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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	:	N02A23090145L00801
Client	:	Luci Pte. Ltd.
Address	:	52A Tanjong Pagar Road, Singapore 088473
Test Model	:	LNLY-1000-L27-DF-I-2, LNLY-1000-L27-DF-I-4 LNLY-1000-L27-DF-I-6, LNLY-1000-L27-DF-I-10
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. 28, 2023
Date of test	:	Sep. 28, 2023 – Oct. 18, 2023
Date of report	:	Oct. 19, 2023

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

Guangdong Meide Testing Technology Co., Ltd. GTG

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.
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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:	LNLY-1000-L27-DF-I-2, LNLY-1000-L27-DF-I-4 LNLY-1000-L27-DF-I-6, LNLY-1000-L27-DF-I-10
Manufacturer:	
Product Type:	SHIN nano line
Rated Voltage/Frequency:	DC24V
Rated Power:	2W, 4W, 6W, 10W
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	2024/10/13
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	2024/10/13

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 LNLY-1000-L27-DF-I-2

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	0.0906	23.998	2.1742	37.746	0.4695	0.4089	0.2695	0.5282	2559	94.5
1	00h00m10s	0.0906	23.998	2.1742	37.769	0.4696	0.409	0.2695	0.5282	2558	94.5
2	00h00m20s	0.0906	23.998	2.1742	37.763	0.4693	0.4086	0.2695	0.528	2558	94.5
3	00h00m30s	0.0906	23.998	2.1742	37.749	0.4697	0.4089	0.2696	0.5282	2556	94.5
4	00h00m40s	0.0906	23.998	2.1742	37.778	0.4697	0.4089	0.2696	0.5282	2556	94.6
5	00h00m50s	0.0906	23.998	2.1742	37.761	0.4696	0.4089	0.2696	0.5282	2556	94.5
6	00h01m00s	0.0906	23.998	2.1742	37.772	0.4697	0.4089	0.2696	0.5282	2556	94.5
7	00h01m10s	0.0906	23.998	2.1742	37.794	0.4695	0.4086	0.2696	0.5281	2556	94.5
8	00h01m20s	0.0907	23.998	2.1766	37.761	0.4697	0.4087	0.2697	0.5281	2555	94.5
9	00h01m30s	0.0907	23.998	2.1766	37.753	0.4698	0.4088	0.2697	0.5282	2554	94.5
10	00h01m40s	0.0907	23.998	2.1766	37.762	0.4697	0.4088	0.2697	0.5282	2554	94.5
11	00h01m50s	0.0907	23.998	2.1766	37.769	0.4697	0.4089	0.2697	0.5282	2555	94.5
12	00h02m00s	0.0907	23.998	2.1766	37.762	0.4696	0.4088	0.2697	0.5281	2555	94.5
13	00h02m10s	0.0907	23.998	2.1766	37.764	0.4695	0.4086	0.2696	0.5281	2557	94.5
14	00h02m20s	0.0907	23.998	2.1766	37.769	0.4696	0.4088	0.2696	0.5281	2556	94.5
15	00h02m30s	0.0907	23.998	2.1766	37.785	0.4697	0.409	0.2696	0.5282	2556	94.6
16	00h02m40s	0.0907	23.998	2.1766	37.758	0.4697	0.4088	0.2697	0.5282	2554	94.5
17	00h02m50s	0.0907	23.998	2.1766	37.784	0.4695	0.4087	0.2696	0.5281	2557	94.5
18	00h03m00s	0.0907	23.998	2.1766	37.763	0.4695	0.4087	0.2697	0.5281	2556	94.5
19	00h03m10s	0.0907	23.998	2.1766	37.778	0.4696	0.4089	0.2696	0.5282	2557	94.5
20	00h03m20s	0.0907	23.998	2.1766	37.777	0.4697	0.4088	0.2697	0.5281	2554	94.5
21	00h03m30s	0.0907	23.998	2.1766	37.748	0.4696	0.4086	0.2697	0.5281	2554	94.5

22	00h03m40s	0.0907	23.998	2.1766	37.754	0.4698	0.4087	0.2698	0.5281	2553	94.5
23	00h03m50s	0.0907	23.998	2.1766	37.772	0.4696	0.4085	0.2698	0.528	2554	94.4
24	00h04m00s	0.0908	23.998	2.179	37.763	0.4696	0.4085	0.2697	0.528	2554	94.5
25	00h04m10s	0.0908	23.998	2.179	37.755	0.4696	0.4085	0.2698	0.528	2553	94.5
26	00h04m20s	0.0908	23.998	2.179	37.767	0.4697	0.4087	0.2697	0.5281	2554	94.5
27	00h04m30s	0.0908	23.998	2.179	37.764	0.4697	0.4086	0.2698	0.5281	2554	94.5
28	00h04m40s	0.0908	23.998	2.179	37.758	0.4698	0.4087	0.2698	0.5281	2552	94.5
29	00h04m50s	0.0908	23.998	2.179	37.746	0.4697	0.4086	0.2698	0.5281	2553	94.5
30	00h05m00s	0.0908	23.998	2.179	37.767	0.4698	0.4088	0.2698	0.5282	2553	94.5
31	00h05m10s	0.0908	23.998	2.179	37.779	0.4697	0.4087	0.2698	0.5281	2554	94.5
32	00h05m20s	0.0908	23.998	2.179	37.777	0.4697	0.4086	0.2698	0.5281	2553	94.5
33	00h05m30s	0.0908	23.998	2.179	37.774	0.4696	0.4086	0.2697	0.5281	2555	94.5
34	00h05m40s	0.0908	23.998	2.179	37.79	0.4696	0.4086	0.2697	0.5281	2555	94.5
35	00h05m50s	0.0908	23.998	2.179	37.771	0.4697	0.4088	0.2697	0.5281	2555	94.5
36	00h06m00s	0.0908	23.998	2.179	37.765	0.4697	0.4086	0.2698	0.5281	2553	94.5
37	00h06m10s	0.0908	23.998	2.179	37.774	0.4699	0.4088	0.2698	0.5282	2552	94.5
38	00h06m20s	0.0908	23.998	2.179	37.771	0.4697	0.4088	0.2697	0.5281	2555	94.5
39	00h06m30s	0.0908	23.998	2.179	37.78	0.4697	0.4087	0.2698	0.5281	2554	94.4
40	00h06m40s	0.0908	23.998	2.179	37.778	0.4696	0.4088	0.2696	0.5281	2556	94.5
41	00h06m50s	0.0908	23.998	2.179	37.759	0.4697	0.4086	0.2698	0.5281	2553	94.5
42	00h07m00s	0.0908	23.998	2.179	37.768	0.4697	0.4086	0.2698	0.5281	2553	94.5
43	00h07m10s	0.0908	23.998	2.179	37.763	0.4696	0.4085	0.2698	0.528	2554	94.5
44	00h07m20s	0.0908	23.998	2.179	37.777	0.4698	0.4087	0.2698	0.5281	2553	94.5
45	00h07m30s	0.0908	23.998	2.179	37.764	0.4699	0.4087	0.2699	0.5282	2552	94.5
46	00h07m40s	0.0908	23.998	2.179	37.756	0.4697	0.4086	0.2698	0.5281	2553	94.5
47	00h07m50s	0.0908	23.998	2.179	37.784	0.4696	0.4086	0.2698	0.5281	2554	94.5
48	00h08m00s	0.0908	23.998	2.179	37.756	0.4696	0.4087	0.2697	0.5281	2555	94.5
49	00h08m10s	0.0908	23.998	2.179	37.758	0.4699	0.4088	0.2698	0.5282	2552	94.5
50	00h08m20s	0.0908	23.998	2.179	37.792	0.4697	0.4087	0.2697	0.5281	2554	94.5
51	00h08m30s	0.0908	23.998	2.179	37.797	0.4696	0.4086	0.2697	0.5281	2554	94.5
52	00h08m40s	0.0908	23.998	2.179	37.767	0.4699	0.4087	0.2699	0.5281	2550	94.4

53	00h08m50s	0.0908	23.998	2.179	37.767	0.4699	0.4087	0.2699	0.5281	2552	94.5
54	00h09m00s	0.0908	23.998	2.179	37.757	0.4696	0.4086	0.2697	0.5281	2554	94.5
55	00h09m10s	0.0908	23.998	2.179	37.776	0.4698	0.4087	0.2698	0.5281	2552	94.5
56	00h09m20s	0.0908	23.998	2.179	37.781	0.4697	0.4086	0.2698	0.5281	2553	94.4
57	00h09m30s	0.0908	23.998	2.179	37.756	0.4697	0.4086	0.2698	0.5281	2554	94.5
58	00h09m40s	0.0908	23.998	2.179	37.762	0.4697	0.4085	0.2698	0.5281	2553	94.5
59	00h09m50s	0.0908	23.998	2.179	37.779	0.4697	0.4085	0.2698	0.528	2553	94.4
60	00h10m00s	0.0908	23.998	2.179	37.778	0.4698	0.4087	0.2698	0.5281	2553	94.5
61	00h10m10s	0.0908	23.998	2.179	37.775	0.4697	0.4087	0.2698	0.5281	2553	94.5
62	00h10m20s	0.0908	23.998	2.179	37.772	0.4696	0.4086	0.2697	0.528	2554	94.5
63	00h10m30s	0.0908	23.998	2.179	37.803	0.4697	0.4087	0.2697	0.5281	2554	94.5
64	00h10m40s	0.0908	23.998	2.179	37.782	0.4698	0.4087	0.2698	0.5281	2553	94.5
65	00h10m50s	0.0908	23.998	2.179	37.777	0.4699	0.4087	0.2699	0.5281	2551	94.4
66	00h11m00s	0.0908	23.998	2.179	37.763	0.4696	0.4087	0.2697	0.5281	2555	94.5
67	00h11m10s	0.0908	23.998	2.179	37.774	0.4698	0.4087	0.2698	0.5281	2553	94.5
68	00h11m20s	0.0908	23.998	2.179	37.793	0.4697	0.4086	0.2698	0.5281	2553	94.5
69	00h11m30s	0.0908	23.998	2.179	37.764	0.4698	0.4087	0.2698	0.5281	2552	94.5
70	00h11m40s	0.0908	23.998	2.179	37.779	0.4697	0.4086	0.2698	0.5281	2553	94.5
71	00h11m50s	0.0908	23.998	2.179	37.777	0.4699	0.4087	0.2699	0.5281	2551	94.5
72	00h12m00s	0.0908	23.998	2.179	37.757	0.4697	0.4085	0.2698	0.528	2552	94.5
73	00h12m10s	0.0908	23.998	2.179	37.774	0.4698	0.4087	0.2698	0.5281	2553	94.5
74	00h12m20s	0.0908	23.998	2.179	37.794	0.4699	0.4087	0.2698	0.5281	2552	94.5
75	00h12m30s	0.0908	23.998	2.179	37.783	0.4697	0.4087	0.2697	0.5281	2554	94.5
76	00h12m40s	0.0908	23.998	2.179	37.76	0.4697	0.4085	0.2698	0.528	2552	94.5
77	00h12m50s	0.0908	23.998	2.179	37.787	0.4696	0.4085	0.2698	0.528	2553	94.4
78	00h13m00s	0.0908	23.998	2.179	37.754	0.4697	0.4086	0.2698	0.5281	2553	94.5
79	00h13m10s	0.0908	23.998	2.179	37.762	0.4697	0.4086	0.2698	0.5281	2553	94.5
80	00h13m20s	0.0908	23.998	2.179	37.791	0.4698	0.4087	0.2698	0.5281	2553	94.5
81	00h13m30s	0.0908	23.998	2.179	37.798	0.4696	0.4087	0.2697	0.5281	2554	94.5
82	00h13m40s	0.0908	23.998	2.179	37.777	0.4697	0.4086	0.2698	0.5281	2553	94.5
83	00h13m50s	0.0908	23.998	2.179	37.798	0.4698	0.4087	0.2698	0.5281	2553	94.5

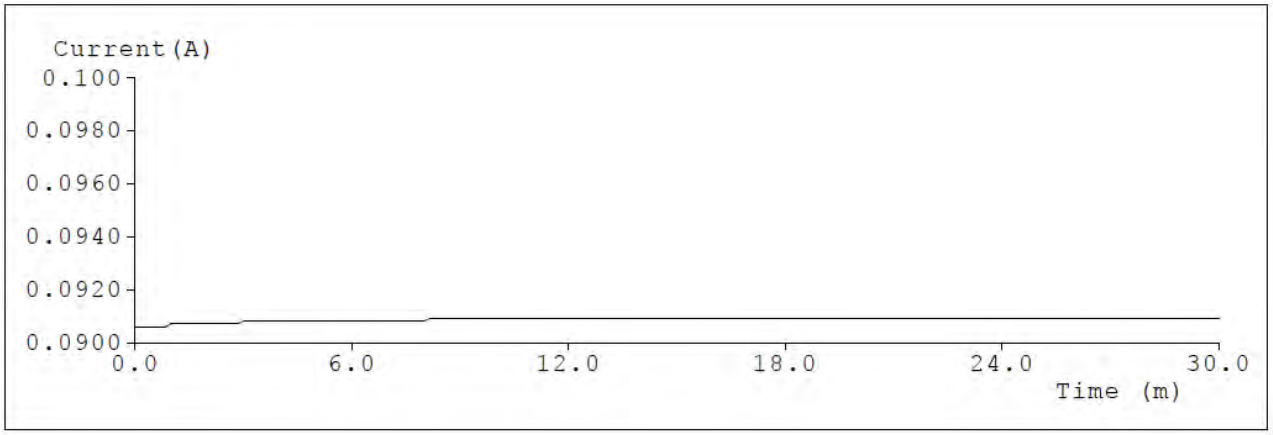
84	00h14m00s	0.0908	23.998	2.179	37.781	0.4697	0.4088	0.2697	0.5281	2554	94.5
85	00h14m10s	0.0908	23.998	2.179	37.766	0.4696	0.4085	0.2698	0.528	2553	94.5
86	00h14m20s	0.0908	23.998	2.179	37.779	0.4698	0.4086	0.2699	0.5281	2551	94.5
87	00h14m30s	0.0908	23.998	2.179	37.759	0.4697	0.4085	0.2698	0.528	2552	94.5
88	00h14m40s	0.0908	23.998	2.179	37.784	0.4697	0.4086	0.2698	0.5281	2553	94.5
89	00h14m50s	0.0908	23.998	2.179	37.794	0.4697	0.4086	0.2698	0.5281	2554	94.5
90	00h15m00s	0.0908	23.998	2.179	37.759	0.4696	0.4085	0.2698	0.528	2553	94.5
91	00h15m10s	0.0908	23.998	2.179	37.774	0.4697	0.4086	0.2698	0.5281	2553	94.5
92	00h15m20s	0.0908	23.998	2.179	37.766	0.4698	0.4086	0.2699	0.5281	2551	94.5
93	00h15m30s	0.0908	23.998	2.179	37.791	0.4697	0.4086	0.2698	0.5281	2553	94.5
94	00h15m40s	0.0908	23.998	2.179	37.788	0.4699	0.4087	0.2698	0.5282	2552	94.5
95	00h15m50s	0.0908	23.998	2.179	37.778	0.4697	0.4085	0.2698	0.528	2553	94.5
96	00h16m00s	0.0908	23.998	2.179	37.76	0.4696	0.4086	0.2698	0.528	2554	94.5
97	00h16m10s	0.0908	23.998	2.179	37.789	0.4696	0.4084	0.2698	0.528	2552	94.5
98	00h16m20s	0.0908	23.998	2.179	37.765	0.4697	0.4086	0.2698	0.5281	2554	94.5
99	00h16m30s	0.0908	23.998	2.179	37.806	0.4697	0.4088	0.2697	0.5281	2554	94.5
100	00h16m40s	0.0908	23.998	2.179	37.776	0.4697	0.4086	0.2698	0.5281	2553	94.5
101	00h16m50s	0.0908	23.998	2.179	37.769	0.4697	0.4085	0.2699	0.528	2552	94.4
102	00h17m00s	0.0908	23.998	2.179	37.809	0.4696	0.4087	0.2697	0.5281	2555	94.5
103	00h17m10s	0.0908	23.998	2.179	37.77	0.4698	0.4087	0.2698	0.5281	2553	94.5
104	00h17m20s	0.0908	23.998	2.179	37.772	0.4697	0.4086	0.2698	0.5281	2553	94.5
105	00h17m30s	0.0908	23.998	2.179	37.781	0.4697	0.4085	0.2699	0.528	2552	94.4
106	00h17m40s	0.0908	23.998	2.179	37.767	0.4698	0.4087	0.2698	0.5281	2553	94.5
107	00h17m50s	0.0908	23.998	2.179	37.768	0.4696	0.4085	0.2698	0.528	2553	94.5
108	00h18m00s	0.0908	23.998	2.179	37.794	0.4698	0.4087	0.2698	0.5281	2553	94.5
109	00h18m10s	0.0908	23.998	2.179	37.764	0.4697	0.4086	0.2698	0.5281	2553	94.5
110	00h18m20s	0.0908	23.998	2.179	37.769	0.4699	0.4086	0.2699	0.5281	2551	94.5
111	00h18m30s	0.0908	23.998	2.179	37.784	0.4696	0.4087	0.2697	0.5281	2555	94.5
112	00h18m40s	0.0908	23.998	2.179	37.78	0.4697	0.4087	0.2698	0.5281	2554	94.5
113	00h18m50s	0.0908	23.998	2.179	37.776	0.4698	0.4086	0.2698	0.5281	2552	94.5
114	00h19m00s	0.0908	23.998	2.179	37.79	0.4697	0.4086	0.2698	0.5281	2553	94.5

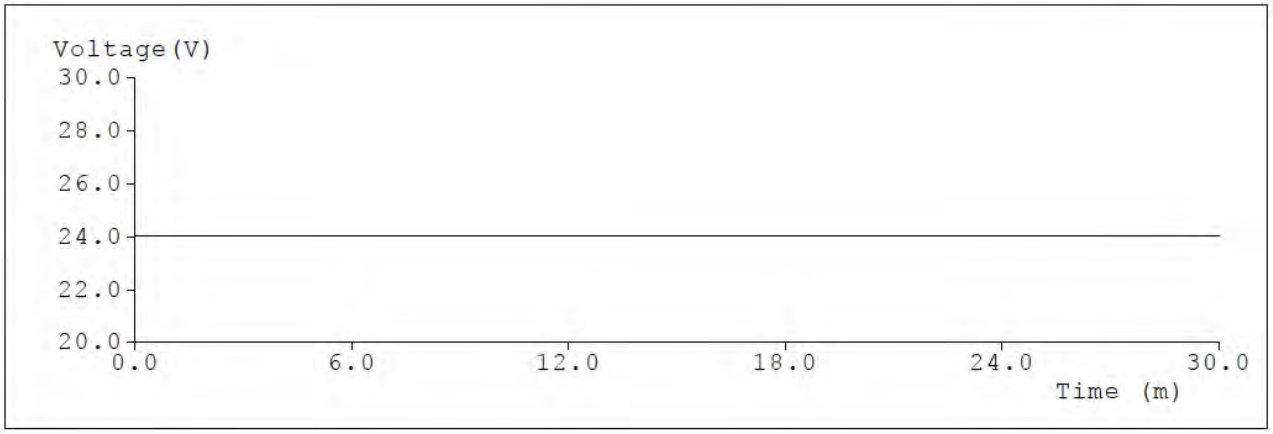
115	00h19m10s	0.0908	23.998	2.179	37.797	0.4698	0.4088	0.2697	0.5282	2554	94.5
116	00h19m20s	0.0908	23.998	2.179	37.783	0.4697	0.4086	0.2698	0.5281	2554	94.5
117	00h19m30s	0.0908	23.998	2.179	37.765	0.4697	0.4086	0.2698	0.5281	2554	94.5
118	00h19m40s	0.0908	23.998	2.179	37.748	0.4696	0.4086	0.2697	0.528	2555	94.5
119	00h19m50s	0.0908	23.998	2.179	37.763	0.4698	0.4086	0.2699	0.5281	2551	94.5
120	00h20m00s	0.0908	23.998	2.179	37.768	0.4697	0.4087	0.2698	0.5281	2554	94.5
121	00h20m10s	0.0908	23.998	2.179	37.746	0.4698	0.4087	0.2698	0.5281	2552	94.5
122	00h20m20s	0.0908	23.998	2.179	37.768	0.4695	0.4085	0.2697	0.528	2555	94.4
123	00h20m30s	0.0908	23.998	2.179	37.8	0.4697	0.4087	0.2698	0.5281	2553	94.5
124	00h20m40s	0.0908	23.998	2.179	37.763	0.4698	0.4086	0.2699	0.5281	2551	94.5
125	00h20m50s	0.0908	23.998	2.179	37.787	0.4695	0.4086	0.2697	0.528	2556	94.5
126	00h21m00s	0.0908	23.998	2.179	37.763	0.4697	0.4085	0.2698	0.5281	2552	94.5
127	00h21m10s	0.0908	23.998	2.179	37.762	0.4699	0.4087	0.2699	0.5281	2551	94.4
128	00h21m20s	0.0908	23.998	2.179	37.784	0.4697	0.4087	0.2698	0.5281	2554	94.5
129	00h21m30s	0.0908	23.998	2.179	37.78	0.4698	0.4087	0.2698	0.5281	2553	94.5
130	00h21m40s	0.0908	23.998	2.179	37.779	0.4696	0.4085	0.2698	0.528	2554	94.5
131	00h21m50s	0.0908	23.998	2.179	37.811	0.4698	0.4088	0.2698	0.5282	2553	94.5
132	00h22m00s	0.0908	23.998	2.179	37.782	0.4698	0.4086	0.2699	0.5281	2551	94.4
133	00h22m10s	0.0908	23.998	2.179	37.754	0.4696	0.4086	0.2697	0.5281	2555	94.5
134	00h22m20s	0.0908	23.998	2.179	37.791	0.4696	0.4086	0.2698	0.528	2554	94.5
135	00h22m30s	0.0908	23.998	2.179	37.774	0.4697	0.4087	0.2698	0.5281	2553	94.5
136	00h22m40s	0.0908	23.998	2.179	37.777	0.4697	0.4086	0.2698	0.5281	2554	94.5
137	00h22m50s	0.0908	23.998	2.179	37.778	0.4697	0.4088	0.2697	0.5281	2554	94.5
138	00h23m00s	0.0908	23.998	2.179	37.778	0.4696	0.4086	0.2697	0.5281	2555	94.5
139	00h23m10s	0.0908	23.998	2.179	37.769	0.4697	0.4088	0.2697	0.5282	2555	94.5
140	00h23m20s	0.0908	23.998	2.179	37.757	0.4698	0.4087	0.2698	0.5281	2553	94.5
141	00h23m30s	0.0908	23.998	2.179	37.767	0.4696	0.4086	0.2697	0.5281	2554	94.5
142	00h23m40s	0.0908	23.998	2.179	37.765	0.4696	0.4086	0.2697	0.528	2554	94.5
143	00h23m50s	0.0908	23.998	2.179	37.777	0.4696	0.4085	0.2698	0.528	2553	94.5
144	00h24m00s	0.0908	23.998	2.179	37.762	0.4699	0.4087	0.2699	0.5282	2551	94.5
145	00h24m10s	0.0908	23.998	2.179	37.776	0.4698	0.4087	0.2698	0.5281	2553	94.5

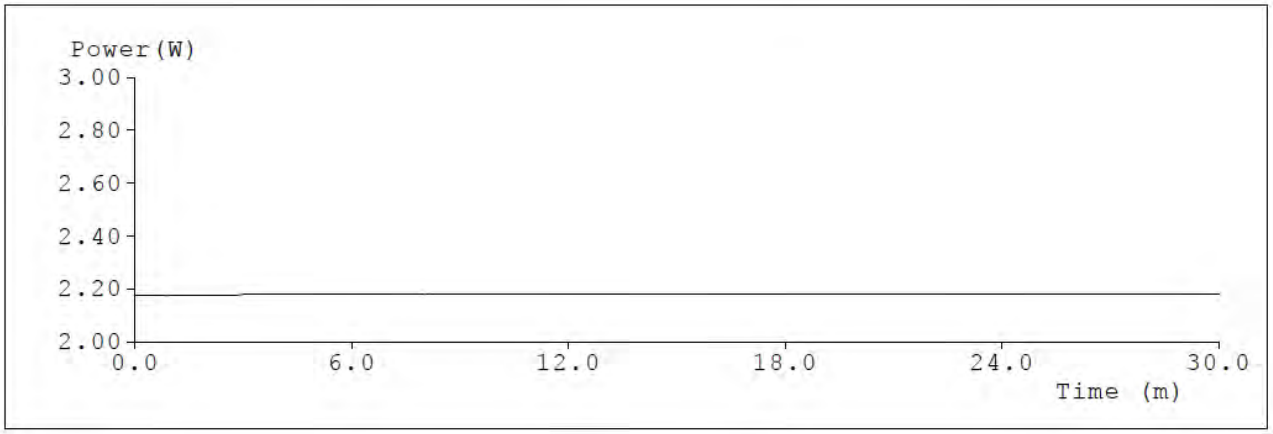
146	00h24m20s	0.0908	23.998	2.179	37.772	0.4696	0.4085	0.2697	0.528	2554	94.5
147	00h24m30s	0.0908	23.998	2.179	37.781	0.4698	0.4085	0.2699	0.528	2551	94.5
148	00h24m40s	0.0908	23.998	2.179	37.769	0.4698	0.4085	0.2699	0.5281	2551	94.5
149	00h24m50s	0.0908	23.998	2.179	37.81	0.4698	0.4087	0.2698	0.5281	2553	94.5
150	00h25m00s	0.0908	23.998	2.179	37.782	0.4696	0.4087	0.2697	0.5281	2555	94.5
151	00h25m10s	0.0908	23.998	2.179	37.777	0.4697	0.4086	0.2698	0.5281	2553	94.5
152	00h25m20s	0.0908	23.998	2.179	37.766	0.4697	0.4085	0.2698	0.528	2552	94.5
153	00h25m30s	0.0908	23.998	2.179	37.776	0.4698	0.4084	0.2699	0.528	2550	94.4
154	00h25m40s	0.0908	23.998	2.179	37.765	0.4696	0.4084	0.2698	0.528	2554	94.4
155	00h25m50s	0.0908	23.998	2.179	37.792	0.4696	0.4087	0.2697	0.5281	2555	94.5
156	00h26m00s	0.0908	23.998	2.179	37.776	0.4696	0.4087	0.2697	0.5281	2555	94.5
157	00h26m10s	0.0908	23.998	2.179	37.783	0.4697	0.4085	0.2699	0.528	2552	94.5
158	00h26m20s	0.0908	23.998	2.179	37.78	0.4697	0.4084	0.2699	0.528	2551	94.5
159	00h26m30s	0.0908	23.998	2.179	37.763	0.4698	0.4085	0.2699	0.528	2551	94.4
160	00h26m40s	0.0908	23.998	2.179	37.768	0.4697	0.4086	0.2698	0.5281	2554	94.5
161	00h26m50s	0.0908	23.998	2.179	37.799	0.4698	0.4086	0.2699	0.5281	2551	94.4
162	00h27m00s	0.0908	23.998	2.179	37.77	0.4697	0.4086	0.2698	0.5281	2553	94.5
163	00h27m10s	0.0908	23.998	2.179	37.782	0.4698	0.4086	0.2698	0.5281	2552	94.5
164	00h27m20s	0.0908	23.998	2.179	37.796	0.4696	0.4086	0.2697	0.5281	2554	94.5
165	00h27m30s	0.0908	23.998	2.179	37.748	0.4697	0.4087	0.2698	0.5281	2553	94.4
166	00h27m40s	0.0908	23.998	2.179	37.763	0.4696	0.4086	0.2697	0.528	2555	94.5
167	00h27m50s	0.0908	23.998	2.179	37.762	0.4698	0.4086	0.2698	0.5281	2552	94.5
168	00h28m00s	0.0908	23.998	2.179	37.761	0.4698	0.4087	0.2698	0.5281	2552	94.5
169	00h28m10s	0.0908	23.998	2.179	37.759	0.4697	0.4085	0.2698	0.5281	2553	94.5
170	00h28m20s	0.0908	23.998	2.179	37.789	0.4697	0.4085	0.2699	0.528	2552	94.5
171	00h28m30s	0.0908	23.998	2.179	37.785	0.4697	0.4086	0.2698	0.5281	2552	94.5
172	00h28m40s	0.0908	23.998	2.179	37.76	0.4697	0.4085	0.2699	0.5281	2552	94.5
173	00h28m50s	0.0908	23.998	2.179	37.757	0.4697	0.4086	0.2698	0.5281	2553	94.5
174	00h29m00s	0.0908	23.998	2.179	37.784	0.4698	0.4087	0.2698	0.5281	2553	94.5
175	00h29m10s	0.0908	23.998	2.179	37.777	0.4698	0.4085	0.2699	0.5281	2552	94.5
176	00h29m20s	0.0908	23.998	2.179	37.781	0.4697	0.4086	0.2698	0.5281	2553	94.5

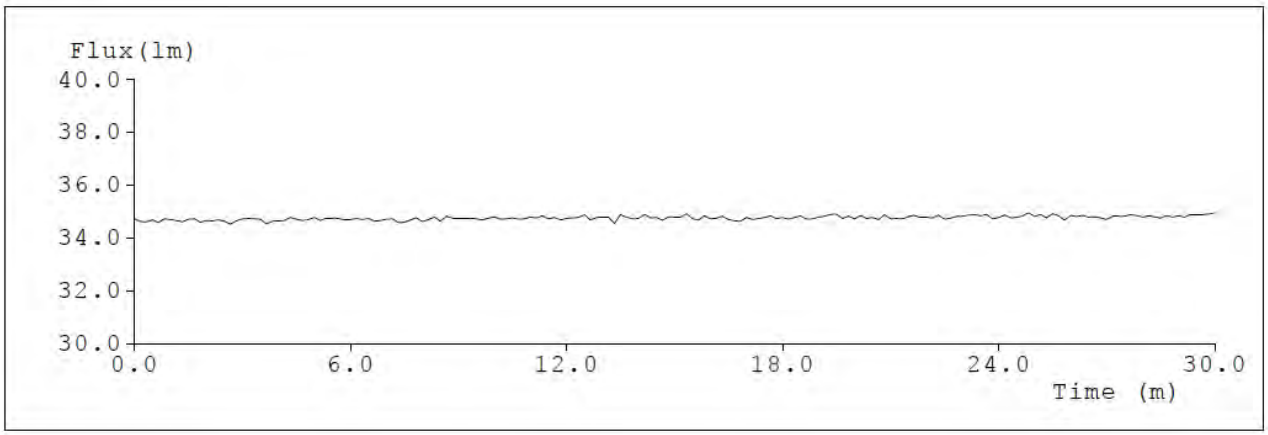
177	00h29m30s	0.0908	23.998	2.179	37.779	0.4696	0.4085	0.2698	0.528	2553	94.5
178	00h29m40s	0.0908	23.998	2.179	37.791	0.4698	0.4085	0.2699	0.528	2552	94.5
179	00h29m50s	0.0908	23.998	2.179	37.794	0.4698	0.4087	0.2698	0.5281	2553	94.4
180	00h30m00s	0.0908	23.998	2.179	37.76	0.4699	0.4085	0.2699	0.5281	2550	94.5

