

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250623168GZU-015

ISSUE DATE

11 August 2025

REVISION DATE

None

NUMBER OF PAGES

13

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

© 2024 INTERTEK



Report No.: 250623168GZU-015

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. KWTB61527XXX

Remark: "XXX" represents the color of the appearance.

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: QGZ250619128.
<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 KWTB61527XXX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250623168-016.
<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>	14 July 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

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

TEST REPORT

SUMMARY

Model Number:	KWTB61527XXX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For KWTB61527XXX

Criteria	Result
Total Lumen Output	46.4 lm
Total Power	2.8 W
Luminaire Efficacy	16.7 lm/W
S/MH(C0/180)	5.28
S/MH(C90/270)	5.28
Correlated Color Temperature (CCT)	2246 K
Color Rendering Index (CRI)	88
R9	51
Chromaticity Coordinate (x)	0.5094
Chromaticity Coordinate (y)	0.4276
Chromaticity Coordinate (u')	0.2864
Chromaticity Coordinate (v')	0.5411

Remark:

N/A

***** 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

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

When determining for test conclusion, measurement uncertainty of tests has been considered.

Throughout this report a ☐ comma ☒ point is used as the decimal separator.

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

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

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

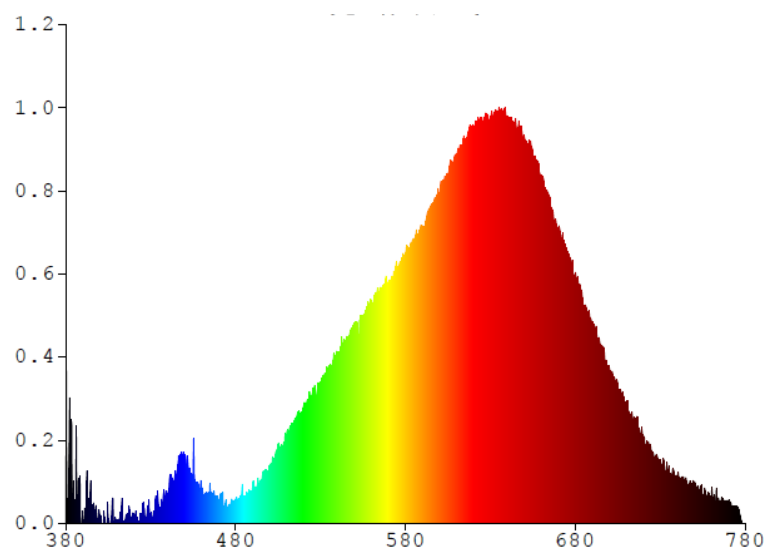
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For KWTB61527XXX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0000	480	0.0087	580	0.1214	680	0.1123	780	0.0000
385	0.0000	485	0.0104	585	0.1279	685	0.0966		
390	0.0000	490	0.0170	590	0.1326	690	0.0902		
395	0.0000	495	0.0192	595	0.1416	695	0.0805		
400	0.0021	500	0.0246	600	0.1490	700	0.0711		
405	0.0000	505	0.0346	605	0.1575	705	0.0606		
410	0.0013	510	0.0396	610	0.1662	710	0.0543		
415	0.0010	515	0.0471	615	0.1718	715	0.0463		
420	0.0015	520	0.0523	620	0.1793	720	0.0389		
425	0.0024	525	0.0582	625	0.1814	725	0.0315		
430	0.0039	530	0.0637	630	0.1828	730	0.0286		
435	0.0068	535	0.0703	635	0.1868	735	0.0249		
440	0.0091	540	0.0768	640	0.1831	740	0.0210		
445	0.0206	545	0.0814	645	0.1800	745	0.0202		
450	0.0297	550	0.0889	650	0.1744	750	0.0166		
455	0.0263	555	0.0932	655	0.1662	755	0.0128		
460	0.0128	560	0.0992	660	0.1568	760	0.0111		
465	0.0163	565	0.1063	665	0.1473	765	0.0097		
470	0.0094	570	0.1086	670	0.1314	770	0.0099		
475	0.0070	575	0.1155	675	0.1206	775	0.0074		



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61527XXX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

