

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250530064GZU-003

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None

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Report format for LM-79_G

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Report No.: 250530064GZU-003

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. KWFM70327XXXALB

Remark: "XXX" are denoted 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: QGZ250527132.
<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 KWFM70327HABALB. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250530064-008.
<u>MANUFACTURER /FACTORY & ADDRESS:</u>	Shao Guan Weng Yuan Pearly Gates Furniture Manufacturing Co., Ltd. GuanYing Industrial Park, GuanDu Economic Development Experimental Zone, Weng Yuan County, Guang Dong Province, PRC. 512625.
<u>DATES OF TESTS:</u>	10 June 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:	KWFM70327HABALB
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For KWFM70327HABALB

Criteria	Result
Total Lumen Output	768.7 lm
Total Power	33.0 W
Luminaire Efficacy	23.3 lm/W
S/MH(C0/180)	1.23
S/MH(C90/270)	1.21
Correlated Color Temperature (CCT)	2579 K
Color Rendering Index (CRI)	94
R9	71
Chromaticity Coordinate (x)	0.4666
Chromaticity Coordinate (y)	0.4068
Chromaticity Coordinate (u')	0.2686
Chromaticity Coordinate (v')	0.5269

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: 3.948A DC

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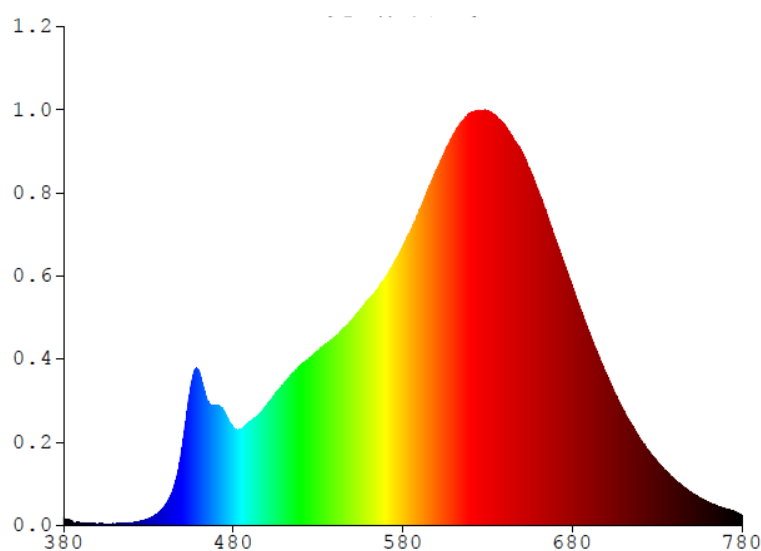
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For KWFM70327HABALB

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.3809	480	4.3134	580	12.3270	680	10.5620	780	0.4255
385	0.1893	485	4.2796	585	13.0850	685	9.5113		
390	0.1102	490	4.5967	590	13.9660	690	8.5202		
395	0.0612	495	4.8974	595	14.8690	695	7.5815		
400	0.0596	500	5.3281	600	15.6650	700	6.6964		
405	0.0634	505	5.8296	605	16.5390	705	5.8643		
410	0.0683	510	6.2771	610	17.3030	710	5.0884		
415	0.0744	515	6.7173	615	17.8590	715	4.4454		
420	0.1254	520	7.0989	620	18.2400	720	3.8199		
425	0.1812	525	7.4023	625	18.3040	725	3.3086		
430	0.3009	530	7.7076	630	18.3180	730	2.8297		
435	0.4987	535	8.0284	635	18.0820	735	2.4095		
440	0.9024	540	8.3026	640	17.7230	740	2.0471		
445	1.6992	545	8.7297	645	17.1280	745	1.7312		
450	3.5107	550	9.0955	650	16.5510	750	1.4651		
455	6.1526	555	9.5445	655	15.7190	755	1.2218		
460	6.7800	560	10.0050	660	14.7740	760	1.0290		
465	5.4860	565	10.4130	665	13.7320	765	0.8736		
470	5.3237	570	11.0070	670	12.6460	770	0.7436		
475	4.9988	575	11.6120	675	11.3930	775	0.6390		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWFM70327HABALB

