

Visual Comfort & Co.

TEST REPORT

SCOPE OF WORK

LM-79 testing report

REPORT NUMBER

251027067GZU-005

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None

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Report No.: 251027067GZU-005

TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. MDOWS86227XXX

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

RENDERED TO

Visual Comfort & Co.

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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: QGZ251023107.

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 MDOWS86227XXX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S251027067-013.

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: 20 November 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:	MDOWS86227XXX
Description:	LED Luminaries
Brand Name:	--

Test Condition: 120V, 60Hz For MDOWS86227XXX

Criteria	Result
Total Lumen Output	67.1 lm
Total Power	15.6 W
Luminaire Efficacy	4.3 lm/W
S/MH(C0/180)	1.28
S/MH(C90/270)	0.88
Correlated Color Temperature (CCT)	2920 K
Color Rendering Index (CRI)	91
R9	55
Chromaticity Coordinate (x)	0.4468
Chromaticity Coordinate (y)	0.4141
Chromaticity Coordinate (u')	0.2526
Chromaticity Coordinate (v')	0.5267

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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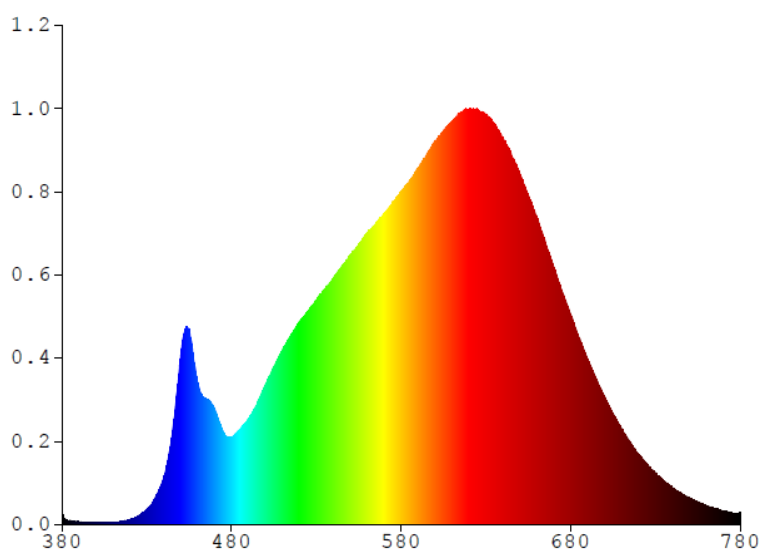
TEST REPORT

RESULTS OF TESTS

Test Condition: 120V, 60Hz For MDOWS86227XXX

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	0.6688	480	8.3545	580	32.0450	680	20.2340	780	1.1179
385	0.3644	485	9.1435	585	33.1260	685	17.9820		
390	0.2198	490	10.1830	590	34.3450	690	15.9350		
395	0.2146	495	11.6160	595	35.5820	695	14.0590		
400	0.1459	500	13.4520	600	36.9810	700	12.3500		
405	0.1636	505	15.2230	605	37.8860	705	10.6950		
410	0.1866	510	16.7760	610	38.8080	710	9.2206		
415	0.3053	515	18.1900	615	39.6820	715	7.9513		
420	0.5085	520	19.5400	620	39.9890	720	6.8040		
425	0.8250	525	20.4700	625	39.9470	725	5.8155		
430	1.4512	530	21.6580	630	39.5600	730	4.9645		
435	2.5746	535	22.6770	635	38.5800	735	4.2407		
440	4.5338	540	23.6840	640	37.2990	740	3.5571		
445	8.6378	545	24.8540	645	35.6270	745	3.0539		
450	16.1970	550	25.9520	650	33.8110	750	2.5875		
455	18.7120	555	26.9620	655	31.7130	755	2.1823		
460	13.7000	560	28.1070	660	29.6180	760	1.8344		
465	12.0780	565	28.9750	665	27.2680	765	1.5684		
470	11.1250	570	29.9420	670	24.8120	770	1.3290		
475	8.9645	575	31.0890	675	22.0350	775	1.1262		



