

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

240729032GZU-011

ISSUE DATE

09 October 2024

REVISION DATE

Modification 1: 28 November 2024

NUMBER OF PAGES

13

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLTB32527XX

Remark: "XX" 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: QGZ240726006.
<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 SLTB32527XX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S240729032-013.
<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 September 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:	SLTB32527XX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLTB32527XX

Criteria	Result
Total Lumen Output	394.9 lm
Total Power	10.0 W
Luminaire Efficacy	39.5 lm/W
S/MH(C0/180)	6.03
S/MH(C90/270)	6.83
Correlated Color Temperature (CCT)	2766 K
Color Rendering Index (CRI)	92
R9	69
Chromaticity Coordinate (x)	0.4579
Chromaticity Coordinate (y)	0.4156
Chromaticity Coordinate (u')	0.2590
Chromaticity Coordinate (v')	0.5289

Remark:

Modification 1: Based on and superseded the previous report 240729032GZU-011 issued on 09 October 2024, correct the manufacturer information on page 2 of the report, Correct the applicant information on page 1 and 2 of the report.

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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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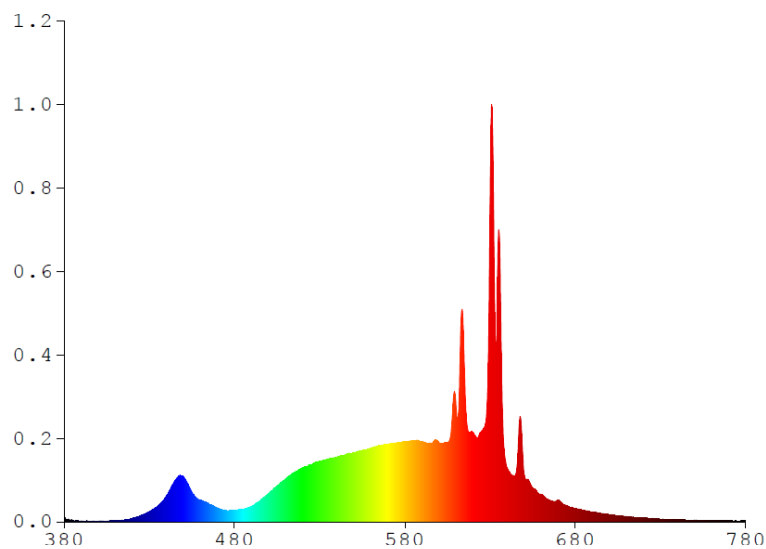
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLTB32527XX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.2034	480	1.0310	580	7.1895	680	1.2011	780	0.1030
385	0.1539	485	1.1343	585	7.2925	685	1.0362		
390	0.0461	490	1.3843	590	7.1819	690	0.8799		
395	0.0443	495	1.8842	595	7.0318	695	0.7469		
400	0.0574	500	2.5400	600	7.0832	700	0.6417		
405	0.0359	505	3.2133	605	7.1375	705	0.5578		
410	0.1014	510	3.8617	610	9.9833	710	0.4720		
415	0.1673	515	4.4149	615	12.7300	715	0.4097		
420	0.3153	520	4.8593	620	7.9979	720	0.3488		
425	0.5499	525	5.1530	625	8.1483	725	0.2933		
430	0.9124	530	5.4186	630	29.1810	730	0.2593		
435	1.3992	535	5.6150	635	26.0860	735	0.2162		
440	2.3218	540	5.8046	640	4.7795	740	0.1910		
445	3.6730	545	6.0220	645	4.2089	745	0.1600		
450	4.0268	550	6.2267	650	4.2110	750	0.1417		
455	2.6314	555	6.4056	655	3.0209	755	0.1264		
460	1.9329	560	6.6102	660	2.4710	760	0.1049		
465	1.6141	565	6.8614	665	1.9181	765	0.0967		
470	1.2301	570	6.9304	670	1.9307	770	0.0857		
475	1.0169	575	7.0813	675	1.3758	775	0.0669		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLTB32527XX

