

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250530064GZU-006

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REVISION DATE

None

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Report format for LM-79_G

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Report No.: 250530064GZU-006

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. KWWS69827XXXALB

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 KWWS69827HABALB. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250530064-002.
<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>	12 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:	KWWS69827HABALB
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For KWWS69827HABALB

Criteria	Result
Total Lumen Output	656.7 lm
Total Power	26.0 W
Luminaire Efficacy	25.3 lm/W
S/MH(C0/180)	1.27
S/MH(C90/270)	1.21
Correlated Color Temperature (CCT)	2543 K
Color Rendering Index (CRI)	93
R9	70
Chromaticity Coordinate (x)	0.4689
Chromaticity Coordinate (y)	0.4060
Chromaticity Coordinate (u')	0.2705
Chromaticity Coordinate (v')	0.5270

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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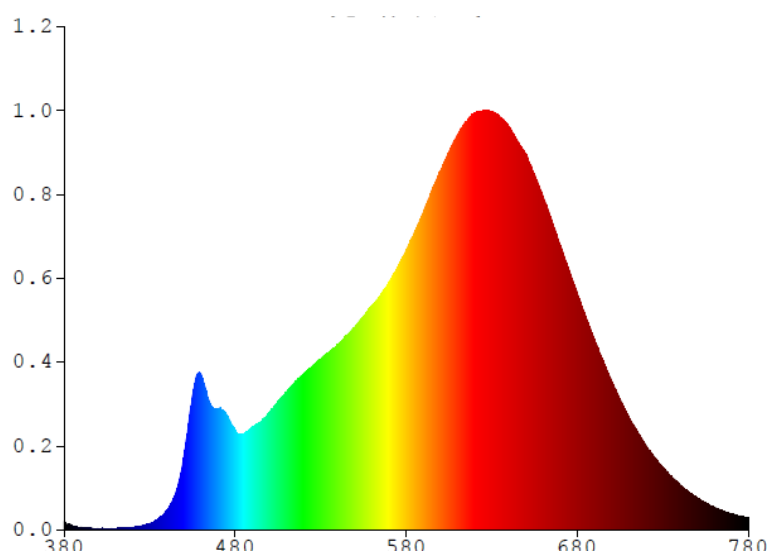
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For KWWS69827HABALB

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.4221	480	4.5332	580	12.7520	680	10.7970	780	0.5492
385	0.1959	485	4.3897	585	13.5900	685	9.7069		
390	0.1181	490	4.6894	590	14.4780	690	8.6899		
395	0.0700	495	4.9516	595	15.4720	695	7.7305		
400	0.0517	500	5.3617	600	16.3270	700	6.7939		
405	0.0558	505	5.8469	605	17.2060	705	5.9608		
410	0.0597	510	6.2770	610	18.0220	710	5.1605		
415	0.0872	515	6.7166	615	18.6310	715	4.5125		
420	0.1170	520	7.1288	620	19.0090	720	3.8676		
425	0.1777	525	7.4485	625	19.1090	725	3.3244		
430	0.2887	530	7.7874	630	19.0640	730	2.8602		
435	0.5002	535	8.1210	635	18.7790	735	2.4366		
440	0.8775	540	8.4682	640	18.3960	740	2.0492		
445	1.6192	545	8.8606	645	17.7390	745	1.7456		
450	3.3538	550	9.2449	650	17.1340	750	1.4560		
455	6.0846	555	9.7243	655	16.2030	755	1.2207		
460	7.0874	560	10.2350	660	15.1910	760	1.0315		
465	5.7928	565	10.6740	665	14.1150	765	0.8698		
470	5.5486	570	11.3190	670	12.9670	770	0.7371		
475	5.2588	575	11.9730	675	11.6630	775	0.6339		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWWS69827HABALB

