

# PHOENIX PRODUCTS LLC

## TEST REPORT

### SCOPE OF WORK

LED Performance Testing

### MODEL NUMBER

CF-250-MF-120-277-NW

### PROJECT NUMBER

G104357589

### REPORT NUMBER

104357589CHI-032

### ISSUE DATE

2/19/2021

### REVISED DATE

None

### TEST DATES

02/10/2021.

### DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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**REPORT NUMBER**

104357589CHI-032

**MODEL NUMBER(s)**

CF-250-MF-120-277-NW

**REPORT RENDERED TO:**

PHOENIX PRODUCTS LLC  
8711 W PORT AVE.  
MILWAUKEE, WI, 53224  
USA

**STATEMENT OF LIMITATION**

NVLAP Lab Code 600186-0. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

**AUTHORIZATION**

The testing performed was authorized by signed quote number Qu-01080058-1.

**TEST STANDARDS**

IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

In Charge of Testing:



Ian Smith  
Engineer  
Lighting Division

Reviewer:



Jeff Davis  
NA Technical Lead  
Lighting Division

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## SAMPLE INFORMATION

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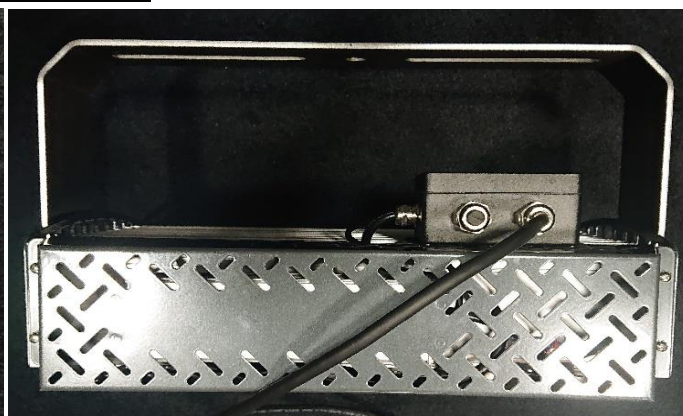
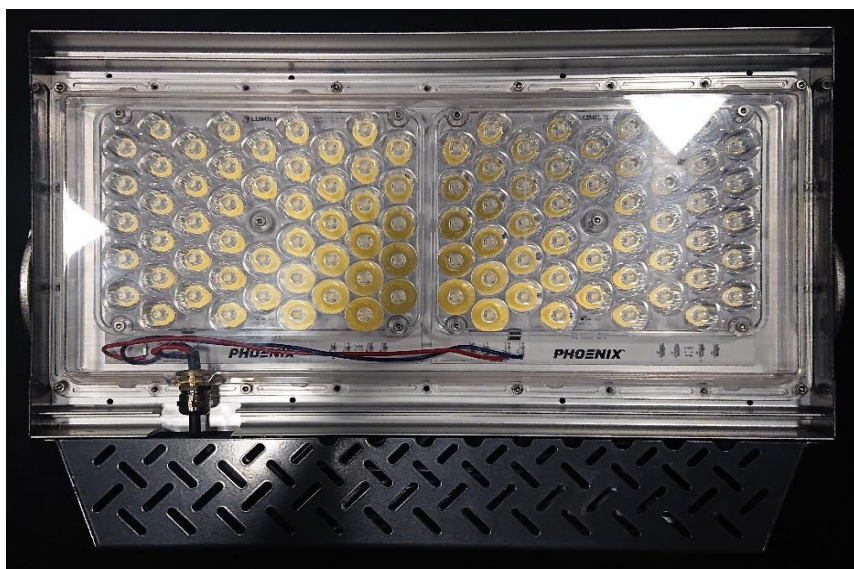
## ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH01272021125026	CF-250-MF-120-277-NW	Command Flood 250	Production	1/27/2021

## TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	CF-250-MF-120-277-NW	1

## SAMPLE PHOTOS - TESTED CONFIGURATIONS



## SUMMARY

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### PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	CF-250-MF-120-277-NW
Product Description:	Command Flood 250
LED Model No.:	Lumileds 5050
Driver Model No.:	Inventronics / EUM-240S350DT
Light Source:	LED

Criteria	Results
Light Output (lumens)	31835.9
Input Power (W) @ 120 (Vac)	239.40
Lumen Efficacy (lm/W)	133.0
Input Power Factor ( ) @ 120 (Vac)	0.998

## TEST METHODS

### SEASONING IN SAMPLE ORIENTATION - LED PRODUCTS

No seasoning was performed in accordance with IESNA LM-79.

### TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

A Type C Mirror Goniophotometer system was used to measure the luminous intensity (candela) at each angle of distribution for the EUT. Electrical measurements of the unit were measured using a power analyzer. Each EUT was operated at the rated input voltage of the system in its designated orientation. The ambient temperature was measured at a position near the EUT at equal height and stabilization procedures to LM-79 were followed.

**TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING**

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Test Configuration	Tested Model No.	Pass/Fail/NA
1	CF-250-MF-120-277-NW	NA

**PHOTOMETRIC AND ELECTRICAL MEASUREMENTS (25°C +/- 1°C)**

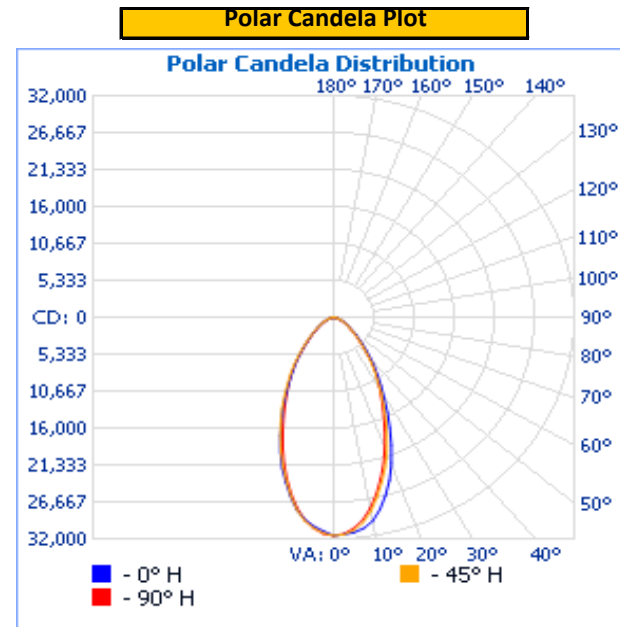
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (I)
Up	120.1	1997.4	239.40	0.998

