

# Visual Comfort & Co.

## TEST REPORT

**SCOPE OF WORK**

LM-79 testing report

**REPORT NUMBER**

241212122GZU-006

**ISSUE DATE**

10 January 2025

**REVISION DATE**

None

**NUMBER OF PAGES**

13

**DOCUMENT CONTROL NUMBER**

Report format for LM-79\_G

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## TEST REPORT

### TEST OF ONE LED LUMINAIRE

MODEL NO. SLPD38827XX

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 SLPD38827XX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S241212122-006.
<u>MANUFACTURER /FACTORY &amp; 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>	27 December 2024
<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:	SLPD38827XX
Description:	LED Luminaries
Brand Name:	--

### Test Condition: 120V, 60Hz For SLPD38827XX

Criteria	Result
Total Lumen Output	176.9 lm
Total Power	3.4 W
Luminaire Efficacy	52.2 lm/W
S/MH(C0/180)	0.69
S/MH(C90/270)	0.66
Correlated Color Temperature (CCT)	2584 K
Color Rendering Index (CRI)	93
R9	58
Chromaticity Coordinate (x)	0.4694
Chromaticity Coordinate (y)	0.4122
Chromaticity Coordinate (u')	0.2679
Chromaticity Coordinate (v')	0.5294

### 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	DS215S	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

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

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 $\pi$  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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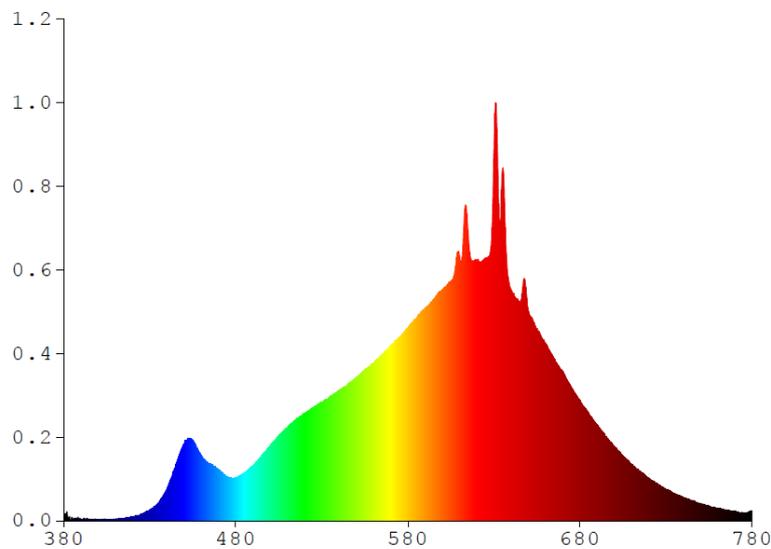
## TEST REPORT

### RESULTS OF TESTS

**Test Condition: 120V, 60Hz For SLPD38827XX**

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.3922	480	2.8053	580	12.4950	680	7.7955	780	0.6557
385	0.1249	485	3.1113	585	13.1560	685	6.9588		
390	0.0920	490	3.5994	590	13.7840	690	6.1952		
395	0.0965	495	4.2058	595	14.3730	695	5.4641		
400	0.0640	500	4.8804	600	14.9830	700	4.8101		
405	0.0716	505	5.5392	605	15.5180	705	4.1789		
410	0.1043	510	6.0572	610	17.0540	710	3.6715		
415	0.1677	515	6.5766	615	18.4450	715	3.1894		
420	0.2540	520	6.9515	620	16.8700	720	2.7454		
425	0.4190	525	7.3559	625	17.0370	725	2.3869		
430	0.7027	530	7.6824	630	24.0430	730	2.0550		
435	1.1558	535	8.0599	635	22.8220	735	1.7601		
440	2.0734	540	8.4586	640	14.9400	740	1.5076		
445	3.5764	545	8.8533	645	14.1990	745	1.3026		
450	4.9936	550	9.3000	650	13.5900	750	1.1203		
455	5.2085	555	9.8213	655	12.4280	755	0.9560		
460	4.2111	560	10.2290	660	11.4940	760	0.8151		
465	3.7128	565	10.7630	665	10.5000	765	0.6992		
470	3.3086	570	11.3340	670	9.6786	770	0.5945		
475	2.8472	575	11.8770	675	8.4574	775	0.5077		