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

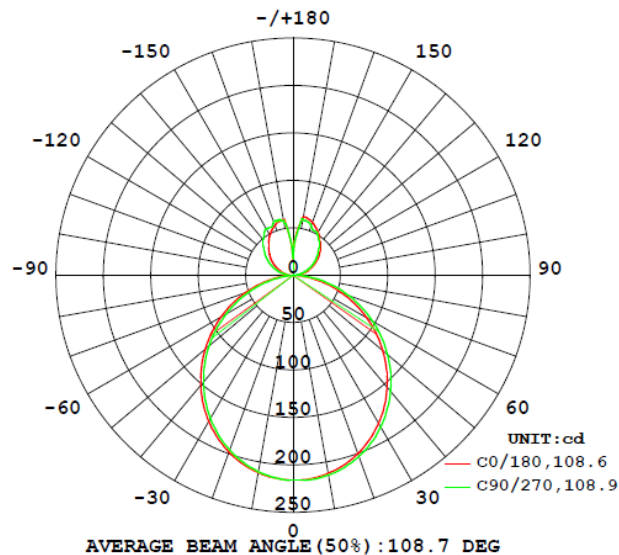
Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperature (K)	CRI	R9	CIE 31'	CIE 31'	CIE 76'	CIE 76'
					Chromaticit y Coordinate (x)	Chromaticit y Coordinate (y)	Chromaticit y Coordinate (u')	Chromaticit y Coordinate (v')
KWFM70327HABALB								
S2505300 64-008	base-up	2579	94	71	0.4666	0.4068	0.2686	0.5269

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)
KWFM70327HABALB							
S2505300 64-008	base-up	120.1	280.3	33.0	0.982	768.7	23.3

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWFM70327HABALB

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	216.0	216.2	216.1	216.2	216.2
5	215.1	215.7	216.0	216.3	216.3
10	212.1	213.1	213.6	213.9	214.0
15	207.2	208.2	209.0	209.6	209.7
20	199.9	201.6	202.5	203.3	203.1
25	191.1	192.9	194.3	195.0	195.0
30	180.3	182.2	183.9	184.9	184.8
35	168.1	170.4	172.2	173.1	173.1
40	154.2	156.7	158.7	159.9	159.9
45	139.3	142.2	144.4	145.5	145.6
50	123.5	126.4	128.7	130.0	130.0
55	107.0	109.7	112.3	113.6	113.8
60	89.7	92.7	95.2	96.6	96.8
65	72.2	75.3	77.9	79.4	79.5
70	54.8	57.9	60.4	61.9	62.1
75	37.9	40.8	43.4	44.9	45.3
80	21.2	24.0	26.6	28.0	28.3
85	6.1	8.5	10.6	12.0	12.4
90	1.0	0.7	0.5	0.5	0.6
95	4.5	3.6	2.8	2.3	2.1
100	9.4	8.3	7.1	6.3	5.8
105	14.7	13.5	12.0	11.0	10.4
110	17.7	18.7	17.2	16.0	15.3
115	22.9	23.7	22.2	21.0	20.1
120	27.7	28.6	27.1	25.8	24.8
125	32.4	33.4	31.8	30.5	29.3
130	36.8	37.6	36.3	34.9	33.8
135	41.0	38.5	40.6	39.2	38.1
140	45.2	42.4	44.9	43.6	42.5
145	49.1	46.8	48.1	48.1	47.0
150	52.7	51.1	49.8	51.6	51.5
155	56.3	55.0	53.4	52.4	52.3
160	59.5	57.9	56.4	56.7	56.2
165	61.6	59.9	59.0	59.5	58.6
170	62.0	61.9	60.9	59.4	60.2
175	45.1	45.7	45.6	44.2	42.0
180	9.2	7.9	11.1	9.9	8.2

