

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

241212122GZU-004

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REVISION DATE

None

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Report format for LM-79_G

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Report No.: 241212122GZU-004

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLPD396XX

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 SLPD396XX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S241212122-004.
<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>	20 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:	SLPD396XX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLPD396XX

Criteria	Result
Total Lumen Output	157.6 lm
Total Power	7.0 W
Luminaire Efficacy	22.6 lm/W
S/MH(C0/180)	2.34
S/MH(C90/270)	2.17
Correlated Color Temperature (CCT)	2441 K
Color Rendering Index (CRI)	93
R9	56
Chromaticity Coordinate (x)	0.4801
Chromaticity Coordinate (y)	0.4107
Chromaticity Coordinate (u')	0.2756
Chromaticity Coordinate (v')	0.5305

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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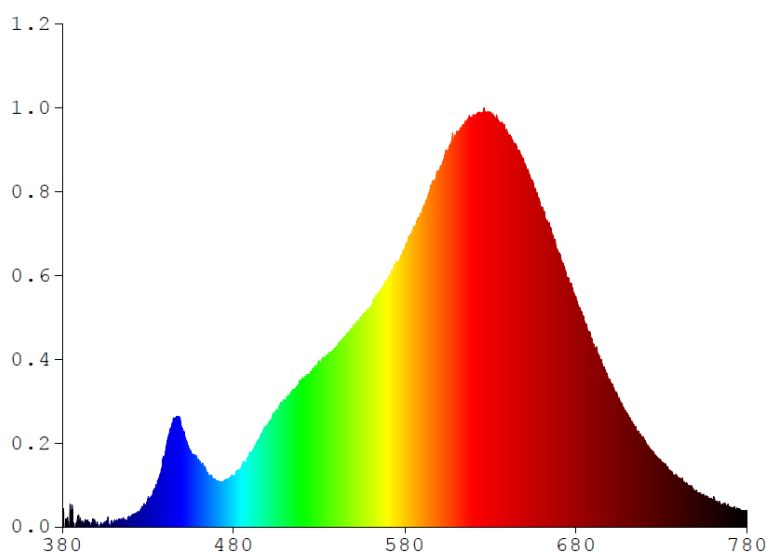
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLPD396XX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0000	480	0.2531	580	1.3921	680	1.1431	780	0.0833
385	0.0044	485	0.3116	585	1.5008	685	1.0251		
390	0.0000	490	0.3707	590	1.5779	690	0.9137		
395	0.0000	495	0.4395	595	1.7112	695	0.8208		
400	0.0180	500	0.5120	600	1.7779	700	0.7259		
405	0.0279	505	0.5831	605	1.8876	705	0.6438		
410	0.0215	510	0.6312	610	1.9753	710	0.5648		
415	0.0308	515	0.6890	615	2.0218	715	0.4955		
420	0.0544	520	0.7479	620	2.0671	720	0.4341		
425	0.0754	525	0.7799	625	2.0663	725	0.3772		
430	0.1457	530	0.8260	630	2.0557	730	0.3253		
435	0.2001	535	0.8595	635	2.0296	735	0.2829		
440	0.3668	540	0.8989	640	1.9720	740	0.2434		
445	0.5355	545	0.9547	645	1.9122	745	0.2084		
450	0.4919	550	1.0090	650	1.8153	750	0.1769		
455	0.3772	555	1.0560	655	1.7185	755	0.1504		
460	0.3202	560	1.1015	660	1.6031	760	0.1361		
465	0.2675	565	1.1767	665	1.5017	765	0.1087		
470	0.2278	570	1.2412	670	1.3729	770	0.0970		
475	0.2365	575	1.3278	675	1.2242	775	0.0904		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD396XX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

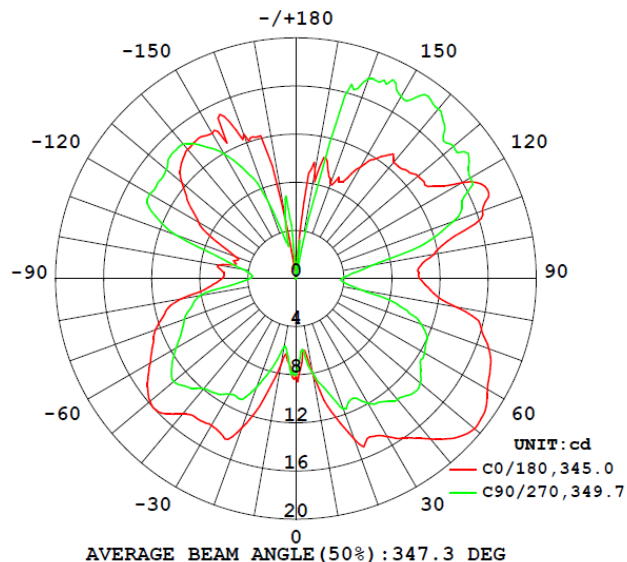
Photometric Measurements at 25°C – Distribution Method

