

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

240124048GZU-005

ISSUE DATE

19 July 2024

REVISION DATE

Modification 1: 07 November 2024

NUMBER OF PAGES

13

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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Report No.: 240124048GZU-005
Modification 1: 07 November 2024

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. AKLS33627XX

Remark: "XX" are denoted appearance color.

RENDERED TO

Visual Comfort & Co.

Contact Name: Adam Same

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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: QGZ240122060.

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 AKLS33627XX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S240124048-004.

MANUFACTURER /FACTORY & ADDRESS: Dongguan Denghuang HomeFurnishing Co., Ltd.
No.5, Central Road, Yayuan IndustrialZone, Nancheng District
Dongguan City, Guangdong Province, 523000

DATES OF TESTS: 18 July 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:	AKLS33627XX
Description:	LED luminaire
Brand Name:	NA

Test Condition: 120V, 60Hz For AKLS33627XX

Criteria	Result
Total Lumen Output	325.4 lm
Total Power	8.7 W
Luminaire Efficacy	37.6 lm/W
S/MH(C0/180)	1.18
S/MH(C90/270)	0.38
Correlated Color Temperature (CCT)	2721 K
Color Rendering Index (CRI)	91
R9	57
Chromaticity Coordinate (x)	0.4472
Chromaticity Coordinate (y)	0.3905
Chromaticity Coordinate (u')	0.2634
Chromaticity Coordinate (v')	0.5175

Remark:

Revision history:

Modification 1: Based on and superseded the previous report 240124048GZU-005 issued on 19 July 2024, correct the manufacturer information on page 2 of the report, correct the applicant name on page 1 and 2 of the report.

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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	DS215S	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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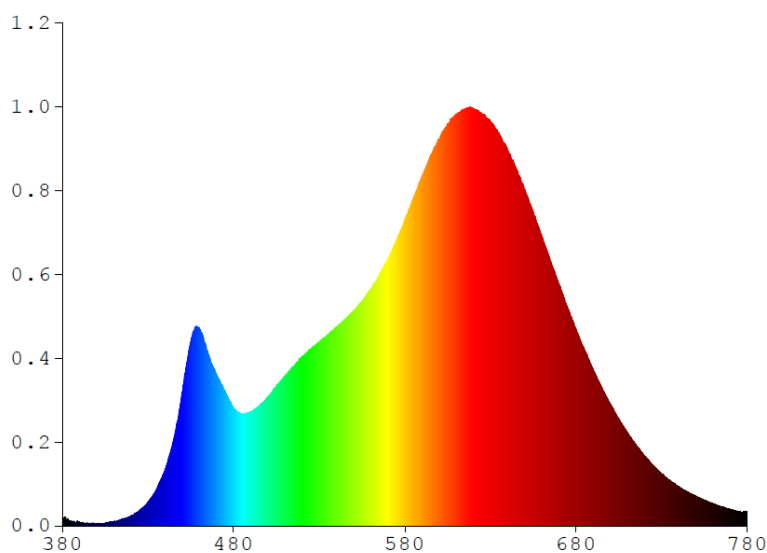
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For AKLS33627XX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.1790	480	2.1509	580	5.5765	680	3.5718	780	0.2655
385	0.0929	485	2.0258	585	5.9724	685	3.1939		
390	0.0660	490	2.0749	590	6.3715	690	2.8406		
395	0.0475	495	2.1843	595	6.7496	695	2.5112		
400	0.0510	500	2.3571	600	7.0435	700	2.2140		
405	0.0537	505	2.5463	605	7.3187	705	1.9451		
410	0.0822	510	2.7321	610	7.4982	710	1.6956		
415	0.1199	515	2.8981	615	7.5878	715	1.4774		
420	0.1801	520	3.0696	620	7.6036	720	1.2765		
425	0.2763	525	3.2188	625	7.5021	725	1.0982		
430	0.4333	530	3.3391	630	7.3579	730	0.9430		
435	0.6666	535	3.4876	635	7.1471	735	0.8180		
440	1.0257	540	3.6235	640	6.8381	740	0.7127		
445	1.5808	545	3.7636	645	6.5062	745	0.6178		
450	2.4270	550	3.9045	650	6.1183	750	0.5410		
455	3.3746	555	4.0854	655	5.6979	755	0.4665		
460	3.5953	560	4.3000	660	5.2766	760	0.4066		
465	3.1529	565	4.5519	665	4.8286	765	0.3519		
470	2.7561	570	4.8637	670	4.3992	770	0.3030		
475	2.4479	575	5.1849	675	3.8928	775	0.2596		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKLS33627XX

