

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250513213GZU-001

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REVISION DATE

None

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Report format for LM-79_G

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Report No.: 250513213GZU-001

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLFL78227XXXCG

Remark: "XXX" denotes the 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: QGZ250428049.
<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-79-24	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 SLFL78227XXXCG. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250513213-005.
<u>MANUFACTURER /FACTORY & ADDRESS:</u>	Union Star Collection Company Limited 288 East Longhua Avenue, Longhua Town, Boluo County, Huizhou City, Guangdong Province, 516122 China
<u>DATES OF TESTS:</u>	29 May 2025
<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:	SLFL78227XXXCG
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLFL78227XXXCG

Criteria	Result
Total Lumen Output	72.8 lm
Total Power	6.5 W
Luminaire Efficacy	11.2 lm/W
S/MH(C0/180)	0.06
S/MH(C90/270)	2.10
Correlated Color Temperature (CCT)	2378 K
Color Rendering Index (CRI)	92
R9	68
Chromaticity Coordinate (x)	0.4911
Chromaticity Coordinate (y)	0.4193
Chromaticity Coordinate (u')	0.2787
Chromaticity Coordinate (v')	0.5353

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: 3.958A DC

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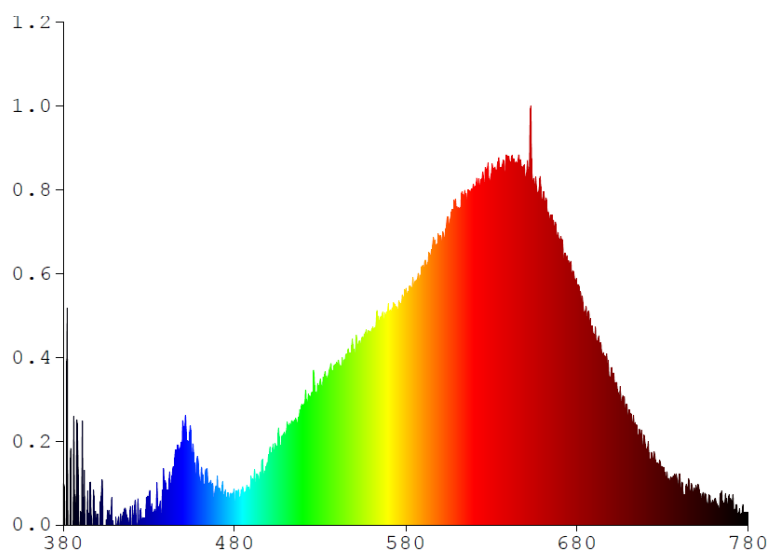
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLFL78227XXXCG

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0108	480	0.0051	580	0.0612	680	0.0614	780	0.0032
385	0.0000	485	0.0090	585	0.0626	685	0.0563		
390	0.0034	490	0.0098	590	0.0673	690	0.0499		
395	0.0031	495	0.0136	595	0.0719	695	0.0441		
400	0.0029	500	0.0175	600	0.0756	700	0.0410		
405	0.0013	505	0.0203	605	0.0789	705	0.0350		
410	0.0000	510	0.0243	610	0.0822	710	0.0294		
415	0.0032	515	0.0271	615	0.0862	715	0.0253		
420	0.0000	520	0.0312	620	0.0870	720	0.0205		
425	0.0039	525	0.0346	625	0.0919	725	0.0191		
430	0.0073	530	0.0381	630	0.0919	730	0.0132		
435	0.0045	535	0.0396	635	0.0917	735	0.0121		
440	0.0092	540	0.0416	640	0.0958	740	0.0120		
445	0.0160	545	0.0444	645	0.0938	745	0.0110		
450	0.0260	550	0.0455	650	0.0909	750	0.0086		
455	0.0176	555	0.0488	655	0.0886	755	0.0078		
460	0.0102	560	0.0509	660	0.0857	760	0.0044		
465	0.0103	565	0.0530	665	0.0809	765	0.0059		
470	0.0118	570	0.0559	670	0.0738	770	0.0064		
475	0.0072	575	0.0559	675	0.0683	775	0.0032		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLFL78227XXXCG

