

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

241212122GZU-009

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REVISION DATE

None

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13

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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Report No.: 241212122GZU-009

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLPD51830XX

Remark: "XX" are denoted appearance color.

RENDERED TO

Visual Comfort & Co.

Contact Name: Javan Rivero

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<u>TEST:</u>	Electrical and Photometric as required to the IES LM-79 test standard.
<u>AUTHORIZATION:</u>	The testing performed was authorized by signed quote number: QGZ241210128.
<u>STANDARDS USED:</u>	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-79-19	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
<u>DESCRIPTION OF SAMPLE:</u>	The client submitted one sample of model SLPD51830XX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S241212122-009.
<u>MANUFACTURER /FACTORY & ADDRESS:</u>	Guangzhou Xiongyi Precision Metalworking Co., Ltd Hantang Industrial Zone, Langbian Village, Shiji Town, Panyu District, Guangzhou City, Guangdong Province, China 511450
<u>DATES OF TESTS:</u>	02 January 2025
<u>ISSUED BY:</u>	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
<u>TEST LOCATION:</u>	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:	SLPD51830XX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLPD51830XX

Criteria	Result
Total Lumen Output	106.8 lm
Total Power	6.2 W
Luminaire Efficacy	17.2 lm/W
S/MH(C0/180)	1.41
S/MH(C90/270)	1.45
Correlated Color Temperature (CCT)	2658 K
Color Rendering Index (CRI)	91
R9	52
Chromaticity Coordinate (x)	0.4643
Chromaticity Coordinate (y)	0.4130
Chromaticity Coordinate (u')	0.2643
Chromaticity Coordinate (v')	0.5289

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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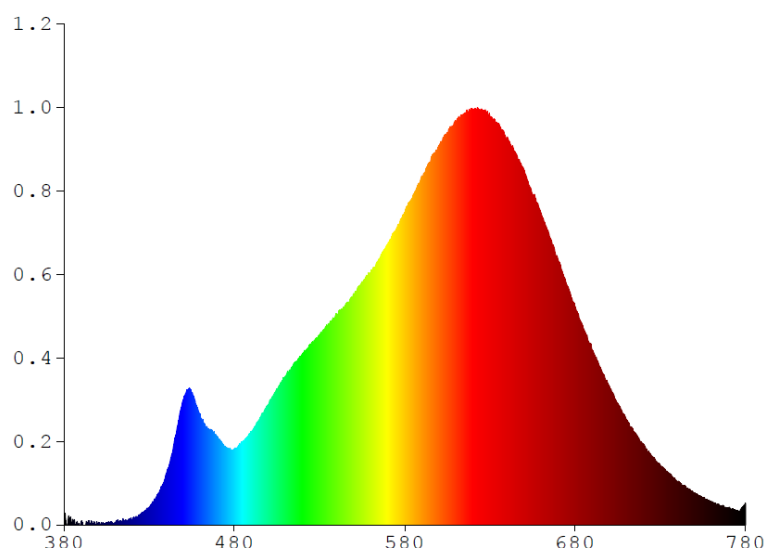
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLPD51830XX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0000	480	1.4067	580	5.7790	680	4.0217	780	0.4004
385	0.1033	485	1.5371	585	6.1171	685	3.6139		
390	0.0458	490	1.7280	590	6.4534	690	3.2186		
395	0.0115	495	1.9789	595	6.7125	695	2.8838		
400	0.0300	500	2.2291	600	7.0179	700	2.5631		
405	0.0386	505	2.5131	605	7.2589	705	2.2454		
410	0.0473	510	2.7505	610	7.4665	710	1.9404		
415	0.0752	515	2.9921	615	7.5869	715	1.7089		
420	0.1015	520	3.1554	620	7.6922	720	1.4933		
425	0.1890	525	3.3299	625	7.6931	725	1.2723		
430	0.3293	530	3.5015	630	7.5408	730	1.0912		
435	0.5601	535	3.7069	635	7.4291	735	0.9578		
440	0.9487	540	3.8964	640	7.1735	740	0.8071		
445	1.5847	545	4.0603	645	6.8779	745	0.6962		
450	2.3051	550	4.2725	650	6.5609	750	0.5906		
455	2.4316	555	4.5015	655	6.0983	755	0.5064		
460	2.0175	560	4.6631	660	5.7618	760	0.4184		
465	1.7607	565	4.9250	665	5.3237	765	0.3591		
470	1.6258	570	5.1947	670	4.8859	770	0.3176		
475	1.4154	575	5.4683	675	4.3791	775	0.2697		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD51830XX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

