

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: LEL9027KDIM120VMD/ADR6BL

Report Type:	Electrical and Photometric tests including: Luminous Flux, Chromaticity, Luminous Intensity Distribution
Test Engineer:	Joker Gu
Report Number:	RKSB200812011-10-2
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: LEL9027KDIM120VMD/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 (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.

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5. Test Result

[Goniophotometer System]

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

Test orientation: **Downward**

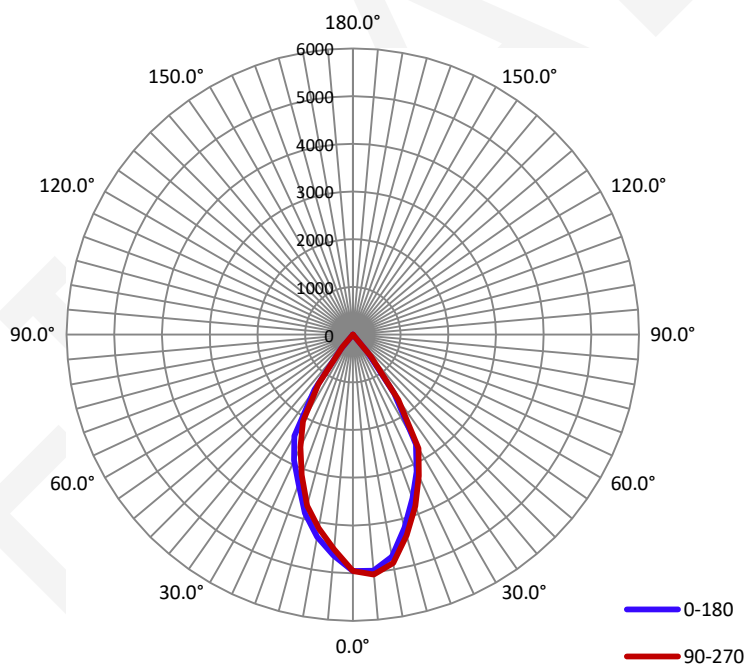
Electrical Measurement

Input Voltage(V)	Frequency(Hz)	Input Current(A)	Power (W)	Power Factor
120.0	60	0.5030	60.13	0.9960

Photometric Measurement

Luminous Flux(lm)	Efficacy(lm/W)	$I_{max}(cd)$	S/MH(C0/180)	S/MH(C90/270)
3927.9	65.37	5093.6	0.86	0.84

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle(50% I_{max}):	60.4	57.0	56.8	60.0	58.6
Field Angle(10% I_{max}):	79.3	79.7	79.9	79.5	79.6

Luminous Intensity (cd) Distribution Data

C y	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	4953	4953	4953	4953	4953	4953	4953	4953
5.0°	4966	5041	5077	5094	5049	4968	4878	4812
10.0°	4724	4852	4903	4895	4861	4820	4695	4549
15.0°	4191	4300	4376	4401	4356	4258	4117	3971
20.0°	3655	3778	3852	3867	3825	3716	3589	3496
25.0°	3172	3243	3310	3344	3271	3173	3078	3036
30.0°	2652	2733	2786	2806	2754	2675	2584	2520
35.0°	1508	1587	1646	1663	1669	1635	1552	1505
40.0°	457	504	564	578	593	616	525	449
45.0°	0	0	0	0	8	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.)