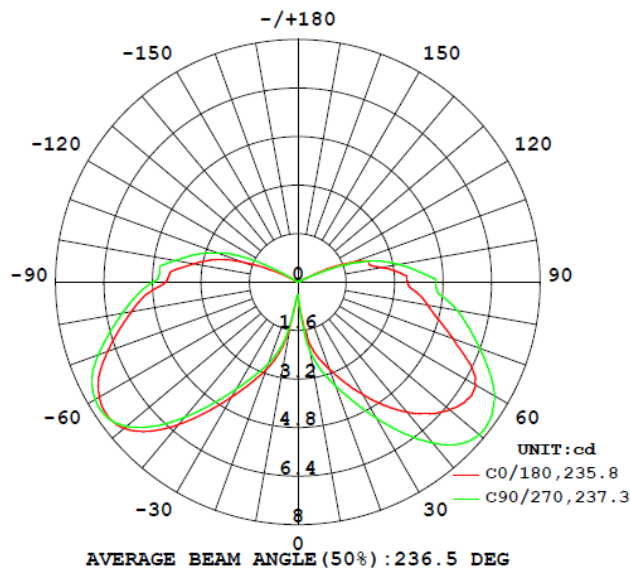
Photometric Measurements at 25°C – Distribution Method

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')
KWTB61527XXX								
S2506231 68-016	base-up	2246	88	51	0.5094	0.4276	0.2864	0.5411

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)
KWTB61527XXX							
S2506231 68-016	base-up	120.1	56.3	2.8	0.411	46.4	16.7

Intensity (Candlepower) Summary at 25°C - Candelas



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61527XXX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	0.1	0.1	0.1	0.1	0.1
5	0.2	0.3	0.3	0.3	0.3
10	0.5	0.5	0.6	0.6	0.6
15	0.6	0.7	0.7	0.7	0.7
20	0.7	0.8	0.9	0.9	0.9
25	0.9	1.0	1.0	1.1	1.0
30	1.0	1.2	1.2	1.3	1.2
35	1.2	1.4	1.5	1.5	1.5
40	1.3	1.7	1.7	1.7	1.7
45	1.5	1.8	1.9	1.9	1.8
50	1.6	1.9	2.0	1.9	1.9
55	1.6	1.9	1.9	1.9	1.9
60	1.6	1.8	1.9	1.8	1.8
65	1.5	1.7	1.7	1.7	1.7
70	1.3	1.5	1.5	1.5	1.5
75	1.2	1.4	1.4	1.4	1.4
80	1.0	1.3	1.3	1.3	1.3
85	0.9	1.2	1.1	1.1	1.1
90	0.9	1.1	1.1	1.1	1.1
95	0.8	1.0	1.0	1.0	1.0
100	0.7	0.8	0.8	0.8	0.8
105	0.6	0.7	0.6	0.6	0.6
110	0.5	0.5	0.4	0.4	0.4
115	0.2	0.2	0.1	0.1	0.1
120	0.0	0.0	0.0	0.0	0.0
125	0.0	0.0	0.0	0.0	0.0
130	0.0	0.0	0.0	0.0	0.0
135	0.0	0.0	0.0	0.0	0.0
140	0.0	0.0	0.0	0.0	0.0
145	0.0	0.0	0.0	0.0	0.0
150	0.0	0.0	0.0	0.0	0.0
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

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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61527XXX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
KWTB61527XXX		
0-30	2.6	5.7
0-40	6.1	13.1
0-60	18.5	39.8
0-90	37.3	80.5
60-90	18.8	40.7
0-180	46.4	100.0

Beam Angle

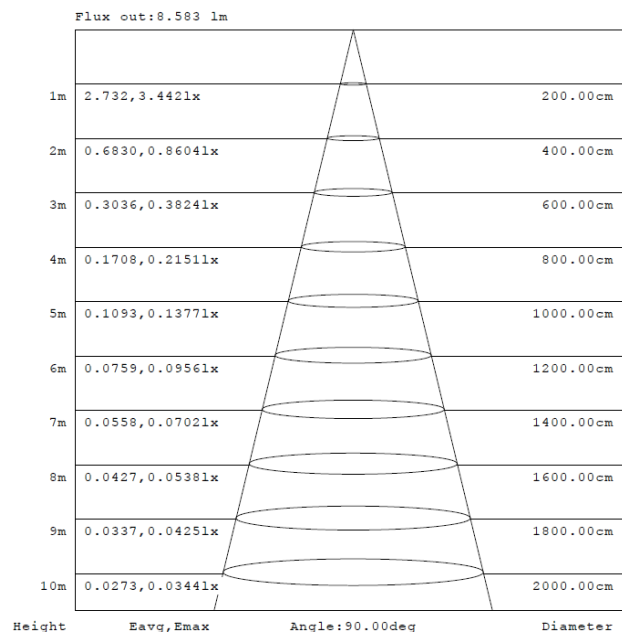
Total Beam Angle(°)
236.5

Illumination Plots

Model No.: KWTB61527XXX

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.