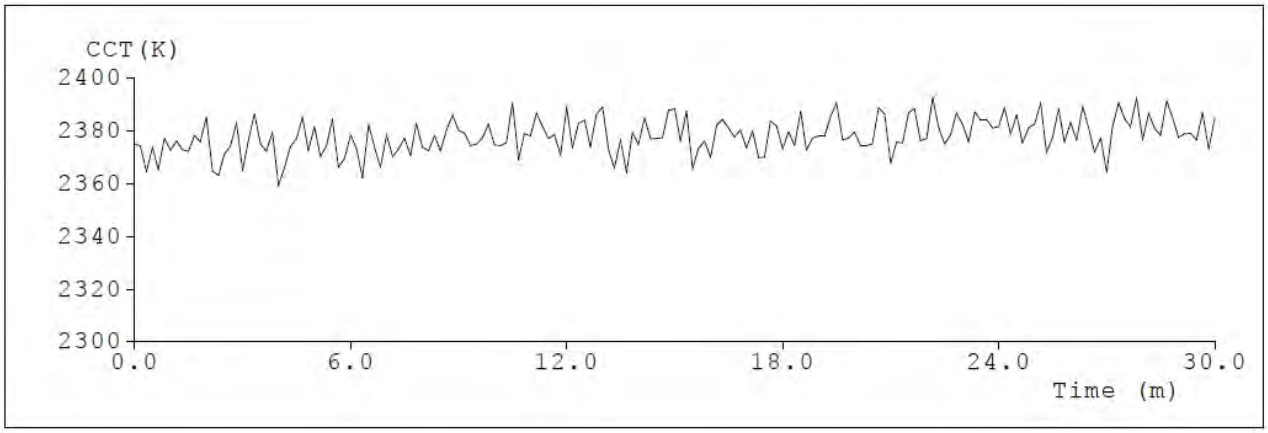
Test curves

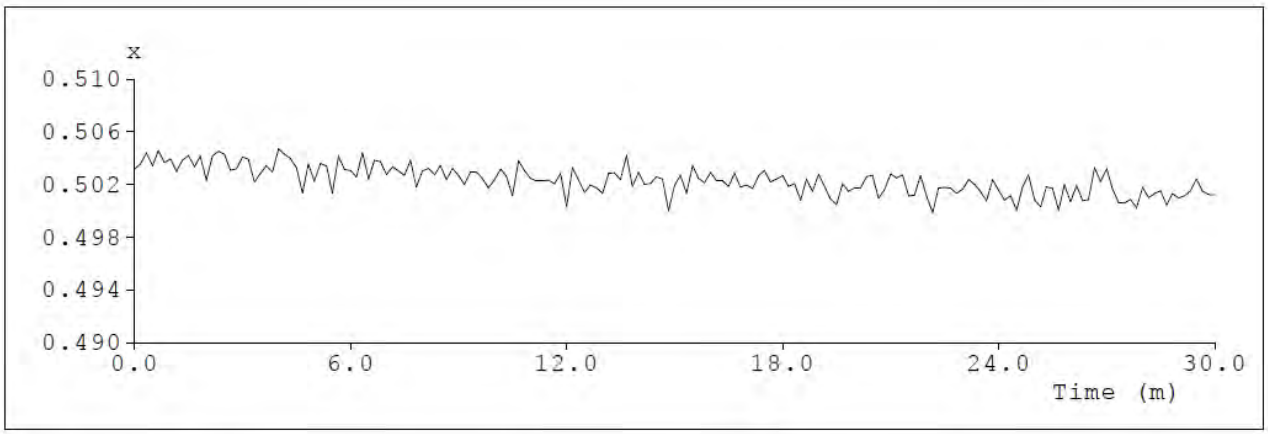


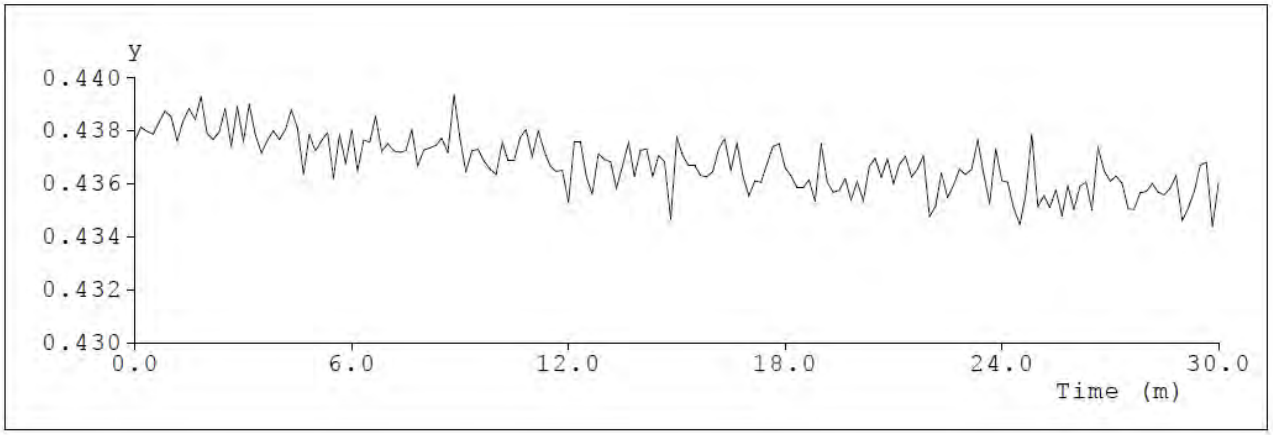


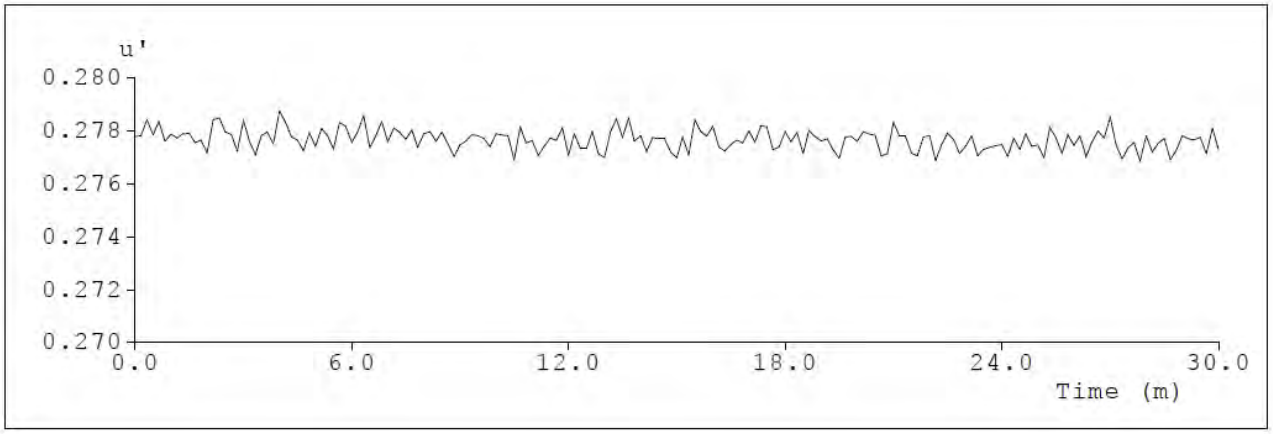


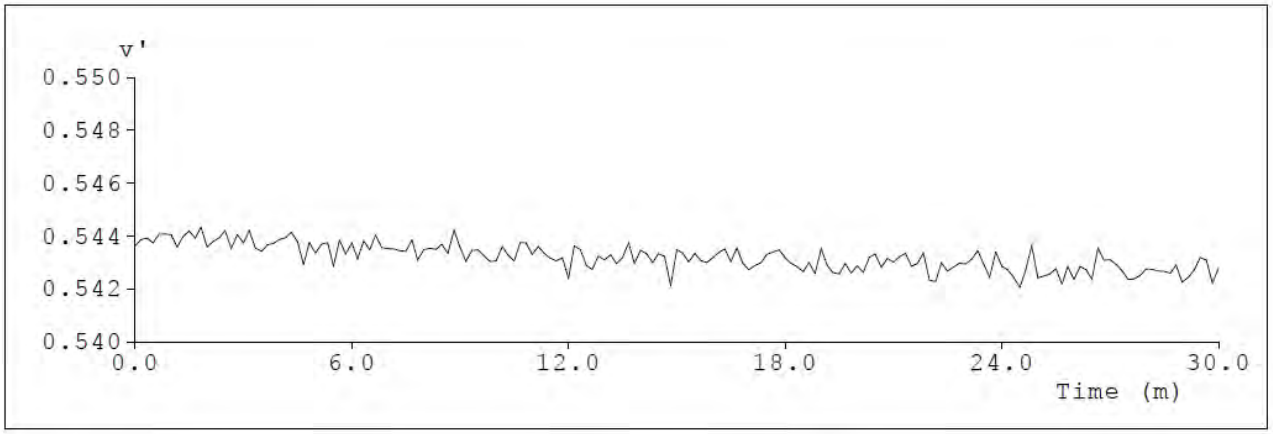

Flux(lm)
40.0
38.0
36.0
34.0
32.0
30.0
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


CCT(K)
2400
2380
2360
2340
2320
2300
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


x
0.510
0.506
0.502
0.498
0.494
0.490
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


y
0.440
0.438
0.436
0.434
0.432
0.430
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)

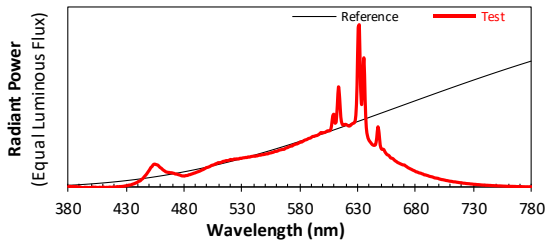

v'
0.550
0.548
0.546
0.544
0.542
0.540
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

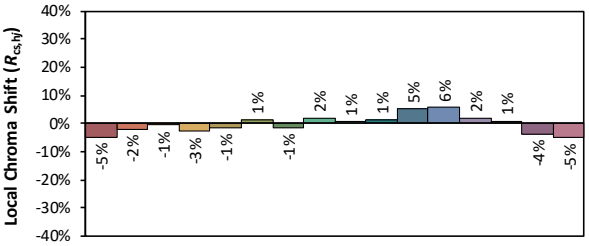
*5.2 ANSI/IES TM-30-18 Color Rendition Report

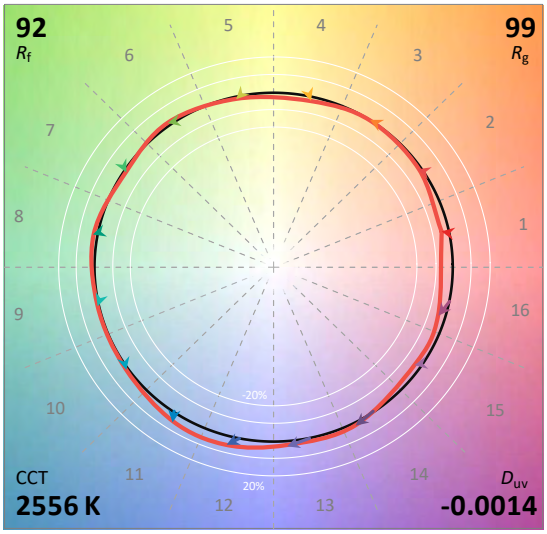
ANSI/IES TM-30-18 Color Rendition Report

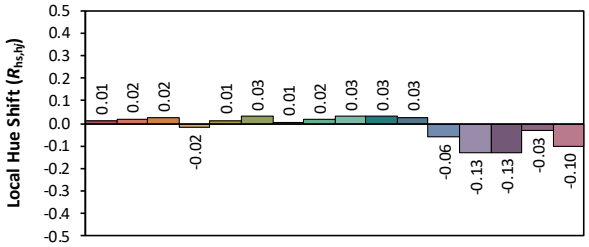
Source: Manufacturer:

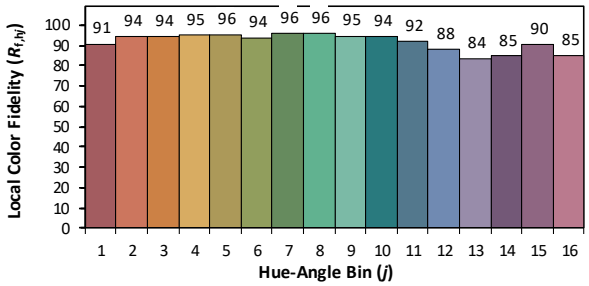
Date: 2023/10/19 Model: LNLY-1000-L27-DF-I-2

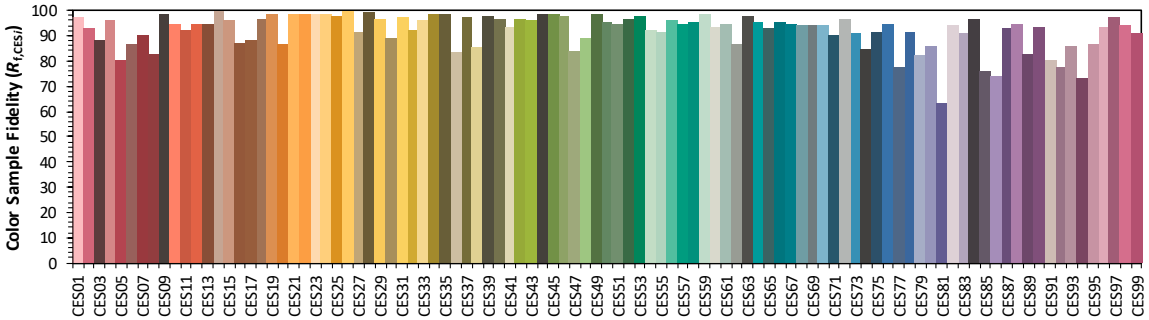












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

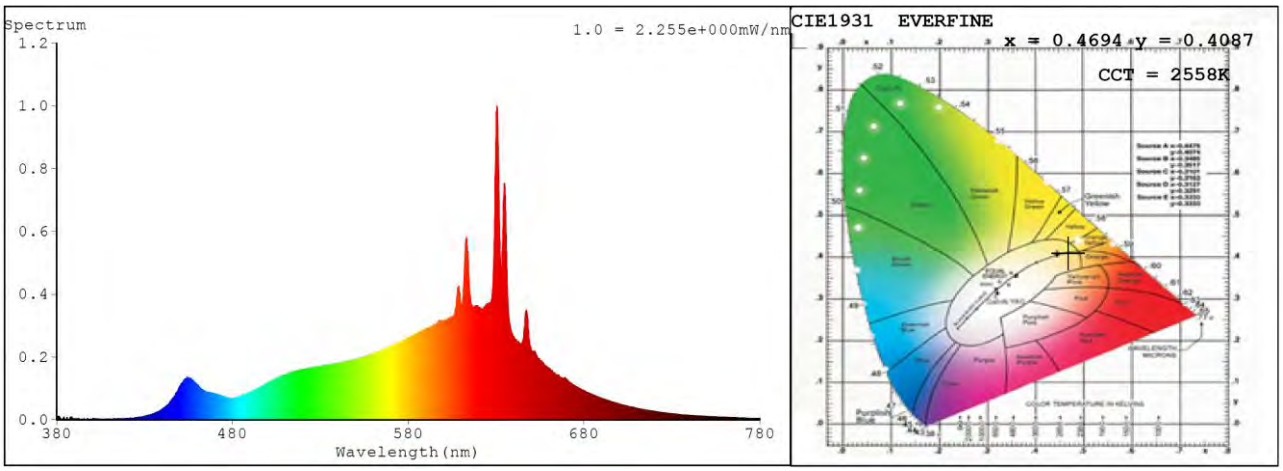
x	0.4694
y	0.4086
u'	0.2696
v'	0.5280

CIE 13.3-1995 (CRI)

R_a	95
R_9	63

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	0.0063	414	0.0008	448	0.0841	482	0.0692	516	0.1547
381	0.0075	415	0.0026	449	0.0938	483	0.0706	517	0.1545
382	0.0056	416	0.0027	450	0.1034	484	0.074	518	0.1557
383	0.0013	417	0.0012	451	0.115	485	0.0746	519	0.1585
384	0.0074	418	0.003	452	0.1207	486	0.0776	520	0.1614
385	0.0006	419	0.0032	453	0.1304	487	0.0794	521	0.1588
386	0.0064	420	0.0034	454	0.1343	488	0.0823	522	0.1608
387	0.0015	421	0.0035	455	0.1333	489	0.0839	523	0.1637
388	0.0045	422	0.0058	456	0.1308	490	0.0868	524	0.1634
389	0.0024	423	0.0045	457	0.129	491	0.0893	525	0.1645
390	0.0042	424	0.006	458	0.1223	492	0.0917	526	0.1643
391	0	425	0.0061	459	0.1154	493	0.094	527	0.1642
392	0	426	0.0065	460	0.1112	494	0.0971	528	0.1684
393	0.0001	427	0.0073	461	0.1047	495	0.1005	529	0.1669
394	0.002	428	0.0084	462	0.0993	496	0.1031	530	0.1694
395	0.001	429	0.0098	463	0.095	497	0.1066	531	0.1707
396	0.0013	430	0.0108	464	0.0904	498	0.1105	532	0.1713
397	0	431	0.0119	465	0.0885	499	0.1145	533	0.1729
398	0.001	432	0.0142	466	0.0872	500	0.1159	534	0.1723
399	0	433	0.0147	467	0.0867	501	0.1184	535	0.1758
400	0.0018	434	0.0161	468	0.085	502	0.1211	536	0.1748
401	0.0034	435	0.0191	469	0.0851	503	0.1255	537	0.1765
402	0.0011	436	0.0212	470	0.083	504	0.1284	538	0.1785
403	0.0027	437	0.0235	471	0.0817	505	0.1298	539	0.1794
404	0.0012	438	0.0268	472	0.0782	506	0.1325	540	0.1802
405	0.0008	439	0.0291	473	0.0779	507	0.1365	541	0.1796
406	0.0009	440	0.0339	474	0.0758	508	0.138	542	0.1816
407	0.0022	441	0.0369	475	0.0737	509	0.1426	543	0.182
408	0.0002	442	0.0398	476	0.072	510	0.1424	544	0.1851
409	0.002	443	0.0471	477	0.0693	511	0.1437	545	0.1857
410	0.0031	444	0.0514	478	0.0669	512	0.1447	546	0.1863
411	0.0015	445	0.0596	479	0.0672	513	0.1494	547	0.1884
412	0.0009	446	0.0673	480	0.0661	514	0.1508	548	0.189
413	0.0017	447	0.0747	481	0.0689	515	0.1521	549	0.1903

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.1918	599	0.3124	648	0.3142	697	0.0549	746	0.0114
551	0.1935	600	0.3148	649	0.2445	698	0.0538	747	0.0113
552	0.1935	601	0.3158	650	0.2227	699	0.0528	748	0.0107
553	0.1969	602	0.3187	651	0.2189	700	0.0497	749	0.0107
554	0.1983	603	0.3234	652	0.2191	701	0.0481	750	0.0105
555	0.1996	604	0.3256	653	0.2062	702	0.0462	751	0.0096
556	0.2015	605	0.325	654	0.1963	703	0.0454	752	0.0099
557	0.2033	606	0.329	655	0.1885	704	0.044	753	0.0095
558	0.2072	607	0.3548	656	0.1859	705	0.0425	754	0.0092
559	0.2076	608	0.409	657	0.1798	706	0.0407	755	0.0087
560	0.2087	609	0.4196	658	0.1706	707	0.0399	756	0.0084
561	0.2118	610	0.3693	659	0.1684	708	0.0384	757	0.0082
562	0.2149	611	0.3768	660	0.1658	709	0.0369	758	0.0077
563	0.2164	612	0.4727	661	0.1592	710	0.0362	759	0.0074
564	0.2178	613	0.5775	662	0.1533	711	0.0353	760	0.0073
565	0.2196	614	0.5117	663	0.1493	712	0.0334	761	0.0074
566	0.2193	615	0.4047	664	0.1441	713	0.033	762	0.0071
567	0.2242	616	0.3673	665	0.1411	714	0.0325	763	0.0072
568	0.2278	617	0.3582	666	0.1376	715	0.031	764	0.0069
569	0.229	618	0.3606	667	0.1347	716	0.0302	765	0.0068
570	0.233	619	0.3624	668	0.1317	717	0.0289	766	0.0066
571	0.2356	620	0.3599	669	0.1298	718	0.0282	767	0.0057
572	0.2383	621	0.3557	670	0.1293	719	0.0279	768	0.006
573	0.2383	622	0.3527	671	0.1234	720	0.0263	769	0.0059
574	0.2442	623	0.3545	672	0.1195	721	0.0251	770	0.0061
575	0.246	624	0.3606	673	0.1142	722	0.025	771	0.0056
576	0.2495	625	0.3662	674	0.1111	723	0.0236	772	0.0051
577	0.2499	626	0.3693	675	0.1073	724	0.023	773	0.005
578	0.2529	627	0.3746	676	0.1045	725	0.0224	774	0.0048
579	0.2566	628	0.415	677	0.1006	726	0.0221	775	0.0046
580	0.2618	629	0.584	678	0.0978	727	0.0208	776	0.0049
581	0.2604	630	0.9146	679	0.0947	728	0.0206	777	0.0043
582	0.2643	631	0.931	680	0.0903	729	0.0197	778	0.005
583	0.2681	632	0.5952	681	0.0894	730	0.0188	779	0.0045
584	0.2725	633	0.4754	682	0.0859	731	0.0188	780	0.0045
585	0.2739	634	0.6268	683	0.0837	732	0.0178		
586	0.2766	635	0.7409	684	0.0826	733	0.0172		
587	0.2809	636	0.5049	685	0.0794	734	0.0169		
588	0.2828	637	0.3442	686	0.0776	735	0.0163		
589	0.2848	638	0.2978	687	0.0731	736	0.0155		
590	0.29	639	0.2757	688	0.073	737	0.0149		
591	0.2934	640	0.2648	689	0.0706	738	0.0146		
592	0.2934	641	0.2562	690	0.069	739	0.0141		
593	0.2968	642	0.2476	691	0.0661	740	0.0132		
594	0.2979	643	0.2434	692	0.064	741	0.0136		
595	0.3003	644	0.2421	693	0.0626	742	0.0132		
596	0.3046	645	0.2468	694	0.0612	743	0.0127		
597	0.3099	646	0.2842	695	0.0586	744	0.0126		
598	0.3157	647	0.3474	696	0.0558	745	0.0118		

6. Goniophotometer Test results for LNLY-1000-L27-DF-I-2

6.1 Test Data

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

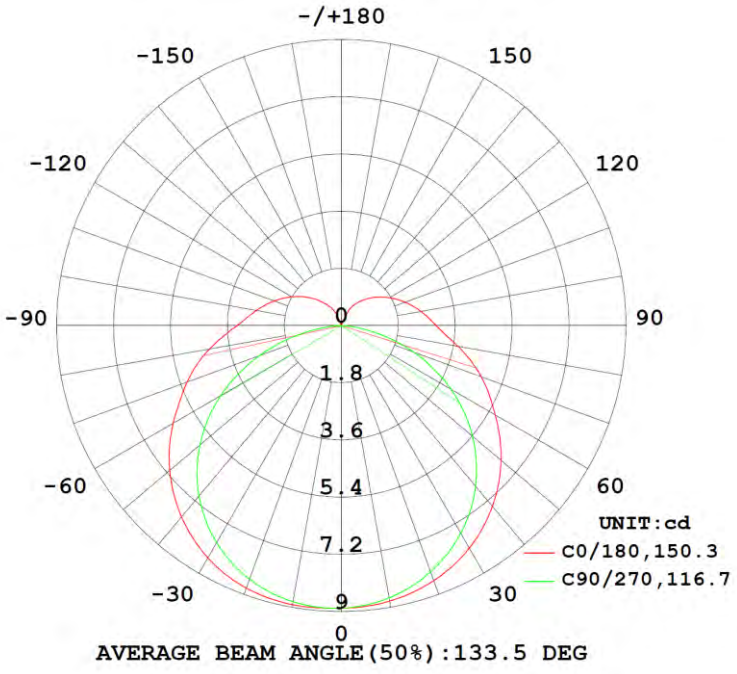
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
24.003	--	0.095506	1.0000	2.2924

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	Imax (cd)	η up (%)	η down (%)
39.4064	17.19	8.929	15.9	84.1

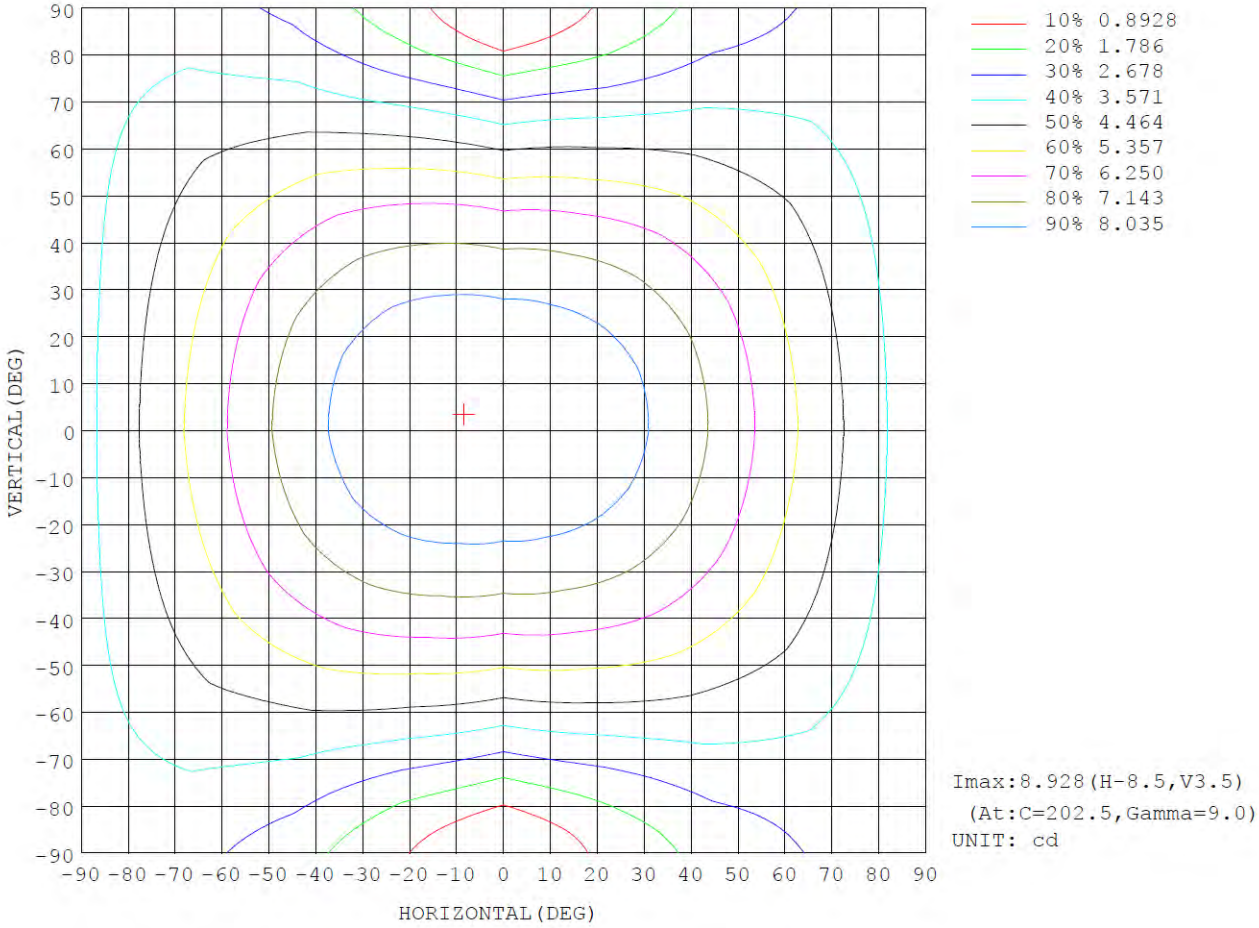
6.2 Luminous Intensity Distribution



6.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	8.803	8.739	8.700	8.811	8.917	8.903	8.824	8.828	0- 10	0.8455	0.8455	2.15,2.15
20	8.541	8.382	8.252	8.536	8.792	8.728	8.491	8.546	10- 20	2.460	3.306	8.39,8.39
30	8.091	7.827	7.547	8.050	8.441	8.319	7.887	8.048	20- 30	3.835	7.141	18.1,18.1
40	7.429	7.070	6.602	7.343	7.863	7.680	7.003	7.334	30- 40	4.816	11.96	30.3,30.3
50	6.592	6.132	5.411	6.436	7.085	6.812	5.839	6.407	40- 50	5.287	17.24	43.8,43.8
60	5.615	5.037	4.001	5.354	6.145	5.754	4.406	5.295	50- 60	5.191	22.44	56.9,56.9
70	4.708	3.895	2.418	4.154	5.194	4.544	2.746	4.080	60- 70	4.566	27.00	68.5,68.5
80	3.743	2.878	0.8525	3.081	4.231	3.436	1.030	3.004	70- 80	3.595	30.60	77.6,77.6
90	2.997	2.141	0.0393	2.192	3.298	2.476	0.0153	2.186	80- 90	2.551	33.15	84.1,84.1
100	2.560	1.771	0	1.757	2.740	1.996	0	1.797	90-100	1.937	35.08	89,89
110	2.152	1.450	0	1.399	2.268	1.595	0	1.456	100-110	1.539	36.62	92.9,92.9
120	1.758	1.172	0	1.054	1.814	1.235	0	1.167	110-120	1.163	37.79	95.9,95.9
130	1.390	0.9174	0	0.7545	1.386	0.9139	0	0.9040	120-130	0.8154	38.60	98,98
140	1.039	0.6747	0	0.5343	0.9785	0.6583	0	0.6458	130-140	0.4878	39.09	99.2,99.2
150	0.7024	0.1157	0	0.0600	0.6478	0.4339	0	0.0017	140-150	0.2554	39.34	99.8,99.8
160	0.0026	0	0	0	0.0030	0.0030	0.0009	0.0017	150-160	0.0621	39.41	100,100
170	0.0013	0	0	0	0.0026	0.0022	0.0004	0.0017	160-170	0.0004	39.41	100,100
180	0.0017	0.0022	0	0	0.0026	0.0017	0	0	170-180	0.0001	39.41	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	8.90	8.90	8.90	8.90	8.90	8.90	8.90	8.90	8.90	8.90	8.90	8.90	8.90	8.90	8.90	8.90			
5	8.87	8.86	8.84	8.83	8.83	8.84	8.87	8.90	8.92	8.92	8.91	8.90	8.89	8.89	8.89	8.88			
10	8.80	8.77	8.74	8.71	8.70	8.73	8.81	8.88	8.92	8.93	8.90	8.86	8.82	8.83	8.83	8.82			
15	8.70	8.65	8.58	8.53	8.51	8.57	8.70	8.82	8.88	8.89	8.84	8.76	8.69	8.70	8.71	8.72			
20	8.54	8.48	8.38	8.29	8.25	8.36	8.54	8.70	8.79	8.80	8.73	8.60	8.49	8.50	8.55	8.57			
25	8.34	8.26	8.13	8.00	7.93	8.08	8.32	8.53	8.65	8.66	8.56	8.38	8.22	8.25	8.32	8.36			
30	8.09	7.99	7.83	7.64	7.55	7.74	8.05	8.31	8.44	8.45	8.32	8.09	7.89	7.94	8.05	8.11			
35	7.78	7.67	7.47	7.24	7.11	7.35	7.72	8.02	8.18	8.18	8.03	7.74	7.48	7.56	7.72	7.81			
40	7.43	7.30	7.07	6.78	6.60	6.90	7.34	7.68	7.86	7.86	7.68	7.33	7.00	7.12	7.33	7.45			
45	7.03	6.89	6.63	6.27	6.03	6.39	6.92	7.30	7.50	7.49	7.27	6.86	6.46	6.62	6.90	7.04			
50	6.59	6.44	6.13	5.71	5.41	5.83	6.44	6.87	7.09	7.07	6.81	6.32	5.84	6.06	6.41	6.59			
55	6.11	5.95	5.60	5.10	4.73	5.22	5.91	6.40	6.63	6.61	6.30	5.73	5.16	5.44	5.87	6.10			
60	5.61	5.43	5.04	4.46	4.00	4.58	5.35	5.89	6.15	6.11	5.75	5.08	4.41	4.77	5.30	5.57			
65	5.16	4.94	4.45	3.78	3.23	3.89	4.76	5.36	5.64	5.57	5.16	4.38	3.60	4.06	4.68	5.06			
70	4.71	4.48	3.89	3.09	2.42	3.18	4.15	4.87	5.19	5.08	4.54	3.66	2.75	3.31	4.08	4.59			
75	4.23	4.00	3.38	2.41	1.61	2.47	3.60	4.39	4.73	4.60	3.98	2.92	1.88	2.57	3.53	4.10			
80	3.74	3.51	2.88	1.83	0.85	1.80	3.08	3.89	4.23	4.09	3.44	2.22	1.03	1.89	3.00	3.60			
85	3.30	3.07	2.43	1.37	0.25	1.31	2.59	3.40	3.73	3.58	2.91	1.67	0.31	1.38	2.52	3.15			
90	3.00	2.77	2.14	1.10	0.04	0.99	2.19	2.97	3.30	3.14	2.48	1.28	0.02	1.06	2.19	2.82			
95	2.77	2.56	1.95	0.96	0.00	0.84	1.95	2.69	2.99	2.84	2.21	1.09	0.00	0.90	1.98	2.60			
100	2.56	2.36	1.77	0.83	0.00	0.71	1.76	2.46	2.74	2.59	2.00	0.95	0.00	0.77	1.80	2.39			
105	2.35	2.16	1.60	0.75	0.00	0.59	1.57	2.23	2.50	2.36	1.79	0.82	0.00	0.68	1.62	2.19			
110	2.15	1.97	1.45	0.67	0.00	0.49	1.40	2.01	2.27	2.13	1.60	0.71	0.00	0.60	1.46	1.99			
115	1.95	1.78	1.31	0.60	0.00	0.41	1.22	1.80	2.04	1.91	1.41	0.61	0.00	0.54	1.31	1.80			
120	1.76	1.61	1.17	0.54	0.00	0.36	1.05	1.59	1.81	1.69	1.24	0.53	0.00	0.48	1.17	1.62			
125	1.57	1.43	1.04	0.43	0.00	0.26	0.91	1.39	1.60	1.49	1.07	0.45	0.00	0.39	1.03	1.44			
130	1.39	1.27	0.92	0.37	0.00	0.19	0.75	1.19	1.39	1.28	0.91	0.37	0.00	0.11	0.90	1.27			
135	1.21	1.10	0.80	0.03	0.00	0.00	0.65	1.00	1.18	1.09	0.78	0.17	0.00	0.00	0.78	1.10			
140	1.04	0.95	0.67	0.00	0.00	0.00	0.53	0.83	0.98	0.92	0.66	0.00	0.00	0.00	0.65	0.94			
145	0.87	0.79	0.54	0.00	0.00	0.00	0.39	0.69	0.81	0.77	0.55	0.00	0.00	0.00	0.34	0.77			
150	0.70	0.63	0.12	0.00	0.00	0.00	0.06	0.52	0.65	0.62	0.43	0.00	0.00	0.00	0.00	0.58			
155	0.43	0.22	0.00	0.00	0.00	0.00	0.00	0.34	0.46	0.45	0.03	0.00	0.00	0.00	0.00	0.01			
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

