

# Visual Comfort & Co.

## TEST REPORT

**SCOPE OF WORK**

LM-79 testing report

**REPORT NUMBER**

250623168GZU-020

**ISSUE DATE**

11 August 2025

**REVISION DATE**

None

**NUMBER OF PAGES**

13

**DOCUMENT CONTROL NUMBER**

Report format for LM-79\_G

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Report No.: 250623168GZU-020

## TEST REPORT

TEST OF ONE LED LUMINAIRE

MODEL NO. MDFM73827XXX

Remark: "XXX" 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 MDFM73827XXX. The sample was received by Intertek in undamaged condition and tested as received. The sample designation was S250623168-021.
<u>MANUFACTURER /FACTORY &amp; 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>	16 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:	MDFM73827XXX
Description:	LED Luminaries
Brand Name:	--

#### Test Condition: 120V, 60Hz For MDFM73827XXX

Criteria	Result
Total Lumen Output	955.1 lm
Total Power	15.2 W
Luminaire Efficacy	62.8 lm/W
S/MH(C0/180)	1.18
S/MH(C90/270)	1.17
Correlated Color Temperature (CCT)	2732 K
Color Rendering Index (CRI)	92
R9	62
Chromaticity Coordinate (x)	0.4565
Chromaticity Coordinate (y)	0.4086
Chromaticity Coordinate (u')	0.2612
Chromaticity Coordinate (v')	0.5261

#### 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 $\pi$  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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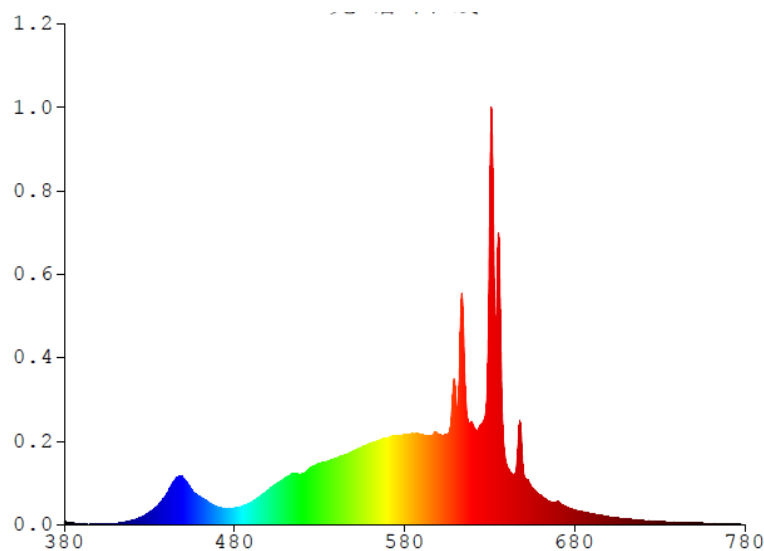
## TEST REPORT

### RESULTS OF TESTS

**Test Condition: 120V, 60Hz For MDFM73827XXX**

Spectral Distribution over Visible Wavelengths

nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm	nm	mW/nm
380	1.0611	480	4.9387	580	26.6690	680	4.4309	780	0.0000
385	0.3271	485	5.5259	585	26.9500	685	3.7791		
390	0.1656	490	6.6986	590	26.7030	690	3.2647		
395	0.1833	495	8.3471	595	26.1740	695	2.8393		
400	0.2035	500	10.3580	600	26.7420	700	2.4215		
405	0.2496	505	12.2240	605	26.7950	705	2.0571		
410	0.3656	510	13.8690	610	38.4190	710	1.7841		
415	0.6353	515	15.2200	615	50.5360	715	1.5103		
420	1.3362	520	15.0290	620	29.8490	720	1.3061		
425	2.2577	525	16.8390	625	29.7530	725	1.1235		
430	3.6327	530	18.0310	630	91.9550	730	0.9721		
435	5.6555	535	18.8170	635	85.4460	735	0.8408		
440	9.0197	540	19.7010	640	17.7260	740	0.7082		
445	13.1900	545	20.7120	645	15.0710	745	0.6265		
450	13.8030	550	21.8170	650	15.5390	750	0.5396		
455	10.2070	555	22.9500	655	10.9210	755	0.4803		
460	8.2729	560	24.1000	660	8.7503	760	0.4134		
465	6.6257	565	24.8980	665	6.9430	765	0.3245		
470	5.2701	570	25.7100	670	6.8517	770	0.3180		
475	4.8736	575	26.3090	675	5.0348	775	0.2825		