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDOWS86227XXX

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

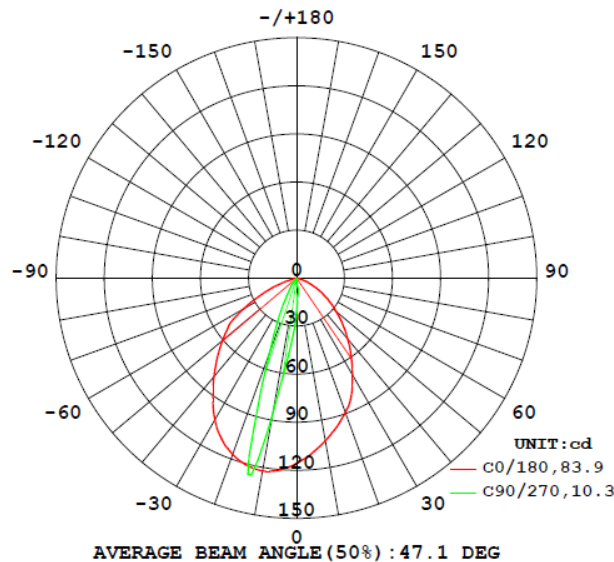
Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperature (K)	CRI	R9	CIE 31'	CIE 31'	CIE 76'	CIE 76'
					Chromaticit y	Chromaticit y	Chromaticit y	Chromaticit y
					Coordinate (x)	Coordinate (y)	Coordinate (u')	Coordinate (v')
MDOWS86227XXX								
S2510270 67-013	base-up	2920	91	55	0.4468	0.4141	0.2526	0.5267

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)
MDOWS86227XXX							
S2510270 67-013	base-up	120.0	131.0	15.6	0.989	67.1	4.3

Intensity (Candlepower) Summary at 25°C - Candelas



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDOWS86227XXX

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	115.6	60.6	42.8	27.2	20.9
5	109.9	45.6	27.3	14.2	10.1
10	103.2	35.3	16.6	7.0	4.0
15	96.3	27.0	9.8	2.9	2.0
20	89.3	19.1	5.1	1.6	1.2
25	81.1	12.5	2.8	1.0	0.7
30	70.0	7.9	1.6	0.6	0.4
35	59.5	4.1	1.0	0.3	0.2
40	49.9	2.2	0.6	0.2	0.1
45	40.7	1.3	0.3	0.1	0.0
50	32.4	0.8	0.1	0.0	0.0
55	24.7	0.4	0.1	0.0	0.0
60	17.8	0.2	0.0	0.0	0.0
65	11.8	0.1	0.0	0.0	0.0
70	6.7	0.0	0.0	0.0	0.0
75	2.7	0.0	0.0	0.0	0.0
80	0.6	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	0.0	0.0	0.0	0.0	0.0
120	0.0	0.0	0.0	0.0	0.0
125	0.0	0.0	0.0	0.0	0.0
130	0.0	0.0	0.0	0.0	0.0
135	0.0	0.0	0.0	0.0	0.0
140	0.0	0.0	0.0	0.0	0.0
145	0.0	0.0	0.0	0.0	0.0
150	0.0	0.0	0.0	0.0	0.0
155	0.0	0.0	0.0	0.0	0.0
160	0.0	0.0	0.0	0.0	0.0
165	0.0	0.0	0.0	0.0	0.0
170	0.0	0.0	0.0	0.0	0.0
175	0.0	0.0	0.0	0.0	0.0
180	0.0	0.0	0.0	0.0	0.0

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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDOWS86227XXX

Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
MDOWS86227XXX		
0-30	38.3	57.2
0-40	49.8	74.3
0-60	63.7	95.0
0-90	67.1	100.0
60-90	3.4	5.0
0-180	67.1	100.0

Beam Angle

Total Beam Angle(°)

