

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250623168GZU-016

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-016

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. KWTB61027XXX

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 KWTB61027XXX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250623168-017.
<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>	12 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:	KWTB61027XXX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For KWTB61027XXX

Criteria	Result
Total Lumen Output	126.2 lm
Total Power	8.2 W
Luminaire Efficacy	15.4 lm/W
S/MH(C0/180)	8.64
S/MH(C90/270)	9.69
Correlated Color Temperature (CCT)	2584 K
Color Rendering Index (CRI)	91
R9	48
Chromaticity Coordinate (x)	0.4700
Chromaticity Coordinate (y)	0.4133
Chromaticity Coordinate (u')	0.2678
Chromaticity Coordinate (v')	0.5299

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 *****

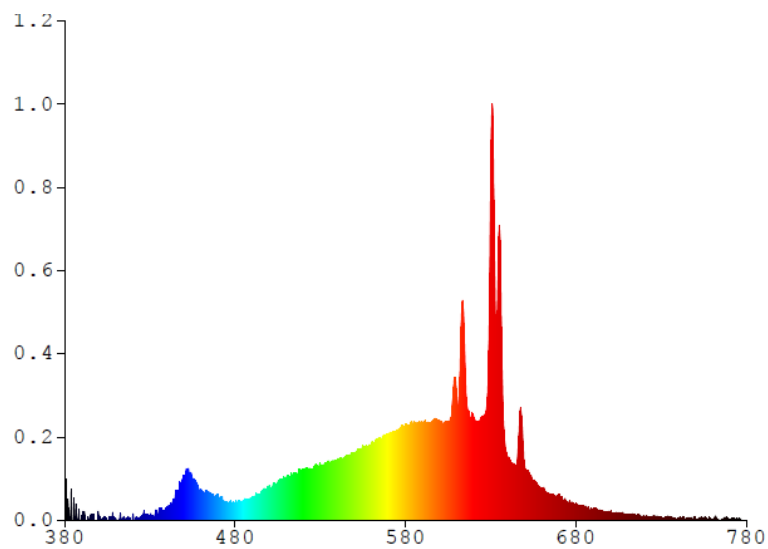
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For KWTB61027XXX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.0000	480	0.0257	580	0.1457	680	0.0243	780	0.0000
385	0.0000	485	0.0280	585	0.1514	685	0.0210		
390	0.0067	490	0.0341	590	0.1509	690	0.0155		
395	0.0056	495	0.0413	595	0.1479	695	0.0134		
400	0.0023	500	0.0519	600	0.1535	700	0.0130		
405	0.0000	505	0.0574	605	0.1510	705	0.0095		
410	0.0026	510	0.0653	610	0.1929	710	0.0085		
415	0.0039	515	0.0714	615	0.2344	715	0.0078		
420	0.0100	520	0.0790	620	0.1596	720	0.0064		
425	0.0044	525	0.0789	625	0.1593	725	0.0028		
430	0.0073	530	0.0844	630	0.5136	730	0.0048		
435	0.0083	535	0.0895	635	0.4532	735	0.0054		
440	0.0198	540	0.0931	640	0.0966	740	0.0023		
445	0.0410	545	0.0980	645	0.0829	745	0.0038		
450	0.0683	550	0.1022	650	0.0834	750	0.0047		
455	0.0626	555	0.1149	655	0.0611	755	0.0031		
460	0.0472	560	0.1174	660	0.0491	760	0.0024		
465	0.0393	565	0.1267	665	0.0372	765	0.0000		
470	0.0382	570	0.1314	670	0.0401	770	0.0010		
475	0.0233	575	0.1386	675	0.0276	775	0.0007		



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61027XXX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

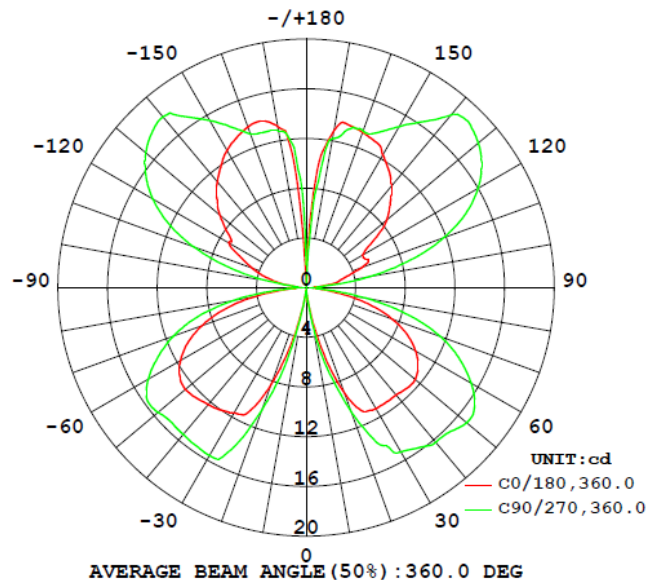
Photometric Measurements at 25°C – Distribution Method

