

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

241128209GZU-001

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REVISION DATE

None

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12

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Report format for LM-79_G

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Report No.: 241128209GZU-001

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. AKLS675WDXOP

Remark: "XX" are denoted appearance color.

RENDERED TO

Visual Comfort & Co.

Contact Name: Javan Rivero

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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: QGZ241127042.

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 AKLS675WDXOP. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S241128209-001.

MANUFACTURER /FACTORY & ADDRESS: Union Star Collection-Dongguan Denghuang HomeFurnishing Co., Ltd.
No.5, Central Road, Yayuan Industrial Zone, Nancheng District, Dongguan City, Guangdong Province, 523000

DATES OF TESTS: 31 December 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:	AKLS675WDXXOP
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For AKLS675WDXXOP

Criteria	Result
Total Lumen Output	145.4 lm
Total Power	10.3 W
Luminaire Efficacy	14.2 lm/W
S/MH(C0/180)	1.06
S/MH(C90/270)	1.26
Correlated Color Temperature (CCT)	2515 K
Color Rendering Index (CRI)	91
R9	57
Chromaticity Coordinate (x)	0.4764
Chromaticity Coordinate (y)	0.4147
Chromaticity Coordinate (u')	0.2713
Chromaticity Coordinate (v')	0.5314

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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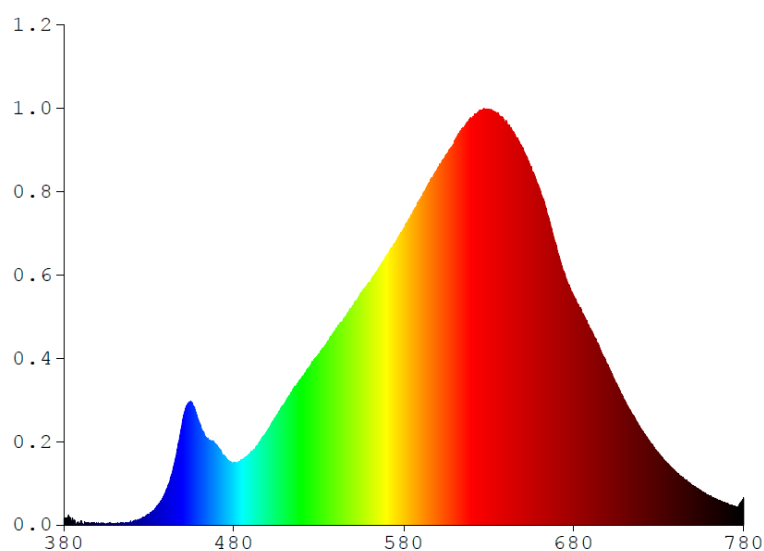
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For AKLS675WDXXOP

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.3013	480	2.5249	580	11.9290	680	9.1807	780	1.0766
385	0.2781	485	2.6235	585	12.5010	685	8.5103		
390	0.1627	490	2.9413	590	13.1420	690	7.8491		
395	0.0589	495	3.3151	595	13.7740	695	7.1383		
400	0.0580	500	3.8144	600	14.3700	700	6.4353		
405	0.0335	505	4.3869	605	14.8430	705	5.6954		
410	0.0476	510	4.9088	610	15.4510	710	4.9784		
415	0.0774	515	5.4960	615	15.9660	715	4.3934		
420	0.1144	520	5.9257	620	16.3200	720	3.8202		
425	0.2419	525	6.4106	625	16.6190	725	3.3080		
430	0.4301	530	6.8623	630	16.6600	730	2.8723		
435	0.7674	535	7.3461	635	16.5580	735	2.4855		
440	1.3565	540	7.8835	640	16.2400	740	2.1357		
445	2.4641	545	8.3029	645	15.7300	745	1.8338		
450	4.2217	550	8.8133	650	15.1590	750	1.5808		
455	4.9416	555	9.3575	655	14.3520	755	1.3482		
460	4.0615	560	9.7387	660	13.5010	760	1.1651		
465	3.4301	565	10.2970	665	12.4350	765	1.0019		
470	3.1973	570	10.8520	670	11.1080	770	0.8575		
475	2.7190	575	11.3460	675	9.8110	775	0.7406		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKLS675WDXXOP