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')
SLPD396XX								
S2412121 22-004	base-up	2441	93	56	0.4801	0.4107	0.2756	0.5305

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)
SLPD396XX							
S2412121 22-004	base-up	120.1	64.5	7.0	0.902	157.6	22.6

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD396XX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	8.0	8.5	8.4	8.3	8.0
5	6.3	6.2	6.5	6.3	5.9
10	7.9	8.7	7.8	7.8	8.0
15	11.5	11.5	10.1	9.6	9.5
20	14.2	14.0	12.6	11.8	11.5
25	14.5	14.1	13.0	11.9	11.0
30	15.2	14.8	13.9	12.5	12.0
35	16.1	15.8	14.7	13.1	12.5
40	17.4	17.2	16.2	14.3	13.2
45	18.7	18.5	17.5	15.6	13.6
50	19.4	18.9	17.9	15.5	13.5
55	19.2	18.6	17.3	14.9	12.7
60	18.4	17.9	16.7	14.2	12.3
65	17.8	17.4	16.2	13.5	12.0
70	17.1	16.4	15.0	12.3	11.1
75	16.0	15.3	13.6	10.5	9.0
80	13.5	12.0	10.3	7.0	5.6
85	11.3	10.5	9.0	5.7	4.1
90	10.3	9.9	8.5	5.5	3.9
95	10.3	10.4	9.2	6.3	4.6
100	11.6	11.9	11.0	8.3	6.5
105	13.6	15.2	14.8	12.4	11.0
110	16.5	18.1	17.7	15.9	14.0
115	17.6	20.3	20.0	18.0	15.2
120	16.0	21.4	21.3	19.5	16.8
125	13.4	22.3	22.3	21.0	17.6
130	13.3	23.3	23.6	22.4	17.1
135	12.8	23.0	24.4	23.4	17.5
140	12.6	22.1	24.4	23.6	18.4
145	12.4	20.8	23.6	24.1	18.7
150	10.7	19.0	22.0	22.2	17.5
155	8.9	18.2	21.9	24.4	17.8
160	8.4	15.1	16.8	17.3	17.7
165	10.1	13.5	16.0	11.2	15.7
170	9.1	12.4	11.3	4.6	0.3
175	4.3	2.5	2.2	2.9	1.2
180	0.0	0.0	0.0	0.0	0.0

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD396XX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLPD396XX		
0-30	9.3	5.9
0-40	17.9	11.3
0-60	43.1	27.4
0-90	76.6	48.6
60-90	33.5	21.2
0-180	157.6	100.0

Beam Angle

Total Beam Angle(°)

