

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

241029179GZU-001

ISSUE DATE

03 December 2024

REVISION DATE

None

NUMBER OF PAGES

14

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

© 2024 INTERTEK



Report No.: 241029179GZU-001

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLPD62327XXXMG

Remark: "XXX" are denoted appearance color.

RENDERED TO

Visual Comfort & Co.

Contact Name: Javan Rivero

7400 LINDER AVE. SKOKIE, IL, 60077

Email: jrivero@visualcomfort.com

Phone No.: 847-410-4552

<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: QGZ241021045.
<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 SLPD62327XXXMG. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S241029179-001.
<u>MANUFACTURER /FACTORY & ADDRESS:</u>	Union Star Collection-Dongguan Denghuang HomeFurnishing Co., Ltd. No.5, Central Road, Yayuan Industrial Zone, Nancheng District,Dongguan City, Guangdong Province, 523000
<u>DATES OF TESTS:</u>	14 November 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

***** End of Page *****

TEST REPORT

SUMMARY

Model Number:	SLPD62327XXXMG
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLPD62327XXXMG

Criteria	Result
Total Lumen Output	1654.0 lm
Total Power	16.6 W
Luminaire Efficacy	99.5 lm/W
S/MH(C0/180)	0.65
S/MH(C90/270)	0.63
Correlated Color Temperature (CCT)	2782 K
Color Rendering Index (CRI)	92
R9	55
Chromaticity Coordinate (x)	0.4535
Chromaticity Coordinate (y)	0.4093
Chromaticity Coordinate (u')	0.2590
Chromaticity Coordinate (v')	0.5259

Remark:

N/A

***** End of Page *****

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

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.

***** End of Page *****

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

***** End of Page *****

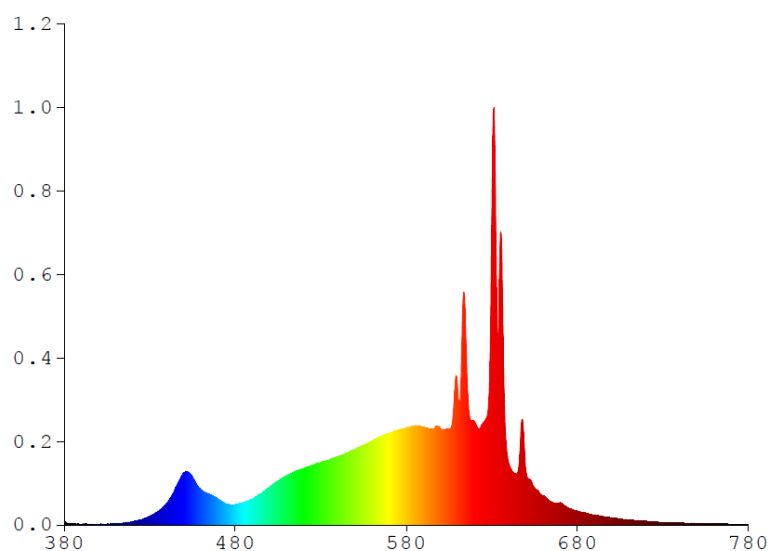
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLPD62327XXXMG

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	4.3935	480	27.2970	580	129.760	680	18.3600	780	0.4869
385	1.3626	485	30.2820	585	132.350	685	15.5670		
390	0.4655	490	34.8710	590	130.730	690	13.1830		
395	0.8729	495	41.9730	595	128.590	695	11.3150		
400	0.7850	500	50.7230	600	128.950	700	9.5015		
405	0.8452	505	58.8370	605	128.760	705	8.1711		
410	1.6913	510	65.8390	610	177.180	710	6.8356		
415	2.4723	515	71.7640	615	225.840	715	5.8943		
420	4.8510	520	75.5000	620	137.470	720	4.9757		
425	7.1026	525	79.8570	625	136.940	725	4.1906		
430	11.4990	530	84.0240	630	423.400	730	3.5069		
435	18.0020	535	87.3620	635	388.720	735	3.0712		
440	29.2840	540	91.5000	640	80.6040	740	2.6523		
445	49.2940	545	96.3580	645	69.3680	745	2.2113		
450	69.9170	550	101.5600	650	70.0330	750	1.9589		
455	63.3550	555	106.7800	655	49.3170	755	1.8048		
460	47.0120	560	112.5300	660	39.5260	760	1.4361		
465	40.6320	565	118.4900	665	30.6150	765	1.3484		
470	34.3710	570	122.7500	670	30.0120	770	1.1040		
475	28.1550	575	126.8100	675	21.4210	775	1.0300		