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

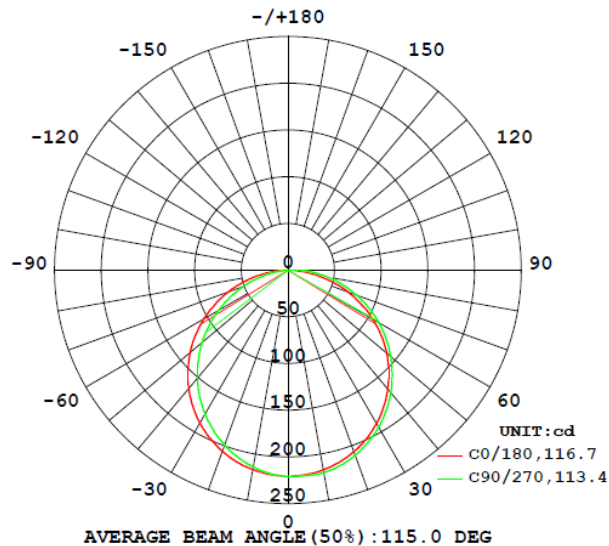
Photometric Measurements at 25°C – Distribution Method

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')
KWWS69827HABALB								
S2505300 64-002	base-up	2543	93	70	0.4689	0.4060	0.2705	0.5270

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)
KWWS69827HABALB							
S2505300 64-002	base-up	120.1	221.1	26.0	0.978	656.7	25.3

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWWS69827HABALB

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	220.5	220.8	220.9	220.8	220.9
5	219.6	220.1	219.9	220.2	220.6
10	217.0	217.3	219.0	219.9	220.0
15	212.8	214.3	216.0	216.5	216.5
20	206.7	209.2	210.4	210.8	210.8
25	199.0	202.1	203.0	203.3	203.1
30	189.6	193.1	193.9	194.3	194.2
35	178.7	182.5	183.4	183.7	183.5
40	166.3	170.3	171.5	171.8	171.4
45	152.7	156.9	158.3	158.5	158.1
50	138.0	142.0	143.8	144.1	143.8
55	122.1	126.1	128.0	128.6	128.3
60	105.2	109.2	111.6	112.4	112.1
65	87.1	91.5	94.4	95.5	95.4
70	68.4	73.1	76.4	78.0	78.2
75	49.8	54.8	58.4	60.4	60.8
80	30.8	36.4	40.7	43.1	43.7
85	12.8	18.5	23.1	25.8	26.7
90	0.5	3.6	6.7	9.4	10.4
95	0.1	0.1	0.3	0.4	0.5
100	0.1	0.1	0.1	0.2	0.3
105	0.1	0.1	0.1	0.1	0.2
110	0.1	0.2	0.1	0.1	0.1
115	0.1	0.2	0.2	0.1	0.2
120	0.1	0.2	0.4	0.2	0.2
125	0.2	0.2	0.3	0.3	0.2
130	0.2	0.2	0.3	0.3	0.3
135	0.2	0.3	0.3	0.3	0.3
140	0.3	0.3	0.3	0.4	0.4
145	0.3	0.3	0.4	0.4	0.4
150	0.3	0.4	0.4	0.4	0.4
155	0.4	0.4	0.4	0.4	0.4
160	0.4	0.4	0.4	0.4	0.4
165	0.4	0.4	0.4	0.4	0.4
170	0.4	0.4	0.4	0.4	0.4
175	0.4	0.4	0.4	0.4	0.4
180	0.4	0.4	0.4	0.3	0.3

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWS69827HABALB

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
KWS69827HABALB		
0-30	171.9	26.2
0-40	282.3	43.0
0-60	503.7	76.7
0-90	654.4	99.7
60-90	150.7	23.0
0-180	656.7	100.0

Beam Angle

Total Beam Angle(°)