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

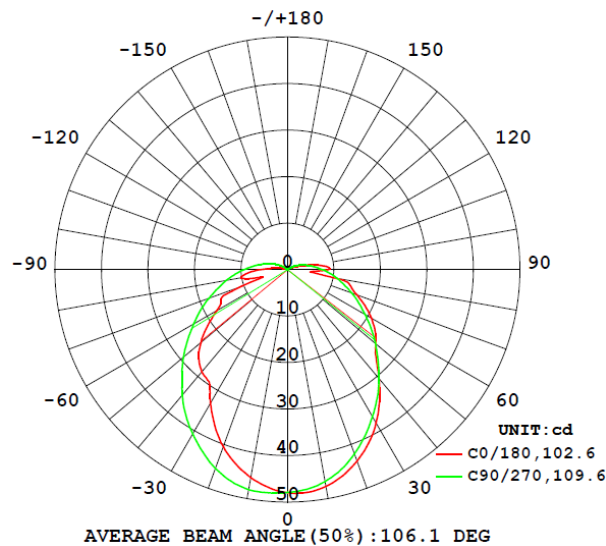
Photometric Measurements at 25°C – Distribution Method

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')
AKLS675WDXXOP								
S2411282 09-001	base-up	2515	91	57	0.4764	0.4147	0.2713	0.5314

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)
AKLS675WDXXOP							
S2411282 09-001	base-up	120.1	86.5	10.3	0.989	145.4	14.2

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKLS675WDXXOP

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	48.0	48.0	48.0	47.9	47.9
5	48.1	47.9	47.8	47.7	47.4
10	47.4	47.1	47.0	46.7	46.3
15	45.9	45.5	45.4	45.1	44.5
20	43.8	43.3	43.2	42.9	42.1
25	41.2	40.7	40.5	40.1	39.4
30	38.1	37.6	37.3	37.2	36.5
35	34.5	34.1	34.2	34.3	33.6
40	30.6	30.3	30.9	31.2	30.6
45	27.0	26.5	27.5	28.1	27.5
50	24.8	23.3	24.3	25.2	24.7
55	23.0	20.7	21.1	22.3	21.9
60	20.8	18.5	18.3	19.5	19.3
65	18.4	16.2	15.7	17.1	16.9
70	15.8	13.1	13.3	14.8	14.7
75	14.1	9.8	11.1	12.6	12.6
80	10.1	7.8	9.1	10.8	10.8
85	5.1	6.1	7.5	9.0	9.1
90	8.7	4.5	6.0	7.5	7.5
95	8.3	3.0	4.6	6.1	6.2
100	6.0	2.0	3.5	4.9	5.0
105	3.6	1.1	2.6	3.8	3.9
110	2.1	0.5	1.8	2.9	3.0
115	1.3	0.3	1.2	2.1	2.2
120	0.8	0.2	0.7	1.4	1.5
125	0.6	0.2	0.3	0.9	1.0
130	0.6	0.1	0.2	0.4	0.5
135	0.5	0.1	0.2	0.2	0.3
140	0.5	0.1	0.2	0.2	0.2
145	0.4	0.1	0.1	0.2	0.2
150	0.4	0.2	0.1	0.1	0.2
155	0.4	0.2	0.1	0.1	0.1
160	0.3	0.2	0.1	0.1	0.1
165	0.3	0.2	0.2	0.1	0.1
170	0.3	0.2	0.2	0.2	0.2
175	0.2	0.1	0.1	0.1	0.1
180	0.1	0.0	0.0	0.0	0.0

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKLS675WDXXOP

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
AKLS675WDXXOP		
0-30	35.9	24.7
0-40	57.2	39.3
0-60	98.3	67.6
0-90	135.2	93.0
60-90	36.9	25.4
0-180	145.4	100.0