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

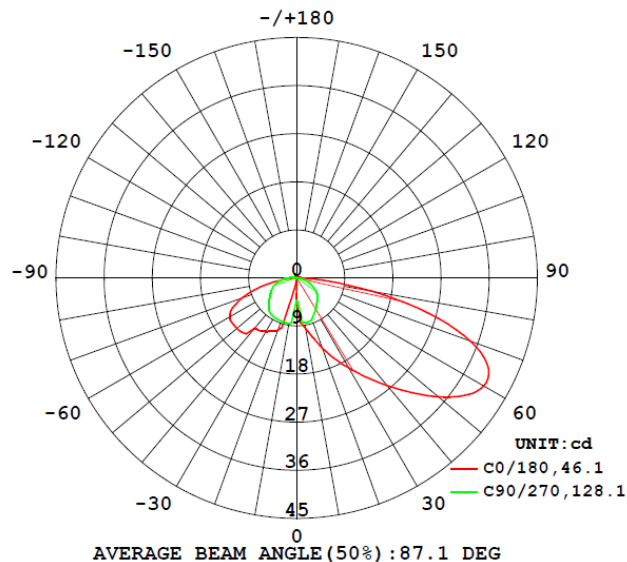
Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperatur e (K)	CRI	R9	CIE 31'	CIE 31'	CIE 76'	CIE 76'
					Chromaticit y	Chromaticit y	Chromaticit y	Chromaticit y
					Coordinate (x)	Coordinate (y)	Coordinate (u')	Coordinate (v')
SLFL78227XXXCG								
S2505132 13-005	base-up	2378	92	68	0.4911	0.4193	0.2787	0.5353

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	Lumen Efficacy
						Flux (Lumens)	(Lumens Per Watt)
SLFL78227XXXCG							
S2505132 13-005	base-up	120.1	70.4	6.5	0.771	72.8	11.2

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLFL78227XXXCG

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	4.3	4.3	4.3	4.3	4.3
5	8.4	8.4	8.1	6.7	5.6
10	9.7	9.3	8.6	8.3	8.5
15	11.4	10.7	9.5	8.3	8.5
20	13.9	12.6	10.4	8.3	8.3
25	16.6	14.8	11.3	7.9	7.6
30	19.4	17.1	12.1	7.7	7.0
35	22.6	19.5	12.8	7.4	6.4
40	26.3	21.7	13.3	7.2	5.9
45	30.3	23.4	13.5	6.8	5.4
50	34.6	24.8	13.2	6.4	5.0
55	38.3	25.5	12.6	5.8	4.4
60	40.4	25.3	11.5	5.0	3.7
65	39.5	23.6	9.8	4.0	3.0
70	34.6	20.3	7.7	3.1	2.3
75	25.6	15.3	5.4	2.1	1.6
80	14.3	9.5	3.2	1.2	0.9
85	4.9	3.7	0.9	0.3	0.3
90	1.3	0.7	0.3	0.1	0.1
95	0.7	0.5	0.2	0.1	0.1
100	0.8	0.3	0.2	0.1	0.1
105	0.6	0.2	0.1	0.1	0.1
110	0.3	0.1	0.1	0.0	0.0
115	0.2	0.1	0.1	0.0	0.0
120	0.1	0.1	0.0	0.0	0.0
125	0.1	0.1	0.0	0.0	0.0
130	0.1	0.1	0.0	0.0	0.0
135	0.1	0.1	0.0	0.0	0.0
140	0.1	0.1	0.0	0.0	0.0
145	0.1	0.1	0.0	0.0	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	0.2	0.2	0.2
175	0.1	0.3	0.3	0.3	0.4
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 SLFL78227XXXCG

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLFL78227XXXCG		
0-30	8.3	11.4
0-40	16.4	22.5
0-60	41.6	57.2
0-90	71.2	97.9
60-90	29.6	40.7
0-180	72.8	100.0

Beam Angle

Total Beam Angle(°)

