

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

241021199GZU-001

ISSUE DATE

06 November 2024

REVISION DATE

None

NUMBER OF PAGES

13

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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Report No.: 241021199GZU-001

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLCH57030X

Remark: "X" 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: QGZ240930087.
<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 SLCH57030X. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S241021199-001.
<u>MANUFACTURER /FACTORY & ADDRESS:</u>	GuangZhou Pan Yu Target Casting and Lighting Corporation No. 1 Industrial Zone, Zhongcun, Panyu, Guangzhou CHINA 511495
<u>DATES OF TESTS:</u>	30 October 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:	SLCH57030X
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLCH57030X

Criteria	Result
Total Lumen Output	3555.5 lm
Total Power	69.6 W
Luminaire Efficacy	51.1 lm/W
S/MH(C0/180)	0.82
S/MH(C90/270)	0.74
Correlated Color Temperature (CCT)	2821 K
Color Rendering Index (CRI)	93
R9	76
Chromaticity Coordinate (x)	0.4473
Chromaticity Coordinate (y)	0.4026
Chromaticity Coordinate (u')	0.2579
Chromaticity Coordinate (v')	0.5223

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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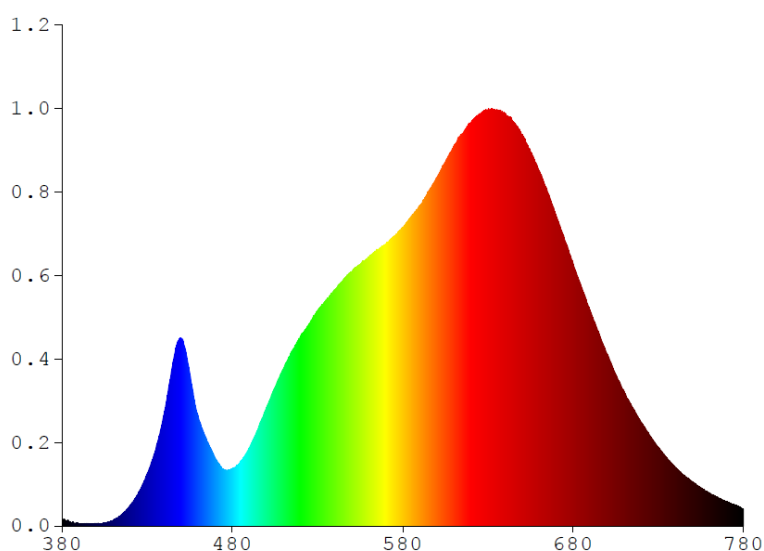
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLCH57030X

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	7.1012	480	54.8030	580	285.350	680	249.7100	780	15.6560
385	3.7012	485	62.3340	585	295.970	685	227.1600		
390	2.7065	490	74.5800	590	305.990	690	205.1700		
395	2.3185	495	92.4130	595	319.660	695	184.2400		
400	2.1889	500	113.1000	600	332.940	700	163.6200		
405	2.8703	505	132.1300	605	347.700	705	144.4800		
410	5.4853	510	150.4400	610	363.430	710	127.3400		
415	10.8050	515	167.3000	615	374.710	715	112.6000		
420	19.7890	520	180.8400	620	385.260	720	98.5830		
425	31.9680	525	193.2800	625	394.080	725	85.9390		
430	49.8490	530	205.7300	630	397.630	730	75.0310		
435	72.7050	535	215.8300	635	397.780	735	64.9390		
440	107.810	540	225.4100	640	394.540	740	55.8280		
445	154.950	545	235.1700	645	386.290	745	48.3380		
450	178.790	550	242.9100	650	373.810	750	42.1240		
455	144.590	555	250.2200	655	357.040	755	36.4900		
460	103.830	560	256.4500	660	339.310	760	31.4250		
465	80.9960	565	263.8600	665	319.020	765	27.1740		
470	64.0990	570	269.1000	670	295.800	770	23.2230		
475	53.9290	575	276.9400	675	268.960	775	20.1180		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH57030X

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

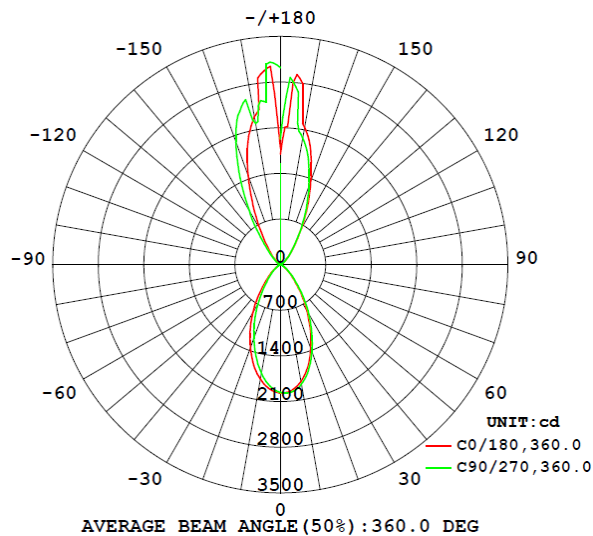
Photometric Measurements at 25°C – Distribution Method

