

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: LEL9027KDIM120VWD/ADR6BL

Report Type:	Electrical and Photometric tests including: Luminous Flux, Chromaticity, Luminous Intensity Distribution
Test Engineer:	Joker Gu
Report Number:	RKSB200812011-10-3
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: LEL9027KDIM120VWD/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.

5. Test Result

[Goniophotometer System]

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

Test orientation: **Downward**

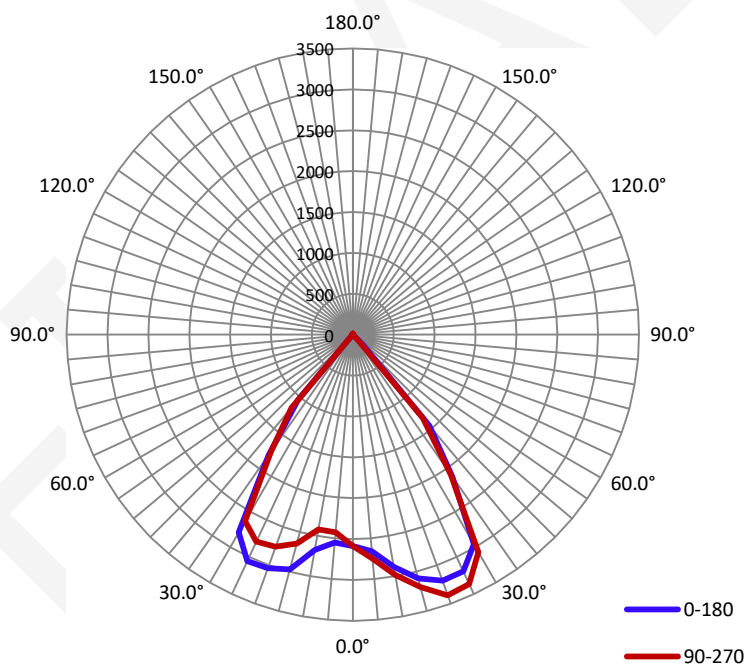
Electrical Measurement

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)
3991.1	66.42	3422.6	1.33	1.32

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle(50% I_{max}):	75.2	72.9	73.0	75.4	74.1
Field Angle(10% I_{max}):	88.0	87.7	87.6	87.8	87.8

Luminous Intensity (cd) Distribution Data

C y	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	2586	2586	2586	2586	2586	2586	2586	2586
5.0°	2658	2698	2708	2734	2750	2745	2717	2666
10.0°	2883	2963	2958	2968	2982	2943	2872	2818
15.0°	3086	3174	3196	3203	3195	3140	3052	2983
20.0°	3203	3385	3413	3423	3391	3271	3133	3085
25.0°	3194	3359	3388	3396	3366	3225	3083	3012
30.0°	2958	3087	3140	3120	3072	2940	2840	2759
35.0°	2125	2232	2218	2182	2089	2000	1899	1872
40.0°	1455	1455	1405	1380	1328	1273	1227	1160
45.0°	185	187	153	110	76	41	24	23
50.0°	7	8	8	8	8	8	8	8
55.0°	3	4	4	4	4	4	4	4
60.0°	0	1	1	1	0	1	0	1
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	1	1	2
145.0°	2	3	3	3	3	3	3	4
150.0°	4	5	4	4	5	5	5	5
155.0°	6	6	7	6	6	6	7	7
160.0°	7	7	8	8	7	8	8	9
165.0°	8	8	9	8	9	9	9	9
170.0°	9	10	10	9	10	10	10	11
175.0°	11	11	11	11	11	11	12	11
180.0°	0	0	0	0	0	0	0	0

Luminous Intensity (cd) Distribution Data (cont.)