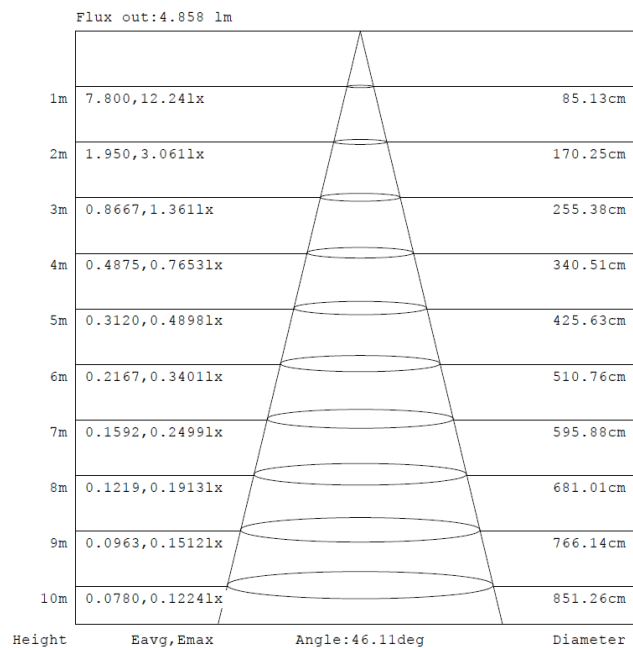
87.1

Illumination Plots

Model No.: SLFL78227XXXCG

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

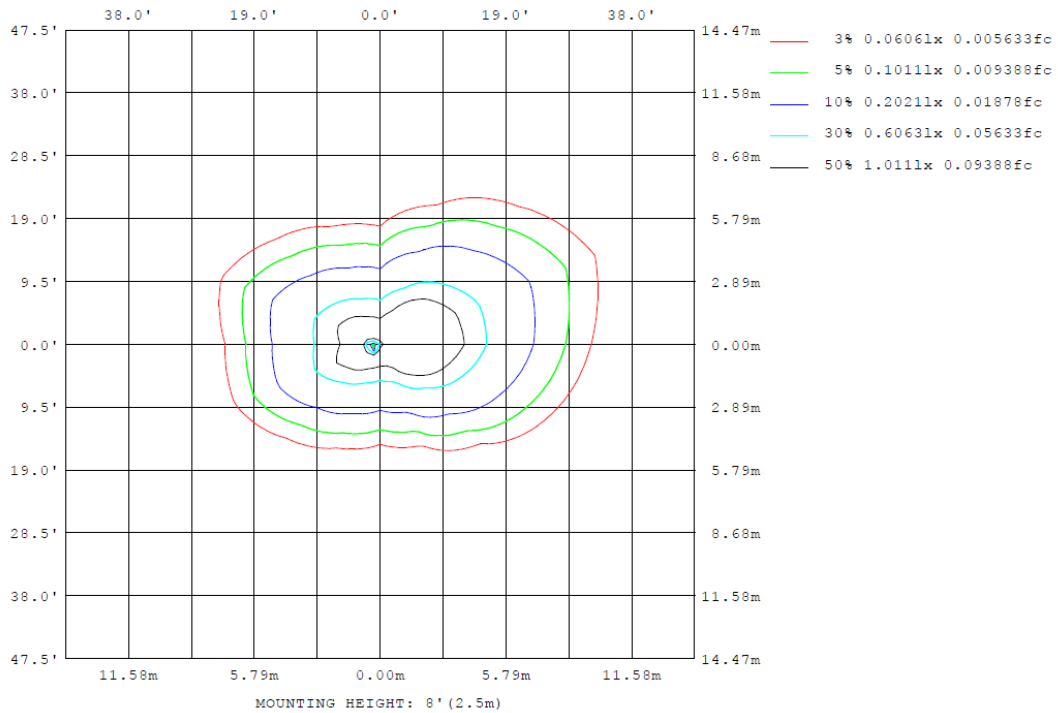
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLFL78227XXXCG