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')
SLCH57030X								
S2410211 99-001	base-up	2821	93	76	0.4473	0.4026	0.2579	0.5223

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	Lumen
						Luminous Flux (Lumens)	Efficacy (Lumens Per Watt)
SLCH57030X							
S2410211 99-001	base-up	120.1	582.5	69.6	0.994	3555.5	51.1

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH57030X

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	1967.7	1967.2	1959.1	1957.9	1957.8
5	1938.1	1942.0	1957.2	1958.9	1960.3
10	1819.2	1819.4	1851.3	1854.8	1862.8
15	1628.7	1613.7	1647.0	1652.5	1673.4
20	1371.6	1350.9	1385.1	1394.8	1419.8
25	1088.7	1057.8	1098.3	1111.9	1142.5
30	820.9	774.3	796.9	836.7	876.8
35	583.0	537.2	542.7	586.1	631.3
40	380.5	355.3	367.0	393.9	422.3
45	251.7	236.7	248.5	263.0	279.4
50	161.4	152.1	161.4	171.1	181.4
55	100.0	93.1	99.3	105.8	112.1
60	58.4	56.1	59.2	62.7	65.6
65	35.0	32.4	33.8	36.1	38.0
70	20.2	19.1	19.9	20.6	21.1
75	12.6	12.2	12.8	12.9	13.1
80	6.6	6.9	7.7	7.8	7.4
85	3.0	3.1	3.9	4.1	3.9
90	0.5	0.4	0.9	1.0	1.0
95	0.3	0.4	0.2	0.2	0.3
100	2.7	3.3	2.6	2.6	2.4
105	6.1	7.3	6.3	6.4	6.0
110	11.0	13.2	11.5	11.3	10.4
115	18.6	21.6	19.1	19.0	17.0
120	32.3	36.8	31.4	31.0	29.4
125	57.6	65.4	57.6	57.4	53.4
130	98.3	108.8	97.9	98.8	94.0
135	160.1	175.6	159.8	162.9	156.6
140	256.8	279.3	253.7	259.5	253.5
145	402.8	436.9	391.8	402.6	397.2
150	652.0	699.1	608.1	632.1	630.3
155	986.6	1072.4	964.6	981.3	936.0
160	1370.5	1499.5	1338.3	1276.1	1284.4
165	1807.1	1998.3	1614.4	1648.8	1668.5
170	2144.3	1573.4	1582.6	1964.0	1978.6
175	2927.8	2139.0	2769.3	2384.7	2743.6
180	1698.1	3096.3	3041.4	3029.7	1930.3

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH57030X

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLCH57030X		
0-30	1094.8	30.8
0-40	1434.8	40.4
0-60	1711.3	48.1
0-90	1761.3	49.5
60-90	50.0	1.4
0-180	3555.5	100.0

Beam Angle

Total Beam Angle(°)

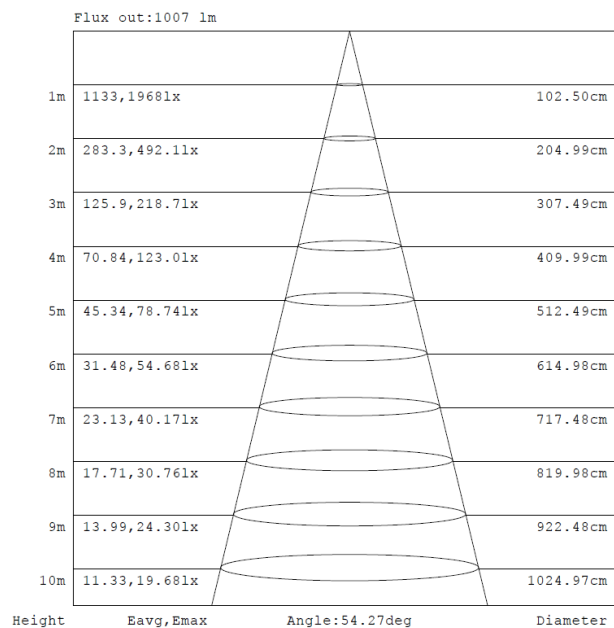
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Illumination Plots