7. Integrating Sphere Test Results for LNLY-1000-L27-DF-I-4

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	0.1732	23.998	4.1565	71.164	0.4692	0.4093	0.2692	0.5283	2565	94.5
1	00h00m10s	0.1733	23.998	4.1589	71.182	0.4689	0.4092	0.269	0.5282	2568	94.5
2	00h00m20s	0.1734	23.998	4.1613	71.182	0.4691	0.4092	0.2691	0.5282	2566	94.5
3	00h00m30s	0.1734	23.998	4.1613	71.259	0.4689	0.4094	0.2689	0.5282	2569	94.5
4	00h00m40s	0.1733	23.998	4.1589	71.076	0.469	0.4092	0.2691	0.5282	2566	94.5
5	00h00m50s	0.1733	23.998	4.1589	71.046	0.4692	0.4091	0.2692	0.5282	2564	94.5
6	00h01m00s	0.1732	23.998	4.1565	71.048	0.4692	0.4093	0.2692	0.5282	2565	94.5
7	00h01m10s	0.1732	23.998	4.1565	71.035	0.4691	0.4091	0.2692	0.5282	2564	94.5
8	00h01m20s	0.1721	23.998	4.1301	70.578	0.4692	0.4092	0.2692	0.5282	2564	94.5
9	00h01m30s	0.1723	23.998	4.1349	70.628	0.469	0.4091	0.2691	0.5282	2566	94.5
10	00h01m40s	0.1725	23.998	4.1397	70.815	0.4691	0.4093	0.2691	0.5282	2566	94.5
11	00h01m50s	0.1726	23.998	4.1421	70.772	0.4692	0.4092	0.2692	0.5282	2564	94.5
12	00h02m00s	0.1727	23.998	4.1445	70.837	0.4693	0.4093	0.2692	0.5283	2564	94.4
13	00h02m10s	0.1725	23.998	4.1397	70.736	0.4691	0.4091	0.2692	0.5282	2565	94.4
14	00h02m20s	0.1722	23.998	4.1325	70.604	0.4692	0.4092	0.2692	0.5282	2564	94.5
15	00h02m30s	0.1722	23.998	4.1325	70.491	0.4692	0.4091	0.2693	0.5282	2563	94.5
16	00h02m40s	0.1725	23.998	4.1397	70.686	0.4689	0.409	0.2691	0.5281	2566	94.5
17	00h02m50s	0.1726	23.998	4.1421	70.68	0.469	0.4091	0.2691	0.5282	2565	94.5
18	00h03m00s	0.1726	23.998	4.1421	70.731	0.4691	0.4091	0.2692	0.5282	2565	94.5
19	00h03m10s	0.1728	23.998	4.1469	70.732	0.4691	0.4091	0.2692	0.5282	2564	94.5
20	00h03m20s	0.1728	23.998	4.1469	70.809	0.469	0.4089	0.2692	0.5281	2565	94.5
21	00h03m30s	0.1728	23.998	4.1469	70.758	0.4694	0.4092	0.2693	0.5283	2562	94.4

22	00h03m40s	0.1729	23.998	4.1493	70.835	0.4691	0.4089	0.2693	0.5281	2563	94.5
23	00h03m50s	0.1729	23.998	4.1493	70.874	0.4692	0.4091	0.2692	0.5282	2563	94.4
24	00h04m00s	0.173	23.998	4.1517	70.829	0.4692	0.409	0.2693	0.5282	2562	94.4
25	00h04m10s	0.173	23.998	4.1517	70.814	0.4691	0.4089	0.2693	0.5281	2562	94.4
26	00h04m20s	0.1731	23.998	4.1541	70.951	0.4692	0.4093	0.2691	0.5282	2565	94.5
27	00h04m30s	0.1731	23.998	4.1541	70.848	0.4691	0.4089	0.2693	0.5281	2563	94.4
28	00h04m40s	0.173	23.998	4.1517	70.855	0.4695	0.4091	0.2694	0.5282	2560	94.5
29	00h04m50s	0.1731	23.998	4.1541	70.839	0.469	0.4089	0.2692	0.5281	2565	94.5
30	00h05m00s	0.1732	23.998	4.1565	70.857	0.4692	0.409	0.2693	0.5281	2563	94.5
31	00h05m10s	0.1731	23.998	4.1541	70.942	0.469	0.4089	0.2691	0.5281	2565	94.5
32	00h05m20s	0.1731	23.998	4.1541	70.804	0.4693	0.409	0.2693	0.5282	2562	94.4
33	00h05m30s	0.1731	23.998	4.1541	70.854	0.4692	0.4091	0.2692	0.5282	2563	94.5
34	00h05m40s	0.1732	23.998	4.1565	70.872	0.469	0.4091	0.2691	0.5282	2566	94.5
35	00h05m50s	0.1732	23.998	4.1565	70.868	0.4693	0.4089	0.2694	0.5281	2561	94.4
36	00h06m00s	0.1732	23.998	4.1565	70.9	0.4694	0.4089	0.2694	0.5282	2560	94.4
37	00h06m10s	0.1733	23.998	4.1589	70.972	0.4691	0.409	0.2692	0.5281	2563	94.5
38	00h06m20s	0.1733	23.998	4.1589	70.88	0.4692	0.4088	0.2694	0.5281	2561	94.4
39	00h06m30s	0.1732	23.998	4.1565	70.872	0.4694	0.4089	0.2694	0.5282	2559	94.4
40	00h06m40s	0.1733	23.998	4.1589	70.895	0.4691	0.409	0.2692	0.5282	2564	94.5
41	00h06m50s	0.1734	23.998	4.1613	70.971	0.4693	0.4091	0.2693	0.5282	2562	94.5
42	00h07m00s	0.1734	23.998	4.1613	70.956	0.4692	0.409	0.2692	0.5282	2563	94.5
43	00h07m10s	0.1733	23.998	4.1589	70.89	0.4693	0.4091	0.2693	0.5282	2562	94.5
44	00h07m20s	0.1732	23.998	4.1565	70.833	0.4692	0.4089	0.2693	0.5281	2561	94.4
45	00h07m30s	0.1732	23.998	4.1565	70.881	0.4691	0.409	0.2692	0.5281	2564	94.5
46	00h07m40s	0.1732	23.998	4.1565	70.766	0.4689	0.4087	0.2692	0.528	2564	94.5
47	00h07m50s	0.1733	23.998	4.1589	70.871	0.4691	0.409	0.2692	0.5281	2563	94.5
48	00h08m00s	0.1733	23.998	4.1589	70.928	0.4691	0.4088	0.2693	0.5281	2563	94.5
49	00h08m10s	0.1733	23.998	4.1589	70.861	0.4692	0.409	0.2693	0.5282	2562	94.5
50	00h08m20s	0.1733	23.998	4.1589	70.925	0.4693	0.409	0.2694	0.5282	2561	94.4
51	00h08m30s	0.1733	23.998	4.1589	70.871	0.4693	0.4089	0.2694	0.5281	2560	94.4
52	00h08m40s	0.1734	23.998	4.1613	70.868	0.4691	0.4089	0.2693	0.5281	2563	94.5

53	00h08m50s	0.1734	23.998	4.1613	70.967	0.4694	0.4091	0.2694	0.5282	2560	94.4
54	00h09m00s	0.1734	23.998	4.1613	70.951	0.4691	0.4089	0.2693	0.5281	2562	94.4
55	00h09m10s	0.1734	23.998	4.1613	70.932	0.4693	0.4091	0.2693	0.5282	2562	94.5
56	00h09m20s	0.1733	23.998	4.1589	70.876	0.4694	0.4089	0.2694	0.5282	2560	94.5
57	00h09m30s	0.1735	23.998	4.1637	70.971	0.4692	0.4089	0.2693	0.5281	2562	94.5
58	00h09m40s	0.1734	23.998	4.1613	70.876	0.4692	0.4089	0.2693	0.5281	2562	94.5
59	00h09m50s	0.1733	23.998	4.1589	70.882	0.4692	0.4088	0.2693	0.5281	2562	94.4
60	00h10m00s	0.1733	23.998	4.1589	70.936	0.4694	0.4092	0.2693	0.5283	2562	94.5
61	00h10m10s	0.1733	23.998	4.1589	70.88	0.4694	0.4088	0.2695	0.5281	2559	94.4
62	00h10m20s	0.1733	23.998	4.1589	70.873	0.4692	0.4089	0.2693	0.5281	2561	94.4
63	00h10m30s	0.1733	23.998	4.1589	70.869	0.4693	0.409	0.2694	0.5282	2561	94.5
64	00h10m40s	0.1734	23.998	4.1613	70.916	0.4693	0.409	0.2693	0.5282	2562	94.5
65	00h10m50s	0.1734	23.998	4.1613	70.912	0.4693	0.4089	0.2694	0.5281	2560	94.4
66	00h11m00s	0.1734	23.998	4.1613	70.948	0.4692	0.4089	0.2694	0.5281	2561	94.5
67	00h11m10s	0.1733	23.998	4.1589	70.823	0.4693	0.4088	0.2694	0.5281	2560	94.5
68	00h11m20s	0.1732	23.998	4.1565	70.879	0.4692	0.4089	0.2693	0.5281	2562	94.4
69	00h11m30s	0.1732	23.998	4.1565	70.789	0.4694	0.409	0.2694	0.5282	2561	94.5
70	00h11m40s	0.1732	23.998	4.1565	70.77	0.4693	0.4088	0.2695	0.5281	2559	94.5
71	00h11m50s	0.1732	23.998	4.1565	70.805	0.4693	0.4088	0.2694	0.5281	2560	94.4
72	00h12m00s	0.1731	23.998	4.1541	70.795	0.4692	0.4089	0.2694	0.5281	2561	94.4
73	00h12m10s	0.1731	23.998	4.1541	70.784	0.4694	0.4091	0.2694	0.5282	2560	94.4
74	00h12m20s	0.1732	23.998	4.1565	70.843	0.4693	0.4088	0.2694	0.5281	2560	94.4
75	00h12m30s	0.1731	23.998	4.1541	70.765	0.4693	0.4089	0.2694	0.5281	2560	94.4
76	00h12m40s	0.1731	23.998	4.1541	70.76	0.4693	0.409	0.2694	0.5281	2561	94.4
77	00h12m50s	0.1731	23.998	4.1541	70.752	0.4694	0.4088	0.2695	0.5281	2559	94.4
78	00h13m00s	0.1731	23.998	4.1541	70.771	0.4694	0.4089	0.2694	0.5281	2560	94.4
79	00h13m10s	0.173	23.998	4.1517	70.735	0.4693	0.409	0.2694	0.5282	2561	94.4
80	00h13m20s	0.1731	23.998	4.1541	70.754	0.4692	0.4089	0.2693	0.5281	2562	94.5
81	00h13m30s	0.173	23.998	4.1517	70.662	0.4692	0.4089	0.2693	0.5281	2562	94.5
82	00h13m40s	0.1729	23.998	4.1493	70.667	0.4694	0.4088	0.2695	0.5281	2559	94.4
83	00h13m50s	0.173	23.998	4.1517	70.728	0.4692	0.4088	0.2694	0.5281	2561	94.4

84	00h14m00s	0.173	23.998	4.1517	70.754	0.4692	0.4089	0.2693	0.5281	2562	94.4
85	00h14m10s	0.1729	23.998	4.1493	70.697	0.4692	0.4088	0.2694	0.5281	2561	94.4
86	00h14m20s	0.1729	23.998	4.1493	70.703	0.4693	0.4092	0.2693	0.5282	2563	94.4
87	00h14m30s	0.1729	23.998	4.1493	70.71	0.4692	0.4089	0.2693	0.5281	2562	94.5
88	00h14m40s	0.173	23.998	4.1517	70.684	0.4695	0.4089	0.2695	0.5282	2559	94.4
89	00h14m50s	0.1729	23.998	4.1493	70.641	0.4693	0.4087	0.2695	0.528	2558	94.4
90	00h15m00s	0.1729	23.998	4.1493	70.676	0.4694	0.4089	0.2695	0.5282	2559	94.4
91	00h15m10s	0.1729	23.998	4.1493	70.689	0.4693	0.4088	0.2694	0.5281	2560	94.4
92	00h15m20s	0.1729	23.998	4.1493	70.656	0.4694	0.4088	0.2695	0.5281	2558	94.4
93	00h15m30s	0.1728	23.998	4.1469	70.622	0.4693	0.4088	0.2694	0.5281	2560	94.4
94	00h15m40s	0.1729	23.998	4.1493	70.639	0.4692	0.4089	0.2694	0.5281	2561	94.5
95	00h15m50s	0.1728	23.998	4.1469	70.682	0.4693	0.4088	0.2694	0.5281	2560	94.4
96	00h16m00s	0.1728	23.998	4.1469	70.633	0.4693	0.4088	0.2694	0.5281	2560	94.4
97	00h16m10s	0.1729	23.998	4.1493	70.669	0.4693	0.4089	0.2694	0.5281	2561	94.4
98	00h16m20s	0.1729	23.998	4.1493	70.67	0.4692	0.4088	0.2694	0.5281	2561	94.4
99	00h16m30s	0.1728	23.998	4.1469	70.609	0.4694	0.4088	0.2695	0.5281	2559	94.4
100	00h16m40s	0.1727	23.998	4.1445	70.648	0.4693	0.409	0.2694	0.5282	2561	94.4
101	00h16m50s	0.1728	23.998	4.1469	70.657	0.4692	0.409	0.2693	0.5281	2563	94.5
102	00h17m00s	0.1728	23.998	4.1469	70.661	0.4693	0.4089	0.2694	0.5281	2561	94.4
103	00h17m10s	0.1728	23.998	4.1469	70.67	0.4693	0.4088	0.2694	0.5281	2561	94.4
104	00h17m20s	0.1729	23.998	4.1493	70.658	0.4693	0.4088	0.2694	0.5281	2560	94.4
105	00h17m30s	0.1729	23.998	4.1493	70.68	0.4692	0.4089	0.2693	0.5281	2562	94.5
106	00h17m40s	0.1729	23.998	4.1493	70.68	0.4693	0.4089	0.2694	0.5281	2560	94.4
107	00h17m50s	0.1729	23.998	4.1493	70.66	0.4693	0.4089	0.2694	0.5281	2561	94.4
108	00h18m00s	0.1729	23.998	4.1493	70.624	0.4692	0.4089	0.2693	0.5281	2562	94.4
109	00h18m10s	0.1729	23.998	4.1493	70.628	0.4693	0.4089	0.2694	0.5281	2560	94.4
110	00h18m20s	0.1728	23.998	4.1469	70.597	0.4694	0.4088	0.2695	0.5281	2558	94.4
111	00h18m30s	0.173	23.998	4.1517	70.703	0.4692	0.4087	0.2694	0.528	2561	94.4
112	00h18m40s	0.173	23.998	4.1517	70.671	0.4693	0.4088	0.2694	0.5281	2560	94.4
113	00h18m50s	0.1729	23.998	4.1493	70.672	0.4693	0.409	0.2694	0.5282	2561	94.4
114	00h19m00s	0.1729	23.998	4.1493	70.705	0.4693	0.409	0.2694	0.5282	2561	94.4

115	00h19m10s	0.1729	23.998	4.1493	70.665	0.4694	0.4091	0.2694	0.5282	2560	94.5
116	00h19m20s	0.1729	23.998	4.1493	70.617	0.4692	0.4087	0.2694	0.528	2561	94.4
117	00h19m30s	0.1729	23.998	4.1493	70.698	0.4694	0.409	0.2694	0.5282	2560	94.5
118	00h19m40s	0.173	23.998	4.1517	70.702	0.4693	0.4089	0.2694	0.5281	2560	94.4
119	00h19m50s	0.173	23.998	4.1517	70.706	0.4693	0.4089	0.2694	0.5281	2560	94.4
120	00h20m00s	0.173	23.998	4.1517	70.707	0.4692	0.4088	0.2694	0.5281	2561	94.4
121	00h20m10s	0.173	23.998	4.1517	70.688	0.4691	0.4089	0.2693	0.5281	2562	94.5
122	00h20m20s	0.1729	23.998	4.1493	70.685	0.4692	0.4088	0.2693	0.5281	2562	94.4
123	00h20m30s	0.173	23.998	4.1517	70.692	0.4693	0.4088	0.2694	0.5281	2560	94.4
124	00h20m40s	0.173	23.998	4.1517	70.721	0.4693	0.4089	0.2694	0.5281	2561	94.4
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126	00h21m00s	0.173	23.998	4.1517	70.711	0.4694	0.4089	0.2694	0.5281	2560	94.4
127	00h21m10s	0.173	23.998	4.1517	70.731	0.4692	0.4089	0.2693	0.5281	2563	94.5
128	00h21m20s	0.173	23.998	4.1517	70.735	0.4693	0.409	0.2693	0.5282	2561	94.5
129	00h21m30s	0.173	23.998	4.1517	70.748	0.4692	0.4087	0.2694	0.528	2560	94.4
130	00h21m40s	0.1731	23.998	4.1541	70.798	0.4692	0.4089	0.2694	0.5281	2561	94.4
131	00h21m50s	0.1731	23.998	4.1541	70.793	0.4692	0.4088	0.2694	0.5281	2561	94.4
132	00h22m00s	0.1731	23.998	4.1541	70.778	0.4693	0.4088	0.2694	0.5281	2559	94.4
133	00h22m10s	0.1728	23.998	4.1469	70.612	0.4692	0.4089	0.2694	0.5281	2561	94.5
134	00h22m20s	0.1729	23.998	4.1493	70.634	0.4694	0.409	0.2694	0.5282	2560	94.4
135	00h22m30s	0.1731	23.998	4.1541	70.736	0.4692	0.4088	0.2694	0.5281	2560	94.4
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137	00h22m50s	0.173	23.998	4.1517	70.654	0.4693	0.4088	0.2694	0.5281	2560	94.5
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156	00h26m00s	0.1731	23.998	4.1541	70.735	0.4693	0.4087	0.2695	0.5281	2559	94.4
157	00h26m10s	0.1732	23.998	4.1565	70.794	0.4693	0.409	0.2694	0.5282	2561	94.4
158	00h26m20s	0.1733	23.998	4.1589	70.842	0.4692	0.4089	0.2693	0.5281	2562	94.4
159	00h26m30s	0.1732	23.998	4.1565	70.801	0.4692	0.4089	0.2693	0.5281	2562	94.4
160	00h26m40s	0.1732	23.998	4.1565	70.736	0.4692	0.4088	0.2694	0.5281	2560	94.5
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164	00h27m20s	0.1731	23.998	4.1541	70.779	0.4692	0.4088	0.2694	0.5281	2561	94.4
165	00h27m30s	0.173	23.998	4.1517	70.716	0.4693	0.409	0.2693	0.5281	2561	94.4
166	00h27m40s	0.1731	23.998	4.1541	70.707	0.4692	0.409	0.2693	0.5281	2562	94.5
167	00h27m50s	0.173	23.998	4.1517	70.689	0.4691	0.4087	0.2693	0.528	2562	94.5
168	00h28m00s	0.1729	23.998	4.1493	70.654	0.4693	0.4089	0.2694	0.5281	2560	94.4
169	00h28m10s	0.173	23.998	4.1517	70.737	0.4692	0.4089	0.2694	0.5281	2561	94.4
170	00h28m20s	0.173	23.998	4.1517	70.665	0.4694	0.4089	0.2695	0.5281	2559	94.4
171	00h28m30s	0.173	23.998	4.1517	70.709	0.4693	0.4089	0.2694	0.5282	2560	94.4
172	00h28m40s	0.173	23.998	4.1517	70.64	0.4693	0.4088	0.2694	0.5281	2561	94.4
173	00h28m50s	0.1729	23.998	4.1493	70.64	0.4694	0.409	0.2694	0.5282	2560	94.5
174	00h29m00s	0.1729	23.998	4.1493	70.658	0.4693	0.4089	0.2694	0.5281	2561	94.4
175	00h29m10s	0.173	23.998	4.1517	70.704	0.4693	0.4089	0.2694	0.5281	2560	94.4
176	00h29m20s	0.173	23.998	4.1517	70.676	0.469	0.4088	0.2693	0.528	2563	94.4

177	00h29m30s	0.1731	23.998	4.1541	70.721	0.4692	0.4089	0.2693	0.5281	2562	94.4
178	00h29m40s	0.1729	23.998	4.1493	70.683	0.4692	0.4089	0.2693	0.5281	2562	94.5
179	00h29m50s	0.173	23.998	4.1517	70.696	0.4691	0.4089	0.2693	0.5281	2562	94.4
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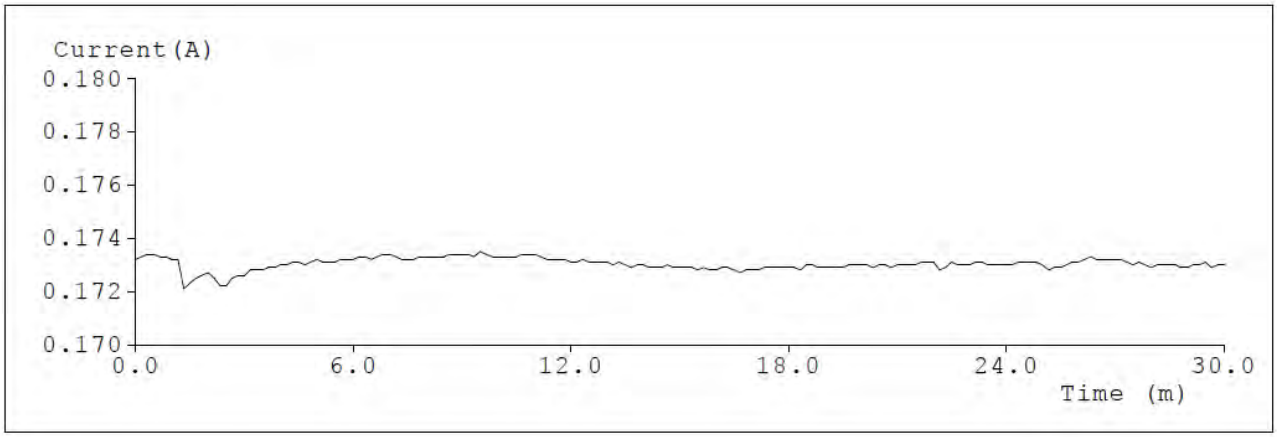
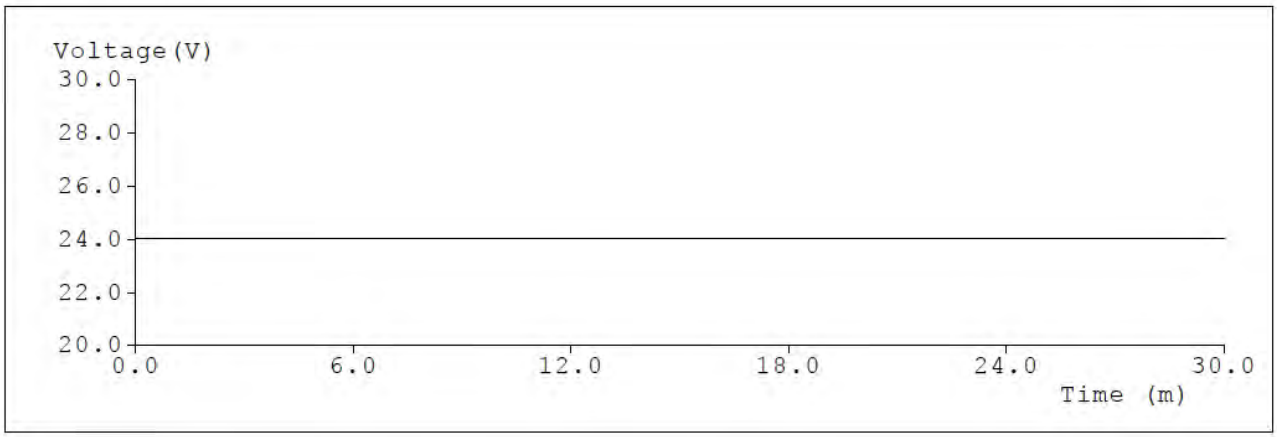
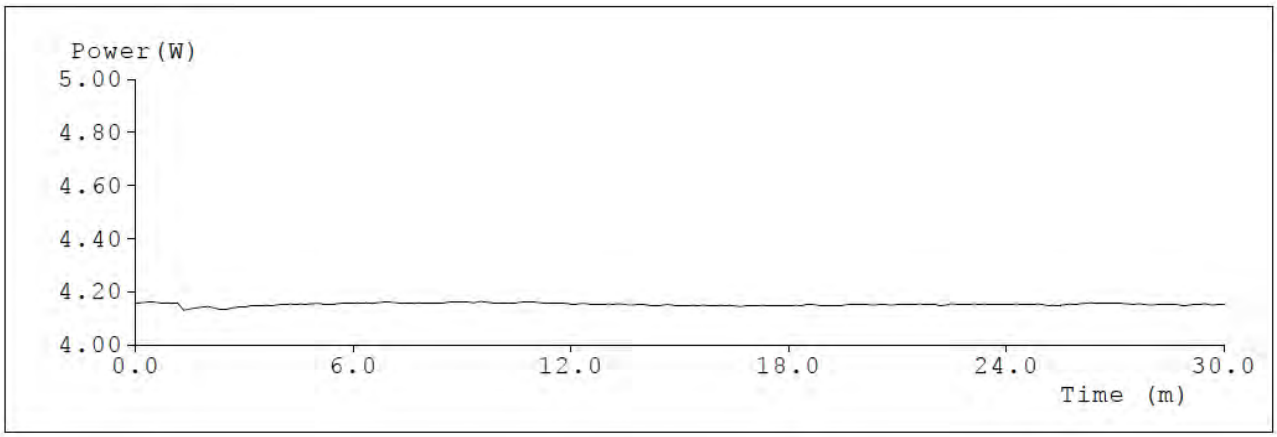
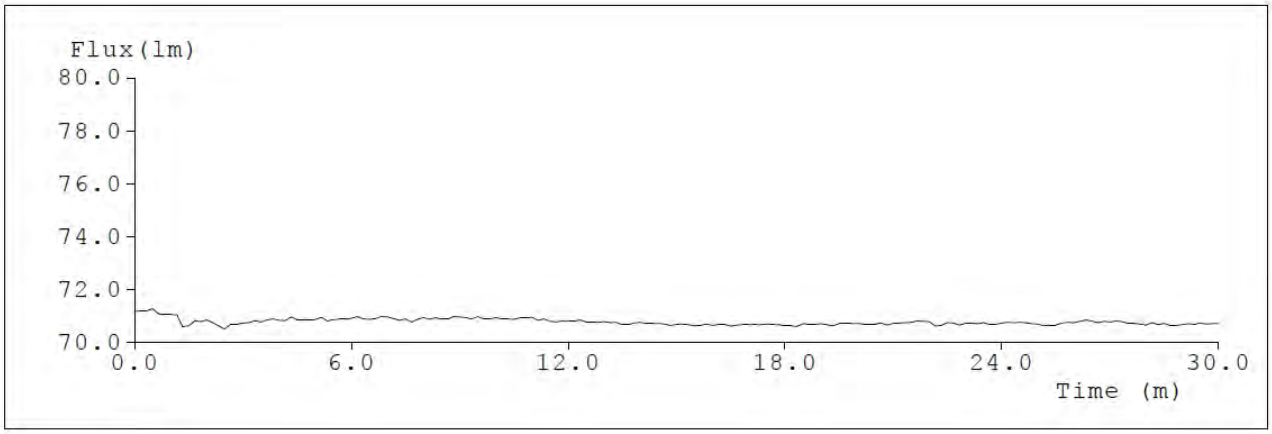
Test curves





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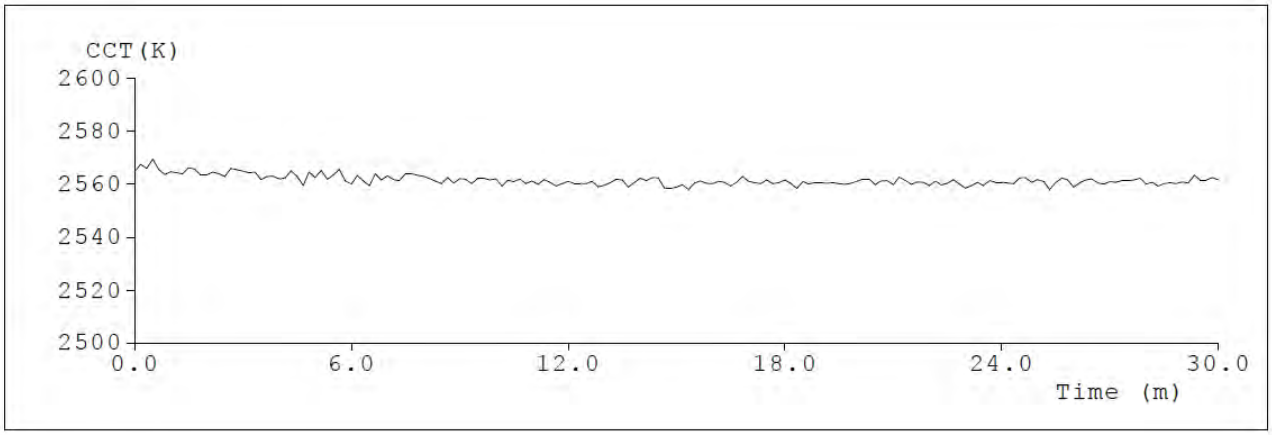
74.0
72.0
70.0
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