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## TEST REPORT

### RESULTS OF TESTS (cont'd)

**Test Condition: 120V, 60Hz For MDFM73827XXX**

Total operation burning time: 60 minutes

Stabilization time: 30 minutes

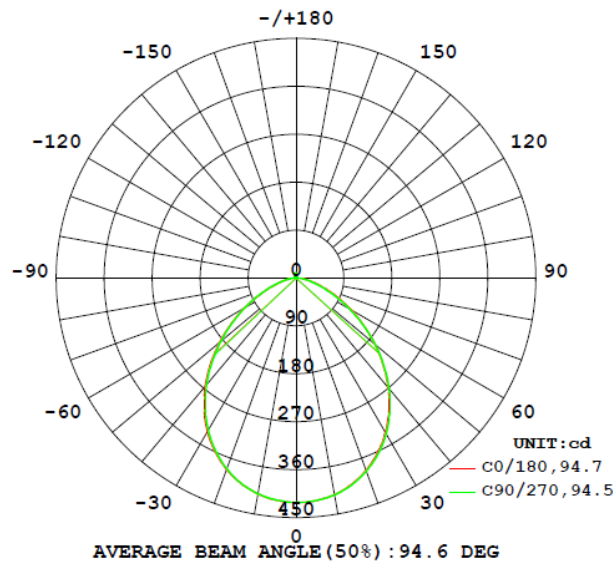
#### Photometric Measurements at 25°C – Distribution Method

Intertek Sample No.	Base Orientation	Correlated Color Temperatur e (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')
MDFM73827XXX								
S2506231 68-021	base-up	2732	92	62	0.4565	0.4086	0.2612	0.5261

#### 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)
MDFM73827XXX							
S2506231 68-021	base-up	120.0	128.2	15.2	0.990	955.1	62.8

#### Intensity (Candlepower) Summary at 25°C - Candelas



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## TEST REPORT

### RESULTS OF TESTS (cont'd)

**Test Condition: 120V, 60Hz For MDFM73827XXX**

Intensity (Candlepower) Summary at 25°C - Candelas

V \ H(°)	0	22.5	45	67.5	90
0	421.2	421.0	421.3	421.0	421.1
5	419.7	418.6	418.9	419.2	419.6
10	413.1	410.5	412.1	412.8	413.6
15	401.4	397.7	400.0	400.9	402.4
20	384.3	379.3	382.2	384.2	385.7
25	362.2	356.3	359.9	362.0	364.5
30	335.3	328.5	332.8	334.9	338.1
35	304.1	296.4	301.1	303.6	307.1
40	269.3	260.6	265.5	268.1	271.9
45	231.8	222.1	226.9	229.4	233.3
50	193.1	182.7	187.0	189.4	193.5
55	154.9	144.4	147.6	149.4	153.5
60	118.8	108.5	110.7	112.0	115.5
65	86.1	76.7	78.0	78.5	81.5
70	58.2	50.8	51.5	51.8	53.9
75	36.7	31.3	32.1	32.2	33.3
80	21.1	17.5	18.3	18.5	19.2
85	9.1	6.1	6.9	7.0	7.7
90	0.6	0.1	0.1	0.1	0.2
95	0.1	0.1	0.1	0.1	0.1
100	0.1	0.1	0.1	0.1	0.1
105	0.1	0.1	0.1	0.1	0.1
110	0.1	0.2	0.9	0.8	0.7
115	0.1	0.3	1.6	1.5	1.3
120	0.2	0.3	2.8	2.5	2.0
125	0.2	0.4	1.7	3.6	3.2
130	0.3	0.3	0.6	1.3	3.4
135	0.4	0.4	0.9	0.8	2.6
140	0.5	0.5	0.6	0.8	2.0
145	0.5	0.6	0.6	0.6	1.0
150	0.7	0.6	0.6	0.6	0.6
155	1.4	0.7	0.7	0.7	0.7
160	1.8	0.8	0.7	0.7	0.7
165	2.5	0.8	0.8	0.7	0.8
170	2.6	0.9	0.8	0.8	0.8
175	2.3	0.6	0.6	0.6	0.7
180	0.6	0.7	0.7	0.6	0.6

