

APOGEE LIGHTING

TEST REPORT

SCOPE OF WORK

LED Performance Testing

MODEL NUMBER

Light Scape

PROJECT NUMBER

G103802715

REPORT NUMBER

103802715CRT-019

REPORT ISSUE DATE

January 24, 2020

REPORT REVISION DATE

None



REPORT NUMBER
103802715CRT-019

TEST OF (1) 2' X 2' LIGHT SCAPE FIXTURE 2700K

MODEL NUMBER
LIGHT SCAPE

REPORT RENDERED TO:
APOGEE LIGHTING
593 ACORN ST
DEER PARK, NY 11729

STATEMENT OF LIMITATION

NVLAP Lab Code 100402-0. 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-00945597.

TEST STANDARDS

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

TEST DATES

January 24, 2020

In Charge of Testing:



Gerald Gray
Associate Engineer
Lighting Division

Reviewer:



Melanie Brittain
Senior Associate Engineer
Lighting Division

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SAMPLE INFORMATION

Control No.	Model No.	Description	Type	Received
CRT2001231150-002	Light Scape	2' x 2' Light Scape fixture 2700K	Production	1/23/2020

SAMPLE PHOTOS



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SUMMARY OF DATA

Product Model No.:	Light Scape
Product Description:	2' x 2' Light Scape fixture 2700K
LED Model No.:	Apogee HE Module
Driver Model No.:	ELDOLED Dual Drive
Light Source:	LED

Criteria	Results
Light Output (lumens)	1533.6
Input Power (W) @ 120 (Vac)	16.69
Lumen Efficacy (lm/W)	91.9
Input Power Factor () @ 120 (Vac)	0.983

TEST METHODS

SEASONING IN SAMPLE ORIENTATION - LED PRODUCTS

No seasoning was performed in accordance with IESNA LM-79.

PHOTOMETRIC AND ELECTRICAL MEASUREMENTS - DISTRIBUTION METHOD

A Type C Mirror Goniometer was used to measure the intensity (candela) at each angle of distribution for the SSL sample.

Ambient temperature was measured equal to the height of the sample mounted on the goniometer equipment. The SSL sample was operated on the client provided driver at rated input volts in its designated orientation. The SSL sample was allowed to stabilize for at least thirty minutes before measurements were made. Stabilization procedures to LM-79 were followed. Electrical measurements including voltage, current, and power were measured using a power analyzer.

The calibration of the goniometer-photometer system is traceable to the National Institute of Standards and Technology.

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

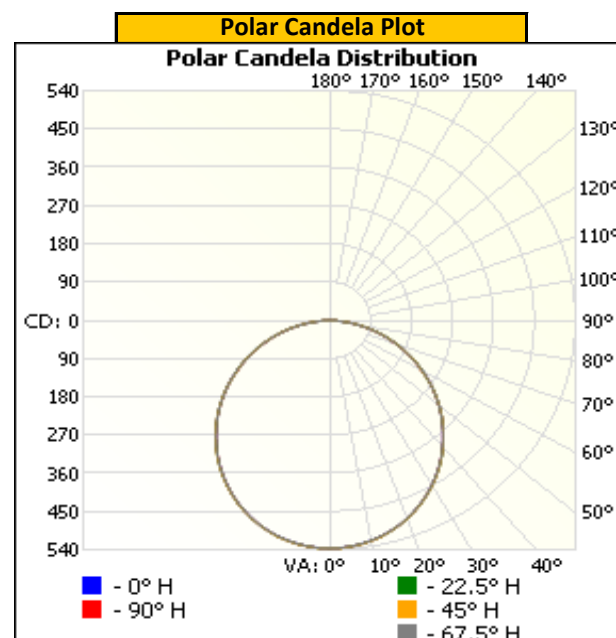
Fixture Model No.	Light Scape	Fixture Control No.	CRT2001231150-002
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Base Orientation	Input Voltage (Vac)	Input Current (mA)	Input Power (W)	Input Power Factor (f)
Up	120.03	141.5	16.69	0.983