CCT(K)
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2520
2500
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6.0
12.0
18.0
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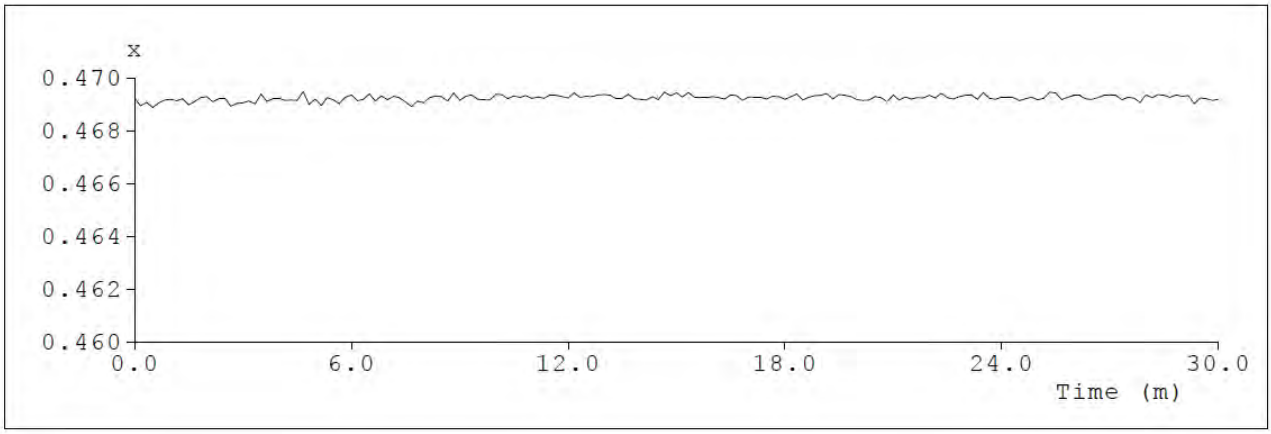
30.0
Time (m)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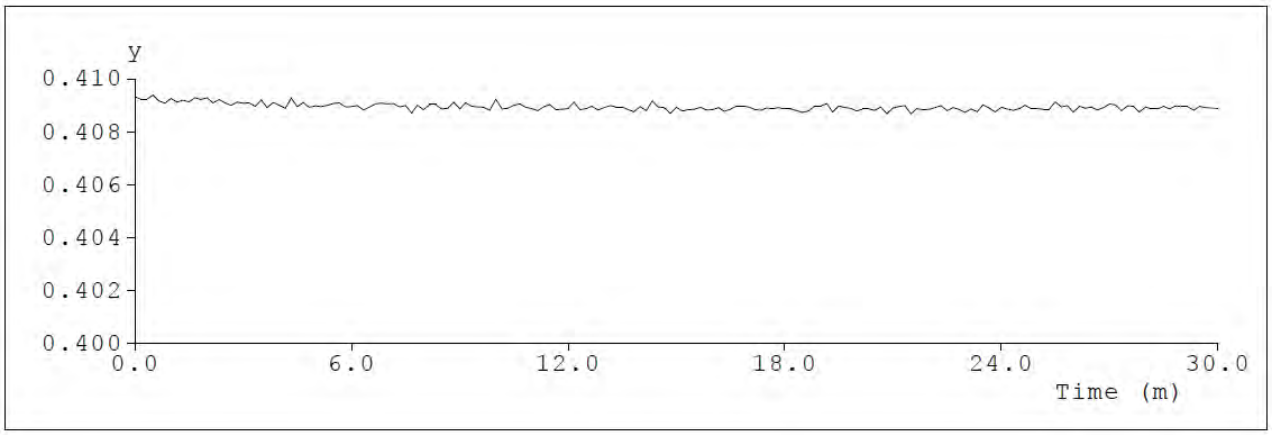
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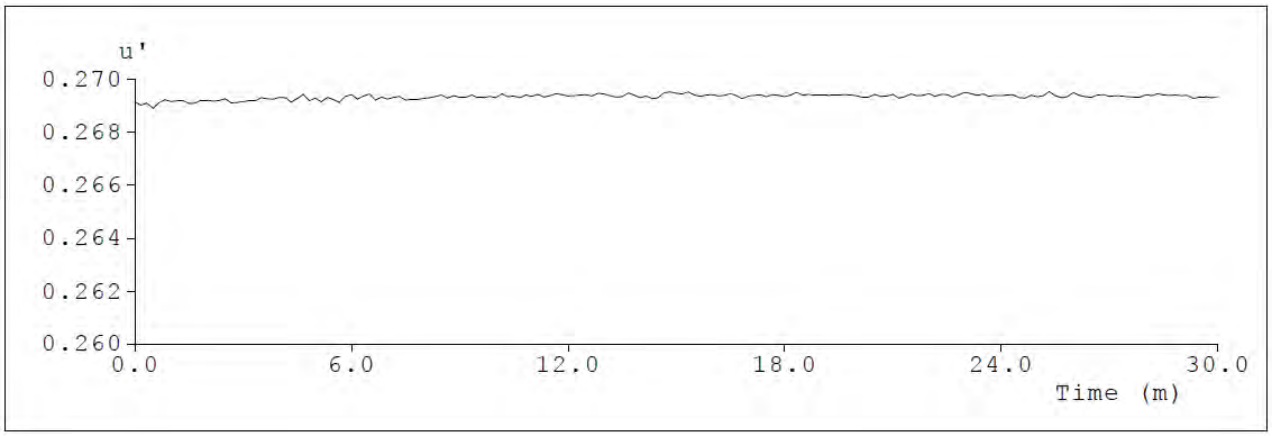
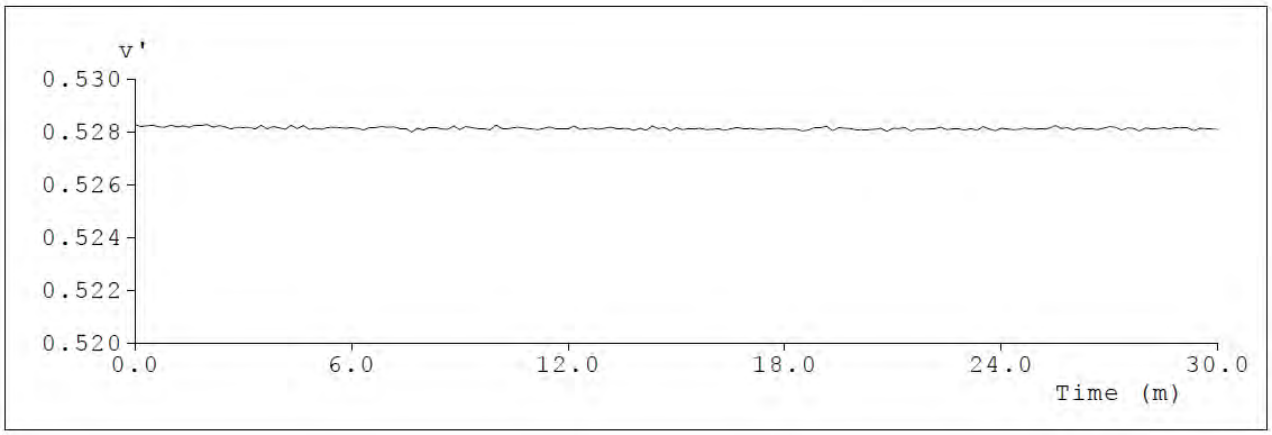

u'
0.270
0.268
0.266
0.264
0.262
0.260
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

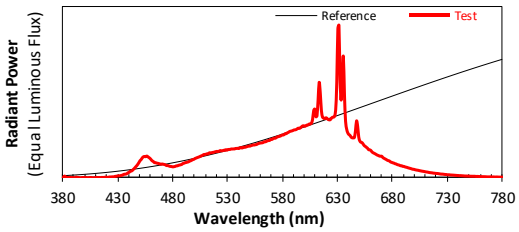

v'
0.530
0.528
0.526
0.524
0.522
0.520
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

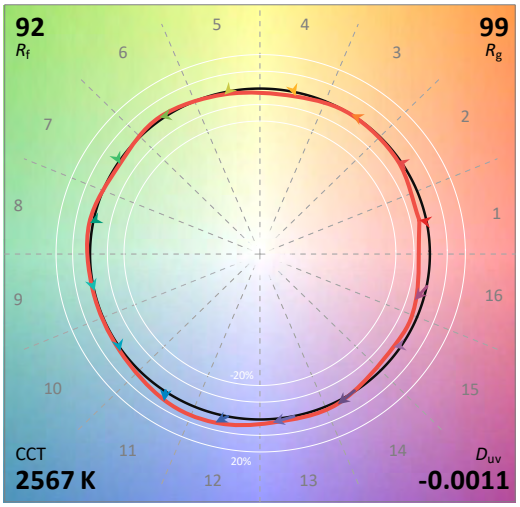
*7.2 ANSI/IES TM-30-18 Color Rendition Report

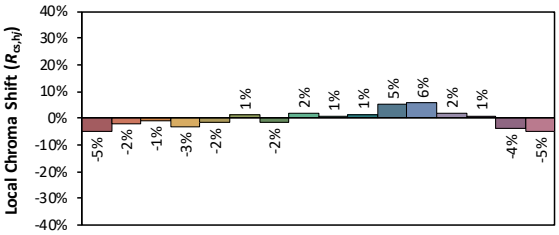
ANSI/IES TM-30-18 Color Rendition Report

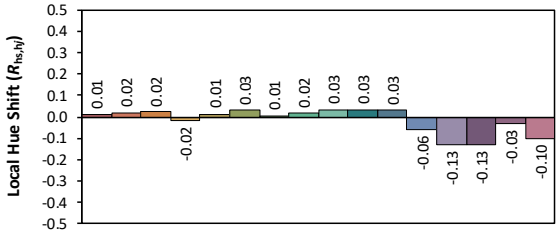
Source: Manufacturer:

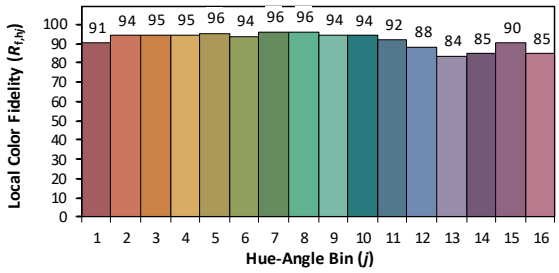
Date: 2023/10/19 Model: LNLY-1000-L27-DF-I-4

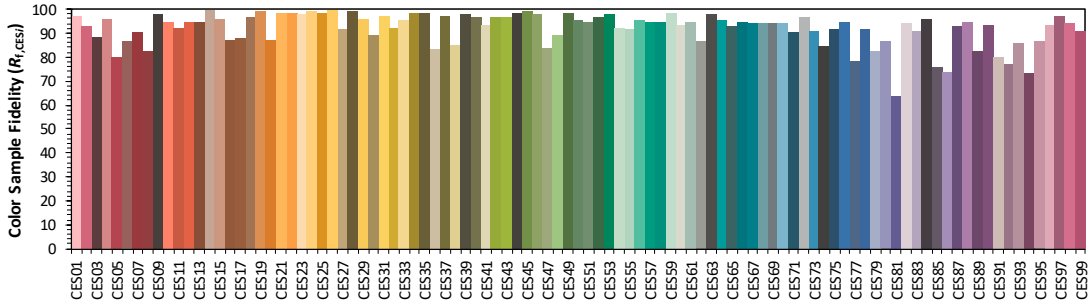












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

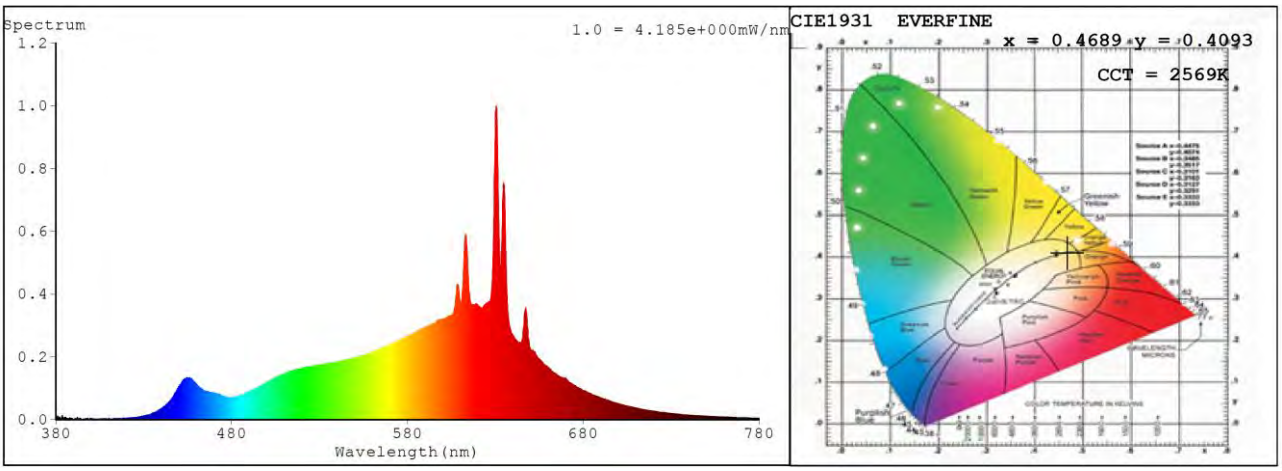
x	0.4690
y	0.4092
u'	0.2690
v'	0.5282

CIE 13.3-1995 (CRI)

R_a	95
R_9	63

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	414	0	448	0.0838	482	0.0703	516	0.1557
381	0.0107	415	0.0026	449	0.0943	483	0.0736	517	0.1567
382	0.0077	416	0.0022	450	0.1055	484	0.0738	518	0.159
383	0	417	0.0026	451	0.1123	485	0.0769	519	0.1608
384	0.0026	418	0.0035	452	0.1224	486	0.0785	520	0.1623
385	0.0012	419	0.004	453	0.1289	487	0.0805	521	0.1614
386	0.0029	420	0.0032	454	0.131	488	0.0827	522	0.1639
387	0.0022	421	0.003	455	0.1295	489	0.088	523	0.1672
388	0.0008	422	0.0053	456	0.1338	490	0.0897	524	0.1658
389	0.0025	423	0.0053	457	0.1298	491	0.0929	525	0.1663
390	0	424	0.0057	458	0.1247	492	0.0943	526	0.1687
391	0.0013	425	0.0063	459	0.1195	493	0.0964	527	0.1691
392	0.0047	426	0.006	460	0.112	494	0.0982	528	0.1727
393	0.0017	427	0.0085	461	0.1044	495	0.1021	529	0.1694
394	0.0024	428	0.0096	462	0.1007	496	0.1047	530	0.1732
395	0.0004	429	0.0107	463	0.0936	497	0.108	531	0.1742
396	0	430	0.0124	464	0.0933	498	0.1117	532	0.1745
397	0.0014	431	0.0125	465	0.0906	499	0.1139	533	0.1771
398	0.0024	432	0.0134	466	0.0895	500	0.1184	534	0.1768
399	0.0016	433	0.0151	467	0.0875	501	0.1212	535	0.1774
400	0.0022	434	0.0167	468	0.0856	502	0.1242	536	0.1774
401	0.0023	435	0.0206	469	0.0833	503	0.1265	537	0.18
402	0	436	0.0224	470	0.0849	504	0.1293	538	0.1804
403	0.001	437	0.0231	471	0.0836	505	0.1326	539	0.1811
404	0.0017	438	0.0258	472	0.082	506	0.1354	540	0.1799
405	0.002	439	0.0312	473	0.0799	507	0.1386	541	0.1846
406	0.0016	440	0.0335	474	0.0756	508	0.1429	542	0.1849
407	0	441	0.0408	475	0.0754	509	0.1434	543	0.183
408	0.0008	442	0.0414	476	0.0737	510	0.1449	544	0.1879
409	0.0013	443	0.0458	477	0.0708	511	0.1474	545	0.1873
410	0.0027	444	0.0525	478	0.07	512	0.1472	546	0.1884
411	0.0021	445	0.0596	479	0.0687	513	0.1533	547	0.1909
412	0.0016	446	0.0673	480	0.0675	514	0.1532	548	0.193
413	0.0023	447	0.0748	481	0.0689	515	0.154	549	0.1949

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.1946	599	0.319	648	0.3162	697	0.0555	746	0.0113
551	0.1977	600	0.3159	649	0.25	698	0.0529	747	0.0112
552	0.1996	601	0.3203	650	0.2259	699	0.0524	748	0.011
553	0.2017	602	0.3239	651	0.2184	700	0.0504	749	0.0106
554	0.2015	603	0.325	652	0.2161	701	0.0486	750	0.0101
555	0.2034	604	0.3305	653	0.2072	702	0.0474	751	0.0098
556	0.2045	605	0.3306	654	0.1978	703	0.0463	752	0.0098
557	0.2083	606	0.3361	655	0.1928	704	0.0446	753	0.0096
558	0.2109	607	0.3591	656	0.1871	705	0.0432	754	0.0098
559	0.2129	608	0.4118	657	0.1815	706	0.0418	755	0.0092
560	0.214	609	0.4214	658	0.1728	707	0.0405	756	0.0086
561	0.2148	610	0.3747	659	0.1717	708	0.0395	757	0.0088
562	0.2167	611	0.3805	660	0.1679	709	0.0382	758	0.0084
563	0.2215	612	0.4766	661	0.1595	710	0.0365	759	0.0079
564	0.2211	613	0.5861	662	0.1542	711	0.0358	760	0.0074
565	0.2239	614	0.5196	663	0.1507	712	0.0345	761	0.0074
566	0.2274	615	0.4143	664	0.1471	713	0.033	762	0.0072
567	0.2288	616	0.373	665	0.143	714	0.0319	763	0.0071
568	0.2299	617	0.3666	666	0.1391	715	0.0312	764	0.0069
569	0.2368	618	0.3631	667	0.1367	716	0.0303	765	0.0065
570	0.2352	619	0.3684	668	0.1332	717	0.0289	766	0.006
571	0.2402	620	0.3654	669	0.1328	718	0.0284	767	0.006
572	0.243	621	0.3587	670	0.1322	719	0.0272	768	0.0059
573	0.2431	622	0.3561	671	0.1242	720	0.0269	769	0.0062
574	0.2469	623	0.3562	672	0.12	721	0.0264	770	0.0057
575	0.2515	624	0.3644	673	0.116	722	0.0252	771	0.0057
576	0.2529	625	0.3711	674	0.1125	723	0.024	772	0.0057
577	0.255	626	0.3723	675	0.108	724	0.0231	773	0.0049
578	0.2574	627	0.3773	676	0.1055	725	0.0229	774	0.0053
579	0.2622	628	0.4157	677	0.103	726	0.0222	775	0.0053
580	0.2627	629	0.5839	678	0.0973	727	0.0212	776	0.0048
581	0.2649	630	0.9139	679	0.0949	728	0.0205	777	0.0046
582	0.2711	631	0.9346	680	0.0922	729	0.02	778	0.0045
583	0.2707	632	0.5999	681	0.0903	730	0.0185	779	0.0042
584	0.2762	633	0.4768	682	0.0868	731	0.019	780	0.0042
585	0.2789	634	0.6295	683	0.0851	732	0.0179		
586	0.2839	635	0.7447	684	0.0815	733	0.0174		
587	0.286	636	0.5103	685	0.0795	734	0.017		
588	0.2876	637	0.3469	686	0.0776	735	0.0166		
589	0.2901	638	0.2993	687	0.0741	736	0.016		
590	0.2935	639	0.2764	688	0.0743	737	0.0155		
591	0.2945	640	0.266	689	0.0705	738	0.0149		
592	0.2962	641	0.2607	690	0.0702	739	0.0143		
593	0.3005	642	0.2506	691	0.0674	740	0.0134		
594	0.3047	643	0.2456	692	0.0655	741	0.0136		
595	0.3034	644	0.2454	693	0.0639	742	0.0134		
596	0.3077	645	0.2467	694	0.0613	743	0.0127		
597	0.3132	646	0.2868	695	0.0595	744	0.0125		
598	0.3185	647	0.349	696	0.0575	745	0.0116		

8. Goniophotometer Test results for LNLY-1000-L27-DF-I-4

8.1 Test Data

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

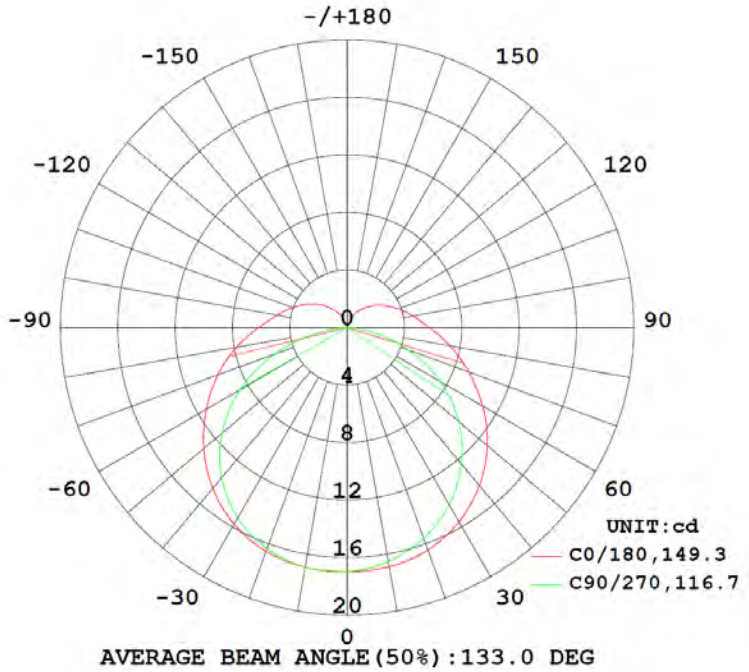
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
24.002	--	0.1831	1.0000	4.3948

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	Imax (cd)	η up (%)	η down (%)
74.1196	16.87	17.01	15.1	84.9

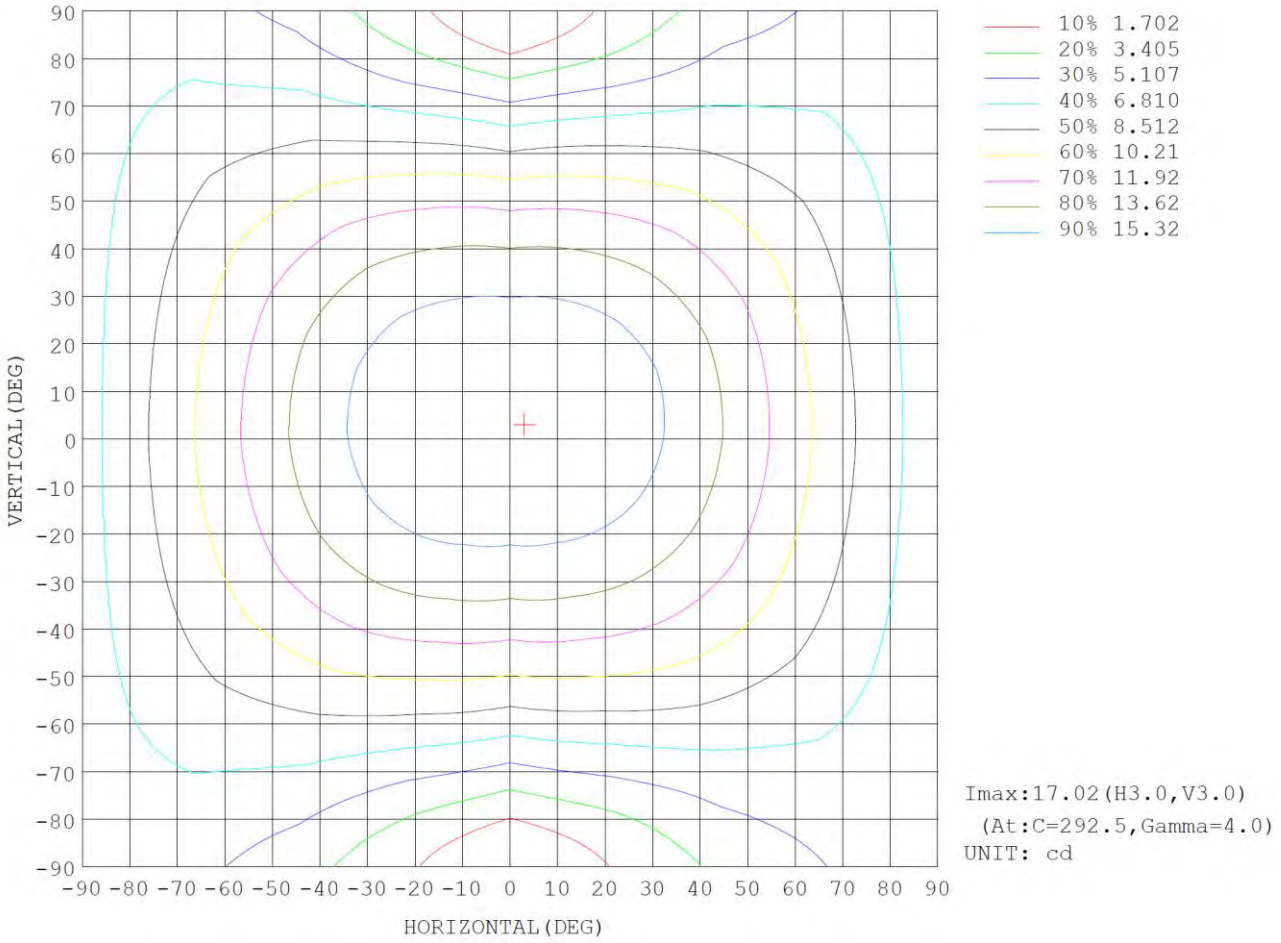
8.2 Luminous Intensity Distribution



8.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	16.88	16.67	16.52	16.68	16.91	16.97	16.92	16.96	0- 10	1.613	1.613	2.18,2.18
20	16.45	15.99	15.60	16.06	16.56	16.60	16.36	16.53	10- 20	4.691	6.304	8.5,8.5
30	15.60	14.91	14.22	15.03	15.78	15.79	15.27	15.66	20- 30	7.307	13.61	18.4,18.4
40	14.35	13.43	12.39	13.62	14.60	14.52	13.62	14.32	30- 40	9.161	22.77	30.7,30.7
50	12.76	11.61	10.13	11.85	13.07	12.82	11.41	12.56	40- 50	10.04	32.81	44.3,44.3
60	10.91	9.534	7.494	9.815	11.35	10.75	8.626	10.44	50- 60	9.844	42.65	57.5,57.5
70	9.021	7.297	4.553	7.705	9.606	8.527	5.366	8.071	60- 70	8.656	51.31	69.2,69.2
80	7.257	5.299	1.649	5.772	7.831	6.423	1.968	5.943	70- 80	6.795	58.10	78.4,78.4
90	5.714	3.829	0.0565	4.175	6.185	4.630	0.0156	4.296	80- 90	4.844	62.95	84.9,84.9
100	4.665	3.007	0	3.229	4.985	3.571	0	3.358	90-100	3.566	66.51	89.7,89.7
110	3.812	2.404	0	2.567	4.077	2.829	0	2.657	100-110	2.757	69.27	93.5,93.5
120	3.057	1.914	0	1.989	3.257	2.186	0	2.086	110-120	2.054	71.32	96.2,96.2
130	2.383	1.469	0.0017	1.373	2.494	1.595	0.0013	1.578	120-130	1.426	72.75	98.2,98.2
140	1.749	1.045	0.0026	0.9238	1.722	1.104	0.0069	1.085	130-140	0.8352	73.59	99.3,99.3
150	1.138	0.0379	0.0043	0.2434	1.081	0.7340	0.0135	0.0152	140-150	0.4269	74.01	99.9,99.9
160	0.0118	0.0100	0.0091	0.0113	0.0161	0.0161	0.0156	0.0161	150-160	0.1015	74.11	100,100
170	0.0113	0.0113	0.0113	0.0117	0.0157	0.0157	0.0156	0.0161	160-170	0.0038	74.12	100,100
180	0.0118	0.0148	0.0148	0.0152	0.0148	0.0139	0.0148	0.0152	170-180	0.0014	74.12	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	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
5	17.0	16.9	16.9	16.8	16.8	16.8	16.9	16.9	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
10	16.9	16.8	16.7	16.6	16.5	16.6	16.7	16.8	16.9	17.0	17.0	16.9	16.9	16.9	17.0	16.9
15	16.7	16.6	16.4	16.2	16.1	16.2	16.4	16.6	16.8	16.9	16.8	16.7	16.7	16.8	16.8	16.8
20	16.4	16.3	16.0	15.7	15.6	15.8	16.1	16.3	16.6	16.6	16.6	16.5	16.4	16.4	16.5	16.6
25	16.1	15.8	15.5	15.2	15.0	15.2	15.6	16.0	16.2	16.3	16.3	16.0	15.9	16.0	16.2	16.2
30	15.6	15.3	14.9	14.5	14.2	14.5	15.0	15.5	15.8	15.9	15.8	15.5	15.3	15.5	15.7	15.7
35	15.0	14.7	14.2	13.7	13.4	13.7	14.4	14.9	15.2	15.4	15.2	14.8	14.5	14.8	15.0	15.1
40	14.3	14.0	13.4	12.8	12.4	12.9	13.6	14.2	14.6	14.7	14.5	14.0	13.6	13.9	14.3	14.5
45	13.6	13.2	12.6	11.8	11.3	11.9	12.8	13.5	13.9	14.0	13.7	13.1	12.6	13.0	13.5	13.7
50	12.8	12.3	11.6	10.7	10.1	10.9	11.9	12.6	13.1	13.2	12.8	12.1	11.4	11.9	12.6	12.8
55	11.9	11.4	10.6	9.57	8.86	9.71	10.9	11.7	12.2	12.3	11.8	10.9	10.1	10.7	11.5	11.9
60	10.9	10.4	9.53	8.33	7.49	8.50	9.82	10.8	11.3	11.3	10.8	9.64	8.63	9.45	10.4	10.9
65	9.94	9.42	8.42	7.04	6.05	7.22	8.75	9.89	10.5	10.4	9.61	8.27	7.04	8.06	9.27	9.90
70	9.02	8.46	7.30	5.74	4.55	5.93	7.71	8.99	9.61	9.47	8.53	6.85	5.37	6.63	8.07	8.93
75	8.13	7.54	6.24	4.45	3.05	4.66	6.71	8.09	8.72	8.54	7.46	5.40	3.64	5.18	6.96	7.97
80	7.26	6.66	5.30	3.27	1.65	3.53	5.77	7.20	7.83	7.61	6.42	4.09	1.97	3.83	5.94	7.06
85	6.45	5.87	4.49	2.38	0.52	2.62	4.90	6.34	6.97	6.71	5.45	3.03	0.60	2.83	5.05	6.23
90	5.71	5.16	3.83	1.82	0.06	1.99	4.18	5.59	6.18	5.90	4.63	2.28	0.02	2.16	4.30	5.47
95	5.15	4.63	3.37	1.52	0.00	1.64	3.64	4.96	5.52	5.23	4.02	1.88	0.00	1.79	3.77	4.89
100	4.67	4.18	3.01	1.31	0.00	1.40	3.23	4.47	4.98	4.71	3.57	1.61	0.00	1.53	3.36	4.41
105	4.22	3.77	2.69	1.15	0.00	1.20	2.88	4.03	4.51	4.25	3.18	1.40	0.00	1.34	2.99	3.98
110	3.81	3.41	2.40	1.01	0.00	1.01	2.57	3.63	4.08	3.82	2.83	1.21	0.00	1.17	2.66	3.58
115	3.42	3.05	2.15	0.89	0.00	0.77	2.27	3.25	3.66	3.42	2.50	1.04	0.00	1.02	2.36	3.20
120	3.06	2.73	1.91	0.71	0.00	0.66	1.99	2.89	3.26	3.03	2.19	0.88	0.00	0.87	2.09	2.85
125	2.72	2.42	1.69	0.64	0.00	0.55	1.69	2.53	2.87	2.65	1.89	0.73	0.00	0.71	1.83	2.52
130	2.38	2.12	1.47	0.29	0.00	0.43	1.37	2.19	2.49	2.30	1.59	0.59	0.00	0.42	1.58	2.20
135	2.06	1.83	1.26	0.01	0.00	0.01	1.14	1.80	2.13	1.94	1.34	0.02	0.00	0.01	1.33	1.89
140	1.75	1.55	1.05	0.01	0.00	0.01	0.92	1.46	1.72	1.58	1.10	0.01	0.01	0.01	1.08	1.59
145	1.45	1.28	0.71	0.01	0.00	0.01	0.72	1.19	1.41	1.33	0.91	0.01	0.01	0.01	0.59	1.28
150	1.14	0.99	0.04	0.01	0.00	0.01	0.24	0.92	1.08	1.04	0.73	0.01	0.01	0.01	0.02	0.93
155	0.57	0.16	0.01	0.01	0.01	0.01	0.01	0.62	0.79	0.77	0.02	0.02	0.02	0.02	0.02	0.02
160	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
165	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
170	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
175	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02
180	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02

9. Integrating Sphere Test Results for LNLY-1000-L27-DF-I-6

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	0.2503	23.998	6.0067	102.31	0.4698	0.4098	0.2693	0.5286	2561	94.6
1	00h00m10s	0.2504	23.998	6.0091	102.14	0.4702	0.41	0.2695	0.5287	2557	94.6
2	00h00m20s	0.2505	23.998	6.0115	102.27	0.4693	0.4096	0.2691	0.5284	2565	94.6
3	00h00m30s	0.2506	23.998	6.0139	102.22	0.4701	0.41	0.2694	0.5287	2558	94.6
4	00h00m40s	0.2507	23.998	6.0163	102.27	0.4697	0.4093	0.2695	0.5284	2558	94.5
5	00h00m50s	0.2508	23.998	6.0187	102.17	0.4696	0.4096	0.2693	0.5284	2562	94.6
6	00h01m00s	0.2509	23.998	6.0211	102.48	0.4694	0.4099	0.269	0.5285	2567	94.7
7	00h01m10s	0.2509	23.998	6.0211	102.16	0.4701	0.4098	0.2695	0.5286	2557	94.5
8	00h01m20s	0.251	23.998	6.0235	102.12	0.4702	0.4097	0.2696	0.5286	2555	94.5
9	00h01m30s	0.2511	23.998	6.0259	102.24	0.4697	0.4095	0.2694	0.5284	2560	94.6
10	00h01m40s	0.2511	23.998	6.0259	102.16	0.4697	0.4089	0.2697	0.5282	2555	94.6
11	00h01m50s	0.2512	23.998	6.0283	102.25	0.4692	0.4095	0.2691	0.5284	2566	94.7
12	00h02m00s	0.2513	23.998	6.0307	102.45	0.4703	0.41	0.2695	0.5287	2556	94.5
13	00h02m10s	0.2513	23.998	6.0307	102.12	0.4697	0.409	0.2696	0.5282	2556	94.4
14	00h02m20s	0.2514	23.998	6.0331	102.22	0.4696	0.4087	0.2697	0.5281	2555	94.4
15	00h02m30s	0.2514	23.998	6.0331	102.28	0.47	0.4098	0.2694	0.5286	2559	94.6
16	00h02m40s	0.2515	23.998	6.0355	102.22	0.4698	0.4094	0.2695	0.5284	2557	94.6
17	00h02m50s	0.2515	23.998	6.0355	102.27	0.4698	0.4094	0.2695	0.5284	2558	94.6
18	00h03m00s	0.2516	23.998	6.0379	102.38	0.4703	0.4102	0.2694	0.5288	2558	94.5
19	00h03m10s	0.2516	23.998	6.0379	102.27	0.4696	0.4093	0.2694	0.5283	2559	94.6
20	00h03m20s	0.2516	23.998	6.0379	102.33	0.4702	0.4094	0.2698	0.5284	2552	94.4
21	00h03m30s	0.2517	23.998	6.0403	102.18	0.4701	0.4095	0.2696	0.5285	2555	94.5

