

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

240428155GZU-001

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REVISION DATE

Modification 1: 01 November 2024

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12

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. SLOWS30427B

RENDERED TO

Visual Comfort & Co.

Contact Name: Adam Same

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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: QGZ240425048

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-79-19 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

DESCRIPTION OF SAMPLE: The client submitted one sample of model SLOWS30427B. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S240428155-002.

MANUFACTURER /FACTORY & ADDRESS: Guangzhou Xiongyi Precision Metalworking Co., Ltd.
Hantang Industrial Zone, Langbian Village, Shiji Town, Panyu District, Guangzhou City, Guangdong Province, China 511450

DATES OF TESTS: 28 May 2024

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:	SLOWS30427B
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For SLOWS30427B

Criteria	Result
Total Lumen Output	106.9 lm
Total Power	7.1 W
Luminaire Efficacy	15.1 lm/W
S/MH(C0/180)	1.24
S/MH(C90/270)	2.23
Correlated Color Temperature (CCT)	2673 K
Color Rendering Index (CRI)	94
R9	66
Chromaticity Coordinate (x)	0.4597
Chromaticity Coordinate (y)	0.4069
Chromaticity Coordinate (u')	0.2641
Chromaticity Coordinate (v')	0.5259

Remark:

Revision history:

Modification 1: Based on and superseded the previous report 240428155GZU-002 issued on 12 July 2024, correct the manufacturer information on page 2 of the report, Correct the applicant name on page 1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	DS215S	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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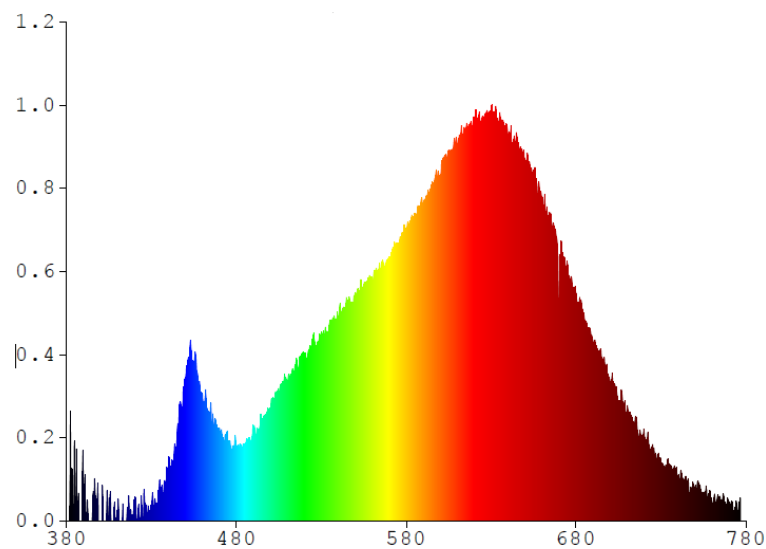
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For SLOWS30427B

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0010	480	0.0045	580	0.0171	680	0.0134	780	0.0000
385	0.0008	485	0.0046	585	0.0181	685	0.0118		
390	0.0020	490	0.0052	590	0.0184	690	0.0105		
395	0.0002	495	0.0058	595	0.0198	695	0.0093		
400	0.0000	500	0.0065	600	0.0203	700	0.0081		
405	0.0014	505	0.0075	605	0.0219	705	0.0070		
410	0.0000	510	0.0082	610	0.0222	710	0.0066		
415	0.0000	515	0.0093	615	0.0231	715	0.0061		
420	0.0008	520	0.0097	620	0.0238	720	0.0054		
425	0.0000	525	0.0106	625	0.0239	725	0.0045		
430	0.0007	530	0.0111	630	0.0242	730	0.0034		
435	0.0022	535	0.0117	635	0.0241	735	0.0030		
440	0.0034	540	0.0119	640	0.0227	740	0.0025		
445	0.0050	545	0.0128	645	0.0228	745	0.0023		
450	0.0084	550	0.0134	650	0.0213	750	0.0020		
455	0.0090	555	0.0138	655	0.0206	755	0.0017		
460	0.0074	560	0.0144	660	0.0191	760	0.0011		
465	0.0067	565	0.0149	665	0.0182	765	0.0012		
470	0.0055	570	0.0156	670	0.0132	770	0.0009		
475	0.0043	575	0.0164	675	0.0144	775	0.0005		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30427B