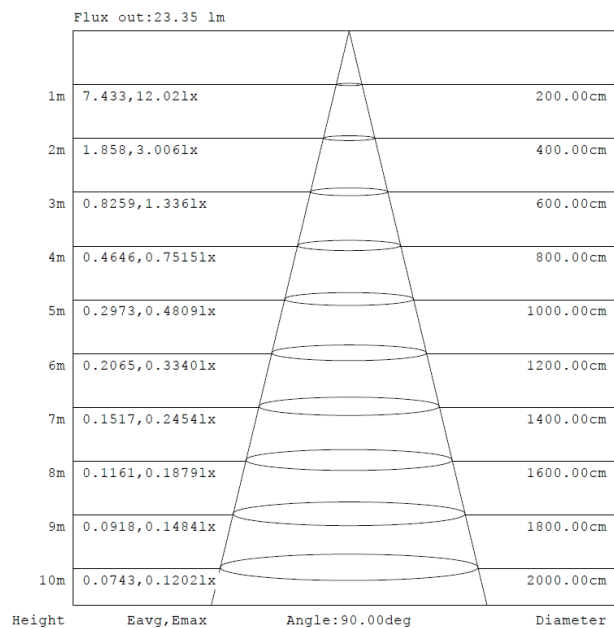
347.3

Illumination Plots

Model No.: SLPD396XX

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

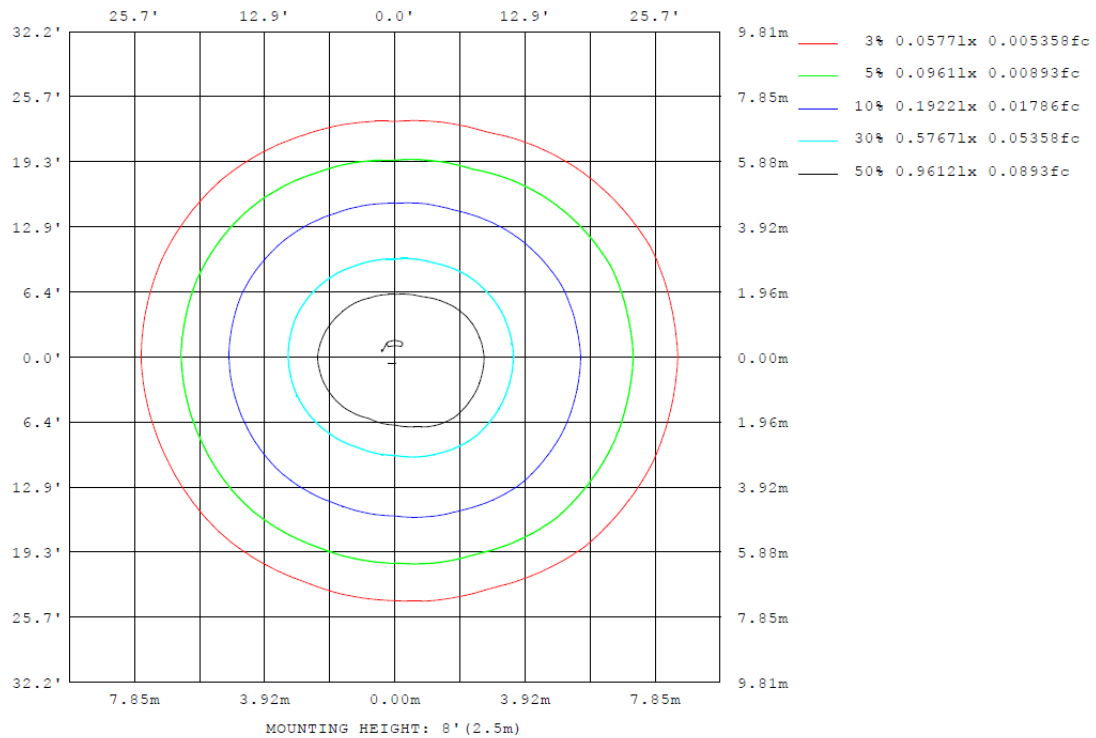
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD396XX

Model No.: SLPD396XX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLPD396XX