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## TEST REPORT

### RESULTS OF TESTS (cont'd)

**Test Condition: 120V, 60Hz For SLPD38827XX**

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

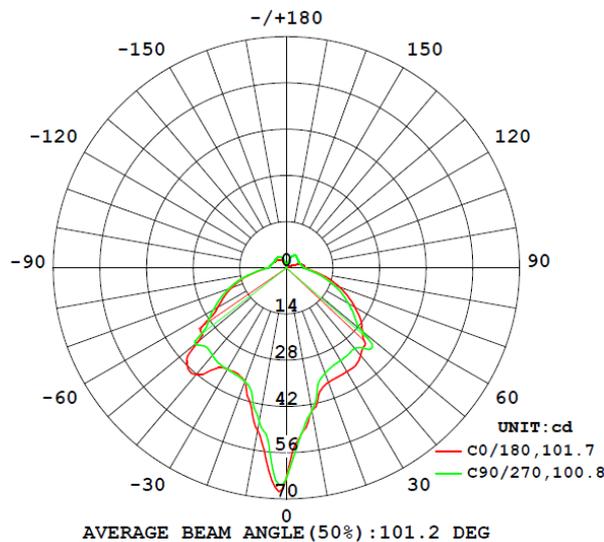
#### Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperature (K)	CRI	R9	CIE 31' Chromaticity Coordinate		CIE 76' Chromaticity Coordinate	
					(x)	(y)	(u')	(v')
SLPD38827XX								
S2412121 22-006	base-up	2584	93	58	0.4694	0.4122	0.2679	0.5294

#### 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)
SLPD38827XX							
S2412121 22-006	base-up	120.1	30.7	3.4	0.919	176.9	52.2

#### Intensity (Candlepower) Summary at 25°C - Candelas



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# TEST REPORT

## RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD38827XX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	63.5	63.4	63.4	63.5	63.6
5	50.7	51.5	51.9	51.4	50.6
10	43.9	46.5	46.7	44.1	44.1
15	38.7	39.3	39.5	37.7	36.5
20	36.9	36.7	35.9	34.7	34.0
25	36.5	34.9	32.9	32.1	32.8
30	36.3	34.0	32.3	31.8	32.5
35	36.1	34.9	34.0	32.2	32.2
40	34.7	34.8	35.0	33.3	31.9
45	33.3	33.7	37.1	36.6	34.9
50	29.8	31.3	32.7	28.9	29.2
55	27.1	28.2	28.8	25.9	24.8
60	23.7	24.5	24.8	22.4	21.5
65	20.3	20.6	20.3	19.1	18.4
70	17.0	16.3	15.8	15.4	15.2
75	13.4	12.5	11.9	11.6	11.7
80	9.9	8.9	8.3	8.4	8.8
85	7.2	6.5	6.0	6.1	6.5
90	5.7	5.1	4.7	4.8	5.2
95	5.5	5.1	4.8	4.7	5.0
100	5.1	4.7	4.4	4.4	4.7
105	4.6	4.4	4.1	4.2	4.4
110	3.2	4.3	4.0	4.1	4.3
115	2.1	4.2	3.9	4.0	4.2
120	1.4	4.1	3.8	4.0	4.2
125	1.0	4.1	3.9	4.0	4.3
130	0.7	4.2	3.9	4.1	4.4
135	0.5	4.3	4.0	4.2	4.5
140	0.2	4.2	4.1	4.3	4.6
145	0.1	4.0	4.2	4.4	4.7
150	0.1	3.3	3.9	4.2	4.5
155	0.1	2.4	3.4	3.6	3.9
160	0.1	1.1	2.4	2.6	2.8
165	0.1	0.4	1.3	1.4	1.5
170	0.1	0.1	0.3	0.4	0.4
175	0.1	0.1	0.1	0.1	0.1
180	0.1	0.1	0.1	0.1	0.1

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## TEST REPORT RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD38827XX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLPD38827XX		
0-30	32.6	18.4
0-40	54.7	30.9
0-60	108.4	61.3
0-90	151.3	85.6
60-90	42.9	24.3
0-180	176.9	100.0

