

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

241121131GZU-006

ISSUE DATE

03 January 2025

REVISION DATE

None

NUMBER OF PAGES

14

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

© 2024 INTERTEK



Report No.: 241121131GZU-006

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLCH66127XXXWWO

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: 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 SLCH66127XXXWWO. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S241121131-006.
<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>	06 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

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

TEST REPORT

SUMMARY

Model Number:	SLCH66127XXXWWO
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLCH66127XXXWWO

Criteria	Result
Total Lumen Output	7143.9 lm
Total Power	100.1 W
Luminaire Efficacy	71.4 lm/W
S/MH(C0/180)	1.36
S/MH(C90/270)	1.35
Correlated Color Temperature (CCT)	2609 K
Color Rendering Index (CRI)	93
R9	60
Chromaticity Coordinate (x)	0.4635
Chromaticity Coordinate (y)	0.4054
Chromaticity Coordinate (u')	0.2672
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 *****

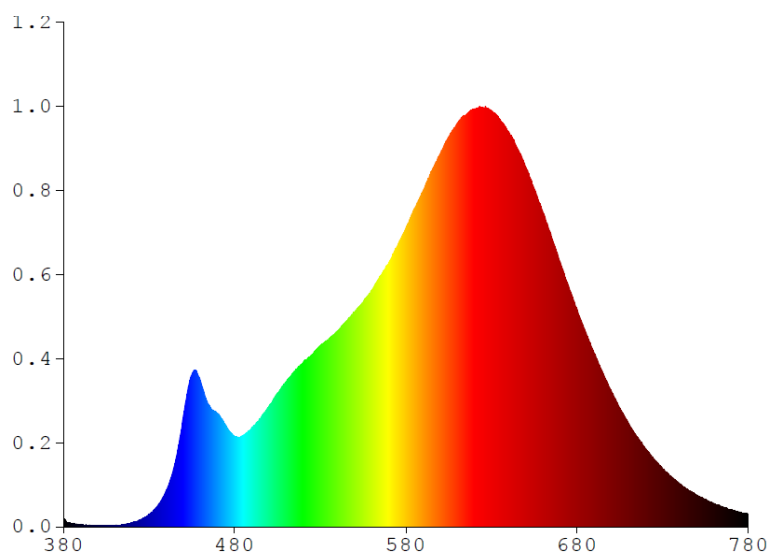
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLCH66127XXXWWO

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	3.4458	480	60.3360	580	199.050	680	144.2600	780	8.5834
385	2.3213	485	60.9920	585	212.160	685	129.3500		
390	1.5009	490	65.9540	590	223.840	690	115.4100		
395	1.0387	495	72.1420	595	236.940	695	102.0700		
400	0.8718	500	80.5000	600	248.490	700	90.0110		
405	0.9514	505	88.9280	605	259.800	705	78.6620		
410	0.8092	510	96.6020	610	268.990	710	68.7080		
415	1.3045	515	103.8200	615	274.270	715	59.8910		
420	2.8120	520	109.4700	620	278.440	720	52.0160		
425	4.8868	525	114.5200	625	279.410	725	44.9860		
430	8.2345	530	120.6200	630	277.170	730	38.6210		
435	13.8130	535	125.2000	635	271.110	735	33.4810		
440	24.0410	540	130.3500	640	263.050	740	28.5370		
445	41.5720	545	136.9400	645	252.140	745	24.4560		
450	73.0540	550	142.8500	650	239.560	750	21.0140		
455	101.460	555	149.8400	655	224.720	755	18.0280		
460	96.9530	560	157.3200	660	209.410	760	15.4090		
465	80.5010	565	167.0300	665	192.930	765	13.1690		
470	75.4430	570	175.7900	670	176.360	770	11.3780		
475	67.0670	575	187.0900	675	156.800	775	9.6500		