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## TEST REPORT

### RESULTS OF TESTS (cont'd)

**Test Condition: 120V, 60Hz For MDFM73827XXX**

#### Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens (lm)	% Luminaire (%)
MDFM73827XXX		
0-30	318.5	33.3
0-40	507.1	53.1
0-60	817.7	85.6
0-90	943.6	98.8
60-90	125.9	13.2
0-180	955.1	100.0

#### Beam Angle

**Total Beam Angle(°)**

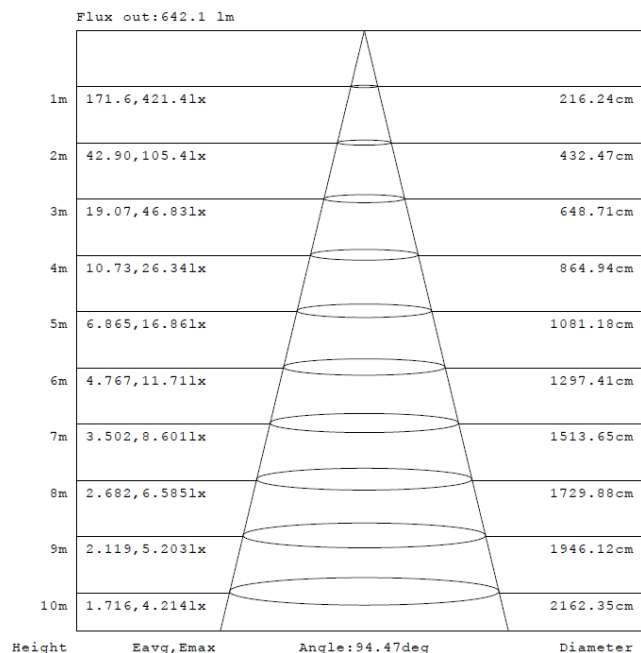
94.6

#### Illumination Plots

Model No.: MDFM73827XXX

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

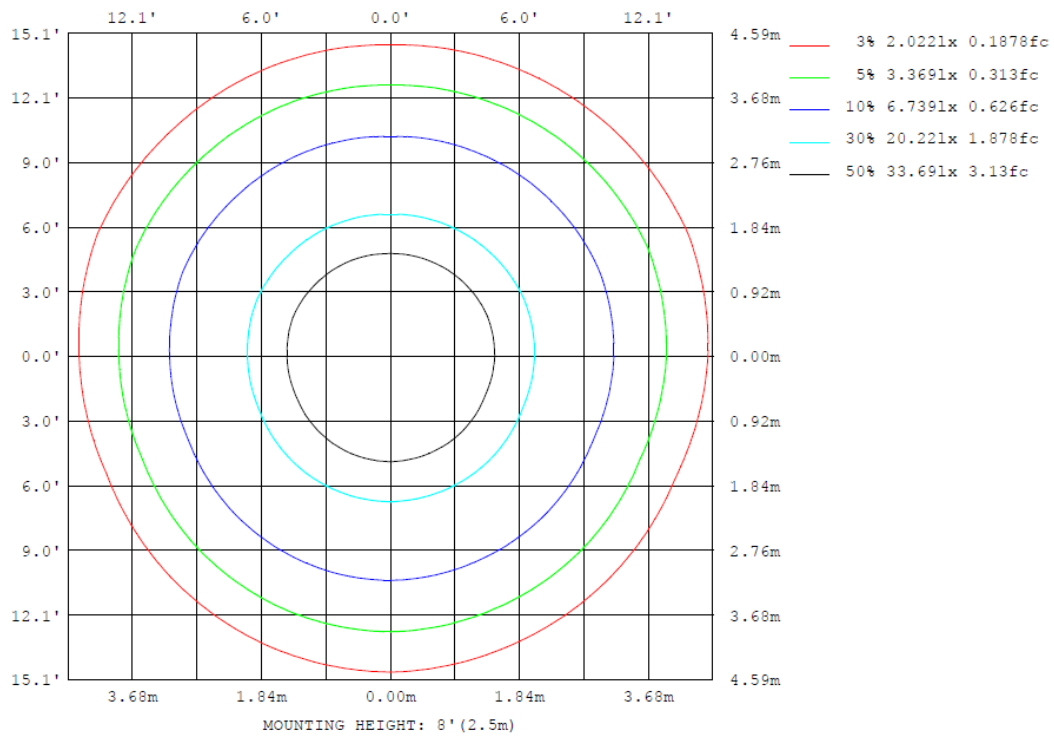
## RESULTS OF TESTS (cont'd)

