

IES LM-79-08

MEASUREMENT AND TEST REPORT

For

GREEN CREATIVE LTD

Room 3603, Level 36, Tower 1, Enterprise Square Five, 38 Wang Chiu Road, Kowloon Bay, KL, Hong Kong

Test Model: SLFT6/9CCT5S/DUALDIM+SLFT6/MD/OPTIC

Report Type:	Electrical and Photometric tests including: Luminous Flux, Chromaticity, Luminous Intensity Distribution
Project Engineer:	Bay Wang
Report Number:	RKSB221207002-10-3
Test Date:	2022-12-08
Report Date:	2022-12-23
Reviewed By:	Seven Xia / EE Engineer
Prepared By:	Bay Area Compliance Laboratories Corp. (Kunshan). No. 248 Chenghu Road, Kunshan, Jiangsu, People's Republic of China Tel: +86-0512-86175000 Fax: +86-0512-88934268
Accreditation:	The IAS Accreditation Number TL-1044.

1. Product Description#

General Information:

One sample was received on 2022-12-07 and used for testing.

Model Tested:	SLFT6/9CCT5S/DUALDIM+SLFT6/MD/OPTIC
Manufacturer:	GREEN CREATIVE LTD
Brand Name:	GREEN CREATIVE
Product Designation:	LED Recessed Downlight
Burning Time Before Test:	0hour(For New Products)
Color Tunable:	White-Tunable
CCT Range:	2700K, 3000K, 3500K, 4000K, 5000K
Least Efficient Setting:	2700K
Most Consumptive Setting:	2700K
Default Setting:	3500K

Rated Values:

Rated Voltage/Frequency:	120-277VAC 50/60Hz
Rated Power:	17W/13.5W/10W
Nominal CCT:	2700K/3000K/3500K/4000K/5000K
Nominal Lumen Output:	1500lm/1580lm/1650lm/1650lm/1650lm @ 17W

2. Standards Used

- IES LM-79-08: Approved Method: Electrical & Photometric Measurement of Solid-state Lighting Products
- ANSI C82.77-10-2014: Harmonic Emission Limits – Related Power Quality Requirements for Lighting Equipment
- IES TM-30-18*: IES Method for Evaluating Light Source Color Rendition

3. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
AC Power Supply	INVENTFINE	CHP-5KVA	900511765	2022-06-21	2023-06-20
DC Power Supply	INVENTFINE	WL3010	JWDMP030001	2022-06-21	2023-06-20
Power Meter	INVENTFINE	WT500	GSDSQ200007	2022-11-03	2023-11-02
Goniophotometer	INVENTFINE	GPM-1900	YWGCF120001	2022-11-14	2023-11-13
Wireless Weather Station	ZHONGXING	KG218	N/A	2022-06-21	2023-06-20
Standard Light Source	INVENTFINE	N/A	JWBYR040008	2021-12-23	2023-12-22

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Kunshan) attested that all calibration has been performed using suitable standards traceable to National Primary Standards and International System of Units (SI).

4. Test Method

Product was tested with no seasoning. All stabilization and measurements were made in compliance with IES LM-79-08. The product was operated at rated voltage or at voltage required by manufacturer. The ambient temperature of the sample was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ during measurement. And relative humidity is less than 65%.

Goniophotometer System

The goniophotometer system is calibrated by standard light source before measurement.

Type C goniophotometer was used for measuring total luminous flux, luminous intensity distribution, and color spatial uniformity. The product was operated in its intended orientation in application and was recorded in this report. The vertical angle (γ) test intervals were set no more than 1 degree while data for 5 degree intervals is reported. The horizontal angle (C plane) test intervals were set no more than 22.5 degree.

The uncertainty of the luminous flux is $U_{rel}=2.6\%$ ($k=2$), at the 95% confidence level.

Note: The UUT was tested at 2700K, the Most Consumptive Setting.

5. Test Result

[Goniophotometer System]

