

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250227200GZU-011

ISSUE DATE

02 April 2025

REVISION DATE

None

NUMBER OF PAGES

13

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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Report No.: 250227200GZU-011

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. KWTB49127SCXXX

Remark: "XXX" are denoted appearance color.

RENDERED TO

Visual Comfort & Co.

Contact Name: Javan Rivero

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TEST: Electrical and Photometric as required to the IES LM-79 test standard.

AUTHORIZATION: The testing performed was authorized by signed quote number: QGZ250224121.

STANDARDS USED: The following American National Standards or Illuminating Engineering Society of North America Test Guides were used in part or totally to test each specimen:

IES LM-79-24 Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products

ANSI C78.377-2017 (R2022) Specifications of the Chromaticity of Solid State Lighting Products

DESCRIPTION OF SAMPLE: The client submitted one sample of model KWTB49127SCXXX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250227200-004.

MANUFACTURER /FACTORY & ADDRESS: Guangzhou Xiongyi Precision Metalworking Co., Ltd
Hantang Industrial Zone, Langbian Village, Shiji Town, Panyu District, Guangzhou City, Guangdong Province, China 511450

DATES OF TESTS: 18 March 2025

ISSUED BY: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

TEST LOCATION: Room101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China

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TEST REPORT

SUMMARY

Model Number:	KWTB49127SCXXX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For KWTB49127SCXXX

Criteria	Result
Total Lumen Output	947.9 lm
Total Power	9.1 W
Luminaire Efficacy	104.5 lm/W
S/MH(C0/180)	0.93
S/MH(C90/270)	0.98
Correlated Color Temperature (CCT)	2736 K
Color Rendering Index (CRI)	94
R9	67
Chromaticity Coordinate (x)	0.4570
Chromaticity Coordinate (y)	0.4101
Chromaticity Coordinate (u')	0.2609
Chromaticity Coordinate (v')	0.5267

Remark:

N/A

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TEST REPORT

EQUIPMENT LIST

Equipment Used	Model Number	Control Number
Goniophotometer System	Go-R5000	SA063-16
KONICA MINOLTA - Illuminance meter	CX-2B_WL	SA063-16-01
Standard Lamp	D215S	SA063-16-06
Digital Power Meter	PLM3000	SA063-16-09
AC power source for Goniophotometer	PCR-1000WH	SA063-16-10
Temperature Meter	S500-TH	SA047-182

GENERAL REMARK

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When determining for test conclusion, measurement uncertainty of tests has been considered.

Throughout this report a ☐ comma ☒ point is used as the decimal separator.

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TEST REPORT

TEST METHOD

Seasoning in Sample Orientation – LED Products

No seasoning was performed in accordance with IES LM-79

Light Distribution and Output Measurements

Light Distribution and total light output (luminous flux) were measured using a Go-R5000 Type-C Rotating Mirror Goniophotometer. Temperature 25°C and relative humidity of 60% was measured at a position in the testing laboratory.

The lamp rotates only around the fixed vertical axle in the prescribed burning position. The lamp and mirror permit the measurement of luminous intensity at the direction of any horizontal or vertical angle without tilting the lamp. The lamp was allowed to stabilize before measurements were made.

Chromaticity Measurements

Chromaticity was measured using a 2 meters integrating sphere spectral lamp measurement system, 4 π geometry, with an interior coating reflectance no less than 95 %. Temperature was measured at a position inside the sphere shielded from direct light. Relative humidity of 65% was measured at a position in the testing laboratory.

Spectral radiant flux measurements were made using spectroradiometer attached to the detector port of the integrating sphere. Each lamp was allowed to stabilise before measurements were made. The calibration of the integrating sphere spectroradiometer system is by the reference/standard lamps which are traceable to National Institute of Metrology P.R. CHINA. Lamp efficacy (lumens per watt) for each lamp model was then computed based on the luminous flux result. Electrical measurements including voltage, power and power factor were measured using YOKOGAWA - Digital Power Meter., model WT310E.

Correction factor (self-absorption) has been considered when doing measurement.

