PHOENIX PRODUCTS LLC

TEST REPORT

SCOPE OF WORK
LED Performance Testing

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

PROJECT NUMBER
G104357589

REPORT NUMBER
104357589CHI-036

ISSUE DATE
2/19/2021

REVISED DATE
None

TEST DATES
02/10/2021.

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

PAGES
7

REPORT NUMBER
104357589CHI-036

MODEL NUMBER(s)
CF-250-MF-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
Lighting Division

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SAMPLE INFORMATION

REPORT NO. 104357589CHI-036

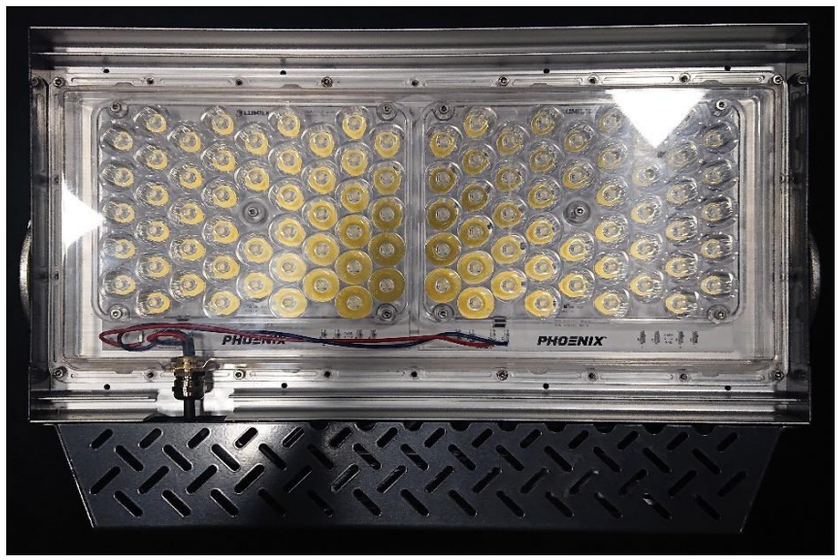
ITEMS RECEIVED

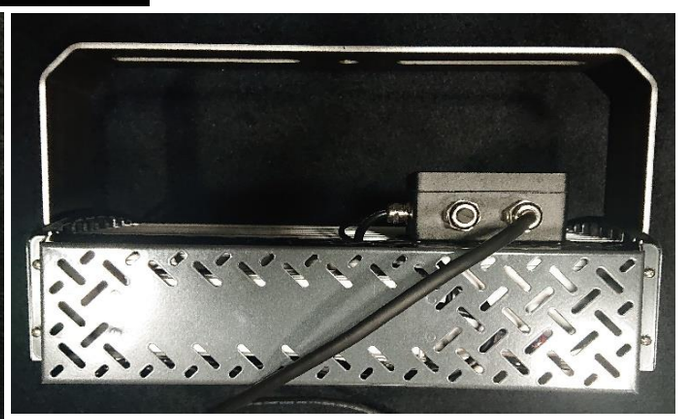
Item No.	Control No.	Model No.	Description	Type	Received
1	AH01272021125026	CF-250-MF-120-277-WW	Command Flood 250	Production	1/27/2021

TESTED SAMPLE CONFIGURATIONS

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

SAMPLE PHOTOS - TESTED CONFIGURATIONS





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SUMMARY **REPORT NO. 104357589CHI-036**

PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	CF-250-MF-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)	30047.8
Input Power (W) @ 120 (Vac)	237.03
Lumen Efficacy (lm/W)	126.8
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-MF-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	120.06	1977.5	237.03	0.998

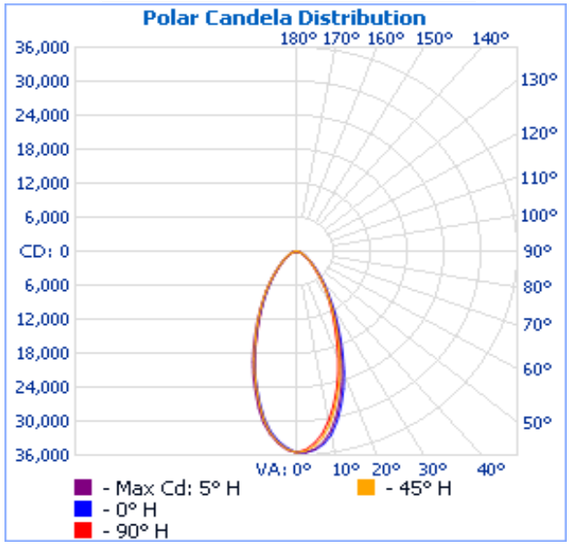
Light Output (lm)	Lumen Efficacy (lm/W)
30047.8	126.8

INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	35518	35518	35518	35518	35518
5	35153	34784	34437	34271	33960
10	32851	31769	31067	30672	30272
15	28118	26786	26007	25478	25312
20	22630	21256	20764	20315	19895
25	17001	15982	15617	15199	14879
30	12457	11834	11534	11292	11172
35	9004	8720	8456	8342	8383
40	6534	6254	6093	5981	5907
45	4656	4432	4299	4206	4120
50	3379	3200	3089	2983	2925
55	2381	2338	2253	2144	2106
60	1740	1676	1684	1575	1527
65	1256	1201	1212	1127	1069
70	827	810	816	763	710
75	518	499	491	494	429
80	264	242	245	243	212
85	70	60	68	75	63
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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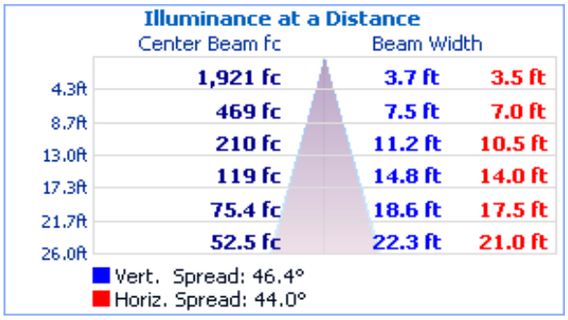
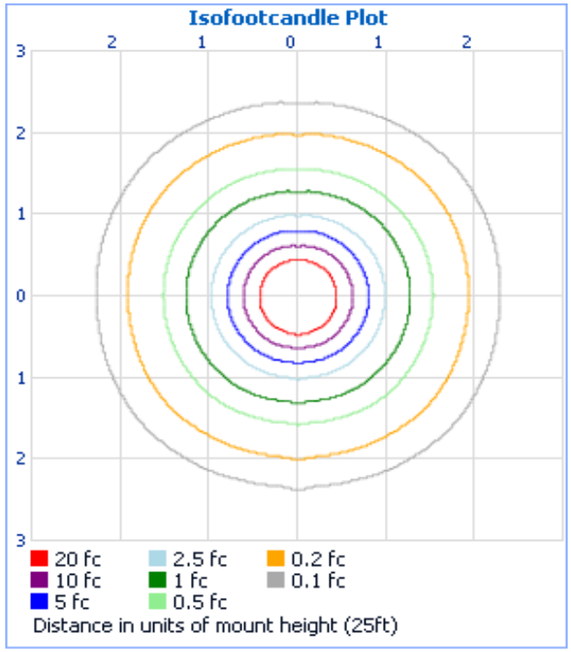
ILLUMINANCE SUMMARY

Mounting Height: 25ft

Illuminance - Cone Of Light



Isoillumination Plot



ZONAL LUMENS

Zonal Lumen Summary

Zone	Lumens	Luminaire
0-30	17,404.8	57.9%
0-40	22,759.7	75.7%
0-60	28,205.7	93.9%
60-90	1,842.0	6.1%
70-100	653.5	2.2%
90-120	0.0	0.0%
0-90	30,047.8	100.0%
90-180	0.0	0.0%
0-180	30,047.8	100.0%

Zone	Lumens	Total	Zone	Lumens	Total
0-10	3151.6	10.5%	90-100	0.0	0.0%
10-20	7121.7	23.7%	100-110	0.0	0.0%
20-30	7131.5	23.7%	110-120	0.0	0.0%
30-40	5354.9	17.8%	120-130	0.0	0.0%
40-50	3402.3	11.3%	130-140	0.0	0.0%
50-60	2043.7	6.8%	140-150	0.0	0.0%
60-70	1188.5	4.0%	150-160	0.0	0.0%
70-80	545.7	1.8%	160-170	0.0	0.0%
80-90	107.8	0.4%	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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