Total operation burning time: 60 minutes
Stabilization time: 30 minutes

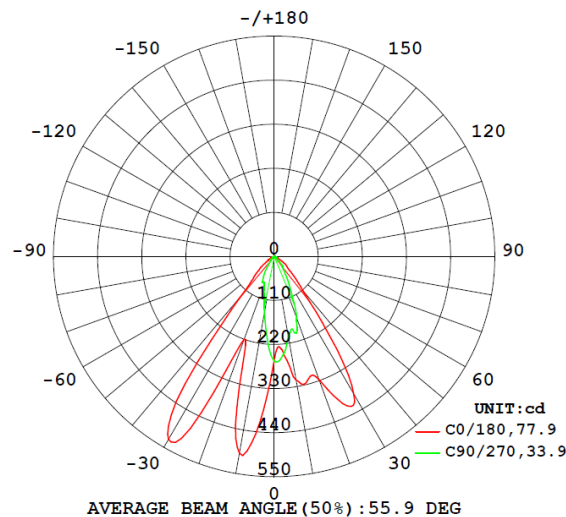
Photometric Measurements at 25°C – Distribution Method

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')
AKLS33627XX								
S2401240 48-004	base-up	2721	91	57	0.4472	0.3905	0.2634	0.5175

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)
AKLS33627XX							
S2401240 48-004	base-up	120.1	73.3	8.7	0.984	325.4	37.6

Intensity (Candlepower) Summary at 25°C - Candelas



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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKLS33627XX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	258.1	258.3	259.8	260.0	260.5
5	234.0	250.3	255.6	250.9	248.0
10	312.9	352.4	357.2	281.8	202.4
15	320.9	283.1	381.4	346.3	196.9
20	327.0	190.6	354.8	317.3	164.3
25	404.9	230.3	346.1	238.1	105.9
30	397.4	340.9	287.1	135.2	66.7
35	241.0	295.3	188.7	79.5	40.7
40	111.9	157.0	95.8	51.0	32.6
45	69.4	85.1	60.2	33.7	18.9
50	43.6	50.3	36.6	25.5	9.9
55	33.8	38.6	29.7	8.9	7.2
60	13.9	20.5	7.7	5.8	5.9
65	8.8	12.2	6.9	5.7	5.1
70	7.2	8.5	4.2	3.0	3.3
75	4.8	4.3	1.2	1.0	0.9
80	1.3	0.9	0.7	0.6	0.5
85	0.5	0.3	0.2	0.2	0.2
90	0.0	0.0	0.0	0.0	0.0
95	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0
105	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0
115	0.0	0.0	0.0	0.0	0.0
120	0.0	0.0	0.0	0.0	0.0
125	0.1	0.1	0.1	0.0	0.0
130	0.1	0.1	0.1	0.1	0.1
135	0.1	0.2	0.2	0.1	0.1
140	0.2	0.2	0.2	0.2	0.2
145	0.2	0.3	0.3	0.3	0.3
150	0.2	0.3	0.3	0.4	0.3
155	0.3	0.3	0.4	0.4	0.4
160	0.3	0.3	0.4	0.5	0.5
165	0.3	0.4	0.4	0.5	0.5
170	0.3	0.4	0.5	0.5	0.5
175	0.4	0.4	0.4	0.5	0.5
180	0.4	0.4	0.4	0.4	0.4

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

TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKLS33627XX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
AKLS33627XX		
0-30	196.7	60.4
0-40	271.3	83.4
0-60	314.8	96.7
0-90	324.9	99.8
60-90	10.1	3.1
0-180	325.4	100.0

Beam Angle

Total Beam Angle(°)