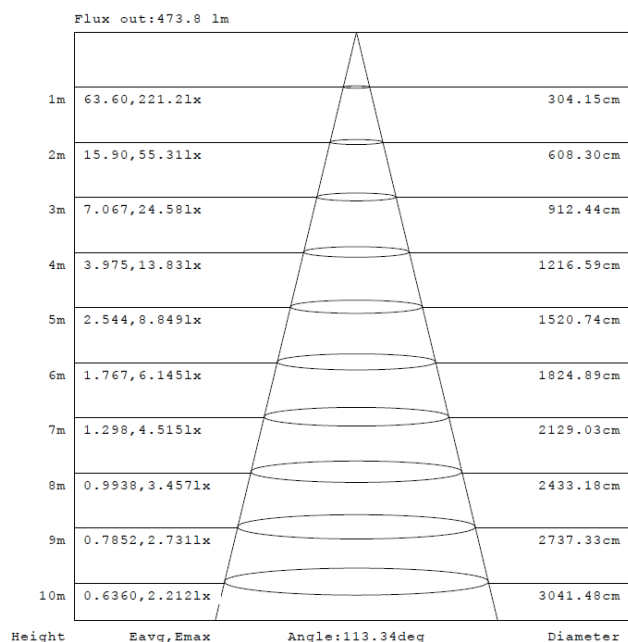
115.0

Illumination Plots

Model No.: KWS69827HABALB

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

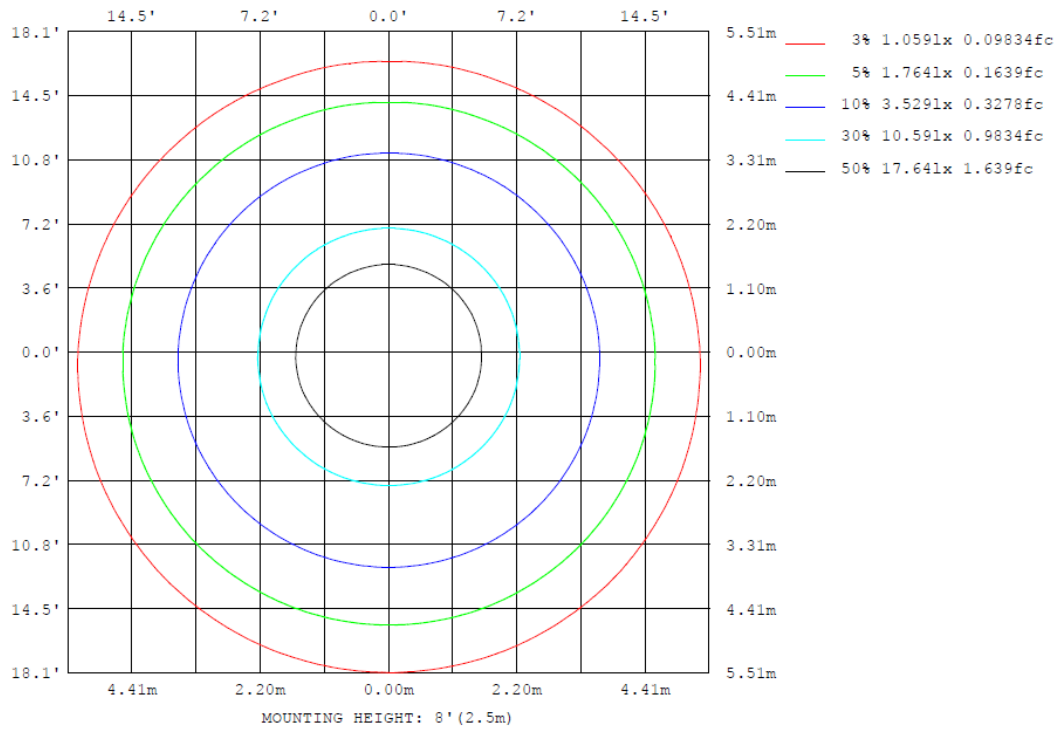
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWWS69827HABALB