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWFM70327HABALB

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
KWFM70327HABALB		
0-30	116.5	21.7
0-40	271.0	35.3
0-60	472.6	61.5
0-90	591.7	77.0
60-90	119.1	15.5
0-180	768.7	100.0

Beam Angle

Total Beam Angle(°)

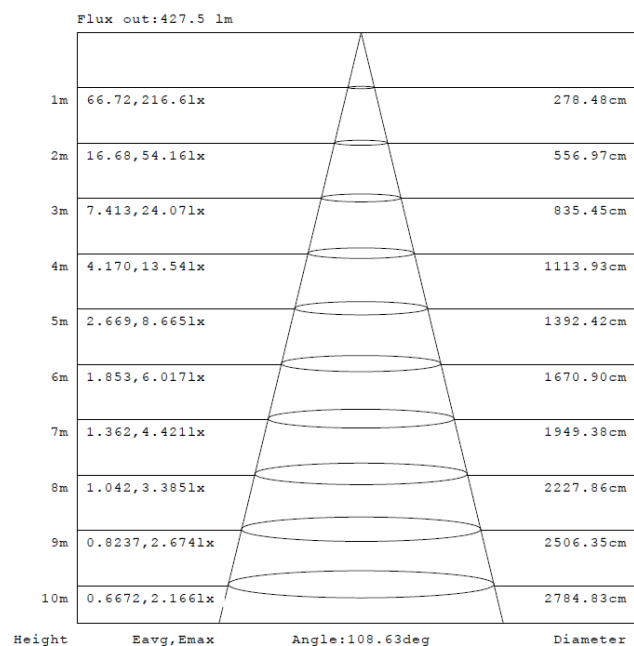
108.7

Illumination Plots

Model No.: KWFM70327HABALB

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

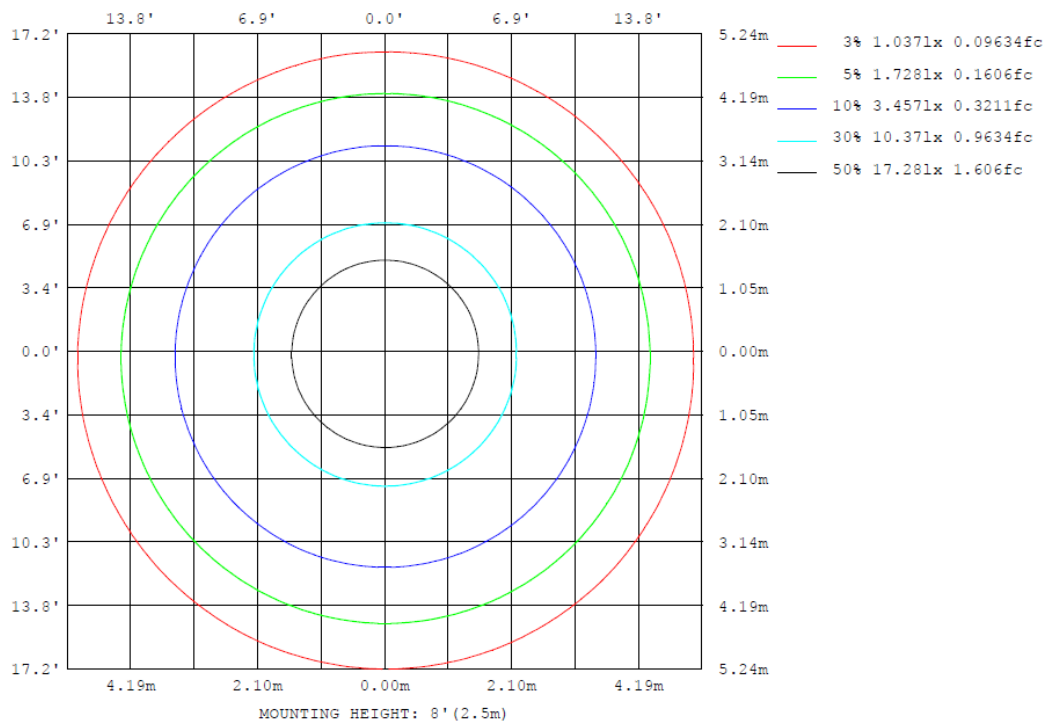
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWFM70327HABALB

