

VISUAL COMFORT AND COMPANY TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

ESRLCVD48259W31FWABES

PROJECT NUMBER

G104941221

REPORT NUMBER

104941221CHI-028

ISSUE DATE

5/27/2022

REVISED DATE

5/31/2022

TEST DATES

2022-05-27.

DOCUMENT CONTROL NUMBER

RTTDS-R-AMER-Test-3407

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REPORT NUMBER

104941221CHI-028

MODEL NUMBER(s)

ESRLCVD48259W31FWABES

REPORT RENDERED TO:

VISUAL COMFORT AND COMPANY
7400 LINDER AVE
SKOKIE, IL 60077
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-01236637-1.

TEST STANDARDS

IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

In Charge of Testing:



Maximilian Carvajal
Engineer
Lighting Division

Reviewer:



Jeff Davis
N.A. Technical Lead
Lighting Division

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SAMPLE INFORMATION

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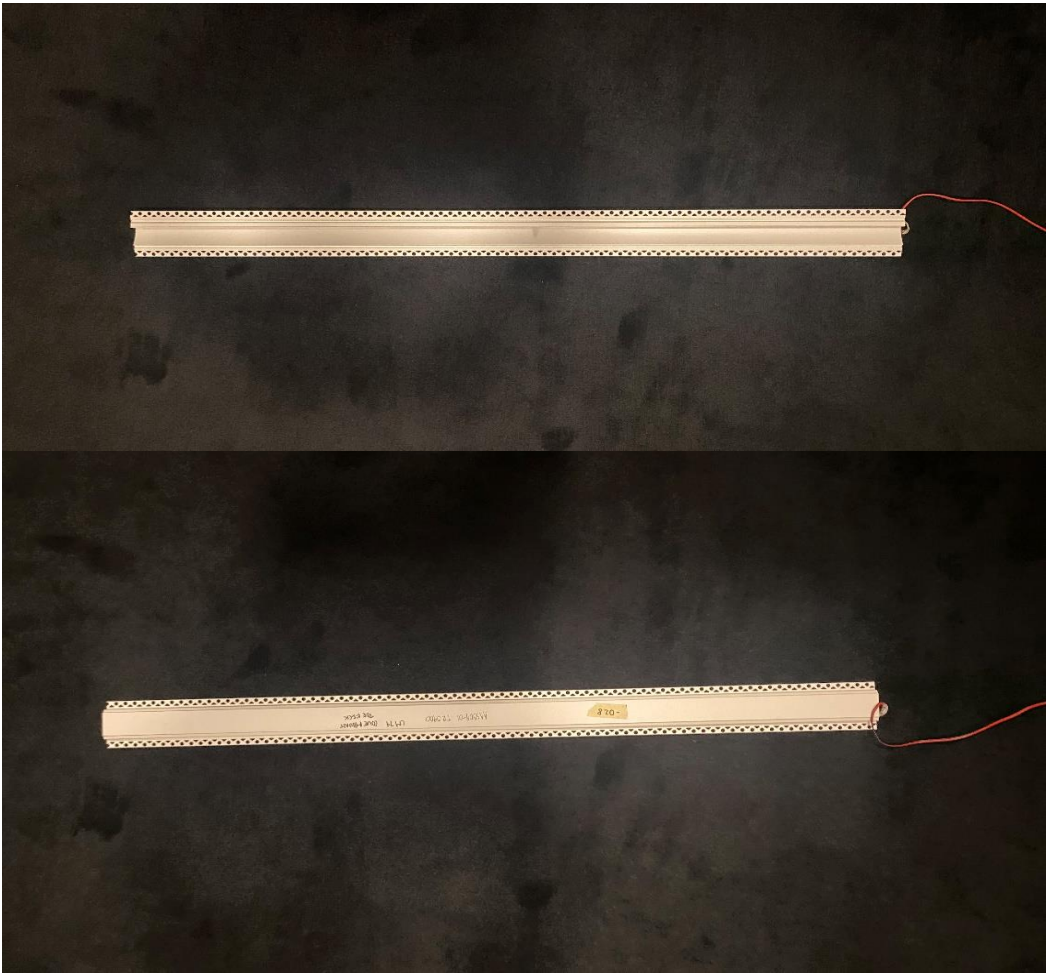
ITEMS RECEIVED