Model No.: KWWS69827HABALB

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWWS69827HABALB

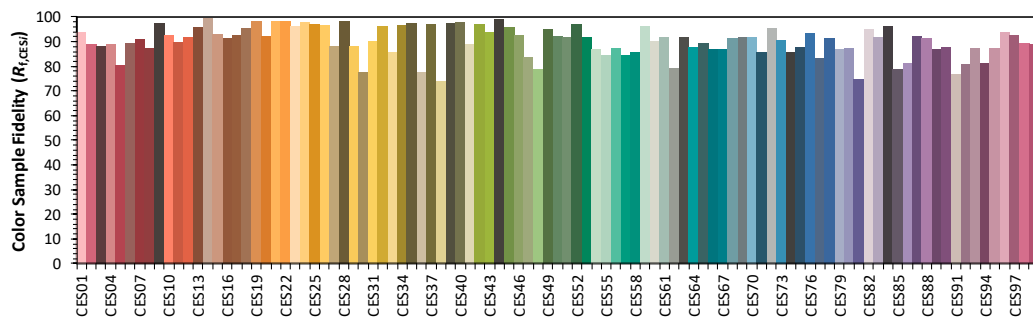
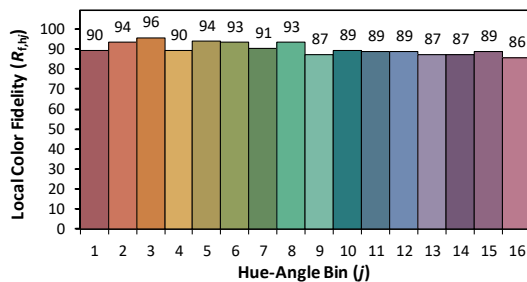
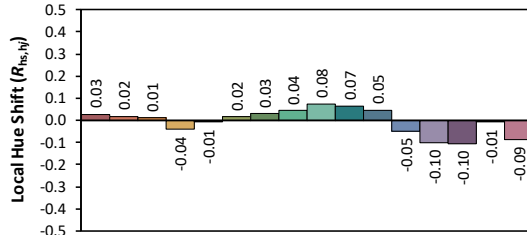
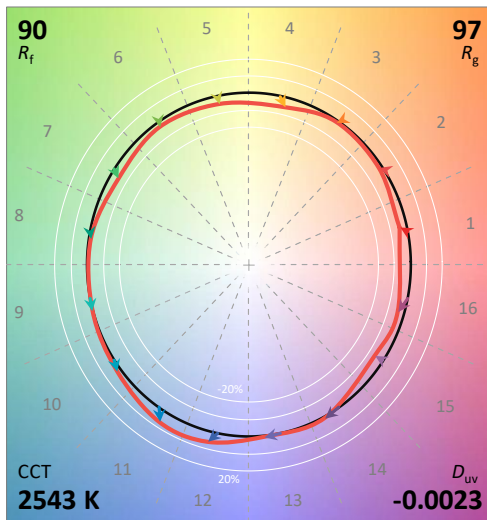
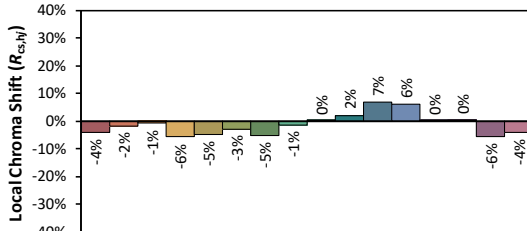
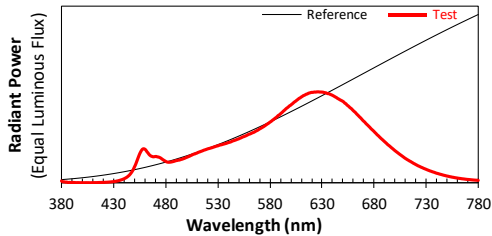
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/6/12