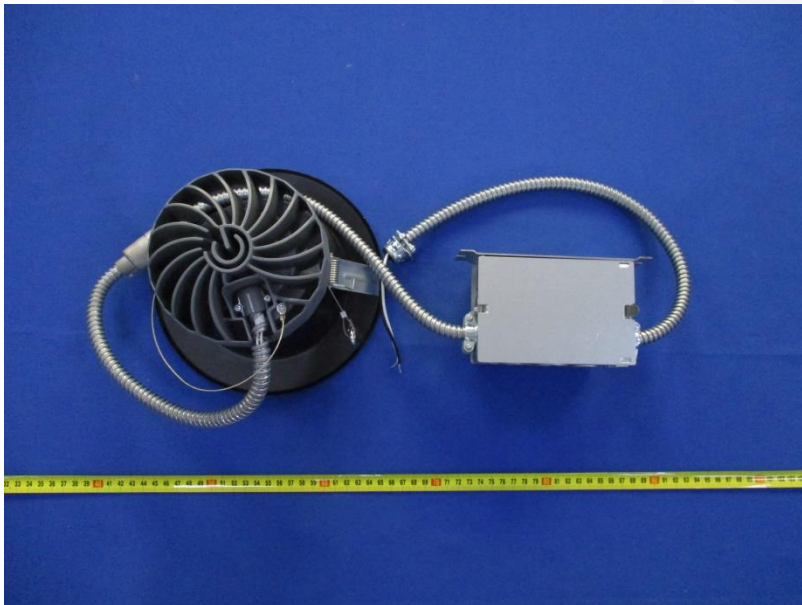
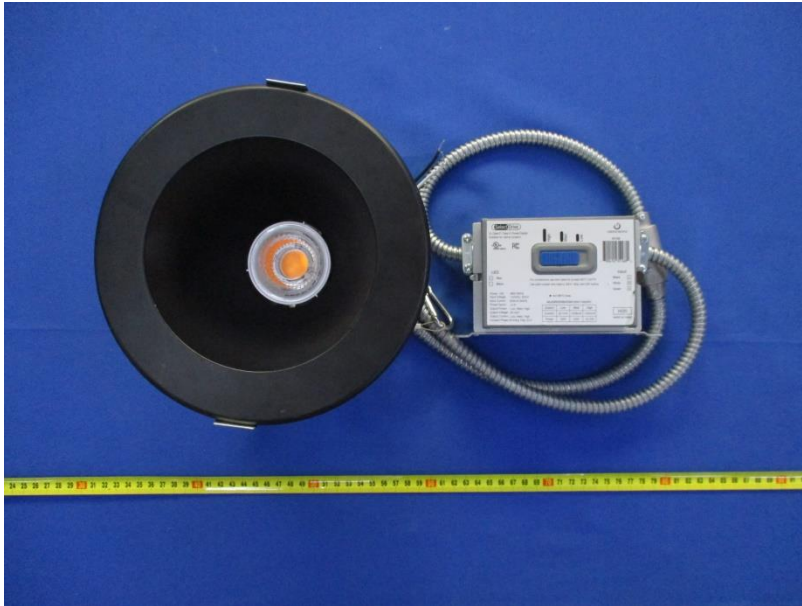
C y	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	2586	2586	2586	2586	2586	2586	2586	2586
5.0°	2551	2487	2415	2387	2428	2480	2541	2586
10.0°	2674	2552	2380	2313	2419	2544	2635	2707
15.0°	2971	2819	2565	2475	2643	2841	2930	2988
20.0°	3037	2912	2637	2552	2760	2957	3009	3059
25.0°	3054	2949	2644	2561	2794	3006	3030	3063
30.0°	2790	2682	2545	2495	2635	2812	2850	2911
35.0°	1802	1717	1664	1673	1748	1872	1987	2065
40.0°	1046	1025	1083	1139	1166	1167	1269	1360
45.0°	18	20	21	23	26	45	66	95
50.0°	7	8	8	8	9	9	9	9
55.0°	2	4	4	4	4	5	4	4
60.0°	0	0	2	1	2	2	2	2
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	1	2	2	1	1	0
145.0°	2	3	3	3	3	3	3	2
150.0°	4	4	5	6	6	5	5	5
155.0°	6	7	7	7	8	7	7	6
160.0°	7	7	9	8	8	9	8	8
165.0°	8	9	10	10	10	9	9	9
170.0°	9	10	11	11	11	11	10	10
175.0°	10	11	11	12	11	11	11	11
180.0°	0	0	0	0	0	0	0	0

Zonal Lumen Density Measurement

Deg	Flux (lm)	%
0-5	62.0	1.55
5-10	190.4	4.77
10-15	336.9	8.44
15-20	497.0	12.45
20-25	644.7	16.15
25-30	749.5	18.78
30-35	706.6	17.71
35-40	532.7	13.35
40-45	243.6	6.10
45-50	15.7	0.39
50-55	2.6	0.06
55-60	1.1	0.03
60-65	0.2	0.01
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	0.1	0.00
140-145	0.6	0.01
145-150	1.1	0.03
150-155	1.4	0.04
155-160	1.5	0.04
160-165	1.4	0.03
165-170	1.1	0.03
170-175	0.8	0.02
175-180	0.1	0.00

Deg	Flux (lm)	%
0-5	62.0	1.55
0-10	252.4	6.32
0-15	589.3	14.76
0-20	1086.3	27.22
0-25	1731.0	43.37
0-30	2480.4	62.15
0-35	3187.1	79.85
0-40	3719.7	93.20
0-45	3963.3	99.31
0-50	3979.0	99.70
0-55	3981.6	99.76
0-60	3982.7	99.79
0-65	3982.9	99.80
0-70	3982.9	99.80
0-75	3982.9	99.80
0-80	3982.9	99.80
0-85	3982.9	99.80
0-90	3982.9	99.80
0-95	3982.9	99.80
0-100	3982.9	99.80
0-105	3982.9	99.80
0-110	3982.9	99.80
0-115	3982.9	99.80
0-120	3982.9	99.80
0-125	3982.9	99.80
0-130	3982.9	99.80
0-135	3982.9	99.80
0-140	3983.0	99.80
0-145	3983.6	99.81
0-150	3984.7	99.84
0-155	3986.1	99.88
0-160	3987.6	99.91
0-165	3989.0	99.95
0-170	3990.2	99.98
0-175	3990.9	100.00
0-180	3991.1	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.
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