Light Output (lm)	Lumen Efficacy (lm/W)
1533.6	91.9

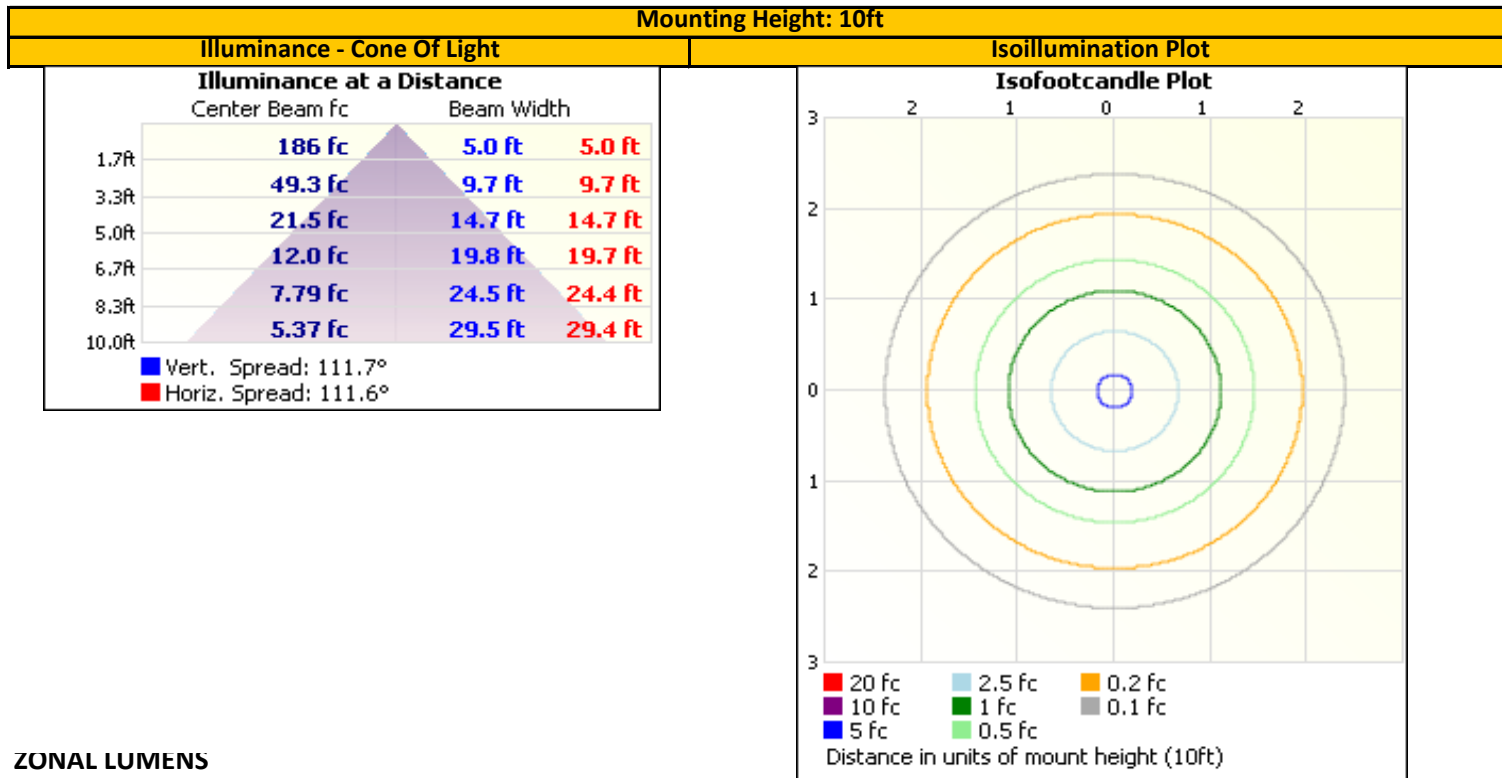
INTENSITY SUMMARY - CANDELA

Angle	0	22.5	45	67.5	90
0	536	536	536	536	536
5	534	534	534	534	534
10	526	526	527	526	526
15	514	514	514	514	514
20	496	497	497	496	497
25	475	475	476	474	475
30	449	449	450	449	449
35	419	420	420	419	419
40	387	387	388	386	386
45	352	352	352	351	352
50	314	315	315	314	314
55	274	276	275	275	275
60	233	234	232	234	233
65	193	193	193	192	192
70	151	152	151	150	150
75	109	110	110	108	108
80	69	70	69	68	68
85	30	31	30	29	30
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



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ILLUMINANCE SUMMARY



ZONAL LUMENS

Zonal Lumen Summary					
Zone	Lumens	Luminaire	Zone	Lumens	Total
0-30	414.5	27.0%	0-10	50.7	3.3%
0-40	676.9	44.1%	10-20	145.0	9.5%
0-60	1,193.6	77.8%	20-30	218.8	14.3%
60-90	340.0	22.2%	30-40	262.4	17.1%
70-100	149.6	9.8%	40-50	271.3	17.7%
90-120	0.0	0.0%	50-60	245.5	16.0%
0-90	1,533.6	100.0%	60-70	190.4	12.4%
90-180	0.0	0.0%	70-80	115.4	7.5%
0-180	1,533.6	100.0%	80-90	34.2	2.2%
			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%

Test Equipment Used:	1 through 10				
Ambient Temp (°C):	24.2	Relative Hum (%):	NA	Test Completion Date	1/24/2020

See last page for equipment details

EQUIPMENT LIST

[illegible]