

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

240729032GZU-010

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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Report No.: 240729032GZU-010
Modification 1: 28 November 2024

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLTB32427XX

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.
<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 SLTB32427XX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S240729032-010.
<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>	08 August 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:	SLTB32427XX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLTB32427XX

Criteria	Result
Total Lumen Output	342.5 lm
Total Power	10.3 W
Luminaire Efficacy	33.2 lm/W
S/MH(C0/180)	0.82
S/MH(C90/270)	0.89
Correlated Color Temperature (CCT)	2738 K
Color Rendering Index (CRI)	92
R9	54
Chromaticity Coordinate (x)	0.4548
Chromaticity Coordinate (y)	0.4063
Chromaticity Coordinate (u')	0.2612
Chromaticity Coordinate (v')	0.5249

Remark:

Modification 1: Based on and superseded the previous report 240729032GZU-010 issued on 09 October 2024, correct the manufacturer information on page 2 of the report, Correct the applicant information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.

***** 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

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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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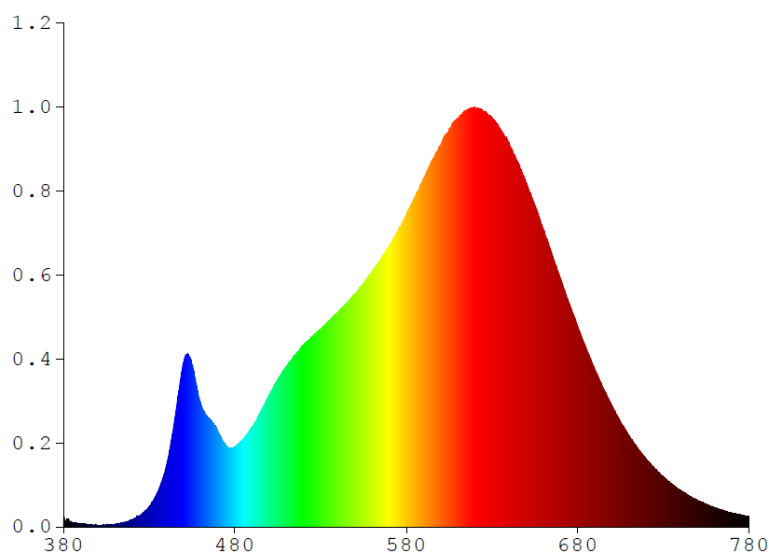
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLTB32427XX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0701	480	0.6675	580	2.6122	680	1.6692	780	0.0912
385	0.0308	485	0.7367	585	2.7604	685	1.4848		
390	0.0260	490	0.8378	590	2.9183	690	1.3110		
395	0.0208	495	0.9633	595	3.0639	695	1.1510		
400	0.0159	500	1.1044	600	3.1958	700	1.0067		
405	0.0209	505	1.2358	605	3.3280	705	0.8735		
410	0.0246	510	1.3411	610	3.4189	710	0.7549		
415	0.0370	515	1.4338	615	3.4809	715	0.6563		
420	0.0591	520	1.5166	620	3.5058	720	0.5649		
425	0.0992	525	1.5869	625	3.4760	725	0.4857		
430	0.1726	530	1.6486	630	3.4194	730	0.4175		
435	0.2921	535	1.7275	635	3.3226	735	0.3561		
440	0.5101	540	1.7960	640	3.2000	740	0.3036		
445	0.9099	545	1.8713	645	3.0479	745	0.2577		
450	1.3729	550	1.9469	650	2.8711	750	0.2203		
455	1.3504	555	2.0365	655	2.6842	755	0.1893		
460	1.0282	560	2.1347	660	2.4820	760	0.1590		
465	0.9043	565	2.2328	665	2.2723	765	0.1367		
470	0.7981	570	2.3504	670	2.0677	770	0.1160		
475	0.6767	575	2.4719	675	1.8277	775	0.0988		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLTB32427XX

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

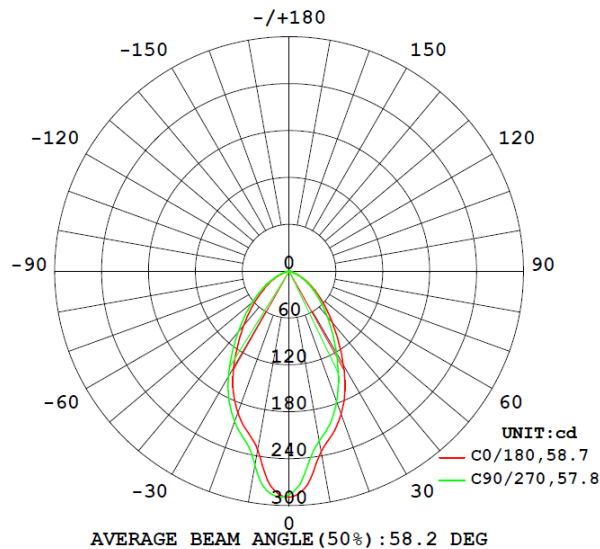
Photometric Measurements at 25°C – Distribution Method