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')
KWTB61027XXX								
S2506231 68-017	base-up	2584	91	48	0.4700	0.4133	0.2678	0.5299

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)
KWTB61027XXX							
S2506231 68-017	base-up	120.1	135.4	8.2	0.504	126.2	15.4

Intensity (Candlepower) Summary at 25°C - Candelas



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61027XXX

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	0.1	0.3	1.0	0.9	0.2
10	2.0	3.2	5.0	5.0	2.9
15	5.6	7.1	9.4	9.8	6.9
20	9.0	10.4	13.1	13.1	10.6
25	11.0	12.2	14.5	14.8	13.9
30	11.2	12.4	15.1	15.4	15.3
35	11.3	12.9	15.5	16.3	15.7
40	11.3	13.4	16.1	16.6	16.2
45	11.5	13.5	16.1	16.8	16.4
50	11.5	13.2	15.9	16.6	16.9
55	11.0	12.7	15.0	15.8	16.6
60	10.2	11.7	13.5	14.8	15.3
65	9.0	10.4	11.9	13.1	13.7
70	7.4	8.7	9.7	10.5	11.5
75	5.3	6.3	6.7	7.3	8.6
80	2.9	3.6	3.1	3.3	4.9
85	0.9	1.6	1.0	0.6	1.0
90	0.4	1.4	1.0	0.5	0.2
95	0.8	2.2	3.1	2.6	1.2
100	2.5	4.4	6.3	6.5	5.2
105	3.2	6.4	9.3	9.9	8.7
110	4.8	7.9	11.8	12.7	11.8
115	5.5	9.2	13.5	14.8	14.2
120	5.3	10.3	14.6	16.3	16.0
125	6.6	10.8	15.2	17.4	17.3
130	8.5	11.1	15.2	18.0	18.1
135	9.6	10.8	14.0	17.6	18.6
140	10.7	10.3	13.1	16.4	18.1
145	11.6	10.8	12.3	15.3	16.3
150	12.4	11.7	12.8	14.1	15.0
155	13.0	13.0	13.2	13.4	13.8
160	13.3	13.5	13.5	13.6	13.4
165	13.5	13.5	13.2	12.8	13.2
170	12.8	12.1	12.0	11.5	12.2
175	8.6	4.8	1.9	1.8	6.8
180	0.0	0.1	3.4	0.0	0.0

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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61027XXX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
KWTB61027XXX		
0-30	7.9	6.2
0-40	17.1	13.5
0-60	41.8	33.1
0-90	64.7	51.3
60-90	22.9	18.2
0-180	126.2	100.0