Light Output (lm)	Lumen Efficacy (lm/W)
31835.9	133.0

**INTENSITY SUMMARY - CANDELA**

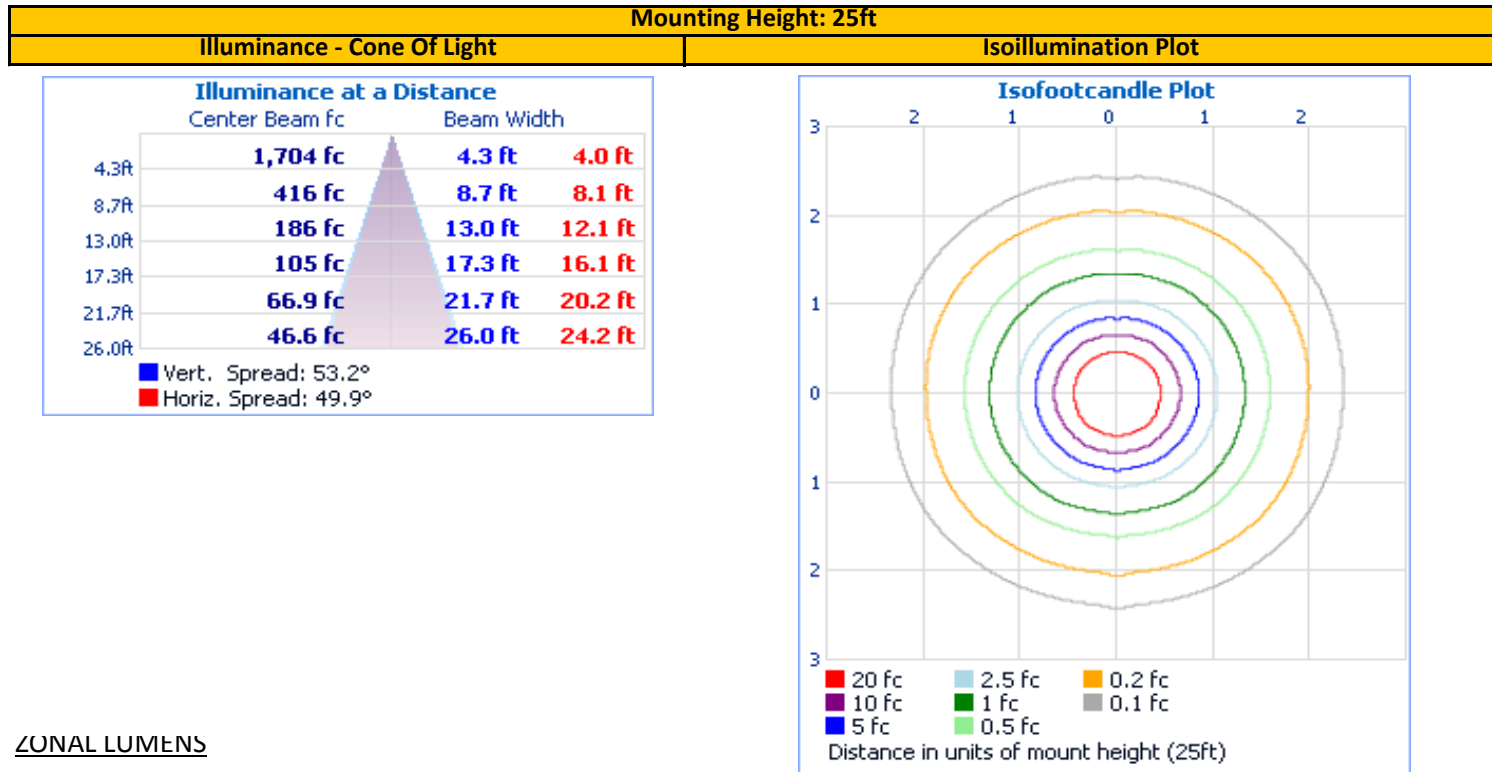
Angle	0	25	45	65	90
0	31513	31513	31513	31513	31513
5	31165	31014	30823	30677	30568
10	29849	28944	28428	28127	27981
15	26603	25189	24648	24226	24113
20	22433	20915	20641	20288	19824
25	17655	16680	16407	15997	15733
30	13405	12918	12618	12403	12394
35	10104	9861	9534	9530	9739
40	7504	7217	7002	7036	7095
45	5374	5120	4965	4954	4961
50	3884	3664	3548	3474	3484
55	2677	2637	2546	2463	2459
60	1926	1846	1866	1772	1736
65	1376	1299	1314	1246	1196
70	896	861	858	828	784
75	553	520	519	512	467
80	278	250	255	256	229
85	70	59	68	78	67
90	0	0	0	0	0
95	0	0	0	0	0
100	0	0	0	0	0
105	0	0	0	0	0
110	0	0	0	0	0
115	0	0	0	0	0
120	0	0	0	0	0
125	0	0	0	0	0
130	0	0	0	0	0
135	0	0	0	0	0
140	0	0	0	0	0
145	0	0	0	0	0
150	0	0	0	0	0
155	0	0	0	0	0
160	0	0	0	0	0
165	0	0	0	0	0
170	0	0	0	0	0
175	0	0	0	0	0
180	0	0	0	0	0

Entire luminous intensity matrix found in .IES file



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ILLUMINANCE SUMMARY



ZONAL LUMENS

Zonal Lumen Summary					
Zone	Lumens	Luminaire	Zone	Lumens	Total
0-30	17,267.8	54.2%	0-10	2854.3	9.0%
0-40	23,412.6	73.5%	10-20	6855.8	21.5%
0-60	29,811.4	93.6%	20-30	7557.7	23.7%
60-90	2,024.5	6.4%	30-40	6144.8	19.3%
70-100	701.9	2.2%	40-50	4030.8	12.7%
90-120	0.0	0.0%	50-60	2367.9	7.4%
0-90	31,835.9	100.0%	60-70	1322.6	4.2%
90-180	0.0	0.0%	70-80	587.1	1.8%
0-180	31,835.9	100.0%	80-90	114.7	0.4%
			90-100	0.0	0.0%
			100-110	0.0	0.0%
			110-120	0.0	0.0%
			120-130	0.0	0.0%
			130-140	0.0	0.0%
			140-150	0.0	0.0%
			150-160	0.0	0.0%
			160-170	0.0	0.0%
			170-180	0.0	0.0%

## EQUIPMENT LIST

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#	Equipment	Model No	Control No.	Last Cal	Cal Due
1	Yokogawa Power Meter	WT210	146919	7/1/2020	7/1/2021
2	Omega Thermometer	DPI8-C24	146920	10/1/2020	10/1/2021
3	LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU
4	Newport Thermohygrometer	iServer	146958	9/30/2020	9/30/2021
5	Pacific AC Power Supply	118-ACX	CHI0153	VBU	VBU

Note: Standard sources listed above are traceable to NIST: National Institute of Standards and Technology

## REVISION HISTORY

#	Revision Date	Updated By	Reviewed By	Description of Change
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