

AFX INC.

TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

PRCL450750LAJUDWH

PROJECT NUMBER

G104599123

REPORT NUMBER

104599123CHI-001

ISSUE DATE

2/23/2021

REVISED DATE

None

TEST DATES

02/18/2021.

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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REPORT NUMBER

104599123CHI-001

MODEL NUMBER(s)

PRCL450750LAJUDWH

REPORT RENDERED TO:

AFX INC.
2345 N. ERNIE KRUEGER CIRCLE
WAUKEGAN, IL 60087
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-01038287-2.

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	AH02162021113725	PRCL450750LAJUDWH	Linear	Production	2/16/2021

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	PRCL450750LAJUDWH	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



SUMMARY

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PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	PRCL450750LAJUDWH
Product Description:	Linear
LED Model No.:	Samsung / Various
Driver Model No.:	ISTAR / ISC-040W-100SMTM-B-1
Light Source:	LED

Criteria	Results
Light Output (lumens)	4203.4
Input Power (W) @ 120 (Vac)	46.29
Lumen Efficacy (lm/W)	90.8
Input Power Factor () @ 120 (Vac)	0.994

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	PRCL450750LAJUDWH	NA

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

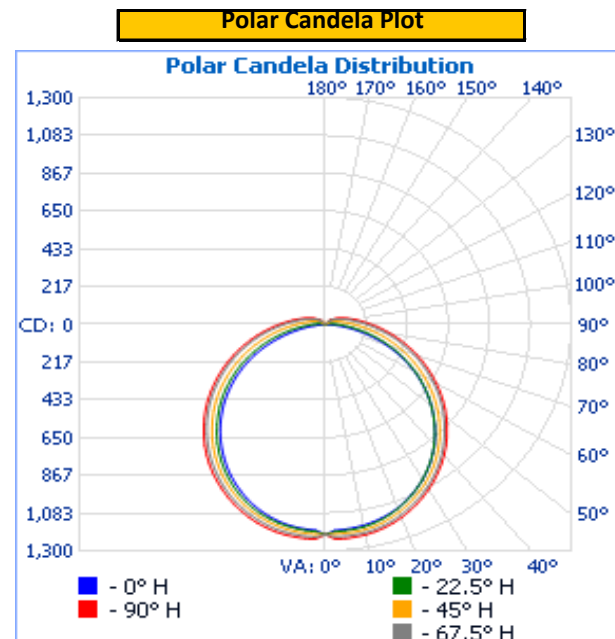
Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor ()
Up	120.07	388.0	46.29	0.994

Light Output (lm)	Lumen Efficacy (lm/W)
4203.4	90.8

INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	1206	1206	1206	1206	1206
5	1181	1188	1203	1219	1233
10	1170	1180	1197	1213	1226
15	1151	1158	1176	1195	1208
20	1121	1124	1144	1165	1179
25	1079	1080	1103	1125	1140
30	1028	1028	1054	1079	1093
35	968	967	996	1024	1038
40	897	896	929	961	977
45	819	817	856	891	909
50	733	733	777	817	836
55	643	645	694	740	759
60	547	553	606	657	678
65	445	458	519	576	597
70	341	363	433	494	517
75	238	270	350	416	439
80	140	185	274	342	366
85	54	114	206	276	301
90	5	65	153	220	244
95	2	40	114	175	197
100	3	26	87	139	159
105	3	19	66	111	129
110	3	14	52	89	104
115	3	11	40	71	84
120	3	9	32	56	67
125	3	7	25	45	54
130	3	6	20	35	42
135	3	5	15	27	33
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



ILLUMINANCE SUMMARY

Mounting Height: 10ft

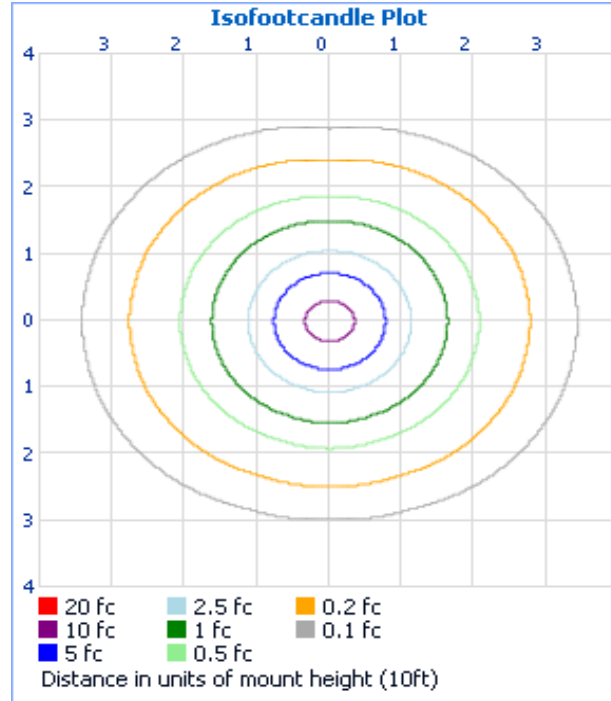
Illuminance - Cone Of Light

Isoillumination Plot

Illuminance at a Distance

	Center Beam fc	Beam Width	
1.7ft	417 fc	4.9 ft	6.9 ft
3.3ft	111 fc	9.6 ft	13.4 ft
5.0ft	48.3 fc	14.6 ft	20.3 ft
6.7ft	26.9 fc	19.5 ft	27.2 ft
8.3ft	17.5 fc	24.2 ft	33.7 ft
10.0ft	12.1 fc	29.1 ft	40.6 ft

■ Vert. Spread: 111.0°
■ Horiz. Spread: 127.5°



ZONAL LUMENS

Zonal Lumen Summary

Zone	Lumens	Luminaire
0-30	954.2	22.7%
0-40	1,575.2	37.5%
0-60	2,850.7	67.8%
60-90	1,084.2	25.8%
70-100	693.0	16.5%
90-120	232.2	5.5%
0-90	3,934.9	93.6%
90-180	268.5	6.4%
0-180	4,203.4	100.0%

Zone	Lumens	Total	Zone	Lumens	Total
0-10	114.6	2.7%	90-100	119.1	2.8%
10-20	331.7	7.9%	100-110	70.9	1.7%
20-30	507.9	12.1%	110-120	42.2	1.0%
30-40	621.0	14.8%	120-130	24.4	0.6%
40-50	657.7	15.6%	130-140	11.9	0.3%
50-60	617.8	14.7%	140-150	0.0	0.0%
60-70	510.3	12.1%	150-160	0.0	0.0%
70-80	361.1	8.6%	160-170	0.0	0.0%
80-90	212.7	5.1%	170-180	0.0	0.0%

EQUIPMENT LIST**REPORT NO. 104599123CHI-001**

#	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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