

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

250227200GZU-015

ISSUE DATE

02 April 2025

REVISION DATE

None

NUMBER OF PAGES

13

DOCUMENT CONTROL NUMBER

Report format for LM-79_G

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Report No.: 250227200GZU-015

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. KWTB49427CEXXX

Remark: "XXX" 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: QGZ250224121.

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-79-24 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

DESCRIPTION OF SAMPLE: The client submitted one sample of model KWTB49427CEXXX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250227200-005.

MANUFACTURER /FACTORY & ADDRESS: Guangzhou Xiongyi Precision Metalworking Co., Ltd
Hantang Industrial Zone, Langbian Village, Shiji Town, Panyu District, Guangzhou City, Guangdong Province, China 511450

DATES OF TESTS: 21 March 2025

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:	KWTB49427CEXXX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For KWTB49427CEXXX

Criteria	Result
Total Lumen Output	731.6 lm
Total Power	9.5 W
Luminaire Efficacy	77.0 lm/W
S/MH(C0/180)	1.22
S/MH(C90/270)	1.18
Correlated Color Temperature (CCT)	2616 K
Color Rendering Index (CRI)	92
R9	54
Chromaticity Coordinate (x)	0.4680
Chromaticity Coordinate (y)	0.4140
Chromaticity Coordinate (u')	0.2662
Chromaticity Coordinate (v')	0.5299

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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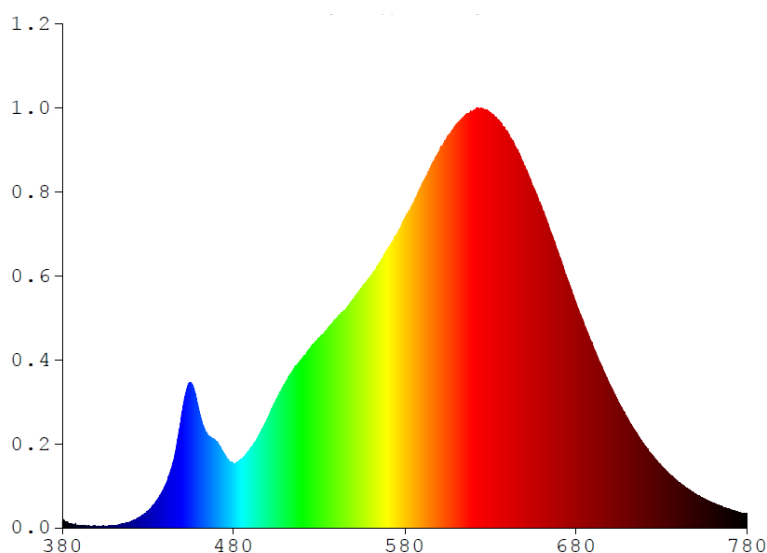
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For KWTB49427CEXXX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.6563	480	6.8085	580	32.8230	680	23.7630	780	1.5587
385	0.3711	485	7.3694	585	34.4930	685	21.3640		
390	0.3049	490	8.4910	590	36.4990	690	19.1580		
395	0.2253	495	9.9015	595	38.2420	695	17.0990		
400	0.1428	500	11.6860	600	39.9540	700	15.0310		
405	0.1620	505	13.6290	605	41.5470	705	13.1840		
410	0.2592	510	15.3180	610	42.7630	710	11.5910		
415	0.4024	515	16.8090	615	43.6830	715	10.1310		
420	0.6662	520	17.9660	620	44.2540	720	8.7280		
425	1.1057	525	19.1130	625	44.4830	725	7.5779		
430	1.8096	530	20.1070	630	44.0220	730	6.4910		
435	2.8406	535	21.1570	635	43.1910	735	5.6125		
440	4.4770	540	22.1870	640	41.9090	740	4.8257		
445	7.1598	545	23.0630	645	40.1330	745	4.1459		
450	12.2860	550	24.2010	650	38.3490	750	3.5482		
455	15.4030	555	25.5060	655	36.0630	755	3.0636		
460	12.2280	560	26.6640	660	33.9340	760	2.6052		
465	9.8127	565	28.0030	665	31.4600	765	2.2651		
470	9.1370	570	29.5550	670	28.8830	770	1.9476		
475	7.6714	575	31.0580	675	25.7970	775	1.6638		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB49427CEXXX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