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH66127XXXWWO

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

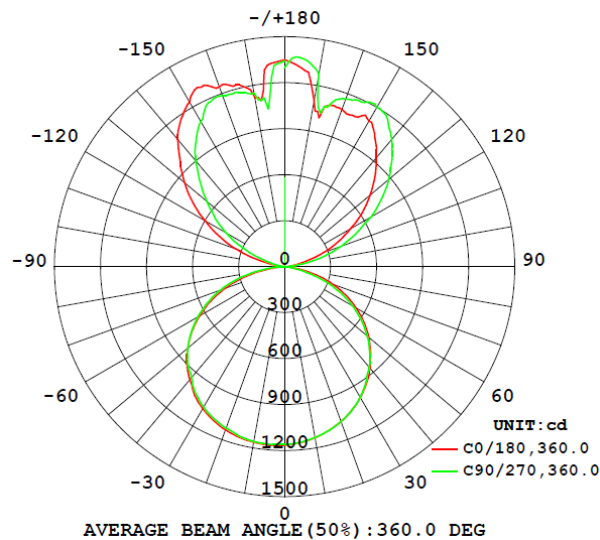
Photometric Measurements at 25°C – Distribution Method

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')
SLCH66127XXXWWO								
S2411211 31-006	base-up	2609	93	60	0.4635	0.4054	0.2672	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)
SLCH66127XXXWWO							
S2411211 31-006	base-up	120.0	841.9	100.1	0.990	7143.9	71.4

Intensity (Candlepower) Summary at 25°C - Candelas



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH66127XXXWWO

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	1164.4	1157.6	1157.9	1158.7	1160.0
5	1152.6	1141.1	1142.5	1145.6	1149.9
10	1133.3	1117.6	1120.0	1125.2	1132.2
15	1107.0	1087.2	1090.6	1098.0	1107.4
20	1074.0	1049.9	1054.3	1063.3	1075.2
25	1033.8	1005.0	1010.2	1021.0	1034.6
30	985.6	952.0	958.1	970.0	983.5
35	929.5	888.9	896.2	908.8	922.7
40	864.4	821.6	828.8	842.9	856.2
45	791.1	746.6	753.6	768.1	784.0
50	714.1	663.8	670.8	685.1	701.0
55	629.1	572.4	580.3	589.6	609.7
60	536.6	473.5	478.2	492.8	509.4
65	437.5	372.1	375.0	385.3	399.5
70	332.2	258.5	260.1	267.5	278.4
75	213.9	137.1	138.7	144.2	150.0
80	95.8	42.8	45.0	49.0	51.1
85	18.5	7.9	11.8	13.5	11.3
90	2.9	9.2	10.9	13.5	12.9
95	12.9	38.4	37.2	40.8	44.1
100	58.6	116.2	120.0	128.3	138.7
105	150.8	225.1	234.0	245.8	263.2
110	266.2	342.5	352.1	366.1	387.6
115	381.8	456.4	471.8	491.4	511.8
120	493.4	584.2	595.0	623.7	648.6
125	618.1	696.8	704.3	741.7	769.8
130	726.0	804.6	808.7	855.2	885.7
135	831.7	905.7	909.2	957.1	989.8
140	932.5	1000.6	1011.1	1051.5	1083.7
145	1024.2	1090.0	1112.3	1141.7	1170.2
150	1097.5	1094.3	1165.5	1187.3	1201.9
155	1081.9	1106.3	1149.3	1167.9	1185.0
160	1091.5	1106.1	1137.4	1157.5	1163.0
165	1087.6	1039.1	1077.9	1090.7	1076.3
170	1102.8	1278.4	1287.1	1297.7	1281.5
175	1299.6	1341.1	1333.2	1334.2	1362.6
180	1348.4	1331.2	1318.7	1351.3	1297.5

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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH66127XXXWWO

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLCH66127XXXWWO		
0-30	919.0	12.9
0-40	1526.2	21.4
0-60	2782.1	38.9
0-90	3568.2	50.0
60-90	786.1	11.1
0-180	7143.9	100.0

Beam Angle

Total Beam Angle(°)