Beam Angle

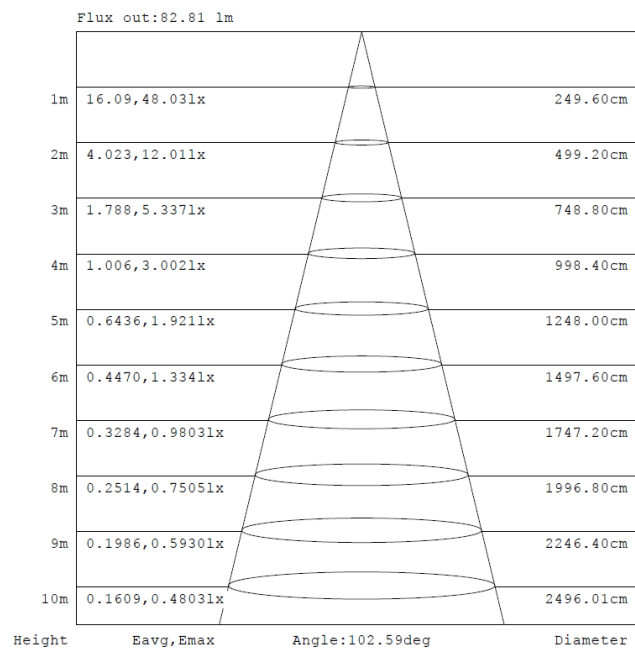
Total Beam Angle(°)
106.1

Illumination Plots

Model No.: AKLS675WDXXOP

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

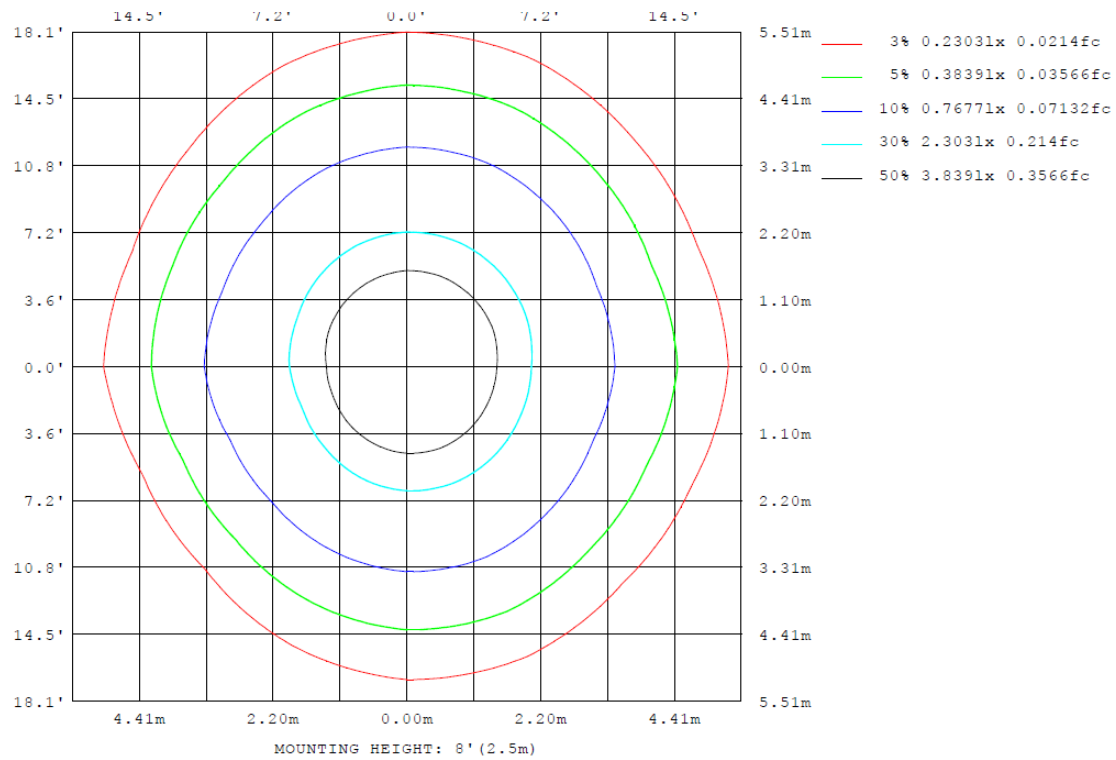
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKLS675WDXOP