Item No.	Control No.	Model No.	Description	Type	Received
1	AH05202022102311	ESRLCVD48259W31FWA BES	Essence Cove/Toe Kick D-Series 350 lm/ft	Production	5/20/2022

TESTED SAMPLE CONFIGURATIONS

Config No.	Tested Model No.	Item Nos. Utilized
1	ESRLCVD48259W31FWABES	1

SAMPLE PHOTOS - TESTED CONFIGURATIONS



SUMMARY

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PRODUCT INFORMATION AND SUMMARY OF DATA

Product Model No.:	ESRLCVD48259W31FWABES
Product Description:	Essence Cove/Toe Kick D-Series 350 lm/ft
LED Model No.:	AA5509-01
Driver Model No.:	NA
Light Source:	LED

Criteria	Results
Light Output (lumens)	786.0
Input Power (W) @ 24VDC (Vdc)	13.80
Lumen Efficacy (lm/W)	57.0

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	ESRLCVD48259W31FWABES	NA

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

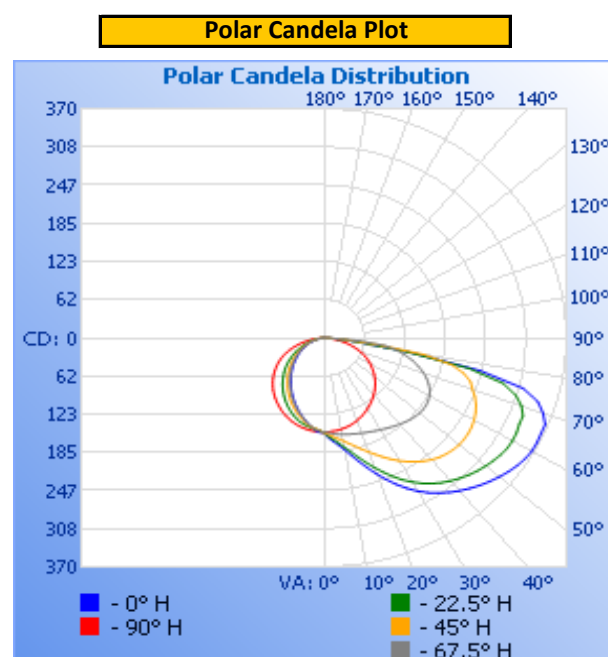
Base Orientation	Input Voltage (Vdc)	Input Current (mA)	Input Power (W)
Up	24.00	575.0	13.80

