

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: LES9027KDIM120VMD/ADR4BL

Report Type:	Electrical and Photometric tests including: Luminous Flux, Luminous Intensity Distribution
Test Engineer:	Joker Gu
Report Number:	RKSB200812009-10-2
Test Date:	2020-08-27
Report Date:	2020-09-07
Reviewed By:	Seven Xia/EE Engineer
Prepared By:	Bay Area Compliance Laboratories Corp. (Kunshan). No.248 Chenghu Road, Kunshan, Jiangsu province, China. Tel: +86-0512-86175000 Fax: +86-0512-88934268
Accreditation:	The IAS Accreditation Number TL-749.

1. Product Description

General Information:

One sample was received on 2020-08-12 and used for testing.

Model Tested: LES9027KDIM120VMD/ADR4BL
Manufacturer: GREEN CREATIVE LTD
Brand Name: GREEN CREATIVE
Product Designation: LED Recessed Downlight
Burning Time Before Test: 0hour(For New Products)

Rated Values:

Rated Voltage/Frequency: 120VAC 60Hz
Rated Power: 12.5W
Nominal CCT: 2700K
Nominal Lumen Output: 820lm

2. Standards Used

- IES LM-79-08: Approved Method: Electrical & Photometric Measurement of Solid-state Lighting Products

3. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
AC Power Supply	INVENTFINE	CHP-5KVA	900511765	2020-04-02	2021-04-01
DC Power Supply	INVENTFINE	WL3010	JWDMP030001	2019-12-20	2020-12-19
Power Meter	INVENTFINE	WT500	GSDSQ200007	2020-04-02	2021-04-01
Goniophotometer	INVENTFINE	GPM-1900	YWGCF120001	2020-01-22	2021-01-21
Wireless Weather Station	ZHONGXING	KG218	N/A	2019-12-02	2020-12-01
Standard Light Source	INVENTFINE	N/A	JWBYR040008	2020-03-19	2021-03-18

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 $U_{re}=2.6\%$ ($k=2$), at the 95% confidence level.

5. Test Result

[Goniophotometer System]

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

Test orientation: **Downward**

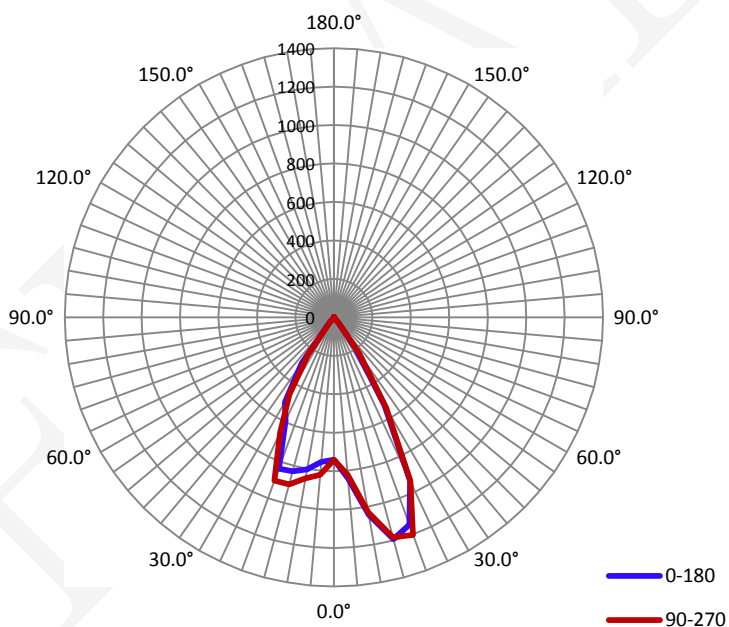
Electrical Measurement

Input Voltage(V)	Frequency(Hz)	Input Current(A)	Power (W)	Power Factor
120.0	60	0.1070	12.66	0.9820

Photometric Measurement

Luminous Flux(lm)	Efficacy(lm/W)	$I_{max}(cd)$	S/MH(C0/180)	S/MH(C90/270)
885.6	70.00	1208.0	1.12	1.11

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle(50% I_{max}):	54.1	52.6	55.7	58.4	55.2
Field Angle(10% I_{max}):	75.9	75.6	75.7	76.1	75.8

Luminous Intensity (cd) Distribution Data

C y	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	741	741	741	741	741	741	741	741
5.0°	841	829	817	809	823	820	808	789
10.0°	1042	1049	1044	1023	1029	1022	990	923
15.0°	1194	1208	1194	1186	1183	1166	1083	956
20.0°	1147	1161	1161	1185	1204	1193	1115	984
25.0°	938	956	938	947	940	887	851	748
30.0°	528	532	569	559	541	541	539	518
35.0°	198	219	199	202	231	248	272	288
40.0°	30	31	24	31	41	45	49	56
45.0°	2	2	2	2	2	2	2	1
50.0°	0	0	0	0	0	0	0	0
55.0°	0	0	0	0	0	0	0	0
60.0°	0	0	0	0	0	0	0	0
65.0°	0	0	0	0	0	0	0	0
70.0°	0	0	0	0	0	0	0	0
75.0°	0	0	0	0	0	0	0	0
80.0°	0	0	0	0	0	0	0	0
85.0°	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0
155.0°	0	0	0	0	0	0	0	0
160.0°	0	0	0	0	0	1	1	0
165.0°	0	1	1	0	1	1	1	1
170.0°	1	1	1	1	1	1	2	1
175.0°	1	2	2	2	2	2	2	2
180.0°	0	0	0	0	0	0	0	0

Luminous Intensity (cd) Distribution Data (cont.)