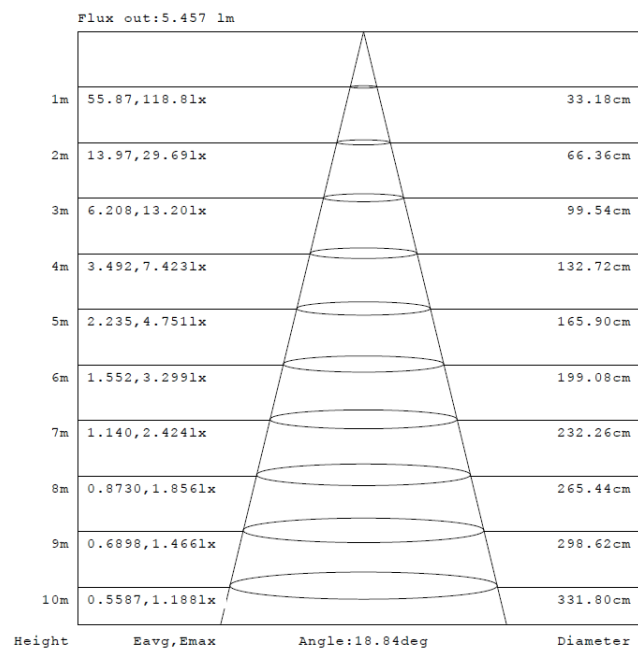
47.1

Illumination Plots

Model No.: MDOWS86227XXX

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

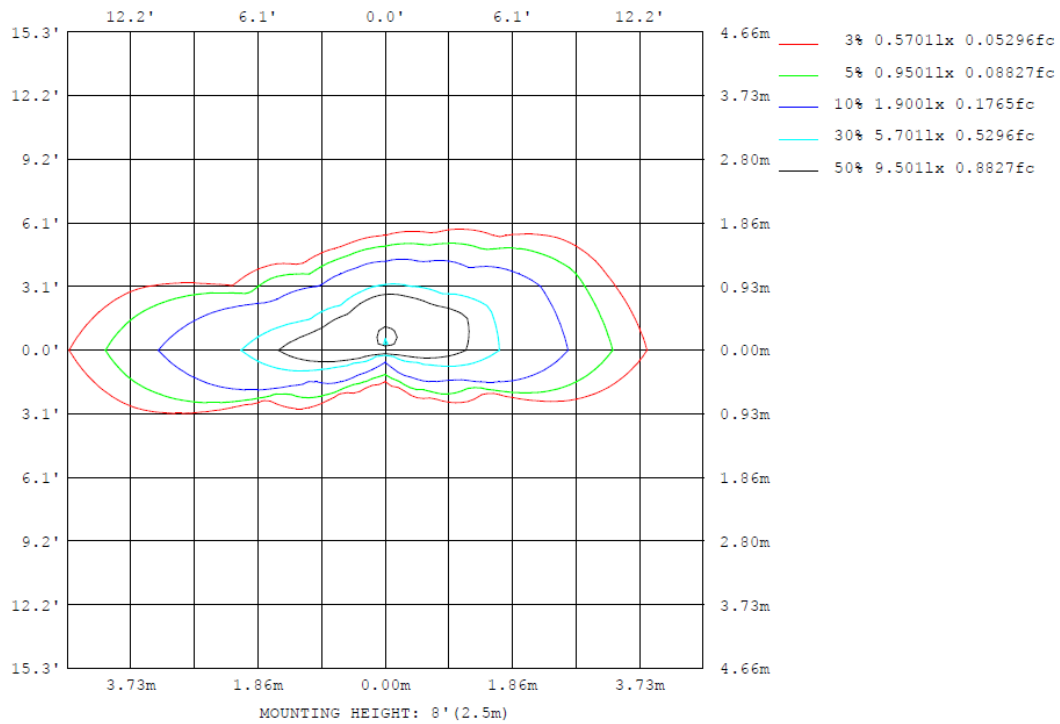
RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDOWS86227XXX

Model No.: MDOWS86227XXX

Mount Height: 2.5 m

Isoillumination Plot



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TEST REPORT

RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDOWS86227XXX

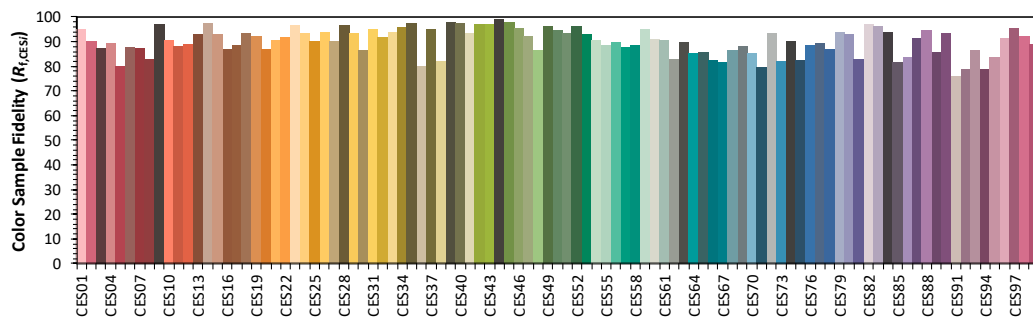
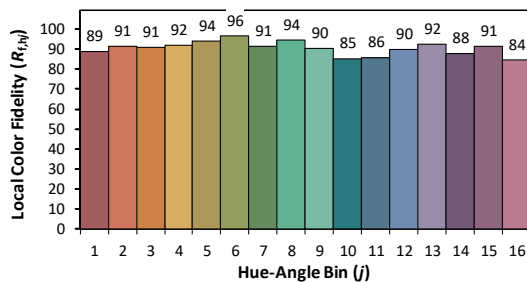
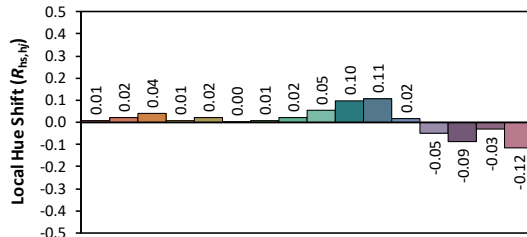
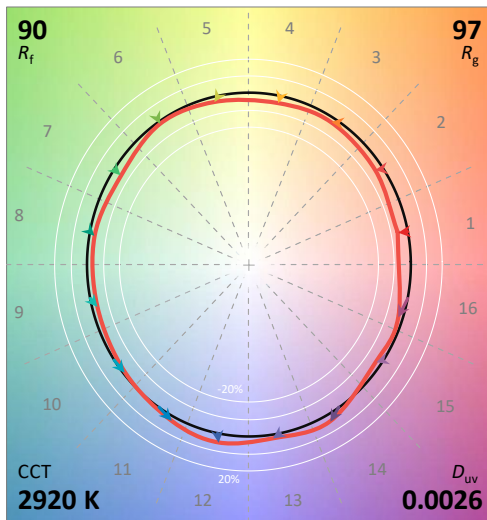
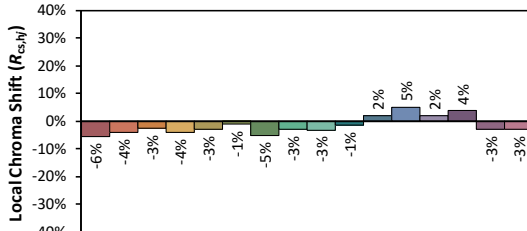
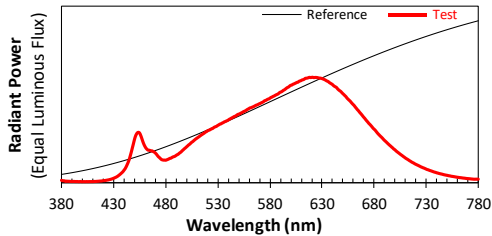
ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/11/20