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

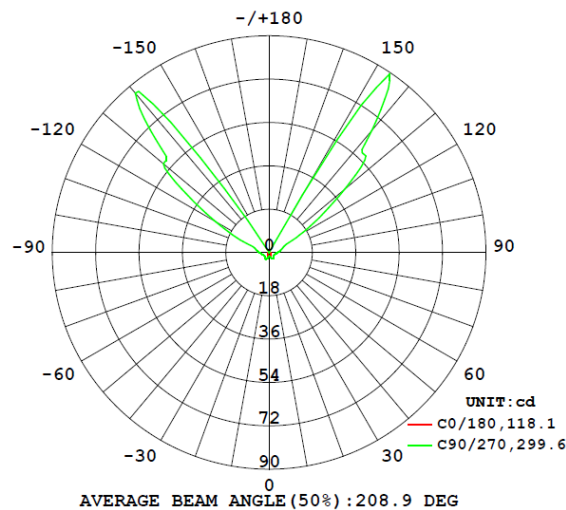
Photometric Measurements at 25°C – Distribution Method

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')
SLOWS30427B								
S2404281 55-002	base-up	2673	94	66	0.4597	0.4069	0.2641	0.5259

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)
SLOWS30427B							
S2404281 55-002	base-up	120.0	59.9	7.1	0.983	106.9	15.1

Intensity (Candlepower) Summary at 25°C - Candelas



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30427B

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	0.4	0.4	0.4	0.4	0.4
5	0.4	0.4	0.4	0.4	0.4
10	0.4	0.4	0.4	0.4	0.4
15	0.4	0.4	0.4	0.5	0.5
20	0.3	0.4	0.5	0.6	0.6
25	0.3	0.4	0.5	0.6	0.7
30	0.3	0.4	0.6	0.7	0.7
35	0.3	0.4	0.6	0.7	0.7
40	0.3	0.4	0.6	0.7	0.7
45	0.2	0.4	0.6	0.7	0.7
50	0.2	0.5	0.6	0.6	0.6
55	0.2	0.5	0.6	0.6	0.6
60	0.2	0.5	0.5	0.5	0.6
65	0.2	0.5	0.5	0.5	0.6
70	0.1	0.4	0.4	0.5	0.6
75	0.1	0.4	0.4	0.6	0.6
80	0.1	0.3	0.4	0.6	0.7
85	0.1	0.3	0.5	0.7	0.8
90	0.0	0.2	0.5	0.8	0.9
95	0.0	0.2	0.6	0.9	1.0
100	0.0	0.7	0.7	1.0	1.1
105	0.0	3.5	0.9	1.2	1.3
110	0.0	6.3	2.0	1.4	1.5
115	0.0	8.6	4.6	2.5	1.7
120	0.0	5.4	8.7	4.8	3.5
125	0.0	2.3	11.0	8.1	6.0
130	0.0	1.7	14.3	12.5	9.8
135	0.0	1.0	16.6	13.8	13.6
140	0.0	0.3	0.8	19.0	15.8
145	0.0	0.0	0.0	15.2	20.9
150	0.0	0.0	0.0	0.0	6.6
155	0.0	0.0	0.0	0.0	0.0
160	0.0	0.0	0.0	0.0	0.0
165	0.0	0.0	0.0	0.0	0.0
170	0.0	0.0	0.0	0.0	0.0
175	0.0	0.0	0.0	0.0	0.0
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 SLOWS30427B

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
SLOWS30427B		
0-30	1.7	1.6
0-40	3.2	3.0
0-60	6.9	6.5
0-90	13.2	12.3
60-90	6.3	5.8
0-180	106.9	100.0

Beam Angle

Total Beam Angle(°)

