

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: LES9027KDIM120VNR/ADR4BL

Report Type:	Electrical and Photometric tests including: Luminous Flux, Luminous Intensity Distribution
Test Engineer:	Joker Gu
Report Number:	RKSB200812009-10-1
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: LES9027KDIM120VNR/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**

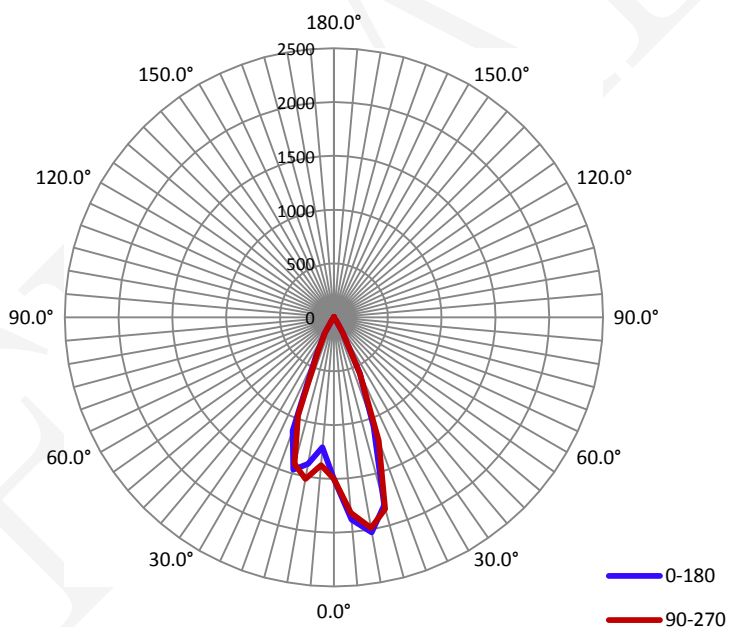
Electrical Measurement

Input Voltage(V)	Frequency(Hz)	Input Current(A)	Power (W)	Power Factor
120.0	60	0.1070	12.63	0.9820

Photometric Measurement

Luminous Flux(lm)	Efficacy(lm/W)	$I_{max}(cd)$	S/MH(C0/180)	S/MH(C90/270)
861.5	68.26	2049.2	0.78	0.78

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle(50% I_{max}):	41.4	41.5	41.5	42.5	41.7
Field Angle(10% I_{max}):	58.9	58.7	58.7	59.2	58.9

Luminous Intensity (cd) Distribution Data

C y	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	1500	1500	1500	1500	1500	1500	1500	1500
5.0°	1886	1928	1915	1899	1822	1754	1608	1402
10.0°	2027	2049	2033	2030	1985	1940	1800	1598
15.0°	1807	1844	1862	1866	1843	1775	1673	1556
20.0°	1081	1116	1157	1191	1218	1229	1190	1143
25.0°	573	588	605	595	572	563	516	479
30.0°	154	160	165	173	174	177	174	170
35.0°	32	32	34	36	39	40	47	49
40.0°	7	7	7	7	7	7	7	7
45.0°	0	1	1	1	1	1	1	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	1	1	1
160.0°	1	1	2	1	1	1	1	2
165.0°	2	2	3	2	2	2	3	3
170.0°	3	3	3	3	3	3	3	3
175.0°	3	4	4	4	4	4	4	4
180.0°	0	0	0	0	0	0	0	0