Model No.: SLCH57030X

Mount Height: 2.5 m

Illuminance - Cone of Light



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TEST REPORT

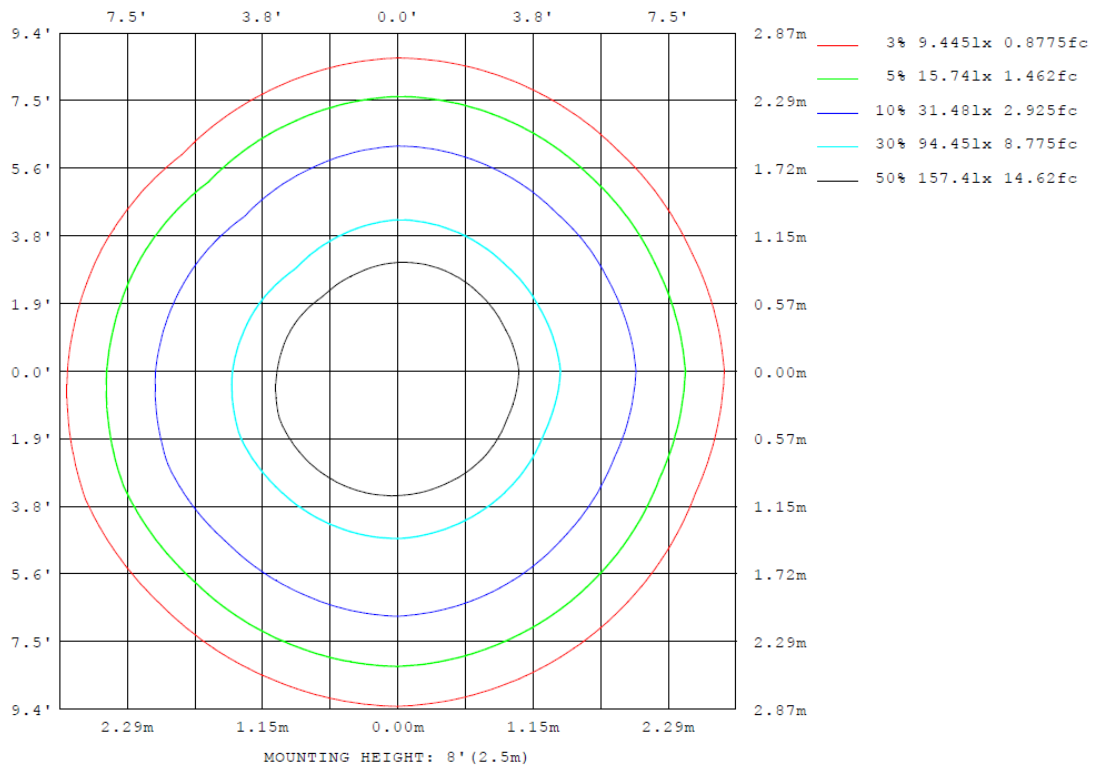
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH57030X