Total operation burning time: 60 minutes
Stabilization time: 30 minutes

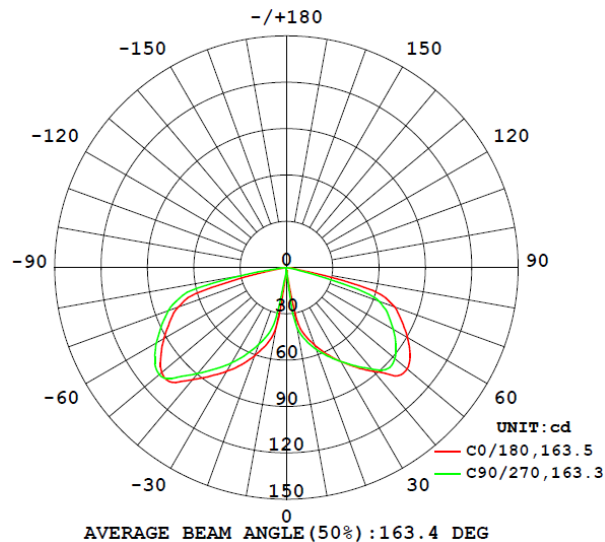
Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperature (K)	CRI	R9	CIE 31'	CIE 31'	CIE 76'	CIE 76'
					Chromaticit y Coordinate (x)	Chromaticit y Coordinate (y)	Chromaticit y Coordinate (u')	Chromaticit y Coordinate (v')
SLTB32527XX								
S2407290 32-013	base-up	2766	92	69	0.4579	0.4156	0.2590	0.5289

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)
SLTB32527XX							
S2407290 32-013	base-up	120.1	158.9	10.0	0.524	394.9	39.5

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLTB32527XX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	1.6	1.6	1.6	1.6	1.6
5	1.7	3.7	3.3	3.1	3.3
10	24.0	39.9	39.6	40.0	39.3
15	44.7	49.4	49.3	49.9	48.9
20	53.2	57.7	57.4	57.8	56.3
25	61.7	65.8	65.2	65.6	63.2
30	70.1	73.9	73.0	73.2	70.2
35	78.7	83.0	81.9	81.8	77.7
40	87.6	92.8	91.6	91.0	85.7
45	99.2	100.1	98.3	97.9	92.6
50	102.0	98.3	97.3	96.9	91.5
55	97.6	92.5	91.8	91.6	86.4
60	90.3	85.0	84.3	84.2	79.7
65	82.3	77.4	76.8	76.7	72.7
70	74.6	67.3	67.2	67.1	63.8
75	57.9	27.1	28.3	29.3	26.8
80	7.7	0.1	0.1	0.1	0.1
85	0.1	0.1	0.1	0.1	0.1
90	0.1	0.1	0.1	0.1	0.1
95	0.1	0.1	0.1	0.1	0.1
100	0.1	0.1	0.1	0.1	0.1
105	0.1	0.1	0.1	0.1	0.1
110	0.1	0.1	0.1	0.1	0.1
115	0.1	0.1	0.1	0.1	0.1
120	0.1	0.1	0.1	0.1	0.1
125	0.1	0.1	0.1	0.1	0.1
130	0.1	0.1	0.1	0.1	0.1
135	0.1	0.1	0.1	0.1	0.1
140	0.1	0.1	0.1	0.1	0.1
145	0.1	0.1	0.1	0.1	0.1
150	0.1	0.1	0.1	0.1	0.1
155	0.1	0.1	0.1	0.1	0.1
160	0.1	0.1	0.1	0.1	0.1
165	0.1	0.1	0.1	0.1	0.1
170	0.1	0.1	0.1	0.1	0.1
175	0.1	0.1	0.1	0.1	0.1
180	0.1	0.1	0.1	0.1	0.1

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLTB32527XX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLTB32527XX		
0-30	44.7	11.3
0-40	96.2	24.4
0-60	260.0	65.9
0-90	394.4	99.9
60-90	134.4	34.0
0-180	394.9	100.0