### Beam Angle

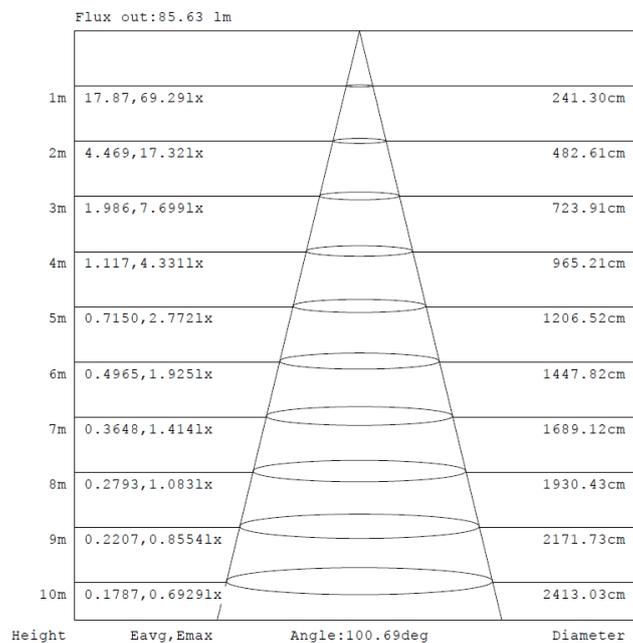
**Total Beam Angle(°)**  
101.2

### Illumination Plots

Model No.: SLPD38827XX

Mount Height: 2.5 m

#### Illuminance - Cone of Light



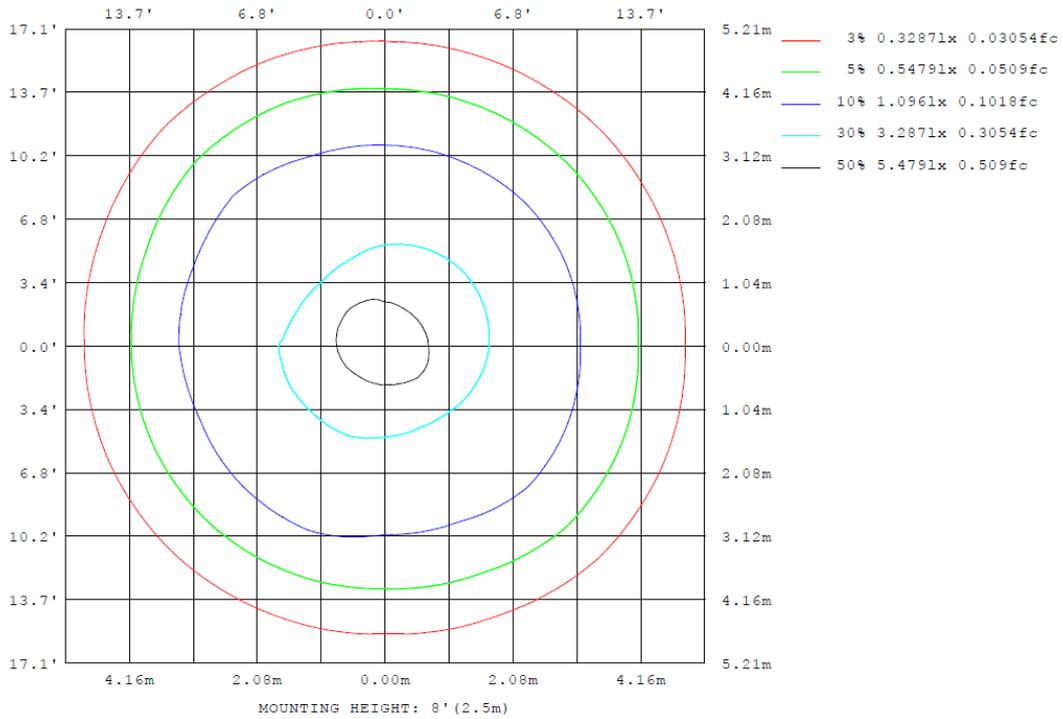
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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**TEST REPORT**  
**RESULTS OF TESTS (cont'd)**