Model No.: SLCH57030X

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLCH57030X

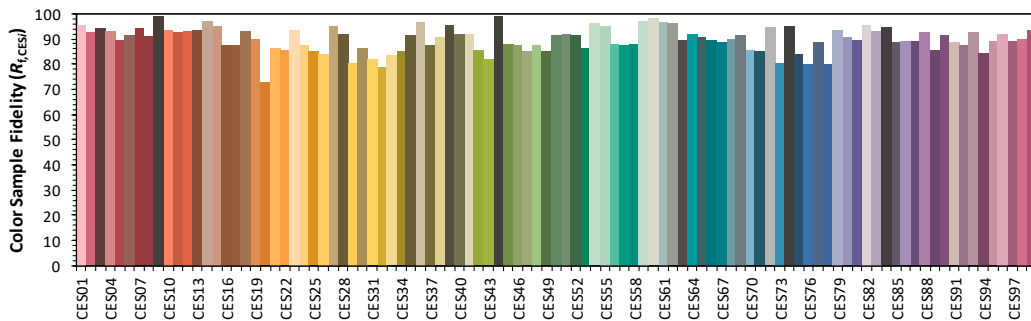
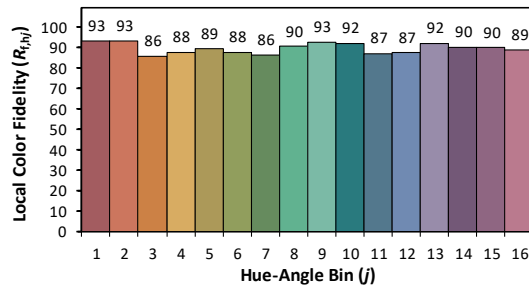
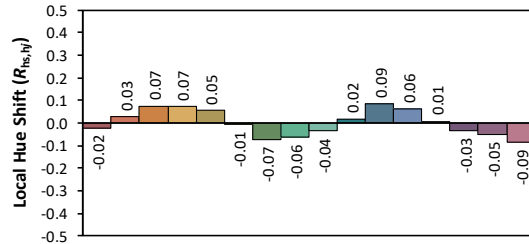
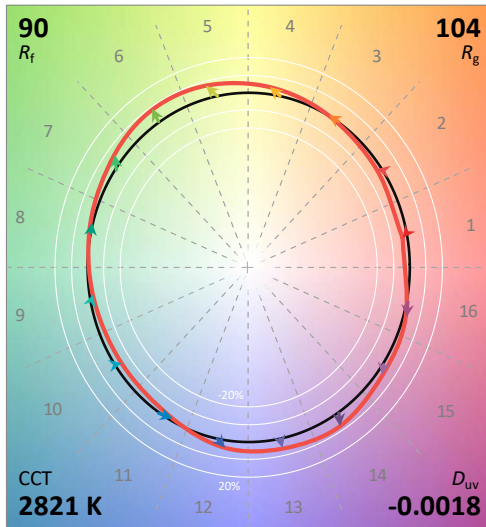
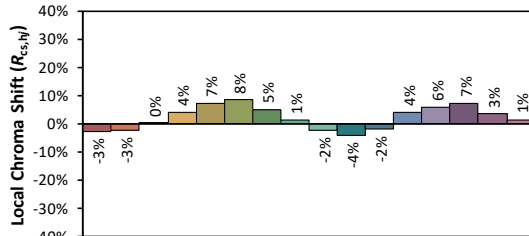
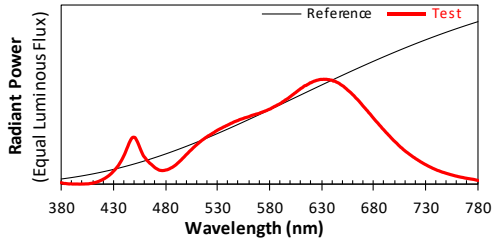
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort and Company

Date: 2024/10/30

Model: SLCH57030X



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

x 0.4473
 y 0.4026
 u' 0.2579
 v' 0.5223

CIE 13.3-1995
(CRI)

R_a 93

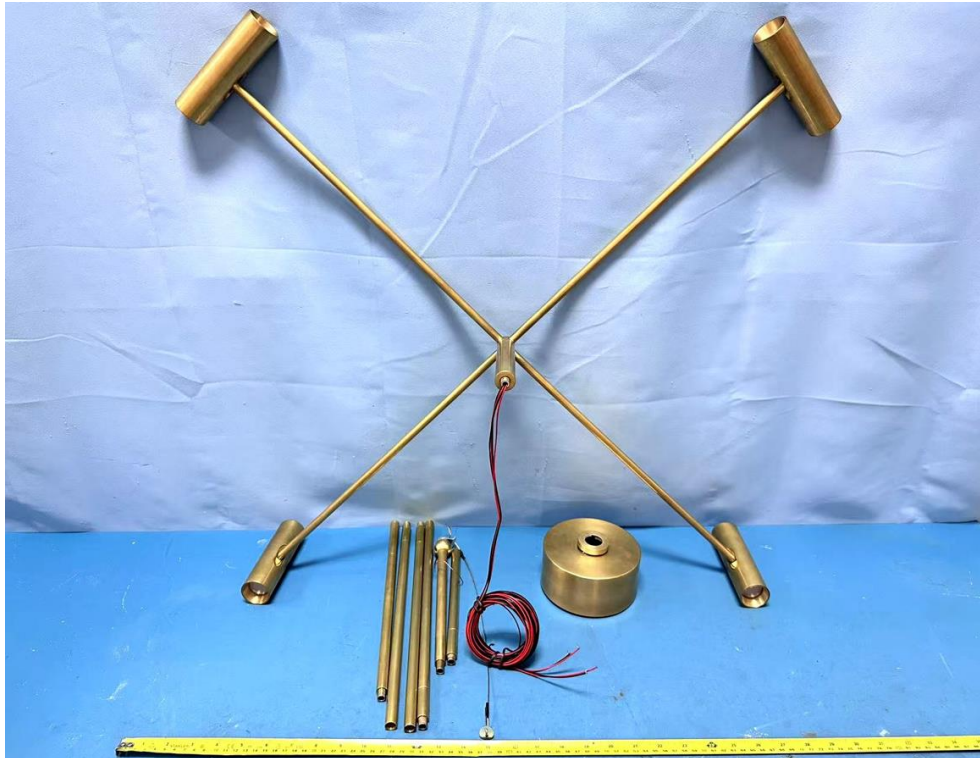
R_g 76

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 SLCH57030X



View of LED driver PVD36-C090V40-UNV3-HE-P

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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 *****