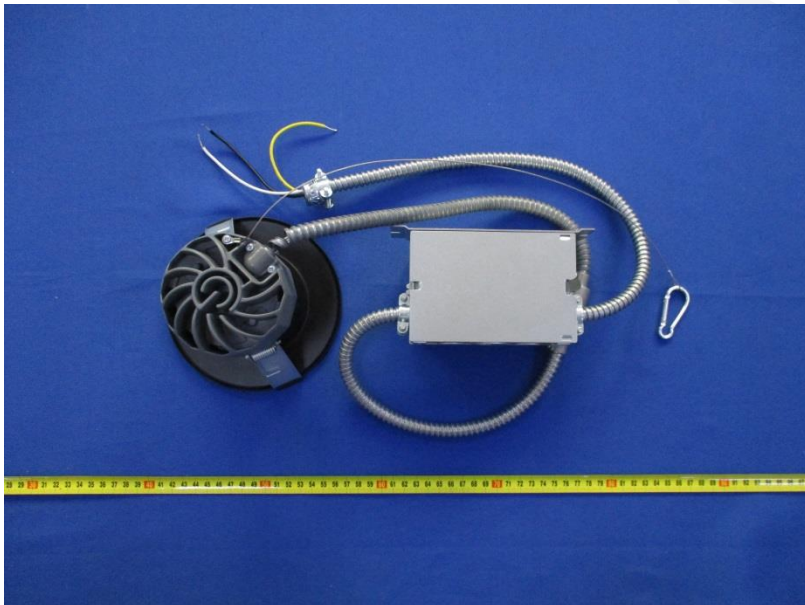
C y	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	741	741	741	741	741	741	741	741
5.0°	755	759	770	787	821	850	867	866
10.0°	803	775	758	779	850	924	983	1015
15.0°	829	770	740	776	900	1032	1134	1163
20.0°	838	750	720	789	903	1020	1111	1136
25.0°	594	526	513	570	661	758	827	864
30.0°	509	501	474	465	464	471	488	484
35.0°	293	300	283	263	239	225	199	179
40.0°	47	43	39	32	28	28	28	26
45.0°	0	1	2	2	2	3	3	3
50.0°	0	0	0	0	0	0	0	0
55.0°	0	0	0	0	0	0	0	0
60.0°	0	0	0	0	0	0	0	0
65.0°	0	0	0	0	0	0	0	0
70.0°	0	0	0	0	0	0	0	0
75.0°	0	0	0	0	0	0	0	0
80.0°	0	0	0	0	0	0	0	0
85.0°	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0
155.0°	0	0	0	0	0	0	0	0
160.0°	0	0	0	1	1	0	1	1
165.0°	1	0	1	1	1	1	1	1
170.0°	1	1	2	2	2	1	2	2
175.0°	2	2	2	2	2	2	2	2
180.0°	0	0	0	0	0	0	0	0

Zonal Lumen Density Measurement

Deg	Flux (lm)	%
0-5	18.6	2.10
5-10	62.6	7.07
10-15	116.9	13.20
15-20	169.6	19.15
20-25	189.6	21.41
25-30	163.7	18.49
30-35	110.6	12.49
35-40	46.1	5.20
40-45	7.1	0.80
45-50	0.4	0.04
50-55	0.0	0.00
55-60	0.0	0.00
60-65	0.0	0.00
65-70	0.0	0.00
70-75	0.0	0.00
75-80	0.0	0.00
80-85	0.0	0.00
85-90	0.0	0.00
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	0.0	0.00
150-155	0.0	0.00
155-160	0.0	0.00
160-165	0.1	0.01
165-170	0.1	0.01
170-175	0.1	0.01
175-180	0.0	0.00

Deg	Flux (lm)	%
0-5	18.6	2.10
0-10	81.2	9.17
0-15	198.1	22.37
0-20	367.7	41.52
0-25	557.3	62.93
0-30	721.0	81.42
0-35	831.7	93.91
0-40	877.7	99.12
0-45	884.8	99.91
0-50	885.2	99.95
0-55	885.2	99.95
0-60	885.2	99.95
0-65	885.2	99.95
0-70	885.2	99.95
0-75	885.2	99.95
0-80	885.2	99.95
0-85	885.2	99.95
0-90	885.2	99.95
0-95	885.2	99.95
0-100	885.2	99.95
0-105	885.2	99.95
0-110	885.2	99.95
0-115	885.2	99.95
0-120	885.2	99.95
0-125	885.2	99.95
0-130	885.2	99.95
0-135	885.2	99.95
0-140	885.2	99.95
0-145	885.2	99.95
0-150	885.2	99.95
0-155	885.2	99.95
0-160	885.2	99.96
0-165	885.3	99.97
0-170	885.4	99.98
0-175	885.6	100.00
0-180	885.6	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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
3. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
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