Beam Angle

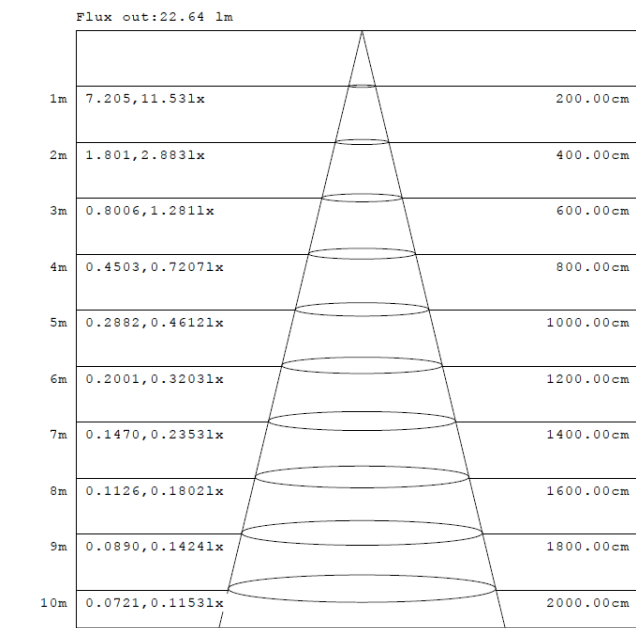
Total Beam Angle(°)
360.0

Illumination Plots

Model No.: KWTB61027XXX

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

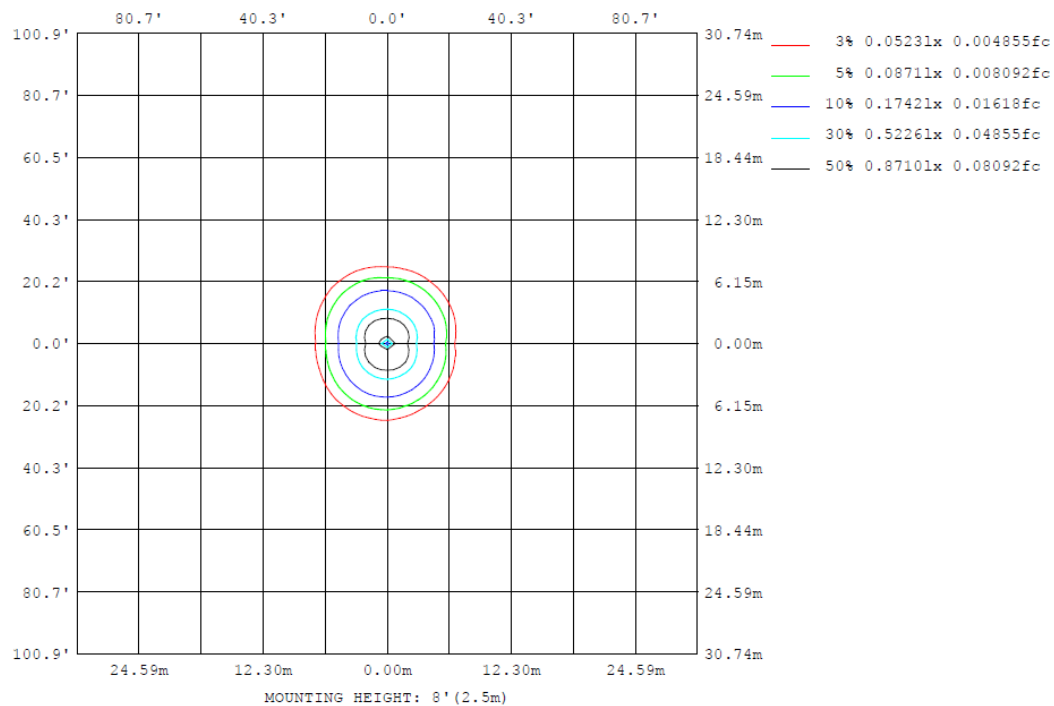
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61027XXX