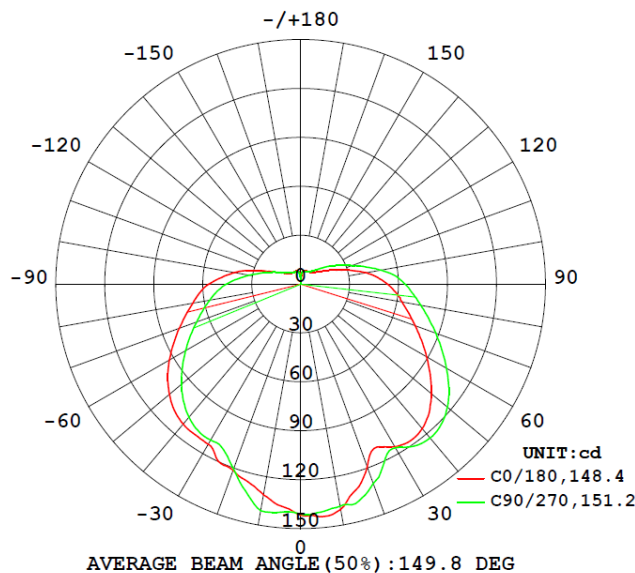
Photometric Measurements at 25°C – Distribution Method

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')
KWTB49427CEXXX								
S2502272 00-005	base-up	2616	92	54	0.4680	0.4140	0.2662	0.5299

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)
KWTB49427CEXXX							
S2502272 00-005	base-up	120.1	92.8	9.5	0.852	731.6	77.0

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB49427CEXXX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	141.7	141.6	141.6	140.6	141.0
5	143.0	141.9	140.5	140.4	140.3
10	140.4	143.5	144.8	142.3	138.2
15	130.7	140.1	151.7	146.6	137.7
20	119.2	132.7	153.6	140.0	130.1
25	110.2	130.3	153.0	136.8	120.9
30	115.1	124.7	154.0	133.9	115.9
35	117.3	118.5	146.6	127.9	121.2
40	115.7	111.8	140.5	118.5	123.3
45	111.2	105.5	132.2	113.7	121.8
50	104.6	99.1	120.2	109.9	117.3
55	96.8	93.6	109.8	103.9	110.7
60	89.1	86.8	104.5	97.5	103.2
65	81.6	79.8	100.1	90.3	95.4
70	74.6	73.0	90.5	83.3	88.0
75	68.4	66.6	86.4	76.6	81.1
80	62.9	60.9	82.5	70.2	74.7
85	58.3	56.1	74.2	64.6	69.1
90	53.2	51.4	64.9	60.1	64.1
95	47.5	46.1	52.1	55.0	58.5
100	40.8	39.6	43.0	47.4	50.1
105	32.7	32.4	38.7	38.5	41.3
110	25.7	26.2	29.7	30.7	33.8
115	20.5	21.5	18.1	24.8	27.8
120	16.6	17.7	15.3	20.1	22.9
125	13.6	14.6	13.8	16.4	18.5
130	11.5	12.2	12.6	13.5	14.9
135	10.2	10.6	11.6	11.6	12.3
140	9.6	9.7	10.5	10.4	10.6
145	9.2	9.3	9.6	9.6	9.7
150	9.0	9.1	9.1	9.0	9.1
155	8.9	8.9	8.7	8.6	8.8
160	8.8	8.6	8.4	8.3	8.4
165	8.7	8.4	8.1	8.0	8.1
170	8.3	7.9	8.0	7.8	7.8
175	5.3	5.3	5.4	6.1	6.3
180	0.0	0.0	1.1	2.4	2.6

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB49427CEXXX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
KWTB49427CEXXX		
0-30	112.4	15.4
0-40	189.4	25.9
0-60	363.0	49.6
0-90	587.7	80.3
60-90	224.7	30.7
0-180	731.6	100.0

