

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250623168GZU-002

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REVISION DATE

None

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Report format for LM-79_G

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Report No.: 250623168GZU-002

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. AKPD683WDXX

Remark: "XX" represents the color of the appearance.

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: 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 AKPD683WDXX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250623168-002.
<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>	08 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

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TEST REPORT

SUMMARY

Model Number:	AKPD683WDXX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For AKPD683WDXX

Criteria	Result
Total Lumen Output	1120.8 lm
Total Power	11.7 W
Luminaire Efficacy	95.8 lm/W
S/MH(C0/180)	1.22
S/MH(C90/270)	1.26
Correlated Color Temperature (CCT)	3173 K
Color Rendering Index (CRI)	93
R9	79
Chromaticity Coordinate (x)	0.4232
Chromaticity Coordinate (y)	0.3954
Chromaticity Coordinate (u')	0.2454
Chromaticity Coordinate (v')	0.5159

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: 3.958A DC

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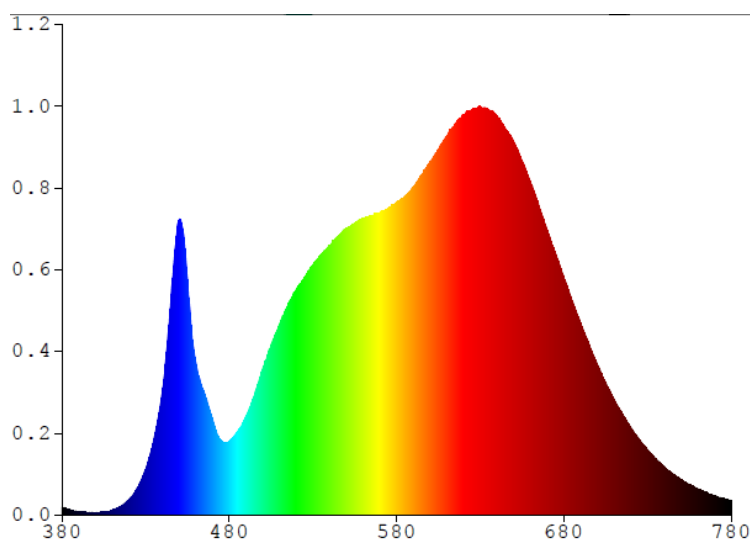
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For AKPD683WDXX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	1.0768	480	10.1510	580	42.8940	680	32.5900	780	1.9767
385	0.6841	485	11.4620	585	43.7420	685	29.3540		
390	0.4126	490	13.6000	590	44.9250	690	26.3010		
395	0.3455	495	16.4300	595	46.6220	695	23.4310		
400	0.3630	500	20.0830	600	48.4410	700	20.6450		
405	0.4473	505	23.2990	605	50.1920	705	18.1380		
410	0.6523	510	26.1550	610	51.9740	710	15.8630		
415	1.2116	515	28.7920	615	53.6470	715	13.8440		
420	2.0699	520	30.9010	620	54.8430	720	12.0260		
425	3.6761	525	32.5650	625	55.5180	725	10.3650		
430	6.2484	530	34.3400	630	55.9520	730	8.9306		
435	10.4140	535	35.7680	635	55.6840	735	7.7271		
440	17.0970	540	36.9270	640	54.7290	740	6.6225		
445	29.1600	545	38.1870	645	52.9670	745	5.6814		
450	40.4770	550	39.2310	650	51.2290	750	4.8931		
455	31.9890	555	40.0250	655	48.6040	755	4.2225		
460	20.9150	560	40.6980	660	45.7400	760	3.6178		
465	16.7320	565	41.0420	665	42.4250	765	3.1187		
470	13.0460	570	41.4550	670	39.0650	770	2.6540		
475	10.2270	575	42.0930	675	35.2360	775	2.3038		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKPD683WDXX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