Model No.: KWTB61027XXX

Mount Height: 2.5 m

Isoillumination Plot



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB61027XXX

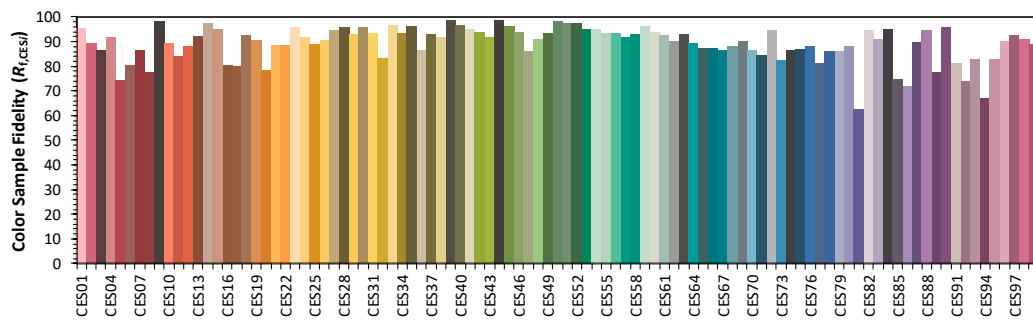
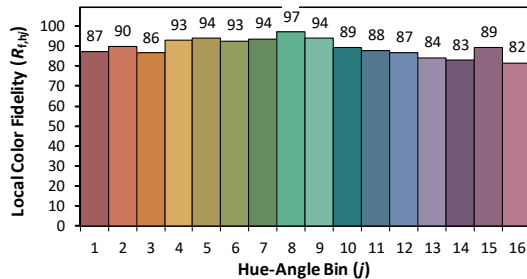
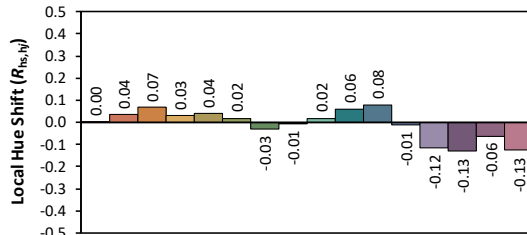
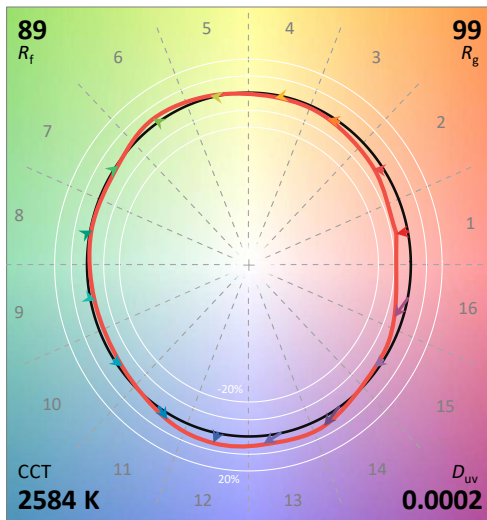
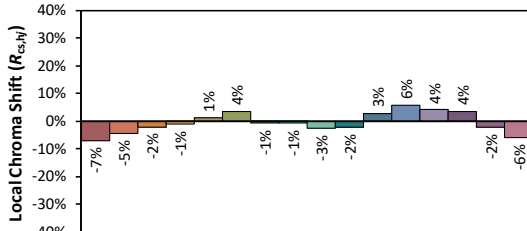
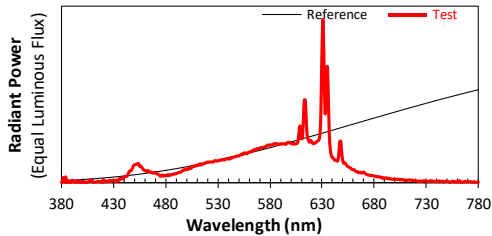
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/7/12