Model: MDOWS86227XXX



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

x 0.4468
 y 0.4141
 u' 0.2526
 v' 0.5267

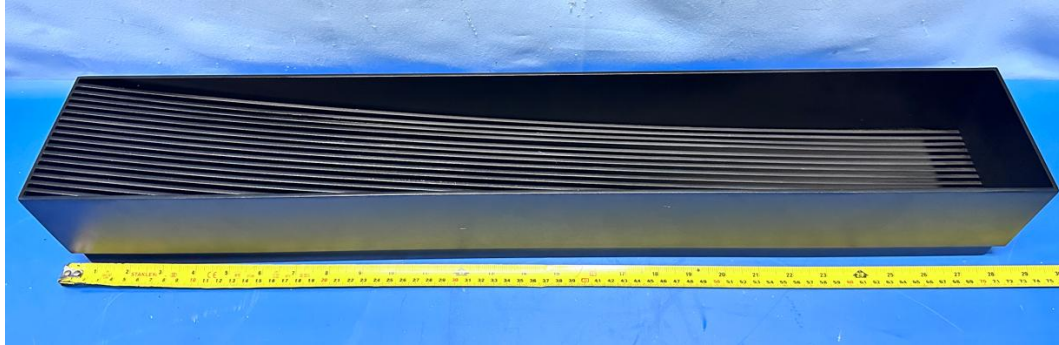
CIE 13.3-1995
(CRI)
 R_a 91
 R_g 55

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

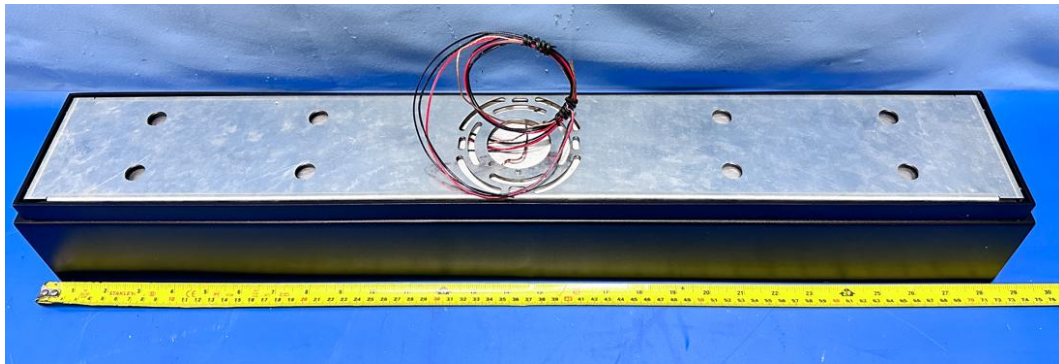
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TEST REPORT

PRODUCT PICTURE (not to scale)



External view of MDOWS86227XXX



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TEST REPORT

PRODUCT PICTURE (not to scale)



View of LED driver PTB20W-0400-38-VCC1(AB0258)



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 *****