



UL Verification Services Inc.
7036 Snowdrift Road
Allentown, PA 18106
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Photometric Test Report

Relevant Standards
IES LM-79-2008, ANSI C82.77-2002

Prepared For
Auroralight Inc

2742 Loker Ave W
#100
Carlsbad, CA 92010-6619
United States

Catalog Number
LSW8-N-30 (10° OPTIC, 3000K)

Order Number
12250114
Test Number
12250114.103

Report Date

2018-05-08

Prepared By

Sean Gregory, Project Handler

Approved By

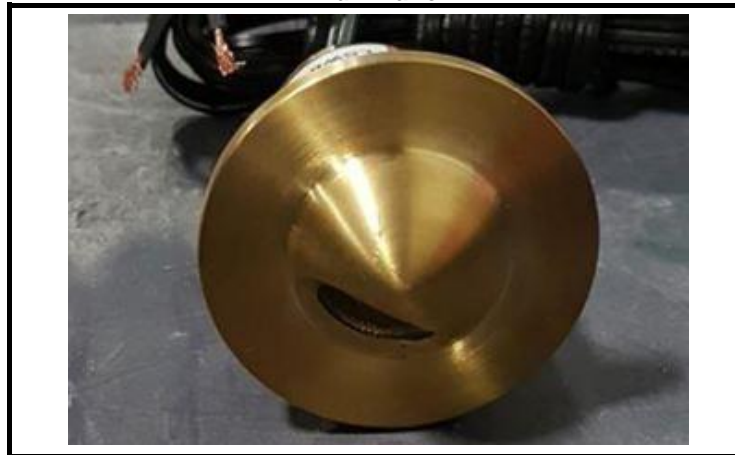
Alexa Lambert, Project Handler

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Luminaire Description: Cylindrical copper housing with circular metal flush faceplate
Lamp: One (1) Cree XP-L 3000K LED with 10°, narrow silicone optic
Mounting: Recessed
Ballast/Driver: Integrated
Note: This report has been pro-rated using data from report numbers 11912334.03, 12250114.01, 12250114.02, 12250114.03, 12250114.04, 12250114.05, and 12250114.06 to account for differences in color temperature.

Luminaire



Luminaire Characteristics

Luminous Diameter: 1.00 in.

Summary of Results

Roadway Classification: Type V, Very Short
Cutoff Classification: Full Cutoff
BUG Rating: B0 U0 G0

Test Conditions

Test Temperature: 24.6 °C
Voltage: 11.95 VAC
Current: 0.1693 A
Power: 1.236 W
Power Factor: 0.611
Frequency: 60 Hz
Current THD: 81.1 %

Tested in 30 planes left side, 30 planes right side, left and right averaged
Vertical test increments are 2.5 degrees
Test distance exceeds five times the greatest luminous opening of luminaire

Laboratory results may not be representative of field performance
Ballast factors have not been applied



Distribution - Goniophotometer

Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.6 °C	11.95 VAC	0.1693 A	1.236 W	0.611	60 Hz	81.1 %

Summary of Results

Spacing Criteria

0-180: 0.24

90-270: 0.24

Total Lumen Output:

