

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

240729032GZU-003

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None

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Report format for LM-79_G

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Report No.: 240729032GZU-003

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLCH55727XX

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: QGZ240726006, QGZ241119056.
<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 SLCH55727XX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S240729032-014.
<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>	26 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

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TEST REPORT

SUMMARY

Model Number:	SLCH55727XX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLCH55727XX

Criteria	Result
Total Lumen Output	5468.7 lm
Total Power	104.1 W
Luminaire Efficacy	52.5 lm/W
S/MH(C0/180)	1.20
S/MH(C90/270)	1.24
Correlated Color Temperature (CCT)	2652 K
Color Rendering Index (CRI)	93
R9	56
Chromaticity Coordinate (x)	0.4629
Chromaticity Coordinate (y)	0.4098
Chromaticity Coordinate (u')	0.2648
Chromaticity Coordinate (v')	0.5275

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

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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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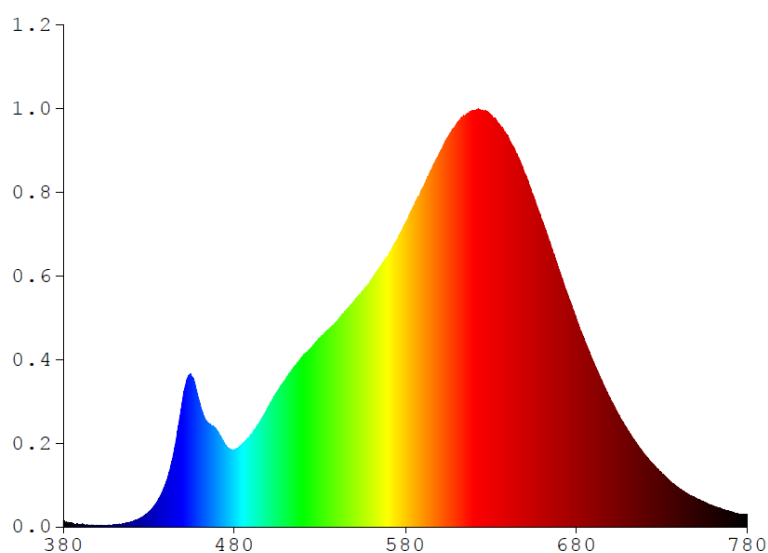
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLCH55727XX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	2.5081	480	36.3160	580	142.290	680	97.1760	780	6.0544
385	1.6970	485	39.1670	585	150.820	685	86.6390		
390	0.8400	490	43.5500	590	158.900	690	77.2630		
395	0.7104	495	49.4000	595	167.340	695	68.0380		
400	0.6790	500	56.6910	600	175.500	700	59.4140		
405	0.7356	505	63.3500	605	182.920	705	51.9990		
410	0.9456	510	69.3170	610	189.240	710	45.1830		
415	1.5356	515	74.9980	615	192.820	715	39.2320		
420	2.4163	520	80.0130	620	195.100	720	33.8300		
425	4.0032	525	84.1780	625	195.530	725	29.1990		
430	6.9787	530	88.6990	630	193.300	730	24.8620		
435	11.9260	535	92.4580	635	188.740	735	21.2870		
440	20.5990	540	96.3490	640	182.810	740	18.0650		
445	36.5960	545	101.2300	645	175.190	745	15.3950		
450	60.4060	550	105.7100	650	165.240	750	13.3620		
455	70.4830	555	110.4900	655	154.510	755	11.5070		
460	57.0790	560	115.3900	660	143.260	760	9.7641		
465	48.2610	565	121.8400	665	131.890	765	8.3404		
470	44.8250	570	127.3200	670	119.920	770	7.1481		
475	38.2460	575	134.7800	675	106.120	775	6.0465		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH55727XX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