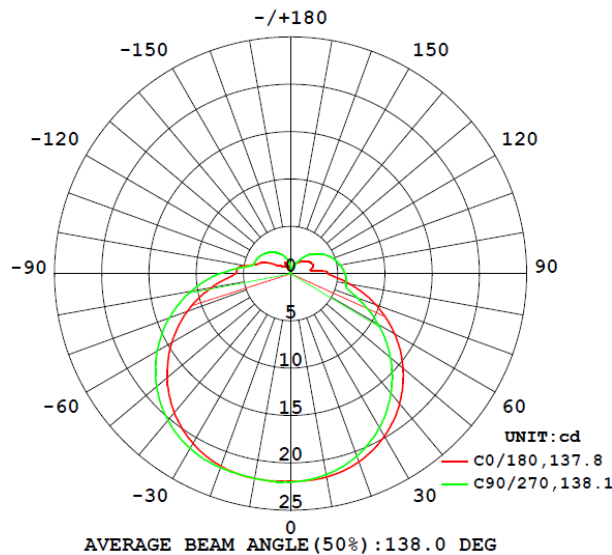
Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperature (K)	CRI	R9	CIE 31'	CIE 31'	CIE 76'	CIE 76'
					Chromaticit	Chromaticit	Chromaticit	Chromaticit
					y	y	y	y
					Coordinate	Coordinate	Coordinate	Coordinate
					(x)	(y)	(u')	(v')
SLPD51830XX								
S2412121 22-009	base-up	2658	91	52	0.4643	0.4130	0.2643	0.5289

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)
SLPD51830XX							
S2412121 22-009	base-up	120.1	53.8	6.2	0.960	106.8	17.2

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD51830XX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	22.0	21.9	21.9	22.0	22.0
5	21.9	21.8	21.7	21.8	21.9
10	21.8	21.5	21.4	21.5	21.6
15	21.6	21.1	20.8	21.0	21.1
20	21.1	20.5	20.1	20.3	20.5
25	20.6	19.7	19.3	19.5	19.7
30	19.9	18.8	18.3	18.5	18.8
35	19.0	17.7	17.2	17.4	17.7
40	17.9	16.6	15.9	16.2	16.5
45	16.8	15.2	14.6	14.8	15.2
50	15.5	13.8	13.1	13.4	13.8
55	14.2	12.3	11.6	11.9	12.3
60	12.7	10.8	10.0	10.3	10.7
65	11.2	9.2	8.3	8.6	9.1
70	9.6	7.5	6.7	7.0	7.5
75	8.0	5.9	5.3	5.7	6.2
80	6.4	4.6	4.8	5.4	6.0
85	4.9	4.3	4.8	5.3	5.9
90	3.9	4.2	4.6	5.2	5.8
95	3.3	4.1	4.5	5.1	5.6
100	2.1	4.0	4.3	4.8	5.3
105	2.4	3.8	4.1	4.6	5.1
110	2.5	3.5	3.8	4.3	4.8
115	2.5	3.0	3.5	4.0	4.4
120	2.4	2.6	3.2	3.7	4.1
125	2.3	2.2	2.9	3.3	3.7
130	2.1	1.9	2.5	3.0	3.3
135	1.9	1.6	2.1	2.6	2.9
140	1.7	1.4	1.7	2.2	2.4
145	1.5	1.2	1.4	1.7	1.9
150	1.3	1.0	1.0	1.3	1.4
155	1.1	0.7	0.7	0.9	0.9
160	0.8	0.5	0.4	0.5	0.5
165	0.7	0.3	0.2	0.1	0.2
170	0.4	0.1	0.0	0.0	0.0
175	0.2	0.0	0.4	0.5	0.6
180	0.0	0.5	0.8	0.9	0.8