123.3 Lumens

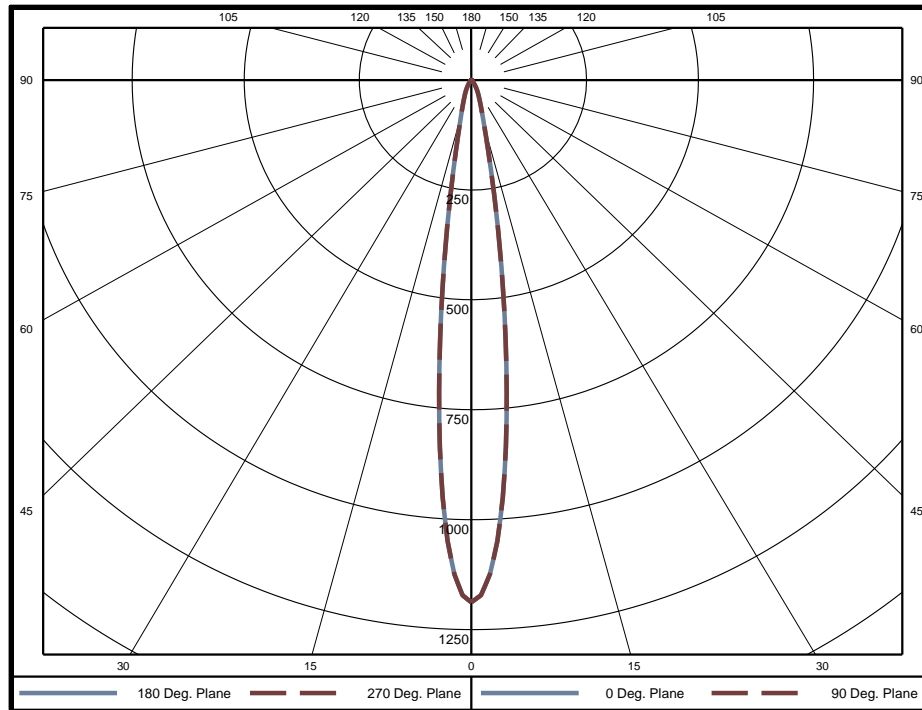
Luminaire Efficacy:

99.7 lm/w

Maximum Candela:

1188 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	24.02	19.5%	60-65	0.59	0.5%	120-125	0	0.0%
5-10	37.07	30.1%	65-70	0.48	0.4%	125-130	0	0.0%
10-15	20.26	16.4%	70-75	0.38	0.3%	130-135	0	0.0%
15-20	12.13	9.8%	75-80	0.28	0.2%	135-140	0	0.0%
20-25	8.94	7.3%	80-85	0.17	0.1%	140-145	0	0.0%
25-30	6.75	5.5%	85-90	0.06	0.0%	145-150	0	0.0%
30-35	4.65	3.8%	90-95	0	0.0%	150-155	0	0.0%
35-40	2.90	2.4%	95-100	0	0.0%	155-160	0	0.0%
40-45	1.79	1.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	1.20	1.0%	105-110	0	0.0%	165-170	0	0.0%
50-55	0.91	0.7%	110-115	0	0.0%	170-175	0	0.0%
55-60	0.73	0.6%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	117	94.7%
0-60	121	98.4%
0-90	123	100.0%
90-180	0	0.0%



Candela Tabulation
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
	0	1188	1188	1188	1188	1188	1188	1188	1188	1188	1188	1188	1188	1188	1188	1188
	5	837	837	837	837	837	837	837	837	837	837	837	837	837	837	837
	10	298	298	298	298	298	298	298	298	298	298	298	298	298	298	298
	15	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103
	20	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
	25	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
	30	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
	35	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	40	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	45	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	50	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	55	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	60	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	65	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	70	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	75	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Average Luminance (cd/m²)
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	2344000	2344000
	45	10260	10260
	55	6189	6189
	65	5013	5013
	75	4671	4671
	85	4873	4873



Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%																		
Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **																	
0	147	147	147	147	143	143	143	143	137	137	137	131	131	131	126	126	126	123
1	142	139	137	134	139	136	134	132	131	130	128	127	126	124	123	122	121	119
2	137	132	129	125	134	130	127	124	126	124	121	123	121	119	120	118	116	115
3	132	127	122	119	130	125	121	118	122	119	116	119	116	114	117	114	112	111
4	128	122	117	113	127	120	116	112	118	114	111	116	113	110	114	111	109	107
5	125	118	112	109	123	117	112	108	115	110	107	113	109	106	111	108	106	104
6	121	114	109	105	120	113	108	105	111	107	104	110	106	103	108	105	103	101
7	118	110	105	102	117	110	105	102	108	104	101	107	103	101	106	103	100	99
8	115	108	103	99	114	107	102	99	106	102	99	105	101	98	104	100	98	97
9	113	105	100	97	112	104	100	97	103	99	96	102	99	96	102	98	96	95
10	110	102	98	94	109	102	97	94	101	97	94	100	97	94	100	96	94	93