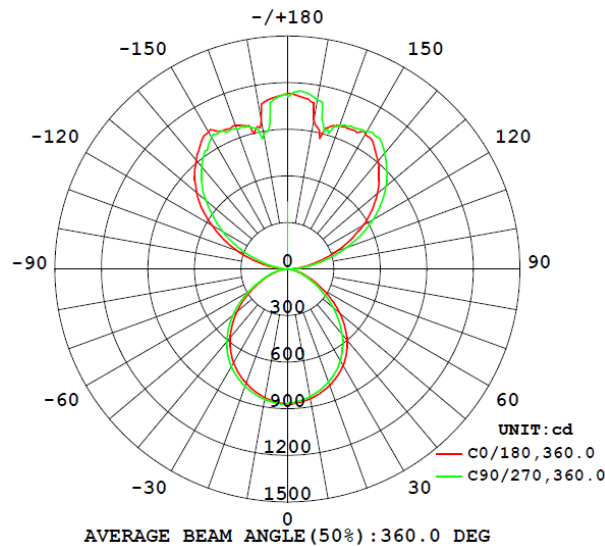
Photometric Measurements at 25°C – Distribution Method

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')
SLCH55727XX								
S2407290 32-014	base-up	2652	93	56	0.4629	0.4098	0.2648	0.5275

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)
SLCH55727XX							
S2407290 32-014	base-up	120.0	878.0	104.1	0.988	5468.7	52.5

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH55727XX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	868.1	867.7	867.5	867.4	865.6
5	862.3	862.6	862.7	860.4	853.8
10	847.5	848.3	848.6	844.5	834.3
15	825.5	826.9	827.4	821.4	807.8
20	796.5	798.7	799.4	791.7	774.1
25	760.8	763.8	764.7	755.0	732.9
30	717.5	721.8	722.6	710.0	681.8
35	663.1	669.3	670.0	653.8	620.0
40	597.9	604.9	605.9	587.1	548.3
45	523.5	530.7	531.8	511.0	469.2
50	441.2	448.1	450.1	428.5	386.2
55	352.4	358.7	361.3	341.2	301.5
60	264.5	270.0	271.9	254.5	221.6
65	191.9	195.7	194.9	180.5	157.1
70	132.8	134.9	134.1	123.3	104.5
75	83.5	85.1	85.3	77.4	62.6
80	45.1	47.0	48.4	42.6	32.0
85	16.6	19.0	20.9	17.8	11.3
90	1.5	5.7	5.1	6.8	15.9
95	38.2	35.2	33.2	44.4	71.7
100	121.8	115.5	113.5	130.2	169.8
105	226.7	225.2	218.7	236.1	283.6
110	339.4	339.1	332.8	350.4	403.3
115	449.7	451.4	450.2	468.9	528.1
120	563.9	570.2	569.2	579.9	637.4
125	664.9	672.2	675.3	686.3	740.1
130	756.2	763.4	768.3	785.8	830.7
135	838.2	848.3	851.7	864.9	902.9
140	908.0	917.2	921.3	939.9	975.9
145	972.0	983.1	979.5	1001.3	1033.5
150	1006.7	1015.0	998.5	1032.5	1022.6
155	989.5	1000.7	994.4	1012.4	1005.6
160	980.7	982.4	992.2	1001.2	982.0
165	938.7	946.1	957.3	922.8	918.2
170	975.4	984.0	1006.4	1089.8	1108.5
175	1111.5	1111.1	1113.9	1120.7	1147.6
180	1133.1	1143.3	1129.7	1123.9	1109.8

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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH55727XX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLCH55727XX		
0-30	656.9	12.0
0-40	1061.1	19.4
0-60	1759.3	32.2
0-90	2065.3	37.8
60-90	306.0	5.6
0-180	5468.7	100.0