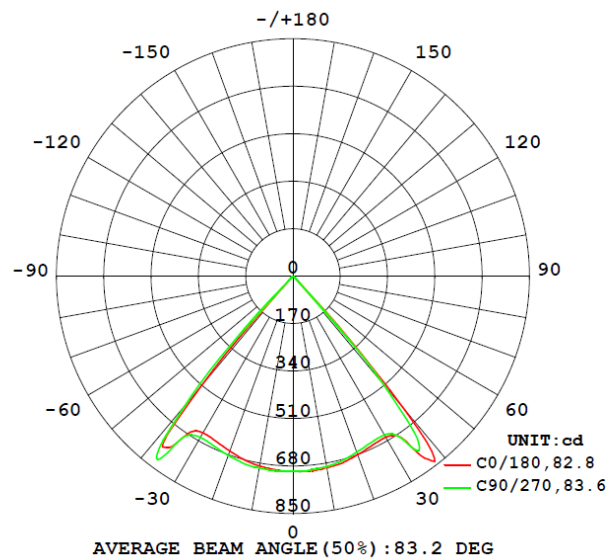
Photometric Measurements at 25°C – Distribution Method

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')
AKPD683WDXX								
S2506231 68-002	base-up	3173	93	79	0.4232	0.3954	0.2454	0.5159

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)
AKPD683WDXX							
S2506231 68-002	base-up	120.0	98.3	11.7	0.992	1120.8	95.8

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKPD683WDXX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	698.9	699.3	698.1	698.3	698.8
5	700.3	699.4	698.4	697.8	696.7
10	696.5	694.9	694.3	694.0	692.2
15	691.5	688.7	687.6	686.9	683.9
20	680.2	677.3	676.1	673.3	669.8
25	669.7	665.9	664.1	660.9	658.6
30	665.8	665.2	660.7	658.7	656.9
35	755.1	803.1	779.3	762.7	754.1
40	626.5	506.4	511.3	496.2	502.7
45	45.2	24.7	33.8	33.5	29.5
50	10.1	8.8	7.7	7.8	8.6
55	5.6	4.2	3.9	3.9	4.3
60	3.5	2.7	2.5	2.4	2.6
65	2.5	2.0	1.8	1.7	1.9
70	2.0	1.7	1.5	1.5	1.7
75	1.8	1.7	1.5	1.5	1.6
80	0.0	0.0	0.0	0.0	0.0
85	0.0	0.0	0.0	0.0	0.0
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	0.1	0.1	0.1	0.1	0.1
120	0.2	0.2	0.2	0.2	0.2
125	0.3	0.3	0.3	0.3	0.3
130	0.4	0.4	0.4	0.4	0.4
135	0.5	0.5	0.5	0.5	0.5
140	0.6	0.6	0.6	0.6	0.6
145	0.7	0.7	0.7	0.7	0.7
150	0.8	0.8	0.8	0.8	0.8
155	0.8	0.9	0.9	0.9	0.9
160	0.9	0.9	0.9	0.9	0.9
165	1.0	1.0	1.0	1.0	1.0
170	1.0	1.0	1.0	1.0	1.0
175	1.0	1.0	1.0	1.0	1.0
180	0.9	0.9	0.9	0.9	1.0

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKPD683WDXX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
AKPD683WDXX		
0-30	567.8	50.7
0-40	1011.8	90.3
0-60	1115.5	99.5
0-90	1119.3	99.9
60-90	3.8	0.4
0-180	1120.8	100.0

