0.6791	23.997	16.296	959.7	0.4726	0.4097	0.2712	0.5289	2525	94.1
66	00h11m00s	0.6791	23.997	16.296	959.89	0.4727	0.4099	0.2712	0.529	2524	94.1
67	00h11m10s	0.6792	23.997	16.299	960.05	0.4725	0.4097	0.2711	0.5289	2525	94.1
68	00h11m20s	0.6792	23.997	16.299	960.39	0.4725	0.4098	0.2711	0.529	2527	94.1
69	00h11m30s	0.6792	23.997	16.299	959.79	0.4726	0.4098	0.2712	0.529	2525	94.1
70	00h11m40s	0.6793	23.997	16.301	960.23	0.4727	0.4098	0.2712	0.529	2525	94.1
71	00h11m50s	0.6793	23.997	16.301	959.41	0.4725	0.4097	0.2711	0.5289	2526	94.1
72	00h12m00s	0.6793	23.997	16.301	959.78	0.4725	0.4099	0.271	0.529	2527	94.1
73	00h12m10s	0.6794	23.997	16.304	959.44	0.4725	0.4097	0.2711	0.5289	2526	94.2
74	00h12m20s	0.6794	23.997	16.304	959.33	0.4727	0.4098	0.2712	0.529	2523	94.1
75	00h12m30s	0.6794	23.997	16.304	959.68	0.4725	0.4098	0.2711	0.529	2527	94.1
76	00h12m40s	0.6794	23.997	16.304	958.99	0.4725	0.4097	0.2712	0.5289	2525	94.1
77	00h12m50s	0.6795	23.997	16.306	958.83	0.4726	0.4098	0.2711	0.529	2526	94.2
78	00h13m00s	0.6795	23.997	16.306	959.27	0.4725	0.4095	0.2712	0.5288	2524	94.1
79	00h13m10s	0.6796	23.997	16.308	958.93	0.4725	0.4097	0.2711	0.5289	2526	94.1
80	00h13m20s	0.6796	23.997	16.308	958.78	0.4725	0.4097	0.2711	0.5289	2526	94.1
81	00h13m30s	0.6796	23.997	16.308	958.92	0.4725	0.4097	0.2711	0.5289	2526	94.2
82	00h13m40s	0.6795	23.997	16.306	958.62	0.4723	0.4094	0.2711	0.5288	2526	94.1
83	00h13m50s	0.6796	23.997	16.308	958.53	0.4725	0.4097	0.2711	0.5289	2526	94.2

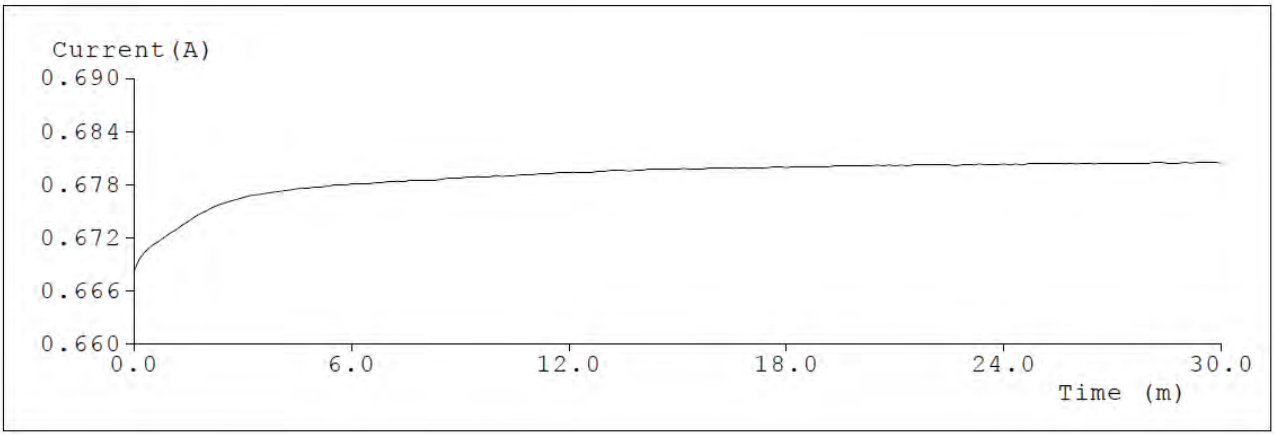
84	00h14m00s	0.6796	23.997	16.308	958.76	0.4726	0.4099	0.2711	0.529	2526	94.1
85	00h14m10s	0.6797	23.997	16.311	958.54	0.4727	0.4097	0.2712	0.5289	2523	94.1
86	00h14m20s	0.6797	23.997	16.311	957.72	0.4725	0.4095	0.2712	0.5289	2524	94.1
87	00h14m30s	0.6797	23.997	16.311	958.12	0.4726	0.4097	0.2712	0.529	2525	94.1
88	00h14m40s	0.6797	23.997	16.311	958.28	0.4725	0.4096	0.2712	0.5289	2525	94.1
89	00h14m50s	0.6797	23.997	16.311	957.7	0.4727	0.4097	0.2712	0.529	2524	94.1
90	00h15m00s	0.6797	23.997	16.311	958.13	0.4727	0.4097	0.2713	0.5289	2523	94.1
91	00h15m10s	0.6798	23.997	16.313	957.95	0.4724	0.4096	0.2711	0.5289	2526	94.2
92	00h15m20s	0.6797	23.997	16.311	957.3	0.4726	0.4095	0.2712	0.5289	2524	94.1
93	00h15m30s	0.6797	23.997	16.311	957.26	0.4728	0.4097	0.2713	0.529	2522	94.1
94	00h15m40s	0.6797	23.997	16.311	957.33	0.4725	0.4096	0.2712	0.5289	2525	94.1
95	00h15m50s	0.6798	23.997	16.313	957.17	0.4726	0.4094	0.2713	0.5288	2522	94.1
96	00h16m00s	0.6798	23.997	16.313	958.27	0.4725	0.4096	0.2711	0.5289	2526	94.1
97	00h16m10s	0.6798	23.997	16.313	957.05	0.4726	0.4096	0.2712	0.5289	2524	94.1
98	00h16m20s	0.6798	23.997	16.313	957.55	0.4728	0.4097	0.2713	0.5289	2523	94.1
99	00h16m30s	0.6798	23.997	16.313	957.46	0.4725	0.4095	0.2712	0.5289	2525	94.1
100	00h16m40s	0.6799	23.997	16.316	957.81	0.4727	0.4096	0.2713	0.5289	2523	94.1
101	00h16m50s	0.6799	23.997	16.316	957.15	0.4727	0.4098	0.2712	0.529	2523	94.1
102	00h17m00s	0.6798	23.997	16.313	956.57	0.4727	0.4096	0.2713	0.5289	2522	94.1
103	00h17m10s	0.6798	23.997	16.313	957.06	0.4726	0.4096	0.2713	0.5289	2523	94.1
104	00h17m20s	0.6798	23.997	16.313	956.31	0.4727	0.4096	0.2713	0.5289	2523	94.1
105	00h17m30s	0.6799	23.997	16.316	957.44	0.4726	0.4096	0.2712	0.5289	2524	94.1
106	00h17m40s	0.68	23.997	16.318	956.64	0.4726	0.4095	0.2713	0.5289	2523	94.1
107	00h17m50s	0.68	23.997	16.318	956.48	0.4728	0.4096	0.2713	0.5289	2522	94.1
108	00h18m00s	0.6799	23.997	16.316	955.98	0.4727	0.4095	0.2713	0.5289	2522	94.1
109	00h18m10s	0.68	23.997	16.318	957.06	0.4727	0.4098	0.2712	0.529	2524	94.1
110	00h18m20s	0.68	23.997	16.318	956.21	0.4727	0.4096	0.2713	0.5289	2523	94.1
111	00h18m30s	0.68	23.997	16.318	956.5	0.4725	0.4095	0.2712	0.5288	2524	94.2
112	00h18m40s	0.68	23.997	16.318	956.38	0.4727	0.4097	0.2713	0.5289	2523	94.1
113	00h18m50s	0.68	23.997	16.318	956.63	0.4726	0.4096	0.2712	0.5289	2524	94.1
114	00h19m00s	0.68	23.997	16.318	956.63	0.4725	0.4097	0.2711	0.5289	2526	94.1

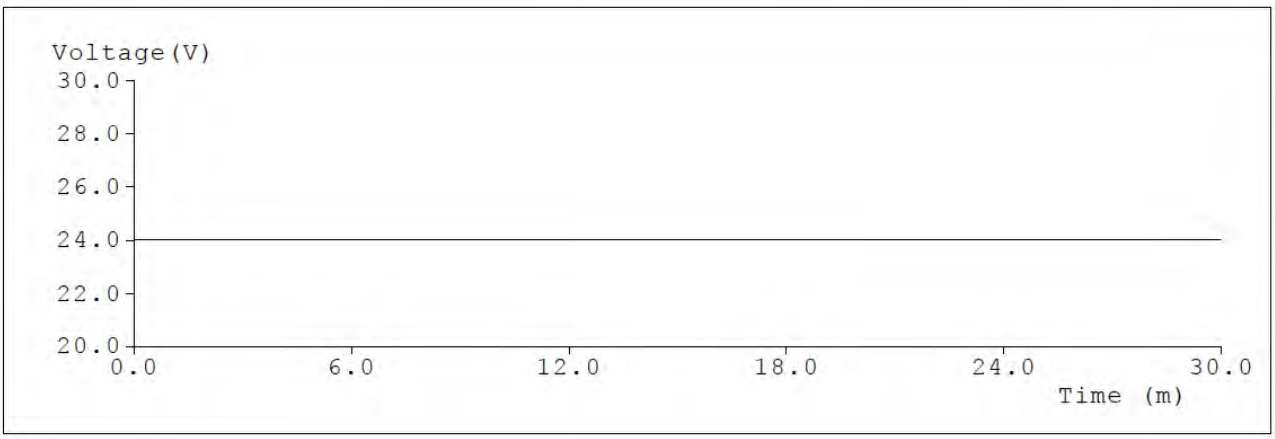
115	00h19m10s	0.68	23.997	16.318	955.74	0.4726	0.4094	0.2713	0.5288	2523	94.1
116	00h19m20s	0.6801	23.997	16.32	955.99	0.4727	0.4094	0.2714	0.5288	2521	94.1
117	00h19m30s	0.6801	23.997	16.32	955.97	0.4727	0.4095	0.2713	0.5289	2522	94.1
118	00h19m40s	0.6801	23.997	16.32	955.93	0.4727	0.4095	0.2713	0.5289	2522	94.1
119	00h19m50s	0.6801	23.997	16.32	955.53	0.4726	0.4095	0.2712	0.5289	2524	94.1
120	00h20m00s	0.6801	23.997	16.32	956.88	0.4726	0.4095	0.2713	0.5288	2523	94.1
121	00h20m10s	0.6801	23.997	16.32	955.5	0.4727	0.4095	0.2713	0.5289	2522	94.1
122	00h20m20s	0.6801	23.997	16.32	955.44	0.4726	0.4096	0.2712	0.5289	2523	94.1
123	00h20m30s	0.6802	23.997	16.323	955.71	0.4726	0.4095	0.2713	0.5289	2523	94.1
124	00h20m40s	0.6801	23.997	16.32	955.86	0.4728	0.4096	0.2713	0.5289	2521	94.1
125	00h20m50s	0.6802	23.997	16.323	955.34	0.4726	0.4094	0.2713	0.5288	2523	94.1
126	00h21m00s	0.6801	23.997	16.32	955.28	0.4728	0.4095	0.2714	0.5289	2521	94.1
127	00h21m10s	0.6802	23.997	16.323	955.25	0.4728	0.4095	0.2714	0.5289	2520	94.1
128	00h21m20s	0.6801	23.997	16.32	955.49	0.4726	0.4094	0.2713	0.5288	2523	94.1
129	00h21m30s	0.6802	23.997	16.323	955.35	0.4726	0.4094	0.2713	0.5288	2522	94
130	00h21m40s	0.6802	23.997	16.323	955.36	0.4727	0.4096	0.2713	0.5289	2522	94.1
131	00h21m50s	0.6802	23.997	16.323	955.1	0.4728	0.4095	0.2714	0.5289	2521	94.1
132	00h22m00s	0.6802	23.997	16.323	955.53	0.4725	0.4095	0.2712	0.5289	2524	94.1
133	00h22m10s	0.6802	23.997	16.323	954.63	0.4728	0.4096	0.2713	0.5289	2522	94.1
134	00h22m20s	0.6802	23.997	16.323	954.78	0.4727	0.4095	0.2714	0.5289	2521	94.1
135	00h22m30s	0.6802	23.997	16.323	955.3	0.4729	0.4096	0.2714	0.529	2520	94.1
136	00h22m40s	0.6801	23.997	16.32	955.4	0.4726	0.4094	0.2714	0.5288	2522	94.1
137	00h22m50s	0.6802	23.997	16.323	954.48	0.4726	0.4094	0.2713	0.5288	2522	94.1
138	00h23m00s	0.6802	23.997	16.323	954.65	0.4727	0.4095	0.2714	0.5289	2521	94.1
139	00h23m10s	0.6802	23.997	16.323	955.08	0.4727	0.4095	0.2713	0.5289	2522	94.1
140	00h23m20s	0.6803	23.997	16.325	955.09	0.4727	0.4095	0.2713	0.5289	2522	94.1
141	00h23m30s	0.6802	23.997	16.323	954.74	0.4727	0.4095	0.2713	0.5289	2522	94.1
142	00h23m40s	0.6802	23.997	16.323	954.32	0.4727	0.4095	0.2713	0.5289	2522	94
143	00h23m50s	0.6802	23.997	16.323	954.77	0.4727	0.4095	0.2713	0.5289	2522	94.1
144	00h24m00s	0.6803	23.997	16.325	954.49	0.4726	0.4095	0.2713	0.5288	2523	94.1
145	00h24m10s	0.6802	23.997	16.323	953.63	0.4728	0.4094	0.2715	0.5289	2520	94.1

