

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250513213GZU-002

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REVISION DATE

None

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DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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Report No.: 250513213GZU-002

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLBA75027XXXCG

Remark: "XXX" denotes the appearance color.

RENDERED TO

Visual Comfort & Co.

Contact Name: Javan Rivero

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TEST: Electrical and Photometric as required to the IES LM-79 test standard.

AUTHORIZATION: The testing performed was authorized by signed quote number: QGZ250428049.

STANDARDS USED: 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

DESCRIPTION OF SAMPLE: The client submitted one sample of model SLBA75027XXXCG. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250513213-002.

MANUFACTURER /FACTORY & ADDRESS: Union Star Collection Company Limited
288 East Longhua Avenue, Longhua Town, Boluo County, Huizhou City, Guangdong Province, 516122 China

DATES OF TESTS: 30 May 2025

ISSUED BY: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

TEST LOCATION: 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:	SLBA75027XXXCG
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLBA75027XXXCG

Criteria	Result
Total Lumen Output	735.1 lm
Total Power	14.3 W
Luminaire Efficacy	51.3 lm/W
S/MH(C0/180)	3.80
S/MH(C90/270)	1.63
Correlated Color Temperature (CCT)	2747 K
Color Rendering Index (CRI)	94
R9	76
Chromaticity Coordinate (x)	0.4535
Chromaticity Coordinate (y)	0.4050
Chromaticity Coordinate (u')	0.2609
Chromaticity Coordinate (v')	0.5242

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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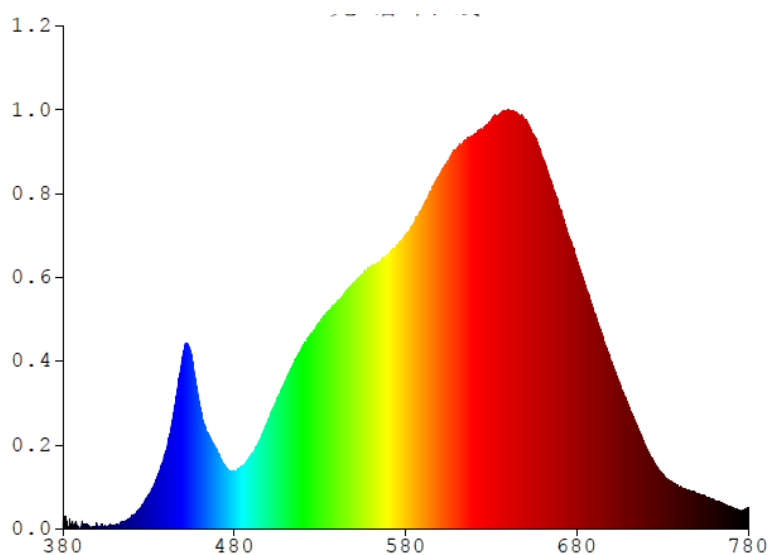
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLBA75027XXXCG

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0143	480	0.3084	580	1.5603	680	1.4311	780	0.1139
385	0.0000	485	0.3326	585	1.6280	685	1.2913		
390	0.0000	490	0.3945	590	1.7107	690	1.1500		
395	0.0098	495	0.4749	595	1.7991	695	1.0269		
400	0.0108	500	0.5865	600	1.8828	700	0.8947		
405	0.0070	505	0.6933	605	1.9490	705	0.7740		
410	0.0194	510	0.7899	610	2.0218	710	0.6578		
415	0.0361	515	0.8844	615	2.0662	715	0.5495		
420	0.0629	520	0.9749	620	2.0939	720	0.4424		
425	0.1045	525	1.0398	625	2.1235	725	0.3535		
430	0.1774	530	1.0945	630	2.1731	730	0.2896		
435	0.2755	535	1.1571	635	2.2054	735	0.2500		
440	0.4119	540	1.2044	640	2.2274	740	0.2223		
445	0.6402	545	1.2622	645	2.2036	745	0.2047		
450	0.9237	550	1.3025	650	2.1727	750	0.1884		
455	0.9170	555	1.3516	655	2.0883	755	0.1702		
460	0.6508	560	1.3968	660	1.9713	760	0.1549		
465	0.4934	565	1.4208	665	1.8490	765	0.1333		
470	0.4151	570	1.4589	670	1.7039	770	0.1187		
475	0.3291	575	1.5092	675	1.5370	775	0.0981		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLBA75027XXXCG