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')
SLTB32427XX								
S2407290 32-010	base-up	2738	92	54	0.4548	0.4063	0.2612	0.5249

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)
SLTB32427XX							
S2407290 32-010	base-up	120.1	163.6	10.3	0.526	342.5	33.2

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLTB32427XX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	289.1	286.1	285.9	285.9	285.8
5	273.8	256.4	255.3	254.7	254.7
10	234.8	224.9	223.6	222.3	220.8
15	215.5	207.3	206.3	204.2	202.1
20	194.3	183.7	181.9	179.8	177.8
25	169.0	155.3	153.9	151.7	149.4
30	138.8	125.7	124.8	123.0	121.1
35	110.2	99.5	98.9	97.8	96.7
40	86.1	77.6	77.2	76.6	76.1
45	66.4	59.4	59.4	59.0	58.8
50	50.1	44.6	44.7	44.7	44.7
55	37.0	32.6	32.6	32.6	32.8
60	26.0	22.3	22.1	22.1	22.2
65	16.5	13.1	13.0	12.8	12.8
70	8.3	5.2	5.1	4.9	4.6
75	2.0	1.0	1.0	0.9	0.9
80	0.6	0.3	0.3	0.3	0.3
85	0.2	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	0.2	0.2	0.2	0.2	0.2
140	0.2	0.2	0.2	0.2	0.2
145	0.2	0.2	0.3	0.3	0.3
150	0.3	0.3	0.3	0.3	0.3
155	0.3	0.3	0.3	0.3	0.3
160	0.3	0.3	0.3	0.3	0.3
165	0.3	0.3	0.3	0.3	0.3
170	0.3	0.3	0.3	0.3	0.3
175	0.3	0.3	0.3	0.3	0.3
180	0.3	0.2	0.2	0.2	0.2

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLTB32427XX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLTB32427XX		
0-30	160.8	46.9
0-40	231.3	67.5
0-60	320.1	93.5
0-90	341.8	99.8
60-90	21.7	6.3
0-180	342.5	100.0

Beam Angle

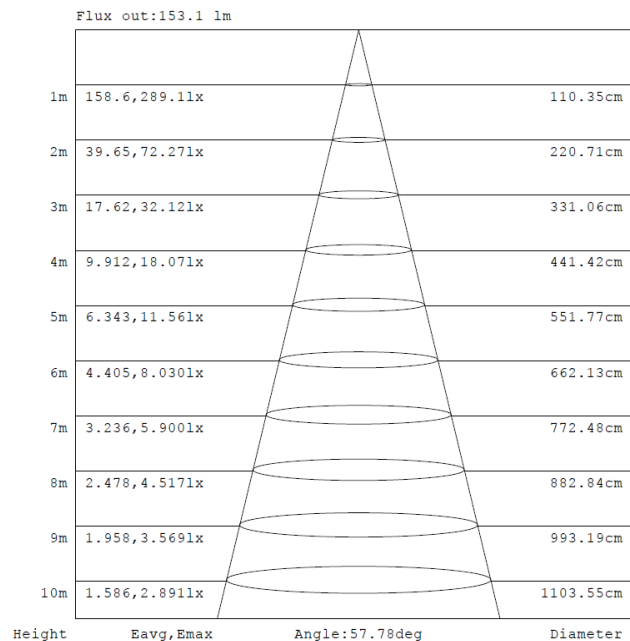
Total Beam Angle(°)
58.2

Illumination Plots

Model No.: SLTB32427XX

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.