22	00h03m40s	0.2517	23.998	6.0403	102.43	0.47	0.4096	0.2695	0.5285	2557	94.6
23	00h03m50s	0.2518	23.998	6.0427	102.49	0.4701	0.4099	0.2694	0.5286	2558	94.5
24	00h04m00s	0.2518	23.998	6.0427	102.39	0.4705	0.4095	0.2699	0.5285	2550	94.5
25	00h04m10s	0.2518	23.998	6.0427	102.45	0.4699	0.4094	0.2696	0.5284	2556	94.6
26	00h04m20s	0.2519	23.998	6.0451	102.05	0.4704	0.4099	0.2697	0.5287	2553	94.7
27	00h04m30s	0.2519	23.998	6.0451	102.3	0.4699	0.409	0.2697	0.5282	2554	94.4
28	00h04m40s	0.2519	23.998	6.0451	102.39	0.4705	0.4095	0.2699	0.5285	2550	94.5
29	00h04m50s	0.252	23.998	6.0475	102.05	0.4708	0.4098	0.27	0.5287	2548	94.6
30	00h05m00s	0.252	23.998	6.0475	102.28	0.4697	0.409	0.2696	0.5282	2556	94.5
31	00h05m10s	0.252	23.998	6.0475	102.41	0.4694	0.409	0.2694	0.5282	2560	94.7
32	00h05m20s	0.252	23.998	6.0475	102.26	0.4696	0.4089	0.2696	0.5282	2557	94.6
33	00h05m30s	0.2521	23.998	6.0499	102.46	0.4701	0.4099	0.2694	0.5286	2558	94.6
34	00h05m40s	0.2521	23.998	6.0499	102.32	0.4705	0.4098	0.2698	0.5287	2552	94.7
35	00h05m50s	0.2521	23.998	6.0499	102.36	0.4701	0.4098	0.2695	0.5286	2557	94.5
36	00h06m00s	0.2521	23.998	6.0499	102.14	0.47	0.4091	0.2697	0.5283	2553	94.6
37	00h06m10s	0.2522	23.998	6.0523	102.36	0.4707	0.41	0.2698	0.5288	2551	94.6
38	00h06m20s	0.2522	23.998	6.0523	102.32	0.47	0.4099	0.2694	0.5286	2560	94.7
39	00h06m30s	0.2522	23.998	6.0523	102.27	0.4699	0.409	0.2697	0.5283	2554	94.6
40	00h06m40s	0.2522	23.998	6.0523	102.37	0.4707	0.4098	0.2699	0.5287	2549	94.5
41	00h06m50s	0.2522	23.998	6.0523	102.45	0.4703	0.4096	0.2697	0.5286	2553	94.5
42	00h07m00s	0.2523	23.998	6.0547	102.24	0.4705	0.4093	0.27	0.5285	2548	94.6
43	00h07m10s	0.2523	23.998	6.0547	102.09	0.4699	0.4086	0.2699	0.5281	2550	94.6
44	00h07m20s	0.2523	23.998	6.0547	102.31	0.4707	0.4097	0.2699	0.5286	2549	94.5
45	00h07m30s	0.2523	23.998	6.0547	102.2	0.4702	0.4095	0.2697	0.5285	2553	94.6
46	00h07m40s	0.2523	23.998	6.0547	102.27	0.4704	0.4091	0.27	0.5284	2548	94.5
47	00h07m50s	0.2523	23.998	6.0547	102.26	0.4699	0.4086	0.2699	0.5281	2551	94.4
48	00h08m00s	0.2523	23.998	6.0547	102.24	0.4704	0.4091	0.27	0.5284	2549	94.4
49	00h08m10s	0.2524	23.998	6.0571	102.41	0.4705	0.4098	0.2698	0.5286	2551	94.6
50	00h08m20s	0.2524	23.998	6.0571	102.33	0.4704	0.4095	0.2698	0.5285	2551	94.6
51	00h08m30s	0.2524	23.998	6.0571	102.37	0.4703	0.4094	0.2698	0.5285	2552	94.5
52	00h08m40s	0.2524	23.998	6.0571	102.18	0.4705	0.4093	0.27	0.5285	2549	94.5

53	00h08m50s	0.2524	23.998	6.0571	102.16	0.4703	0.4089	0.2701	0.5283	2547	94.5
54	00h09m00s	0.2524	23.998	6.0571	102.36	0.4704	0.4096	0.2698	0.5286	2551	94.6
55	00h09m10s	0.2524	23.998	6.0571	102.48	0.4702	0.4097	0.2696	0.5286	2555	94.6
56	00h09m20s	0.2525	23.998	6.0595	102.28	0.4704	0.4096	0.2698	0.5286	2552	94.6
57	00h09m30s	0.2525	23.998	6.0595	102.43	0.4707	0.4099	0.2699	0.5287	2550	94.6
58	00h09m40s	0.2525	23.998	6.0595	102.29	0.4707	0.4094	0.27	0.5285	2547	94.6
59	00h09m50s	0.2525	23.998	6.0595	102.36	0.4707	0.4097	0.2699	0.5286	2549	94.5
60	00h10m00s	0.2525	23.998	6.0595	102.47	0.4705	0.4099	0.2697	0.5287	2552	94.6
61	00h10m10s	0.2525	23.998	6.0595	102.45	0.471	0.4099	0.2701	0.5288	2546	94.4
62	00h10m20s	0.2525	23.998	6.0595	102.14	0.4707	0.4093	0.2701	0.5285	2545	94.5
63	00h10m30s	0.2525	23.998	6.0595	102.49	0.4708	0.4104	0.2697	0.5289	2552	94.6
64	00h10m40s	0.2525	23.998	6.0595	102.43	0.4707	0.4098	0.2699	0.5287	2550	94.5
65	00h10m50s	0.2525	23.998	6.0595	102.3	0.4709	0.4096	0.2701	0.5286	2545	94.6
66	00h11m00s	0.2525	23.998	6.0595	102.39	0.4699	0.4088	0.2698	0.5282	2552	94.6
67	00h11m10s	0.2526	23.998	6.0619	102.32	0.4704	0.4094	0.2699	0.5285	2550	94.6
68	00h11m20s	0.2526	23.998	6.0619	102.37	0.4706	0.4095	0.27	0.5285	2548	94.6
69	00h11m30s	0.2526	23.998	6.0619	102.21	0.4703	0.4094	0.2698	0.5285	2552	94.6
70	00h11m40s	0.2526	23.998	6.0619	102.27	0.4706	0.4095	0.27	0.5286	2549	94.6
71	00h11m50s	0.2526	23.998	6.0619	102.46	0.4706	0.4093	0.27	0.5285	2547	94.6
72	00h12m00s	0.2526	23.998	6.0619	102.19	0.4707	0.4097	0.27	0.5287	2548	94.6
73	00h12m10s	0.2526	23.998	6.0619	102.4	0.4705	0.4103	0.2695	0.5288	2556	94.7
74	00h12m20s	0.2526	23.998	6.0619	102.13	0.471	0.4099	0.2701	0.5288	2546	94.7
75	00h12m30s	0.2526	23.998	6.0619	102.38	0.4703	0.4093	0.2698	0.5284	2551	94.6
76	00h12m40s	0.2526	23.998	6.0619	102.29	0.4703	0.4092	0.2699	0.5284	2549	94.5
77	00h12m50s	0.2526	23.998	6.0619	102.34	0.4707	0.4098	0.2698	0.5287	2550	94.5
78	00h13m00s	0.2526	23.998	6.0619	102.32	0.4705	0.4091	0.2701	0.5284	2547	94.4
79	00h13m10s	0.2526	23.998	6.0619	102.24	0.4706	0.4093	0.27	0.5285	2547	94.6
80	00h13m20s	0.2526	23.998	6.0619	102.42	0.4711	0.41	0.2701	0.5288	2545	94.5
81	00h13m30s	0.2526	23.998	6.0619	102.19	0.4708	0.41	0.2699	0.5288	2549	94.7
82	00h13m40s	0.2526	23.998	6.0619	102.37	0.4707	0.41	0.2698	0.5288	2551	94.6
83	00h13m50s	0.2526	23.998	6.0619	102.22	0.4713	0.4095	0.2704	0.5287	2540	94.5

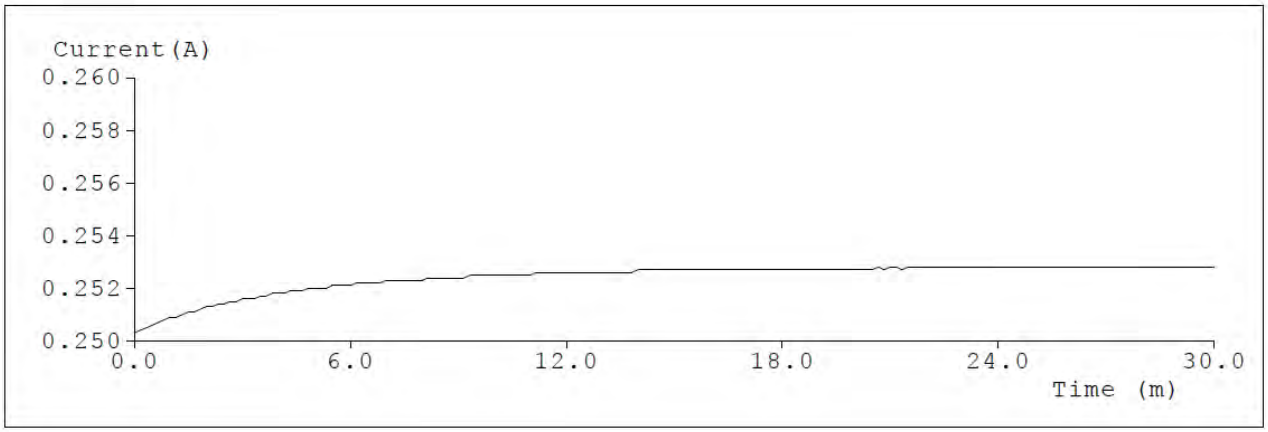
84	00h14m00s	0.2527	23.998	6.0643	102.29	0.4705	0.4094	0.27	0.5285	2548	94.6
85	00h14m10s	0.2527	23.998	6.0643	102.24	0.4711	0.4097	0.2702	0.5287	2544	94.6
86	00h14m20s	0.2527	23.998	6.0643	102.17	0.4706	0.4096	0.2699	0.5286	2549	94.6
87	00h14m30s	0.2527	23.998	6.0643	102.26	0.4705	0.4092	0.2701	0.5284	2547	94.5
88	00h14m40s	0.2527	23.998	6.0643	102.22	0.4709	0.4101	0.2699	0.5288	2549	94.6
89	00h14m50s	0.2527	23.998	6.0643	102.28	0.4707	0.4098	0.2699	0.5287	2549	94.6
90	00h15m00s	0.2527	23.998	6.0643	102.23	0.4709	0.4097	0.2701	0.5287	2546	94.6
91	00h15m10s	0.2527	23.998	6.0643	102.26	0.4709	0.4098	0.27	0.5287	2547	94.5
92	00h15m20s	0.2527	23.998	6.0643	102.36	0.4712	0.4095	0.2704	0.5286	2541	94.3
93	00h15m30s	0.2527	23.998	6.0643	102.26	0.4703	0.4097	0.2697	0.5286	2553	94.5
94	00h15m40s	0.2527	23.998	6.0643	102.34	0.4709	0.4101	0.2699	0.5288	2548	94.6
95	00h15m50s	0.2527	23.998	6.0643	102.29	0.471	0.4097	0.2701	0.5287	2545	94.5
96	00h16m00s	0.2527	23.998	6.0643	102.51	0.4709	0.4098	0.27	0.5287	2547	94.5
97	00h16m10s	0.2527	23.998	6.0643	102.47	0.4717	0.4106	0.2702	0.5291	2543	94.5
98	00h16m20s	0.2527	23.998	6.0643	102.48	0.4711	0.41	0.2701	0.5288	2545	94.3
99	00h16m30s	0.2527	23.998	6.0643	102.12	0.4711	0.4095	0.2703	0.5286	2541	94.4
100	00h16m40s	0.2527	23.998	6.0643	102.17	0.4707	0.4098	0.2699	0.5287	2549	94.6
101	00h16m50s	0.2527	23.998	6.0643	102.24	0.4707	0.4095	0.27	0.5286	2547	94.5
102	00h17m00s	0.2527	23.998	6.0643	102.32	0.4707	0.4095	0.27	0.5285	2547	94.7
103	00h17m10s	0.2527	23.998	6.0643	102.25	0.4706	0.4094	0.27	0.5285	2548	94.6
104	00h17m20s	0.2527	23.998	6.0643	102.26	0.4713	0.4098	0.2703	0.5288	2542	94.5
105	00h17m30s	0.2527	23.998	6.0643	102.34	0.4715	0.4105	0.2701	0.5291	2544	94.7
106	00h17m40s	0.2527	23.998	6.0643	102.3	0.4709	0.4099	0.2699	0.5288	2548	94.5
107	00h17m50s	0.2527	23.998	6.0643	102.2	0.4706	0.4095	0.2699	0.5286	2549	94.6
108	00h18m00s	0.2527	23.998	6.0643	102.08	0.4708	0.4094	0.2701	0.5285	2545	94.5
109	00h18m10s	0.2527	23.998	6.0643	102.26	0.4711	0.4104	0.2699	0.529	2549	94.7
110	00h18m20s	0.2527	23.998	6.0643	102.21	0.471	0.4101	0.27	0.5288	2548	94.6
111	00h18m30s	0.2527	23.998	6.0643	102.05	0.4718	0.4104	0.2703	0.5291	2541	94.5
112	00h18m40s	0.2527	23.998	6.0643	102.34	0.4711	0.4098	0.2702	0.5287	2544	94.5
113	00h18m50s	0.2527	23.998	6.0643	102.24	0.4713	0.41	0.2702	0.5288	2543	94.5
114	00h19m00s	0.2527	23.998	6.0643	102.29	0.4709	0.4097	0.27	0.5287	2546	94.6

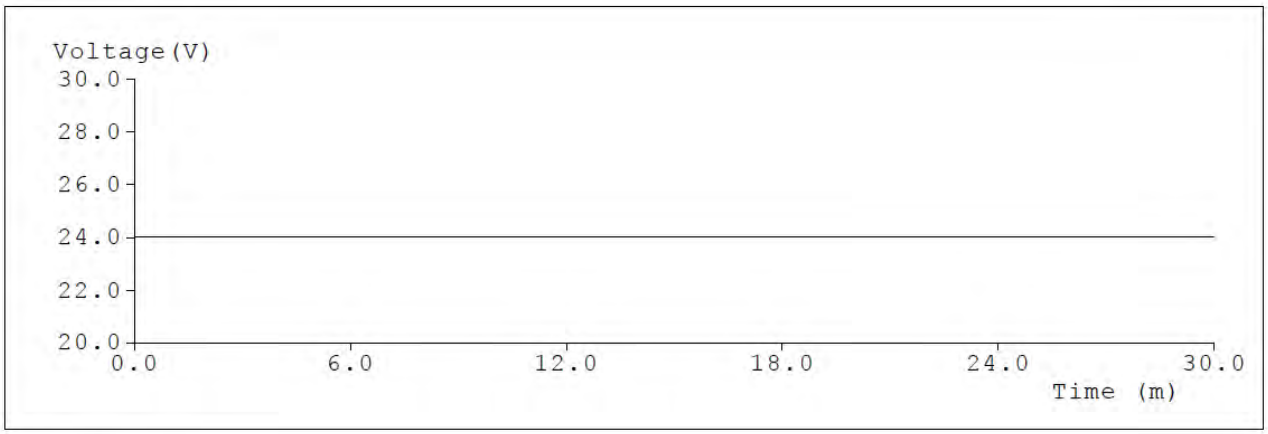
115	00h19m10s	0.2527	23.998	6.0643	102.3	0.4708	0.41	0.2698	0.5288	2550	94.5
116	00h19m20s	0.2527	23.998	6.0643	102.17	0.4712	0.4101	0.2701	0.5289	2546	94.4
117	00h19m30s	0.2527	23.998	6.0643	102.24	0.4707	0.4096	0.27	0.5286	2547	94.6
118	00h19m40s	0.2527	23.998	6.0643	102.21	0.4707	0.4097	0.2699	0.5286	2549	94.5
119	00h19m50s	0.2527	23.998	6.0643	102.17	0.4713	0.4102	0.2701	0.5289	2545	94.5
120	00h20m00s	0.2527	23.998	6.0643	102.17	0.4717	0.4099	0.2705	0.5289	2538	94.5
121	00h20m10s	0.2527	23.998	6.0643	102.18	0.4712	0.4095	0.2704	0.5286	2541	94.5
122	00h20m20s	0.2527	23.998	6.0643	102.3	0.4716	0.4105	0.2701	0.5291	2543	94.7
123	00h20m30s	0.2527	23.998	6.0643	102.19	0.4713	0.4106	0.2699	0.5291	2548	94.5
124	00h20m40s	0.2528	23.998	6.0667	102.53	0.4707	0.4099	0.2698	0.5287	2550	94.5
125	00h20m50s	0.2527	23.998	6.0643	101.97	0.4713	0.4101	0.2701	0.5289	2544	94.7
126	00h21m00s	0.2528	23.998	6.0667	102.01	0.4709	0.4095	0.2701	0.5286	2545	94.5
127	00h21m10s	0.2528	23.998	6.0667	102.19	0.4714	0.4099	0.2703	0.5288	2541	94.5
128	00h21m20s	0.2527	23.998	6.0643	102.21	0.4704	0.4098	0.2697	0.5286	2553	94.6
129	00h21m30s	0.2528	23.998	6.0667	102.05	0.471	0.4101	0.27	0.5288	2547	94.6
130	00h21m40s	0.2528	23.998	6.0667	102.34	0.471	0.4102	0.2699	0.5289	2549	94.6
131	00h21m50s	0.2528	23.998	6.0667	102.02	0.4708	0.4095	0.2701	0.5286	2546	94.6
132	00h22m00s	0.2528	23.998	6.0667	102.01	0.4711	0.4094	0.2703	0.5286	2541	94.5
133	00h22m10s	0.2528	23.998	6.0667	102.22	0.4707	0.4101	0.2697	0.5288	2552	94.6
134	00h22m20s	0.2528	23.998	6.0667	102.45	0.4709	0.4102	0.2698	0.5289	2550	94.5
135	00h22m30s	0.2528	23.998	6.0667	102.19	0.4712	0.4097	0.2703	0.5287	2542	94.6
136	00h22m40s	0.2528	23.998	6.0667	102.14	0.4711	0.4101	0.27	0.5289	2546	94.5
137	00h22m50s	0.2528	23.998	6.0667	102.13	0.471	0.4099	0.2701	0.5288	2546	94.6
138	00h23m00s	0.2528	23.998	6.0667	102.07	0.4718	0.4103	0.2704	0.529	2539	94.5
139	00h23m10s	0.2528	23.998	6.0667	102.14	0.4712	0.4105	0.2699	0.529	2548	94.5
140	00h23m20s	0.2528	23.998	6.0667	102.28	0.4709	0.4101	0.2699	0.5288	2550	94.6
141	00h23m30s	0.2528	23.998	6.0667	102.16	0.471	0.4102	0.2699	0.5289	2549	94.5
142	00h23m40s	0.2528	23.998	6.0667	102.22	0.4709	0.4096	0.2702	0.5286	2545	94.4
143	00h23m50s	0.2528	23.998	6.0667	102.41	0.4713	0.4104	0.27	0.529	2546	94.5
144	00h24m00s	0.2528	23.998	6.0667	102.07	0.4715	0.4104	0.2701	0.529	2544	94.6
145	00h24m10s	0.2528	23.998	6.0667	102.08	0.4711	0.4103	0.2699	0.5289	2548	94.6

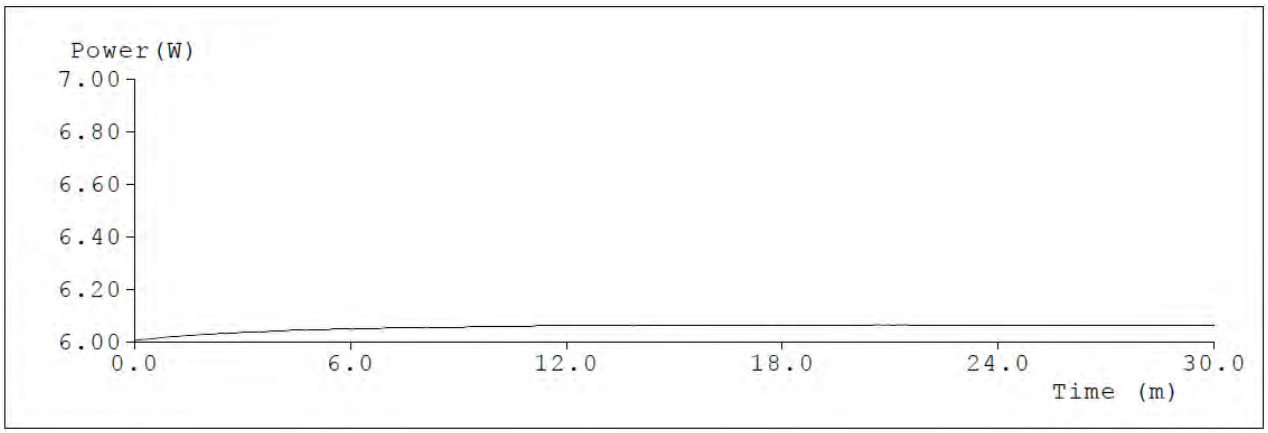
146	00h24m20s	0.2528	23.998	6.0667	102.1	0.471	0.41	0.27	0.5288	2548	94.6
147	00h24m30s	0.2528	23.998	6.0667	102.12	0.4712	0.4102	0.27	0.5289	2547	94.6
148	00h24m40s	0.2528	23.998	6.0667	101.98	0.4715	0.4097	0.2704	0.5288	2539	94.5
149	00h24m50s	0.2528	23.998	6.0667	102.33	0.4711	0.41	0.27	0.5288	2546	94.5
150	00h25m00s	0.2528	23.998	6.0667	102.12	0.4713	0.4103	0.2701	0.529	2545	94.6
151	00h25m10s	0.2528	23.998	6.0667	101.87	0.4712	0.4088	0.2707	0.5284	2536	94.4
152	00h25m20s	0.2528	23.998	6.0667	102.19	0.4717	0.4104	0.2703	0.5291	2541	94.5
153	00h25m30s	0.2528	23.998	6.0667	102.14	0.4713	0.4101	0.2701	0.5289	2544	94.5
154	00h25m40s	0.2528	23.998	6.0667	102.13	0.4717	0.4106	0.2702	0.5291	2543	94.5
155	00h25m50s	0.2528	23.998	6.0667	102.27	0.4712	0.4097	0.2703	0.5287	2542	94.4
156	00h26m00s	0.2528	23.998	6.0667	102.12	0.4716	0.4101	0.2703	0.5289	2540	94.5
157	00h26m10s	0.2528	23.998	6.0667	102.2	0.4716	0.4105	0.2702	0.5291	2543	94.5
158	00h26m20s	0.2528	23.998	6.0667	102.12	0.4713	0.4103	0.2701	0.529	2545	94.5
159	00h26m30s	0.2528	23.998	6.0667	102.12	0.4714	0.41	0.2702	0.5289	2542	94.5
160	00h26m40s	0.2528	23.998	6.0667	102.22	0.4716	0.4103	0.2702	0.529	2542	94.5
161	00h26m50s	0.2528	23.998	6.0667	102.2	0.4716	0.4103	0.2702	0.529	2542	94.5
162	00h27m00s	0.2528	23.998	6.0667	102.03	0.4716	0.4103	0.2702	0.529	2542	94.5
163	00h27m10s	0.2528	23.998	6.0667	102.04	0.4717	0.4104	0.2703	0.5291	2541	94.4
164	00h27m20s	0.2528	23.998	6.0667	102.08	0.4717	0.4104	0.2702	0.5291	2542	94.5
165	00h27m30s	0.2528	23.998	6.0667	102.22	0.4723	0.411	0.2704	0.5294	2538	94.5
166	00h27m40s	0.2528	23.998	6.0667	102.13	0.4716	0.4106	0.2701	0.5291	2544	94.5
167	00h27m50s	0.2528	23.998	6.0667	101.99	0.4715	0.4099	0.2704	0.5288	2540	94.6
168	00h28m00s	0.2528	23.998	6.0667	102.28	0.472	0.4107	0.2703	0.5292	2540	94.5
169	00h28m10s	0.2528	23.998	6.0667	102.18	0.4717	0.4105	0.2702	0.5291	2542	94.5
170	00h28m20s	0.2528	23.998	6.0667	102.06	0.4711	0.4107	0.2698	0.5291	2551	94.6
171	00h28m30s	0.2528	23.998	6.0667	102.03	0.4714	0.4104	0.2701	0.529	2545	94.5
172	00h28m40s	0.2528	23.998	6.0667	102.17	0.4718	0.4107	0.2702	0.5292	2542	94.5
173	00h28m50s	0.2528	23.998	6.0667	102.37	0.4708	0.4099	0.2699	0.5287	2549	94.5
174	00h29m00s	0.2528	23.998	6.0667	102.12	0.4714	0.41	0.2703	0.5289	2542	94.5
175	00h29m10s	0.2528	23.998	6.0667	102.19	0.4718	0.4111	0.27	0.5293	2545	94.6
176	00h29m20s	0.2528	23.998	6.0667	102.22	0.4714	0.4104	0.2701	0.529	2545	94.4

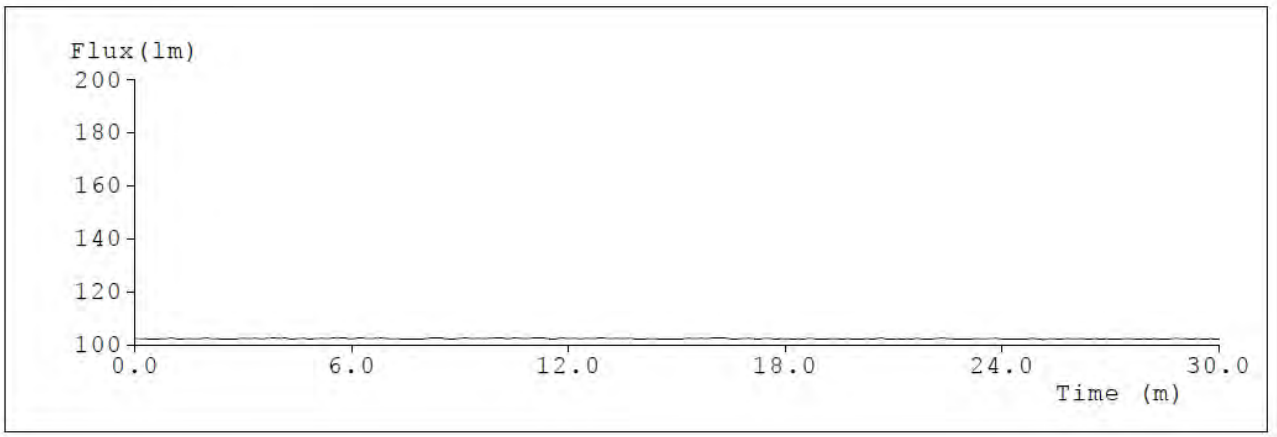
177	00h29m30s	0.2528	23.998	6.0667	102.08	0.4718	0.4102	0.2704	0.529	2539	94.5
178	00h29m40s	0.2528	23.998	6.0667	102	0.4718	0.411	0.2701	0.5293	2544	94.5
179	00h29m50s	0.2528	23.998	6.0667	102.19	0.4716	0.4104	0.2702	0.5291	2542	94.4
180	00h30m00s	0.2528	23.998	6.0667	102.2	0.4721	0.4107	0.2704	0.5292	2539	94.5

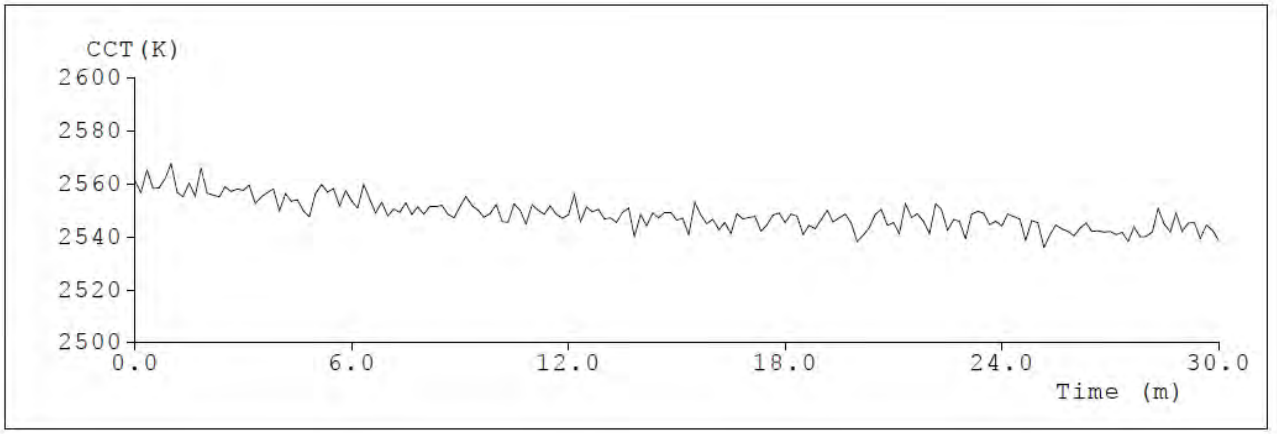
Test curves

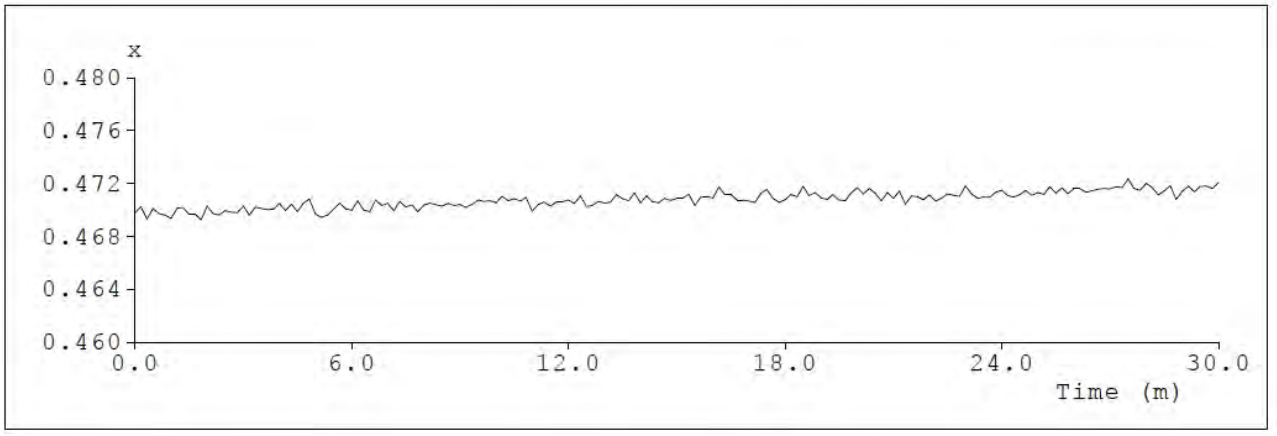


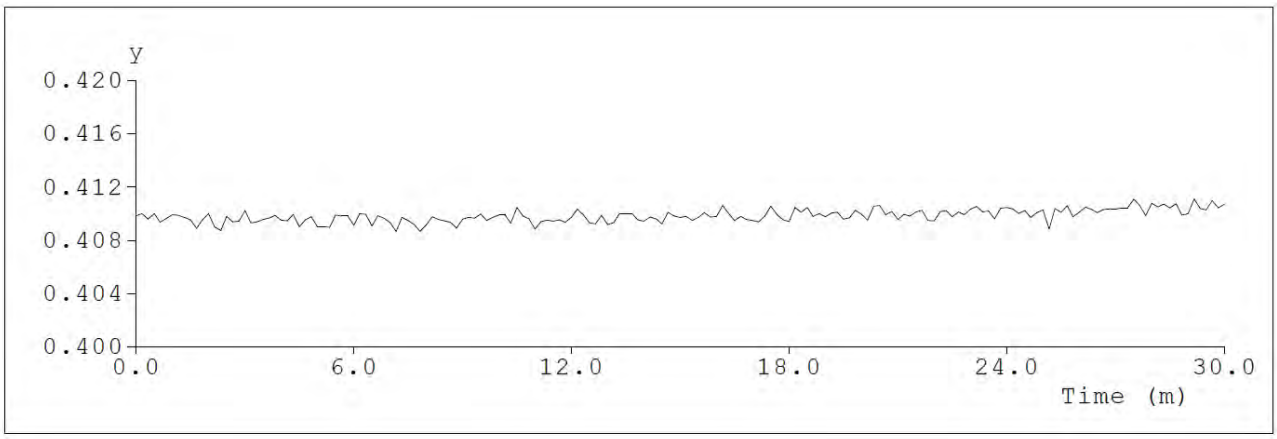


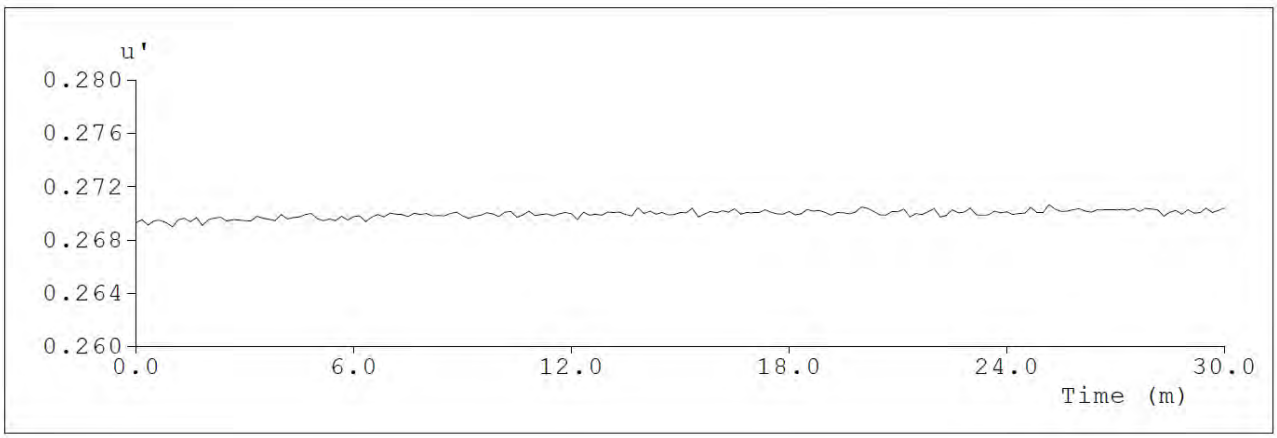


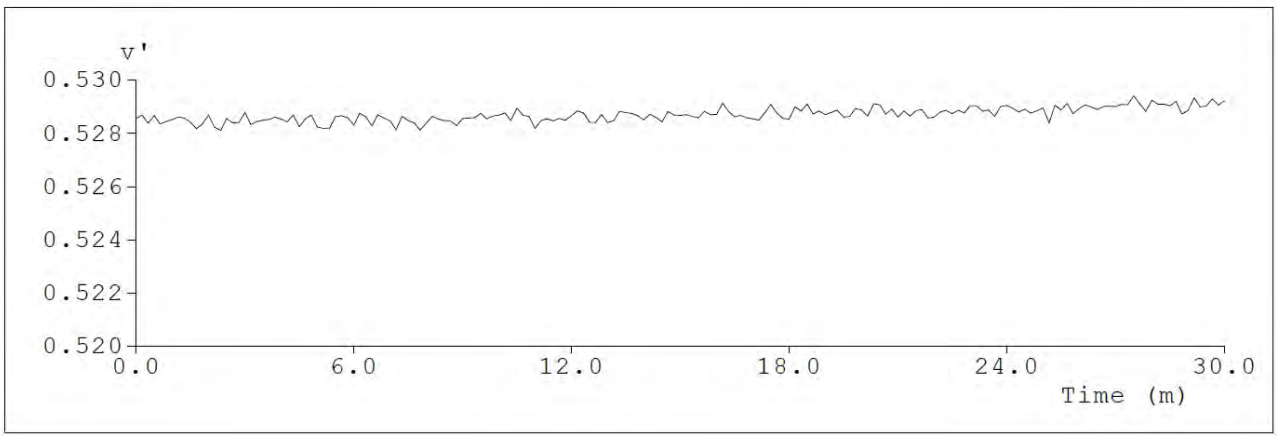

Flux(lm)
200
180
160
140
120
100
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