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

TEST REPORT

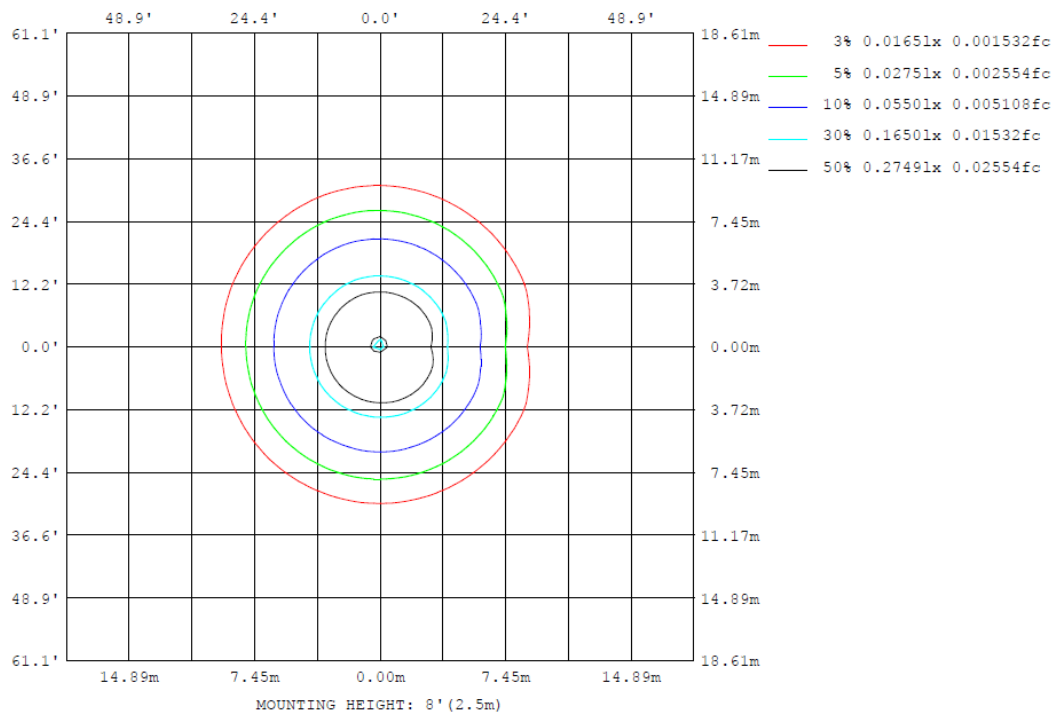
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61527XXX