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD51830XX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLPD51830XX		
0-30	17.7	16.6
0-40	29.8	27.9
0-60	56.5	52.9
0-90	85.8	80.3
60-90	29.3	27.4
0-180	106.8	100.0

Beam Angle

Total Beam Angle(°)

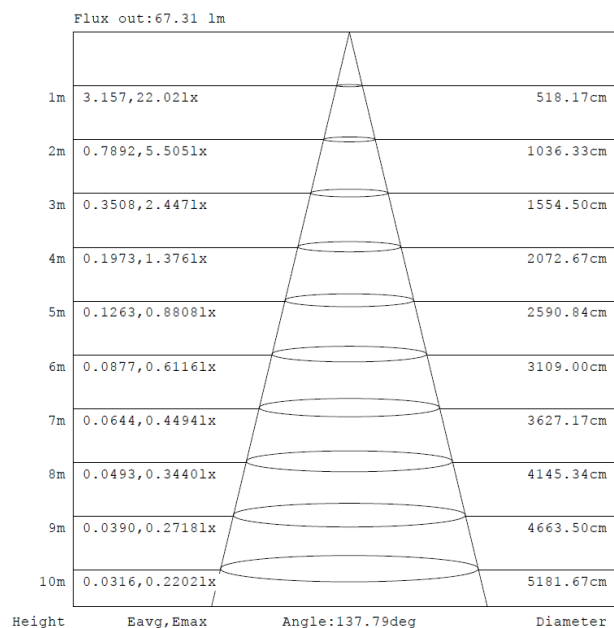
138.0

Illumination Plots

Model No.: SLPD51830XX

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

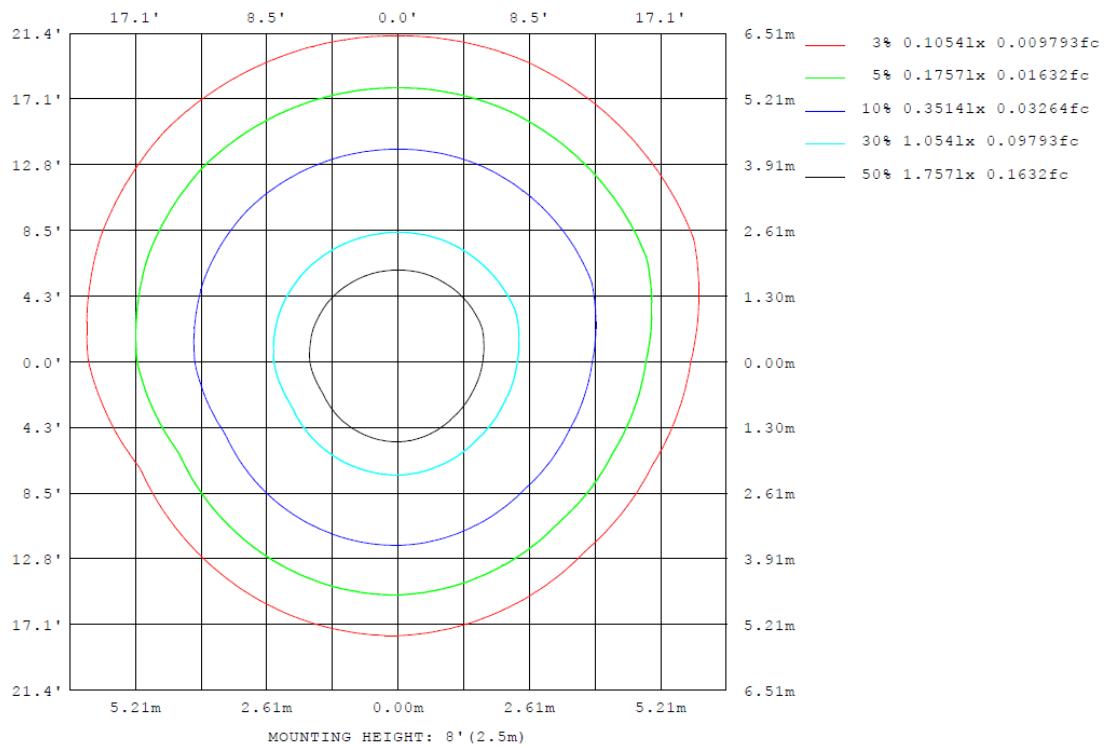
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD51830XX