Model: KWWS69827HABALB



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

x 0.4689
 y 0.4060
 u' 0.2705
 v' 0.5270

CIE 13.3-1995
(CRI)
 R_a 93
 R_g 70

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

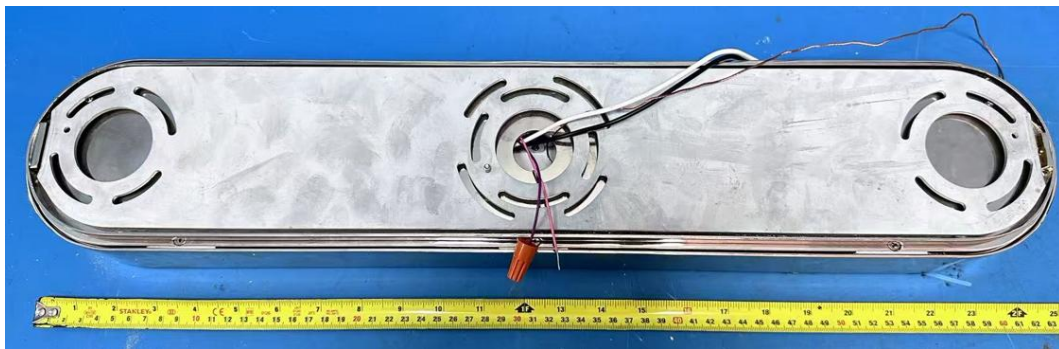
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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of KWW569827HABALB

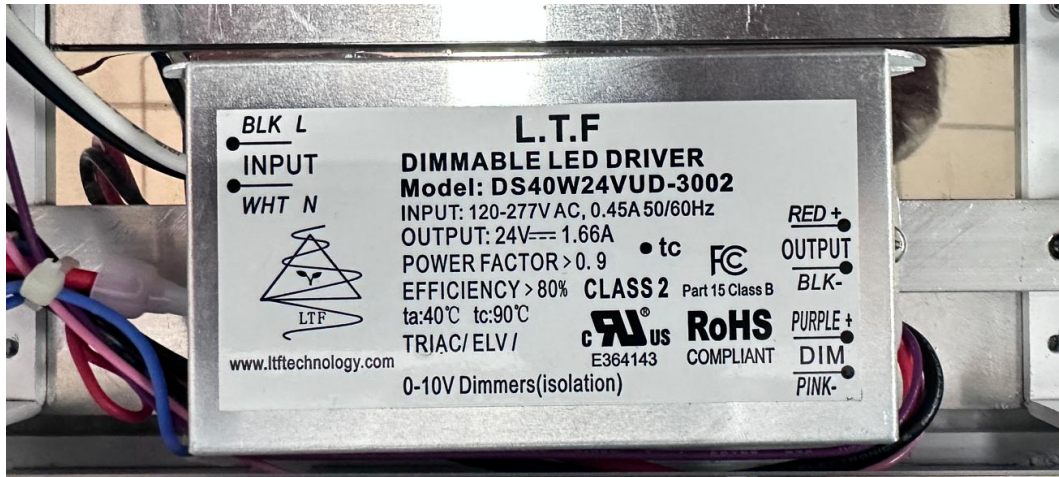


External view of KWW569827HABALB

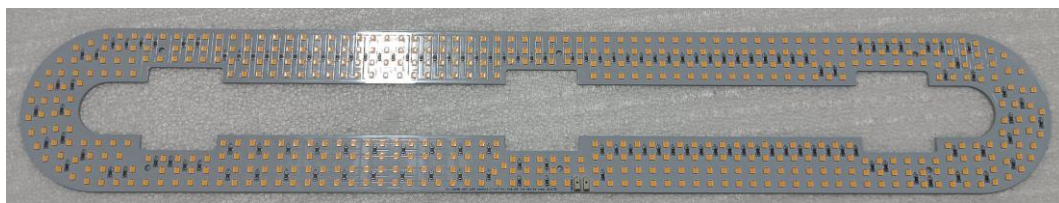
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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver DS40W24VUD-3002



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 *****