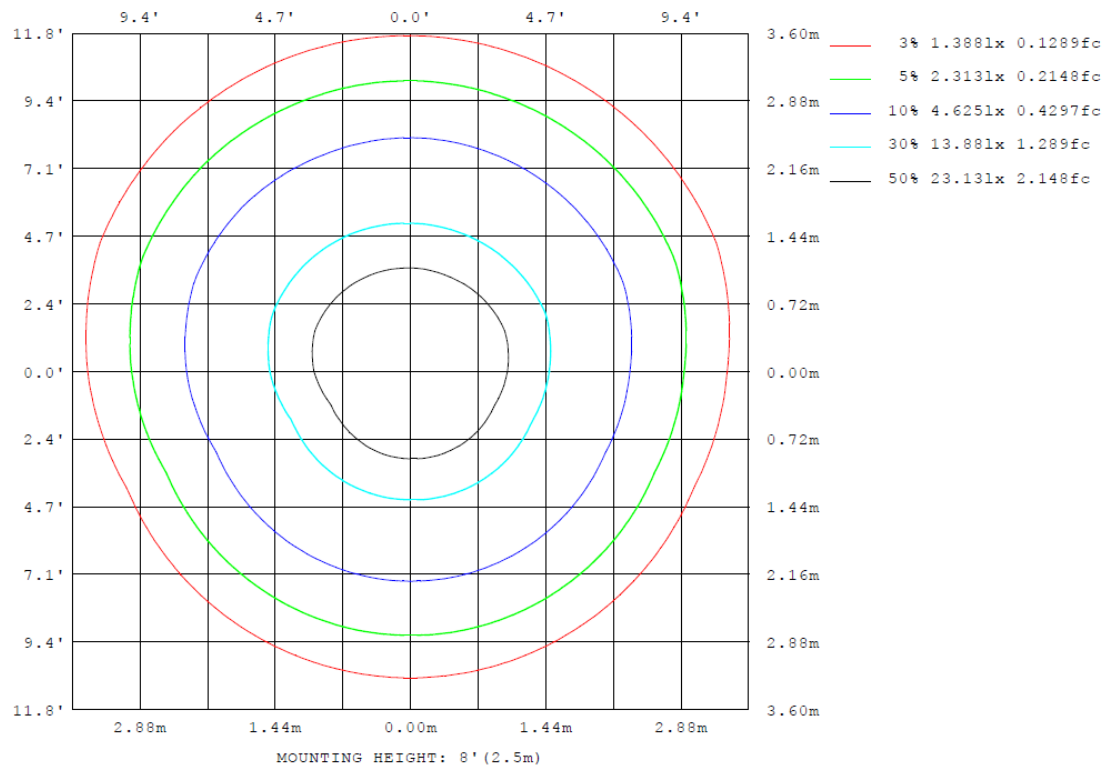
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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLTB32427XX

Model No.: SLTB32427XX
Mount Height: 2.5 m
Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLTB32427XX

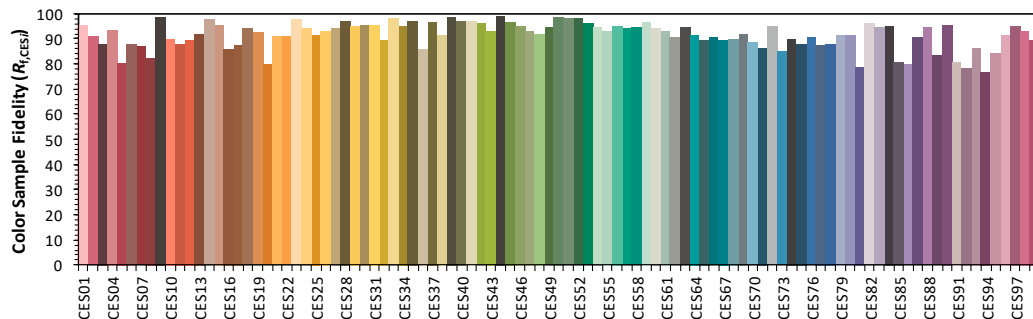
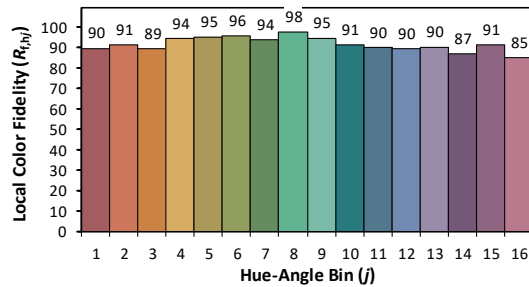
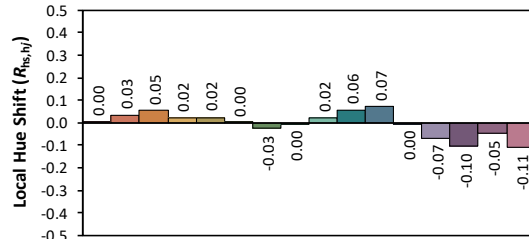
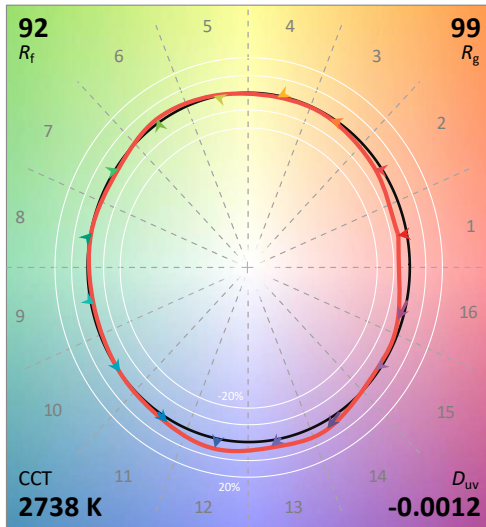
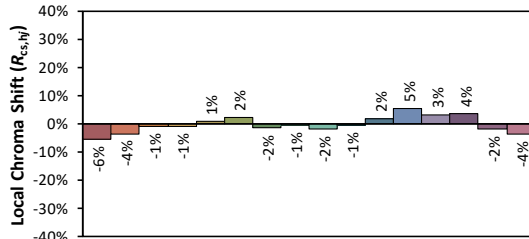
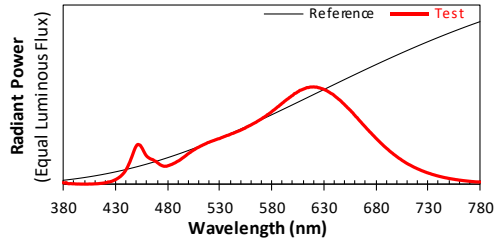
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2024/8/8