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

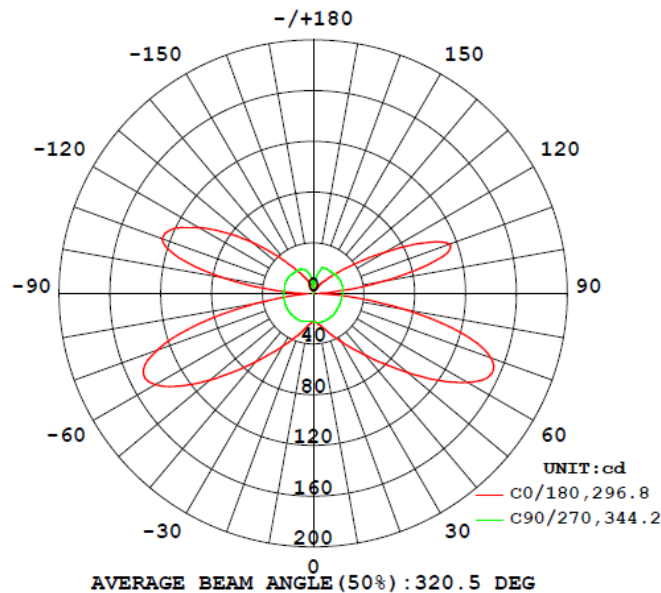
Photometric Measurements at 25°C – Distribution Method

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')
SLBA75027XXXCG								
S2505132 13-002	base-up	2747	94	76	0.4535	0.4050	0.2609	0.5242

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
						Flux (Lumens)	Efficacy (Lumens Per Watt)
SLBA75027XXXCG							
S2505132 13-002	base-up	120.0	121.1	14.3	0.987	735.1	51.3

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLBA75027XXXCG

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	22.5	22.6	22.6	22.5	22.5
5	22.8	22.7	22.7	22.8	22.9
10	24.5	24.0	23.7	23.2	23.2
15	27.6	26.7	25.3	23.7	23.5
20	31.8	30.4	27.6	24.2	23.4
25	37.1	35.1	30.0	24.6	23.3
30	43.7	40.5	32.7	25.4	23.4
35	52.4	46.5	35.7	26.1	23.3
40	63.6	53.4	38.4	26.9	23.3
45	78.3	62.2	41.4	27.3	23.1
50	97.1	73.6	44.9	27.6	22.9
55	119.4	87.5	48.8	28.2	22.7
60	140.5	103.6	53.0	28.9	22.7
65	153.4	119.8	57.4	29.6	22.6
70	148.7	133.6	61.6	30.3	22.5
75	120.8	144.7	65.7	31.0	22.6
80	73.6	151.3	69.5	31.7	22.8
85	26.1	155.7	72.6	32.2	22.9
90	4.9	157.2	73.9	32.3	23.0
95	16.7	156.9	73.9	32.7	23.2
100	56.1	155.6	72.8	32.8	23.5
105	99.4	150.5	70.3	32.7	23.7
110	114.0	138.7	66.7	32.4	23.8
115	94.4	127.0	62.6	31.7	23.8
120	65.7	113.5	57.8	30.7	23.5
125	42.9	97.7	51.1	28.7	23.1
130	27.5	81.2	45.4	26.7	22.9
135	17.8	66.5	41.1	24.9	22.4
140	12.3	54.1	36.1	23.9	22.1
145	8.6	41.7	32.4	23.3	22.1
150	6.3	28.9	29.4	22.9	22.1
155	4.7	20.2	26.6	22.5	22.0
160	3.5	12.5	19.8	22.1	21.9
165	2.8	7.0	13.8	17.0	17.7
170	2.5	4.8	8.1	11.7	12.6
175	5.3	4.0	5.8	7.7	7.7
180	8.7	7.9	7.1	8.1	6.5

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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLBA75027XXXCG

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLBA75027XXXCG		
0-30	24.7	3.4
0-40	49.8	6.8
0-60	148.2	20.2
0-90	391.0	53.2
60-90	242.8	33.0
0-180	735.1	100.0