Model No.: KWFM70327HABALB

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWFM70327HABALB

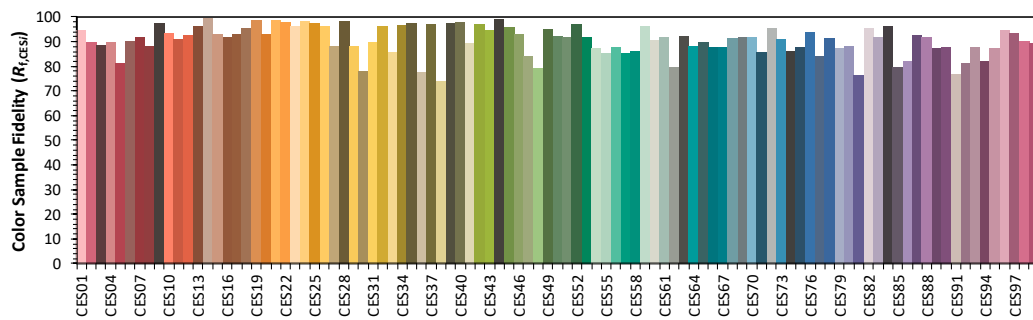
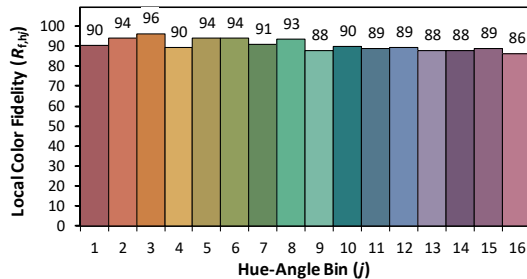
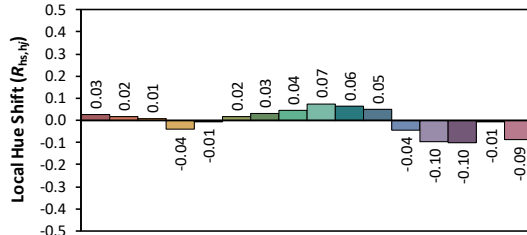
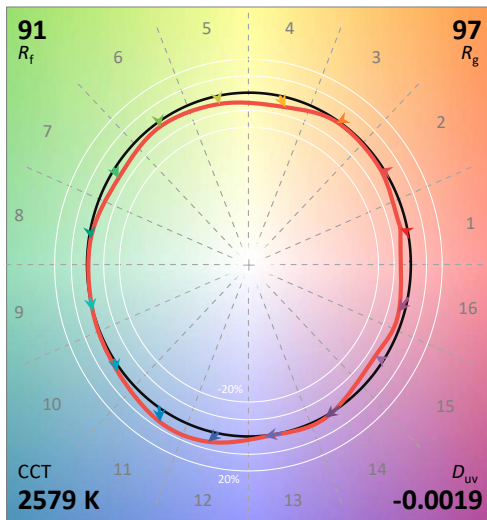
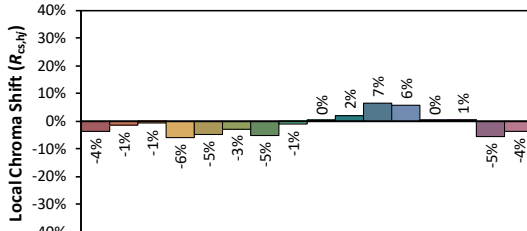
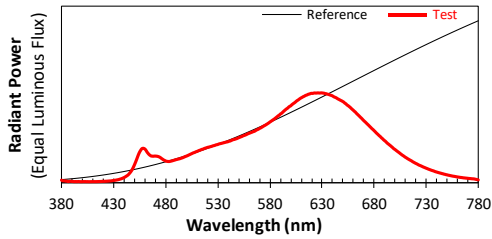
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/6/10