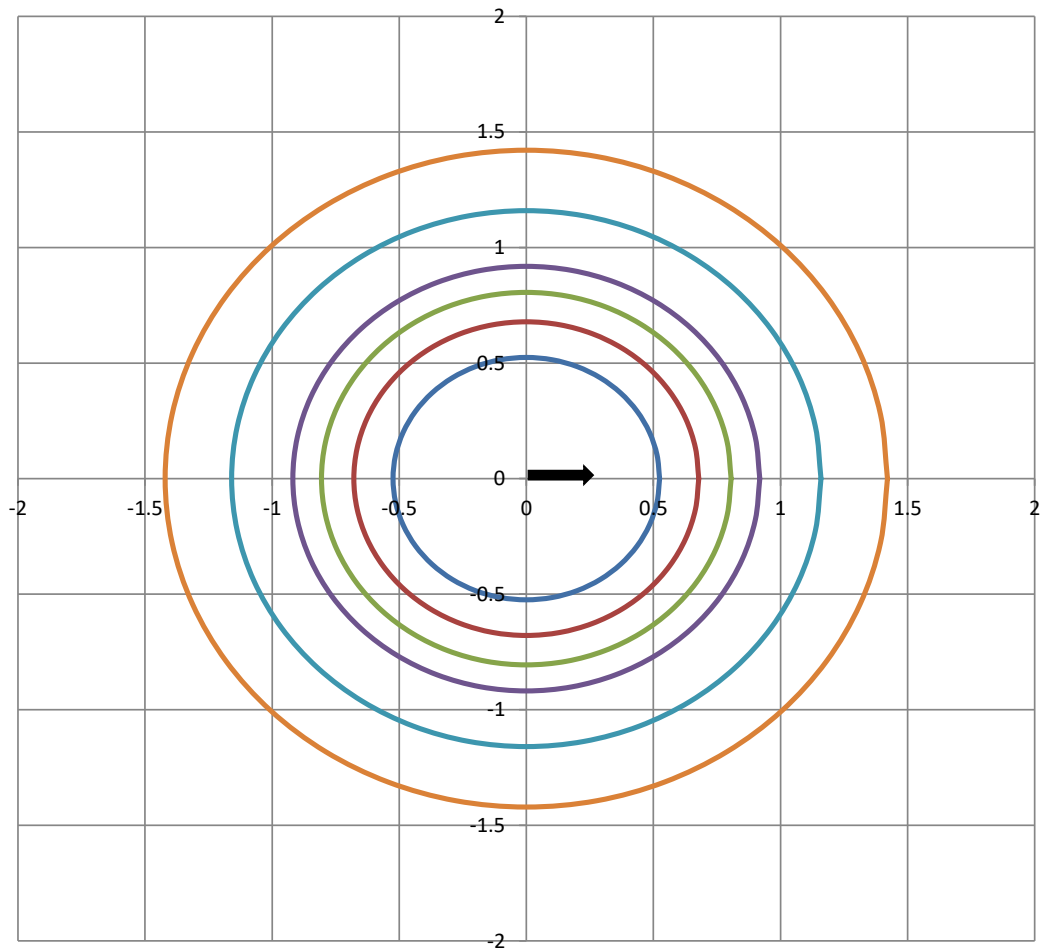
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1188 Candela
Central Cone Intensity:	1058 Candela
Beam Flux:	39.8 Lumens
Beam Angle (0-180):	14.0 Degrees
Beam Angle (90-270):	14.0 Degrees
Field Angle (0-180):	28.3 Degrees
Field Angle (90-270):	28.3 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		74.2	0.966
6.00		33.0	1.45
8.00		18.6	1.93
10.0		11.9	2.42
12.0		8.25	2.90
14.0		6.06	3.38
16.0		4.64	3.87



ISOFootcandle Plot

Mounting Height - 2 Feet



Grid Lines in Units of Mounting Height

5 fc 2 fc 1 fc 0.5 fc 0.2 fc 0.1 fc



IES "BUG" Rating
(Back Light, Uplight, Glare)
Per IES TM-15-11



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	54.8	44.3%
FM	(30-60)	6.1	4.9%
FH	(60-80)	0.9	0.7%
FVH	(80-90)	0.1	0.1%
BL	(0-30)	54.8	44.3%
BM	(30-60)	6.1	4.9%
BH	(60-80)	0.9	0.7%
BVH	(80-90)	0.1	0.1%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		123.7	100.0%
BUG Rating	B0 U0 G0		