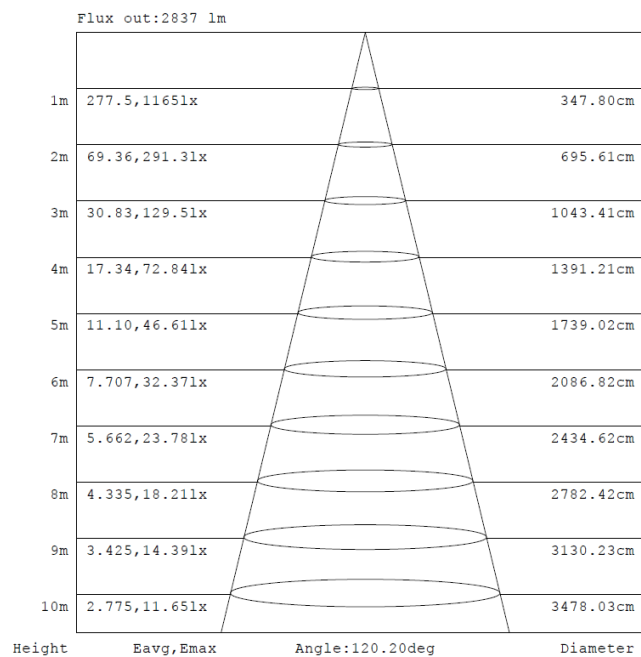
360.0

Illumination Plots

Model No.: SLCH66127XXXWWO

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

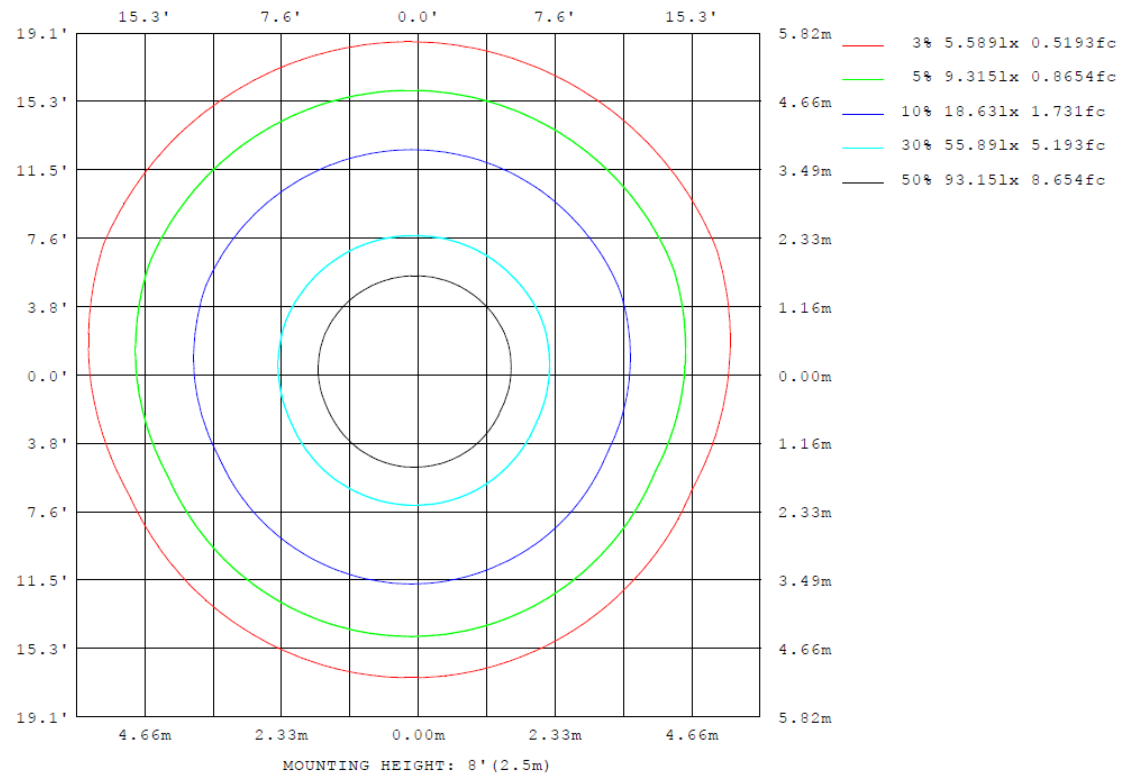
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH66127XXXWWO