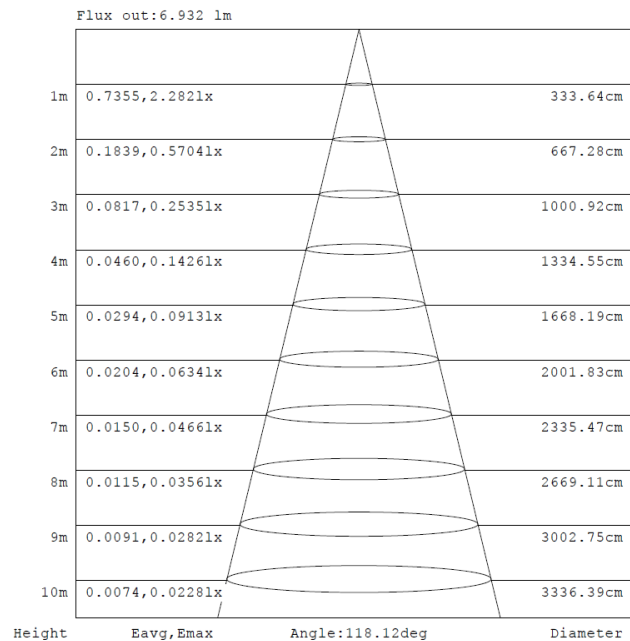
208.9

Illumination Plots

Model No.: SLOWS30427B

Mount Height: 2.5 m

Illuminance - Cone of Light



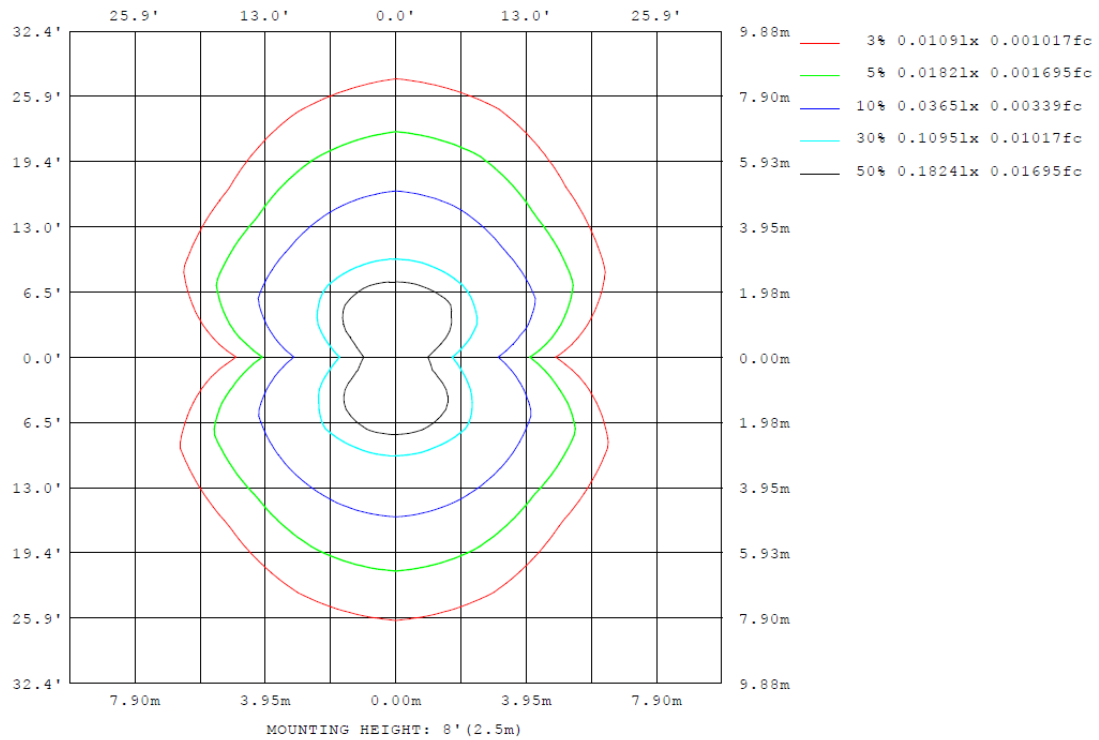
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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30427B

Model No.: SLOWS30427B
Mount Height: 2.5 m
Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For SLOWS30427B