Beam Angle

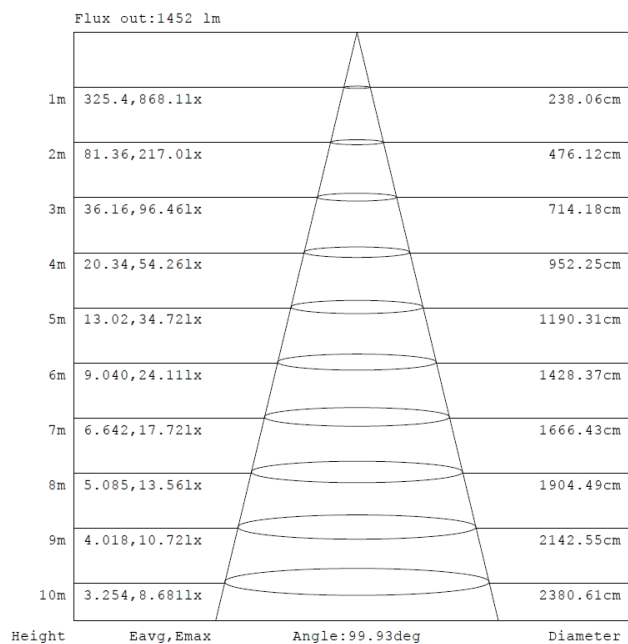
Total Beam Angle(°)
360.0

Illumination Plots

Model No.: SLCH55727XX

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

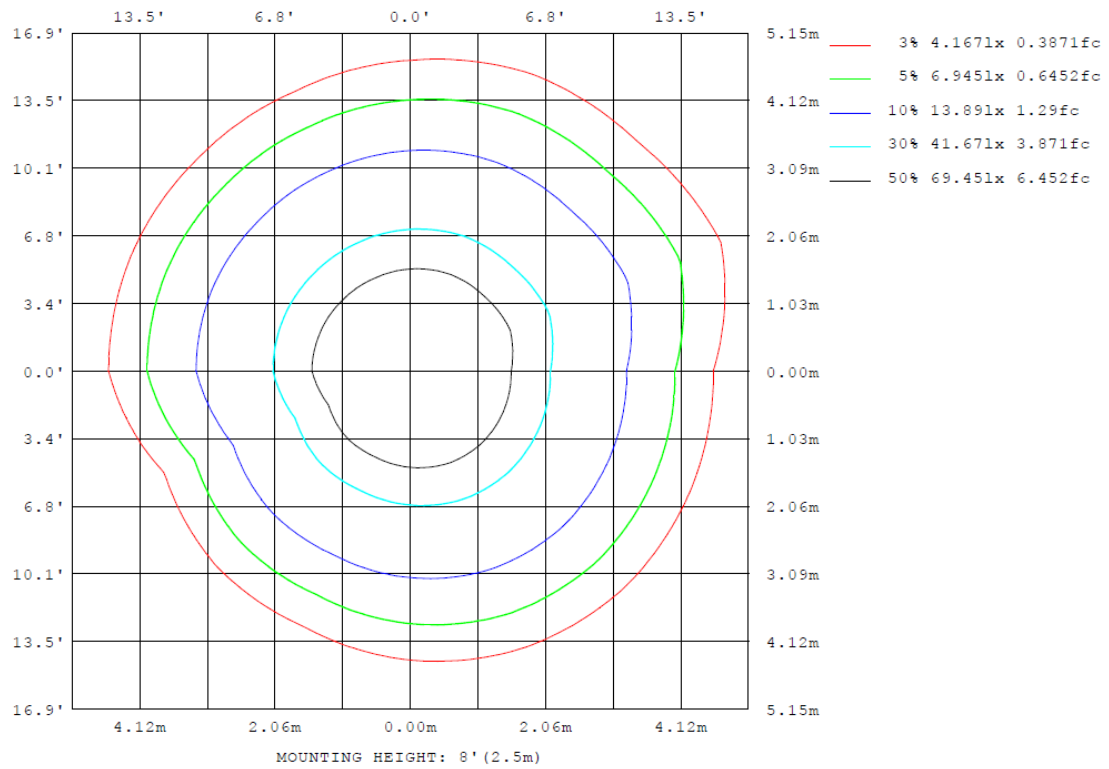
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH55727XX

Model No.: SLCH55727XX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH55727XX