Beam Angle

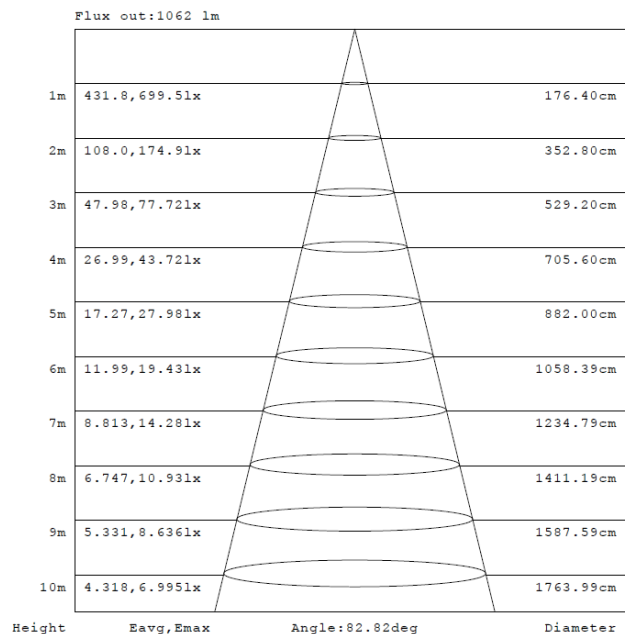
Total Beam Angle(°)
83.2

Illumination Plots

Model No.: AKPD683WDXX

Mount Height: 2.5 m

Illuminance - Cone of Light



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TEST REPORT

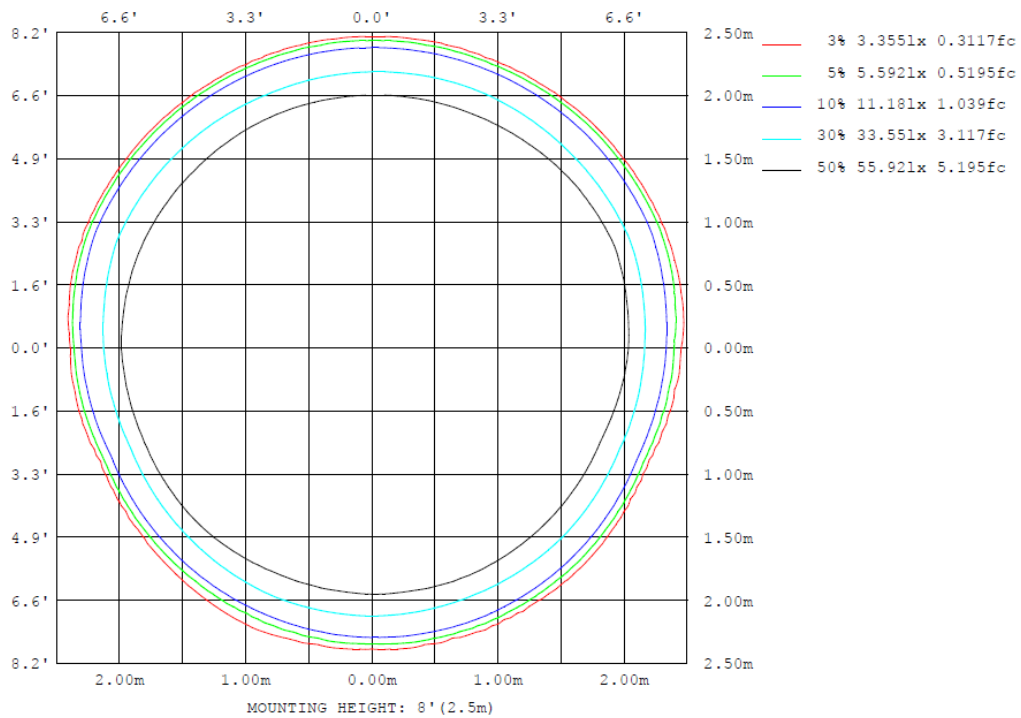
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKPD683WDXX

Model No.: AKPD683WDXX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For AKPD683WDXX