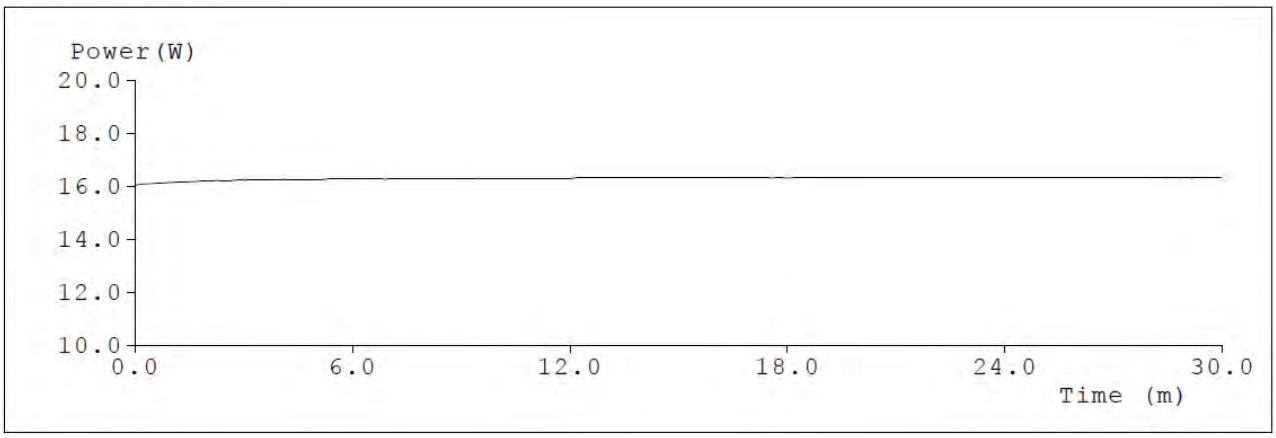
146	00h24m20s	0.6803	23.997	16.325	954.38	0.4728	0.4094	0.2714	0.5288	2520	94.1
147	00h24m30s	0.6802	23.997	16.323	954.03	0.4728	0.4095	0.2714	0.5289	2521	94.1
148	00h24m40s	0.6803	23.997	16.325	953.56	0.4728	0.4096	0.2714	0.5289	2521	94.1
149	00h24m50s	0.6803	23.997	16.325	953.51	0.4726	0.4095	0.2713	0.5288	2522	94.1
150	00h25m00s	0.6803	23.997	16.325	953.46	0.4727	0.4095	0.2713	0.5289	2522	94.1
151	00h25m10s	0.6803	23.997	16.325	953.67	0.4727	0.4094	0.2713	0.5288	2522	94.1
152	00h25m20s	0.6803	23.997	16.325	953.46	0.4728	0.4096	0.2714	0.5289	2521	94.1
153	00h25m30s	0.6803	23.997	16.325	952.69	0.4728	0.4095	0.2714	0.5289	2521	94.1
154	00h25m40s	0.6803	23.997	16.325	952.73	0.4728	0.4095	0.2714	0.5289	2521	94.1
155	00h25m50s	0.6804	23.997	16.328	952.46	0.4726	0.4094	0.2713	0.5288	2522	94.1
156	00h26m00s	0.6803	23.997	16.325	952.58	0.4729	0.4096	0.2714	0.5289	2520	94.1
157	00h26m10s	0.6804	23.997	16.328	952.55	0.4727	0.4095	0.2714	0.5289	2521	94.1
158	00h26m20s	0.6804	23.997	16.328	952.52	0.4728	0.4095	0.2714	0.5289	2521	94.1
159	00h26m30s	0.6803	23.997	16.325	952.62	0.4727	0.4095	0.2713	0.5289	2522	94.1
160	00h26m40s	0.6804	23.997	16.328	951.91	0.4728	0.4093	0.2715	0.5288	2520	94.1
161	00h26m50s	0.6804	23.997	16.328	952.35	0.4727	0.4096	0.2713	0.5289	2523	94.1
162	00h27m00s	0.6804	23.997	16.328	951.37	0.4727	0.4095	0.2713	0.5289	2522	94.1
163	00h27m10s	0.6804	23.997	16.328	951.79	0.4728	0.4094	0.2714	0.5289	2520	94
164	00h27m20s	0.6804	23.997	16.328	951.81	0.4729	0.4095	0.2715	0.5289	2519	94.1
165	00h27m30s	0.6804	23.997	16.328	951.8	0.4726	0.4094	0.2713	0.5288	2522	94.1
166	00h27m40s	0.6804	23.997	16.328	951.48	0.4727	0.4095	0.2713	0.5289	2522	94.1
167	00h27m50s	0.6804	23.997	16.328	950.72	0.4728	0.4093	0.2715	0.5288	2519	94
168	00h28m00s	0.6804	23.997	16.328	951.19	0.4728	0.4095	0.2714	0.5289	2521	94.1
169	00h28m10s	0.6805	23.997	16.33	950.71	0.4728	0.4093	0.2715	0.5288	2519	94.1
170	00h28m20s	0.6805	23.997	16.33	951.03	0.4727	0.4093	0.2714	0.5288	2521	94.1
171	00h28m30s	0.6804	23.997	16.328	953.63	0.4726	0.4093	0.2714	0.5288	2522	94.1
172	00h28m40s	0.6804	23.997	16.328	954.68	0.4728	0.4095	0.2714	0.5289	2521	94.1
173	00h28m50s	0.6804	23.997	16.328	953.8	0.4726	0.4095	0.2713	0.5289	2522	94.1
174	00h29m00s	0.6805	23.997	16.33	954.37	0.4728	0.4094	0.2714	0.5289	2521	94.1
175	00h29m10s	0.6804	23.997	16.328	954.15	0.4727	0.4094	0.2714	0.5289	2522	94.1
176	00h29m20s	0.6805	23.997	16.33	953.5	0.4726	0.4094	0.2713	0.5288	2523	94.1

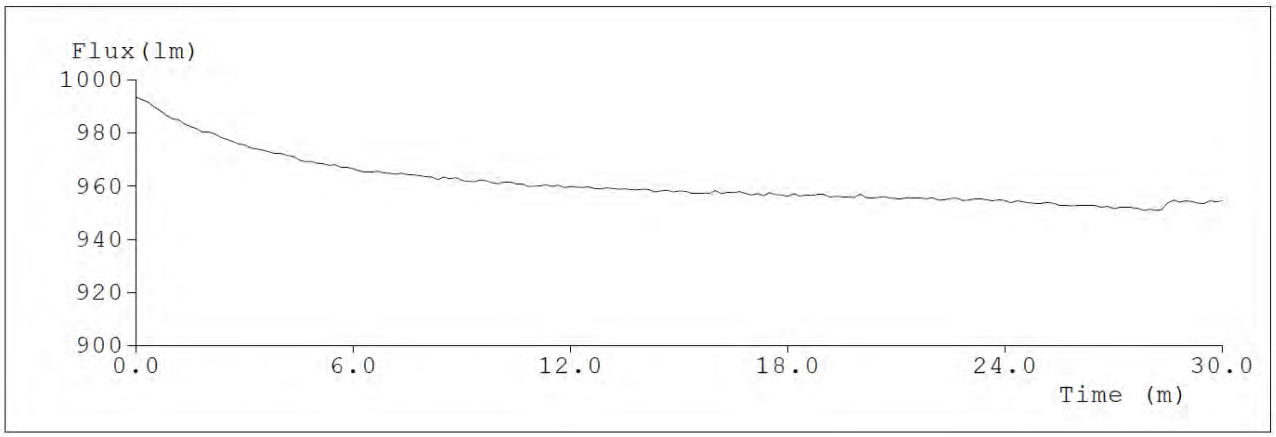
177	00h29m30s	0.6805	23.997	16.33	953.39	0.4727	0.4093	0.2714	0.5288	2520	94.1
178	00h29m40s	0.6805	23.997	16.33	954.41	0.4727	0.4095	0.2713	0.5289	2522	94.1
179	00h29m50s	0.6805	23.997	16.33	953.98	0.4725	0.4094	0.2713	0.5288	2523	94.1
180	00h30m00s	0.6804	23.997	16.328	954.42	0.4727	0.4094	0.2714	0.5289	2522	94.1

Test curves








Flux(lm)
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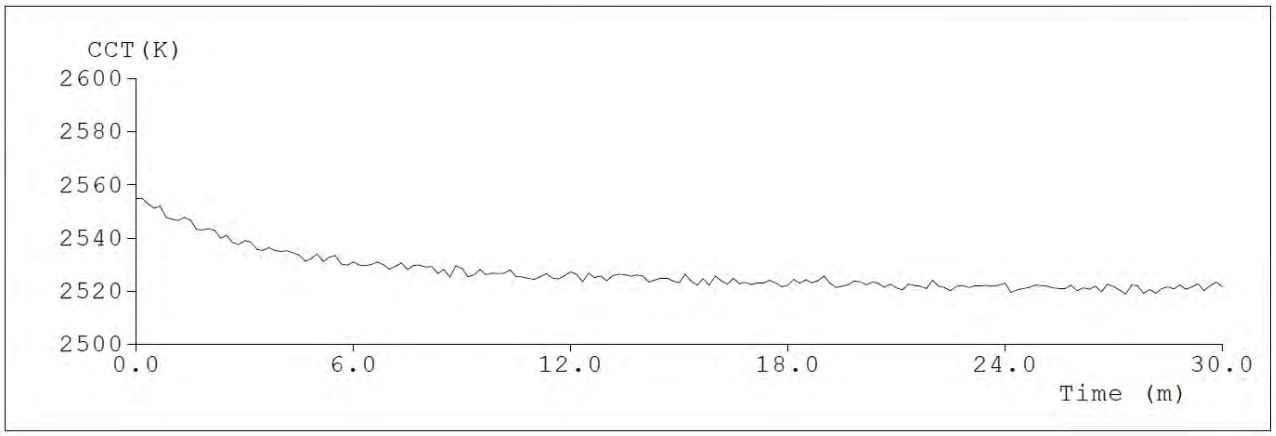
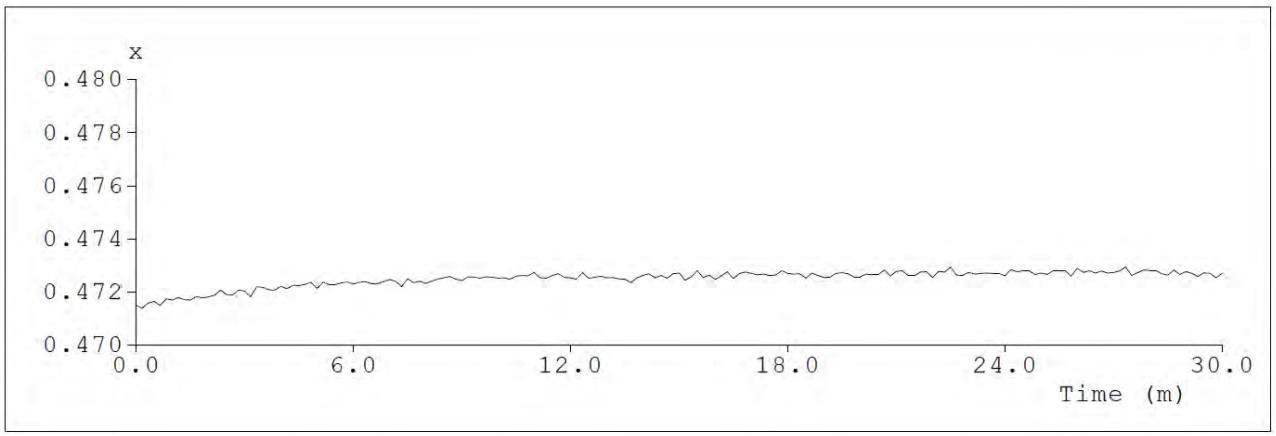
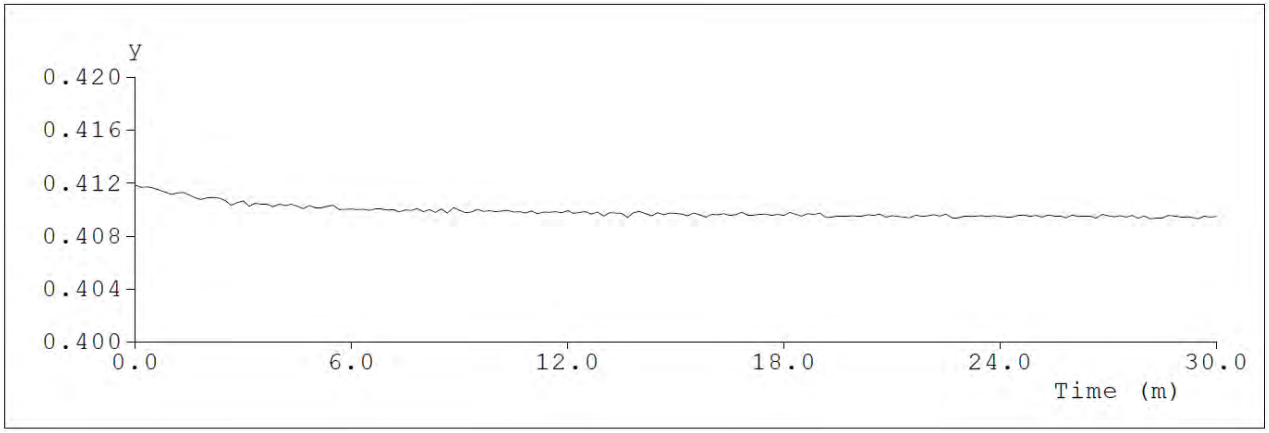
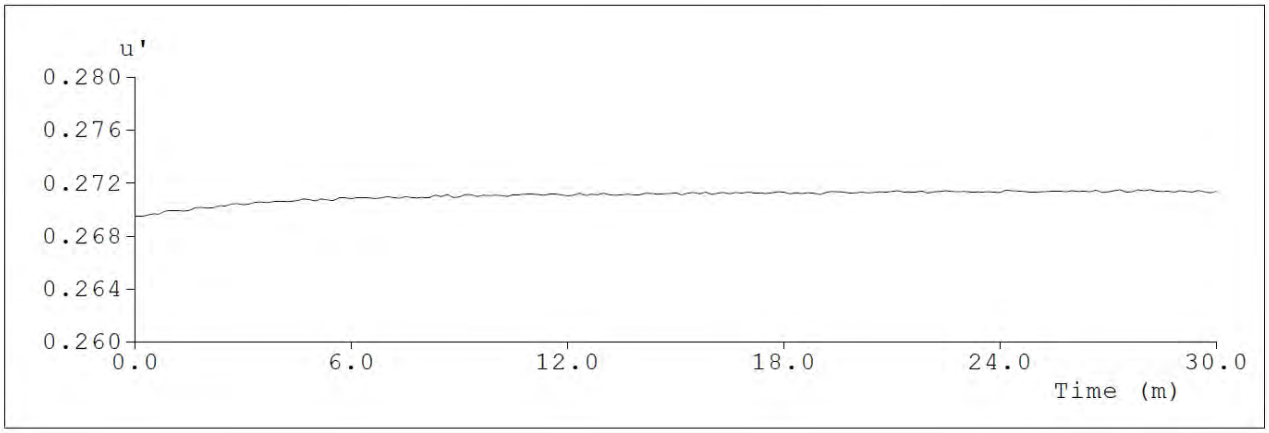
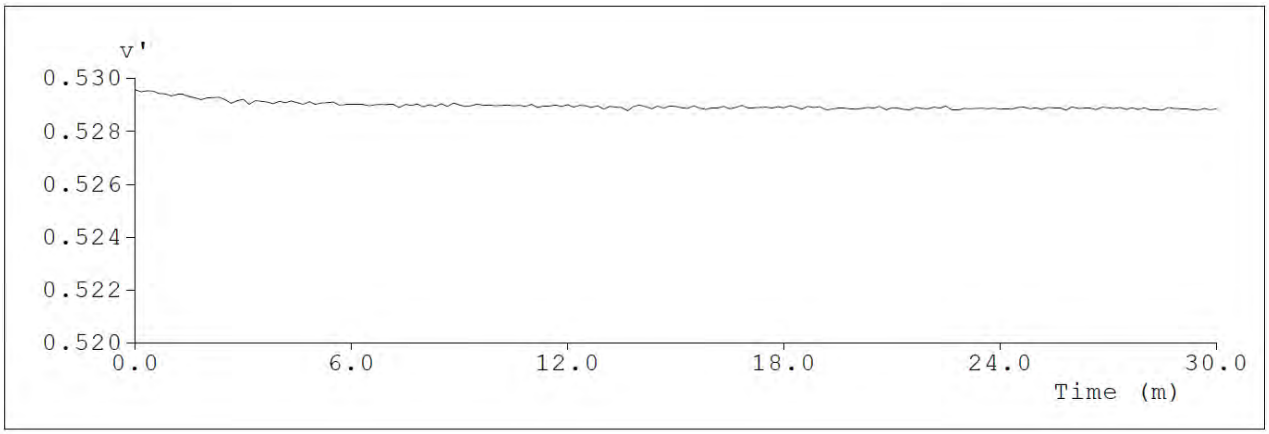
980
960
940
920
900
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


CCT(K)
2600
2580
2560
2540
2520
2500
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


x
0.480
0.478
0.476
0.474
0.472
0.470
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


y
0.420
0.416
0.412
0.408
0.404
0.400
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


u'
0.280
0.276
0.272
0.268
0.264
0.260
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

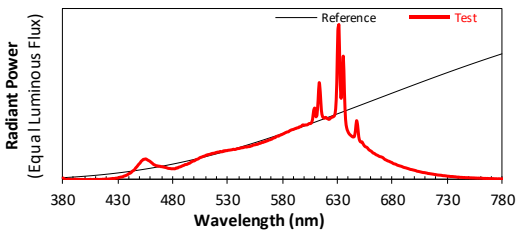

v'
0.530
0.528
0.526
0.524
0.522
0.520
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