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
0.476
0.472
0.468
0.464
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)

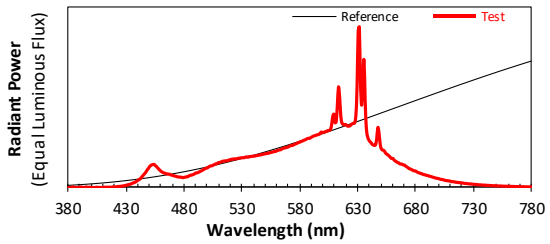

u'
0.280
0.276
0.272
0.268
0.264
0.260
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

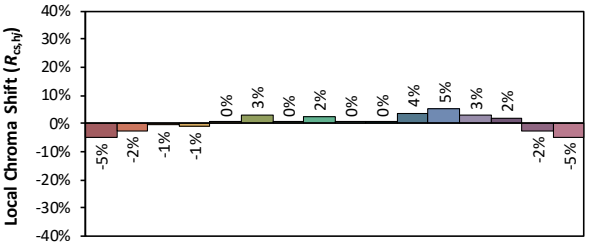

v'
0.530
0.528
0.526
0.524
0.522
0.520
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

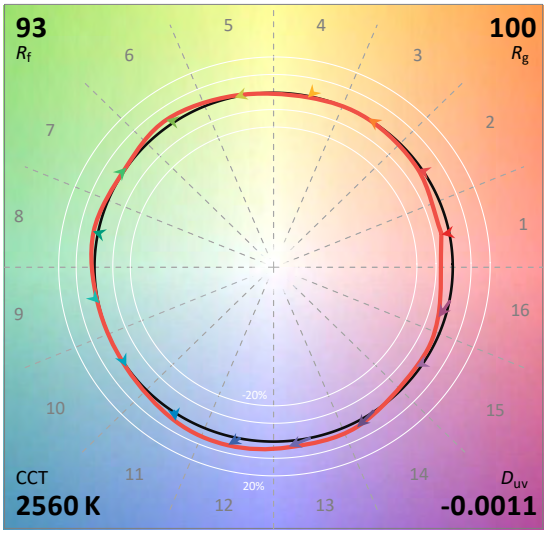
*9.2 ANSI/IES TM-30-18 Color Rendition Report

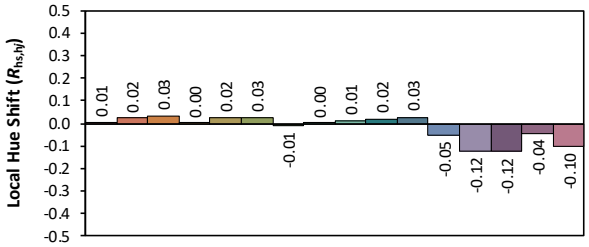
ANSI/IES TM-30-18 Color Rendition Report

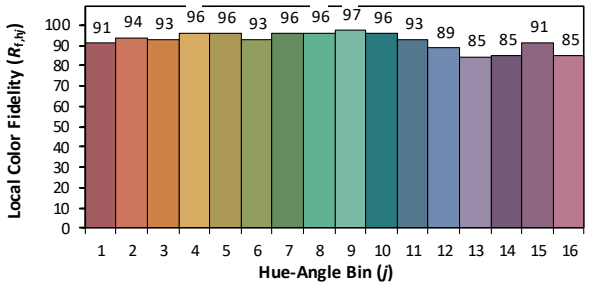
Source:		Manufacturer:	
Date:	2023/10/19	Model:	LNLY-1000-L27-DF-I-6

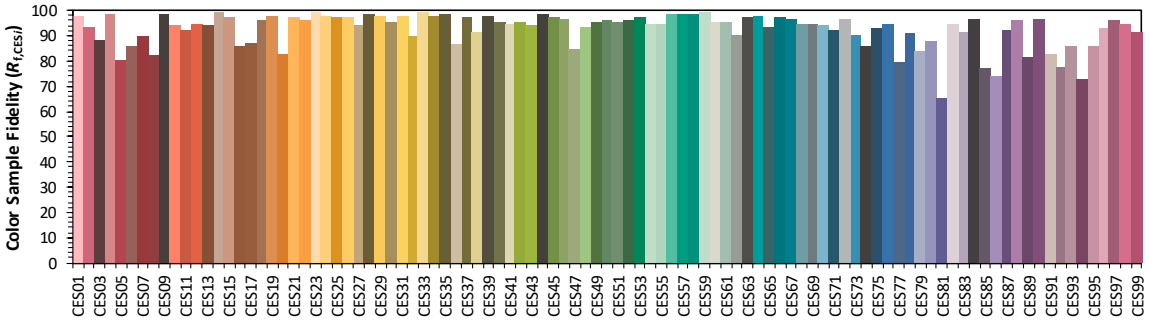












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

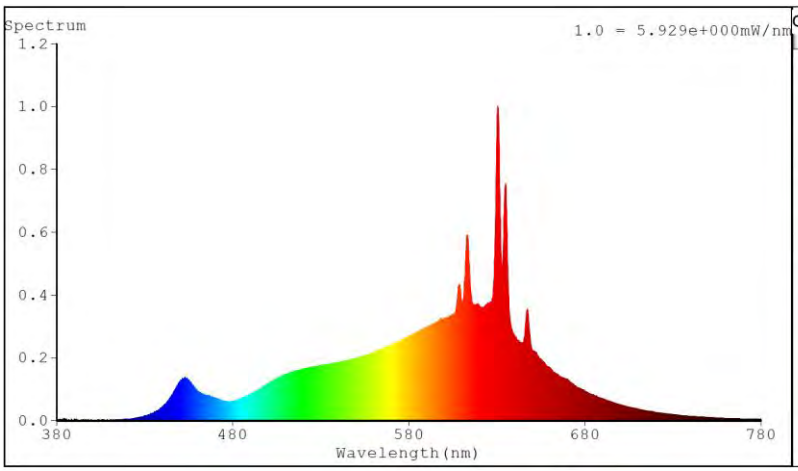
x	0.4697
y	0.4094
u'	0.2694
v'	0.5284

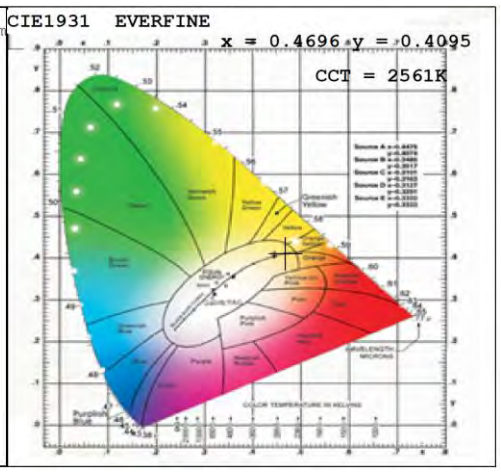
CIE 13.3-1995 (CRI)

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.

9.3 Relative Spectral Power Distribution





nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0011	414	0.0028	448	0.1051	482	0.064	516	0.157
381	0	415	0.0027	449	0.1133	483	0.0641	517	0.1582
382	0.0001	416	0.0024	450	0.1239	484	0.0696	518	0.1589
383	0.0032	417	0.0028	451	0.1298	485	0.0717	519	0.1635
384	0.0036	418	0.0041	452	0.1341	486	0.0739	520	0.1636
385	0.0011	419	0.0042	453	0.1351	487	0.0752	521	0.1669
386	0.0003	420	0.0049	454	0.136	488	0.0781	522	0.1664
387	0	421	0.0043	455	0.1281	489	0.082	523	0.1684
388	0.0015	422	0.0062	456	0.1228	490	0.0864	524	0.1682
389	0	423	0.0069	457	0.1144	491	0.0865	525	0.1688
390	0.0024	424	0.0071	458	0.1075	492	0.0899	526	0.171
391	0.0044	425	0.0081	459	0.1005	493	0.0922	527	0.1721
392	0.0008	426	0.0093	460	0.0946	494	0.0967	528	0.173
393	0.0015	427	0.0098	461	0.0907	495	0.0995	529	0.1745
394	0.0005	428	0.0118	462	0.0866	496	0.1036	530	0.1748
395	0.0044	429	0.012	463	0.0851	497	0.1075	531	0.1756
396	0.0024	430	0.0151	464	0.0823	498	0.1122	532	0.1757
397	0.0021	431	0.0151	465	0.0806	499	0.1141	533	0.1797
398	0.0027	432	0.019	466	0.0792	500	0.1163	534	0.1791
399	0.0017	433	0.0195	467	0.079	501	0.1218	535	0.1778
400	0.0006	434	0.0221	468	0.0752	502	0.1256	536	0.1822
401	0.0007	435	0.0251	469	0.0732	503	0.1273	537	0.1812
402	0	436	0.0284	470	0.0714	504	0.1284	538	0.1832
403	0.0001	437	0.0307	471	0.0688	505	0.1326	539	0.184
404	0.0028	438	0.0341	472	0.0677	506	0.1355	540	0.1838
405	0.0015	439	0.0395	473	0.0656	507	0.1391	541	0.1854
406	0.0015	440	0.0441	474	0.0635	508	0.1401	542	0.1876
407	0.0014	441	0.0475	475	0.0624	509	0.1452	543	0.1877
408	0.0007	442	0.0525	476	0.0613	510	0.1472	544	0.1902
409	0.0004	443	0.0614	477	0.0616	511	0.1488	545	0.1915
410	0.0012	444	0.0688	478	0.0595	512	0.151	546	0.1915
411	0.0026	445	0.0775	479	0.0588	513	0.155	547	0.1948
412	0.0028	446	0.0844	480	0.0609	514	0.1546	548	0.1954
413	0.0019	447	0.0943	481	0.0616	515	0.1567	549	0.1971

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.1988	599	0.3228	648	0.3194	697	0.0556	746	0.0115
551	0.2001	600	0.3222	649	0.2536	698	0.0551	747	0.0111
552	0.2007	601	0.3261	650	0.2271	699	0.0532	748	0.0113
553	0.2026	602	0.327	651	0.2202	700	0.0517	749	0.0106
554	0.2049	603	0.3319	652	0.2186	701	0.0491	750	0.0105
555	0.2062	604	0.3332	653	0.2098	702	0.0481	751	0.0098
556	0.2086	605	0.335	654	0.1989	703	0.0468	752	0.0099
557	0.2099	606	0.3397	655	0.1953	704	0.0448	753	0.0097
558	0.212	607	0.3641	656	0.1889	705	0.0431	754	0.0093
559	0.2124	608	0.4148	657	0.1837	706	0.0411	755	0.0089
560	0.2175	609	0.4294	658	0.1754	707	0.0411	756	0.0085
561	0.2187	610	0.3799	659	0.1703	708	0.0393	757	0.0083
562	0.2212	611	0.3848	660	0.1711	709	0.0393	758	0.0085
563	0.2216	612	0.4797	661	0.1616	710	0.0365	759	0.0081
564	0.2265	613	0.589	662	0.1561	711	0.0352	760	0.008
565	0.2287	614	0.5272	663	0.1517	712	0.0349	761	0.0076
566	0.2322	615	0.4179	664	0.1473	713	0.0339	762	0.0073
567	0.2327	616	0.3776	665	0.1451	714	0.032	763	0.0074
568	0.2359	617	0.3708	666	0.1389	715	0.0314	764	0.0069
569	0.2367	618	0.3666	667	0.138	716	0.0303	765	0.0068
570	0.2399	619	0.3703	668	0.137	717	0.0298	766	0.0062
571	0.2436	620	0.3648	669	0.1328	718	0.0289	767	0.0063
572	0.2474	621	0.3596	670	0.1321	719	0.0282	768	0.0064
573	0.2466	622	0.3602	671	0.1259	720	0.0273	769	0.0062
574	0.2497	623	0.3622	672	0.1215	721	0.0258	770	0.0057
575	0.2533	624	0.3693	673	0.1167	722	0.0247	771	0.0058
576	0.2564	625	0.3738	674	0.1114	723	0.0243	772	0.0053
577	0.2583	626	0.3764	675	0.1095	724	0.0233	773	0.0057
578	0.2631	627	0.3788	676	0.1056	725	0.0227	774	0.0049
579	0.2648	628	0.42	677	0.1026	726	0.0223	775	0.0048
580	0.268	629	0.5839	678	0.0984	727	0.0211	776	0.0045
581	0.2704	630	0.9131	679	0.0984	728	0.0215	777	0.0047
582	0.2732	631	0.9387	680	0.0951	729	0.02	778	0.0047
583	0.2773	632	0.6106	681	0.091	730	0.0191	779	0.0048
584	0.2792	633	0.4825	682	0.0874	731	0.0191	780	0.0048
585	0.2829	634	0.6273	683	0.0862	732	0.0185		
586	0.2863	635	0.7478	684	0.0822	733	0.0178		
587	0.2888	636	0.5147	685	0.0815	734	0.0169		
588	0.2887	637	0.3507	686	0.0772	735	0.0161		
589	0.2927	638	0.3009	687	0.0761	736	0.0163		
590	0.2966	639	0.2821	688	0.0744	737	0.0151		
591	0.3006	640	0.2701	689	0.0716	738	0.0151		
592	0.303	641	0.2638	690	0.0709	739	0.0143		
593	0.3053	642	0.2543	691	0.0679	740	0.0138		
594	0.3078	643	0.2499	692	0.0665	741	0.0133		
595	0.3094	644	0.2474	693	0.0646	742	0.0137		
596	0.3127	645	0.2505	694	0.0622	743	0.0127		
597	0.3146	646	0.2877	695	0.0602	744	0.0124		
598	0.3251	647	0.3518	696	0.0583	745	0.0122		

10. Goniophotometer Test results for LNLY-1000-L27-DF-I-6

10.1 Test Data

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

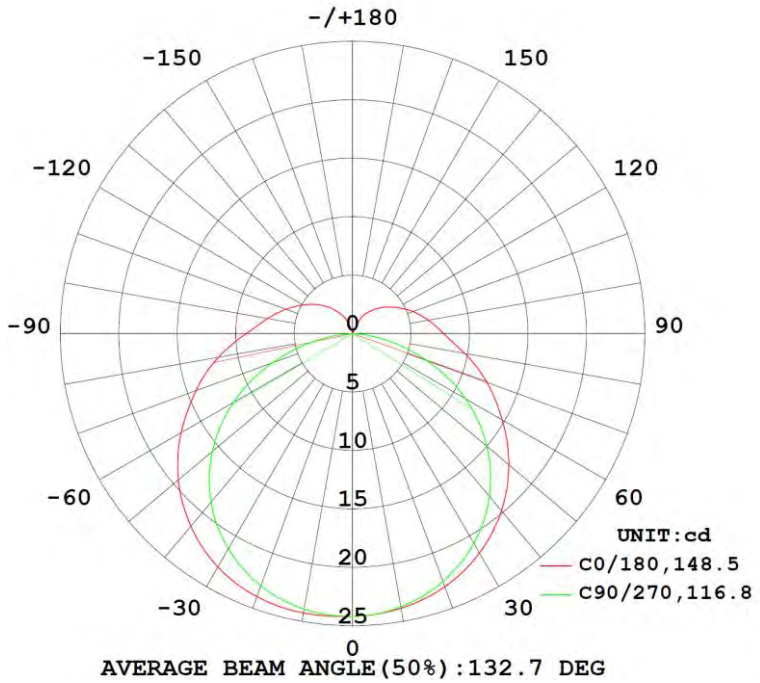
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
24.002	--	0.26234	1.0000	6.2967

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	Imax (cd)	η up (%)	η down (%)
106.097	16.85	24.28	15.6	84.4

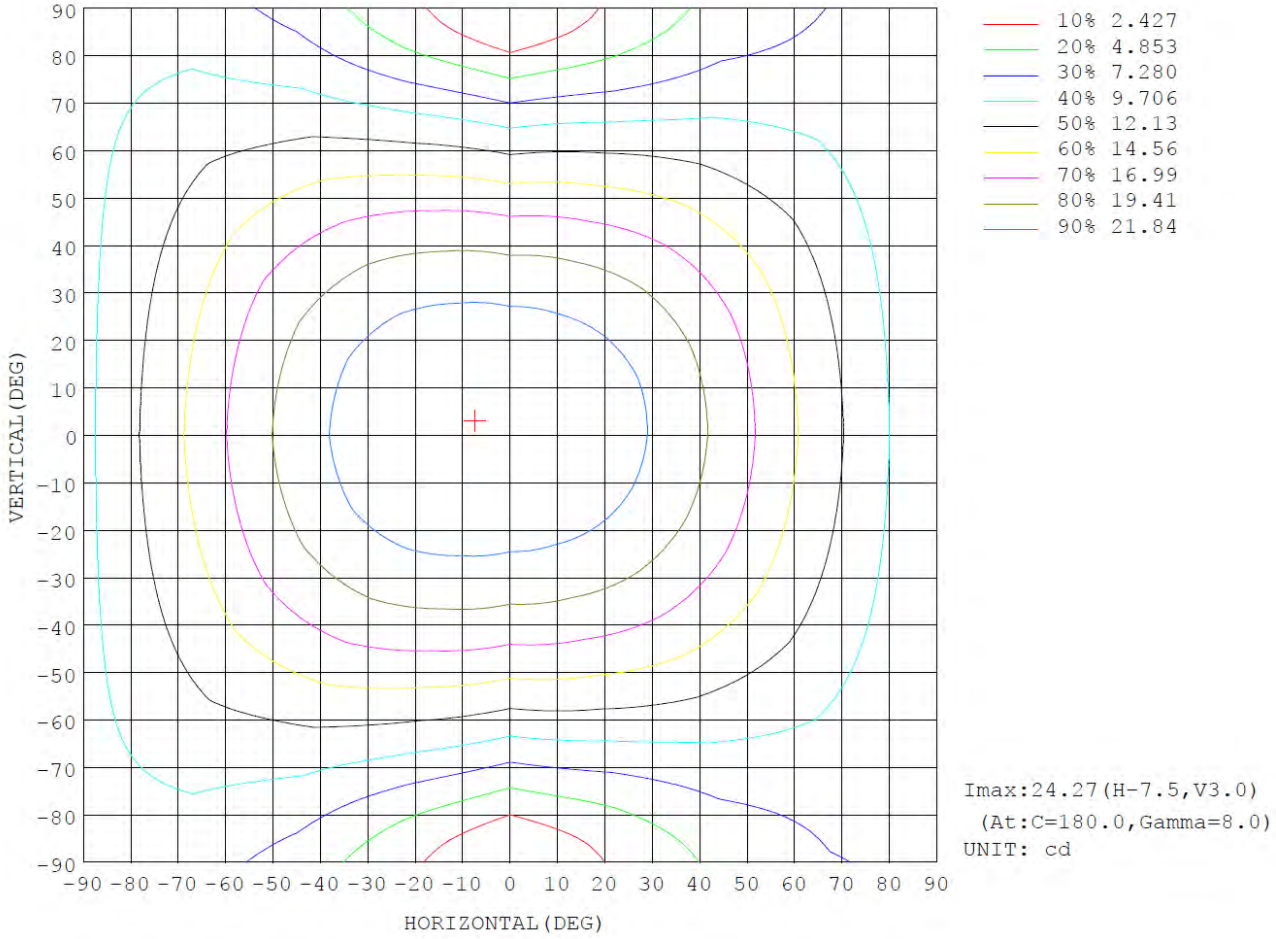
10.2 Luminous Intensity Distribution



10.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	23.87	23.76	23.74	24.04	24.27	24.17	23.94	23.90	0- 10	2.299	2.299	2.17,2.17
20	23.05	22.76	22.58	23.38	23.96	23.63	22.97	23.04	10- 20	6.682	8.981	8.47,8.47
30	21.69	21.19	20.74	22.14	23.06	22.48	21.28	21.58	20- 30	10.41	19.39	18.3,18.3
40	19.79	19.06	18.20	20.31	21.53	20.71	18.83	19.54	30- 40	13.05	32.44	30.6,30.6
50	17.44	16.43	14.98	17.92	19.47	18.29	15.66	16.96	40- 50	14.30	46.74	44.1,44.1
60	14.78	13.38	11.14	15.04	16.95	15.40	11.76	13.93	50- 60	14.02	60.77	57.3,57.3
70	12.24	10.18	6.786	11.81	14.27	12.18	7.284	10.68	60- 70	12.31	73.08	68.9,68.9
80	9.718	7.415	2.423	8.790	11.65	9.069	2.700	7.817	70- 80	9.633	82.71	78,78
90	7.788	5.473	0.0808	6.293	9.123	6.494	0.0792	5.730	80- 90	6.825	89.53	84.4,84.4
100	6.582	4.459	0	4.935	7.404	5.084	0.0004	4.675	90-100	5.124	94.66	89.2,89.2
110	5.501	3.603	0	3.976	6.095	4.070	0.0009	3.789	100-110	4.040	98.70	93,93
120	4.465	2.877	0.0022	3.166	4.917	3.211	0.0035	3.024	110-120	3.061	101.8	95.9,95.9
130	3.515	2.226	0.0074	2.388	3.854	2.467	0.0065	2.344	120-130	2.164	103.9	98,98
140	2.620	1.586	0.0104	1.620	2.830	1.770	0.0152	1.651	130-140	1.308	105.2	99.2,99.2
150	1.723	0.0248	0.0139	0.9192	1.829	1.271	0.0248	0.0278	140-150	0.6800	105.9	99.8,99.8
160	0.0244	0.0204	0.0178	0.0269	0.0663	0.0352	0.0313	0.0300	150-160	0.1754	106.1	100,100
170	0.0244	0.0235	0.0248	0.0282	0.0335	0.0348	0.0313	0.0304	160-170	0.0080	106.1	100,100
180	0.0274	0.0309	0.0291	0.0304	0.0300	0.0309	0.0291	0.0300	170-180	0.0028	106.1	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	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2
5	24.1	24.1	24.0	24.0	24.1	24.1	24.2	24.2	24.3	24.3	24.2	24.2	24.2	24.1	24.1	24.1
10	23.9	23.8	23.8	23.7	23.7	23.9	24.0	24.2	24.3	24.3	24.2	24.0	23.9	23.9	23.9	23.9
15	23.5	23.4	23.3	23.2	23.2	23.5	23.8	24.0	24.2	24.2	24.0	23.7	23.5	23.5	23.5	23.6
20	23.1	22.9	22.8	22.6	22.6	22.9	23.4	23.8	24.0	23.9	23.6	23.3	23.0	23.0	23.0	23.1
25	22.4	22.3	22.0	21.8	21.7	22.2	22.8	23.4	23.6	23.5	23.1	22.6	22.2	22.2	22.4	22.5
30	21.7	21.5	21.2	20.8	20.7	21.3	22.1	22.8	23.1	23.0	22.5	21.8	21.3	21.3	21.6	21.7
35	20.8	20.6	20.2	19.7	19.6	20.3	21.3	22.0	22.4	22.2	21.7	20.8	20.1	20.3	20.6	20.8
40	19.8	19.5	19.1	18.5	18.2	19.1	20.3	21.2	21.5	21.4	20.7	19.7	18.8	19.1	19.5	19.8
45	18.7	18.4	17.8	17.1	16.7	17.8	19.2	20.2	20.6	20.4	19.6	18.3	17.3	17.7	18.3	18.7
50	17.4	17.1	16.4	15.5	15.0	16.3	17.9	19.0	19.5	19.2	18.3	16.9	15.7	16.2	17.0	17.4
55	16.1	15.7	14.9	13.8	13.1	14.6	16.5	17.8	18.3	18.0	16.9	15.2	13.8	14.5	15.5	16.1
60	14.8	14.3	13.4	12.0	11.1	12.9	15.0	16.4	16.9	16.7	15.4	13.4	11.8	12.7	13.9	14.6
65	13.5	12.9	11.8	10.1	9.00	11.1	13.5	15.0	15.6	15.2	13.8	11.5	9.58	10.7	12.3	13.2
70	12.2	11.6	10.2	8.20	6.79	9.13	11.8	13.6	14.3	13.8	12.2	9.52	7.28	8.76	10.7	11.9
75	11.0	10.4	8.75	6.31	4.54	7.20	10.2	12.2	13.0	12.5	10.6	7.53	4.95	6.79	9.21	10.6
80	9.72	9.08	7.42	4.66	2.42	5.37	8.79	10.9	11.7	11.1	9.07	5.60	2.70	5.04	7.82	9.34
85	8.60	7.96	6.25	3.43	0.69	3.93	7.42	9.54	10.3	9.72	7.65	4.08	0.78	3.71	6.59	8.18
90	7.79	7.17	5.47	2.72	0.08	2.98	6.29	8.36	9.12	8.53	6.49	3.08	0.08	2.90	5.73	7.34
95	7.15	6.56	4.93	2.33	0.00	2.50	5.51	7.44	8.16	7.59	5.68	2.56	0.00	2.49	5.16	6.72
100	6.58	6.01	4.46	2.01	0.00	2.18	4.93	6.74	7.40	6.86	5.08	2.23	0.00	2.17	4.67	6.16
105	6.03	5.49	4.02	1.76	0.00	1.92	4.43	6.10	6.73	6.22	4.56	1.95	0.00	1.90	4.22	5.63
110	5.50	4.99	3.60	1.56	0.00	1.70	3.98	5.51	6.09	5.61	4.07	1.73	0.00	1.70	3.79	5.11
115	4.98	4.50	3.22	1.38	0.00	1.46	3.55	4.97	5.49	5.04	3.62	1.53	0.00	1.50	3.39	4.61
120	4.47	4.03	2.88	1.20	0.00	1.20	3.17	4.44	4.92	4.50	3.21	1.32	0.00	1.32	3.02	4.13
125	3.98	3.59	2.55	0.97	0.00	1.04	2.79	3.94	4.37	3.98	2.83	1.14	0.00	1.10	2.68	3.67
130	3.51	3.16	2.23	0.23	0.01	0.86	2.39	3.48	3.85	3.51	2.47	0.96	0.01	0.25	2.34	3.24
135	3.06	2.74	1.91	0.02	0.01	0.10	1.98	3.00	3.35	3.04	2.08	0.36	0.01	0.02	2.01	2.82
140	2.62	2.34	1.59	0.02	0.01	0.02	1.62	2.49	2.83	2.57	1.77	0.02	0.02	0.02	1.65	2.39
145	2.18	1.93	1.09	0.02	0.01	0.02	1.35	2.01	2.30	2.12	1.52	0.03	0.02	0.02	0.74	1.95
150	1.72	1.47	0.02	0.02	0.01	0.02	0.92	1.62	1.83	1.74	1.27	0.03	0.02	0.02	0.03	1.39
155	0.45	0.07	0.02	0.02	0.02	0.02	0.03	1.21	1.35	1.36	0.37	0.03	0.03	0.03	0.03	0.03
160	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.07	0.06	0.04	0.03	0.03	0.03	0.03	0.03
165	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.03
170	0.02	0.03	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
175	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
180	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03

11. Integrating Sphere Test Results for LNLY-1000-L27-DF-I-10

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	0.4	23.998	9.5992	162.6	0.471	0.4106	0.2697	0.529	2552	94.5
1	00h00m10s	0.4003	23.998	9.6064	162.62	0.4704	0.4101	0.2696	0.5288	2555	94.6
2	00h00m20s	0.4006	23.998	9.6136	162.81	0.4709	0.4104	0.2697	0.529	2552	94.6
3	00h00m30s	0.4009	23.998	9.6208	163.05	0.4709	0.4107	0.2696	0.5291	2553	94.5
4	00h00m40s	0.4011	23.998	9.6256	162.94	0.4707	0.4106	0.2695	0.529	2556	94.7
5	00h00m50s	0.4013	23.998	9.6304	162.98	0.4703	0.4105	0.2693	0.5289	2559	94.5
6	00h01m00s	0.4016	23.998	9.6376	162.71	0.4708	0.4101	0.2698	0.5288	2550	94.6
7	00h01m10s	0.4018	23.998	9.6424	162.99	0.4712	0.4102	0.27	0.5289	2546	94.4
8	00h01m20s	0.402	23.998	9.6472	162.94	0.4711	0.4107	0.2697	0.5291	2551	94.5
9	00h01m30s	0.4022	23.998	9.652	162.67	0.4709	0.4102	0.2698	0.5289	2550	94.6
10	00h01m40s	0.4023	23.998	9.6544	163.05	0.4705	0.4102	0.2695	0.5288	2555	94.6
11	00h01m50s	0.4025	23.998	9.6592	162.98	0.4709	0.4105	0.2697	0.529	2552	94.6
12	00h02m00s	0.4027	23.998	9.664	163	0.4709	0.4102	0.2698	0.5289	2550	94.5
13	00h02m10s	0.4028	23.998	9.6664	162.81	0.4711	0.4102	0.27	0.5289	2547	94.5
14	00h02m20s	0.403	23.998	9.6712	163.04	0.471	0.41	0.27	0.5288	2547	94.5
15	00h02m30s	0.4031	23.998	9.6736	163.06	0.4708	0.41	0.2698	0.5288	2550	94.5
16	00h02m40s	0.4033	23.998	9.6784	163.06	0.4706	0.41	0.2697	0.5288	2552	94.5
17	00h02m50s	0.4034	23.998	9.6808	162.8	0.471	0.41	0.27	0.5288	2547	94.7
18	00h03m00s	0.4035	23.998	9.6832	162.94	0.471	0.4099	0.2701	0.5288	2546	94.5
19	00h03m10s	0.4036	23.998	9.6856	163.24	0.471	0.41	0.27	0.5288	2548	94.6
20	00h03m20s	0.4038	23.998	9.6904	162.96	0.4708	0.4096	0.2701	0.5286	2546	94.5
21	00h03m30s	0.4039	23.998	9.6928	163.2	0.4713	0.41	0.2702	0.5288	2543	94.5

