

PHOENIX PRODUCTS LLC

TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

CF-250-MF-120-277-CW

PROJECT NUMBER

G104357589

REPORT NUMBER

104357589CHI-016

ISSUE DATE

1/22/2021

REVISED DATE

None

TEST DATES

01/22/2021.

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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REPORT NUMBER

104357589CHI-016

MODEL NUMBER(s)

CF-250-MF-120-277-CW

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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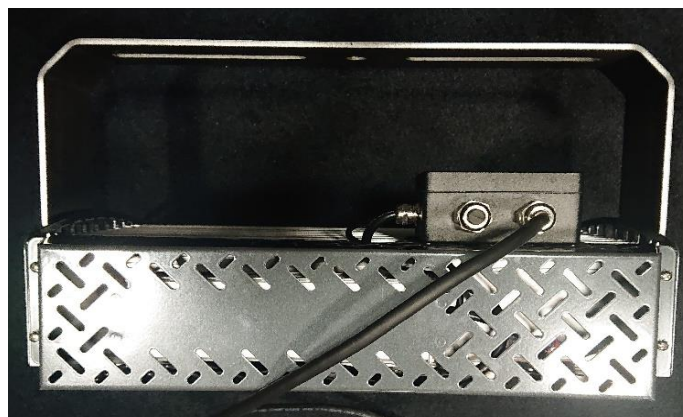
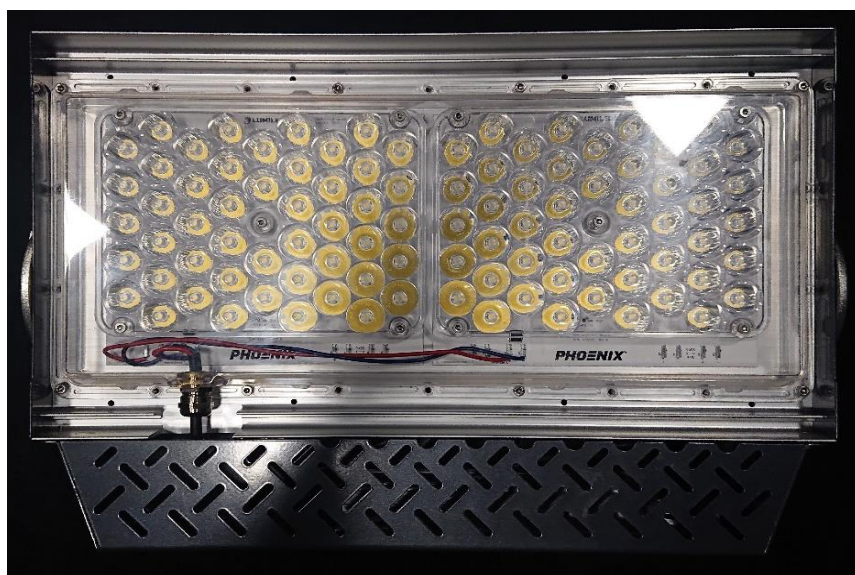
ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH01112021101748	CF-250-MF-120-277-CW	Command Flood 250	Production	1/12/2021

TESTED SAMPLE CONFIGURATIONS

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

SAMPLE PHOTOS - TESTED CONFIGURATIONS



SUMMARY

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PRODUCT INFORMATION AND SUMMARY OF DATA

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

Criteria	Results
Light Output (lumens)	31496.7
Input Power (W) @ 120 (Vac)	235.97
Lumen Efficacy (lm/W)	133.5
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-CW	NA

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

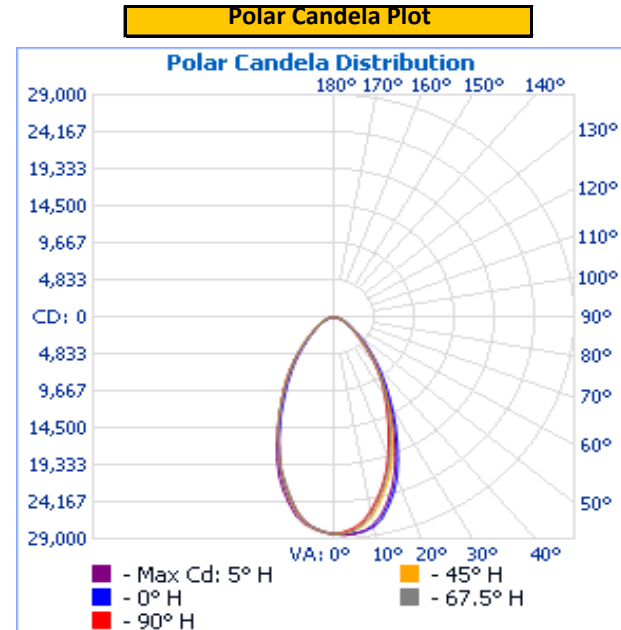
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (I)
Up	120.0	1969.4	235.97	0.998