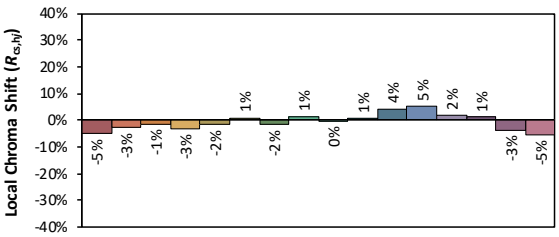
*17.2 ANSI/IES TM-30-18 Color Rendition Report

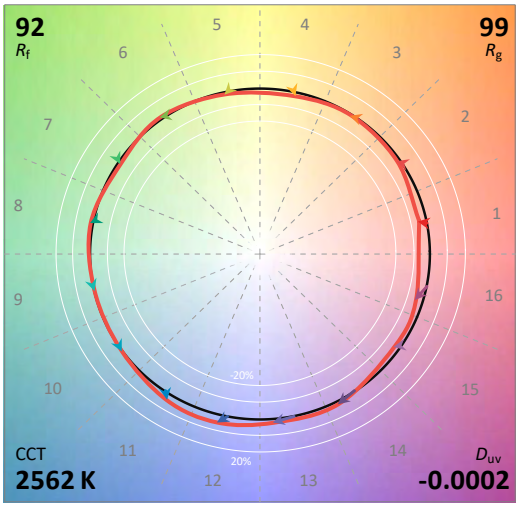
ANSI/IES TM-30-18 Color Rendition Report

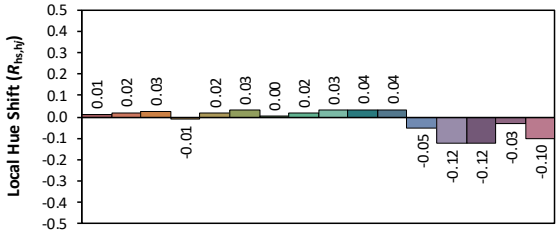
Source: Manufacturer:

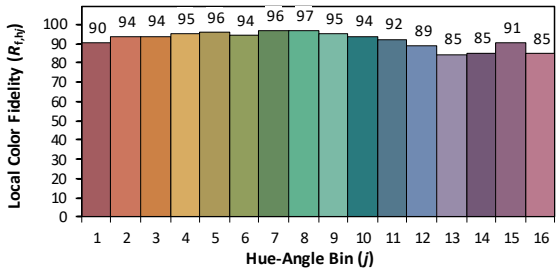
Date: 2023/9/26 Model: LFUAY-1000-L27-DF-0-14

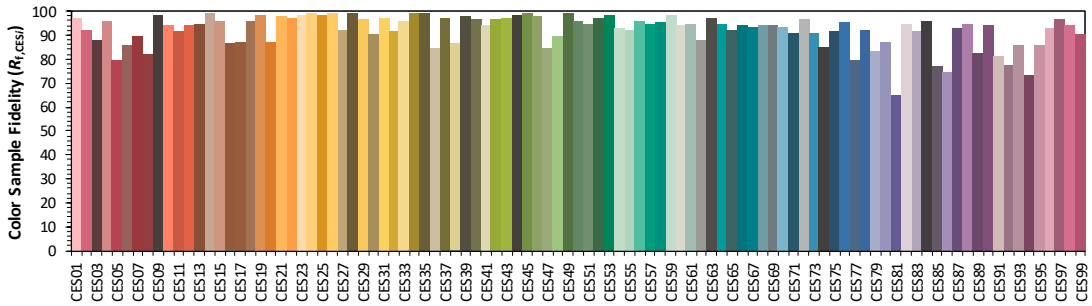












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

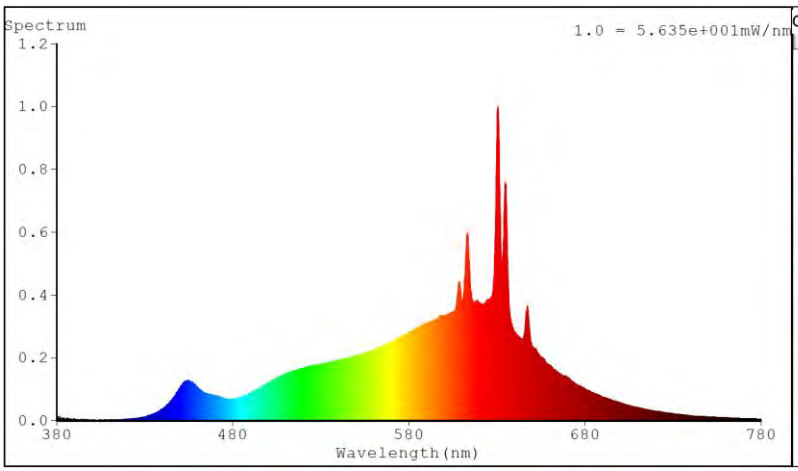
x	0.4712
y	0.4123
u'	0.2691
v'	0.5297

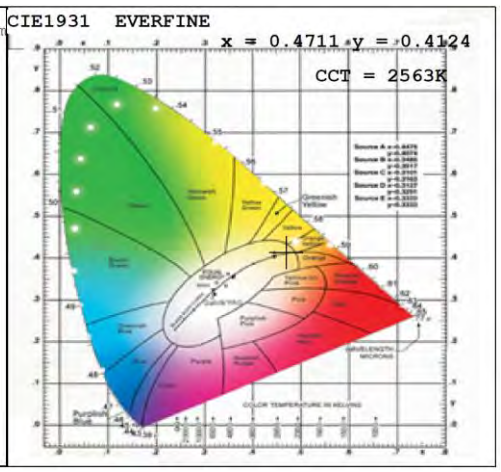
CIE 13.3-1995 (CRI)

R_a	94
R_9	60

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

9.3 Relative Spectral Power Distribution





nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0113	414	0.0028	448	0.0879	482	0.068	516	0.1614
381	0.0071	415	0.0022	449	0.0963	483	0.0727	517	0.1621
382	0	416	0.0039	450	0.1027	484	0.0716	518	0.1634
383	0.001	417	0.0031	451	0.1129	485	0.0762	519	0.1663
384	0.0024	418	0.0044	452	0.1184	486	0.0784	520	0.168
385	0.0054	419	0.0046	453	0.1247	487	0.0802	521	0.1693
386	0	420	0.0036	454	0.1251	488	0.0837	522	0.1693
387	0.0026	421	0.0049	455	0.1275	489	0.0865	523	0.1733
388	0	422	0.0051	456	0.1247	490	0.0889	524	0.1712
389	0.0017	423	0.0064	457	0.1202	491	0.093	525	0.1719
390	0.0023	424	0.0068	458	0.1167	492	0.0935	526	0.1773
391	0.0047	425	0.0083	459	0.1128	493	0.0952	527	0.1753
392	0.0017	426	0.0078	460	0.107	494	0.0995	528	0.1786
393	0.0031	427	0.0084	461	0.1019	495	0.1009	529	0.1776
394	0.0019	428	0.0101	462	0.0955	496	0.1059	530	0.1802
395	0.0029	429	0.0103	463	0.0915	497	0.1099	531	0.1808
396	0.0008	430	0.0112	464	0.0884	498	0.1141	532	0.1818
397	0.0029	431	0.0142	465	0.0853	499	0.115	533	0.1829
398	0.0011	432	0.0159	466	0.0852	500	0.1183	534	0.1841
399	0.0018	433	0.0173	467	0.0823	501	0.1231	535	0.1865
400	0.0025	434	0.0179	468	0.0829	502	0.1255	536	0.185
401	0.0004	435	0.0217	469	0.0802	503	0.1281	537	0.1861
402	0.001	436	0.0239	470	0.0804	504	0.1331	538	0.1888
403	0.002	437	0.0262	471	0.0782	505	0.1368	539	0.1907
404	0.0019	438	0.0292	472	0.0771	506	0.1383	540	0.1909
405	0.0031	439	0.0331	473	0.0753	507	0.1416	541	0.1929
406	0.0007	440	0.0383	474	0.0741	508	0.1439	542	0.1949
407	0.0016	441	0.0404	475	0.0711	509	0.1457	543	0.1957
408	0.0026	442	0.0456	476	0.0695	510	0.1497	544	0.1967
409	0.0019	443	0.0524	477	0.0691	511	0.1519	545	0.1994
410	0.0022	444	0.0571	478	0.0681	512	0.1539	546	0.2005
411	0.0032	445	0.0626	479	0.0672	513	0.1549	547	0.2
412	0.0023	446	0.0723	480	0.0678	514	0.1569	548	0.2019
413	0.0022	447	0.0792	481	0.0673	515	0.1597	549	0.2025

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.2034	599	0.3338	648	0.3309	697	0.0626	746	0.0132
551	0.2063	600	0.3342	649	0.2636	698	0.061	747	0.0133
552	0.208	601	0.3349	650	0.2375	699	0.0593	748	0.013
553	0.2126	602	0.3353	651	0.2306	700	0.0576	749	0.013
554	0.2129	603	0.339	652	0.2313	701	0.0558	750	0.012
555	0.2143	604	0.3439	653	0.2191	702	0.0526	751	0.0121
556	0.216	605	0.343	654	0.2087	703	0.0516	752	0.0119
557	0.2171	606	0.349	655	0.2021	704	0.0501	753	0.0115
558	0.2209	607	0.3708	656	0.1993	705	0.0486	754	0.0115
559	0.2223	608	0.4233	657	0.1941	706	0.0469	755	0.0108
560	0.2245	609	0.4369	658	0.1853	707	0.0452	756	0.0108
561	0.2286	610	0.385	659	0.1799	708	0.0442	757	0.01
562	0.2284	611	0.3951	660	0.1759	709	0.0439	758	0.0105
563	0.2323	612	0.4844	661	0.171	710	0.0421	759	0.0098
564	0.2331	613	0.5921	662	0.1637	711	0.0412	760	0.01
565	0.2372	614	0.5329	663	0.1617	712	0.0387	761	0.0099
566	0.2381	615	0.4249	664	0.1568	713	0.0382	762	0.0089
567	0.2425	616	0.3876	665	0.1523	714	0.0371	763	0.0084
568	0.2437	617	0.3779	666	0.1498	715	0.0361	764	0.0087
569	0.2465	618	0.3766	667	0.1457	716	0.035	765	0.0081
570	0.2488	619	0.3812	668	0.1421	717	0.034	766	0.0084
571	0.2539	620	0.3749	669	0.1407	718	0.0326	767	0.008
572	0.256	621	0.3718	670	0.1384	719	0.0319	768	0.0076
573	0.258	622	0.3685	671	0.1351	720	0.0303	769	0.0076
574	0.2638	623	0.3743	672	0.1288	721	0.0294	770	0.0073
575	0.2665	624	0.3797	673	0.1234	722	0.0287	771	0.0074
576	0.2665	625	0.3823	674	0.1207	723	0.0282	772	0.007
577	0.271	626	0.3858	675	0.1168	724	0.0277	773	0.0063
578	0.2737	627	0.3929	676	0.1141	725	0.0262	774	0.0068
579	0.2762	628	0.4323	677	0.1119	726	0.0252	775	0.0057
580	0.2797	629	0.5895	678	0.108	727	0.025	776	0.0064
581	0.2826	630	0.9111	679	0.106	728	0.0241	777	0.0064
582	0.2867	631	0.9441	680	0.101	729	0.0232	778	0.0057
583	0.2896	632	0.6242	681	0.0978	730	0.0217	779	0.0061
584	0.2923	633	0.4971	682	0.0964	731	0.0218	780	0.0061
585	0.2931	634	0.6377	683	0.094	732	0.0205		
586	0.2986	635	0.7523	684	0.0898	733	0.0201		
587	0.3024	636	0.5315	685	0.0876	734	0.0201		
588	0.3052	637	0.3685	686	0.0855	735	0.0195		
589	0.3068	638	0.3179	687	0.0836	736	0.0186		
590	0.309	639	0.2972	688	0.0817	737	0.0183		
591	0.312	640	0.2835	689	0.0787	738	0.0169		
592	0.3145	641	0.2754	690	0.0758	739	0.0164		
593	0.3169	642	0.2697	691	0.0742	740	0.0164		
594	0.3179	643	0.264	692	0.0726	741	0.0152		
595	0.3233	644	0.2613	693	0.0704	742	0.0149		
596	0.3236	645	0.2647	694	0.0684	743	0.0148		
597	0.3284	646	0.3001	695	0.0661	744	0.0136		
598	0.335	647	0.3601	696	0.0635	745	0.0142		

18. Goniophotometer Test results for LFUAY-1000-L27-DF-O-14

18.1 Test Data

Test Ambient Temperature	25.2℃	Test orientation	Downward
Operate time(Min.)	90	stabilization time(Min.)	30

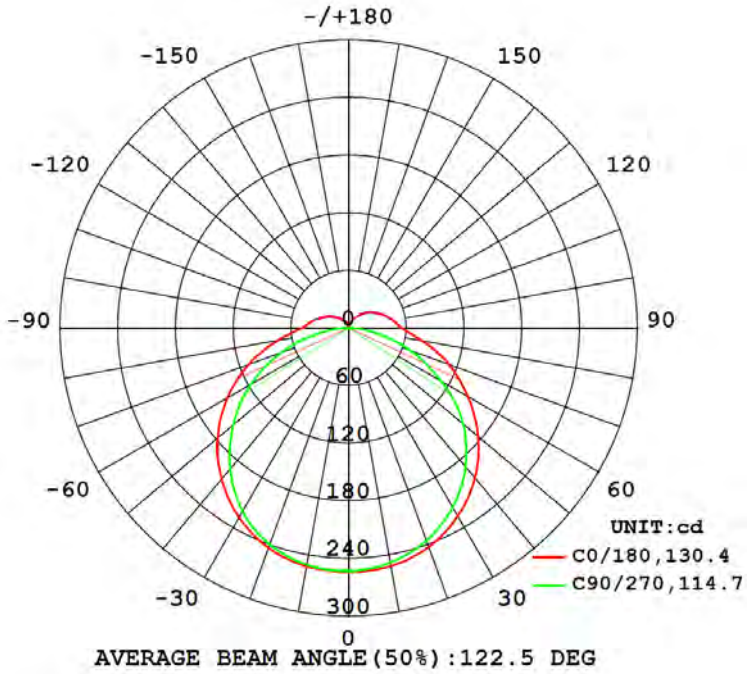
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
24.002	--	0.63541	1.0000	15.251

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	Imax (cd)	η up (%)	η down (%)
954.797	62.61	253.9	10.5	89.5

