intertek
Total Quality. Assured.

PHOENIX PRODUCTS LLC

TEST REPORT

SCOPE OF WORK
LED Performance Testing

MODEL NUMBER
CF-250-WF-120-277-NW

PROJECT NUMBER
G104357589

REPORT NUMBER
104357589CHI-033

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-033

MODEL NUMBER(s)
CF-250-WF-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

545 E Algonquin Rd
Arlington Heights , IL 60005
Telephone: (847) 439-5667
www.intertek.com

SAMPLE INFORMATION

REPORT NO. 104357589CHI-033

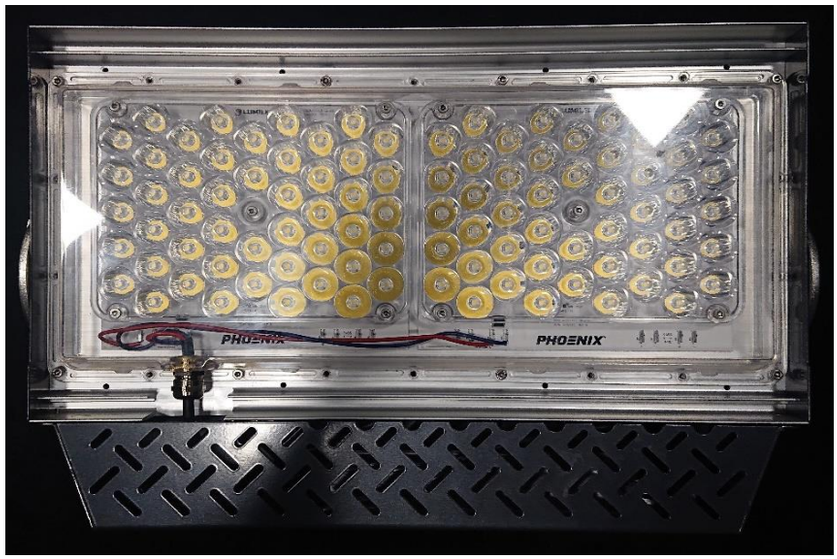
ITEMS RECEIVED

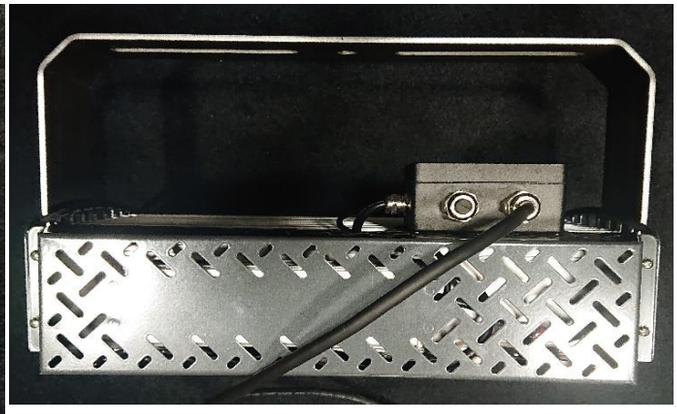
Item No.	Control No.	Model No.	Description	Type	Received
1	AH01272021125026	CF-250-WF-120-277-NW	Command Flood 250	Production	1/27/2021

TESTED SAMPLE CONFIGURATIONS

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

SAMPLE PHOTOS - TESTED CONFIGURATIONS





545 E Algonquin Rd
Arlington Heights , IL 60005
Telephone: (847) 439-5667
www.intertek.com

SUMMARY

REPORT NO. 104357589CHI-033

PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	CF-250-WF-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)	31149.0
Input Power (W) @ 120 (Vac)	239.64
Lumen Efficacy (lm/W)	130.0
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.

545 E Algonquin Rd
Arlington Heights , IL 60005
Telephone: (847) 439-5667
www.intertek.com

TYPE C GONIOPHOTOMETER DISTRIBUTION TESTING

REPORT NO. 104357589CHI-033

Test Configuration	Tested Model No.	Pass/Fail/NA
1	CF-250-WF-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 ()
Up	120.1	1999.4	239.64	0.998

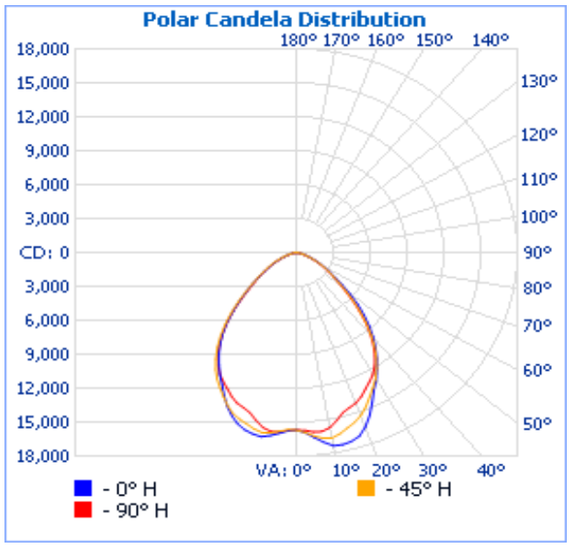
Light Output (lm)	Lumen Efficacy (lm/W)
31149.0	130.0

INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	15692	15692	15692	15692	15692
5	16392	16443	16267	16076	15922
10	17338	16928	16651	16218	15712
15	17286	16496	16054	15505	14641
20	16399	15773	15332	14846	14152
25	14607	14367	14099	13872	13302
30	13004	13112	12872	12739	12452
35	11424	11489	11351	11316	11136
40	9700	9622	9453	9384	9361
45	7770	7384	7308	7219	7231
50	5731	5286	5255	5174	5098
55	3888	3727	3709	3625	3672
60	2714	2596	2663	2524	2557
65	1819	1783	1777	1677	1685
70	1077	1072	1069	1014	970
75	638	621	619	599	546
80	310	292	299	290	257
85	78	68	79	89	75
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



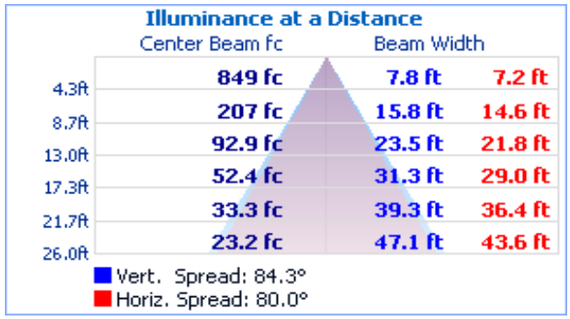
545 E Algonquin Rd
Arlington Heights , IL 60005
Telephone: (847) 439-5667
www.intertek.com

REPORT NO. 104357589CHI-033

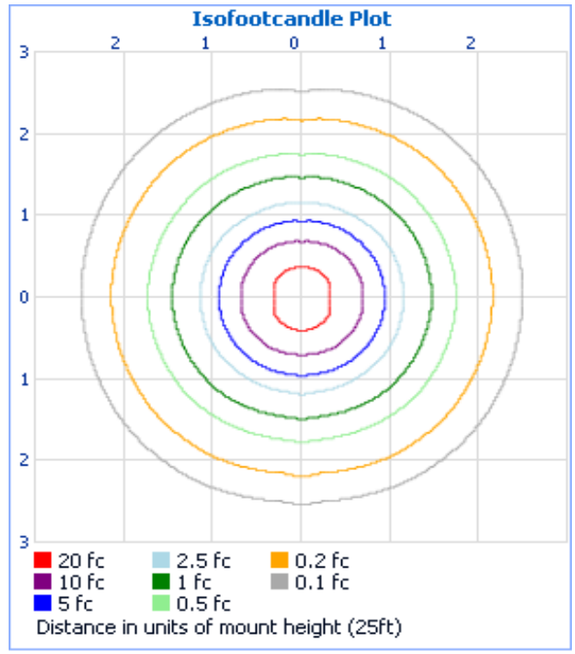
ILLUMINANCE SUMMARY

Mounting Height: 25ft

Illuminance - Cone Of Light



Isoillumination Plot



ZONAL LUMENS

Zonal Lumen Summary

Zone	Lumens	Luminaire
0-30	12,442.4	39.9%
0-40	19,488.6	62.6%
0-60	28,556.2	91.7%
60-90	2,592.8	8.3%
70-100	818.1	2.6%
90-120	0.0	0.0%
0-90	31,149.0	100.0%
90-180	0.0	0.0%
0-180	31,149.0	100.0%

Zone	Lumens	Total	Zone	Lumens	Total
0-10	1544.9	5.0%	90-100	0.0	0.0%
10-20	4457.8	14.3%	100-110	0.0	0.0%
20-30	6439.6	20.7%	110-120	0.0	0.0%
30-40	7046.2	22.6%	120-130	0.0	0.0%
40-50	5670.9	18.2%	130-140	0.0	0.0%
50-60	3396.7	10.9%	140-150	0.0	0.0%
60-70	1774.6	5.7%	150-160	0.0	0.0%
70-80	690.4	2.2%	160-170	0.0	0.0%
80-90	127.8	0.4%	170-180	0.0	0.0%

545 E Algonquin Rd
Arlington Heights , IL 60005
Telephone: (847) 439-5667
www.intertek.com

EQUIPMENT LIST

REPORT NO. 104357589CHI-033

#	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
---	None	---	---	---
---	---	---	---	---
---	---	---	---	---