Model No.: SLFL78227XXXCG

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLFL78227XXXCG

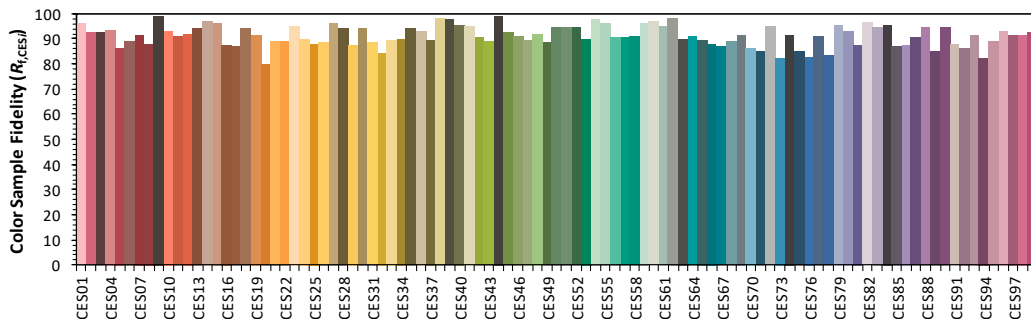
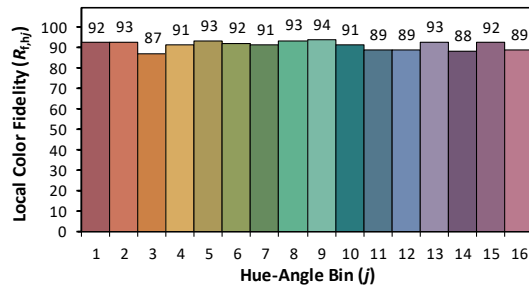
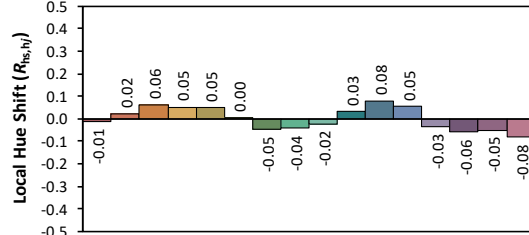
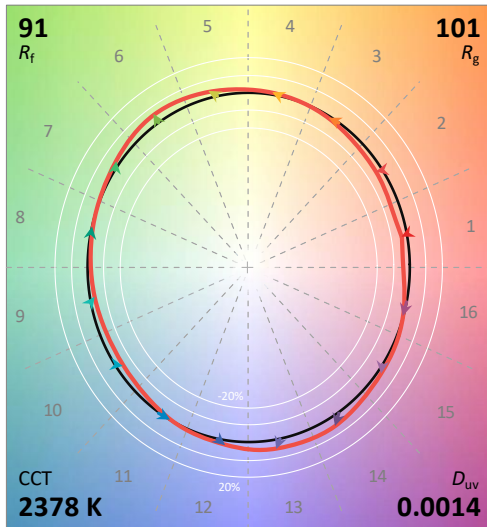
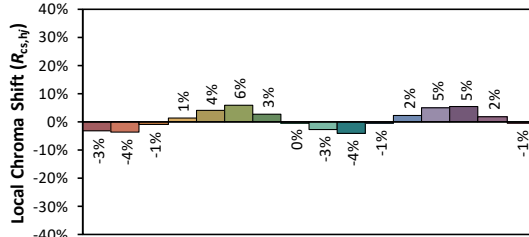
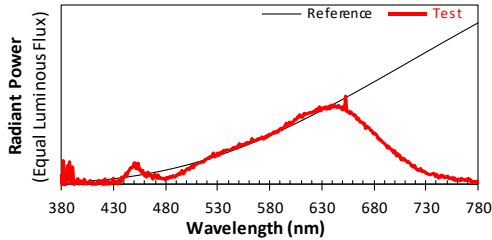
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/5/29

Model: SLFL78227XXXCG



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

x 0.4911
 y 0.4193
 u' 0.2787
 v' 0.5353

CIE 13.3-1995
(CRI)