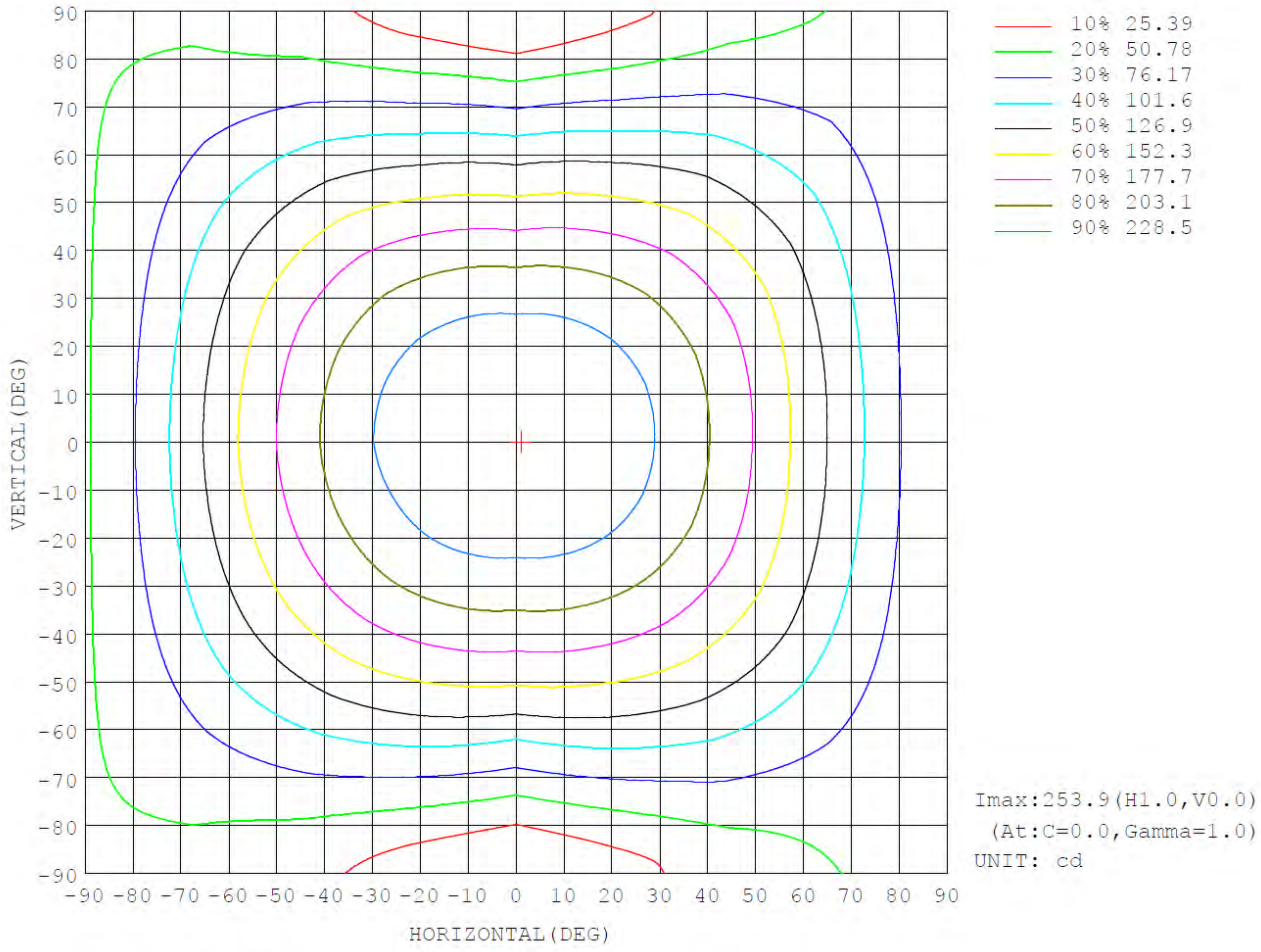
18.2 Luminous Intensity Distribution



18.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	251.9	250.1	248.2	249.6	252.1	251.6	250.4	251.1	0- 10	24.06	24.06	2.52,2.52
20	242.9	239.7	235.8	239.4	243.7	243.1	240.1	242.4	10- 20	69.68	93.73	9.82,9.82
30	226.5	222.5	215.9	222.1	228.0	227.0	220.8	226.5	20- 30	107.6	201.3	21.1,21.1
40	204.1	199.0	189.1	198.2	205.7	203.7	191.7	203.7	30- 40	133.0	334.3	35,35
50	175.6	170.0	155.5	168.4	177.9	174.1	156.7	175.1	40- 50	142.9	477.2	50,50
60	143.2	136.4	111.4	133.8	145.9	139.2	117.9	141.7	50- 60	136.3	613.5	64.3,64.3
70	110.6	99.52	67.22	95.62	110.5	100.7	74.02	104.8	60- 70	114.2	727.7	76.2,76.2
80	77.53	62.15	24.66	57.46	74.72	61.49	29.55	67.28	70- 80	80.71	808.4	84.7,84.7
90	55.17	37.70	0.7657	32.38	48.94	34.15	1.200	39.94	80- 90	46.54	855.0	89.5,89.5
100	46.65	30.76	0.3681	23.59	39.50	25.86	0.6177	32.90	90-100	30.94	885.9	92.8,92.8
110	39.23	25.34	0.5447	18.17	30.97	19.03	0.5779	26.90	100-110	24.04	910.0	95.3,95.3
120	32.16	20.32	0.6060	13.90	23.98	14.16	0.6191	21.48	110-120	17.96	927.9	97.2,97.2
130	25.29	15.56	0.6482	10.13	17.73	10.53	0.6413	16.10	120-130	12.56	940.5	98.5,98.5
140	18.31	10.50	0.6430	6.810	12.42	7.500	0.6534	10.57	130-140	7.894	948.4	99.3,99.3
150	11.10	5.625	0.4826	3.693	7.904	5.281	0.7201	4.696	140-150	4.203	952.6	99.8,99.8
160	4.719	2.016	0.4695	2.181	3.811	3.143	0.8009	1.164	150-160	1.669	954.3	99.9,99.9
170	1.333	0.8853	0.6560	0.9741	1.565	1.403	0.7620	0.7916	160-170	0.4627	954.7	100,100
180	0.4572	0.6913	0.6760	0.6851	0.5173	0.7004	0.6843	0.6873	170-180	0.0819	954.8	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

18.4 Isocandela Diagram



18.5 Luminous Distribution Intensity Data

Table--1 UNIT: cd

C(DEG) / γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	254	254	253	253	253	253	253	253	254	254	253	253	253	253	253	253			
5	254	253	253	252	252	252	252	252	254	254	253	253	253	253	253	253			
10	252	251	250	249	248	249	250	250	252	252	252	251	250	251	251	251			
15	248	247	246	244	243	244	245	247	249	249	248	247	246	247	248	248			
20	243	242	240	237	236	237	239	241	244	244	243	242	240	241	242	243			
25	236	234	232	229	227	229	232	234	237	237	236	234	232	234	235	236			
30	227	225	223	219	216	219	222	225	228	228	227	224	221	224	227	227			
35	216	215	212	207	203	207	211	214	218	218	216	212	207	212	216	217			
40	204	203	199	193	189	193	198	202	206	206	204	197	192	198	204	206			
45	191	190	185	178	173	178	184	188	192	192	190	181	175	182	190	193			
50	176	176	170	162	155	161	168	173	178	178	174	164	157	165	175	179			
55	160	160	154	144	135	143	152	157	162	162	157	146	138	147	159	164			
60	143	144	136	125	111	124	134	141	146	145	139	126	118	128	142	148			
65	127	126	118	105	88.6	103	115	123	128	127	120	106	96.3	108	124	131			
70	111	107	99.5	83.8	67.2	81.9	95.6	105	110	109	101	85.0	74.0	87.5	105	113			
75	94.1	88.9	80.7	62.8	45.1	60.7	76.1	86.1	92.3	90.0	80.7	63.9	51.7	66.7	85.7	95.5			
80	77.5	72.9	62.2	43.0	24.7	40.6	57.5	68.5	74.7	71.9	61.5	43.4	29.6	47.0	67.3	78.4			
85	63.5	58.7	45.5	26.9	8.77	24.2	41.8	53.5	59.5	56.2	44.9	26.4	11.6	30.4	51.4	63.2			
90	55.2	50.6	37.7	18.0	0.77	15.6	32.4	43.6	48.9	45.4	34.1	16.1	1.20	19.3	39.9	52.3			
95	50.4	46.1	33.9	15.6	0.37	11.4	28.1	38.9	43.5	40.0	29.3	12.7	0.58	17.0	36.2	47.5			
100	46.7	42.5	30.8	13.6	0.37	9.33	23.6	34.7	39.5	36.1	25.9	9.97	0.62	14.9	32.9	43.9			
105	42.9	39.0	28.0	12.0	0.47	8.08	20.3	30.2	35.1	32.1	22.4	7.90	0.66	13.2	29.8	40.3			
110	39.2	35.5	25.3	10.7	0.54	6.95	18.2	26.6	31.0	28.2	19.0	7.09	0.58	11.6	26.9	36.8			
115	35.7	32.2	22.7	9.39	0.57	6.02	16.0	23.7	27.3	24.5	16.3	6.26	0.57	10.0	24.1	33.4			
120	32.2	29.0	20.3	8.03	0.61	5.15	13.9	20.9	24.0	21.2	14.2	5.48	0.62	8.44	21.5	30.0			
125	28.7	25.9	18.0	6.62	0.63	4.29	11.9	18.1	20.8	18.3	12.3	4.77	0.64	6.95	18.8	26.7			
130	25.3	22.8	15.6	5.31	0.65	3.48	10.1	15.4	17.7	15.7	10.5	4.11	0.64	5.57	16.1	23.4			
135	21.8	19.6	13.0	4.14	0.65	2.48	8.40	12.8	14.9	13.3	8.88	3.40	0.66	4.26	13.4	20.1			
140	18.3	16.4	10.5	3.17	0.64	2.21	6.81	10.6	12.4	11.1	7.50	2.89	0.65	3.13	10.6	16.6			
145	14.7	13.1	7.96	2.37	0.51	1.92	5.38	8.44	10.0	9.07	6.33	2.57	0.67	2.13	7.48	13.0			
150	11.1	9.73	5.62	1.66	0.48	1.60	3.69	6.55	7.90	7.40	5.28	2.42	0.72	1.17	4.70	9.18			
155	7.65	6.67	3.68	1.03	0.48	1.21	2.85	4.56	5.96	5.69	4.03	2.24	0.79	0.67	2.41	5.75			
160	4.72	4.11	2.02	0.74	0.47	0.97	2.18	3.13	3.81	3.77	3.14	1.96	0.80	0.62	1.16	3.14			
165	2.66	2.08	1.22	0.73	0.49	0.79	1.37	2.21	2.70	2.69	2.34	1.40	0.76	0.61	0.82	1.37			
170	1.33	0.96	0.89	0.71	0.66	0.72	0.97	1.18	1.57	1.57	1.40	1.09	0.76	0.68	0.79	0.98			
175	0.81	0.76	0.72	0.69	0.67	0.70	0.78	0.84	0.93	0.94	0.98	0.83	0.75	0.70	0.73	0.78			
180	0.46	0.70	0.69	0.68	0.68	0.68	0.69	0.65	0.52	0.52	0.70	0.69	0.68	0.68	0.69	0.70			

19. Integrating Sphere Test Results for LFUAY-1000-L27-DF-O-19

19.1 Test Data

Test Ambient Temperature (Integrating sphere internal temperature)	25.1℃	Test orientation	Downward
Operate time(Min.)	30	stabilization time(Min.)	0

Optical and Electrical Measurement Result

Number	Time	Current (A)	Voltage (V)	Power (W)	Flux(lm)	x	y	u'	v'	CCT (K)	Ra
0	00h00m00s	0.8772	23.998	21.051	1294.8	0.471	0.4118	0.2691	0.5295	2561	94
1	00h00m10s	0.878	23.998	21.07	1293	0.4711	0.4117	0.2692	0.5295	2559	94
2	00h00m20s	0.8784	23.998	21.08	1291	0.4712	0.4117	0.2693	0.5295	2558	94
3	00h00m30s	0.879	23.998	21.094	1287.9	0.4714	0.4116	0.2695	0.5295	2554	94
4	00h00m40s	0.8794	23.998	21.104	1285.3	0.4713	0.4113	0.2696	0.5293	2553	93.9
5	00h00m50s	0.8798	23.998	21.113	1283.1	0.4713	0.4112	0.2696	0.5293	2553	94
6	00h01m00s	0.8802	23.998	21.123	1281.3	0.4713	0.4111	0.2697	0.5293	2552	94
7	00h01m10s	0.8805	23.998	21.13	1279.6	0.4714	0.4111	0.2697	0.5293	2551	94
8	00h01m20s	0.8808	23.998	21.137	1277.9	0.4716	0.411	0.2699	0.5293	2547	94
9	00h01m30s	0.881	23.998	21.142	1276.2	0.4718	0.411	0.2701	0.5293	2544	93.9
10	00h01m40s	0.8812	23.998	21.147	1274.3	0.4717	0.4108	0.27	0.5292	2545	93.9
11	00h01m50s	0.8813	23.998	21.149	1272.6	0.4717	0.4108	0.2701	0.5292	2544	94
12	00h02m00s	0.8814	23.997	21.151	1271.7	0.4719	0.4108	0.2702	0.5293	2542	93.9
13	00h02m10s	0.8815	23.998	21.154	1269.7	0.4719	0.4106	0.2703	0.5292	2541	94
14	00h02m20s	0.8817	23.997	21.158	1268.5	0.4717	0.4105	0.2702	0.5291	2542	93.9
15	00h02m30s	0.8817	23.997	21.158	1267.4	0.4719	0.4105	0.2704	0.5291	2539	93.9
16	00h02m40s	0.8819	23.997	21.163	1266	0.4718	0.4104	0.2703	0.5291	2540	93.9
17	00h02m50s	0.8819	23.997	21.163	1265	0.4719	0.4104	0.2704	0.5291	2539	93.9
18	00h03m00s	0.882	23.997	21.165	1263.9	0.472	0.4105	0.2704	0.5292	2539	93.9
19	00h03m10s	0.8821	23.997	21.168	1262.6	0.4719	0.4103	0.2704	0.529	2538	93.9
20	00h03m20s	0.8822	23.997	21.17	1261.2	0.4721	0.4105	0.2705	0.5292	2537	93.9
21	00h03m30s	0.8822	23.997	21.17	1260.8	0.472	0.4103	0.2705	0.5291	2537	93.9

22	00h03m40s	0.8822	23.997	21.17	1260.6	0.4722	0.4104	0.2705	0.5291	2536	93.9
23	00h03m50s	0.8823	23.997	21.173	1259.1	0.4721	0.4103	0.2706	0.5291	2535	93.9
24	00h04m00s	0.8824	23.997	21.175	1259.2	0.472	0.4103	0.2705	0.5291	2536	93.9
25	00h04m10s	0.8824	23.997	21.175	1257.4	0.4721	0.4101	0.2706	0.529	2534	93.8
26	00h04m20s	0.8824	23.997	21.175	1257.3	0.4723	0.4103	0.2707	0.5291	2534	93.9
27	00h04m30s	0.8825	23.997	21.177	1256	0.4721	0.4102	0.2707	0.529	2534	94
28	00h04m40s	0.8826	23.997	21.18	1254.5	0.4722	0.41	0.2708	0.529	2532	93.9
29	00h04m50s	0.8825	23.997	21.177	1254.6	0.4722	0.4101	0.2707	0.529	2533	93.9
30	00h05m00s	0.8826	23.997	21.18	1253.9	0.4722	0.41	0.2707	0.529	2532	93.9
31	00h05m10s	0.8826	23.997	21.18	1253.3	0.4721	0.4097	0.2708	0.5289	2531	93.9
32	00h05m20s	0.8827	23.997	21.182	1253.4	0.4724	0.4101	0.2709	0.529	2530	93.9
33	00h05m30s	0.8827	23.997	21.182	1252.9	0.4724	0.4101	0.2708	0.5291	2530	93.9
34	00h05m40s	0.8827	23.997	21.182	1252.4	0.4723	0.41	0.2708	0.529	2531	93.9
35	00h05m50s	0.8827	23.997	21.182	1251.7	0.4723	0.4099	0.2708	0.529	2531	93.9
36	00h06m00s	0.8828	23.997	21.185	1251.8	0.4722	0.4099	0.2708	0.5289	2531	93.9
37	00h06m10s	0.8828	23.997	21.185	1251.3	0.4724	0.4099	0.2709	0.529	2529	93.9
38	00h06m20s	0.8829	23.997	21.187	1251.2	0.4724	0.4099	0.2709	0.529	2529	93.9
39	00h06m30s	0.8829	23.997	21.187	1249.6	0.4722	0.4099	0.2708	0.529	2531	93.9
40	00h06m40s	0.883	23.997	21.189	1250.1	0.4724	0.41	0.2709	0.529	2529	93.9
41	00h06m50s	0.883	23.997	21.189	1249.9	0.4724	0.41	0.2709	0.529	2529	93.9
42	00h07m00s	0.883	23.997	21.189	1249.6	0.4725	0.4099	0.271	0.529	2528	93.8
43	00h07m10s	0.883	23.997	21.189	1248.6	0.4723	0.4098	0.2709	0.5289	2529	93.9
44	00h07m20s	0.8831	23.997	21.192	1248.4	0.4723	0.4098	0.2709	0.5289	2529	93.9
45	00h07m30s	0.8831	23.997	21.192	1247.2	0.4723	0.4097	0.271	0.5289	2528	93.9
46	00h07m40s	0.8832	23.997	21.194	1246.9	0.4726	0.4098	0.2711	0.529	2525	93.8
47	00h07m50s	0.8832	23.997	21.194	1246.8	0.4724	0.4097	0.271	0.5289	2528	93.9
48	00h08m00s	0.8832	23.997	21.194	1246.6	0.4726	0.4099	0.2711	0.529	2526	93.9
49	00h08m10s	0.8832	23.997	21.194	1246.6	0.4723	0.4097	0.271	0.5289	2528	93.9
50	00h08m20s	0.8833	23.997	21.197	1246.4	0.4725	0.4099	0.271	0.529	2527	93.9
51	00h08m30s	0.8833	23.997	21.197	1245.4	0.4725	0.4097	0.2711	0.5289	2526	93.9
52	00h08m40s	0.8833	23.997	21.197	1245.2	0.4727	0.4098	0.2712	0.529	2524	93.8