Beam Angle

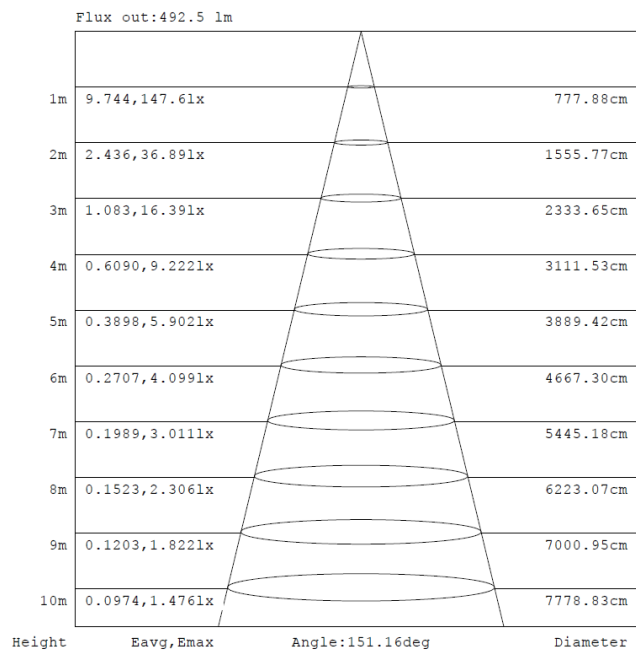
Total Beam Angle(°)
149.8

Illumination Plots

Model No.: KWTB49427CEXXX

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

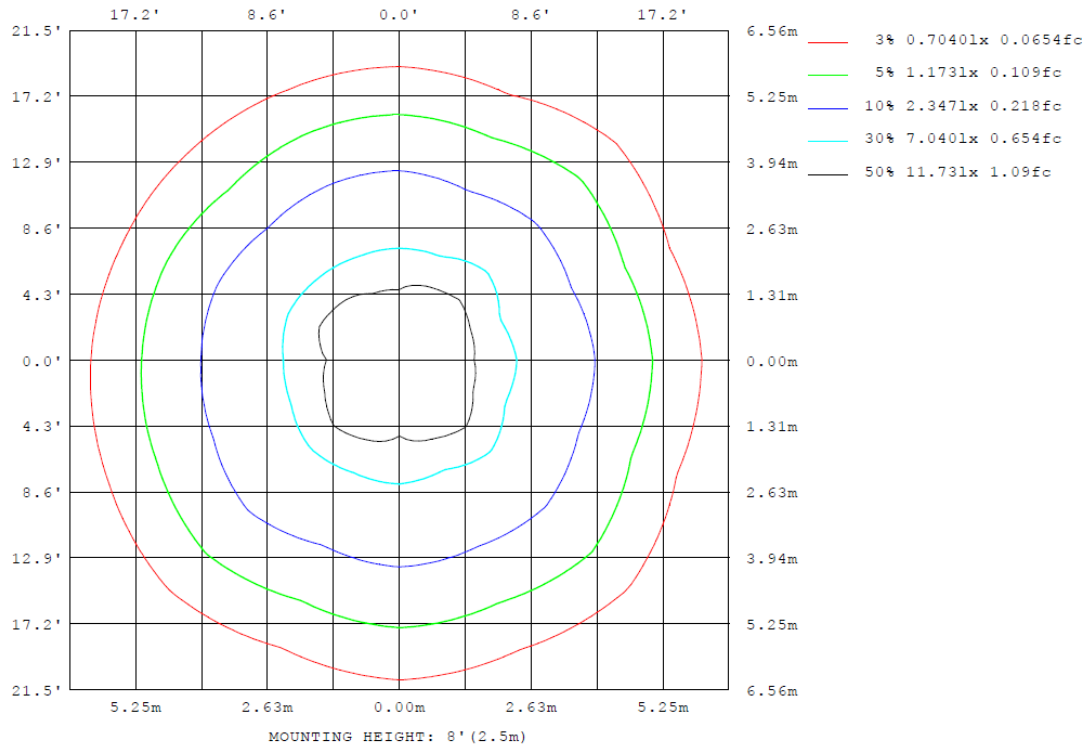
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB49427CEXXX

Model No.: KWTB49427CEXXX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For KWTB49427CEXXX