Standard lamp used for Goniophotometer method:

Model: D215S

Current: 4.809A DC

Standard lamp used for integrating sphere:

Model: D204

Current: 3.948A DC

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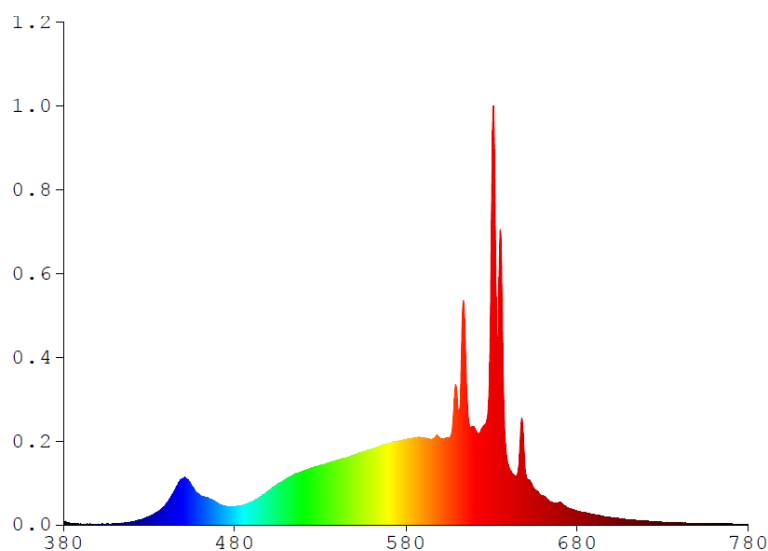
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For KWTB49127SCXXX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	2.8717	480	15.8730	580	75.2160	680	12.2840	780	0.4210
385	0.8841	485	17.5880	585	76.6990	685	10.5480		
390	0.8247	490	20.5180	590	76.8540	690	8.9601		
395	0.3814	495	24.9960	595	75.4430	695	7.7215		
400	0.4964	500	30.3320	600	76.4320	700	6.4668		
405	0.8896	505	35.7480	605	77.3350	705	5.6215		
410	0.9406	510	40.3020	610	108.040	710	4.7180		
415	1.4439	515	44.3850	615	139.570	715	4.0091		
420	2.7862	520	47.3760	620	86.0180	720	3.4023		
425	4.4472	525	50.0110	625	86.6060	725	2.9380		
430	7.3850	530	52.6600	630	284.120	730	2.4434		
435	11.4610	535	54.9060	635	258.750	735	2.0432		
440	18.5910	540	57.1040	640	51.2490	740	1.8414		
445	30.4810	545	59.1340	645	44.3550	745	1.5485		
450	41.1400	550	61.8460	650	44.7320	750	1.3095		
455	34.1760	555	64.6850	655	31.7950	755	1.1214		
460	25.8200	560	67.0310	660	25.8100	760	0.9786		
465	23.1440	565	69.4710	665	20.1350	765	0.9221		
470	19.1650	570	72.4830	670	19.9890	770	0.7828		
475	16.2690	575	73.7840	675	14.1650	775	0.7157		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB49127SCXXX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

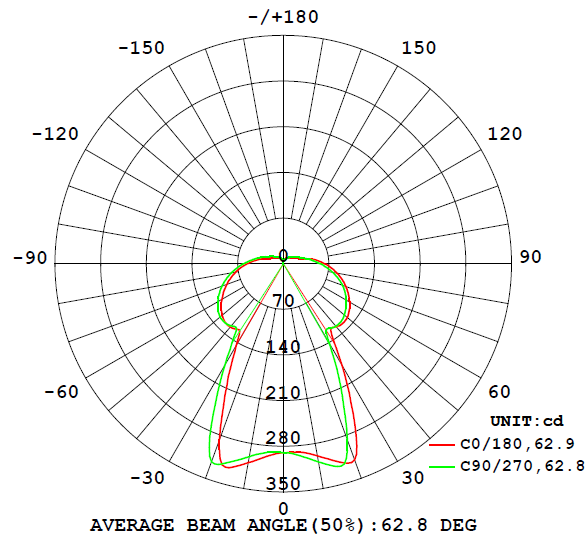
Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperature (K)	CRI	R9	CIE 31'	CIE 31'	CIE 76'	CIE 76'
					Chromaticit y Coordinate (x)	Chromaticit y Coordinate (y)	Chromaticit y Coordinate (u')	Chromaticit y Coordinate (v')
KWTB49127SCXXX								
S2502272 00-004	base-up	2736	94	67	0.4570	0.4101	0.2609	0.5267

Photometric and Electrical Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (Watts)	Input Power Factor	Absolute Luminous Flux (Lumens)	Lumen Efficacy (Lumens Per Watt)
KWTB49127SCXXX							
S2502272 00-004	base-up	120.1	89.2	9.1	0.847	947.9	104.5