**Test Condition: 120V, 60Hz For MDFM73827XXX**

Model No.: MDFM73827XXX

Mount Height: 2.5 m

Isoillumination Plot



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## TEST REPORT

### RESULTS OF TESTS (cont'd)

Test Condition: 120V, 60Hz For MDFM73827XXX

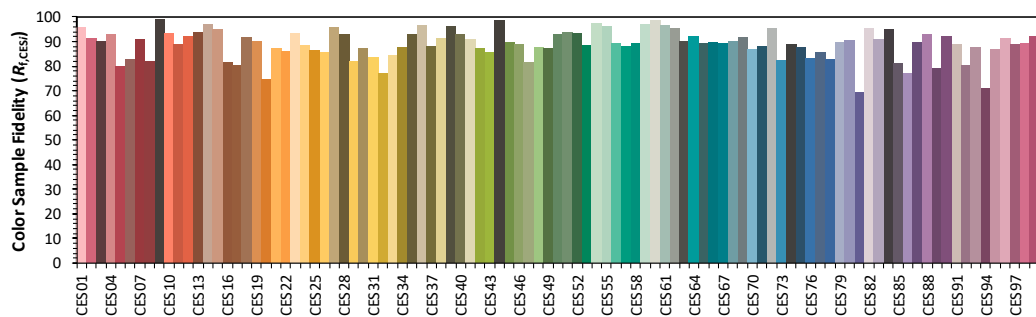
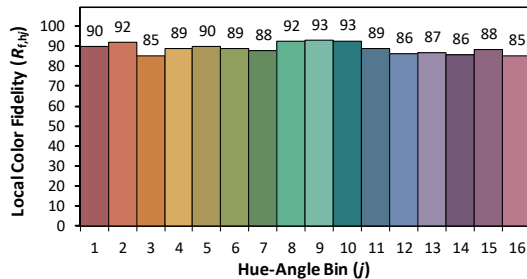
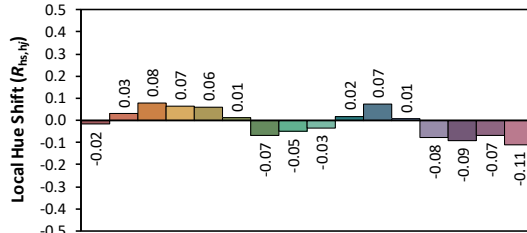
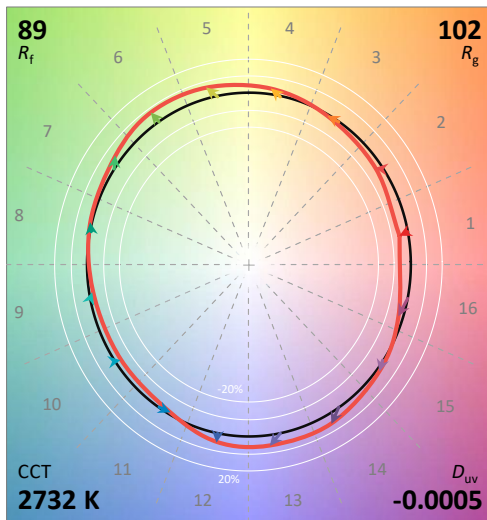
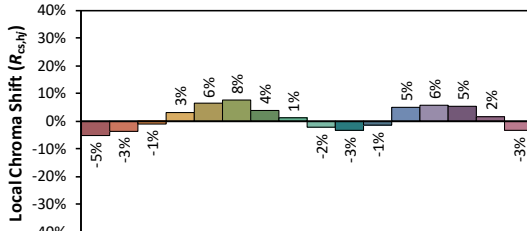
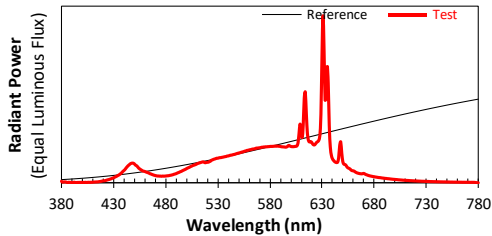
#### ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD

Manufacturer: Visual Comfort & Co.

Date: 2025/7/16

Model: MDFM73827XXX



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

$x$  0.4565  
 $y$  0.4086  
 $u'$  0.2612  
 $v'$  0.5261

CIE 13.3-1995  
(CRI)  
 $R_a$  92  
 $R_g$  62

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

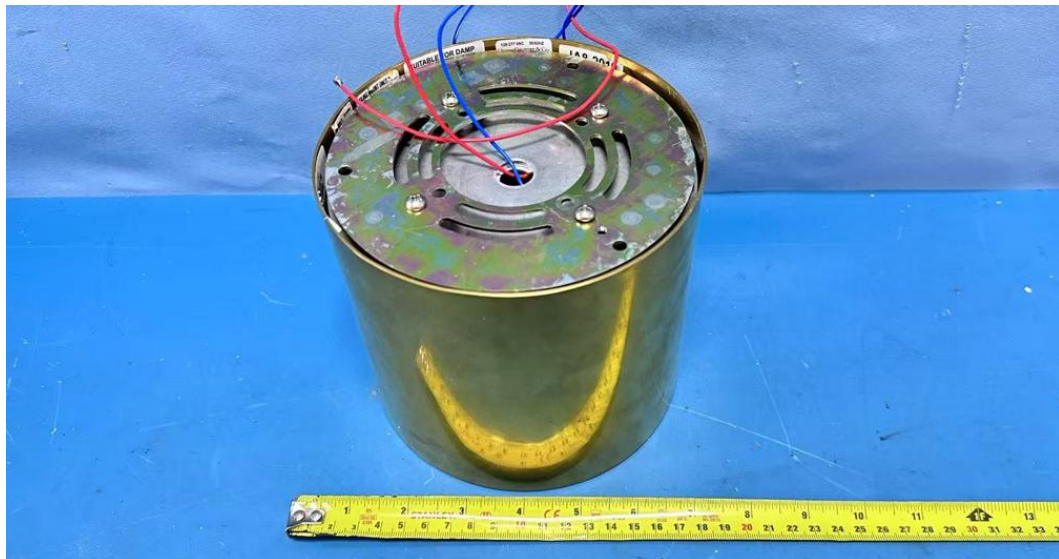
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## TEST REPORT

### PRODUCT PICTURE (not to scale)



**External view of MDFM73827XXX**



**External view of MDFM73827XXX**

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## TEST REPORT

### PRODUCT PICTURE (not to scale)



View of LED



View of LED driver PVD14-C040V35-UNV3-HE-P

In Charge Of Tests:

*Done Ye*

Done Ye  
Engineer

Report Reviewed By

*Shelley Ying*

Shelley Ying  
Reviewer

Attachment: None

\*\*\*\*\* End of Report \*\*\*\*\*