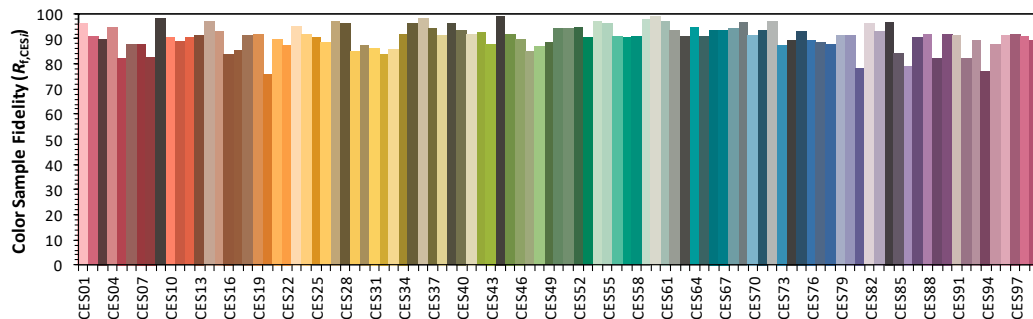
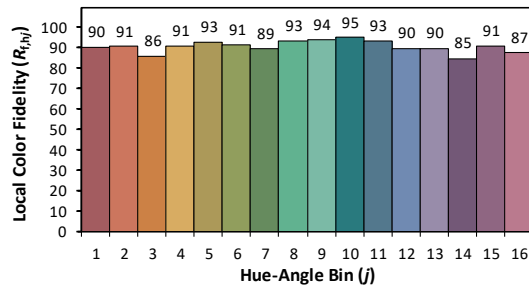
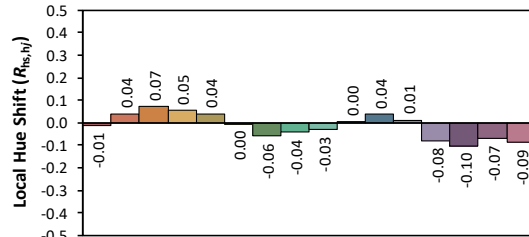
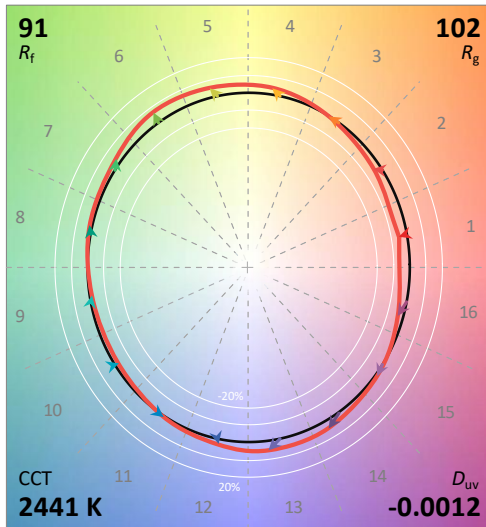
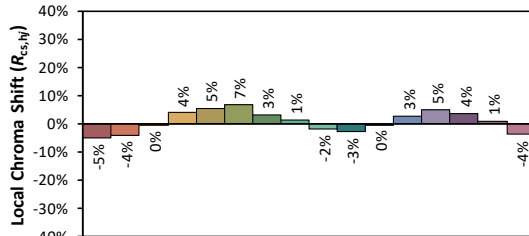
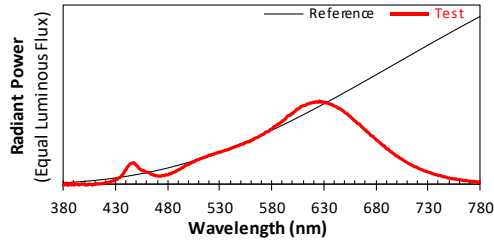
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2024/12/20

Model: SLPD396XX



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

x 0.4801
 y 0.4107
 u' 0.2756
 v' 0.5305

CIE 13.3-1995
(CRI)

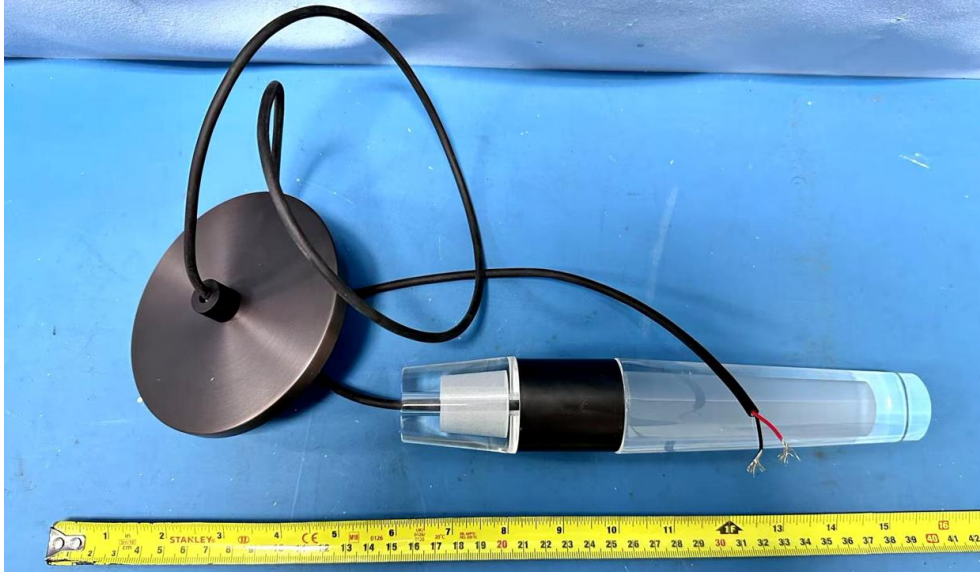
R_a 93
 R_g 56

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

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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of SLPD396XX



View of LED driver TA60WA12LED65B15-0000

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

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 *****