Model No.: SLPD51830XX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD51830XX

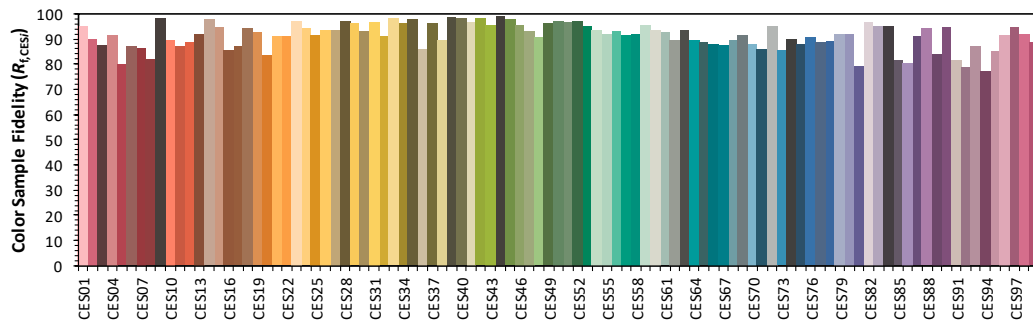
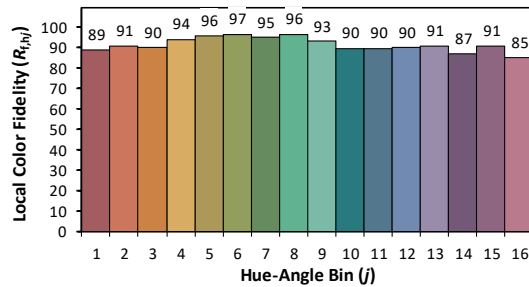
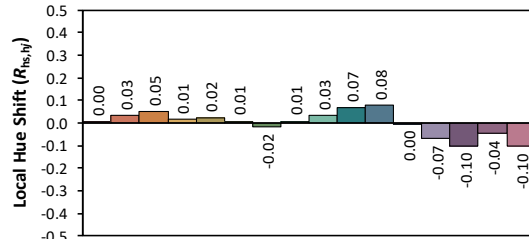
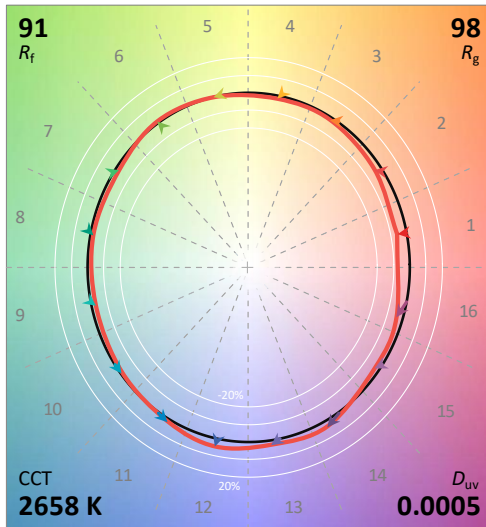
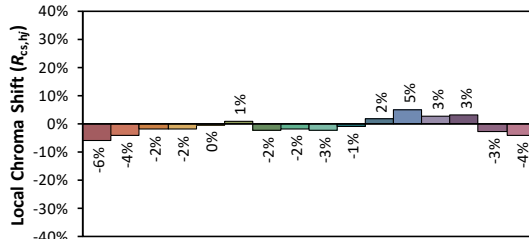
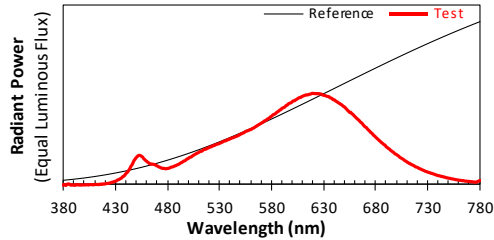
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/1/2