***** End of Page *****

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD62327XXXMG

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

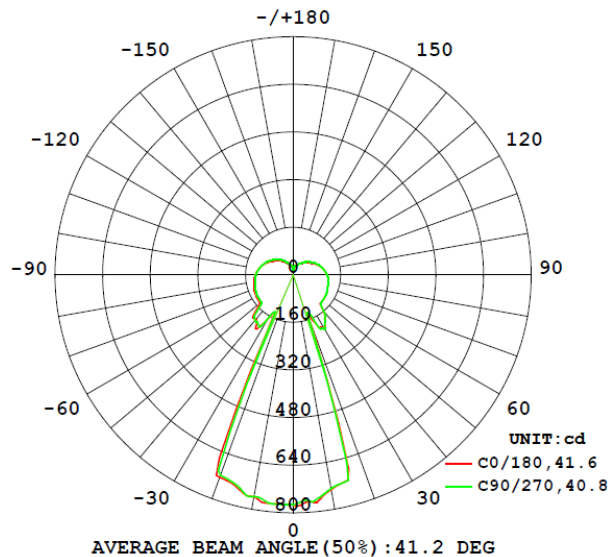
Photometric Measurements at 25°C – Distribution Method

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')
SLPD62327XXXMG								
S2410291 79-001	base-up	2782	92	55	0.4535	0.4093	0.2590	0.5259

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)
SLPD62327XXXMG							
S2410291 79-001	base-up	120.1	139.7	16.6	0.991	1654.0	99.5

Intensity (Candlepower) Summary at 25°C - Candelas



***** End of Page *****

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD62327XXXMG

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	774.8	773.3	773.4	775.1	773.0
5	767.5	758.3	761.9	764.6	765.8
10	733.8	723.0	723.6	725.9	730.1
15	713.6	488.0	510.9	628.0	715.5
20	142.7	139.6	137.0	136.0	137.4
25	182.2	197.2	193.1	190.6	176.7
30	207.3	200.9	208.8	209.8	213.0
35	186.2	176.0	178.4	184.7	187.9
40	157.2	135.6	137.3	146.8	161.5
45	132.6	129.9	129.3	130.4	132.7
50	131.7	129.1	128.5	129.5	131.5
55	130.9	128.2	127.7	128.7	130.6
60	129.2	126.2	125.9	127.2	129.3
65	126.8	123.6	123.2	124.4	126.7
70	123.7	121.0	120.5	121.4	123.7
75	122.4	120.1	119.7	120.7	122.5
80	120.6	118.0	117.9	118.9	120.8
85	117.7	115.0	115.0	116.1	118.1
90	114.1	111.2	111.3	112.5	114.4
95	109.7	106.8	107.0	108.1	110.1
100	104.8	101.8	102.0	103.2	105.1
105	99.4	96.4	96.6	97.7	99.7
110	92.9	90.7	90.9	92.0	93.9
115	85.6	84.6	84.7	85.9	87.7
120	77.9	77.8	78.3	79.4	81.3
125	70.6	70.3	71.9	72.9	74.6
130	64.1	63.4	65.2	66.1	68.0
135	58.5	57.2	58.5	59.7	61.4
140	52.9	51.0	51.8	53.6	55.3
145	47.5	45.3	46.0	47.5	48.9
150	42.8	40.8	41.2	42.0	43.1
155	38.7	36.8	37.1	37.5	37.9
160	35.6	34.1	34.0	33.6	34.8
165	33.2	32.2	32.3	32.5	32.9
170	29.7	26.9	26.4	26.0	26.5
175	22.6	18.5	18.1	18.0	18.2
180	17.1	16.2	16.8	18.0	18.0

***** End of Page *****

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD62327XXXMG

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLPD62327XXXMG		
0-30	367.5	22.2
0-40	489.0	29.6
0-60	731.4	44.2
0-90	1134.2	68.6
60-90	402.8	24.4
0-180	1654.0	100.0

Beam Angle

Total Beam Angle(°)