Light Output (lm)	Lumen Efficacy (lm/W)
786.0	57.0

INTENSITY SUMMARY - CANDELA

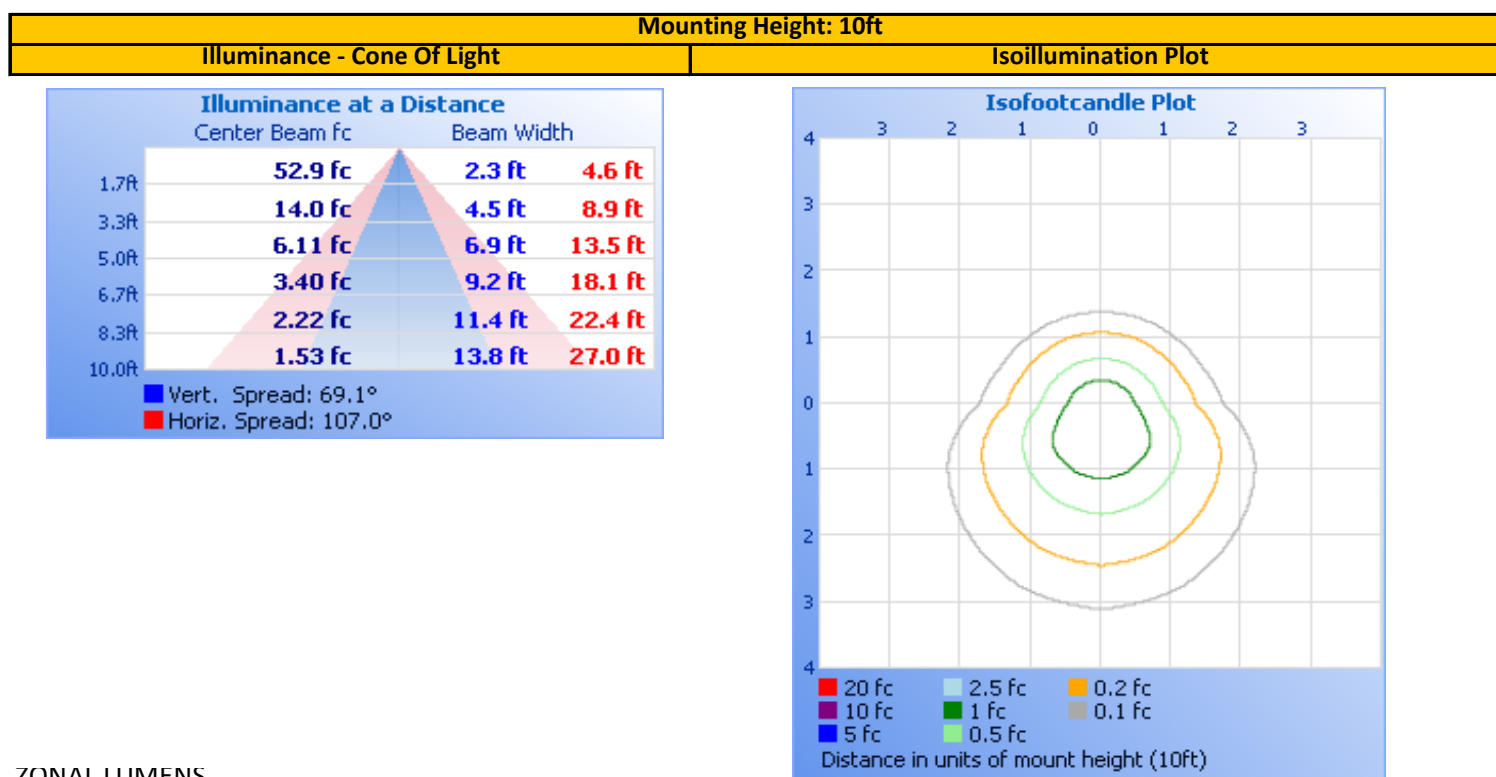
Angle	0	22.5	45	67.5	90
0	152.8	152.8	152.8	152.8	152.8
5	167.7	164.5	160.1	155.3	151.3
10	184.0	179.1	168.9	158.3	149.8
15	206.7	198.9	180.8	160.7	147.1
20	233.4	222.2	195.3	163.7	143.2
25	260.8	246.5	212.0	167.2	138.3
30	285.6	268.6	228.9	171.4	132.4
35	305.7	287.0	244.2	176.2	125.7
40	322.1	301.3	256.5	181.3	118.4
45	336.4	312.6	264.7	186.1	110.3
50	349.2	322.0	268.8	189.6	101.4
55	359.7	329.0	268.7	190.1	91.4
60	366.0	332.2	264.6	186.1	80.8
65	365.2	328.9	256.0	176.4	68.6
70	355.7	320.5	240.9	160.7	54.7
75	314.5	283.1	221.0	139.7	39.8
80	131.0	129.4	154.7	112.4	24.5
85	29.2	27.2	34.0	54.6	10.6
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	134.9	17.2%	0-10	14.8	1.9%
0-40	238.8	30.4%	10-20	44.8	5.7%
0-60	505.9	64.4%	20-30	75.4	9.6%
60-90	280.1	35.6%	30-40	103.9	13.2%
70-100	139.3	17.7%	40-50	126.6	16.1%
90-120	0.0	0.0%	50-60	140.4	17.9%
0-90	786.0	100.0%	60-70	140.8	17.9%
90-180	0.0	0.0%	70-80	113.3	14.4%
0-180	786.0	100.0%	80-90	26.0	3.3%
			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%

EQUIPMENT LIST

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#	Equipment	Model No	Control No.	Last Cal	Cal Due
1	Yokogawa Power Meter	WT310E	CHI0664	3/30/2022	3/30/2023
2	Omega Thermometer	DPI8-C24	146920	10/4/2021	10/4/2022
3	LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU
4	Newport Thermohygrometer	iServer	CHI0452	2/3/2022	2/3/2023
5	Chroma Power Supply	61604	CHI0371	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
1	5/31/2022	Max Carvajal MC	Jeff Davis JD	Reran distribution test ensuring proper lens on sample and no significant line voltage losses
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