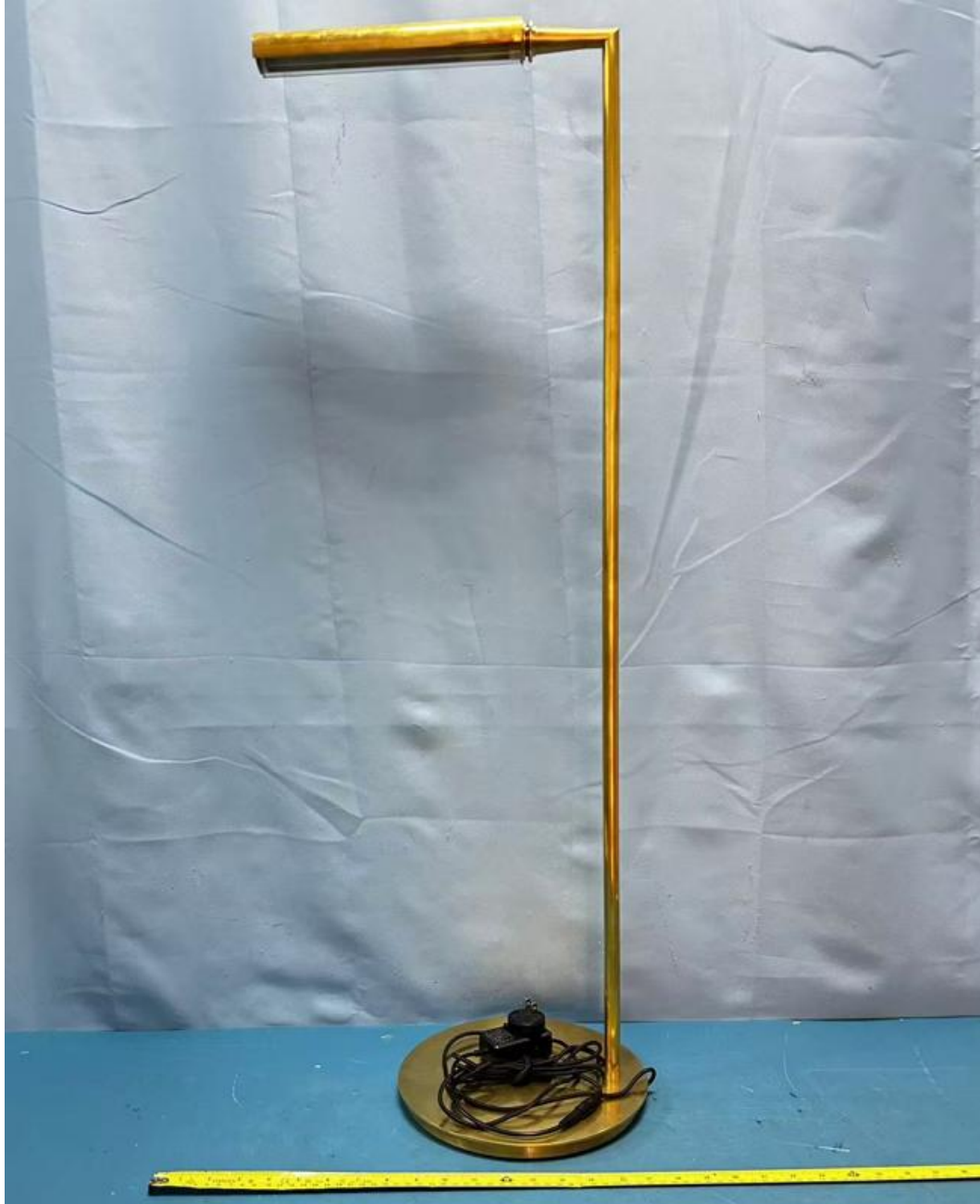
R_a 92
 R_g 68

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 SLFL78227XXXCG

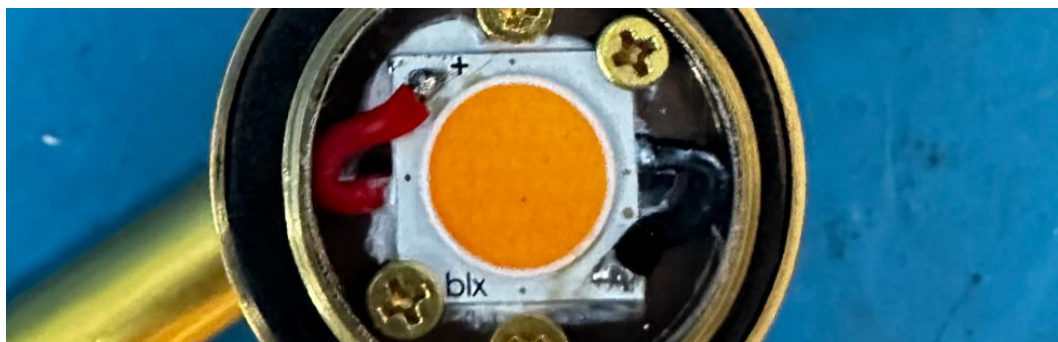
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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver JY24-240-100-SPS



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 *****