Model: KWTB61027XXX



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

x 0.4700
 y 0.4133
 u' 0.2678
 v' 0.5299

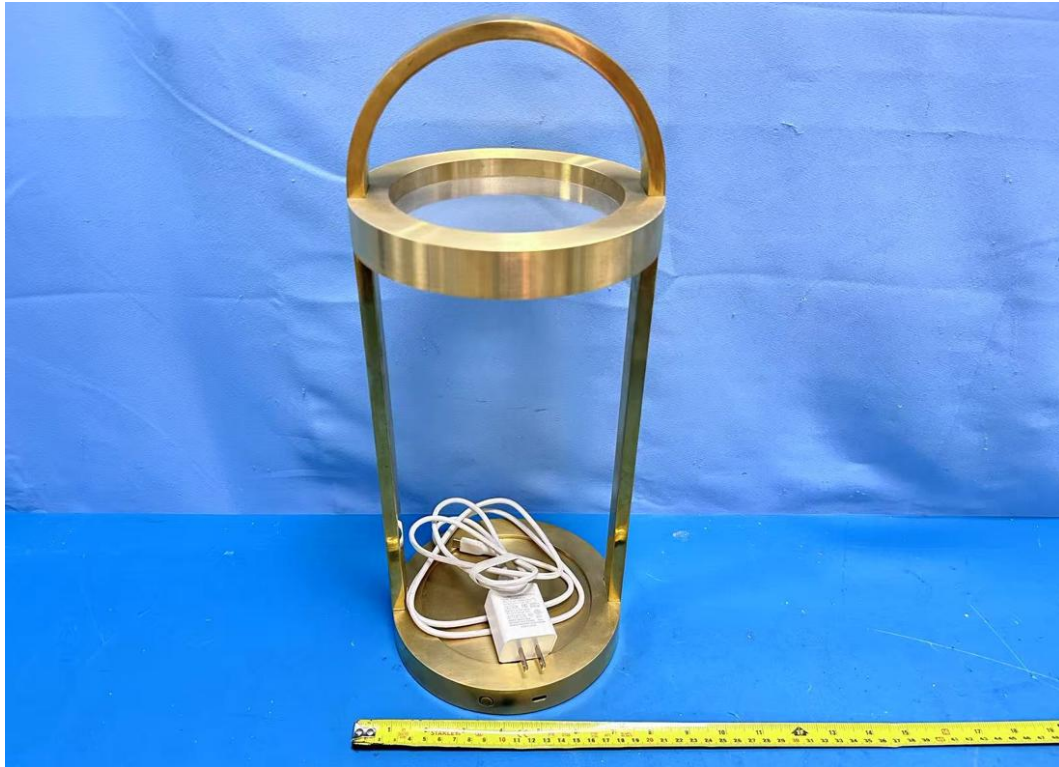
CIE 13.3-1995
(CRI)
 R_a 91
 R_g 48

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

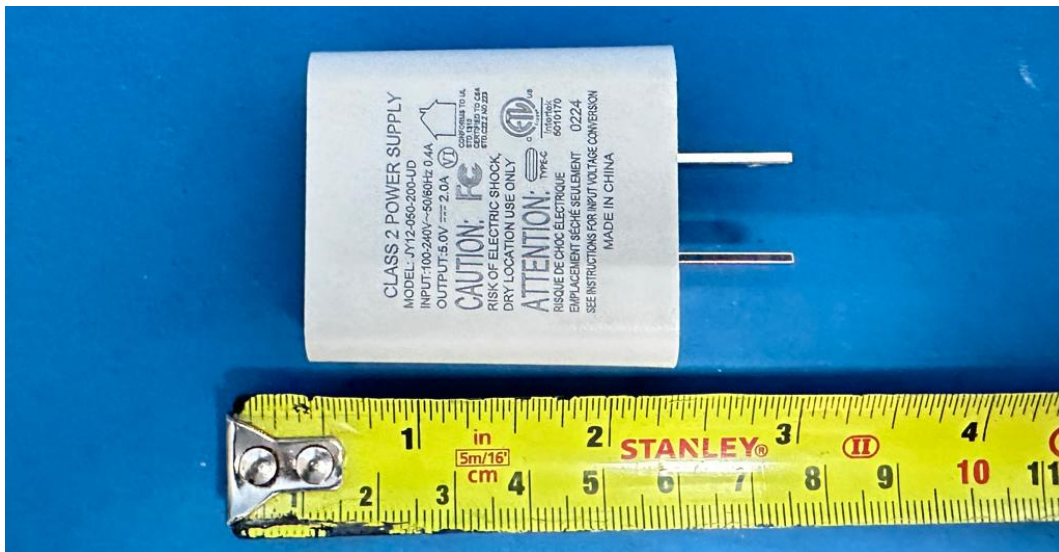
***** End of Page *****

TEST REPORT

PRODUCT PICTURE (not to scale)



External view of KWTB61027XXX

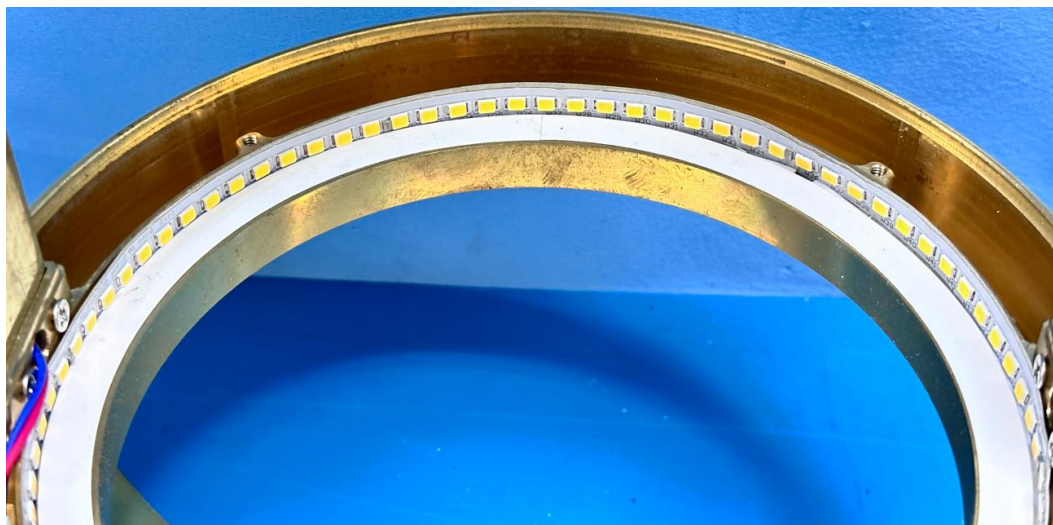


View of LED driver JY12-050-200-UD

***** 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 *****