

PHOENIX PRODUCTS LLC

TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

CF-250-VS-120-277-CW

PROJECT NUMBER

G104357589

REPORT NUMBER

104357589CHI-014

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-014

MODEL NUMBER(s)

CF-250-VS-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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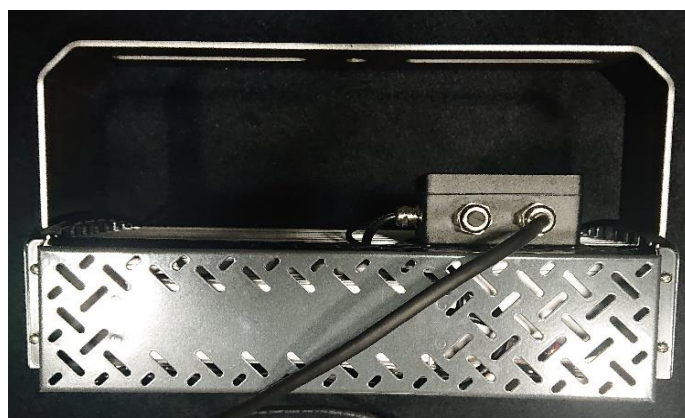
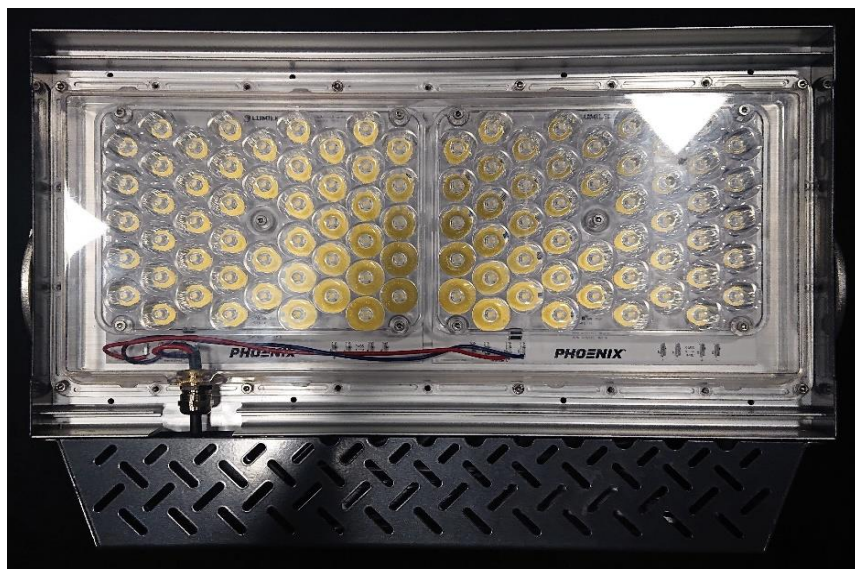
ITEMS RECEIVED

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

TESTED SAMPLE CONFIGURATIONS

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

SAMPLE PHOTOS - TESTED CONFIGURATIONS



SUMMARY

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PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	CF-250-VS-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)	32731.8
Input Power (W) @ 120 (Vac)	235.98
Lumen Efficacy (lm/W)	138.7
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-VS-120-277-CW	NA

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

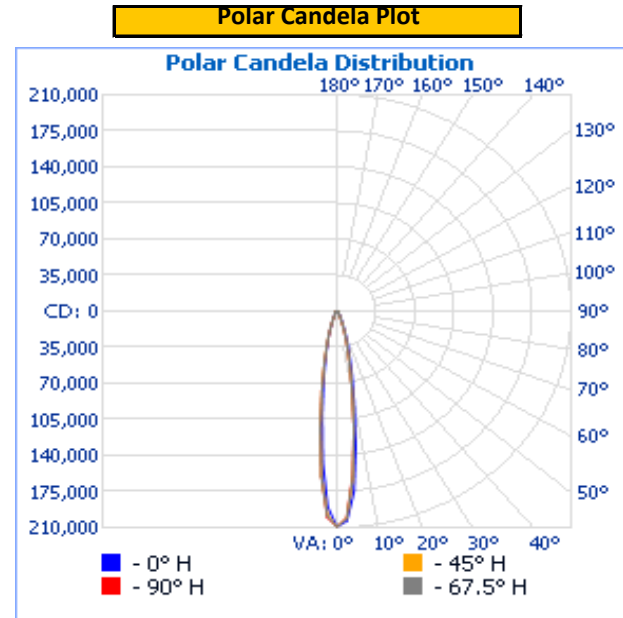
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (I)
Up	120.0	1969.5	235.98	0.998