53	00h08m50s	0.8834	23.997	21.199	1245.1	0.4724	0.4097	0.271	0.5289	2527	93.9
54	00h09m00s	0.8834	23.997	21.199	1244.1	0.4728	0.4099	0.2712	0.529	2523	93.8
55	00h09m10s	0.8834	23.997	21.199	1244.9	0.4725	0.4098	0.2711	0.5289	2527	93.9
56	00h09m20s	0.8834	23.997	21.199	1243.5	0.4727	0.4096	0.2713	0.5289	2523	93.9
57	00h09m30s	0.8834	23.997	21.199	1243.8	0.4726	0.4098	0.2711	0.529	2526	93.8
58	00h09m40s	0.8835	23.997	21.201	1245	0.4725	0.4095	0.2712	0.5289	2524	93.8
59	00h09m50s	0.8835	23.997	21.201	1245	0.4725	0.4096	0.2711	0.5289	2526	93.9
60	00h10m00s	0.8836	23.997	21.204	1244	0.4726	0.4096	0.2712	0.5289	2524	93.8
61	00h10m10s	0.8835	23.997	21.201	1243.5	0.4727	0.4097	0.2712	0.529	2524	93.9
62	00h10m20s	0.8835	23.997	21.201	1243.1	0.4725	0.4095	0.2712	0.5288	2524	93.9
63	00h10m30s	0.8836	23.997	21.204	1243.5	0.4725	0.4096	0.2712	0.5289	2524	93.8
64	00h10m40s	0.8836	23.997	21.204	1243.3	0.4726	0.4095	0.2713	0.5289	2523	93.8
65	00h10m50s	0.8836	23.997	21.204	1243.2	0.4726	0.4097	0.2712	0.5289	2525	93.9
66	00h11m00s	0.8836	23.997	21.204	1242.6	0.4726	0.4095	0.2712	0.5289	2524	93.8
67	00h11m10s	0.8836	23.997	21.204	1242.4	0.4726	0.4095	0.2712	0.5289	2524	93.8
68	00h11m20s	0.8836	23.997	21.204	1241.5	0.4726	0.4096	0.2712	0.5289	2524	93.9
69	00h11m30s	0.8837	23.997	21.206	1242.2	0.4725	0.4097	0.2711	0.5289	2525	93.9
70	00h11m40s	0.8837	23.997	21.206	1241.9	0.4725	0.4095	0.2712	0.5288	2524	93.8
71	00h11m50s	0.8837	23.997	21.206	1241.7	0.4726	0.4095	0.2712	0.5289	2523	93.8
72	00h12m00s	0.8837	23.997	21.206	1241.3	0.4727	0.4097	0.2712	0.5289	2524	93.9
73	00h12m10s	0.8837	23.997	21.206	1242.1	0.4726	0.4096	0.2712	0.5289	2524	93.8
74	00h12m20s	0.8837	23.997	21.206	1241.7	0.4727	0.4095	0.2713	0.5289	2522	93.9
75	00h12m30s	0.8837	23.997	21.206	1241.7	0.4725	0.4094	0.2713	0.5288	2523	93.8
76	00h12m40s	0.8837	23.997	21.206	1241.6	0.4725	0.4094	0.2712	0.5288	2524	93.9
77	00h12m50s	0.8837	23.997	21.206	1241	0.4726	0.4095	0.2712	0.5289	2524	93.9
78	00h13m00s	0.8837	23.997	21.206	1241.4	0.4725	0.4095	0.2712	0.5288	2524	93.9
79	00h13m10s	0.8837	23.997	21.206	1241.3	0.4726	0.4095	0.2712	0.5289	2523	93.8
80	00h13m20s	0.8838	23.997	21.209	1241.2	0.4725	0.4093	0.2713	0.5288	2523	93.8
81	00h13m30s	0.8838	23.997	21.209	1241.8	0.4726	0.4096	0.2712	0.5289	2524	93.8
82	00h13m40s	0.8838	23.997	21.209	1240.8	0.4727	0.4095	0.2713	0.5289	2522	93.8
83	00h13m50s	0.8838	23.997	21.209	1239.8	0.4729	0.4096	0.2714	0.5289	2521	93.8

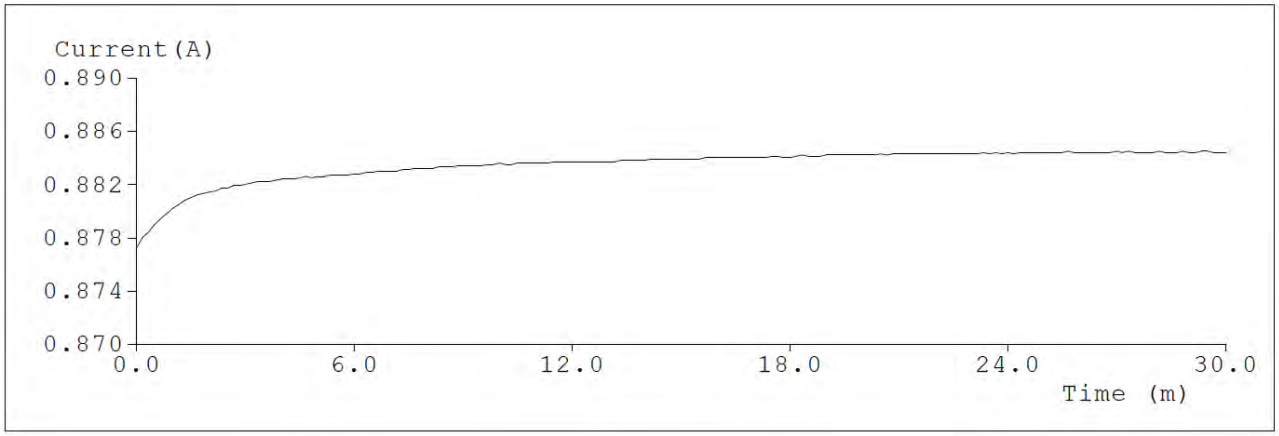
84	00h14m00s	0.8838	23.997	21.209	1240.3	0.4727	0.4095	0.2714	0.5289	2521	93.8
85	00h14m10s	0.8839	23.997	21.211	1239.4	0.4725	0.4093	0.2713	0.5288	2522	93.8
86	00h14m20s	0.8839	23.997	21.211	1239.6	0.4726	0.4094	0.2714	0.5288	2522	93.8
87	00h14m30s	0.8839	23.997	21.211	1239.2	0.4726	0.4093	0.2713	0.5288	2522	93.8
88	00h14m40s	0.8839	23.997	21.211	1238.9	0.4728	0.4094	0.2714	0.5288	2520	93.8
89	00h14m50s	0.8839	23.997	21.211	1239.3	0.4726	0.4093	0.2713	0.5288	2522	93.8
90	00h15m00s	0.8839	23.997	21.211	1239.4	0.4727	0.4094	0.2713	0.5288	2522	93.8
91	00h15m10s	0.8839	23.997	21.211	1239	0.4728	0.4095	0.2714	0.5289	2520	93.8
92	00h15m20s	0.8839	23.997	21.211	1238.6	0.4727	0.4094	0.2714	0.5288	2521	93.8
93	00h15m30s	0.8839	23.997	21.211	1239.1	0.4727	0.4095	0.2713	0.5289	2522	93.9
94	00h15m40s	0.884	23.997	21.213	1238.5	0.4726	0.4093	0.2714	0.5288	2521	93.8
95	00h15m50s	0.884	23.997	21.213	1238.4	0.4725	0.4093	0.2713	0.5288	2522	93.9
96	00h16m00s	0.884	23.997	21.213	1237.9	0.4727	0.4094	0.2714	0.5288	2521	93.8
97	00h16m10s	0.884	23.997	21.213	1238.7	0.4726	0.4093	0.2713	0.5288	2522	93.8
98	00h16m20s	0.884	23.997	21.213	1238.1	0.4728	0.4094	0.2714	0.5289	2521	93.8
99	00h16m30s	0.884	23.997	21.213	1238.5	0.4728	0.4094	0.2714	0.5289	2520	93.8
100	00h16m40s	0.884	23.997	21.213	1236.8	0.4727	0.4093	0.2714	0.5288	2521	93.8
101	00h16m50s	0.884	23.997	21.213	1237.2	0.4727	0.4094	0.2714	0.5289	2521	93.8
102	00h17m00s	0.884	23.997	21.213	1238.1	0.4728	0.4094	0.2714	0.5289	2520	93.8
103	00h17m10s	0.884	23.997	21.213	1236.4	0.4729	0.4092	0.2716	0.5288	2517	93.8
104	00h17m20s	0.884	23.997	21.213	1237.3	0.4727	0.4094	0.2714	0.5288	2521	93.8
105	00h17m30s	0.8841	23.997	21.216	1238.1	0.4726	0.4093	0.2713	0.5288	2522	93.8
106	00h17m40s	0.8841	23.997	21.216	1237	0.4728	0.4093	0.2715	0.5288	2520	93.8
107	00h17m50s	0.884	23.997	21.213	1237.4	0.4728	0.4095	0.2714	0.5289	2520	93.8
108	00h18m00s	0.884	23.997	21.213	1236.5	0.4727	0.4091	0.2715	0.5287	2520	93.8
109	00h18m10s	0.8841	23.997	21.216	1236.7	0.4728	0.4093	0.2715	0.5288	2520	93.8
110	00h18m20s	0.8842	23.997	21.218	1237.7	0.4728	0.4094	0.2714	0.5288	2520	93.8
111	00h18m30s	0.8841	23.997	21.216	1236.6	0.4728	0.4094	0.2714	0.5288	2520	93.8
112	00h18m40s	0.8841	23.997	21.216	1236.7	0.4726	0.4093	0.2714	0.5288	2521	93.8
113	00h18m50s	0.8841	23.997	21.216	1236.8	0.4728	0.4095	0.2714	0.5289	2520	93.8
114	00h19m00s	0.8842	23.997	21.218	1236.5	0.4726	0.4094	0.2714	0.5288	2521	93.8

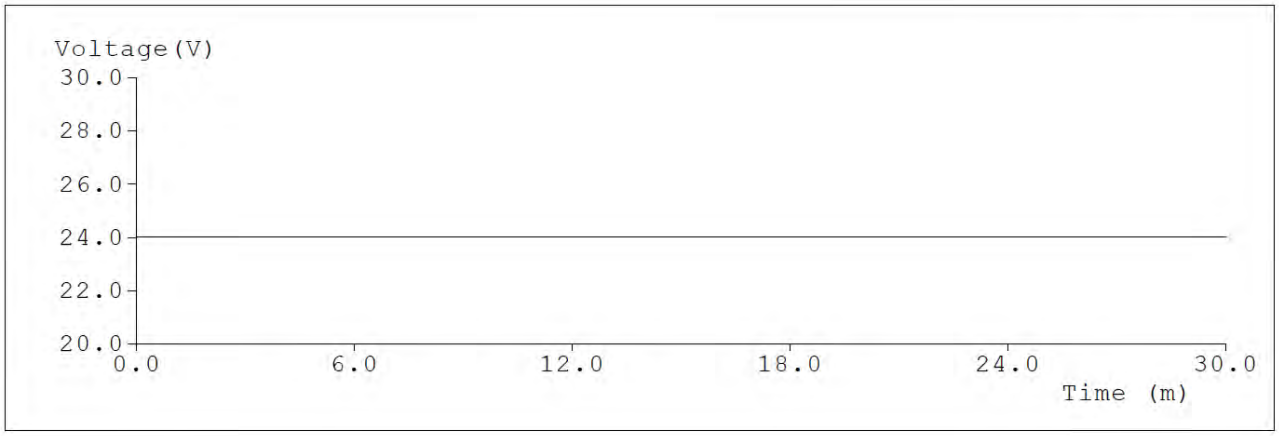
115	00h19m10s	0.8842	23.997	21.218	1236.3	0.4726	0.4093	0.2714	0.5288	2521	93.8
116	00h19m20s	0.8842	23.997	21.218	1236.3	0.4728	0.4094	0.2714	0.5289	2520	93.8
117	00h19m30s	0.8842	23.997	21.218	1235.9	0.4728	0.4092	0.2715	0.5288	2518	93.8
118	00h19m40s	0.8842	23.997	21.218	1236.7	0.473	0.4094	0.2715	0.5289	2518	93.8
119	00h19m50s	0.8842	23.997	21.218	1237	0.4728	0.4094	0.2714	0.5288	2520	93.8
120	00h20m00s	0.8842	23.997	21.218	1236.7	0.4727	0.4094	0.2714	0.5289	2521	93.9
121	00h20m10s	0.8842	23.997	21.218	1236.7	0.473	0.4092	0.2716	0.5288	2516	93.8
122	00h20m20s	0.8842	23.997	21.218	1236.3	0.4728	0.4094	0.2714	0.5288	2520	93.8
123	00h20m30s	0.8843	23.997	21.221	1235.9	0.4728	0.4093	0.2715	0.5288	2519	93.8
124	00h20m40s	0.8842	23.997	21.218	1235	0.4726	0.4092	0.2714	0.5288	2521	93.8
125	00h20m50s	0.8843	23.997	21.221	1235.7	0.4727	0.4092	0.2715	0.5288	2519	93.8
126	00h21m00s	0.8843	23.997	21.221	1235.8	0.4728	0.4093	0.2715	0.5288	2519	93.8
127	00h21m10s	0.8843	23.997	21.221	1236.6	0.4728	0.4095	0.2714	0.5289	2520	93.8
128	00h21m20s	0.8843	23.997	21.221	1234.7	0.4726	0.4092	0.2714	0.5288	2520	93.8
129	00h21m30s	0.8843	23.997	21.221	1235.9	0.4728	0.4093	0.2715	0.5288	2519	93.8
130	00h21m40s	0.8843	23.997	21.221	1235.3	0.4727	0.4092	0.2715	0.5288	2520	93.8
131	00h21m50s	0.8843	23.997	21.221	1235.6	0.4728	0.4094	0.2715	0.5288	2520	93.8
132	00h22m00s	0.8843	23.997	21.221	1234.9	0.4727	0.4093	0.2715	0.5288	2520	93.8
133	00h22m10s	0.8843	23.997	21.221	1236.1	0.4728	0.4094	0.2715	0.5289	2519	93.8
134	00h22m20s	0.8843	23.997	21.221	1235.8	0.4728	0.4093	0.2715	0.5288	2520	93.8
135	00h22m30s	0.8843	23.997	21.221	1235.4	0.4728	0.4093	0.2715	0.5288	2519	93.8
136	00h22m40s	0.8843	23.997	21.221	1235.4	0.4726	0.4092	0.2714	0.5287	2521	93.8
137	00h22m50s	0.8843	23.997	21.221	1234.9	0.4727	0.4091	0.2715	0.5287	2518	93.8
138	00h23m00s	0.8843	23.997	21.221	1235.4	0.4728	0.4092	0.2715	0.5288	2519	93.8
139	00h23m10s	0.8843	23.997	21.221	1235.5	0.4729	0.4094	0.2715	0.5288	2519	93.8
140	00h23m20s	0.8844	23.997	21.223	1235.2	0.4728	0.4093	0.2715	0.5288	2518	93.8
141	00h23m30s	0.8843	23.997	21.221	1234.5	0.4727	0.4092	0.2715	0.5288	2519	93.8
142	00h23m40s	0.8844	23.997	21.223	1235.2	0.4728	0.4092	0.2715	0.5288	2519	93.8
143	00h23m50s	0.8843	23.997	21.221	1235.4	0.4728	0.4093	0.2715	0.5288	2519	93.8
144	00h24m00s	0.8844	23.997	21.223	1235.3	0.4727	0.4094	0.2714	0.5288	2521	93.8
145	00h24m10s	0.8843	23.997	21.221	1234	0.4729	0.4093	0.2715	0.5288	2518	93.8