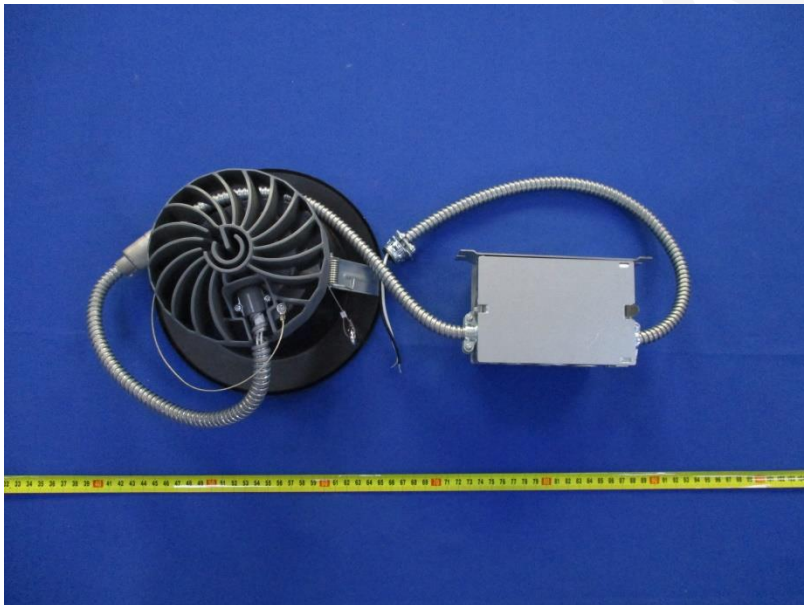
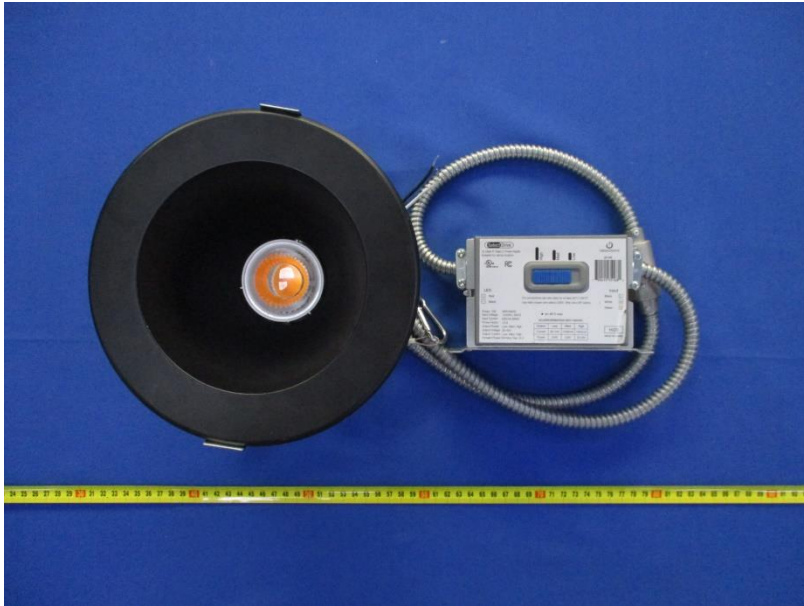
C y	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	4953	4953	4953	4953	4953	4953	4953	4953
5.0°	4645	4553	4498	4480	4518	4583	4677	4767
10.0°	4304	4220	4115	4098	4119	4197	4253	4384
15.0°	3875	3803	3742	3722	3712	3729	3798	3970
20.0°	3325	3220	3140	3119	3130	3204	3302	3487
25.0°	2910	2748	2626	2632	2602	2736	2906	3083
30.0°	2456	2304	2148	2053	2095	2263	2421	2508
35.0°	1404	1394	1336	1269	1263	1316	1320	1383
40.0°	397	377	353	331	340	351	351	357
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	116.4	2.96
5-10	332.2	8.46
10-15	505.4	12.87
15-20	618.2	15.74
20-25	678.9	17.29
25-30	693.1	17.65
30-35	581.7	14.81
35-40	319.0	8.12
40-45	82.7	2.11
45-50	0.1	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	116.4	2.96
0-10	448.7	11.42
0-15	954.0	24.29
0-20	1572.3	40.03
0-25	2251.2	57.31
0-30	2944.3	74.96
0-35	3526.0	89.77
0-40	3845.0	97.89
0-45	3927.8	100.00
0-50	3927.8	100.00
0-55	3927.8	100.00
0-60	3927.8	100.00
0-65	3927.8	100.00
0-70	3927.8	100.00
0-75	3927.8	100.00
0-80	3927.8	100.00
0-85	3927.8	100.00
0-90	3927.8	100.00
0-95	3927.8	100.00
0-100	3927.8	100.00
0-105	3927.8	100.00
0-110	3927.8	100.00
0-115	3927.8	100.00
0-120	3927.8	100.00
0-125	3927.8	100.00
0-130	3927.8	100.00
0-135	3927.8	100.00
0-140	3927.8	100.00
0-145	3927.8	100.00
0-150	3927.8	100.00
0-155	3927.8	100.00
0-160	3927.8	100.00
0-165	3927.8	100.00
0-170	3927.8	100.00
0-175	3927.8	100.00
0-180	3927.8	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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