Model No.: AKLS675WDXOP

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKLS675WDXOP

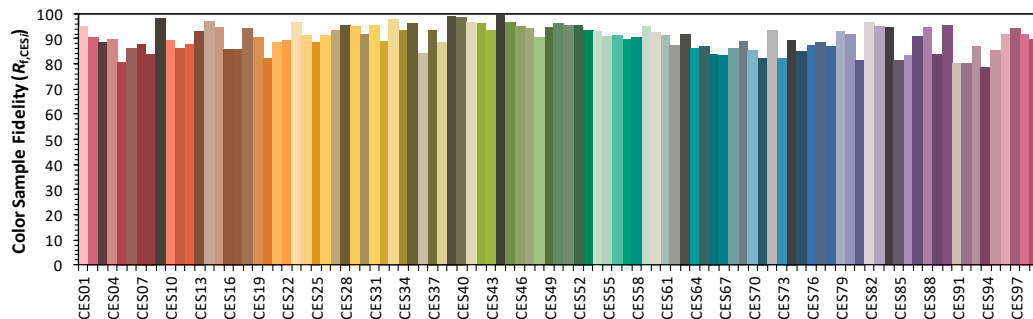
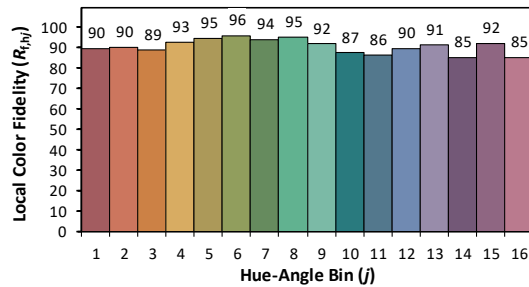
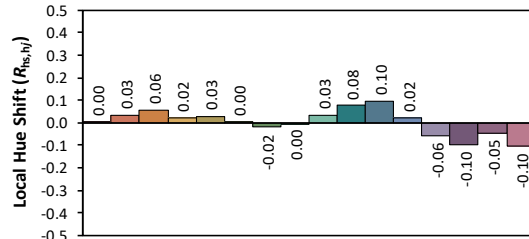
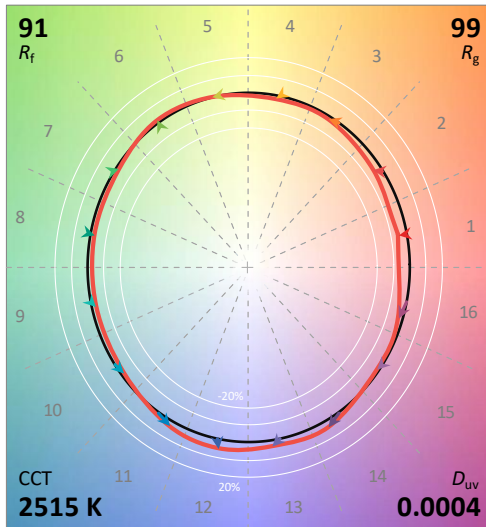
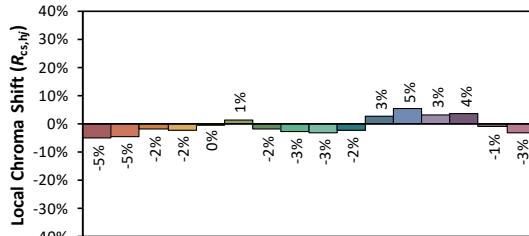
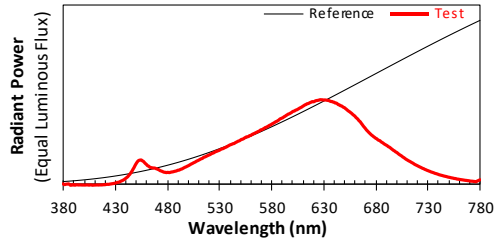
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2024/12/31