Model No.: KWTB61527XXX

Mount Height: 2.5 m

Isoillumination Plot



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61527XXX

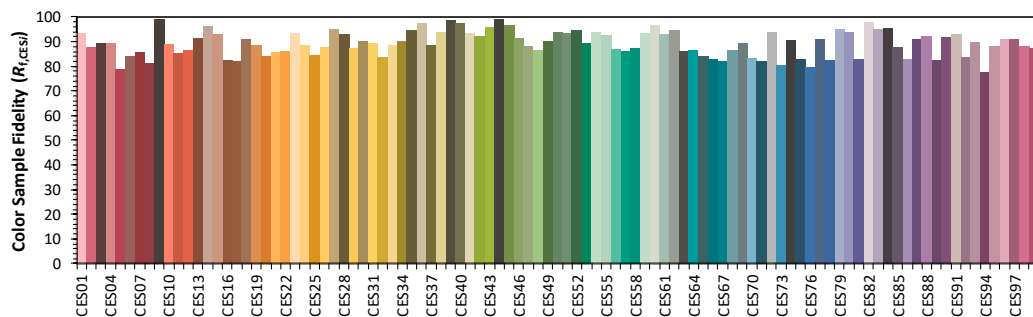
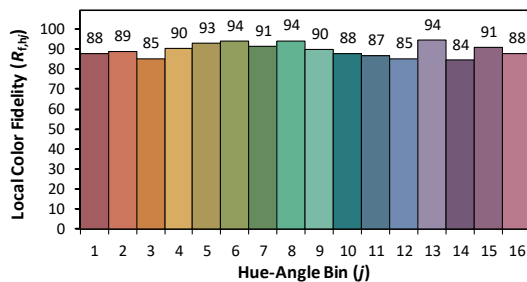
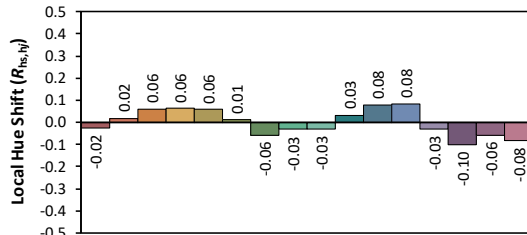
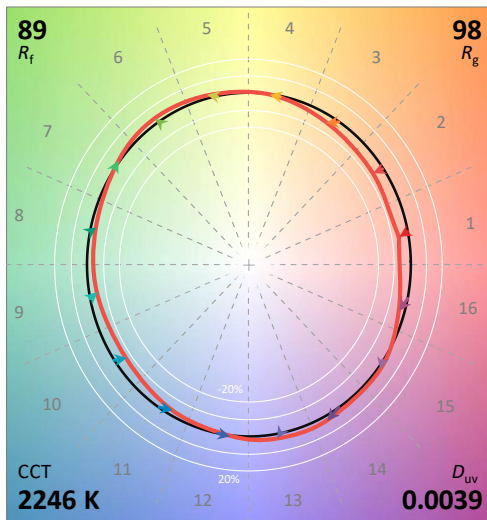
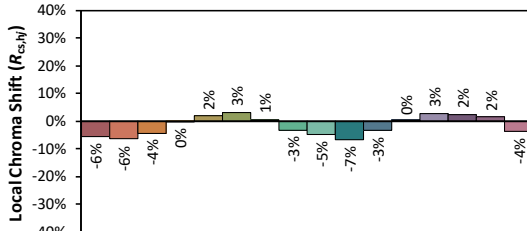
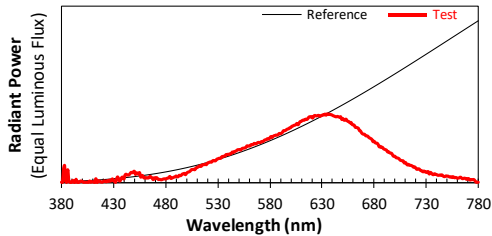
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/7/14

Model: KWTB61527XXX



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

x 0.5094
 y 0.4276
 u' 0.2864
 v' 0.5411

CIE 13.3-1995
(CRI)
 R_a 88
 R_g 51

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

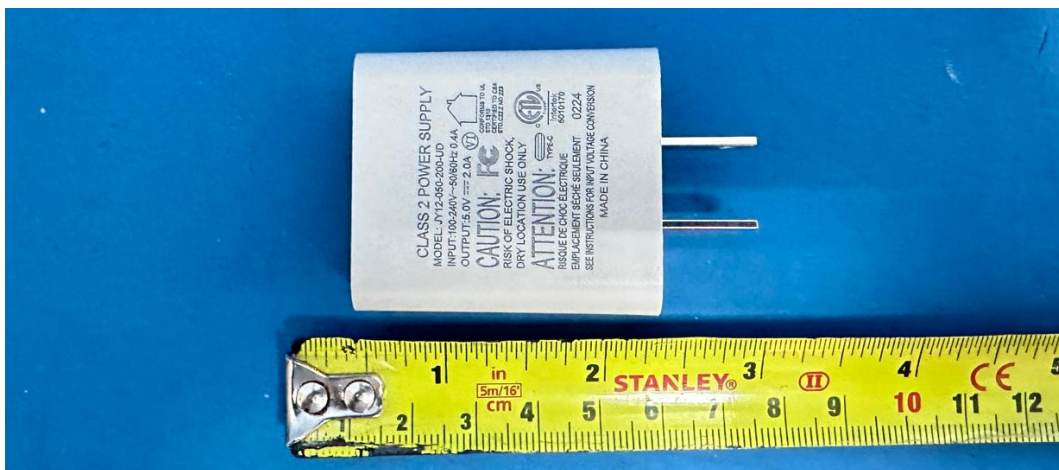
***** End of Page *****

TEST REPORT

PRODUCT PICTURE (not to scale)



External view of KWTB61527XXX



View of LED driver JY12-050-200-UD

***** 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 *****