Model: SLPD51830XX



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

x 0.4643
 y 0.4130
 u' 0.2643
 v' 0.5289

CIE 13.3-1995
(CRI)

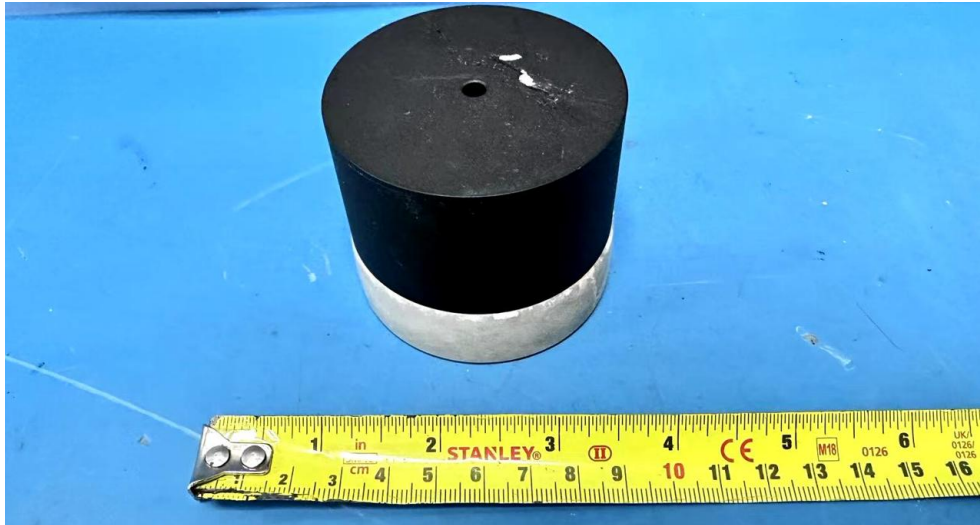
R_a 91
 R_g 52

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 SLPD51830XX

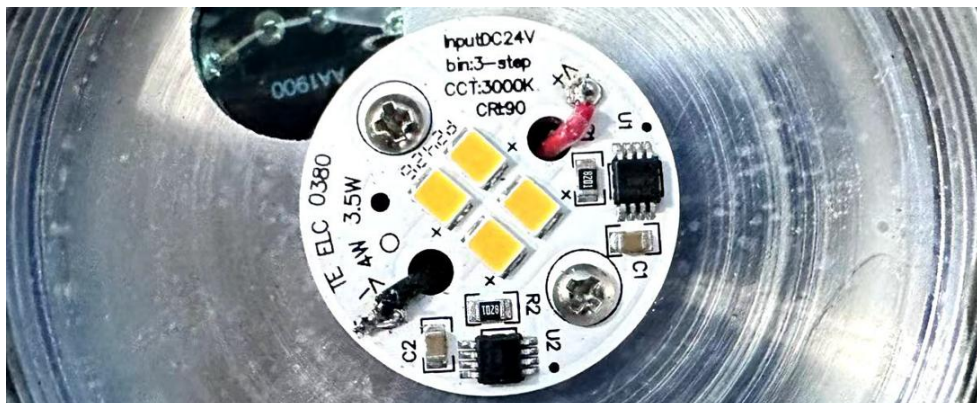


View of LED driver DS12W24VMB1UD-0000

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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 *****