22	00h03m40s	0.404	23.998	9.6952	162.91	0.471	0.4096	0.2702	0.5287	2544	94.4
23	00h03m50s	0.4041	23.998	9.6976	163.02	0.471	0.4097	0.2701	0.5287	2545	94.5
24	00h04m00s	0.4042	23.998	9.7	163.06	0.4709	0.4097	0.2701	0.5287	2546	94.5
25	00h04m10s	0.4043	23.998	9.7024	162.94	0.4706	0.4095	0.27	0.5286	2548	94.5
26	00h04m20s	0.4044	23.998	9.7048	162.97	0.4711	0.4099	0.2701	0.5288	2545	94.5
27	00h04m30s	0.4044	23.998	9.7048	162.94	0.4714	0.4103	0.2701	0.529	2544	94.6
28	00h04m40s	0.4045	23.998	9.7072	163.25	0.471	0.4096	0.2702	0.5287	2544	94.5
29	00h04m50s	0.4046	23.998	9.7096	163.38	0.4711	0.4098	0.2702	0.5287	2544	94.5
30	00h05m00s	0.4047	23.998	9.712	163.25	0.4712	0.4095	0.2703	0.5286	2541	94.4
31	00h05m10s	0.4048	23.998	9.7144	163.22	0.4707	0.4099	0.2699	0.5287	2550	94.5
32	00h05m20s	0.4048	23.998	9.7144	163.22	0.4712	0.41	0.2701	0.5288	2544	94.6
33	00h05m30s	0.4049	23.998	9.7168	163.14	0.4709	0.4094	0.2702	0.5285	2544	94.5
34	00h05m40s	0.4049	23.998	9.7168	163	0.471	0.4093	0.2703	0.5285	2542	94.4
35	00h05m50s	0.405	23.998	9.7192	162.94	0.4709	0.4094	0.2702	0.5286	2545	94.6
36	00h06m00s	0.4051	23.998	9.7216	162.89	0.4709	0.4094	0.2702	0.5286	2545	94.5
37	00h06m10s	0.4051	23.998	9.7216	163.06	0.4712	0.4095	0.2704	0.5286	2541	94.4
38	00h06m20s	0.4052	23.998	9.724	163.23	0.4709	0.4095	0.2702	0.5286	2544	94.5
39	00h06m30s	0.4052	23.998	9.724	162.92	0.4711	0.4094	0.2704	0.5286	2541	94.5
40	00h06m40s	0.4053	23.998	9.7264	163.18	0.471	0.4093	0.2703	0.5285	2542	94.5
41	00h06m50s	0.4053	23.998	9.7264	163.06	0.4708	0.4089	0.2703	0.5284	2542	94.4
42	00h07m00s	0.4054	23.998	9.7288	163.15	0.471	0.4096	0.2702	0.5286	2544	94.5
43	00h07m10s	0.4054	23.998	9.7288	163.02	0.4714	0.4092	0.2706	0.5285	2536	94.4
44	00h07m20s	0.4054	23.998	9.7288	163.18	0.4709	0.4093	0.2702	0.5285	2543	94.5
45	00h07m30s	0.4055	23.998	9.7312	163.05	0.4712	0.4094	0.2704	0.5286	2540	94.4
46	00h07m40s	0.4055	23.998	9.7312	163.35	0.471	0.4096	0.2702	0.5286	2544	94.4
47	00h07m50s	0.4056	23.998	9.7336	163.21	0.4709	0.4096	0.2701	0.5286	2546	94.5
48	00h08m00s	0.4056	23.998	9.7336	163.1	0.4707	0.4093	0.2701	0.5285	2546	94.5
49	00h08m10s	0.4056	23.998	9.7336	162.99	0.4713	0.4097	0.2704	0.5287	2540	94.6
50	00h08m20s	0.4057	23.998	9.736	163.25	0.4709	0.4089	0.2705	0.5284	2539	94.3
51	00h08m30s	0.4057	23.998	9.736	163.04	0.4709	0.4092	0.2703	0.5285	2542	94.4
52	00h08m40s	0.4057	23.998	9.736	163.23	0.471	0.4092	0.2703	0.5285	2541	94.5

53	00h08m50s	0.4058	23.998	9.7384	163.11	0.4712	0.4095	0.2704	0.5286	2540	94.5
54	00h09m00s	0.4058	23.998	9.7384	163.19	0.4713	0.4098	0.2703	0.5288	2541	94.5
55	00h09m10s	0.4058	23.998	9.7384	163.06	0.471	0.4091	0.2704	0.5285	2540	94.5
56	00h09m20s	0.4058	23.998	9.7384	163.53	0.4706	0.4094	0.27	0.5285	2548	94.6
57	00h09m30s	0.4059	23.998	9.7408	163.25	0.4708	0.4096	0.27	0.5286	2547	94.5
58	00h09m40s	0.4059	23.998	9.7408	163.54	0.4709	0.4094	0.2702	0.5286	2544	94.5
59	00h09m50s	0.4059	23.998	9.7408	163.22	0.4711	0.4093	0.2704	0.5286	2540	94.4
60	00h10m00s	0.4059	23.998	9.7408	163.35	0.471	0.4094	0.2703	0.5286	2543	94.5
61	00h10m10s	0.4059	23.998	9.7408	163.33	0.4712	0.4092	0.2705	0.5285	2538	94.5
62	00h10m20s	0.406	23.998	9.7432	163.05	0.4712	0.4095	0.2703	0.5286	2541	94.5
63	00h10m30s	0.406	23.998	9.7432	163.11	0.4714	0.4093	0.2706	0.5286	2537	94.4
64	00h10m40s	0.406	23.998	9.7432	163.21	0.4711	0.4095	0.2703	0.5286	2542	94.5
65	00h10m50s	0.406	23.998	9.7432	163.13	0.4711	0.4096	0.2703	0.5287	2542	94.5
66	00h11m00s	0.406	23.998	9.7432	163.32	0.4709	0.4092	0.2703	0.5285	2542	94.5
67	00h11m10s	0.4061	23.998	9.7456	163.2	0.471	0.4093	0.2703	0.5286	2542	94.5
68	00h11m20s	0.4061	23.998	9.7456	163.29	0.471	0.409	0.2705	0.5284	2539	94.3
69	00h11m30s	0.4061	23.998	9.7456	163.05	0.4707	0.4086	0.2704	0.5282	2541	94.5
70	00h11m40s	0.4061	23.998	9.7456	163.08	0.4713	0.4096	0.2704	0.5287	2540	94.6
71	00h11m50s	0.4061	23.998	9.7456	163.27	0.4708	0.4089	0.2703	0.5284	2542	94.5
72	00h12m00s	0.4061	23.998	9.7456	162.81	0.471	0.4093	0.2704	0.5285	2541	94.5
73	00h12m10s	0.4061	23.998	9.7456	163.15	0.4711	0.4091	0.2705	0.5285	2539	94.4
74	00h12m20s	0.4061	23.998	9.7456	163.35	0.4705	0.4089	0.2702	0.5283	2545	94.5
75	00h12m30s	0.4062	23.998	9.748	163.35	0.471	0.4095	0.2703	0.5286	2543	94.5
76	00h12m40s	0.4062	23.998	9.748	163.25	0.4708	0.4091	0.2703	0.5284	2543	94.4
77	00h12m50s	0.4062	23.998	9.748	163.29	0.471	0.4093	0.2703	0.5286	2542	94.5
78	00h13m00s	0.4062	23.998	9.748	163.24	0.4714	0.4096	0.2705	0.5287	2539	94.4
79	00h13m10s	0.4062	23.998	9.748	162.98	0.4712	0.4089	0.2706	0.5284	2536	94.3
80	00h13m20s	0.4062	23.998	9.748	163.26	0.4708	0.4091	0.2703	0.5284	2543	94.4
81	00h13m30s	0.4062	23.998	9.748	163.38	0.4708	0.4092	0.2702	0.5285	2543	94.5
82	00h13m40s	0.4062	23.998	9.748	163.1	0.4712	0.4091	0.2705	0.5285	2538	94.4
83	00h13m50s	0.4063	23.998	9.7504	163.51	0.4708	0.4091	0.2703	0.5284	2542	94.3

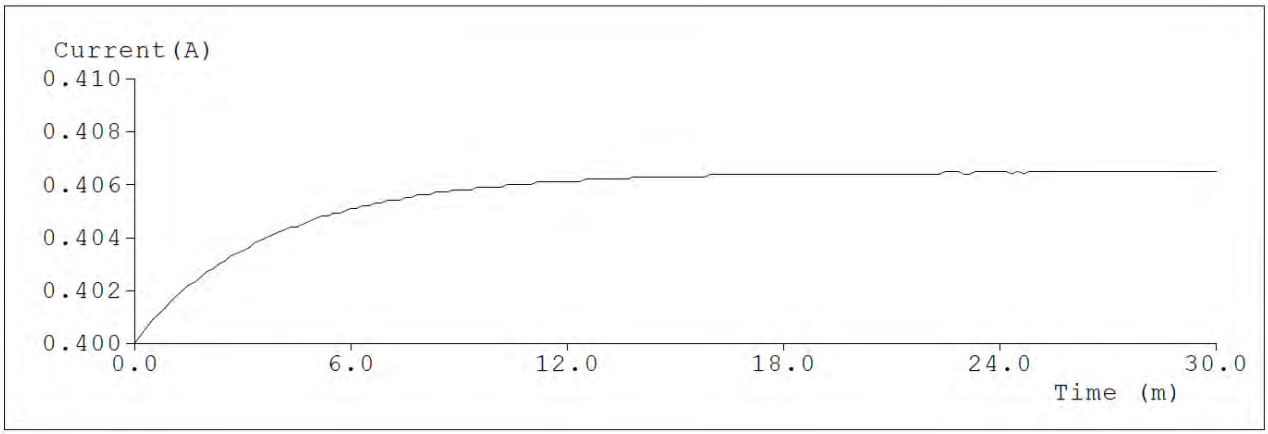
84	00h14m00s	0.4063	23.998	9.7504	163.53	0.471	0.409	0.2704	0.5284	2540	94.4
85	00h14m10s	0.4063	23.998	9.7504	163.23	0.4712	0.4092	0.2705	0.5285	2538	94.5
86	00h14m20s	0.4063	23.998	9.7504	163.21	0.4709	0.4093	0.2702	0.5285	2543	94.5
87	00h14m30s	0.4063	23.998	9.7504	163.16	0.4713	0.4093	0.2705	0.5286	2538	94.3
88	00h14m40s	0.4063	23.998	9.7504	163.29	0.471	0.4093	0.2703	0.5285	2542	94.5
89	00h14m50s	0.4063	23.998	9.7504	163.42	0.471	0.4091	0.2704	0.5285	2540	94.5
90	00h15m00s	0.4063	23.998	9.7504	163.2	0.471	0.409	0.2704	0.5284	2540	94.5
91	00h15m10s	0.4063	23.998	9.7504	163.49	0.4707	0.409	0.2702	0.5284	2544	94.4
92	00h15m20s	0.4063	23.998	9.7504	163.03	0.471	0.409	0.2704	0.5284	2540	94.4
93	00h15m30s	0.4063	23.998	9.7504	163.37	0.4713	0.4095	0.2704	0.5287	2540	94.4
94	00h15m40s	0.4063	23.998	9.7504	163.07	0.471	0.4088	0.2706	0.5283	2537	94.5
95	00h15m50s	0.4063	23.998	9.7504	163.26	0.4707	0.4086	0.2704	0.5282	2540	94.5
96	00h16m00s	0.4064	23.998	9.7528	163.36	0.4709	0.4091	0.2704	0.5284	2541	94.4
97	00h16m10s	0.4064	23.998	9.7528	163.51	0.4711	0.4096	0.2703	0.5287	2542	94.4
98	00h16m20s	0.4064	23.998	9.7528	163.36	0.4709	0.409	0.2704	0.5284	2541	94.4
99	00h16m30s	0.4064	23.998	9.7528	163.1	0.4711	0.409	0.2705	0.5284	2538	94.4
100	00h16m40s	0.4064	23.998	9.7528	163.41	0.4705	0.409	0.2701	0.5283	2546	94.5
101	00h16m50s	0.4064	23.998	9.7528	163.14	0.4712	0.4087	0.2707	0.5283	2535	94.4
102	00h17m00s	0.4064	23.998	9.7528	163.37	0.4706	0.4091	0.2701	0.5284	2545	94.6
103	00h17m10s	0.4064	23.998	9.7528	163.41	0.4706	0.409	0.2702	0.5284	2545	94.4
104	00h17m20s	0.4064	23.998	9.7528	163.41	0.4706	0.4093	0.2701	0.5285	2546	94.5
105	00h17m30s	0.4064	23.998	9.7528	163.38	0.4707	0.4087	0.2704	0.5283	2541	94.4
106	00h17m40s	0.4064	23.998	9.7528	163.14	0.4705	0.4089	0.2702	0.5283	2545	94.5
107	00h17m50s	0.4064	23.998	9.7528	163.2	0.471	0.4088	0.2706	0.5283	2537	94.5
108	00h18m00s	0.4064	23.998	9.7528	163.45	0.471	0.4091	0.2704	0.5285	2540	94.4
109	00h18m10s	0.4064	23.998	9.7528	163.42	0.4711	0.4093	0.2704	0.5286	2540	94.5
110	00h18m20s	0.4064	23.998	9.7528	163.43	0.4708	0.4087	0.2704	0.5283	2541	94.5
111	00h18m30s	0.4064	23.998	9.7528	163.4	0.4709	0.409	0.2704	0.5284	2540	94.4
112	00h18m40s	0.4064	23.998	9.7528	163.48	0.4706	0.4092	0.2701	0.5284	2546	94.6
113	00h18m50s	0.4064	23.998	9.7528	163.48	0.4711	0.4092	0.2704	0.5285	2540	94.5
114	00h19m00s	0.4064	23.998	9.7528	163.39	0.4707	0.4088	0.2704	0.5283	2541	94.4

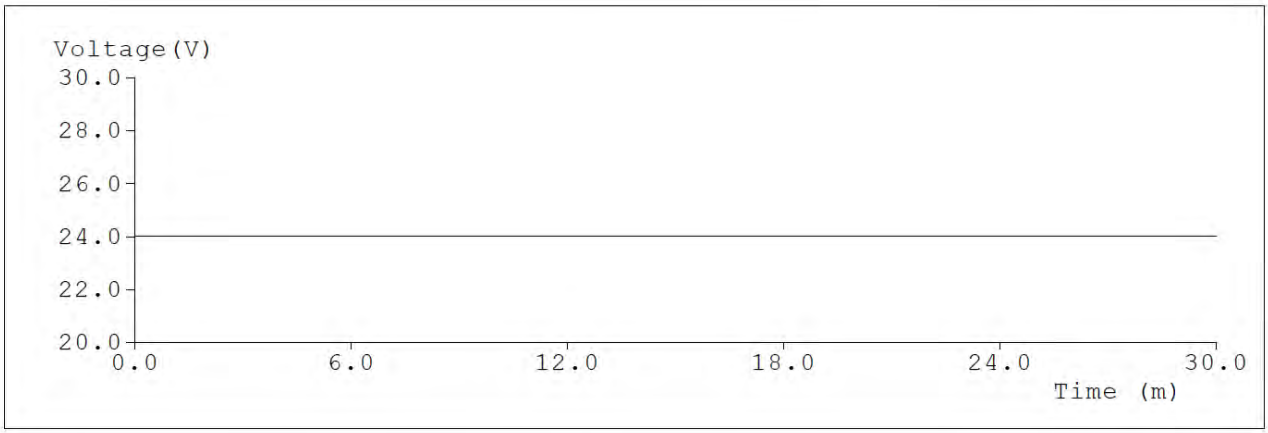
115	00h19m10s	0.4064	23.998	9.7528	163.21	0.4707	0.4088	0.2704	0.5283	2542	94.4
116	00h19m20s	0.4064	23.998	9.7528	163.35	0.4705	0.4089	0.2702	0.5283	2546	94.5
117	00h19m30s	0.4064	23.998	9.7528	163.37	0.4708	0.4088	0.2704	0.5283	2541	94.3
118	00h19m40s	0.4064	23.998	9.7528	163.46	0.4704	0.409	0.2701	0.5283	2547	94.5
119	00h19m50s	0.4064	23.998	9.7528	163.19	0.4708	0.4091	0.2703	0.5284	2543	94.5
120	00h20m00s	0.4064	23.998	9.7528	163.29	0.4707	0.4091	0.2702	0.5284	2544	94.5
121	00h20m10s	0.4064	23.998	9.7528	163.74	0.4704	0.4089	0.2701	0.5283	2546	94.5
122	00h20m20s	0.4064	23.998	9.7528	163.52	0.4708	0.4091	0.2703	0.5284	2542	94.4
123	00h20m30s	0.4064	23.998	9.7528	163.36	0.4708	0.4089	0.2703	0.5284	2542	94.5
124	00h20m40s	0.4064	23.998	9.7528	163.29	0.4706	0.409	0.2702	0.5284	2545	94.4
125	00h20m50s	0.4064	23.998	9.7528	163.31	0.471	0.4092	0.2704	0.5285	2541	94.5
126	00h21m00s	0.4064	23.998	9.7528	163.19	0.4706	0.4091	0.2701	0.5284	2546	94.5
127	00h21m10s	0.4064	23.998	9.7528	163.08	0.4705	0.4084	0.2704	0.5281	2541	94.4
128	00h21m20s	0.4064	23.998	9.7528	163.35	0.4705	0.4084	0.2704	0.5281	2541	94.4
129	00h21m30s	0.4064	23.998	9.7528	163.15	0.4706	0.4089	0.2703	0.5283	2544	94.5
130	00h21m40s	0.4064	23.998	9.7528	163.47	0.4711	0.4093	0.2704	0.5286	2541	94.5
131	00h21m50s	0.4064	23.998	9.7528	163.46	0.4705	0.409	0.2701	0.5283	2546	94.5
132	00h22m00s	0.4064	23.998	9.7528	163.44	0.4709	0.409	0.2704	0.5284	2541	94.4
133	00h22m10s	0.4064	23.998	9.7528	163.54	0.4704	0.4087	0.2702	0.5282	2545	94.5
134	00h22m20s	0.4064	23.998	9.7528	163.06	0.4707	0.4089	0.2703	0.5283	2543	94.5
135	00h22m30s	0.4065	23.998	9.7552	163.38	0.4708	0.4089	0.2704	0.5284	2541	94.5
136	00h22m40s	0.4065	23.998	9.7552	163.46	0.4706	0.4088	0.2703	0.5283	2543	94.4
137	00h22m50s	0.4065	23.998	9.7552	163.26	0.4708	0.409	0.2703	0.5284	2543	94.4
138	00h23m00s	0.4064	23.998	9.7528	163.28	0.4706	0.4089	0.2703	0.5283	2543	94.5
139	00h23m10s	0.4064	23.998	9.7528	163.4	0.4706	0.409	0.2702	0.5284	2545	94.5
140	00h23m20s	0.4065	23.998	9.7552	163.65	0.4707	0.4093	0.2701	0.5285	2545	94.4
141	00h23m30s	0.4065	23.998	9.7552	163.39	0.4704	0.4085	0.2703	0.5281	2543	94.5
142	00h23m40s	0.4065	23.998	9.7552	163.49	0.4704	0.4088	0.2702	0.5282	2545	94.4
143	00h23m50s	0.4065	23.998	9.7552	163.55	0.4706	0.409	0.2702	0.5284	2545	94.5
144	00h24m00s	0.4065	23.998	9.7552	163.32	0.4707	0.4089	0.2703	0.5284	2543	94.4
145	00h24m10s	0.4065	23.998	9.7552	163.38	0.4704	0.4084	0.2703	0.5281	2543	94.5

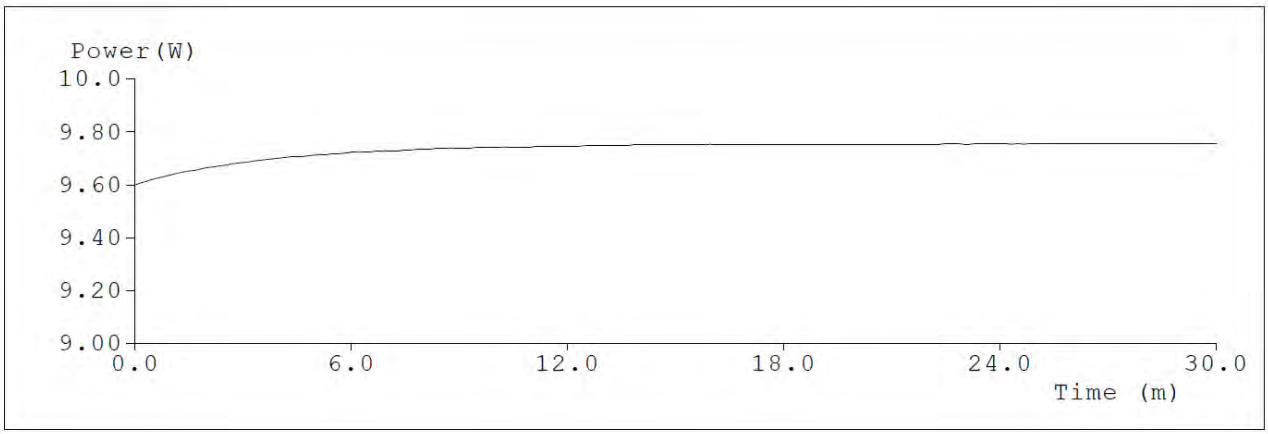
146	00h24m20s	0.4064	23.998	9.7528	163.33	0.4708	0.409	0.2703	0.5284	2543	94.5
147	00h24m30s	0.4065	23.998	9.7552	163.44	0.4711	0.4093	0.2704	0.5285	2541	94.4
148	00h24m40s	0.4064	23.998	9.7528	163.41	0.4705	0.4088	0.2702	0.5283	2545	94.5
149	00h24m50s	0.4065	23.998	9.7552	163.56	0.4705	0.4088	0.2702	0.5283	2544	94.5
150	00h25m00s	0.4065	23.998	9.7552	163.5	0.4705	0.4091	0.2701	0.5284	2547	94.5
151	00h25m10s	0.4065	23.998	9.7552	163.63	0.4706	0.409	0.2702	0.5284	2545	94.3
152	00h25m20s	0.4065	23.998	9.7552	163.43	0.4705	0.4085	0.2704	0.5281	2542	94.4
153	00h25m30s	0.4065	23.998	9.7552	163.41	0.4712	0.4089	0.2706	0.5284	2537	94.4
154	00h25m40s	0.4065	23.998	9.7552	163.61	0.4707	0.4093	0.2701	0.5285	2545	94.5
155	00h25m50s	0.4065	23.998	9.7552	163.64	0.4706	0.4089	0.2703	0.5283	2544	94.4
156	00h26m00s	0.4065	23.998	9.7552	163.42	0.4707	0.4093	0.2701	0.5285	2546	94.5
157	00h26m10s	0.4065	23.998	9.7552	163.24	0.4705	0.4086	0.2703	0.5282	2542	94.5
158	00h26m20s	0.4065	23.998	9.7552	163.64	0.4703	0.4088	0.2701	0.5282	2546	94.6
159	00h26m30s	0.4065	23.998	9.7552	163.6	0.4702	0.4088	0.27	0.5282	2548	94.5
160	00h26m40s	0.4065	23.998	9.7552	163.57	0.4708	0.4089	0.2704	0.5283	2542	94.4
161	00h26m50s	0.4065	23.998	9.7552	163.21	0.4708	0.4088	0.2704	0.5283	2541	94.5
162	00h27m00s	0.4065	23.998	9.7552	163.16	0.4707	0.4089	0.2703	0.5283	2542	94.5
163	00h27m10s	0.4065	23.998	9.7552	163.42	0.4711	0.4092	0.2704	0.5285	2540	94.5
164	00h27m20s	0.4065	23.998	9.7552	163.39	0.4703	0.4082	0.2704	0.528	2542	94.3
165	00h27m30s	0.4065	23.998	9.7552	163.47	0.4711	0.4093	0.2704	0.5286	2541	94.5
166	00h27m40s	0.4065	23.998	9.7552	163.28	0.4708	0.409	0.2703	0.5284	2542	94.5
167	00h27m50s	0.4065	23.998	9.7552	163.6	0.4704	0.4086	0.2702	0.5282	2545	94.5
168	00h28m00s	0.4065	23.998	9.7552	163.49	0.4707	0.4091	0.2703	0.5284	2543	94.5
169	00h28m10s	0.4065	23.998	9.7552	163.37	0.4706	0.4082	0.2706	0.528	2538	94.3
170	00h28m20s	0.4065	23.998	9.7552	163.68	0.4707	0.4086	0.2705	0.5282	2540	94.2
171	00h28m30s	0.4065	23.998	9.7552	163.46	0.4705	0.4091	0.2701	0.5284	2546	94.6
172	00h28m40s	0.4065	23.998	9.7552	163.45	0.4708	0.4086	0.2705	0.5282	2540	94.4
173	00h28m50s	0.4065	23.998	9.7552	163.69	0.4699	0.4087	0.2699	0.5281	2551	94.5
174	00h29m00s	0.4065	23.998	9.7552	163.37	0.4701	0.4088	0.27	0.5282	2549	94.5
175	00h29m10s	0.4065	23.998	9.7552	163.61	0.4701	0.409	0.2699	0.5283	2551	94.5
176	00h29m20s	0.4065	23.998	9.7552	163.62	0.4702	0.4087	0.2701	0.5282	2548	94.5

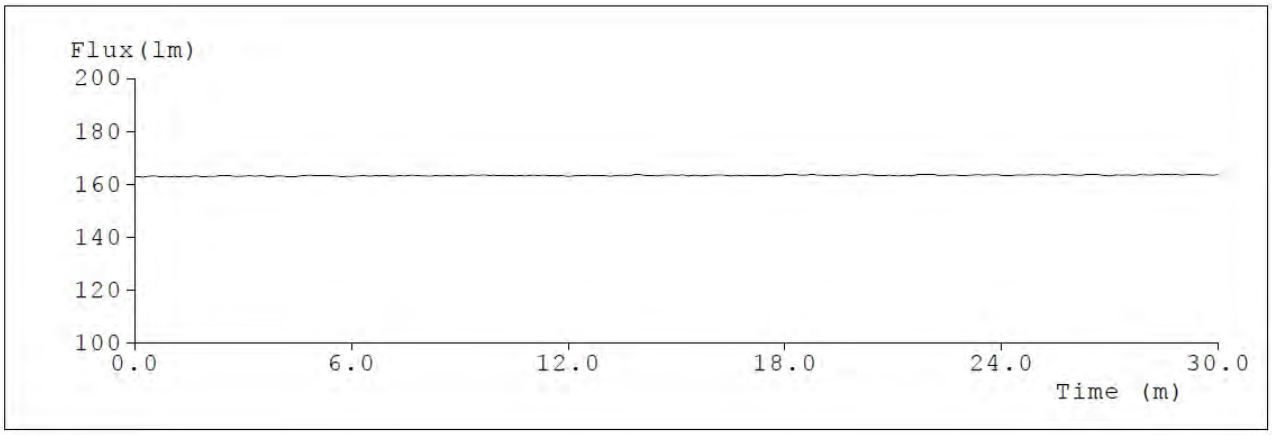
177	00h29m30s	0.4065	23.998	9.7552	163.6	0.4707	0.4088	0.2703	0.5283	2542	94.5
178	00h29m40s	0.4065	23.998	9.7552	163.49	0.4705	0.4091	0.2701	0.5284	2546	94.5
179	00h29m50s	0.4065	23.998	9.7552	163.41	0.4703	0.4085	0.2702	0.5281	2544	94.5
180	00h30m00s	0.4065	23.998	9.7552	163.64	0.4706	0.4086	0.2703	0.5282	2542	94.4

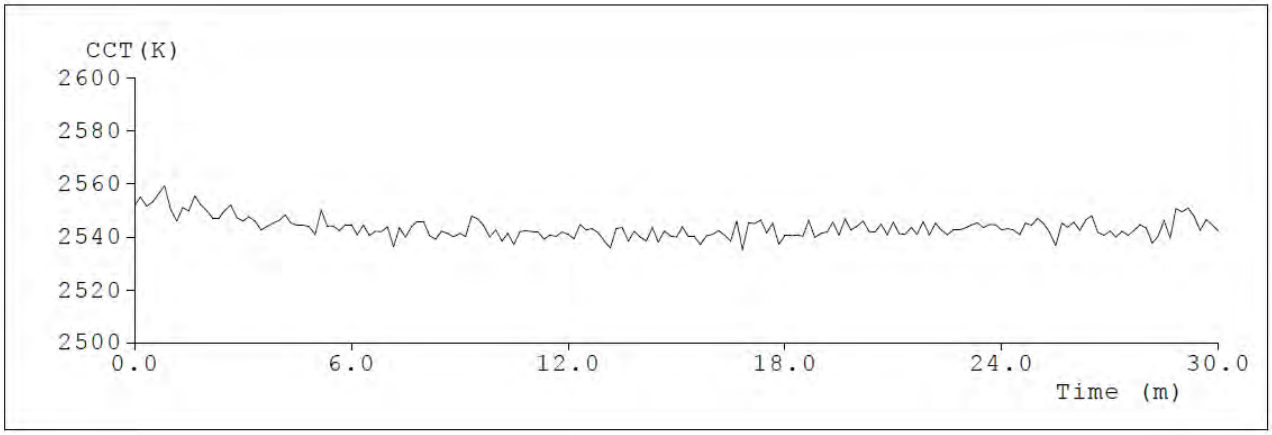
Test curves

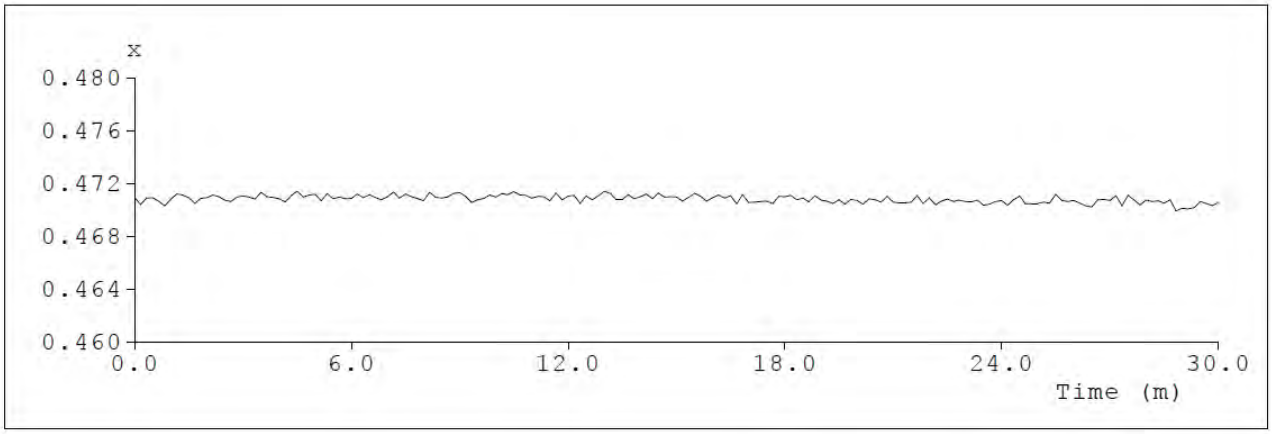


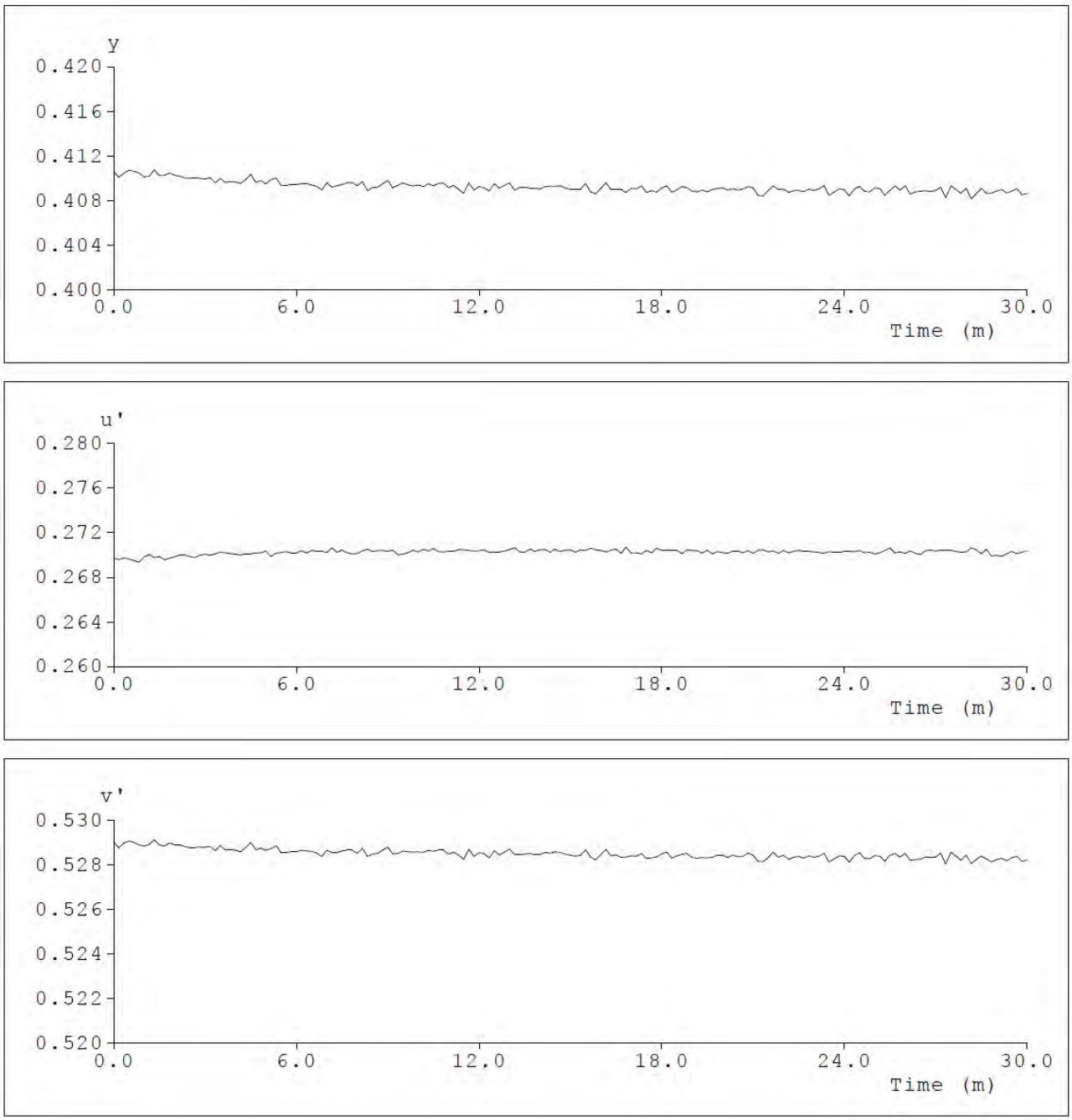





Flux(lm)
200
180
160
140
120
100
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)