Model: KWFM70327HABALB



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

x 0.4666
 y 0.4068
 u' 0.2686
 v' 0.5269

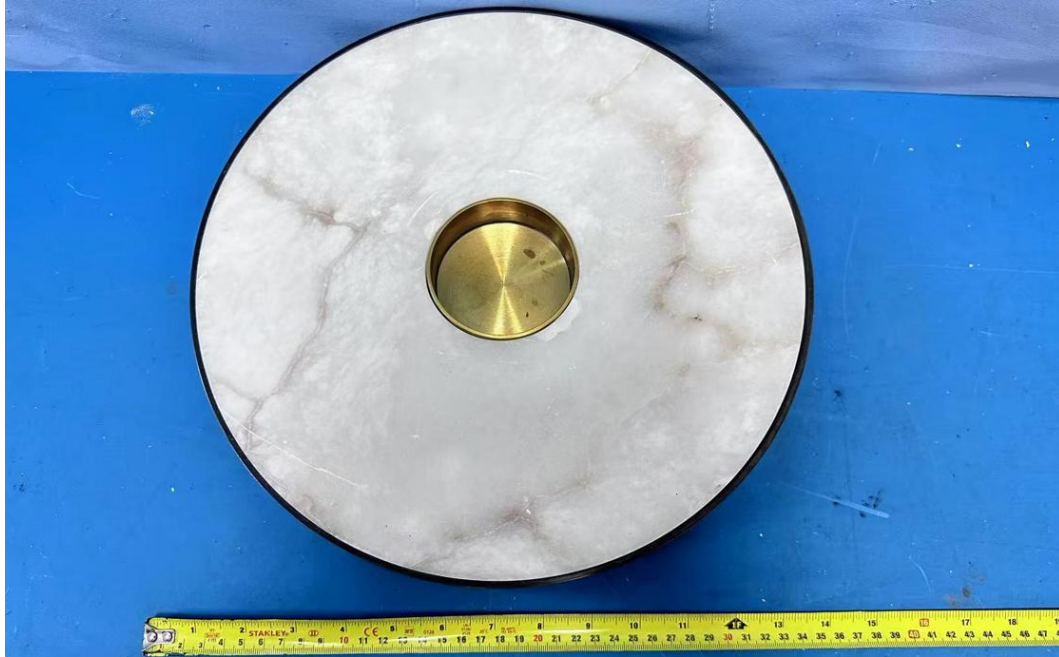
CIE 13.3-1995
(CRI)
 R_a 94
 R_g 71

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

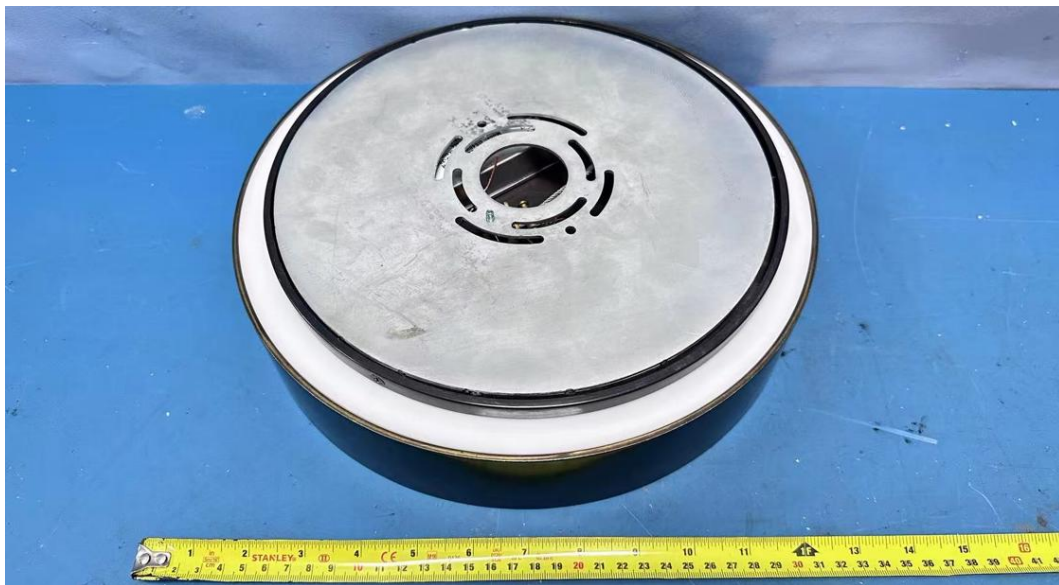
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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of KWFM70327HABALB