Beam Angle

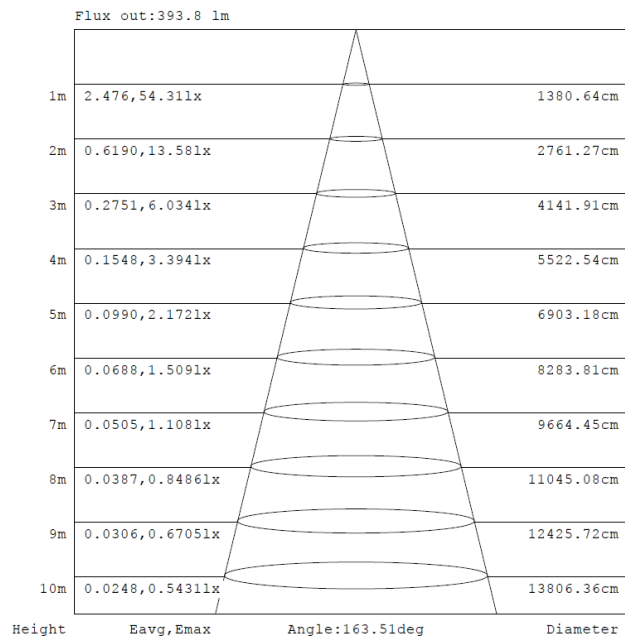
Total Beam Angle(°)
163.4

Illumination Plots

Model No.: SLTB32527XX

Mount Height: 2.5 m

Illuminance - Cone of Light



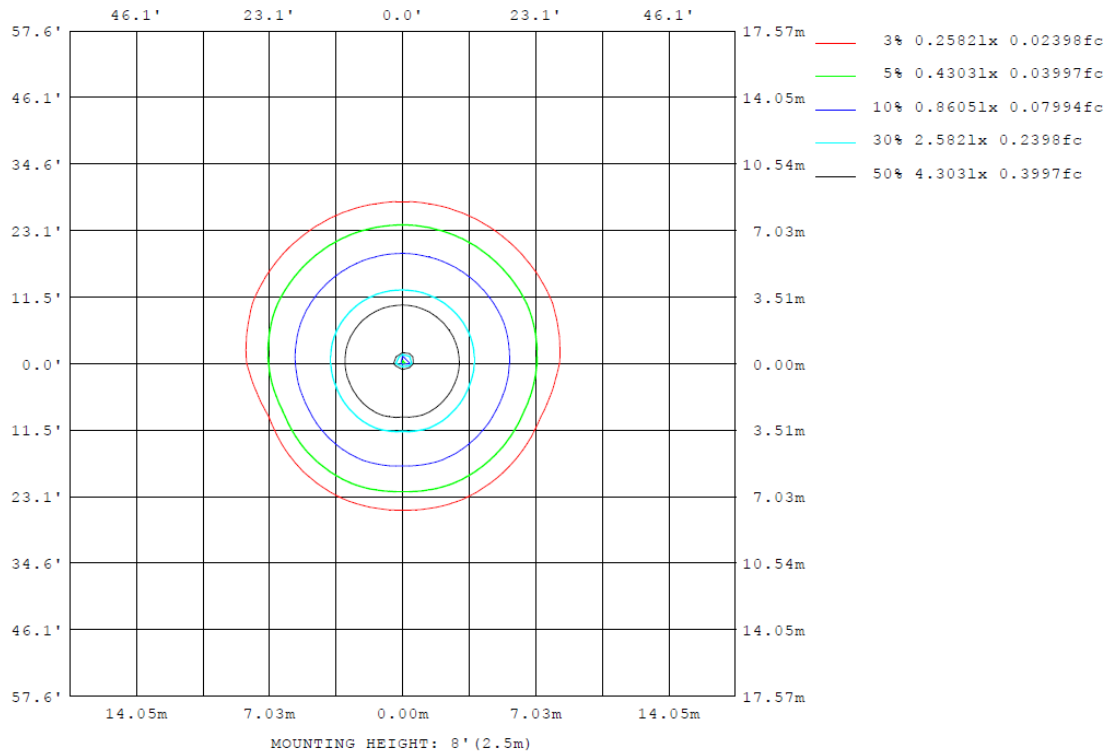
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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLTB32527XX

Model No.: SLTB32527XX
Mount Height: 2.5 m
Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLTB32527XX