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB49127SCXXX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	289.8	289.8	289.7	289.6	289.5
5	289.9	290.8	292.3	293.9	295.5
10	298.9	301.0	303.6	306.1	308.3
15	313.4	315.1	317.6	320.3	322.0
20	320.0	318.3	309.7	299.1	287.6
25	253.3	240.5	230.8	217.7	208.8
30	180.5	171.3	162.4	151.3	141.4
35	127.3	124.9	122.5	120.8	121.4
40	126.3	126.1	126.7	125.0	125.3
45	129.2	128.6	128.5	125.5	125.4
50	128.1	127.3	126.5	122.6	122.4
55	123.6	122.8	121.7	117.3	117.3
60	117.3	116.7	115.5	111.0	111.5
65	110.1	109.8	108.4	103.9	104.6
70	102.1	101.8	100.3	95.8	96.5
75	93.2	92.7	91.1	86.6	87.2
80	83.7	82.5	80.8	76.7	77.0
85	73.7	71.7	70.0	66.4	66.6
90	63.4	60.8	59.4	56.8	57.1
95	53.8	51.3	49.8	47.9	48.2
100	42.5	42.7	41.4	40.1	40.3
105	30.3	35.6	34.4	33.5	33.8
110	24.6	29.6	28.8	28.3	28.6
115	21.4	24.7	24.3	24.1	24.4
120	18.9	20.9	20.8	20.8	21.1
125	16.9	18.0	18.2	18.2	18.4
130	15.4	15.9	16.3	16.1	16.3
135	14.1	14.3	14.7	14.5	14.6
140	13.0	13.0	13.3	13.1	13.0
145	11.9	11.7	11.9	11.6	11.4
150	10.7	10.4	10.4	10.2	9.8
155	9.4	9.0	8.9	8.7	8.3
160	7.9	7.4	7.2	6.8	6.6
165	6.5	6.0	5.4	5.0	5.0
170	5.1	4.9	4.3	4.1	3.8
175	3.3	3.0	2.6	2.4	2.3
180	0.0	0.0	0.0	0.0	0.0

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB49127SCXXX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
KWTB49127SCXXX		
0-30	223.8	23.6
0-40	307.0	32.4
0-60	513.7	54.2
0-90	789.5	83.3
60-90	275.8	29.1
0-180	947.9	100.0

Beam Angle

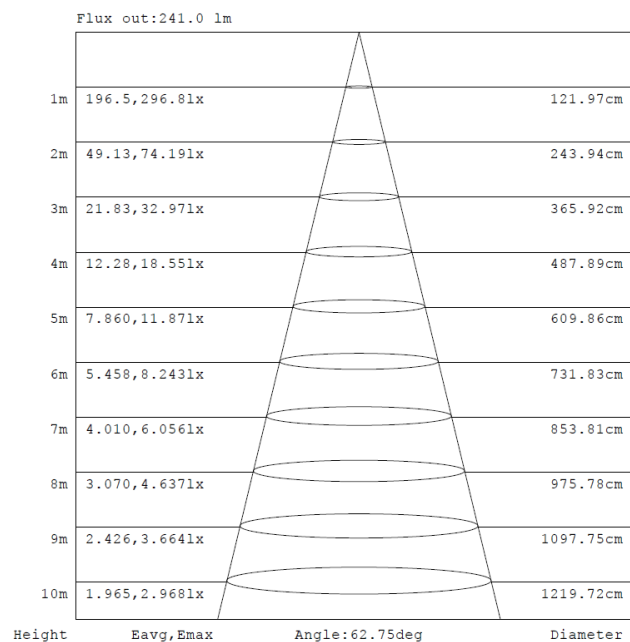
Total Beam Angle(°)
62.8

Illumination Plots

Model No.: KWTB49127SCXXX

Mount Height: 2.5 m

Illuminance - Cone of Light



Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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TEST REPORT