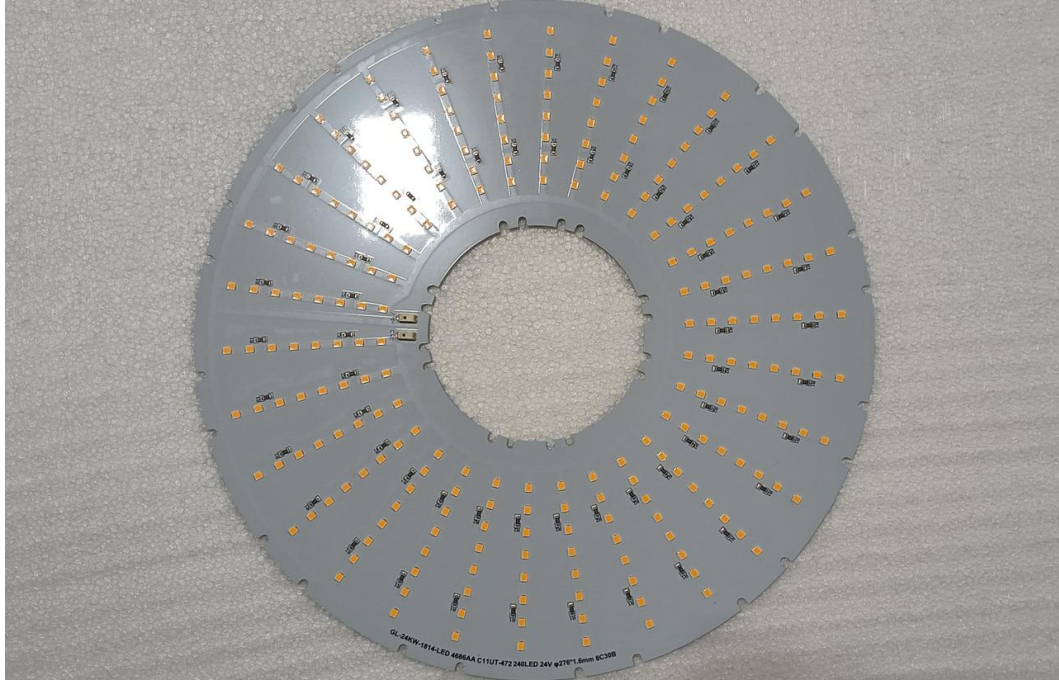


External view of KWFM70327HABALB

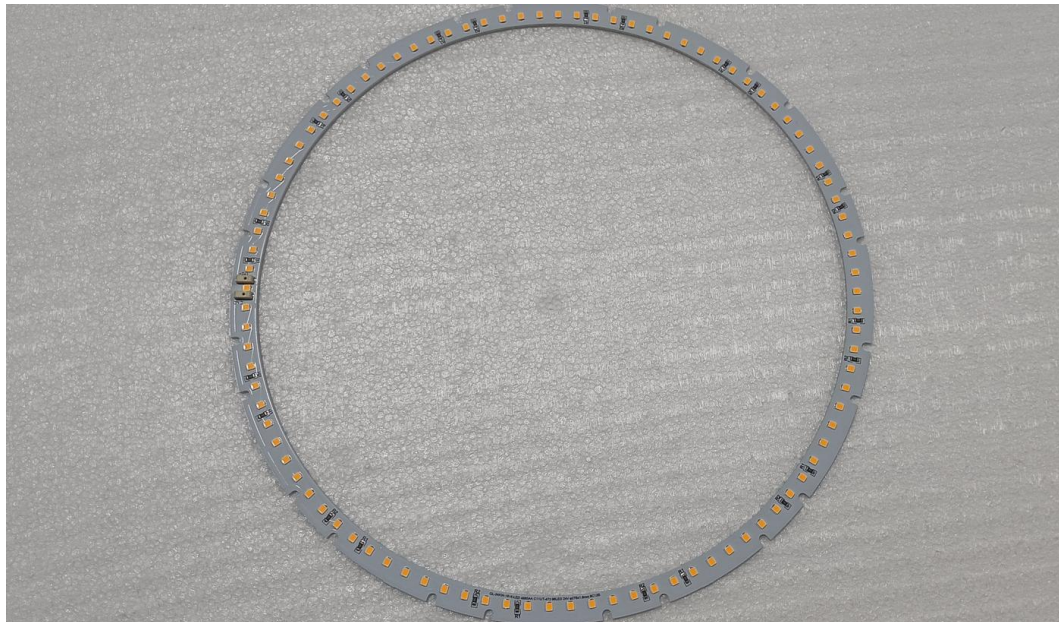
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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED

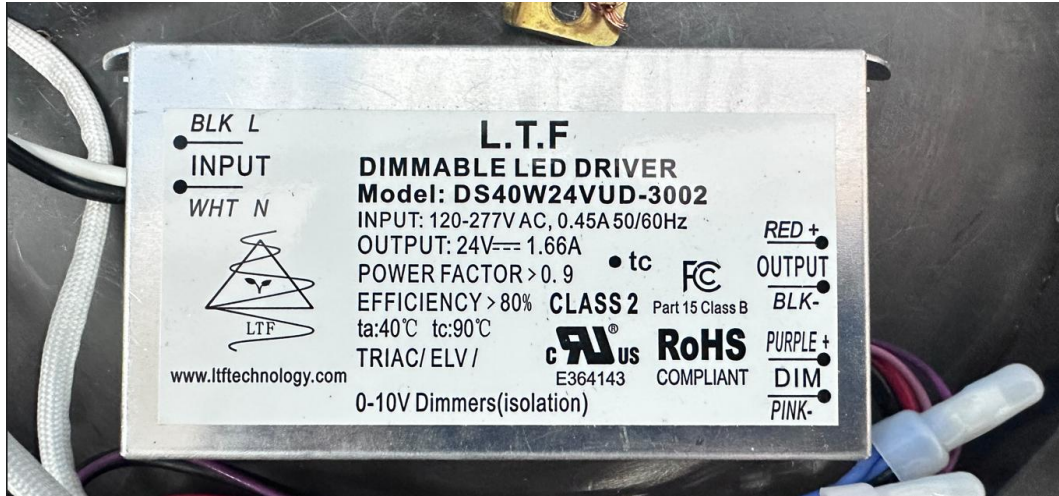


View of LED

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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver DS40W24VUD-3002

In Charge Of Tests:

Done Ye

Done Ye
Engineer

Report Reviewed By

Shelley Ying

Shelley Ying
Reviewer

Attachment: None

***** End of Report *****