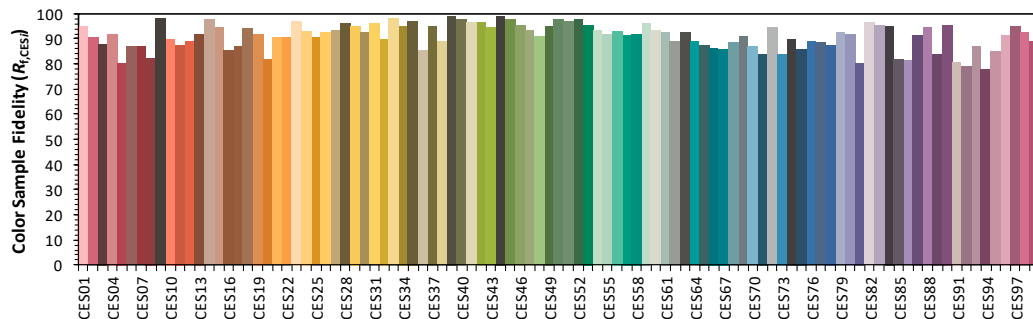
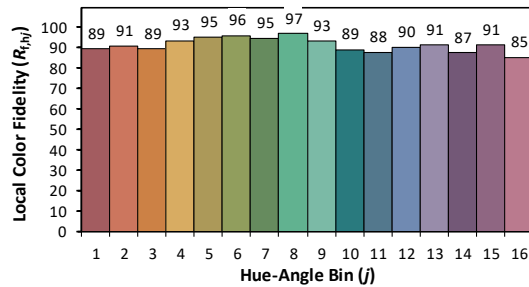
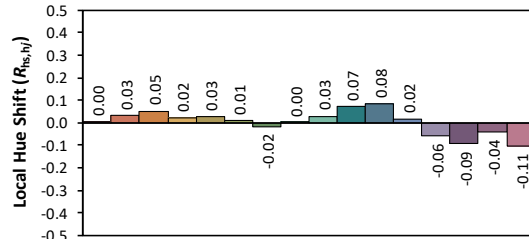
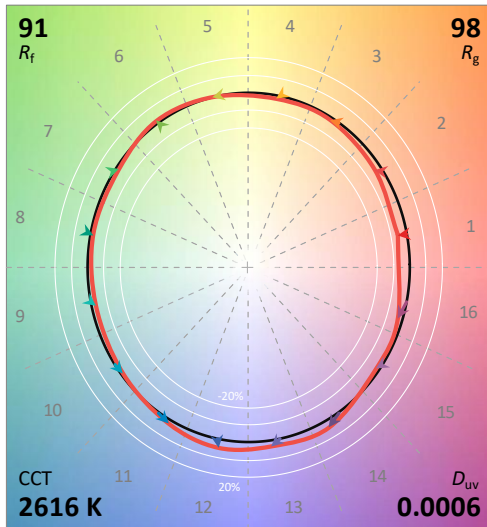
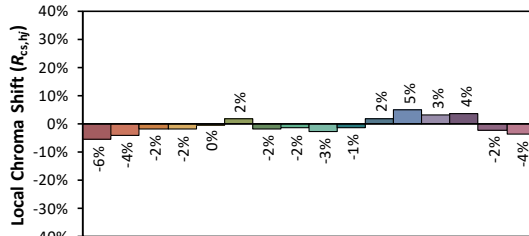
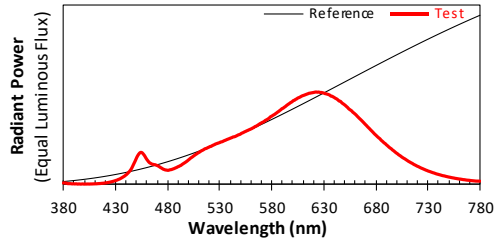
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/3/21

Model: KWTB49427CEXXX



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

x 0.4680
 y 0.4140
 u' 0.2662
 v' 0.5299

CIE 13.3-1995
(CRI)

R_a 92

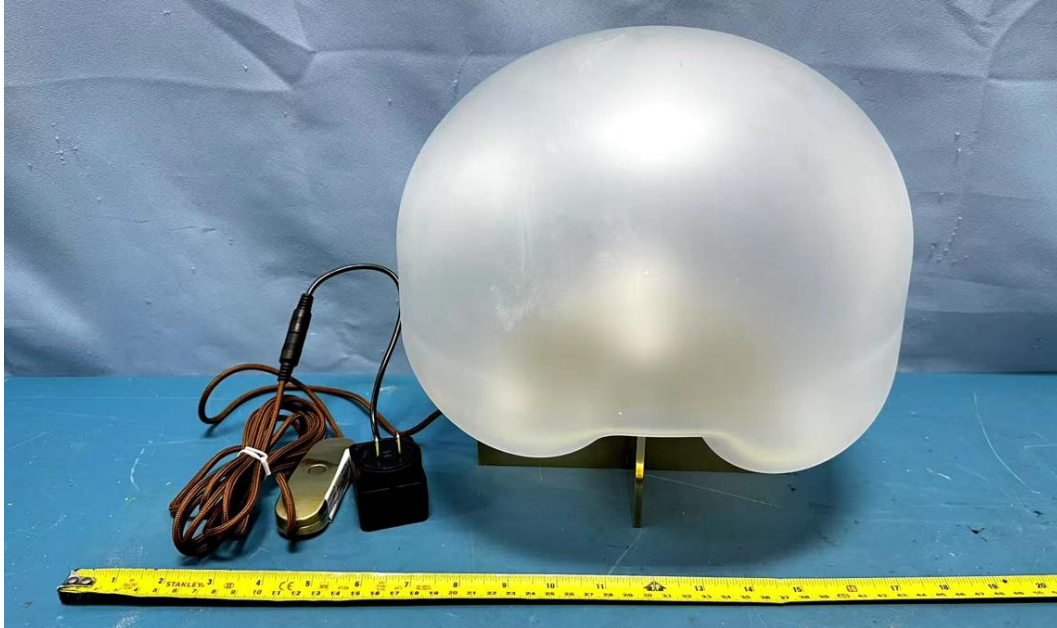
R_g 54

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 KWTB49427CEXXX



View of LED driver A122-1201000ID

***** 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 *****