Model No.: SLCH66127XXXWWO

Mount Height: 2.5 m

Isoillumination Plot



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH66127XXXWWO

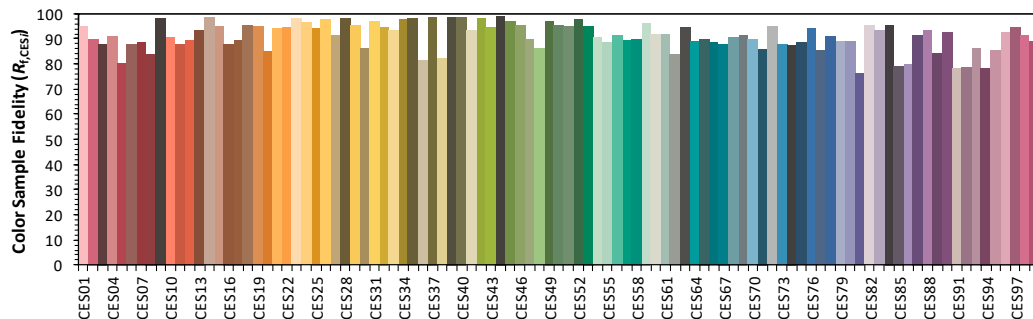
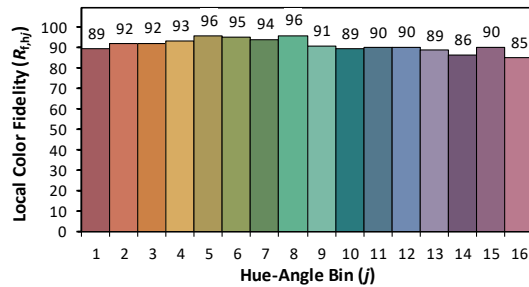
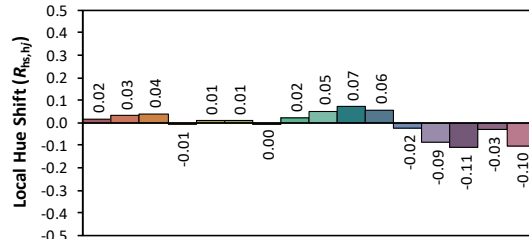
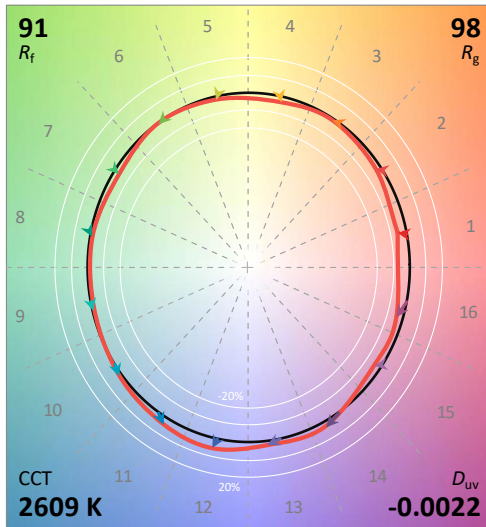
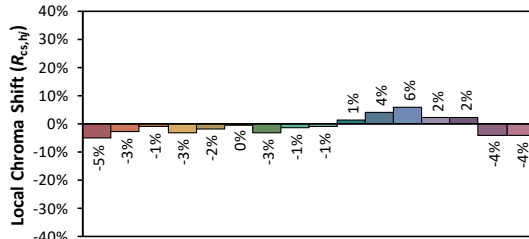
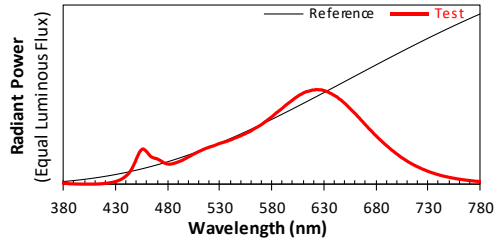
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2024/12/6

Model: SLCH66127XXXWWO



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

x 0.4635
 y 0.4054
 u' 0.2672
 v' 0.5259

CIE 13.3-1995
(CRI)
 R_a 93
 R_g 60

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 SLCH66127XXXWWO

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

TEST REPORT

PRODUCT PICTURE (not to scale)



External view of SLCH66127XXXWWO

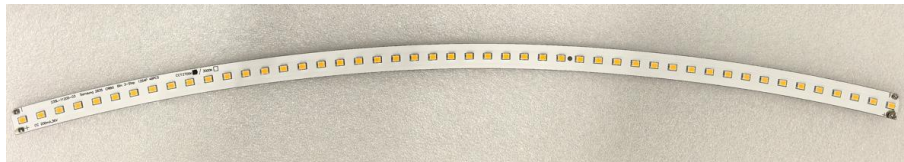
***** End of Page *****

TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver DS45W1200C2036F5UD-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 *****