Light Output (lm)	Lumen Efficacy (lm/W)
31496.7	133.5

INTENSITY SUMMARY - CANDELA

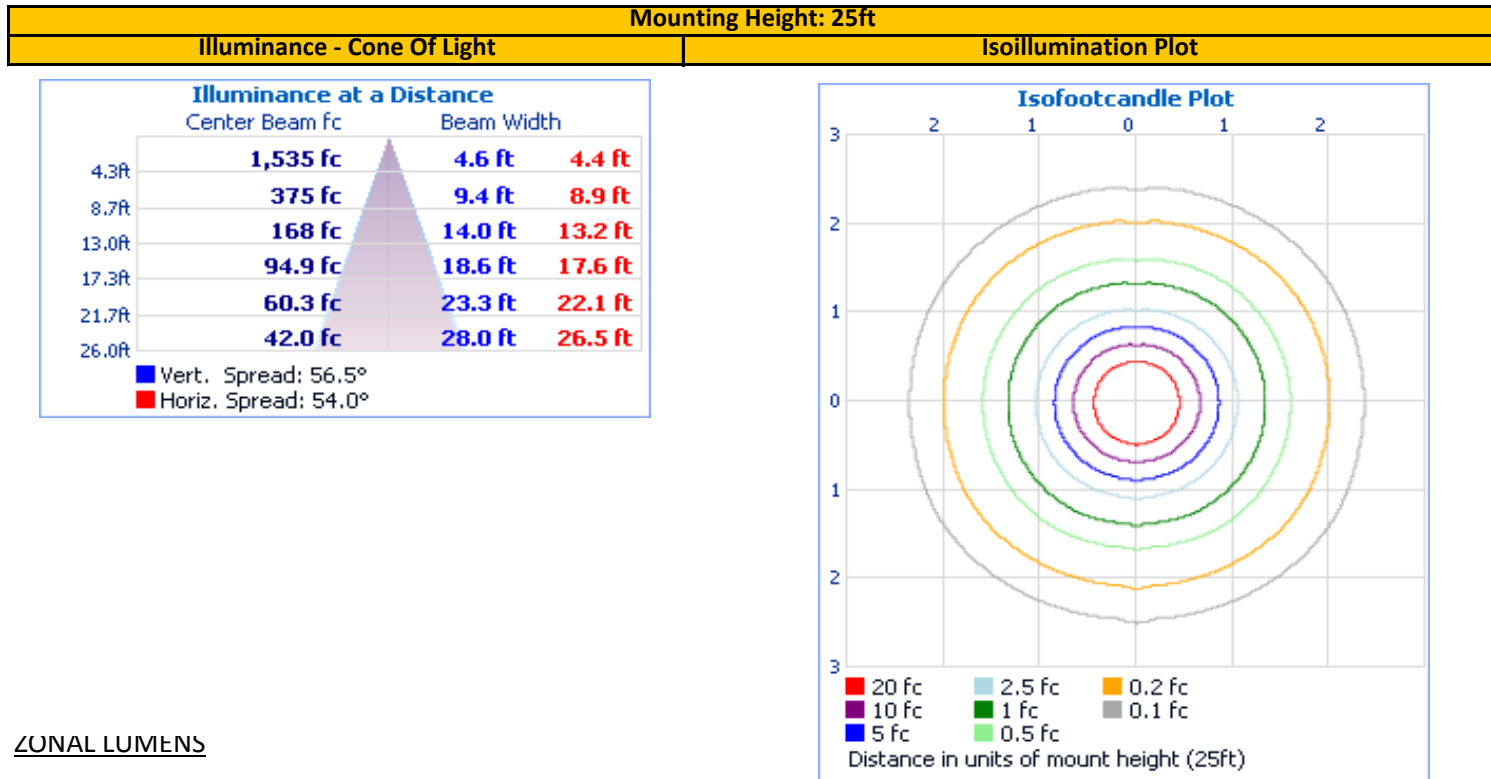
Angle	0	22.5	45	67.5	90
0	28388	28388	28388	28388	28388
5	28412	28324	28051	27954	27693
10	27843	27170	26528	26060	25726
15	25554	24347	23510	23031	22762
20	22270	20886	20329	19638	19197
25	18117	17141	16663	16000	15560
30	14290	13612	13163	12782	12481
35	10970	10621	10149	10018	9917
40	8308	7968	7676	7533	7349
45	6052	5744	5514	5316	5178
50	4409	4133	3947	3742	3652
55	3018	2952	2821	2640	2567
60	2160	2071	2054	1884	1806
65	1564	1460	1445	1323	1236
70	1030	979	955	874	806
75	655	608	587	544	477
80	351	315	306	284	232
85	120	94	96	92	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	16,514.6	52.4%	90-100	0.0	0.0%
0-40	22,751.1	72.2%	100-110	0.0	0.0%
0-60	29,409.8	93.4%	110-120	0.0	0.0%
60-90	2,086.9	6.6%	120-130	0.0	0.0%
70-100	718.8	2.3%	130-140	0.0	0.0%
90-120	0.0	0.0%	140-150	0.0	0.0%
0-90	31,496.7	100.0%	150-160	0.0	0.0%
90-180	0.0	0.0%	160-170	0.0	0.0%
0-180	31,496.7	100.0%	170-180	0.0	0.0%

LUM. CLASSIFICATION SYSTEM (LCS)

CS Zone		Lumens	% Lamp	% Lum
FL	(0-30)	8434.8	N.A.	26.8
FM	(30-60)	6640.0	N.A.	21.1
FH	(60-80)	1008.1	N.A.	3.2
FVH	(80-90)	61.9	N.A.	0.2
BL	(0-30)	8101.9	N.A.	25.7
BM	(30-60)	6266.6	N.A.	19.9
BH	(60-80)	963.6	N.A.	3.1
BVH	(80-90)	54.2	N.A.	0.2
UL	(90-100)	0.0	N.A.	0.0
UH	(100-180)	0.0	N.A.	0.0
Total	-----	31531.1	N.A.	100.0
BUG Rating		B5-U0-G1		

IES Classification: Type VS
Longitudinal Classification: Very Short

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
6	Sorenson DC Power Supply	XHR 150-7	146922	VBU	VBU
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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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