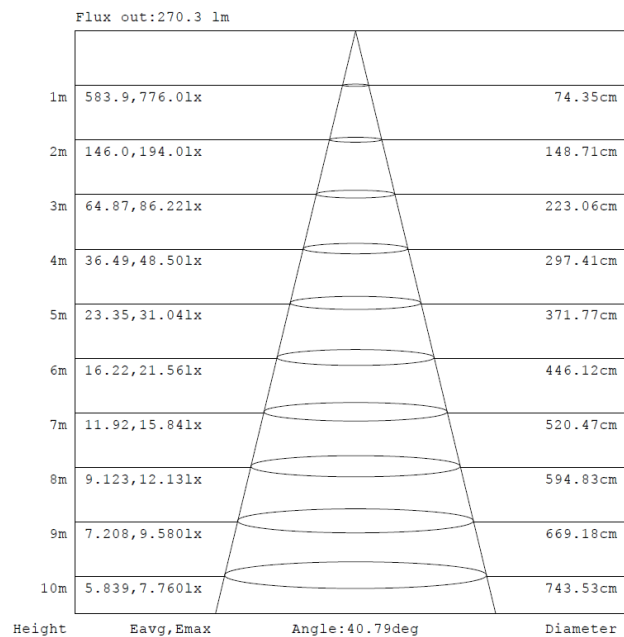
41.2

Illumination Plots

Model No.: SLPD62327XXXMG

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.

***** End of Page *****

TEST REPORT

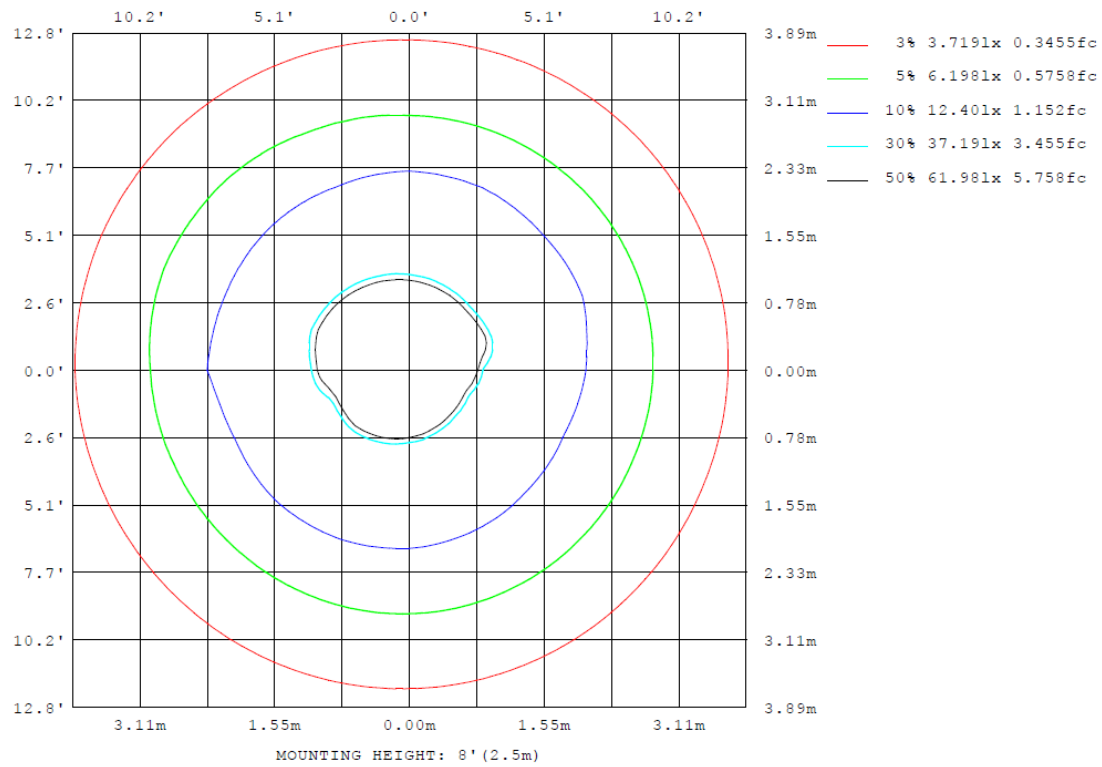
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD62327XXXMG