Total operating time for luminous intensity distribution: **1.0 hour**

Test orientation: **Downward**

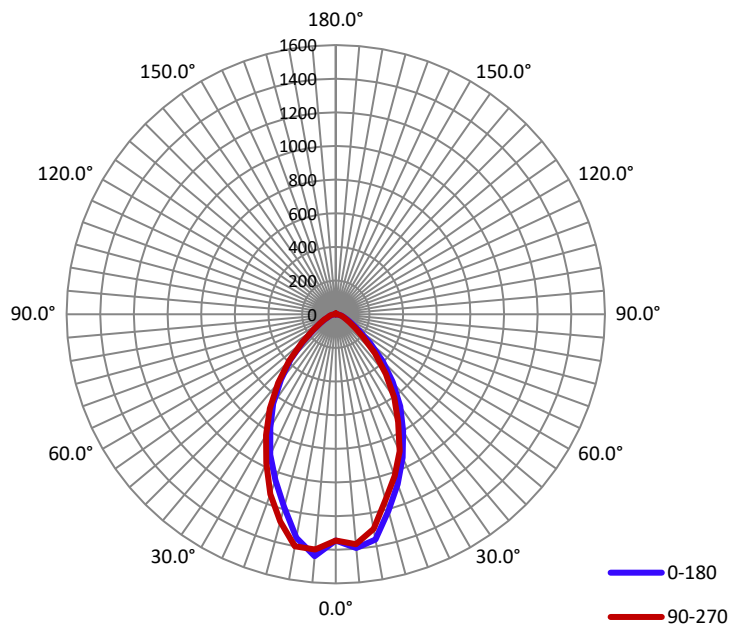
Electrical Measurement

Input Voltage(V)	Frequency(Hz)	Input Current(A)	Power (W)	Power Factor
120.0	60	0.1340	15.9	0.9860

Photometric Measurement

Luminous Flux(lm)	Efficacy(lm/W)	$I_{max}(cd)$	S/MH(C0/180)	S/MH(C90/270)
1857	116.84	1446.0	0.96	0.96

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle(50% I_{max}):	64.8	64.4	65.0	65.4	64.9
Field Angle(10% I_{max}):	112.5	112.4	111.1	112.6	112.2

Luminous Intensity (cd) Distribution Data

C y	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	1345	1345	1345	1345	1345	1345	1345	1345
5.0°	1395	1381	1378	1377	1372	1379	1398	1419
10.0°	1360	1328	1336	1306	1295	1290	1331	1328
15.0°	1210	1162	1198	1149	1142	1137	1193	1167
20.0°	1075	1039	1047	1021	1023	1016	1051	1038
25.0°	939	921	904	896	898	899	909	918
30.0°	800	771	754	748	741	753	755	771
35.0°	668	642	621	612	607	610	622	639
40.0°	526	504	489	471	463	467	479	495
45.0°	393	378	361	346	329	340	356	373
50.0°	268	249	232	223	213	218	229	246
55.0°	167	158	150	142	137	140	146	154
60.0°	111	107	103	99	95	98	101	105
65.0°	75	72	69	66	64	65	67	70
70.0°	49	48	47	47	46	46	47	47
75.0°	37	36	35	35	35	34	34	35
80.0°	24	23	22	21	21	21	21	22
85.0°	9	9	8	7	6	6	6	7
90.0°	0	0	0	0	0	0	0	0
95.0°	0	0	0	0	0	0	0	0
100.0°	0	0	0	0	0	0	0	0
105.0°	0	0	0	0	0	0	0	0
110.0°	0	0	0	0	0	0	0	0
115.0°	0	0	0	0	0	0	0	0
120.0°	0	0	0	0	0	0	0	0
125.0°	0	0	0	0	0	0	0	0
130.0°	0	0	0	0	0	0	0	0
135.0°	0	0	0	0	0	0	0	0
140.0°	0	0	0	0	0	0	0	0
145.0°	0	0	1	1	2	1	0	1
150.0°	1	1	2	2	2	2	2	1
155.0°	2	2	3	3	3	3	3	3
160.0°	2	2	4	4	4	4	3	3
165.0°	3	3	4	4	4	4	4	4
170.0°	4	4	4	4	4	4	4	4
175.0°	5	4	5	5	5	5	5	5
180.0°	0	0	0	0	0	0	0	0

Luminous Intensity (cd) Distribution Data (cont.)

