

# 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: LEL9027KDIM120VNR/ADR6BL**

<b>Report Type:</b>	Electrical and Photometric tests including: Luminous Flux, Chromaticity, Luminous Intensity Distribution
<b>Test Engineer:</b>	Joker Gu
<b>Report Number:</b>	RKSB200812011-10-1
<b>Test Date:</b>	2020-08-27
<b>Report Date:</b>	2020-09-07
<b>Reviewed By:</b>	Seven Xia/EE Engineer
<b>Prepared By:</b>	Bay Area Compliance Laboratories Corp. (Kunshan). No.248 Chenghu Road, Kunshan, Jiangsu province, China. Tel: +86-0512-86175000 Fax: +86-0512-88934268
<b>Accreditation:</b>	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: LEL9027KDIM120VNR/ADR6BL  
 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: 60W  
 Nominal CCT: 2700K  
 Nominal Lumen Output: 3790lm

## 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 ( $\gamma$ ) 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.

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## 5. Test Result

### [Goniophotometer System]

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

Test orientation: **Downward**

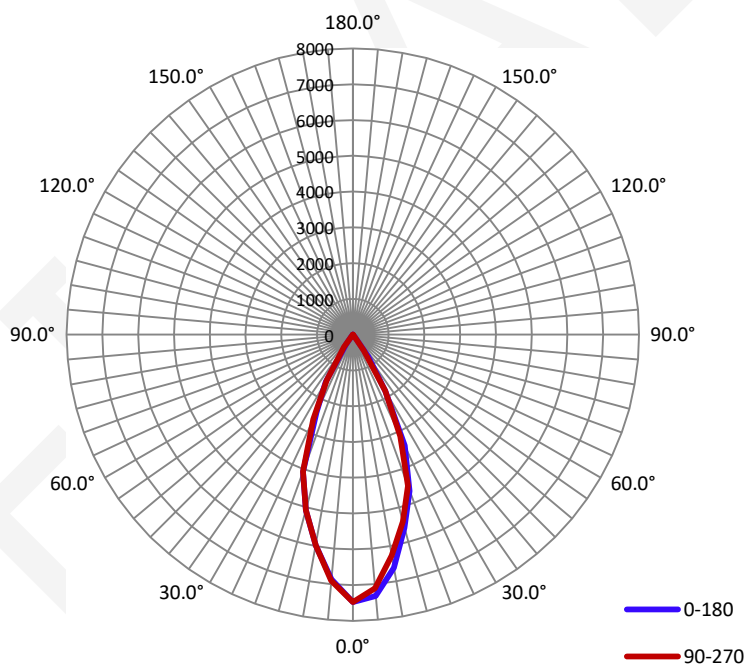
### Electrical Measurement

Input Voltage(V)	Frequency(Hz)	Input Current(A)	Power (W)	Power Factor
120.0	60	0.5030	60.11	0.9960

### Photometric Measurement

Luminous Flux(lm)	Efficacy(lm/W)	$I_{max}(cd)$	S/MH(C0/180)	S/MH(C90/270)
3862.1	64.30	7472.7	0.71	0.70

### Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle(50% $I_{max}$ ):	44.8	44.5	43.9	43.7	44.2
Field Angle(10% $I_{max}$ ):	68.2	67.7	67.7	67.9	67.9

**Luminous Intensity (cd) Distribution Data**

C y	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	7473	7473	7473	7473	7473	7473	7473	7473
5.0°	7337	7324	7248	7134	7117	7067	6959	6951
10.0°	6621	6642	6523	6451	6271	6117	6076	6029
15.0°	5591	5637	5609	5527	5418	5283	5168	5099
20.0°	4648	4687	4673	4584	4498	4399	4232	4161
25.0°	3426	3493	3428	3280	3136	2945	2703	2544
30.0°	1812	1901	1905	1861	1811	1727	1672	1591
35.0°	749	741	677	625	543	475	433	389
40.0°	106	123	111	81	58	50	41	36
45.0°	0	0	0	0	0	0	0	0
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	0	0	0
165.0°	0	0	0	0	0	0	0	0
170.0°	0	0	0	0	0	0	0	0
175.0°	0	0	0	0	0	0	0	0
180.0°	0	0	0	0	0	0	0	0

Luminous Intensity (cd) Distribution Data (cont.)