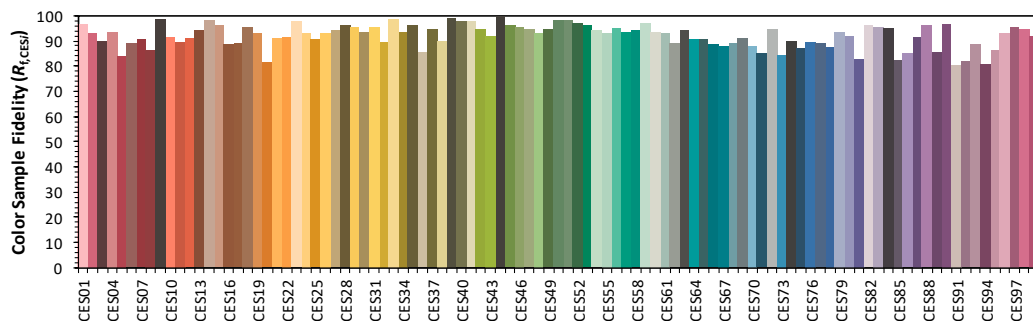
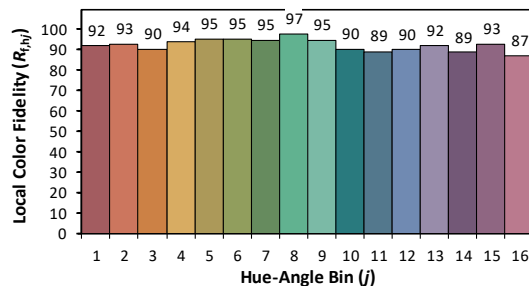
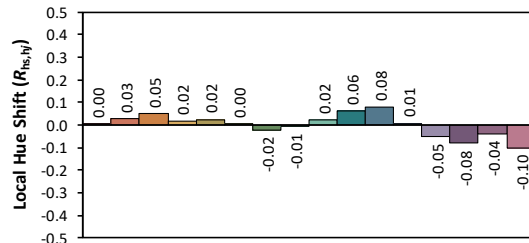
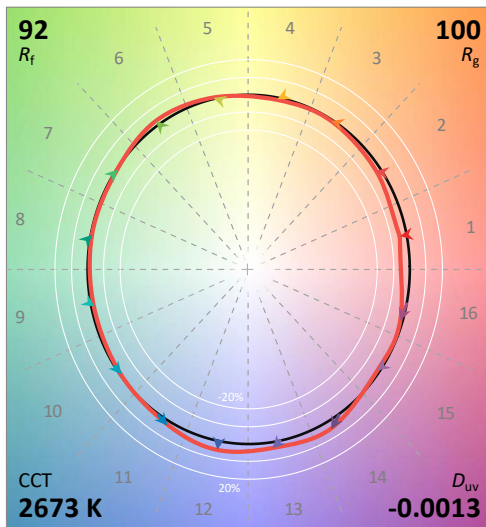
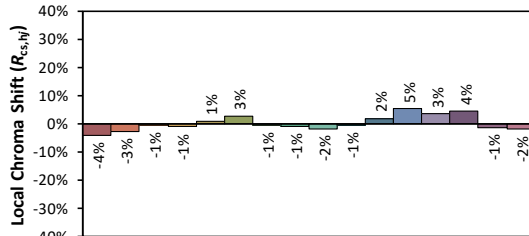
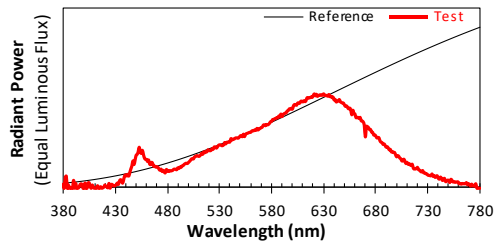
ANSI/IES +B3:X17TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort and Company

Date: 2024/5/28

Model: SLOWS30427B



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

x 0.4597
 y 0.4069
 u' 0.2641
 v' 0.5259

CIE 13.3-1995
(CRI)

R_a 94

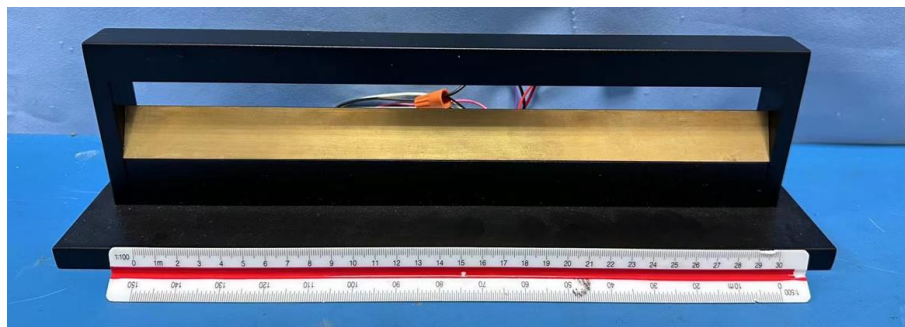
R_g 66

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 SLOWS30427B



View of LED driver ESS010W-0180-42



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 *****