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
0.476
0.472
0.468
0.464
0.460
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

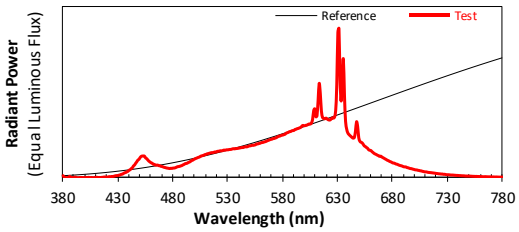

y
0.420
0.416
0.412
0.408
0.404
0.400
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)
u'
0.280
0.276
0.272
0.268
0.264
0.260
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)
v'
0.530
0.528
0.526
0.524
0.522
0.520
0.0
6.0
12.0
18.0
24.0
30.0
Time (m)

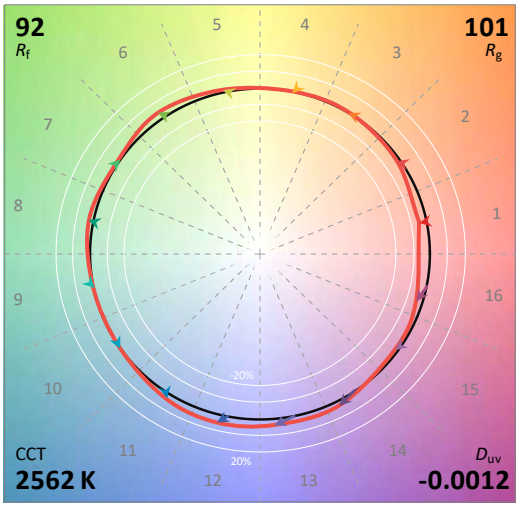
*11.2 ANSI/IES TM-30-18 Color Rendition Report

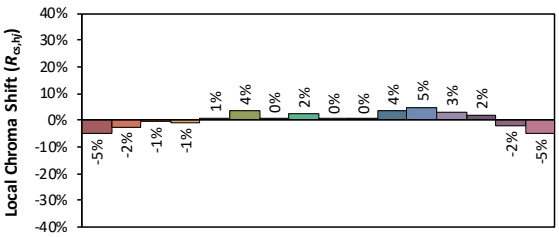
ANSI/IES TM-30-18 Color Rendition Report

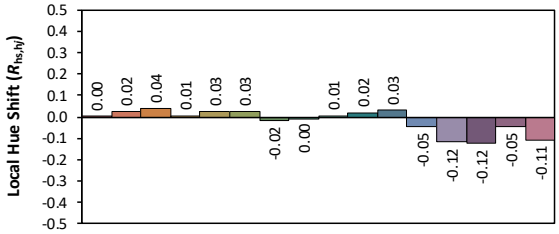
Source: Manufacturer:

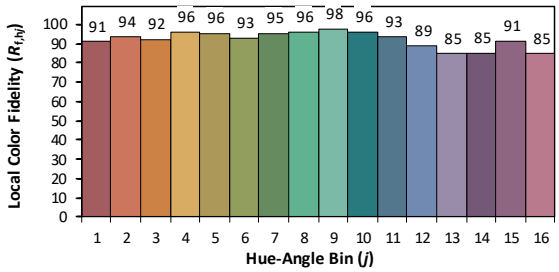
Date: 2023/10/19 Model: LNLY-1000-L27-DF-I-10

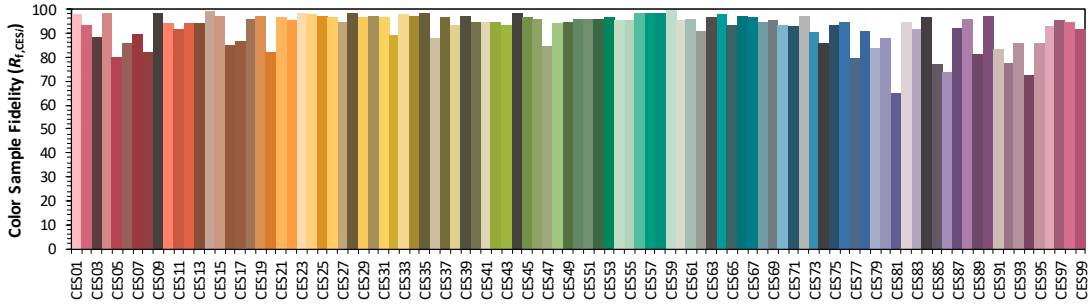












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

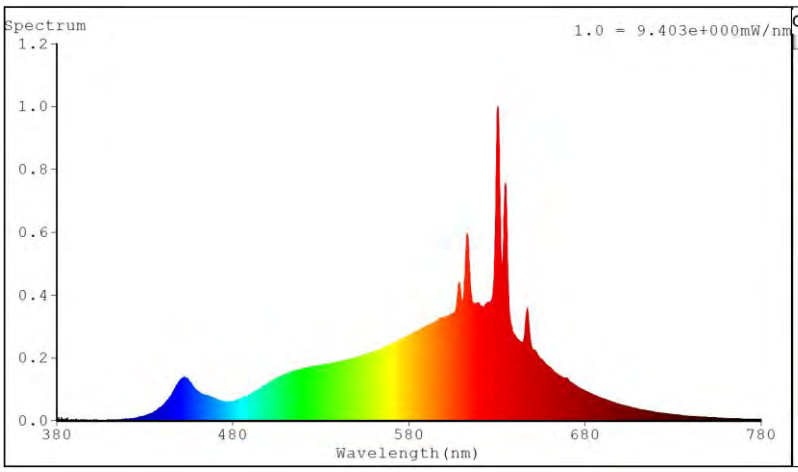
x	0.4693
y	0.4091
u'	0.2693
v'	0.5282

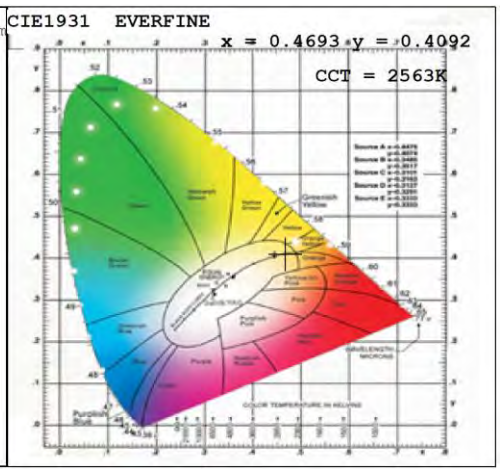
CIE 13.3-1995 (CRI)

R_a	95
R_9	60

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	0.0137	414	0.0018	448	0.1114	482	0.0633	516	0.1585
381	0.0041	415	0.0028	449	0.1164	483	0.0663	517	0.1599
382	0.0026	416	0.0034	450	0.1269	484	0.0697	518	0.1626
383	0.0004	417	0.0048	451	0.1346	485	0.0709	519	0.1616
384	0.0016	418	0.0052	452	0.1369	486	0.0722	520	0.1657
385	0.0036	419	0.004	453	0.1372	487	0.075	521	0.167
386	0.0091	420	0.0046	454	0.1364	488	0.0771	522	0.1678
387	0	421	0.0056	455	0.1254	489	0.0812	523	0.17
388	0.0034	422	0.0076	456	0.1208	490	0.0841	524	0.1698
389	0	423	0.007	457	0.1126	491	0.0888	525	0.1708
390	0.0016	424	0.0083	458	0.1052	492	0.0902	526	0.1738
391	0.0049	425	0.0083	459	0.0999	493	0.0925	527	0.1741
392	0.0015	426	0.0095	460	0.0948	494	0.0968	528	0.1744
393	0.0007	427	0.0117	461	0.0917	495	0.0993	529	0.1763
394	0	428	0.0135	462	0.0859	496	0.1038	530	0.1759
395	0.0021	429	0.0141	463	0.0844	497	0.1087	531	0.1778
396	0.0018	430	0.0146	464	0.0807	498	0.1113	532	0.1784
397	0.002	431	0.0172	465	0.0797	499	0.116	533	0.1791
398	0.0015	432	0.019	466	0.0802	500	0.1195	534	0.1818
399	0.0013	433	0.0222	467	0.0766	501	0.1226	535	0.183
400	0.0019	434	0.0234	468	0.076	502	0.1256	536	0.1823
401	0.0025	435	0.028	469	0.0723	503	0.1286	537	0.1838
402	0.0005	436	0.0317	470	0.0712	504	0.1306	538	0.1843
403	0.0032	437	0.0338	471	0.0685	505	0.1354	539	0.1853
404	0.0017	438	0.0377	472	0.0659	506	0.1378	540	0.1867
405	0.0013	439	0.0413	473	0.0644	507	0.1399	541	0.1881
406	0.0021	440	0.0476	474	0.062	508	0.1421	542	0.1897
407	0.0004	441	0.0514	475	0.061	509	0.1459	543	0.1906
408	0.0007	442	0.0582	476	0.0596	510	0.1471	544	0.1908
409	0.003	443	0.0634	477	0.0585	511	0.1508	545	0.1941
410	0.0026	444	0.0748	478	0.06	512	0.1523	546	0.1952
411	0.0032	445	0.0808	479	0.0593	513	0.1544	547	0.1947
412	0.0019	446	0.0917	480	0.0613	514	0.1564	548	0.1967
413	0.0023	447	0.1007	481	0.0616	515	0.1582	549	0.1999

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.2009	599	0.3279	648	0.3219	697	0.0576	746	0.0115
551	0.2024	600	0.3279	649	0.2525	698	0.055	747	0.0114
552	0.2049	601	0.3305	650	0.2303	699	0.0535	748	0.0112
553	0.2042	602	0.3318	651	0.2239	700	0.0511	749	0.011
554	0.2061	603	0.336	652	0.2205	701	0.0499	750	0.0108
555	0.2078	604	0.3385	653	0.2115	702	0.0493	751	0.0104
556	0.213	605	0.3383	654	0.2011	703	0.047	752	0.01
557	0.213	606	0.3456	655	0.1967	704	0.0462	753	0.0095
558	0.2154	607	0.3675	656	0.1908	705	0.0441	754	0.0093
559	0.2168	608	0.4219	657	0.1859	706	0.0434	755	0.0087
560	0.2201	609	0.4335	658	0.1769	707	0.0407	756	0.009
561	0.2219	610	0.3837	659	0.1733	708	0.0398	757	0.0084
562	0.2229	611	0.3901	660	0.1718	709	0.0374	758	0.0083
563	0.2257	612	0.4846	661	0.1649	710	0.0374	759	0.008
564	0.2275	613	0.593	662	0.1594	711	0.0365	760	0.0079
565	0.2302	614	0.5308	663	0.1534	712	0.0345	761	0.0076
566	0.2338	615	0.4215	664	0.1498	713	0.0338	762	0.0071
567	0.236	616	0.3801	665	0.1464	714	0.033	763	0.0068
568	0.2393	617	0.3738	666	0.1423	715	0.0323	764	0.0075
569	0.2416	618	0.3708	667	0.1392	716	0.0313	765	0.007
570	0.2431	619	0.3755	668	0.1347	717	0.0304	766	0.0067
571	0.2465	620	0.3718	669	0.1364	718	0.0295	767	0.0064
572	0.2474	621	0.3662	670	0.1311	719	0.0282	768	0.0064
573	0.2502	622	0.3636	671	0.127	720	0.0273	769	0.0061
574	0.2526	623	0.3641	672	0.1231	721	0.0264	770	0.0059
575	0.257	624	0.371	673	0.1188	722	0.0253	771	0.0058
576	0.2608	625	0.3774	674	0.1152	723	0.025	772	0.0058
577	0.2621	626	0.3752	675	0.1105	724	0.0238	773	0.005
578	0.2653	627	0.3819	676	0.108	725	0.024	774	0.0055
579	0.2677	628	0.4212	677	0.1036	726	0.0221	775	0.0051
580	0.2692	629	0.584	678	0.101	727	0.0223	776	0.0049
581	0.272	630	0.9132	679	0.0976	728	0.0211	777	0.0045
582	0.2744	631	0.9379	680	0.0936	729	0.0196	778	0.0046
583	0.2809	632	0.6137	681	0.0927	730	0.0196	779	0.0046
584	0.2834	633	0.4827	682	0.09	731	0.0192	780	0.0046
585	0.2862	634	0.629	683	0.0865	732	0.0184		
586	0.2905	635	0.7474	684	0.0852	733	0.0176		
587	0.291	636	0.5203	685	0.0817	734	0.0176		
588	0.2952	637	0.3548	686	0.079	735	0.0172		
589	0.2971	638	0.3073	687	0.0768	736	0.0164		
590	0.2979	639	0.2832	688	0.0753	737	0.0159		
591	0.3041	640	0.2732	689	0.0723	738	0.0151		
592	0.3054	641	0.266	690	0.0695	739	0.0152		
593	0.3092	642	0.2597	691	0.0688	740	0.0141		
594	0.3106	643	0.2535	692	0.0681	741	0.0141		
595	0.3139	644	0.2494	693	0.0644	742	0.0135		
596	0.3166	645	0.2538	694	0.0631	743	0.013		
597	0.3226	646	0.2917	695	0.0603	744	0.0128		
598	0.3293	647	0.3523	696	0.0583	745	0.0125		

12. Goniophotometer Test results for LNLY-1000-L27-DF-I-10

12.1 Test Data

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

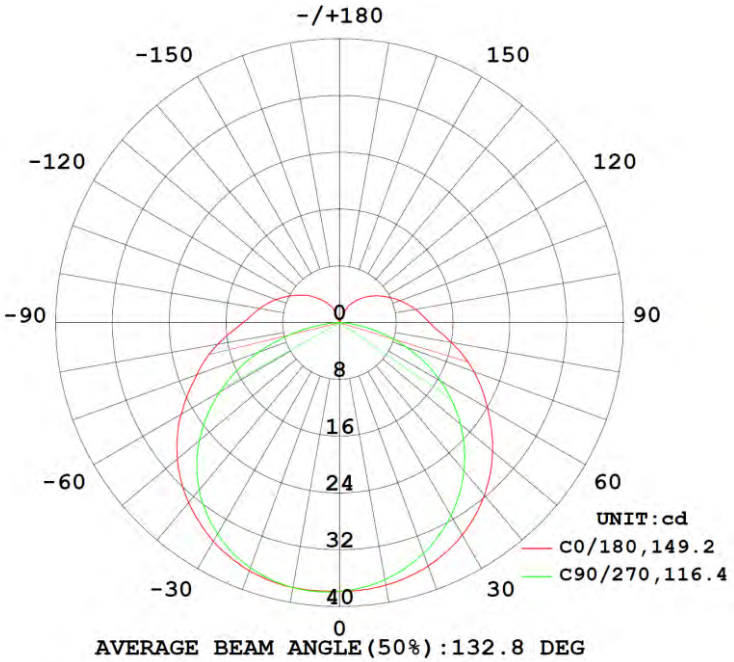
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
24.003	--	0.41538	1.0000	9.9702

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	Imax (cd)	η up (%)	η down (%)
167.257	16.78	38.07	16	84

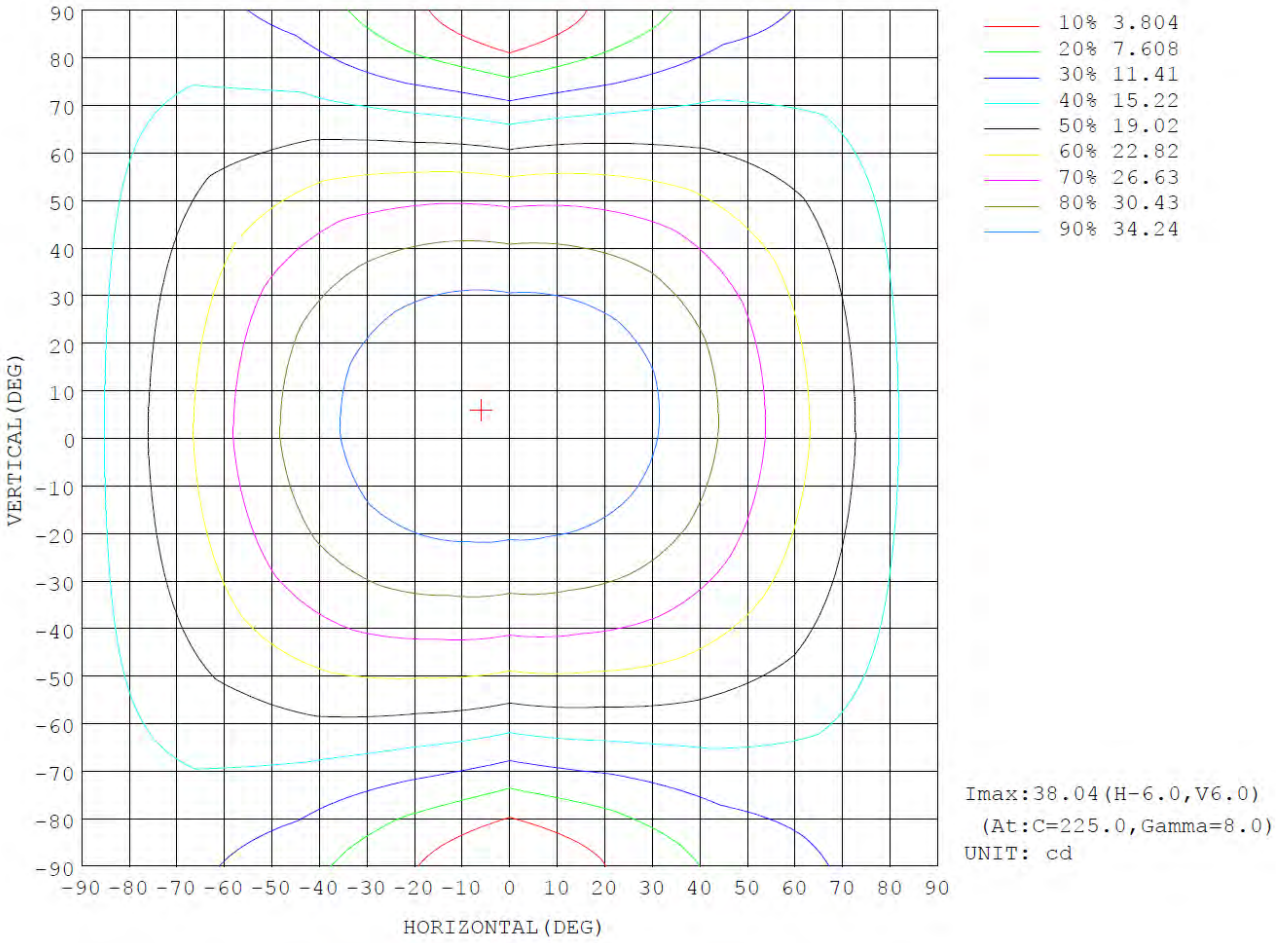
12.2 Luminous Intensity Distribution



12.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	37.54	37.05	36.75	37.24	37.89	38.06	37.89	37.86	0- 10	3.599	3.599	2.15,2.15
20	36.49	35.36	34.58	35.85	37.20	37.41	36.75	36.90	10- 20	10.47	14.07	8.41,8.41
30	34.56	32.84	31.40	33.55	35.58	35.68	34.40	34.97	20- 30	16.31	30.38	18.2,18.2
40	31.74	29.53	27.27	30.53	33.09	32.79	30.78	32.06	30- 40	20.46	50.84	30.4,30.4
50	28.15	25.49	22.23	26.70	29.84	29.05	25.78	28.19	40- 50	22.46	73.30	43.8,43.8
60	24.09	20.86	16.41	22.21	25.78	24.35	19.51	23.40	50- 60	22.04	95.34	57,57
70	20.16	16.09	9.962	17.26	21.41	19.04	12.15	18.28	60- 70	19.35	114.7	68.6,68.6
80	15.99	11.76	3.634	12.72	17.40	14.13	4.510	13.50	70- 80	15.15	129.8	77.6,77.6
90	12.70	8.599	0.1580	9.171	13.60	10.16	0.1898	9.876	80- 90	10.72	140.6	84,84
100	10.85	7.085	0.0147	7.512	11.46	8.288	0.0165	8.138	90-100	8.166	148.7	88.9,88.9
110	9.101	5.734	0.0087	6.049	9.547	6.640	0.0174	6.570	100-110	6.527	155.2	92.8,92.8
120	7.400	4.622	0.0191	4.823	7.675	5.231	0.0174	5.251	110-120	4.951	160.2	95.8,95.8
130	5.831	3.607	0.0252	3.574	6.013	3.938	0.0226	4.049	120-130	3.509	163.7	97.9,97.9
140	4.355	2.627	0.0296	2.600	4.350	2.879	0.0352	2.862	130-140	2.108	165.8	99.1,99.1
150	2.909	0.1975	0.0309	0.8669	2.935	2.019	0.0509	0.0521	140-150	1.127	166.9	99.8,99.8
160	0.0453	0.0400	0.0378	0.0518	0.1129	0.0661	0.0613	0.0552	150-160	0.2915	167.2	100,100
170	0.0444	0.0491	0.0574	0.0608	0.0644	0.0670	0.0643	0.0639	160-170	0.0160	167.3	100,100
180	0.0509	0.0600	0.0608	0.0643	0.0514	0.0626	0.0608	0.0617	170-180	0.0058	167.3	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	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9			
5	37.8	37.7	37.6	37.5	37.5	37.5	37.6	37.8	37.9	38.0	38.0	38.0	38.0	38.0	38.0	37.9			
10	37.5	37.3	37.0	36.8	36.8	36.9	37.2	37.6	37.9	38.0	38.1	37.9	37.9	37.9	37.9	37.7			
15	37.1	36.7	36.3	36.0	35.8	36.1	36.7	37.2	37.7	37.9	37.9	37.6	37.5	37.5	37.5	37.4			
20	36.5	36.0	35.4	34.8	34.6	35.0	35.8	36.6	37.2	37.5	37.4	37.1	36.8	36.8	36.9	36.8			
25	35.6	35.0	34.2	33.5	33.1	33.8	34.8	35.8	36.5	36.8	36.7	36.2	35.7	35.9	36.1	36.0			
30	34.6	33.8	32.8	31.9	31.4	32.2	33.6	34.8	35.6	35.8	35.7	35.0	34.4	34.7	35.0	35.0			
35	33.2	32.4	31.3	30.1	29.4	30.5	32.1	33.5	34.4	34.7	34.3	33.6	32.8	33.2	33.6	33.7			
40	31.7	30.8	29.5	28.1	27.3	28.5	30.5	32.1	33.1	33.3	32.8	31.8	30.8	31.4	32.1	32.2			
45	30.0	29.0	27.6	25.9	24.9	26.4	28.7	30.5	31.6	31.8	31.0	29.7	28.5	29.3	30.2	30.5			
50	28.2	27.1	25.5	23.5	22.2	24.1	26.7	28.7	29.8	30.0	29.0	27.3	25.8	27.0	28.2	28.6			
55	26.1	25.0	23.2	20.9	19.4	21.6	24.5	26.7	27.9	28.0	26.9	24.5	22.8	24.2	25.9	26.5			
60	24.1	22.9	20.9	18.2	16.4	18.9	22.2	24.5	25.8	25.8	24.3	21.6	19.5	21.4	23.4	24.2			
65	22.1	20.8	18.4	15.4	13.2	16.2	19.8	22.3	23.5	23.4	21.7	18.4	15.9	18.3	20.8	22.1			
70	20.2	18.8	16.1	12.5	9.96	13.3	17.3	20.0	21.4	21.1	19.0	15.2	12.2	15.1	18.3	20.1			
75	18.1	16.7	13.9	9.73	6.70	10.4	14.8	18.0	19.5	19.1	16.4	11.9	8.26	11.8	15.9	17.9			
80	16.0	14.7	11.8	7.29	3.63	7.76	12.7	16.0	17.4	16.9	14.1	8.81	4.51	8.94	13.5	15.7			
85	14.1	12.8	9.87	5.35	1.19	5.73	10.7	14.0	15.3	14.8	11.9	6.48	1.47	6.60	11.4	13.7			
90	12.7	11.5	8.60	4.20	0.16	4.42	9.17	12.3	13.6	13.0	10.2	4.99	0.19	5.19	9.88	12.3			
95	11.7	10.6	7.81	3.61	0.00	3.81	8.25	11.2	12.4	11.8	9.13	4.30	0.01	4.48	8.97	11.3			
100	10.9	9.72	7.08	3.10	0.01	3.31	7.51	10.3	11.5	10.9	8.29	3.75	0.02	3.87	8.14	10.4			
105	9.98	8.91	6.39	2.75	0.01	2.89	6.77	9.41	10.5	9.91	7.45	3.29	0.02	3.44	7.33	9.53			
110	9.10	8.10	5.73	2.46	0.01	2.53	6.05	8.52	9.55	8.96	6.64	2.90	0.02	3.07	6.57	8.65			
115	8.23	7.31	5.16	2.19	0.01	2.17	5.39	7.65	8.59	8.03	5.89	2.53	0.02	2.72	5.89	7.80			
120	7.40	6.57	4.62	1.70	0.02	1.94	4.82	6.83	7.67	7.15	5.23	2.19	0.02	2.38	5.25	6.99			
125	6.60	5.86	4.11	1.61	0.02	1.63	4.13	6.08	6.82	6.34	4.56	1.87	0.02	1.98	4.64	6.22			
130	5.83	5.18	3.61	0.80	0.03	1.42	3.57	5.34	6.01	5.55	3.94	1.55	0.02	1.36	4.05	5.48			
135	5.09	4.51	3.12	0.04	0.03	0.10	3.10	4.50	5.13	4.73	3.39	0.14	0.03	0.04	3.46	4.75			
140	4.36	3.86	2.63	0.03	0.03	0.05	2.60	3.84	4.35	4.04	2.88	0.05	0.04	0.04	2.86	4.03			
145	3.64	3.21	1.74	0.03	0.03	0.05	2.16	3.22	3.66	3.42	2.45	0.05	0.04	0.04	1.72	3.31			
150	2.91	2.53	0.20	0.03	0.03	0.05	0.87	2.55	2.93	2.78	2.02	0.05	0.05	0.05	0.05	2.47			
155	1.62	0.71	0.04	0.04	0.04	0.05	0.06	1.78	2.27	2.20	0.17	0.06	0.06	0.05	0.05	0.13			
160	0.05	0.05	0.04	0.04	0.04	0.05	0.05	0.06	0.11	0.10	0.07	0.06	0.06	0.06	0.06	0.06			
165	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.06			
170	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.06			
175	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.06			
180	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06			

13. Photo of sample

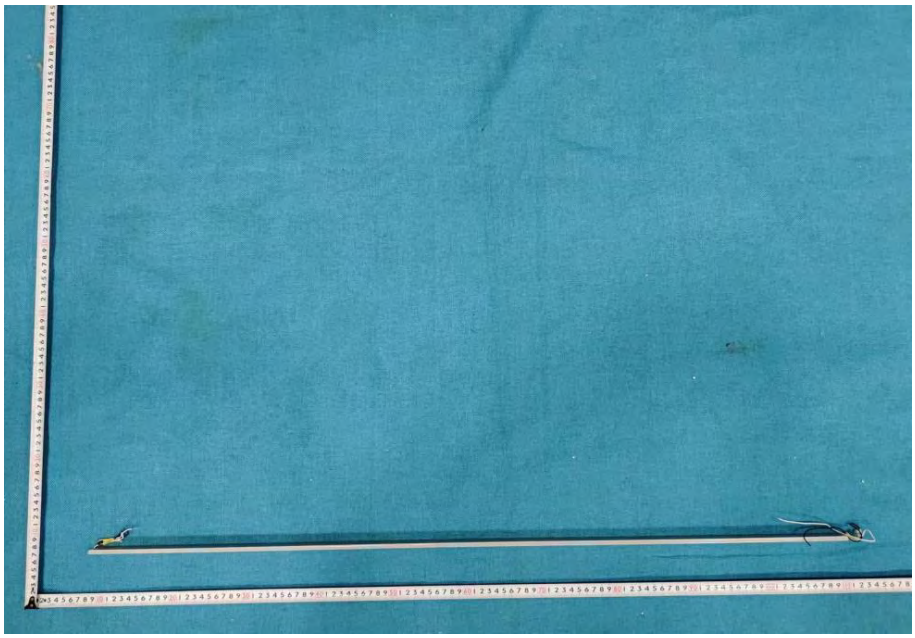


Figure 1 Overview

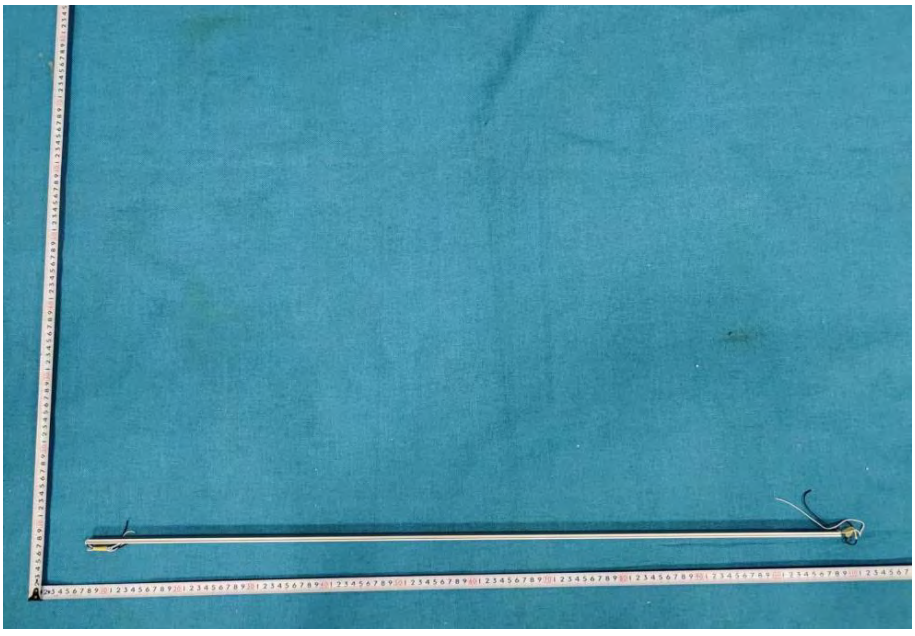


Figure 2 Overview

---End of Report---