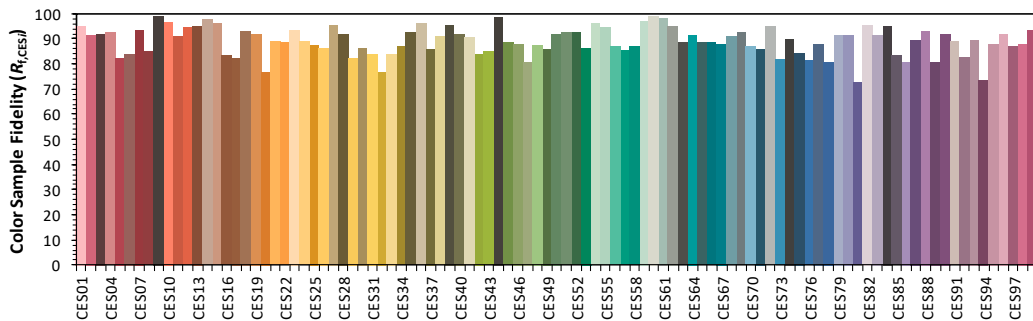
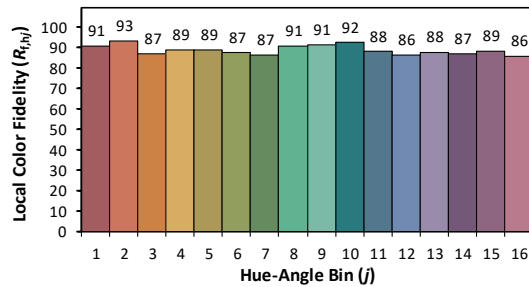
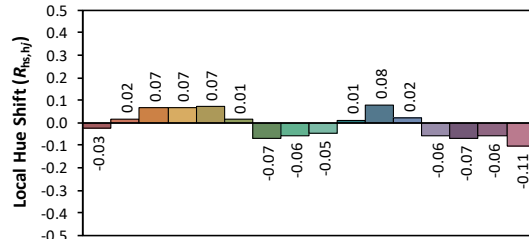
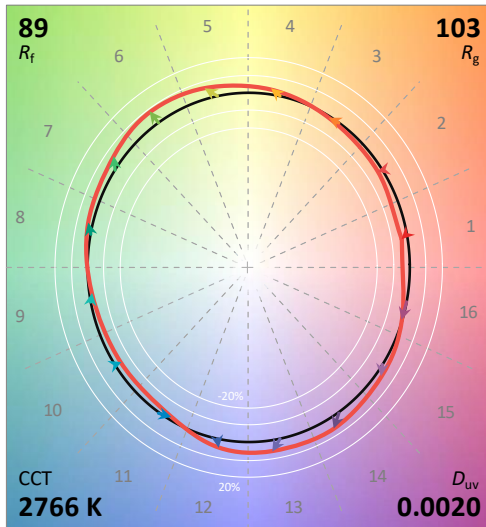
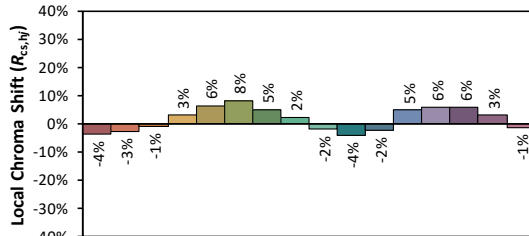
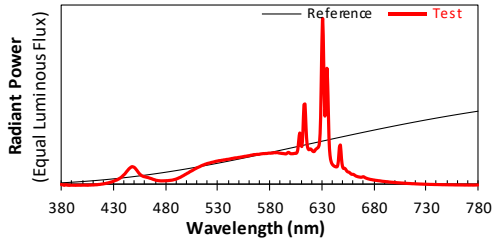
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2024/9/20

Model: SLTB32527XX



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

x 0.4579
 y 0.4156
 u' 0.2590
 v' 0.5289

CIE 13.3-1995
(CRI)

R_a 92
 R_g 69

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 SLTB32527XX

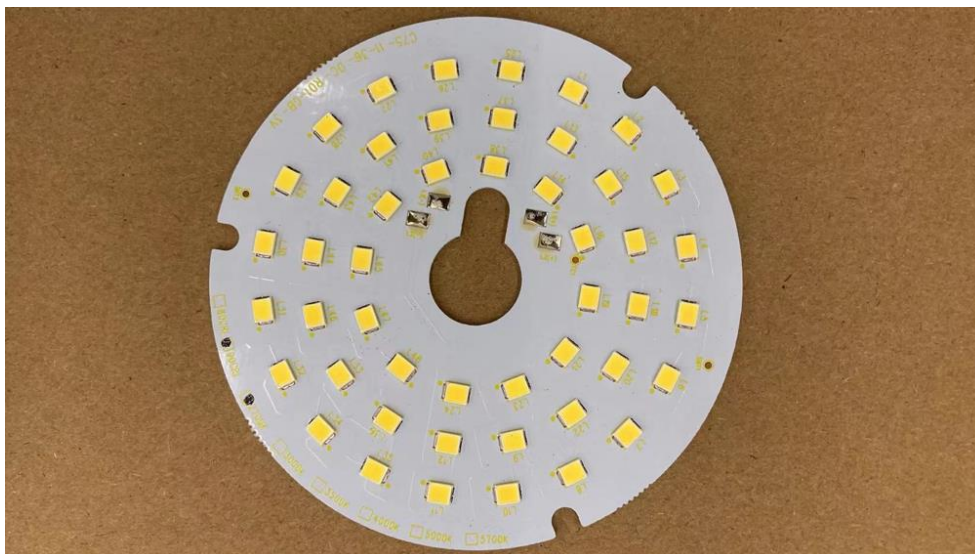


View of LED driver A122-1201000ID

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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 *****