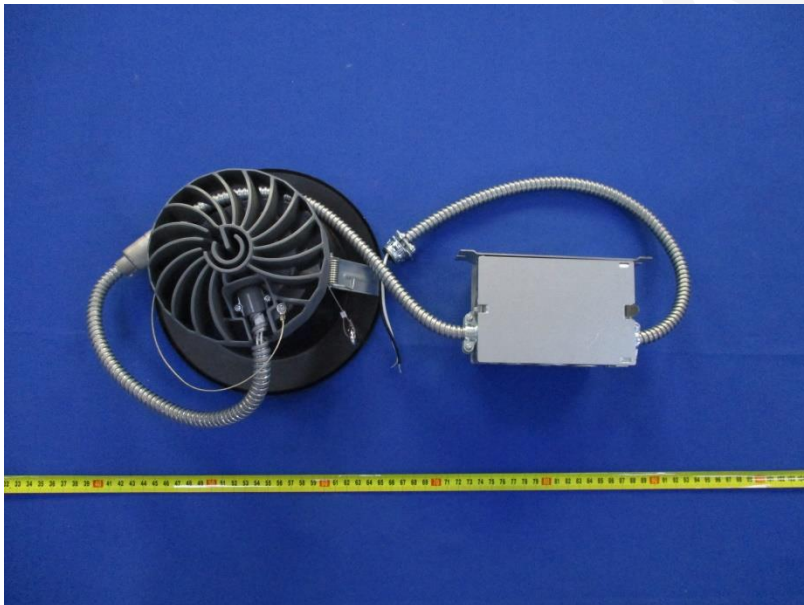
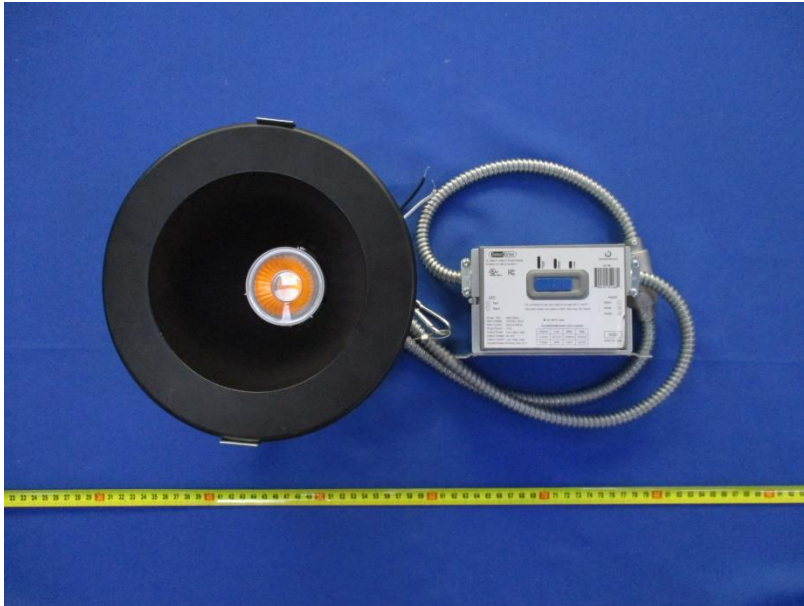
C y	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	7473	7473	7473	7473	7473	7473	7473	7473
5.0°	6870	6858	6842	6824	6906	6962	7043	7067
10.0°	5984	5961	5968	5920	5986	6045	6144	6255
15.0°	5083	5005	5024	4971	5083	5095	5206	5303
20.0°	4079	3977	3957	3967	4072	4120	4256	4426
25.0°	2404	2367	2392	2465	2614	2822	3034	3138
30.0°	1523	1460	1429	1413	1470	1526	1595	1679
35.0°	322	299	303	338	425	516	582	620
40.0°	24	24	34	44	56	64	74	77
45.0°	0	0	0	0	0	0	0	0
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	0	0	0
165.0°	0	0	0	0	0	0	0	0
170.0°	0	0	0	0	0	0	0	0
175.0°	0	0	0	0	0	0	0	0
180.0°	0	0	0	0	0	0	0	0

### Zonal Lumen Density Measurement

Deg	Flux (lm)	%
0-5	173.4	4.49
5-10	472.9	12.24
10-15	678.8	17.58
15-20	787.2	20.38
20-25	753.3	19.51
25-30	573.9	14.86
30-35	316.7	8.20
35-40	94.3	2.44
40-45	11.6	0.30
45-50	0.0	0.00
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	0.0	0.00
165-170	0.0	0.00
170-175	0.0	0.00
175-180	0.0	0.00

Deg	Flux (lm)	%
0-5	173.4	4.49
0-10	646.3	16.73
0-15	1325.1	34.31
0-20	2112.3	54.69
0-25	2865.7	74.20
0-30	3439.6	89.06
0-35	3756.3	97.26
0-40	3850.5	99.70
0-45	3862.1	100.00
0-50	3862.1	100.00
0-55	3862.1	100.00
0-60	3862.1	100.00
0-65	3862.1	100.00
0-70	3862.1	100.00
0-75	3862.1	100.00
0-80	3862.1	100.00
0-85	3862.1	100.00
0-90	3862.1	100.00
0-95	3862.1	100.00
0-100	3862.1	100.00
0-105	3862.1	100.00
0-110	3862.1	100.00
0-115	3862.1	100.00
0-120	3862.1	100.00
0-125	3862.1	100.00
0-130	3862.1	100.00
0-135	3862.1	100.00
0-140	3862.1	100.00
0-145	3862.1	100.00
0-150	3862.1	100.00
0-155	3862.1	100.00
0-160	3862.1	100.00
0-165	3862.1	100.00
0-170	3862.1	100.00
0-175	3862.1	100.00
0-180	3862.1	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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