**Test Condition: 120V, 60Hz For SLPD38827XX**

Model No.: SLPD38827XX  
Mount Height: 2.5 m  
Isoillumination Plot



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## TEST REPORT

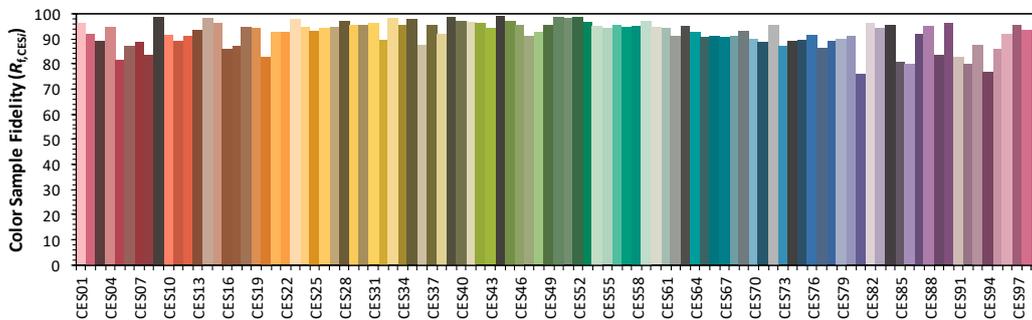
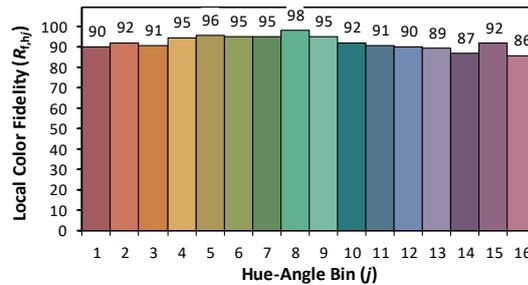
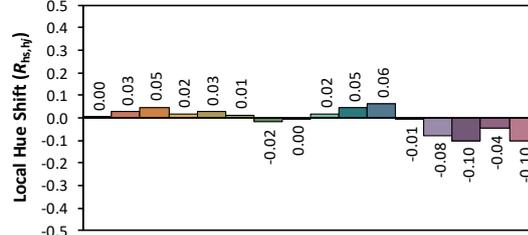
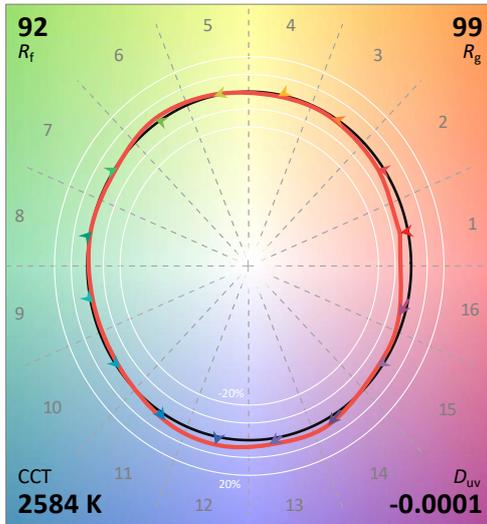
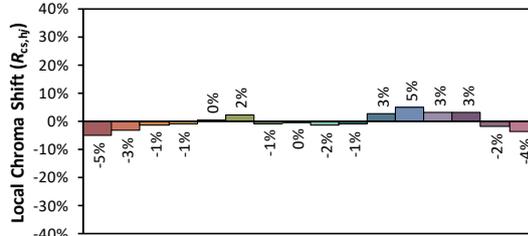
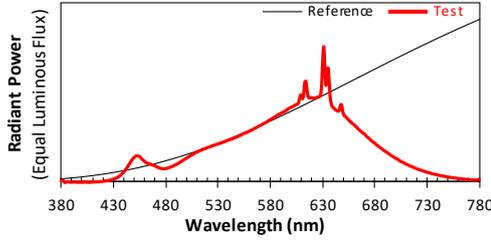
### RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD38827XX

### ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD  
Date: 2024/12/27

Manufacturer: Visual Comfort & Co.  
Model: SLPD38827XX



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

$x$  0.4694  
 $y$  0.4122  
 $u'$  0.2679  
 $v'$  0.5294

CIE 13.3-1995 (CRI)	
$R_a$	93
$R_g$	58

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 SLPD38827XX



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 \*\*\*\*\*