PHOENIX PRODUCTS LLC

TEST REPORT

SCOPE OF WORK
LED Performance Testing

MODEL NUMBER
CF-250-SP-120-277-WW

PROJECT NUMBER
G104357589

REPORT NUMBER
104357589CHI-035

ISSUE DATE
2/19/2021

REVISED DATE
None

TEST DATES
02/09/2021.

DOCUMENT CONTROL NUMBER
RTTDS-R-AMER-Test-3407

PAGES
7

REPORT NUMBER
104357589CHI-035

MODEL NUMBER(s)
CF-250-SP-120-277-WW

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
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SAMPLE INFORMATION

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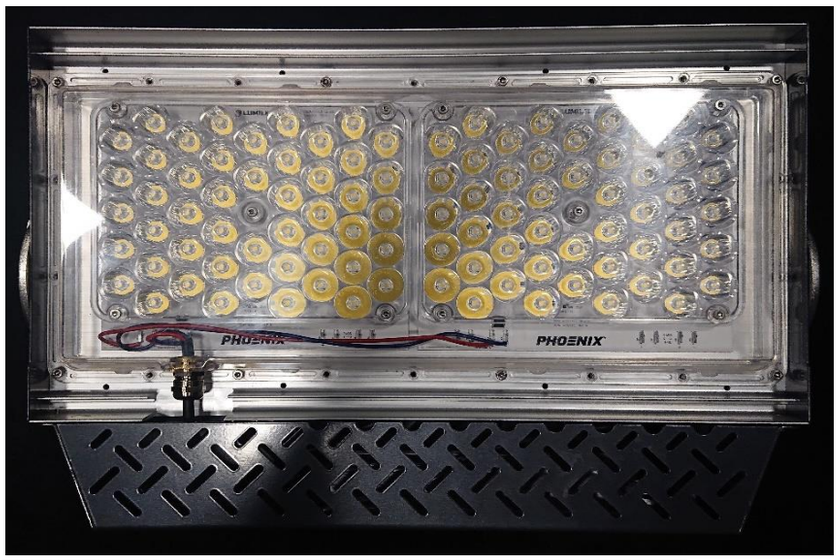
ITEMS RECEIVED

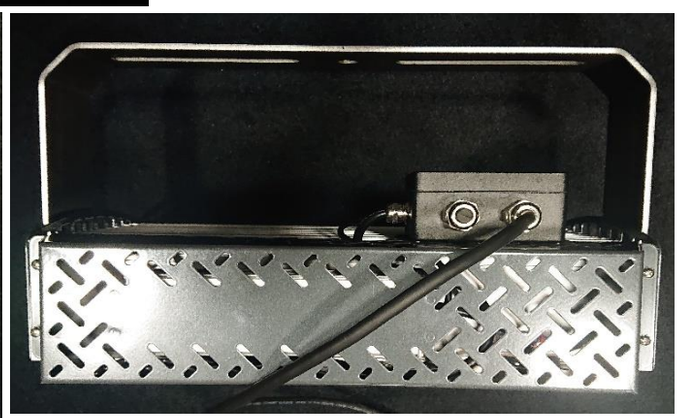
Item No.	Control No.	Model No.	Description	Type	Received
1	AH01272021125026	CF-250-SP-120-277-WW	Command Flood 250	Production	1/27/2021

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	CF-250-SP-120-277-WW	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS





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SUMMARY

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PRODUCT INFORMATION AND SUMMARY OF DATA

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

Criteria	Results
Light Output (lumens)	31044.8
Input Power (W) @ 120 (Vac)	237.13
Lumen Efficacy (lm/W)	130.9
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.

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TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

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

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

Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up	120.0	1978.6	237.13	0.998

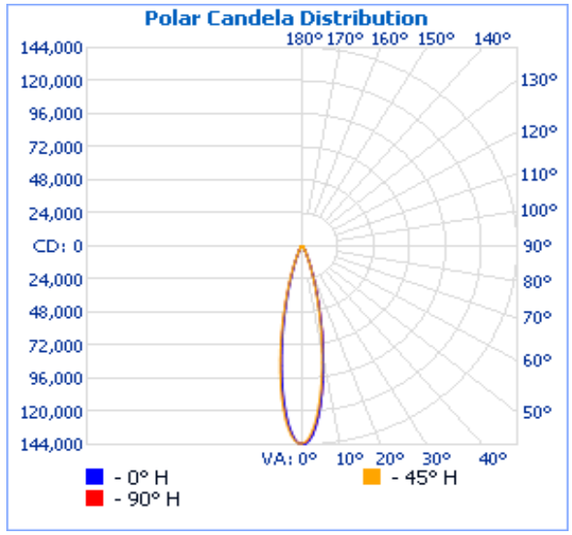
Light Output (lm)	Lumen Efficacy (lm/W)
31044.8	130.9

INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	143311	143311	143311	143311	143311
5	124578	118692	120196	121941	123756
10	81392	75002	76804	79033	81358
15	41596	37153	38364	39960	41706
20	18263	16406	16978	17614	18237
25	8339	7676	7757	7951	8166
30	4481	4120	4156	4216	4241
35	2770	2580	2593	2593	2643
40	1967	1904	1880	1868	1902
45	1591	1538	1514	1484	1510
50	1340	1280	1243	1227	1240
55	1107	1072	1043	1010	1013
60	911	881	870	830	832
65	719	692	691	657	643
70	541	500	503	500	450
75	358	320	318	324	283
80	178	158	165	165	141
85	54	40	42	52	43
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

Polar Candela Plot



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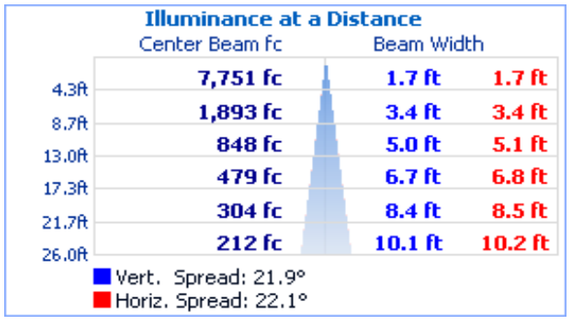
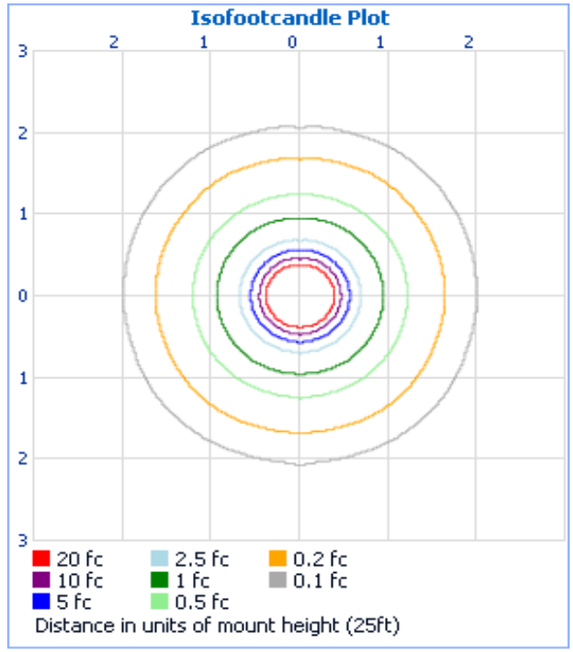
ILLUMINANCE SUMMARY

Mounting Height: 25ft

Illuminance - Cone Of Light



Isoillumination Plot



ZONAL LUMENS

Zonal Lumen Summary

Zone	Lumens	Luminaire
0-30	26,018.8	83.8%
0-40	27,766.9	89.4%
0-60	29,925.5	96.4%
60-90	1,119.3	3.6%
70-100	432.1	1.4%
90-120	0.0	0.0%
0-90	31,044.8	100.0%
90-180	0.0	0.0%
0-180	31,044.8	100.0%

Zone	Lumens	Total	Zone	Lumens	Total
0-10	10356.9	33.4%	90-100	0.0	0.0%
10-20	11555.8	37.2%	100-110	0.0	0.0%
20-30	4106.1	13.2%	110-120	0.0	0.0%
30-40	1748.1	5.6%	120-130	0.0	0.0%
40-50	1203.2	3.9%	130-140	0.0	0.0%
50-60	955.4	3.1%	140-150	0.0	0.0%
60-70	687.2	2.2%	150-160	0.0	0.0%
70-80	358.7	1.2%	160-170	0.0	0.0%
80-90	73.4	0.2%	170-180	0.0	0.0%

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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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