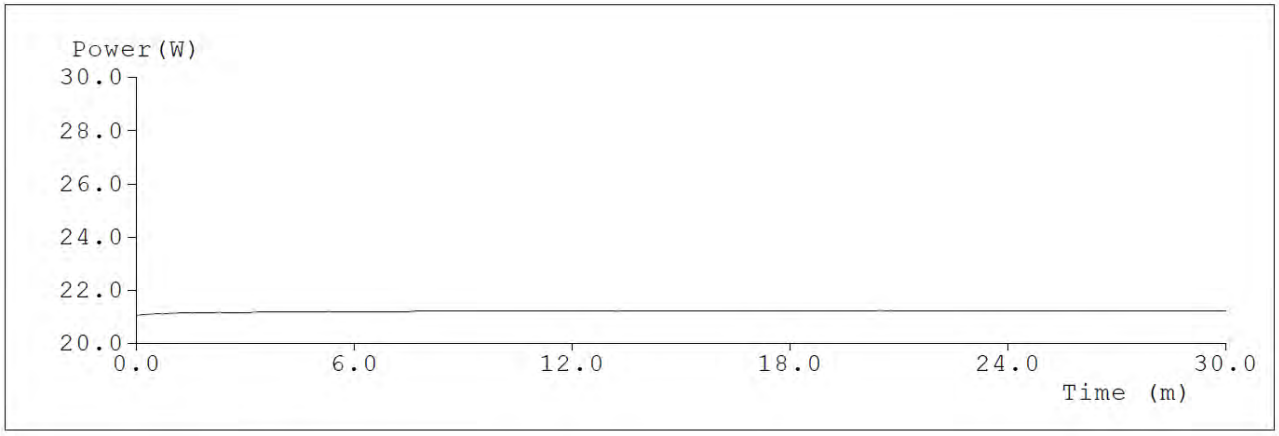
146	00h24m20s	0.8844	23.997	21.223	1235	0.4726	0.4093	0.2714	0.5288	2521	93.9
147	00h24m30s	0.8844	23.997	21.223	1234.7	0.4728	0.4093	0.2715	0.5288	2519	93.8
148	00h24m40s	0.8844	23.997	21.223	1234.7	0.4728	0.4094	0.2714	0.5288	2520	93.9
149	00h24m50s	0.8844	23.997	21.223	1234.6	0.4727	0.4094	0.2714	0.5288	2521	93.8
150	00h25m00s	0.8844	23.997	21.223	1235	0.4728	0.4093	0.2715	0.5288	2520	93.8
151	00h25m10s	0.8844	23.997	21.223	1234.1	0.4727	0.4092	0.2715	0.5288	2519	93.8
152	00h25m20s	0.8844	23.997	21.223	1234.8	0.4727	0.4092	0.2715	0.5288	2519	93.8
153	00h25m30s	0.8844	23.997	21.223	1234.2	0.4728	0.4092	0.2716	0.5288	2518	93.8
154	00h25m40s	0.8845	23.997	21.225	1234.6	0.4728	0.4093	0.2715	0.5288	2518	93.8
155	00h25m50s	0.8844	23.997	21.223	1235.4	0.4727	0.4093	0.2714	0.5288	2520	93.8
156	00h26m00s	0.8844	23.997	21.223	1233.9	0.4726	0.4092	0.2714	0.5287	2521	93.8
157	00h26m10s	0.8844	23.997	21.223	1234.9	0.4728	0.4094	0.2715	0.5288	2520	93.9
158	00h26m20s	0.8844	23.997	21.223	1233.9	0.4727	0.4093	0.2715	0.5288	2520	93.8
159	00h26m30s	0.8844	23.997	21.223	1234.7	0.473	0.4094	0.2716	0.5289	2517	93.8
160	00h26m40s	0.8844	23.997	21.223	1234.6	0.4727	0.4091	0.2715	0.5287	2519	93.8
161	00h26m50s	0.8844	23.997	21.223	1233.9	0.4729	0.4094	0.2715	0.5289	2518	93.8
162	00h27m00s	0.8845	23.997	21.225	1234.1	0.4729	0.4093	0.2715	0.5288	2519	93.8
163	00h27m10s	0.8844	23.997	21.223	1235	0.4726	0.4093	0.2714	0.5288	2521	93.8
164	00h27m20s	0.8845	23.997	21.225	1234.5	0.4728	0.4092	0.2715	0.5288	2519	93.8
165	00h27m30s	0.8844	23.997	21.223	1234.3	0.4728	0.4092	0.2715	0.5288	2519	93.8
166	00h27m40s	0.8844	23.997	21.223	1234.7	0.4728	0.4092	0.2715	0.5288	2518	93.8
167	00h27m50s	0.8844	23.997	21.223	1235.2	0.4728	0.4093	0.2715	0.5288	2519	93.8
168	00h28m00s	0.8844	23.997	21.223	1234.4	0.4728	0.4093	0.2715	0.5288	2519	93.8
169	00h28m10s	0.8845	23.997	21.225	1234.5	0.4729	0.4093	0.2715	0.5288	2518	93.8
170	00h28m20s	0.8844	23.997	21.223	1234	0.4729	0.4093	0.2715	0.5288	2518	93.8
171	00h28m30s	0.8844	23.997	21.223	1234.4	0.4727	0.4092	0.2714	0.5288	2520	93.8
172	00h28m40s	0.8844	23.997	21.223	1234.4	0.4729	0.4092	0.2716	0.5288	2517	93.8
173	00h28m50s	0.8845	23.997	21.225	1234.5	0.4728	0.4093	0.2715	0.5288	2519	93.8
174	00h29m00s	0.8844	23.997	21.223	1234.6	0.4729	0.4093	0.2715	0.5288	2518	93.8
175	00h29m10s	0.8844	23.997	21.223	1234	0.4728	0.4094	0.2715	0.5288	2520	93.9
176	00h29m20s	0.8845	23.997	21.225	1234.2	0.4728	0.4092	0.2715	0.5288	2519	93.8

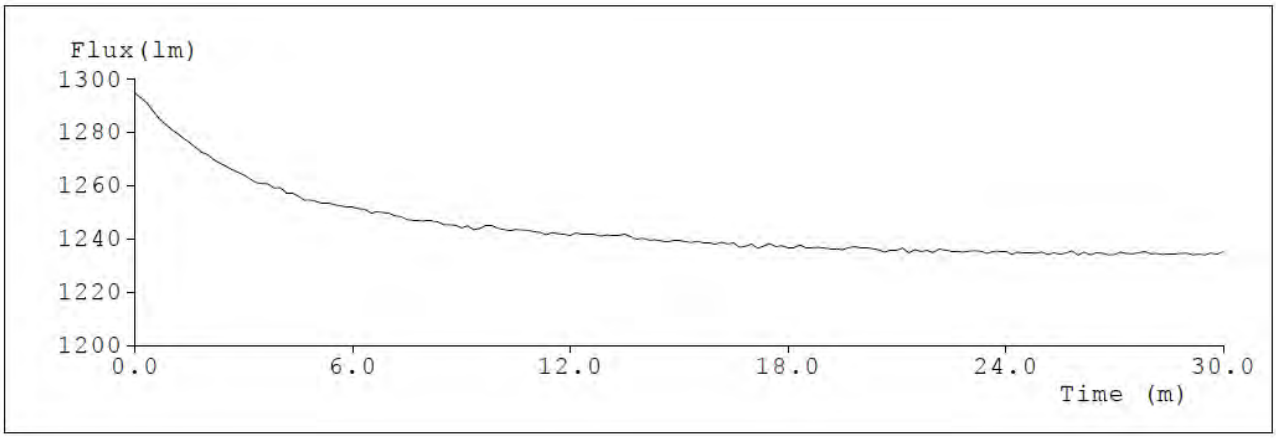
177	00h29m30s	0.8845	23.997	21.225	1233.9	0.4729	0.4091	0.2716	0.5287	2517	93.8
178	00h29m40s	0.8844	23.997	21.223	1234.6	0.4728	0.4093	0.2715	0.5288	2519	93.8
179	00h29m50s	0.8844	23.997	21.223	1234.2	0.4728	0.4093	0.2715	0.5288	2519	93.9
180	00h30m00s	0.8844	23.997	21.223	1235.1	0.4729	0.4094	0.2715	0.5288	2519	93.8

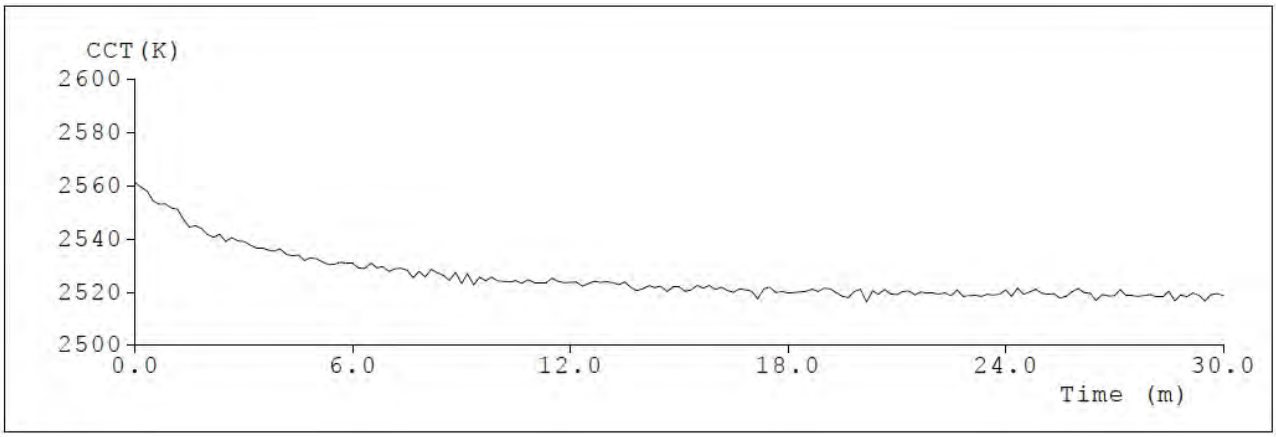
Test curves

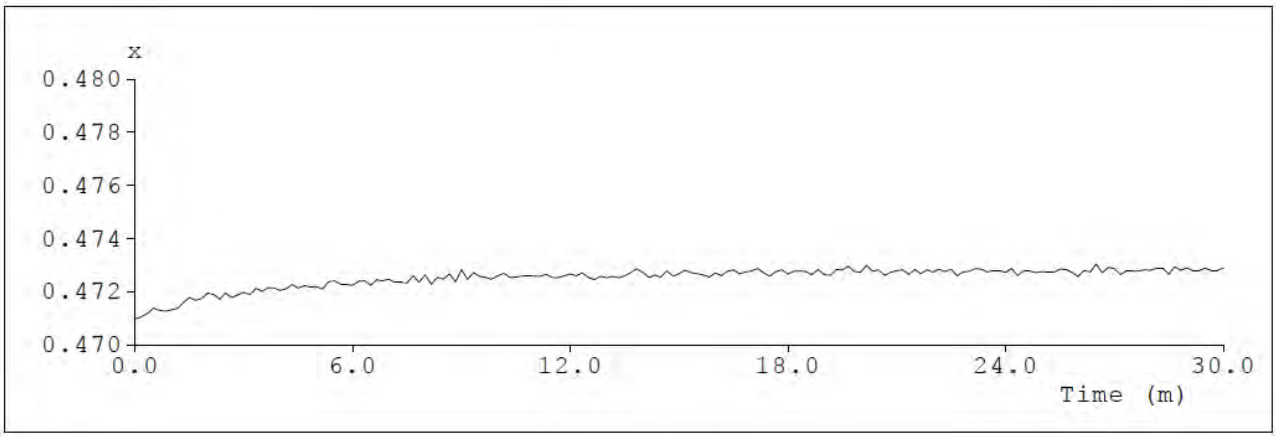


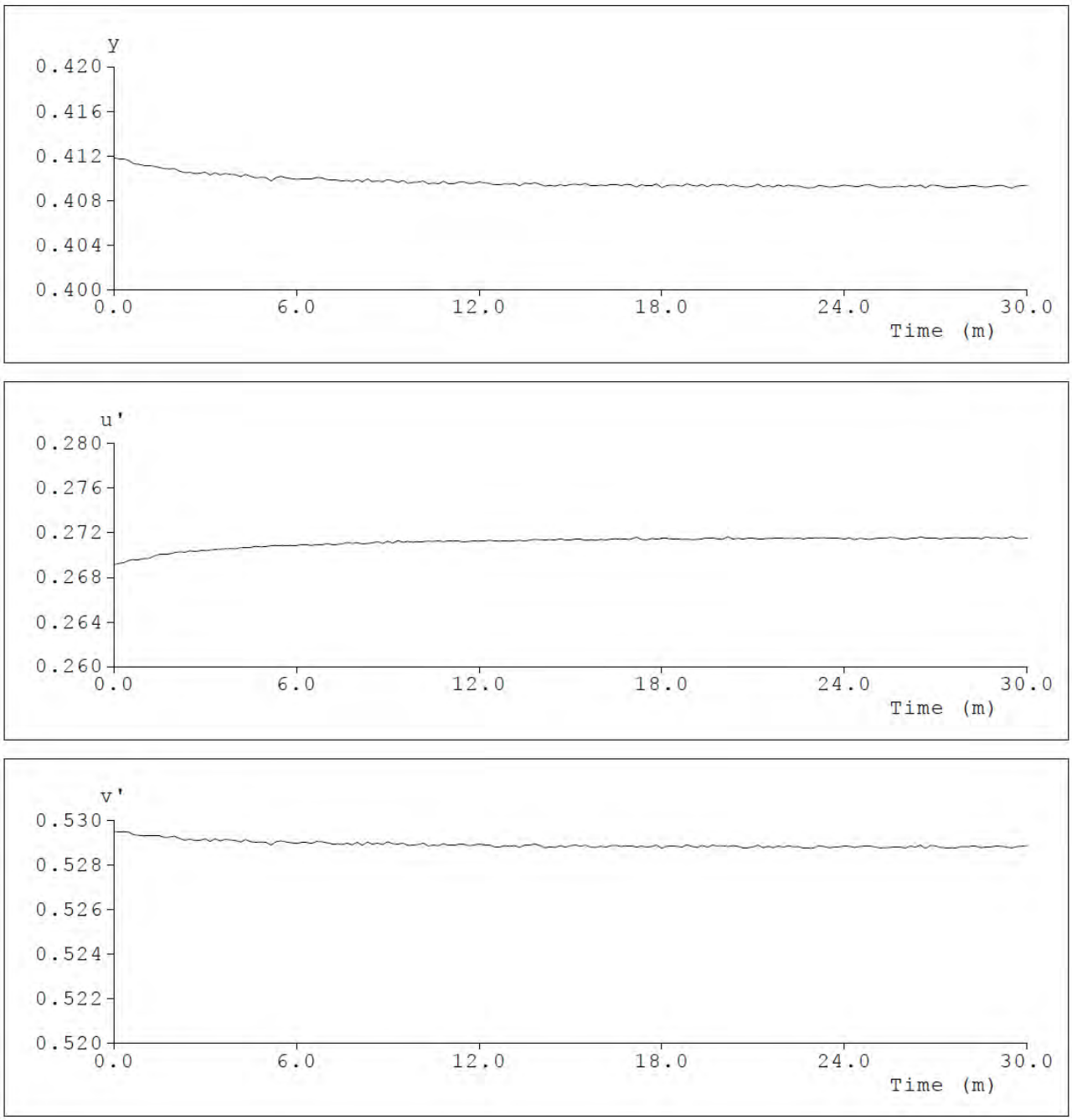





Flux(lm)
1300
1280
1260
1240
1220
1200
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