Model No.: SLPD62327XXXMG

Mount Height: 2.5 m

Isoillumination Plot



***** End of Page *****

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD62327XXXMG

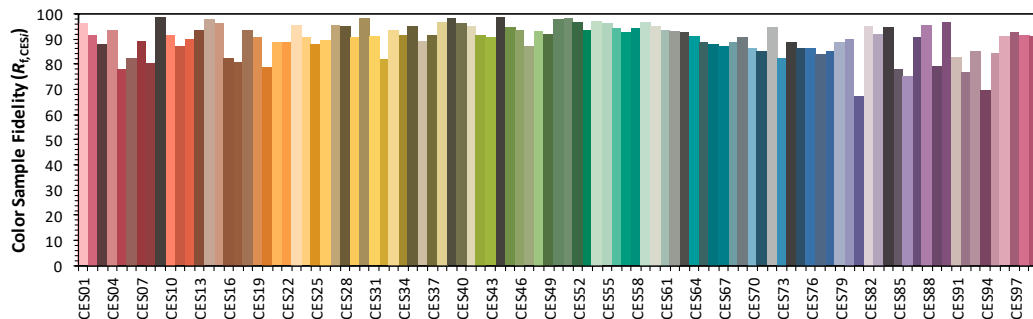
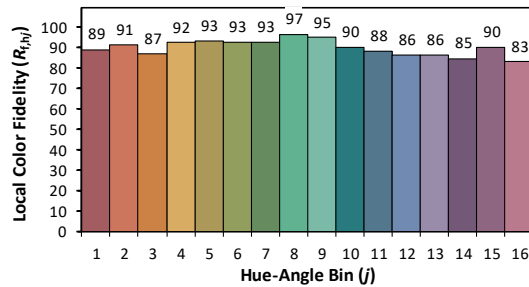
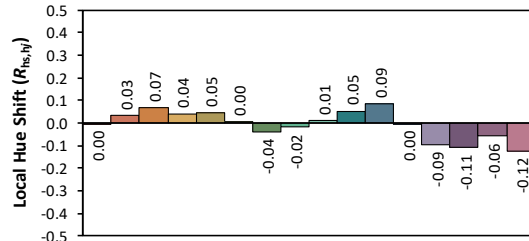
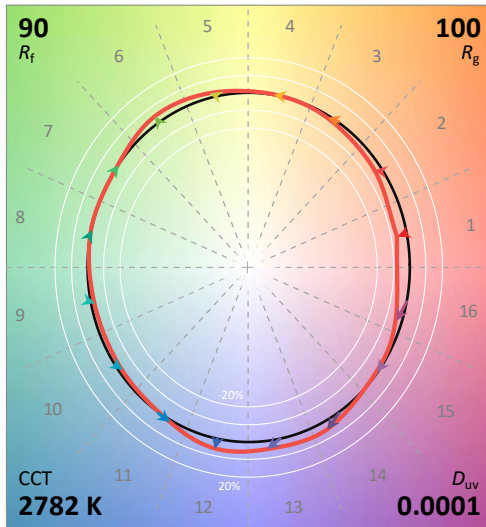
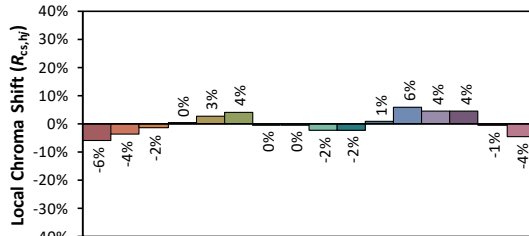
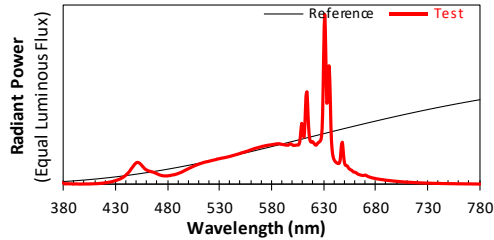
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2024/11/14

Model: SLPD62327XXXMG



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

x 0.4535
 y 0.4093
 u' 0.2590
 v' 0.5259

CIE 13.3-1995
(CRI)

R_a 92
 R_g 55

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

***** End of Page *****

TEST REPORT

PRODUCT PICTURE (not to scale)



External view of SLPD62327XXMG

***** End of Page *****

TEST REPORT

PRODUCT PICTURE (not to scale)



External view of SLPD62327XXXMG

***** End of Page *****

TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver PTB20W-0400-38-VCC1 (AB0258)



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 *****