Light Output (lm)	Lumen Efficacy (lm/W)
32731.8	138.7

INTENSITY SUMMARY - CANDELA

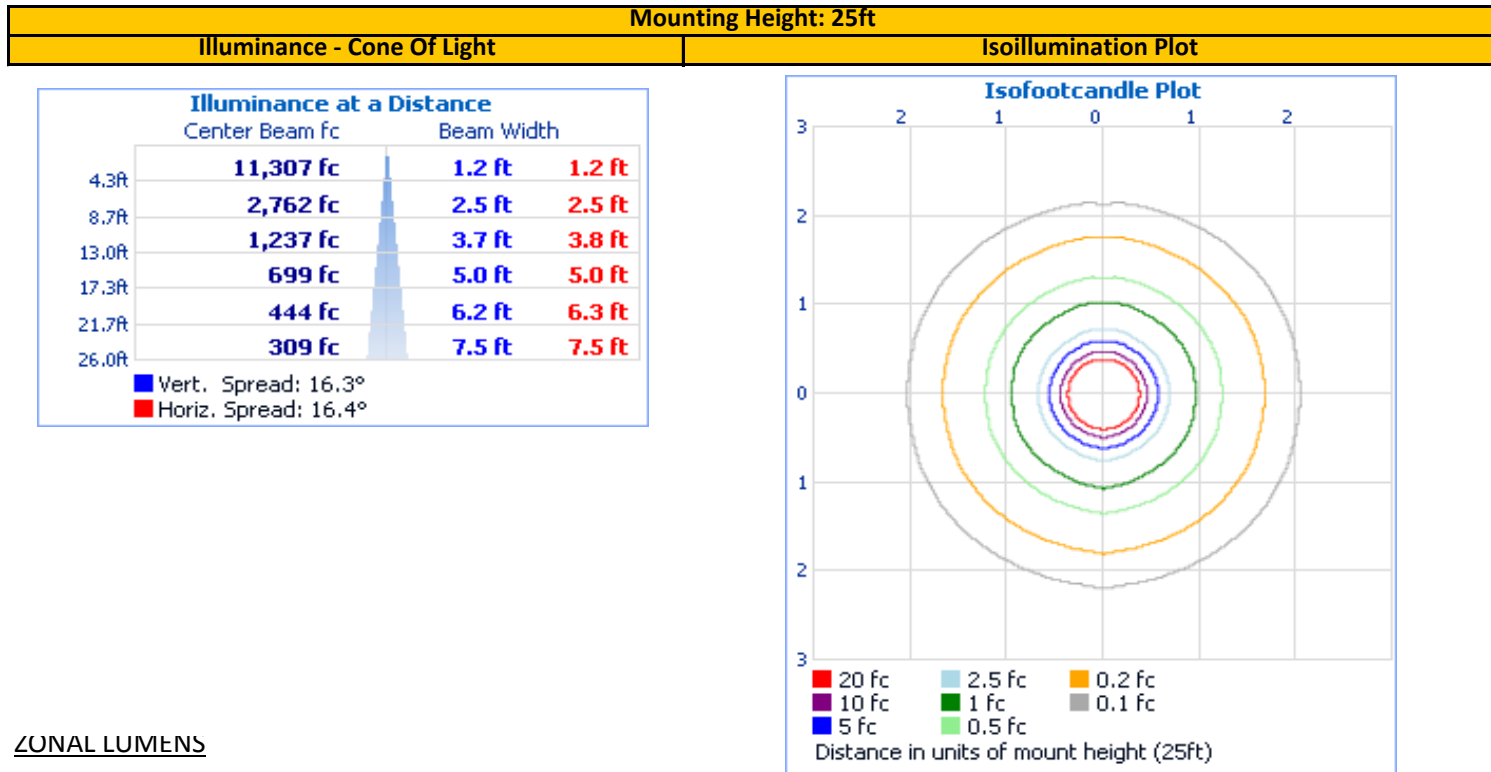
Angle	0	22.5	45	67.5	90
0	209061	209061	209061	209061	209061
5	175513	163834	163490	163528	162842
10	88249	79911	79509	79113	78786
15	42854	38953	38370	37953	37187
20	21425	18955	18480	18003	17568
25	9991	9074	8715	8368	8119
30	6080	5594	5355	5088	4869
35	3579	3343	3165	2968	2862
40	2598	2471	2366	2230	2166
45	2064	1988	1879	1772	1722
50	1683	1626	1538	1470	1424
55	1391	1333	1265	1240	1200
60	1144	1082	1041	1016	996
65	885	852	827	806	793
70	654	606	587	577	577
75	431	393	385	377	366
80	224	195	192	192	186
85	74	59	56	54	57
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	27,194.2	83.1%	0-10	12442.2	38.0%
0-40	29,116.2	89.0%	10-20	10695.7	32.7%
0-60	31,514.2	96.3%	20-30	4056.3	12.4%
60-90	1,217.6	3.7%	30-40	1921.9	5.9%
70-100	460.0	1.4%	40-50	1342.0	4.1%
90-120	0.0	0.0%	50-60	1056.0	3.2%
0-90	32,731.8	100.0%	60-70	757.5	2.3%
90-180	0.0	0.0%	70-80	382.5	1.2%
0-180	32,731.8	100.0%	80-90	77.6	0.2%
			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%

LUM. CLASSIFICATION SYSTEM (LCS)

CS Zone	Lumens	% Lamp	% Lum
FL (0-30)	14124.0	N.A.	43.2
FM (30-60)	2242.6	N.A.	6.9
FH (60-80)	578.2	N.A.	1.8
FVH (80-90)	38.0	N.A.	0.1
BL (0-30)	12992.8	N.A.	39.7
BM (30-60)	2152.1	N.A.	6.6
BH (60-80)	548.9	N.A.	1.7
BVH (80-90)	32.2	N.A.	0.1
UL (90-100)	0.0	N.A.	0.0
UH (100-180)	0.0	N.A.	0.0
Total	32708.8	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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