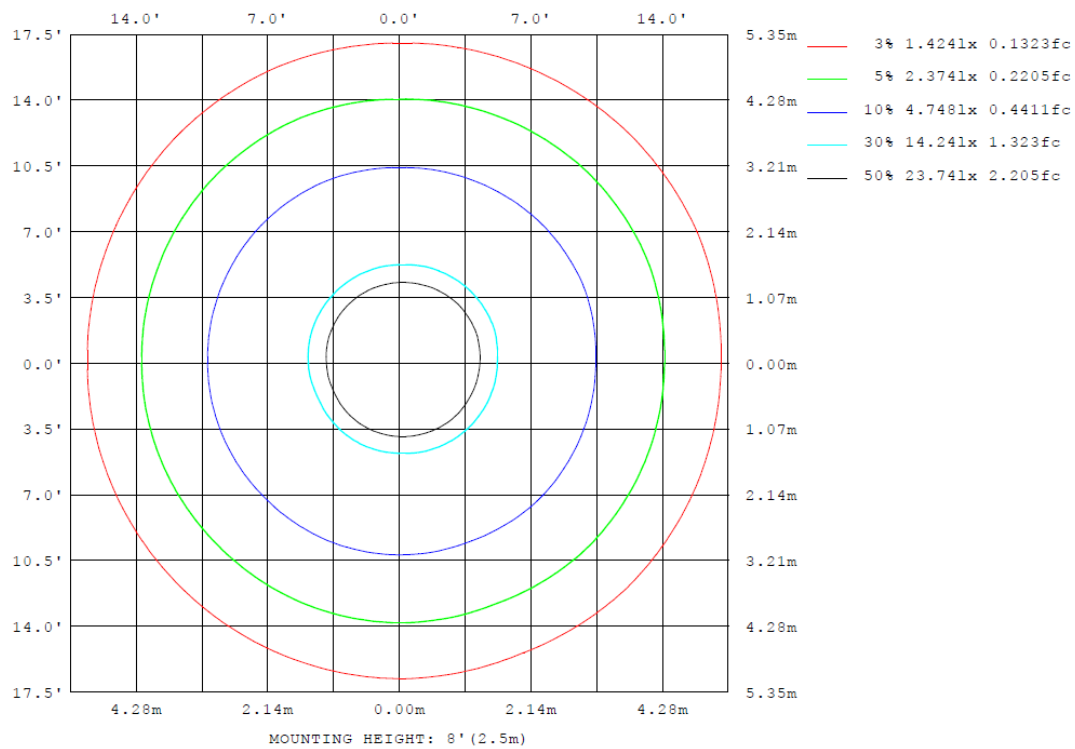
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB49127SCXXX

Model No.: KWTB49127SCXXX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB49127SCXXX

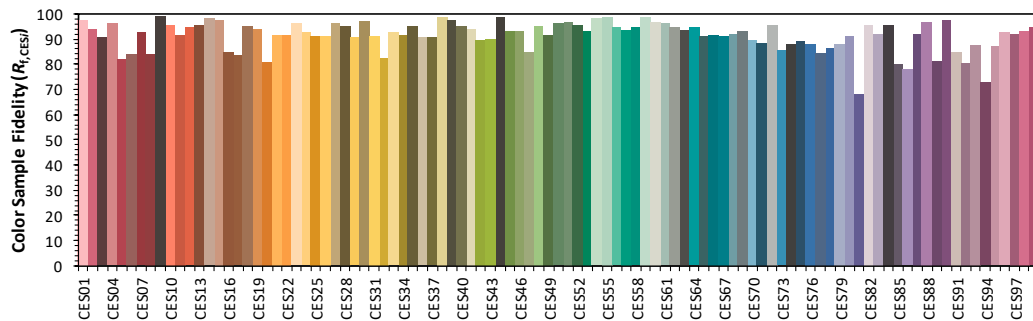
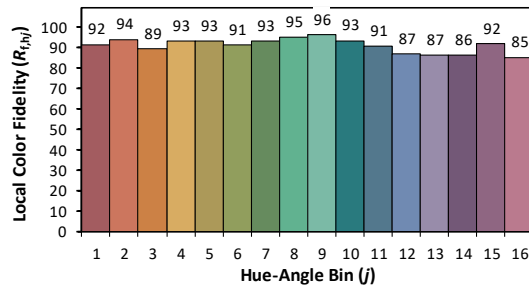
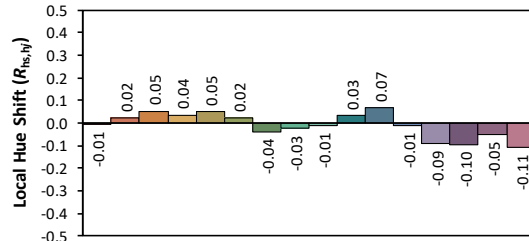
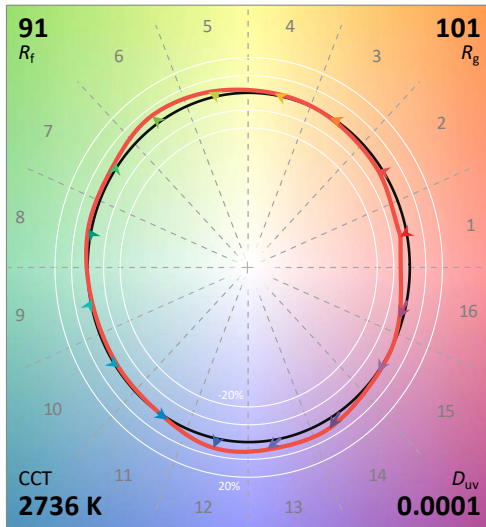
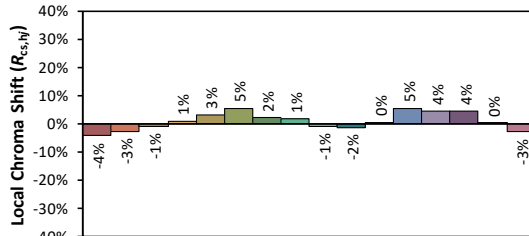
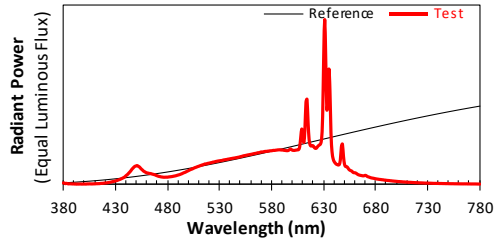
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/3/18