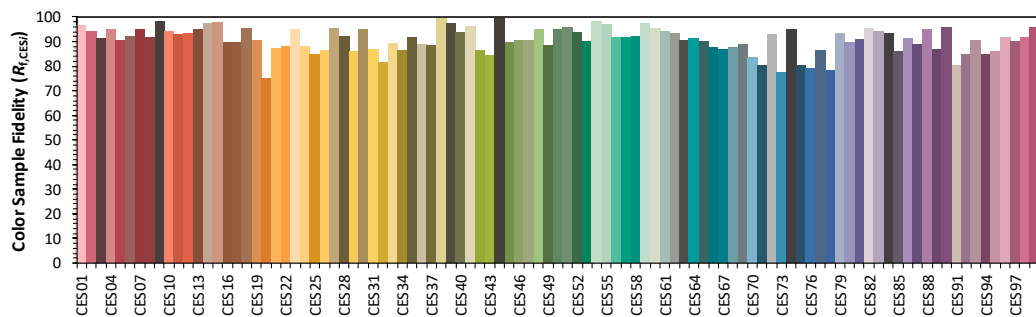
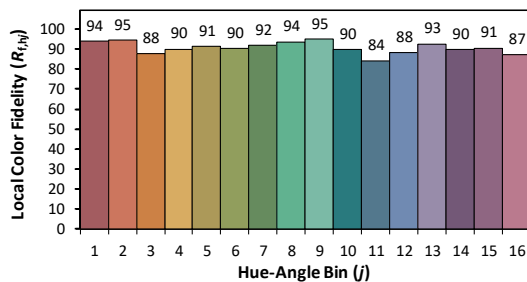
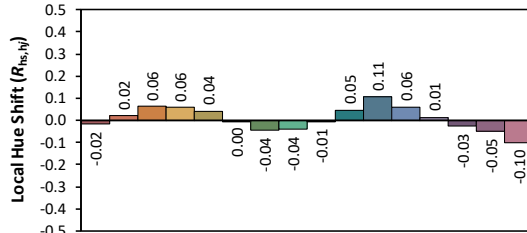
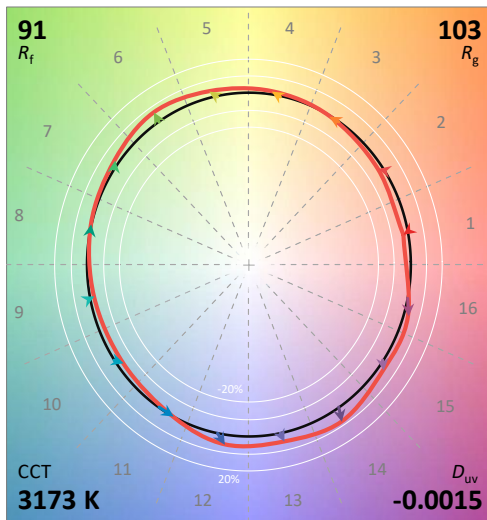
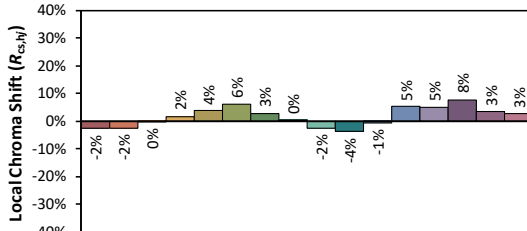
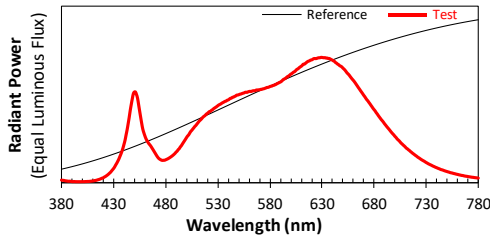
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/7/8