Beam Angle

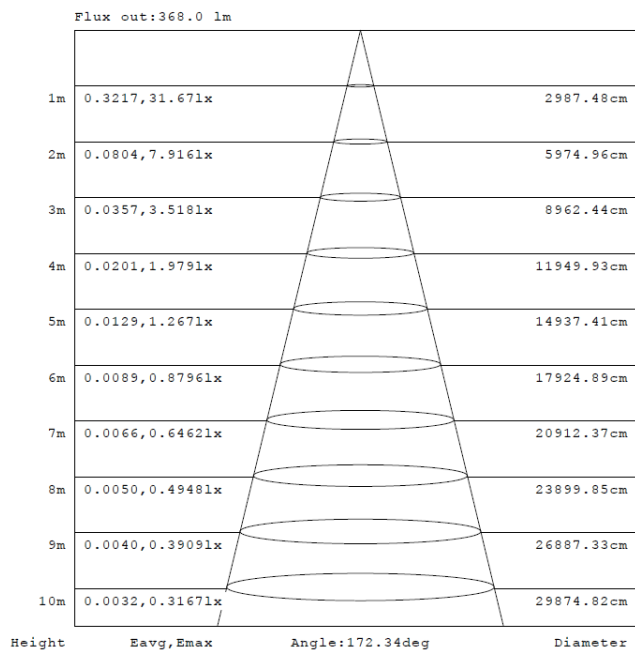
Total Beam Angle(°)
320.5

Illumination Plots

Model No.: SLBA75027XXXCG

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

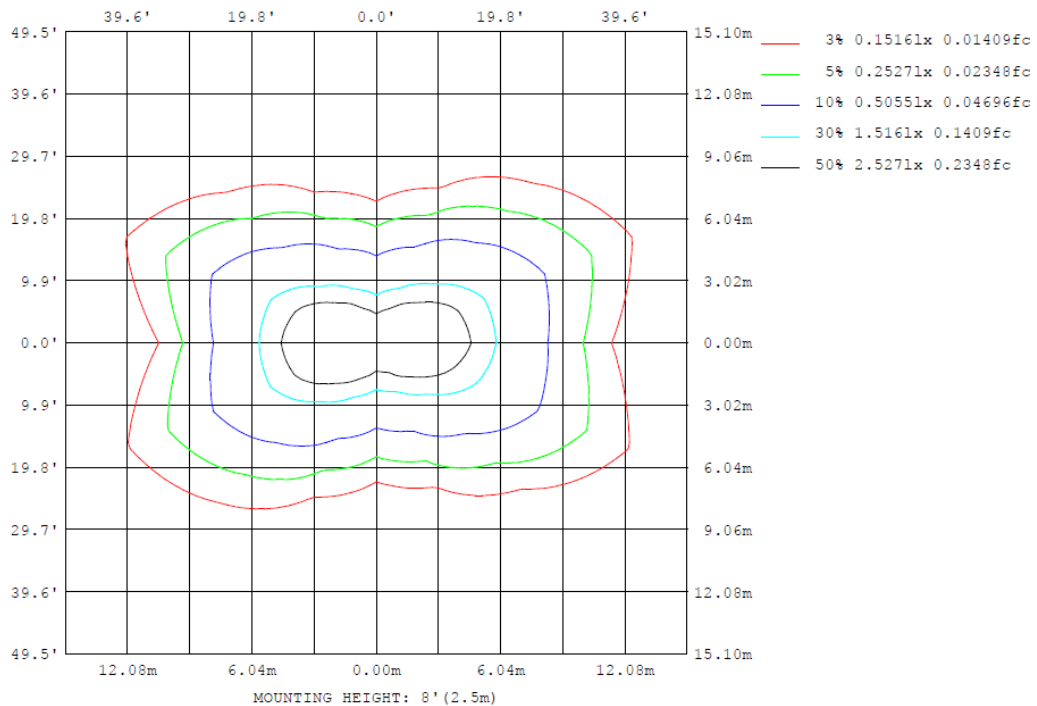
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLBA75027XXXCG