Model: KWTB49127SCXXX



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4570
 y 0.4101
 u' 0.2609
 v' 0.5267

CIE 13.3-1995
(CRI)

R_a 94

R_g 67

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of KWTB49127SCXXX

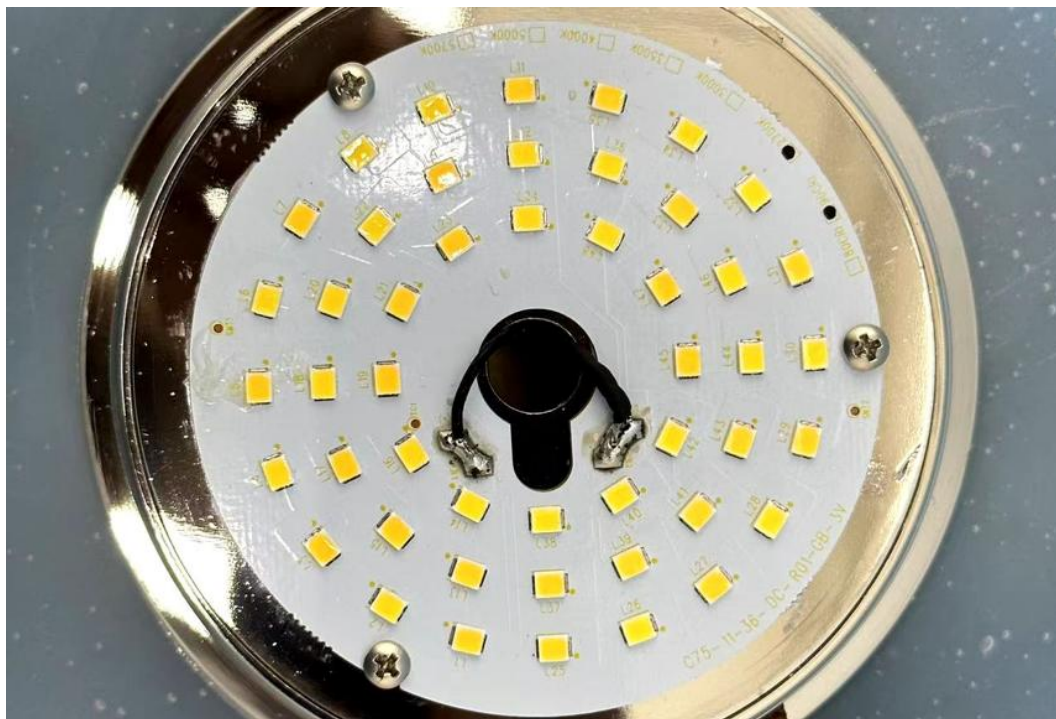


View of LED driver A122-1201000ID

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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED

In Charge Of Tests:

Done Ye

Done Ye
Engineer

Report Reviewed By

Shelley Ying

Shelley Ying
Reviewer

Attachment: None

***** End of Report *****