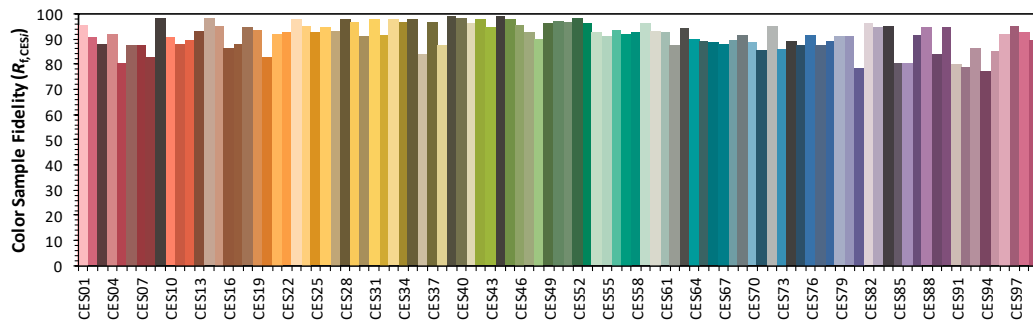
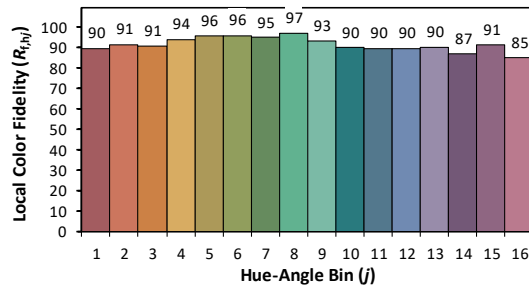
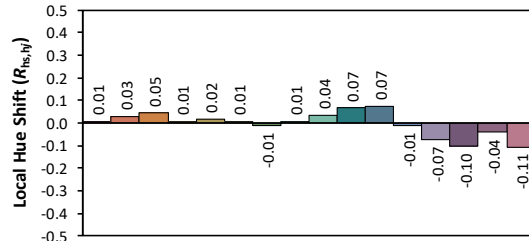
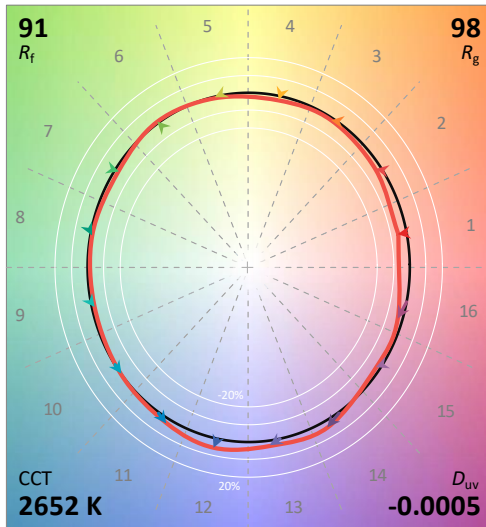
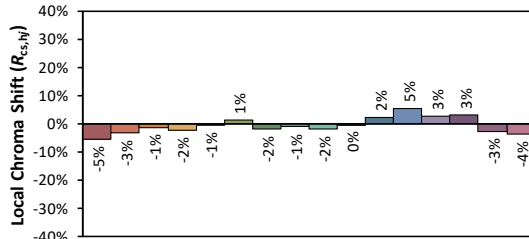
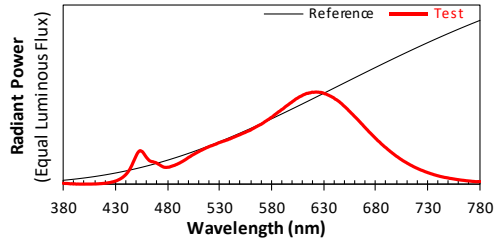
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2024/11/26

Model: SLCH55727XX



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

x 0.4629
 y 0.4098
 u' 0.2648
 v' 0.5275

CIE 13.3-1995
(CRI)

R_a 93
 R_g 56

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 SLCH55727XX

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

TEST REPORT

PRODUCT PICTURE (not to scale)



External view of SLCH55727XX

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

TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver DS50W1400C2036F5UD-0000



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 *****