Model No.: SLBA75027XXXCG

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLBA75027XXXCG

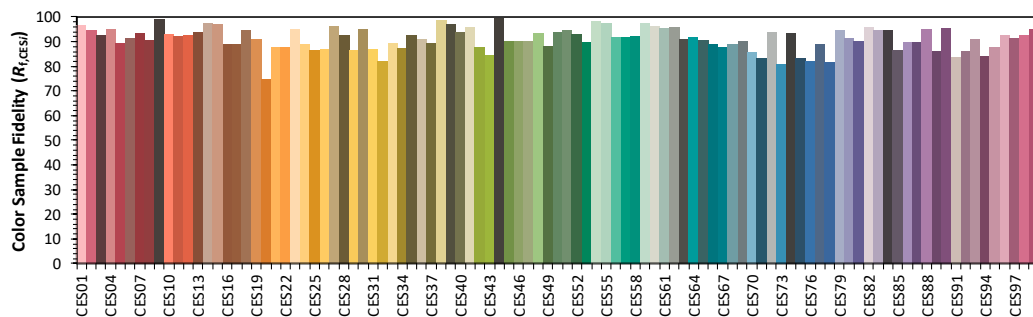
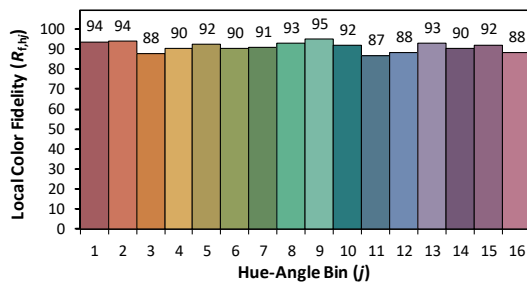
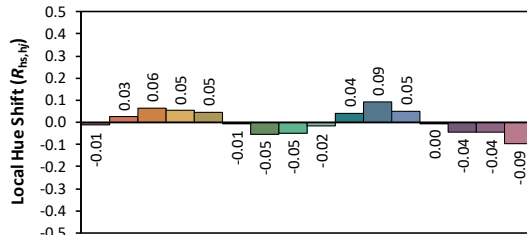
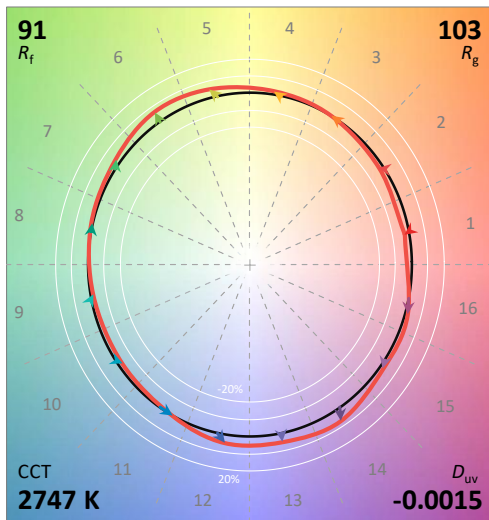
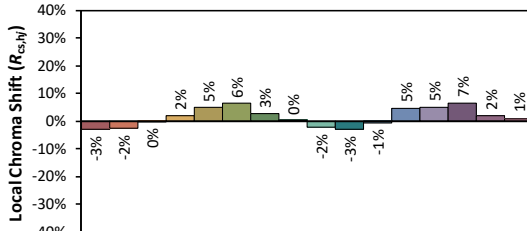
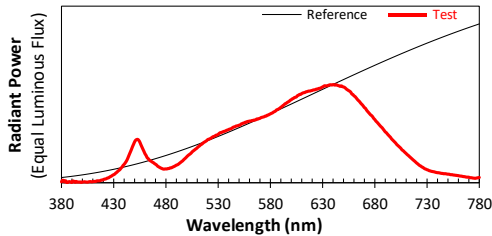
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/5/30

Model: SLBA75027XXXCG



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

x 0.4535
 y 0.4050
 u' 0.2609
 v' 0.5242

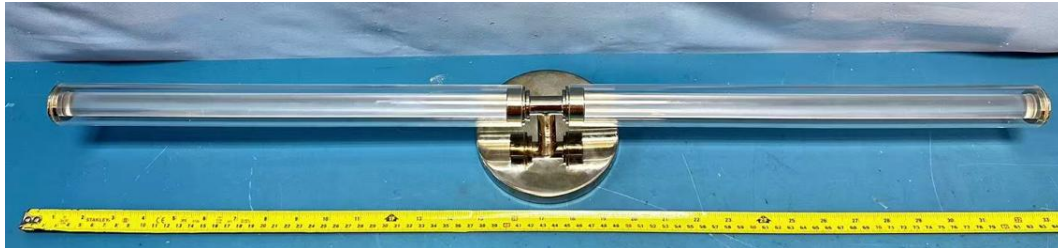
CIE 13.3-1995
(CRI)
 R_a 94
 R_g 76

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 SLBA75027XXXCG



View of LED driver PTB20W-0400-38-VCC1(AB0258)

***** 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 *****