CCT(K)
2600
2580
2560
2540
2520
2500
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


x
0.480
0.478
0.476
0.474
0.472
0.470
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


y
0.420
0.416
0.412
0.408
0.404
0.400
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)
u'
0.280
0.276
0.272
0.268
0.264
0.260
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)
v'
0.530
0.528
0.526
0.524
0.522
0.520
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

*19.2 ANSI/IES TM-30-18 Color Rendition Report

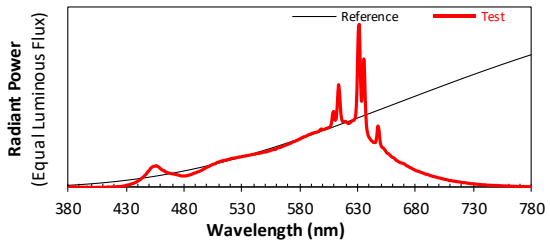
ANSI/IES TM-30-18 Color Rendition Report

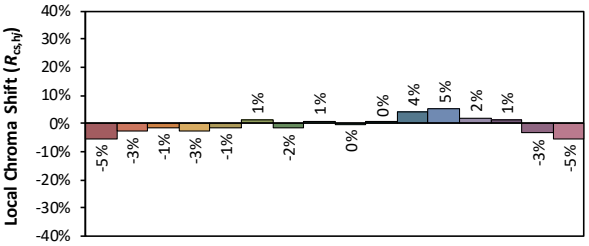
Source:

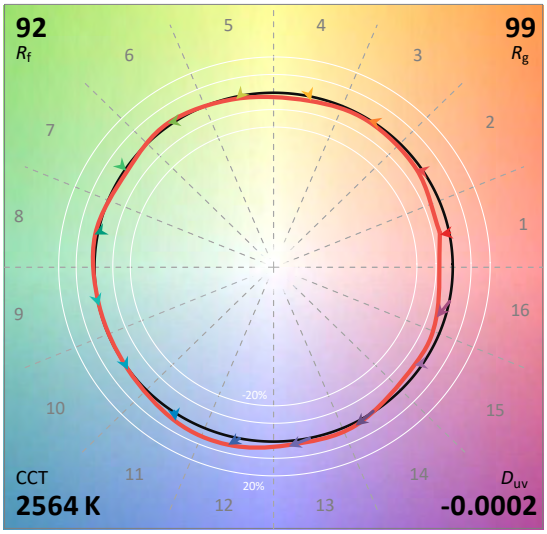
Manufacturer:

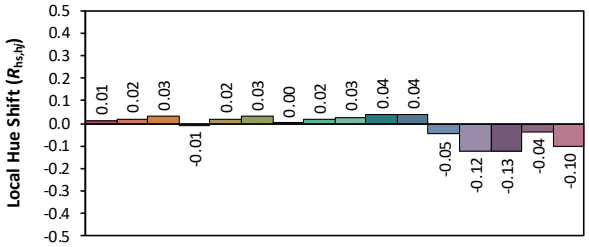
Date: 2023/9/26

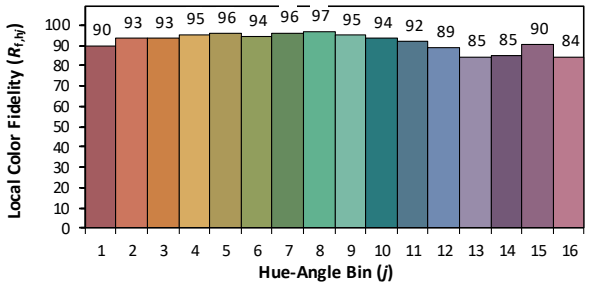
Model: LFUAY-1000-L27-DF-0-19

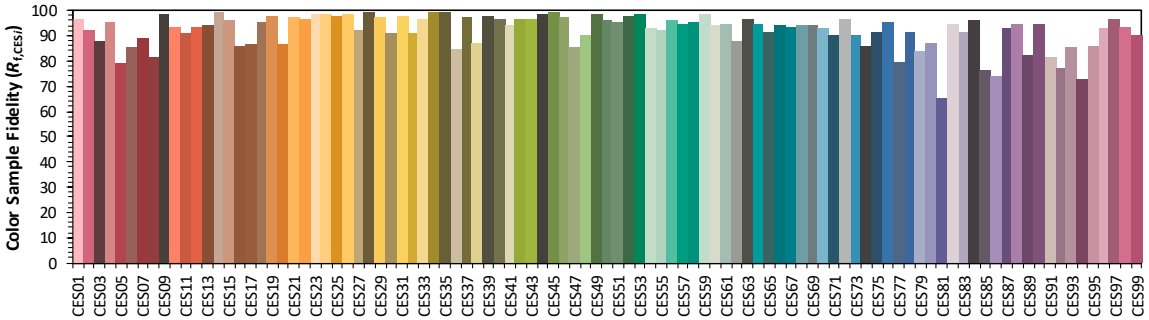












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

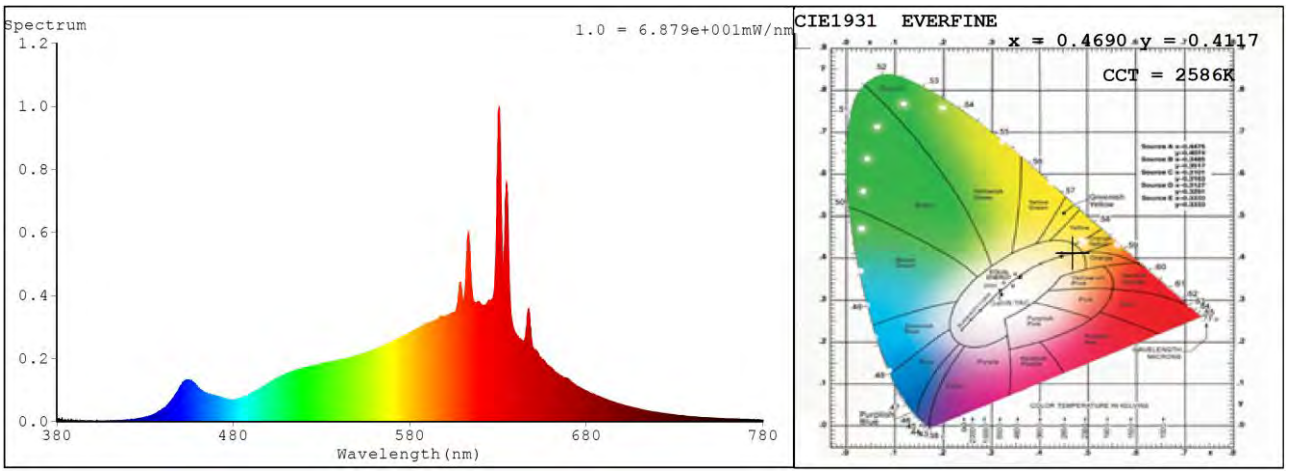
x	0.4710
y	0.4123
u'	0.2689
v'	0.5297

CIE 13.3-1995 (CRI)

R_a	94
R_9	58

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

19.3 Relative Spectral Power Distribution



nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0	414	0.0042	448	0.09	482	0.0701	516	0.1625
381	0.0021	415	0.0039	449	0.0974	483	0.0726	517	0.164
382	0.003	416	0.0028	450	0.1049	484	0.0736	518	0.166
383	0.0064	417	0.0039	451	0.1149	485	0.0756	519	0.1677
384	0.003	418	0.0049	452	0.1203	486	0.078	520	0.17
385	0.0046	419	0.0032	453	0.124	487	0.0811	521	0.1722
386	0.0062	420	0.0046	454	0.1259	488	0.0842	522	0.1735
387	0.0024	421	0.0056	455	0.127	489	0.0866	523	0.1735
388	0.0017	422	0.0061	456	0.129	490	0.0871	524	0.1753
389	0	423	0.0067	457	0.1234	491	0.0917	525	0.1756
390	0.0028	424	0.007	458	0.1206	492	0.094	526	0.178
391	0.002	425	0.0068	459	0.1133	493	0.096	527	0.1803
392	0.0038	426	0.0083	460	0.1081	494	0.0996	528	0.1796
393	0.0017	427	0.0093	461	0.1027	495	0.1033	529	0.1814
394	0.0031	428	0.011	462	0.1016	496	0.1065	530	0.1836
395	0.0012	429	0.0118	463	0.0958	497	0.1102	531	0.1841
396	0.0042	430	0.0139	464	0.092	498	0.1141	532	0.1858
397	0.0021	431	0.0152	465	0.0888	499	0.1185	533	0.1872
398	0.0019	432	0.017	466	0.0868	500	0.1215	534	0.1881
399	0.0024	433	0.0189	467	0.0857	501	0.1242	535	0.1893
400	0.0011	434	0.0217	468	0.0836	502	0.1281	536	0.1908
401	0	435	0.0232	469	0.0822	503	0.1324	537	0.1918
402	0.0014	436	0.0257	470	0.0812	504	0.1347	538	0.1934
403	0.0011	437	0.0286	471	0.0797	505	0.1382	539	0.1955
404	0.0022	438	0.0315	472	0.0789	506	0.1393	540	0.1959
405	0.0017	439	0.0349	473	0.0764	507	0.1419	541	0.1964
406	0.0018	440	0.0399	474	0.0752	508	0.1474	542	0.2005
407	0.0022	441	0.0436	475	0.0738	509	0.1492	543	0.2015
408	0.001	442	0.0481	476	0.0716	510	0.1517	544	0.2004
409	0.002	443	0.0546	477	0.0692	511	0.1539	545	0.2029
410	0.0022	444	0.0603	478	0.0687	512	0.1571	546	0.2043
411	0.0024	445	0.0659	479	0.069	513	0.1565	547	0.2048
412	0.002	446	0.0737	480	0.0688	514	0.1607	548	0.2085
413	0.0032	447	0.0794	481	0.0695	515	0.1606	549	0.2086

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.2103	599	0.3424	648	0.3347	697	0.063	746	0.0138
551	0.2105	600	0.342	649	0.2686	698	0.0607	747	0.0129
552	0.213	601	0.3434	650	0.2429	699	0.0584	748	0.0127
553	0.2159	602	0.3462	651	0.2352	700	0.0574	749	0.0126
554	0.2171	603	0.3486	652	0.2308	701	0.0557	750	0.0124
555	0.2204	604	0.351	653	0.2217	702	0.053	751	0.012
556	0.2218	605	0.3537	654	0.2117	703	0.0526	752	0.012
557	0.2247	606	0.359	655	0.2023	704	0.0501	753	0.0121
558	0.2241	607	0.3806	656	0.2	705	0.0486	754	0.0109
559	0.2265	608	0.4341	657	0.1941	706	0.0475	755	0.0104
560	0.2316	609	0.4462	658	0.187	707	0.0461	756	0.0107
561	0.2343	610	0.3958	659	0.1804	708	0.0434	757	0.0104
562	0.2352	611	0.4042	660	0.1769	709	0.0425	758	0.0102
563	0.2368	612	0.4929	661	0.1737	710	0.0415	759	0.01
564	0.2404	613	0.6029	662	0.1667	711	0.0403	760	0.0094
565	0.2429	614	0.5486	663	0.1598	712	0.0387	761	0.0094
566	0.2458	615	0.4401	664	0.1569	713	0.0384	762	0.0092
567	0.2491	616	0.3959	665	0.1517	714	0.037	763	0.0087
568	0.2509	617	0.3864	666	0.148	715	0.0356	764	0.0088
569	0.2532	618	0.3862	667	0.1456	716	0.035	765	0.0084
570	0.2567	619	0.3896	668	0.144	717	0.0341	766	0.0081
571	0.2591	620	0.3838	669	0.1425	718	0.0332	767	0.0077
572	0.2613	621	0.3784	670	0.1386	719	0.0315	768	0.0075
573	0.2659	622	0.3768	671	0.133	720	0.0302	769	0.0078
574	0.2697	623	0.3811	672	0.1284	721	0.0299	770	0.0076
575	0.2709	624	0.3873	673	0.1253	722	0.0294	771	0.0065
576	0.274	625	0.3927	674	0.1217	723	0.0281	772	0.0066
577	0.2769	626	0.3945	675	0.1168	724	0.0272	773	0.0069
578	0.2801	627	0.402	676	0.1152	725	0.0258	774	0.0065
579	0.2855	628	0.4368	677	0.1099	726	0.0253	775	0.0061
580	0.2852	629	0.5905	678	0.1074	727	0.024	776	0.0063
581	0.292	630	0.9037	679	0.1034	728	0.023	777	0.0063
582	0.2932	631	0.9537	680	0.0996	729	0.0234	778	0.0058
583	0.2988	632	0.6462	681	0.098	730	0.0221	779	0.0054
584	0.2992	633	0.5067	682	0.097	731	0.022	780	0.0054
585	0.302	634	0.6342	683	0.0933	732	0.0205		
586	0.3062	635	0.7552	684	0.0905	733	0.0203		
587	0.3096	636	0.5469	685	0.0881	734	0.0194		
588	0.3125	637	0.3779	686	0.0856	735	0.0188		
589	0.3139	638	0.3237	687	0.0836	736	0.0185		
590	0.3192	639	0.3005	688	0.0796	737	0.018		
591	0.32	640	0.2893	689	0.0782	738	0.0166		
592	0.3226	641	0.2789	690	0.0778	739	0.017		
593	0.3246	642	0.2729	691	0.0744	740	0.0161		
594	0.3261	643	0.2664	692	0.0721	741	0.0151		
595	0.3271	644	0.2655	693	0.0696	742	0.015		
596	0.3303	645	0.2659	694	0.0677	743	0.0144		
597	0.3377	646	0.299	695	0.0656	744	0.0143		
598	0.3442	647	0.3608	696	0.0643	745	0.0136		

20. Goniophotometer Test results for LFUAY-1000-L27-DF-O-19

20.1 Test Data

Test Ambient Temperature	25.2℃	Test orientation	Downward
Operate time(Min.)	90	stabilization time(Min.)	30