Model: AKPD683WDXX



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

x 0.4232
 y 0.3954
 u' 0.2454
 v' 0.5159

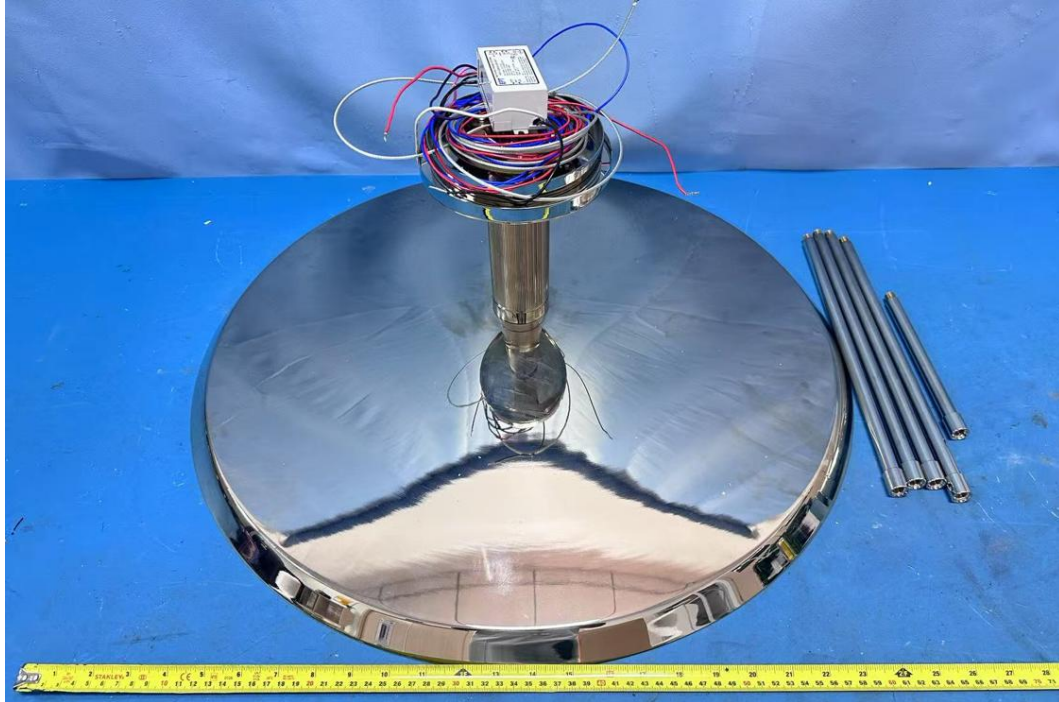
CIE 13.3-1995
(CRI)
 R_a 93
 R_g 79

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

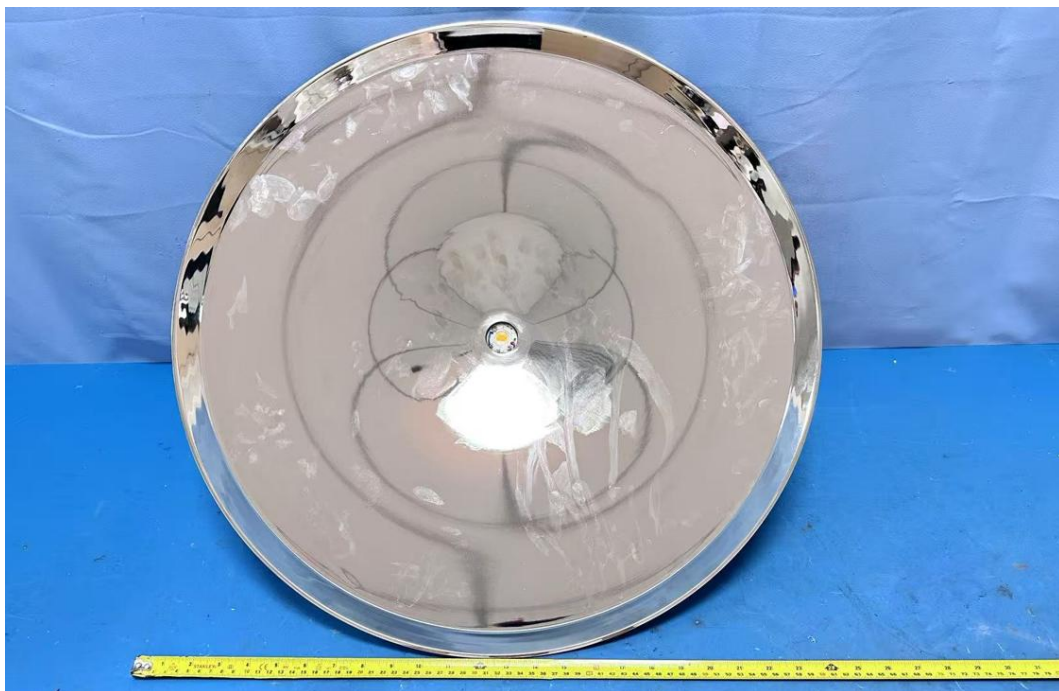
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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of AKPD683WDXX

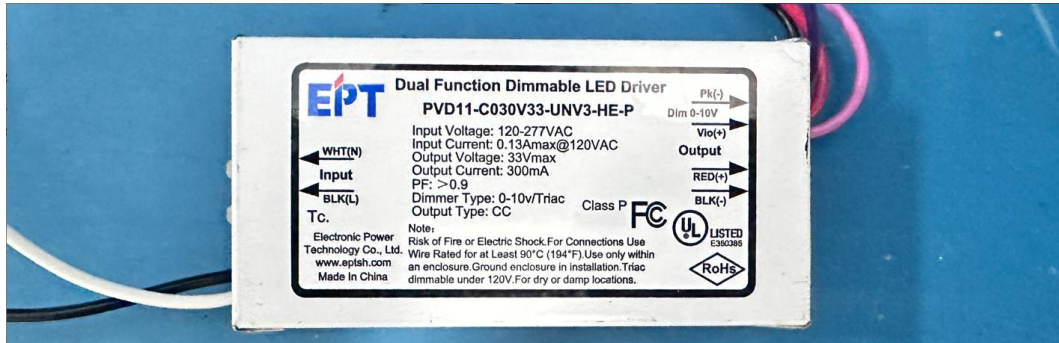


External view of AKPD683WDXX

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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver PVD11-C030V33-UNV3-HE-P



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 *****