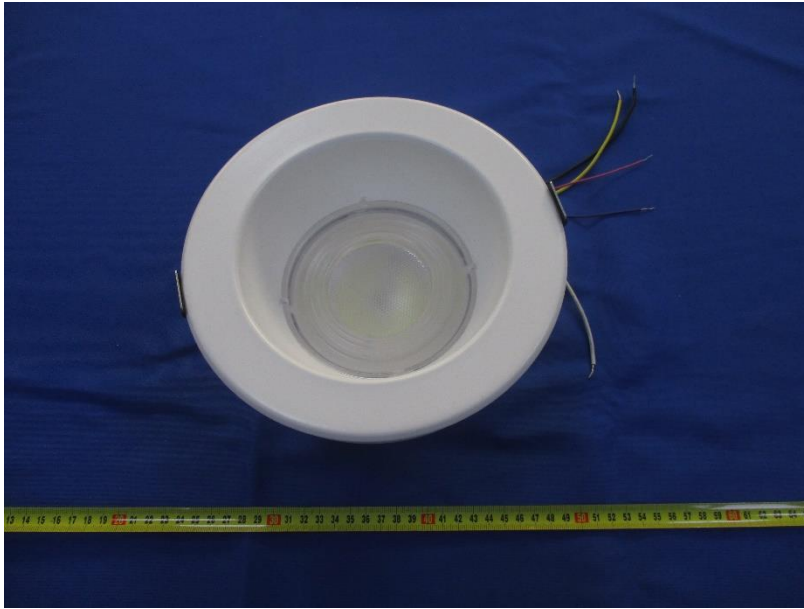
C y	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	1345	1345	1345	1345	1345	1345	1345	1345
5.0°	1444	1439	1430	1415	1404	1398	1401	1401
10.0°	1349	1344	1378	1382	1400	1389	1385	1359
15.0°	1186	1180	1238	1223	1275	1239	1257	1191
20.0°	1050	1052	1110	1097	1138	1103	1124	1065
25.0°	922	934	960	975	977	982	968	948
30.0°	779	790	810	824	829	829	812	805
35.0°	648	657	665	679	684	683	676	669
40.0°	507	518	528	532	533	537	532	525
45.0°	379	391	401	402	393	407	406	399
50.0°	252	261	269	268	263	273	271	266
55.0°	156	163	168	165	165	170	171	167
60.0°	106	109	113	112	110	114	114	111
65.0°	69	72	75	77	76	78	78	76
70.0°	46	47	49	50	50	50	50	50
75.0°	34	35	37	38	38	39	38	37
80.0°	21	23	24	25	26	26	25	25
85.0°	6	8	10	11	11	11	11	9
90.0°	0	0	0	0	0	0	0	0
95.0°	0	0	0	0	0	0	0	0
100.0°	0	0	0	0	0	0	0	0
105.0°	0	0	0	0	0	0	0	0
110.0°	0	0	0	0	0	0	0	0
115.0°	0	0	0	0	0	0	0	0
120.0°	0	0	0	0	0	0	0	0
125.0°	0	0	0	0	0	0	0	0
130.0°	0	0	0	0	0	0	0	0
135.0°	0	0	0	0	0	0	0	0
140.0°	0	0	0	0	0	0	0	0
145.0°	0	0	0	0	0	0	0	0
150.0°	0	1	1	1	2	1	2	1
155.0°	1	1	2	2	2	2	2	2
160.0°	1	2	3	3	3	3	3	3
165.0°	2	3	3	4	4	4	4	3
170.0°	3	4	4	4	5	5	5	4
175.0°	3	4	5	5	5	5	5	5
180.0°	0	0	0	0	0	0	0	0

Zonal Lumen Density Measurement

Deg	Flux (lm)	%
0-5	33.0	1.78
5-10	99.2	5.35
10-15	150.5	8.11
15-20	185.8	10.02
20-25	209.2	11.27
25-30	217.7	11.71
30-35	210.3	11.33
35-40	192.0	10.34
40-45	163.5	8.79
45-50	126.4	6.80
50-55	86.8	4.68
55-60	59.7	3.21
60-65	43.0	2.33
65-70	29.4	1.58
70-75	22.0	1.19
75-80	15.9	0.86
80-85	8.5	0.47
85-90	1.3	0.07
90-95	0.0	0.00
95-100	0.0	0.00
100-105	0.0	0.00
105-110	0.0	0.00
110-115	0.0	0.00
115-120	0.0	0.00
120-125	0.0	0.00
125-130	0.0	0.00
130-135	0.0	0.00
135-140	0.0	0.00
140-145	0.0	0.00
145-150	0.2	0.00
150-155	0.5	0.00
155-160	0.5	0.05
160-165	0.5	0.05
165-170	0.5	0.01
170-175	0.4	0.00
175-180	0.0	0.00

Deg	Flux (lm)	%
0-5	33.0	1.78
0-10	132.2	7.12
0-15	282.7	15.22
0-20	468.5	25.23
0-25	677.6	36.49
0-30	895.3	48.21
0-35	1105.7	59.54
0-40	1297.6	69.88
0-45	1461.0	78.68
0-50	1587.3	85.48
0-55	1674.2	90.16
0-60	1734.0	93.38
0-65	1777.1	95.70
0-70	1806.5	97.28
0-75	1828.5	98.47
0-80	1844.4	99.32
0-85	1853.0	99.79
0-90	1854.4	99.86
0-95	1854.4	99.86
0-100	1854.4	99.86
0-105	1854.4	99.86
0-110	1854.4	99.86
0-115	1854.4	99.86
0-120	1854.4	99.86
0-125	1854.4	99.86
0-130	1854.4	99.86
0-135	1854.4	99.86
0-140	1854.4	99.86
0-145	1854.4	99.86
0-150	1854.7	99.88
0-155	1855.1	99.90
0-160	1855.6	99.93
0-165	1856.1	99.95
0-170	1856.6	99.98
0-175	1856.9	99.99
0-180	1857.0	100.00

6. Product Photo



Directions

1. The information marked "superscript #" is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report.
2. This report may contain data that are not covered by the accreditation scope and shall be marked with an asterisk "★".
3. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.
6. This report cannot be reproduced except in full, without prior written approval of the Company.
7. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

*****END OF REPORT*****