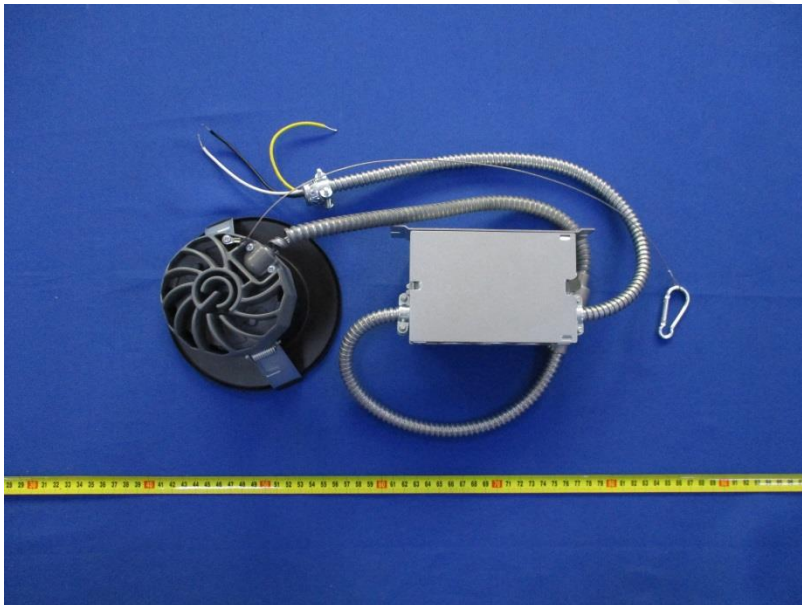
Luminous Intensity (cd) Distribution Data (cont.)

C y	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	1500	1500	1500	1500	1500	1500	1500	1500
5.0°	1211	1052	1061	1208	1378	1563	1696	1778
10.0°	1383	1221	1196	1326	1525	1701	1842	1897
15.0°	1463	1367	1338	1363	1409	1506	1581	1640
20.0°	1118	1081	1055	1007	971	980	974	964
25.0°	396	361	335	331	361	407	459	488
30.0°	180	183	176	172	158	149	142	138
35.0°	43	38	33	30	30	31	31	30
40.0°	6	7	7	7	7	7	7	7
45.0°	0	0	1	1	1	1	1	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	1	1	1	1	1	1
160.0°	0	1	2	2	2	2	2	2
165.0°	2	2	3	3	3	3	2	3
170.0°	3	3	3	4	3	4	4	3
175.0°	3	3	4	4	4	4	4	5
180.0°	0	0	0	0	0	0	0	0

Zonal Lumen Density Measurement

Deg	Flux (lm)	%	Deg	Flux (lm)	%
0-5	36.7	4.26	0-5	36.7	4.26
5-10	117.9	13.68	0-10	154.6	17.94
10-15	198.1	23.00	0-15	352.7	40.94
15-20	223.4	25.93	0-20	576.1	66.87
20-25	164.5	19.10	0-25	740.6	85.97
25-30	81.2	9.43	0-30	821.9	95.40
30-35	29.6	3.44	0-35	851.5	98.84
35-40	7.2	0.83	0-40	858.7	99.67
40-45	1.4	0.17	0-45	860.1	99.84
45-50	0.2	0.02	0-50	860.3	99.86
50-55	0.0	0.00	0-55	860.3	99.86
55-60	0.0	0.00	0-60	860.3	99.86
60-65	0.0	0.00	0-65	860.3	99.86
65-70	0.0	0.00	0-70	860.3	99.86
70-75	0.0	0.00	0-75	860.3	99.86
75-80	0.0	0.00	0-80	860.3	99.86
80-85	0.0	0.00	0-85	860.3	99.86
85-90	0.0	0.00	0-90	860.3	99.86
90-95	0.0	0.00	0-95	860.3	99.86
95-100	0.0	0.00	0-100	860.3	99.86
100-105	0.0	0.00	0-105	860.3	99.86
105-110	0.0	0.00	0-110	860.3	99.86
110-115	0.0	0.00	0-115	860.3	99.86
115-120	0.0	0.00	0-120	860.3	99.86
120-125	0.0	0.00	0-125	860.3	99.86
125-130	0.0	0.00	0-130	860.3	99.86
130-135	0.0	0.00	0-135	860.3	99.86
135-140	0.0	0.00	0-140	860.3	99.86
140-145	0.0	0.00	0-145	860.3	99.86
145-150	0.0	0.00	0-150	860.3	99.86
150-155	0.1	0.01	0-155	860.3	99.86
155-160	0.2	0.02	0-160	860.5	99.89
160-165	0.3	0.04	0-165	860.9	99.93
165-170	0.3	0.04	0-170	861.2	99.96
170-175	0.3	0.03	0-175	861.4	99.99
175-180	0.0	0.01	0-180	861.5	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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