Model: SLTB32427XX



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

x 0.4548
 y 0.4063
 u' 0.2612
 v' 0.5249

CIE 13.3-1995
(CRI)
 R_a 92
 R_g 54

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 SLTB32427XX

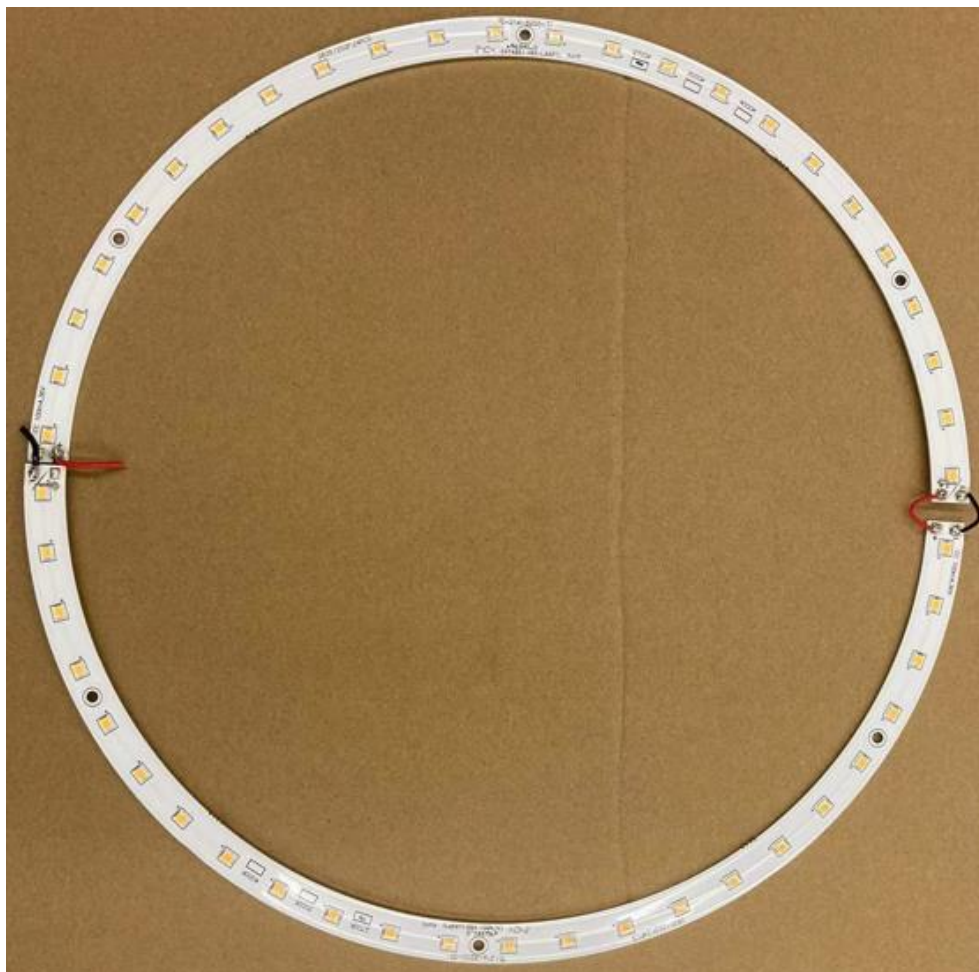


View of LED driver A122-1201000ID

***** 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 *****