Model: AKLS675WDXOP



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

x 0.4764
 y 0.4147
 u' 0.2713
 v' 0.5314

CIE 13.3-1995
(CRI)

R_a 91

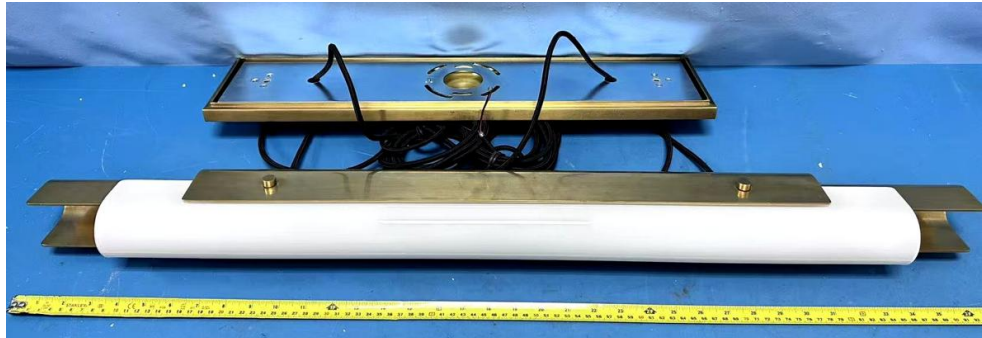
R_g 57

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

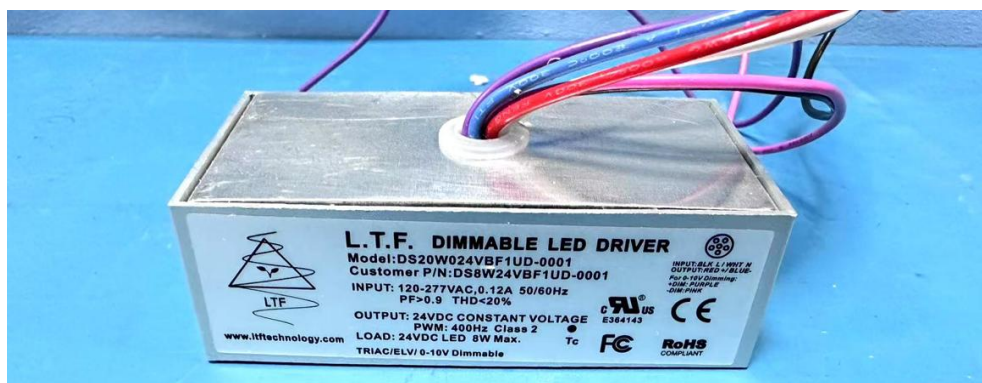
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TEST REPORT

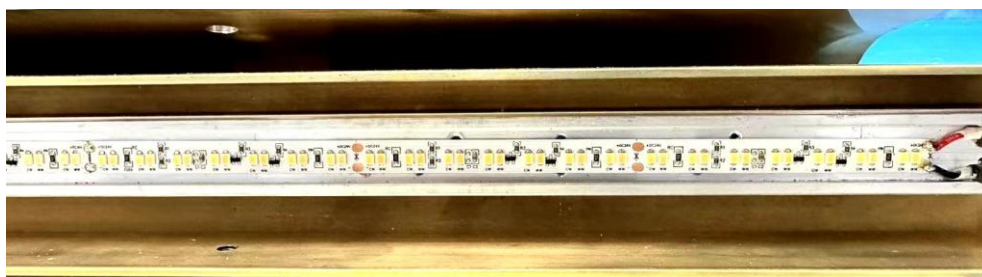
PRODUCT PICTURE (not to scale)



External view of AKLS675WDXXOP



View of LED driver DS8W24VBF1UD-0001



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 *****