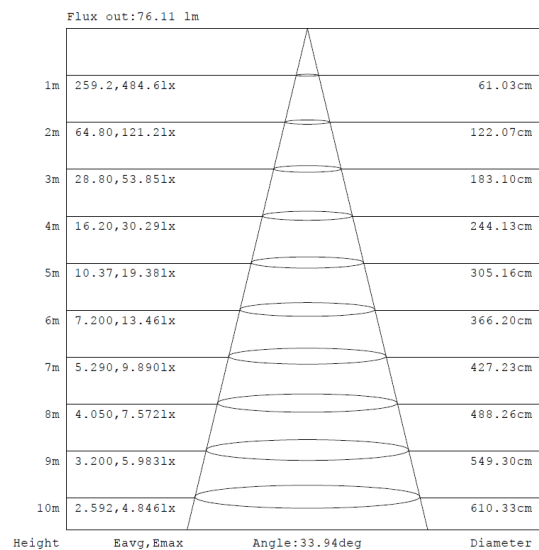
55.9

Illumination Plots

Model No.: AKLS33627XX

Mount Height: 2.5 m

Illuminance - Cone of Light



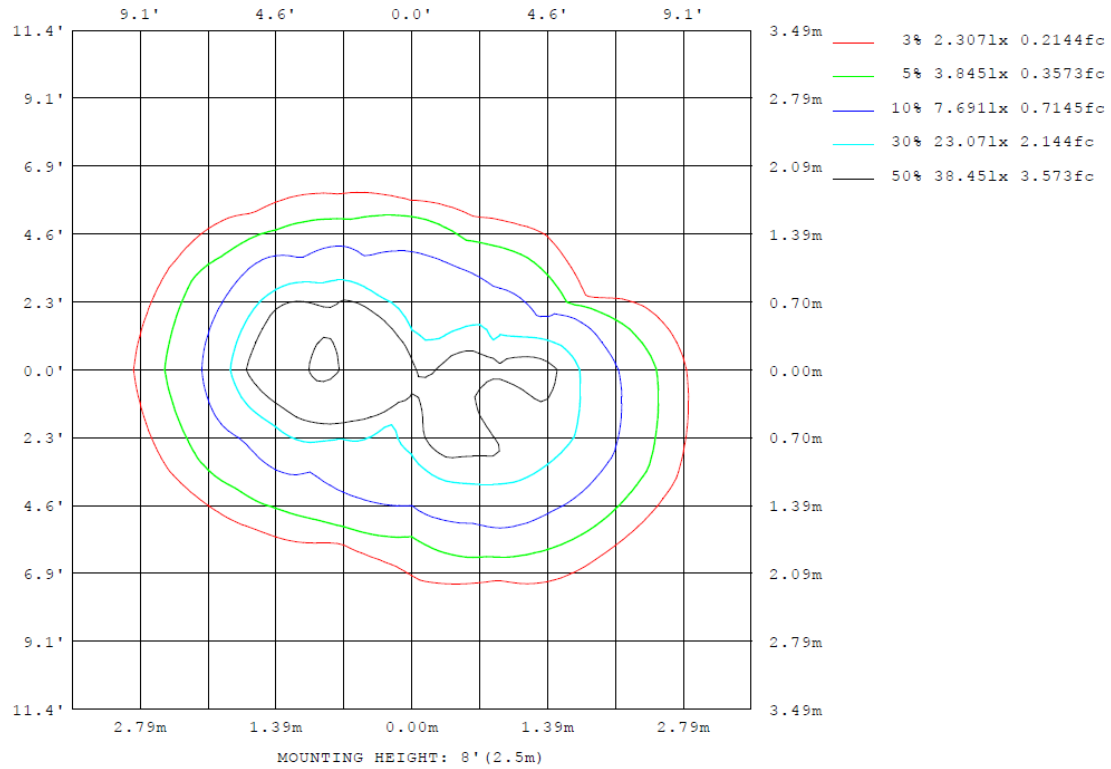
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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKLS33627XX

Model No.: AKLS33627XX
Mount Height: 2.5 m
Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKLS33627XX