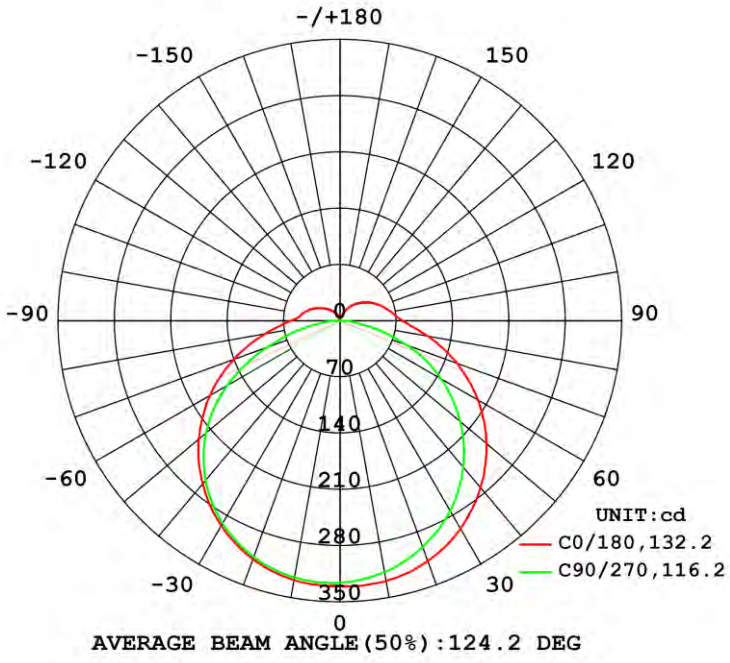
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
24.003	--	0.84938	1.0000	20.387

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	Imax (cd)	η up (%)	η down (%)
1247.4	61.19	330.8	10.6	89.4

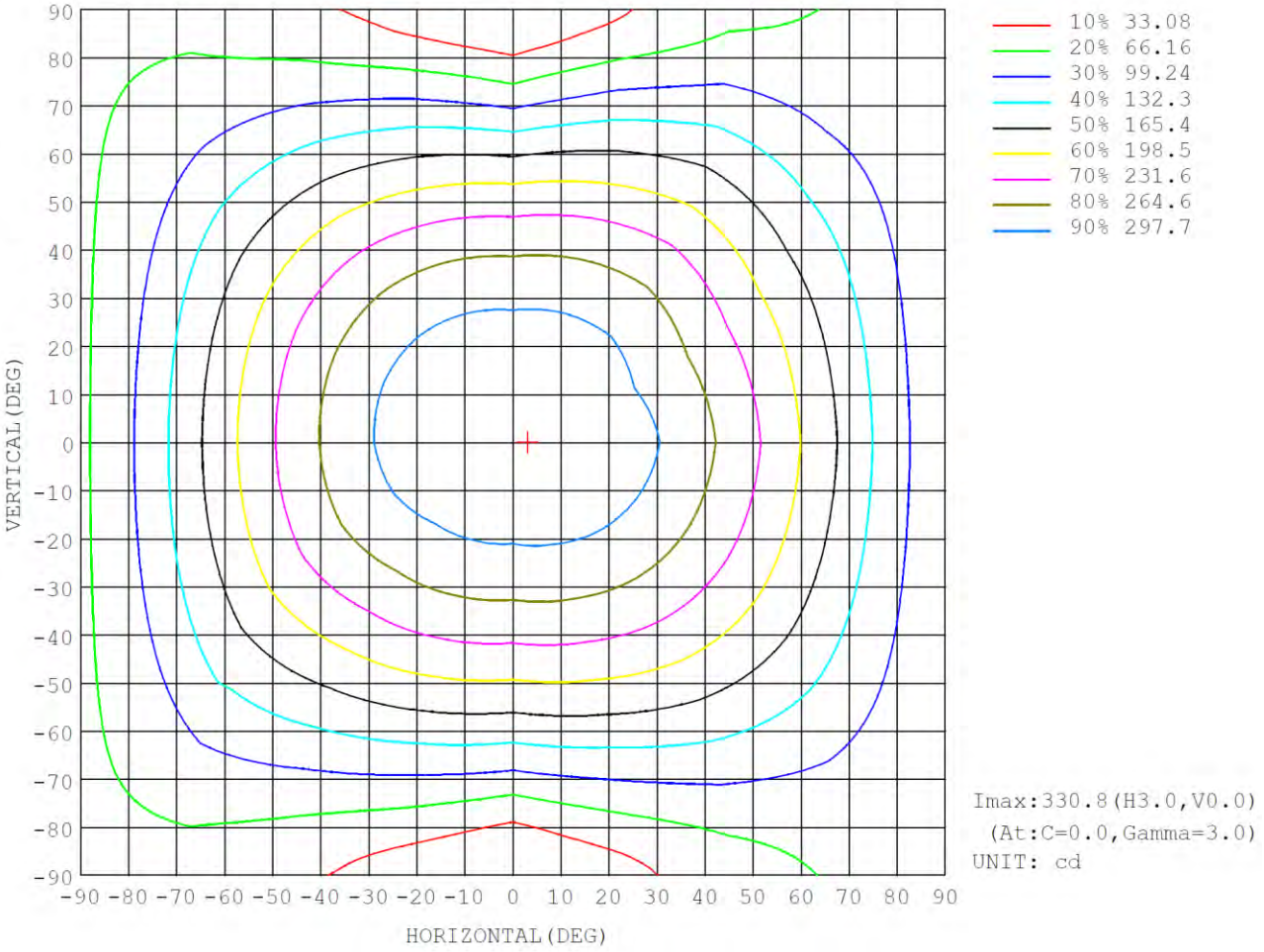
10.2 Luminous Intensity Distribution



20.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	328.8	322.7	317.9	318.9	327.8	326.8	324.6	324.5	0- 10	31.07	31.07	2.49,2.49
20	318.6	308.8	300.2	304.3	316.0	316.1	313.1	315.4	10- 20	90.02	121.1	9.71,9.71
30	299.2	286.3	273.4	280.8	294.8	295.7	291.6	297.1	20- 30	139.1	260.2	20.9,20.9
40	271.7	256.0	238.3	249.4	265.5	266.1	259.7	270.1	30- 40	172.6	432.8	34.7,34.7
50	237.6	218.9	195.2	211.0	228.9	227.7	217.2	234.6	40- 50	186.3	619.0	49.6,49.6
60	198.1	176.3	145.2	166.9	186.6	181.7	161.7	192.0	50- 60	178.6	797.6	63.9,63.9
70	154.5	129.7	87.54	119.0	140.4	130.1	95.32	143.9	60- 70	150.2	947.8	76,76
80	110.1	82.82	27.38	71.21	94.14	77.90	35.39	94.11	70- 80	106.1	1054	84.5,84.5
90	77.92	50.88	1.041	39.10	61.10	41.99	1.958	57.97	80- 90	61.48	1115	89.4,89.4
100	64.47	40.74	0.2479	29.66	48.55	31.42	0.4065	45.93	90-100	39.90	1155	92.6,92.6
110	54.51	33.63	0.3009	23.67	40.44	24.98	0.4289	37.72	100-110	31.71	1187	95.2,95.2
120	45.00	26.95	0.3892	18.15	31.83	18.97	0.4687	30.53	110-120	24.04	1211	97.1,97.1
130	35.19	20.78	0.4604	13.44	23.74	13.92	0.5059	21.30	120-130	16.85	1228	98.4,98.4
140	25.85	13.81	0.4820	9.515	16.80	10.05	0.5715	14.54	130-140	10.69	1239	99.3,99.3
150	15.83	7.518	0.4505	6.344	11.00	7.388	0.6527	6.349	140-150	5.716	1244	99.8,99.8
160	6.446	3.000	0.4831	3.108	6.318	4.918	0.9024	1.642	150-160	2.345	1247	99.9,99.9
170	1.776	1.191	0.6341	1.143	1.996	1.725	0.8321	0.8565	160-170	0.6382	1247	100,100
180	0.5920	0.7121	0.7077	0.6958	0.6391	0.7251	0.7130	0.7212	170-180	0.0914	1247	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

20.4 Isocandela Diagram



20.5 Luminous Distribution Intensity Data

Table--1 UNIT: cd

C (DEG) / γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	330	329	328	327	326	326	325	325	330	329	328	327	326	326	325	325
5	331	328	326	325	323	323	323	324	330	329	328	327	327	326	326	325
10	329	326	323	320	318	318	319	322	328	327	327	326	325	325	325	323
15	325	321	317	313	310	311	313	317	323	323	323	321	320	321	321	319
20	319	314	309	304	300	302	304	310	316	317	316	315	313	314	315	312
25	310	305	299	292	288	290	294	301	307	308	307	305	303	306	307	303
30	299	293	286	279	273	276	281	290	295	296	296	294	292	295	297	292
35	286	280	272	263	257	261	266	277	281	283	282	280	277	281	285	280
40	272	265	256	246	238	243	249	262	266	267	266	263	260	265	270	265
45	255	248	238	227	218	223	231	245	248	249	248	244	240	247	253	248
50	238	230	219	205	195	202	211	226	229	230	228	222	217	227	235	230
55	218	210	198	183	171	179	190	206	208	209	206	199	191	204	214	210
60	198	190	176	159	145	155	167	185	187	187	182	173	162	179	192	189
65	177	168	153	133	118	129	143	163	164	163	156	145	129	152	168	167
70	154	146	130	108	87.5	103	119	140	140	139	130	116	95.3	125	144	144
75	132	123	106	81.3	55.6	76.1	94.4	117	117	114	103	86.2	63.2	96.0	119	121
80	110	101	82.8	56.3	27.4	51.0	71.2	93.8	94.1	90.6	77.9	57.8	35.4	68.4	94.1	97.8
85	90.9	82.1	63.0	35.4	10.9	30.5	51.0	70.7	75.2	71.0	56.6	34.1	14.0	44.4	72.3	79.5
90	77.9	69.6	50.9	23.9	1.04	18.5	39.1	56.4	61.1	56.4	42.0	20.0	1.96	30.0	58.0	67.8
95	70.1	62.4	44.9	20.0	0.24	14.0	31.6	48.4	52.0	47.6	33.9	14.5	0.42	25.0	50.7	61.5
100	64.5	57.3	40.7	16.1	0.25	12.1	29.7	43.8	48.5	43.9	31.4	12.9	0.41	21.9	45.9	56.7
105	59.4	52.6	37.1	14.8	0.26	10.4	26.7	40.5	44.7	40.5	28.5	11.1	0.41	18.4	41.7	52.1
110	54.5	48.2	33.6	13.2	0.30	9.10	23.7	36.5	40.4	36.5	25.0	9.48	0.43	14.9	37.7	47.6
115	49.7	43.9	30.3	11.7	0.36	7.94	20.8	32.6	36.1	32.4	21.8	8.19	0.45	13.3	34.0	43.2
120	45.0	39.6	26.9	10.1	0.39	6.97	18.1	28.7	31.8	28.4	19.0	7.07	0.47	11.6	30.5	38.8
125	40.1	35.1	23.9	8.22	0.43	6.11	15.7	25.0	27.7	24.6	16.3	6.10	0.48	9.63	25.9	34.8
130	35.2	30.9	20.8	6.60	0.46	5.35	13.4	21.6	23.7	21.0	13.9	5.32	0.51	7.68	21.3	30.4
135	30.5	26.7	17.4	5.29	0.48	4.64	11.4	18.4	20.1	17.8	11.8	4.67	0.54	5.81	18.5	25.7
140	25.8	22.6	13.8	4.06	0.48	3.85	9.51	15.4	16.8	15.0	10.0	4.09	0.57	4.09	14.5	20.6
145	21.0	18.1	10.4	3.04	0.44	2.81	7.84	12.7	13.8	12.5	8.59	3.50	0.63	2.71	10.2	15.5
150	15.8	13.3	7.52	2.18	0.45	2.18	6.34	10.2	11.0	10.2	7.39	3.20	0.65	1.60	6.35	10.2
155	10.8	9.03	4.89	1.65	0.46	1.58	4.88	8.01	8.54	8.14	6.26	2.93	0.82	0.88	3.36	6.21
160	6.45	5.42	3.00	1.22	0.48	1.15	3.11	6.06	6.32	6.16	4.92	2.44	0.90	0.69	1.64	3.05
165	3.41	2.80	1.97	0.94	0.53	0.76	1.80	3.83	3.84	3.81	3.07	1.85	0.87	0.68	1.11	1.55
170	1.78	1.53	1.19	0.71	0.63	0.69	1.14	2.06	2.00	2.00	1.73	1.22	0.83	0.75	0.86	1.09
175	0.74	0.80	0.73	0.68	0.68	0.68	0.80	1.08	0.95	0.95	0.92	0.85	0.74	0.74	0.76	0.79
180	0.59	0.72	0.71	0.71	0.71	0.72	0.70	0.71	0.64	0.64	0.73	0.72	0.71	0.71	0.72	0.75

21. Photo of sample

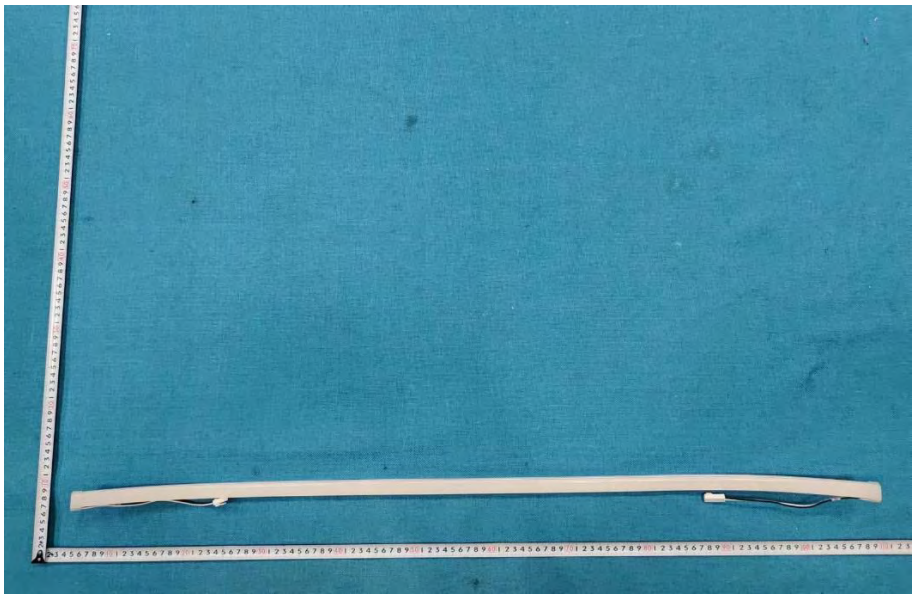


Figure 1 Overview

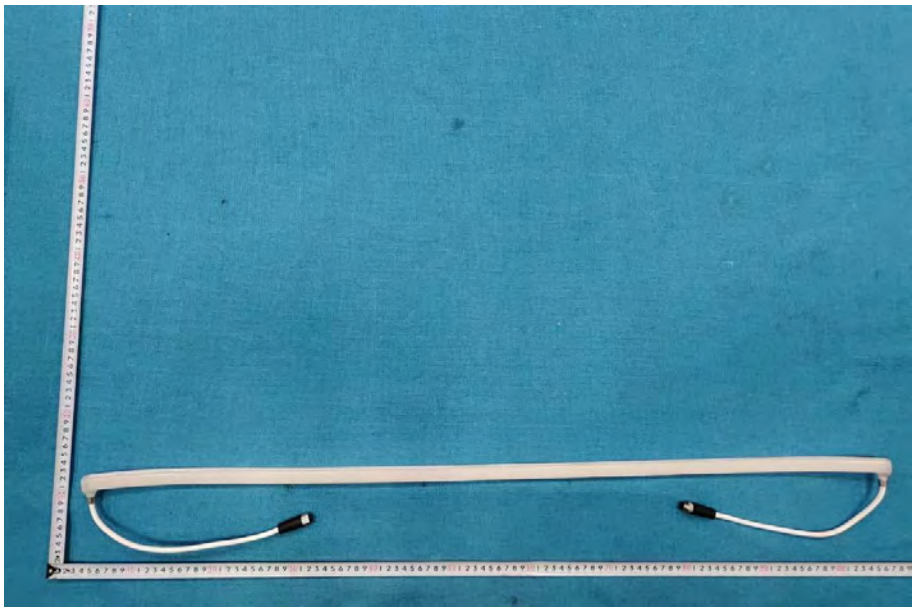


Figure 2 Overview

---End of Report---