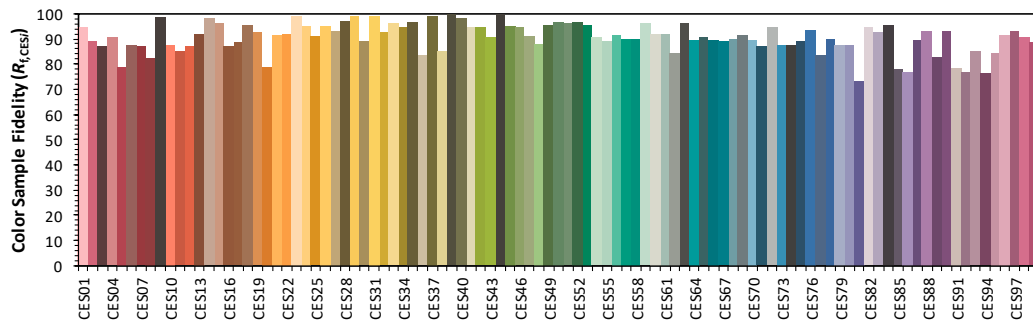
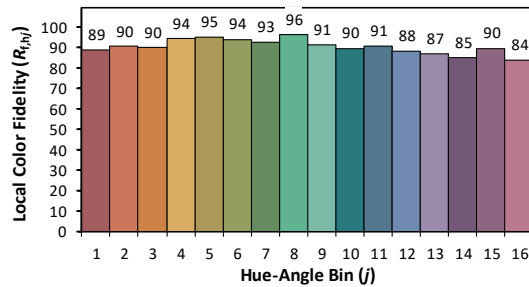
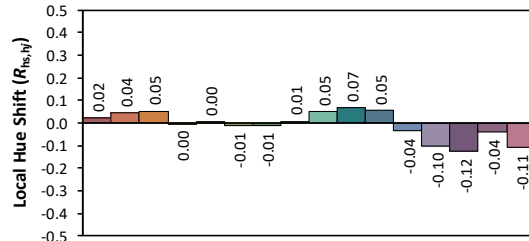
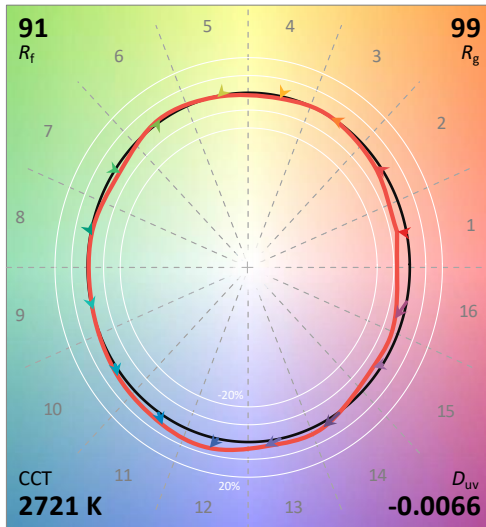
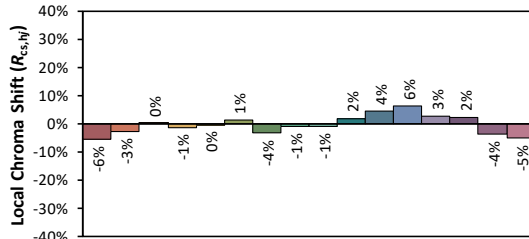
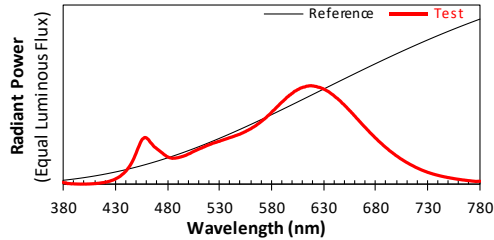
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort and Company

Date: 2024/7/18

Model: AKLS33627XX



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

x 0.4472
 y 0.3905
 u' 0.2634
 v' 0.5175

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.

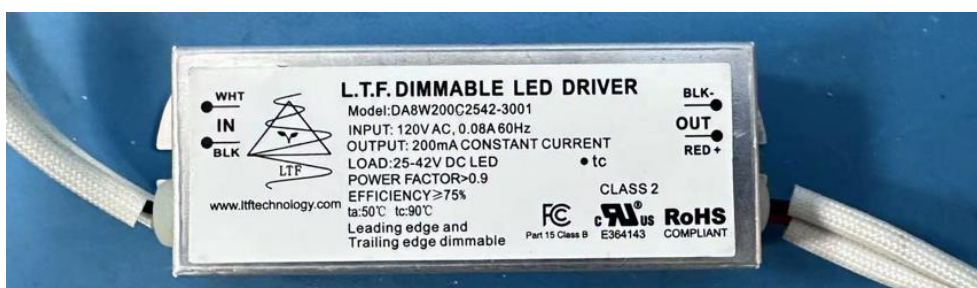
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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of AKLS33627XX



View of LED driver DA8W200C2542-3001

***** 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 *****