



UL Verification Services Inc.
7036 Snowdrift Road
Allentown, PA 18106
610-774-1300

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-FL-M-40 (25° OPTIC, 4000K)

Order Number
12250114
Test Number
12250114.91

Report Date

2018-05-08

Prepared By

Sean Gregory, Project Handler

Approved By

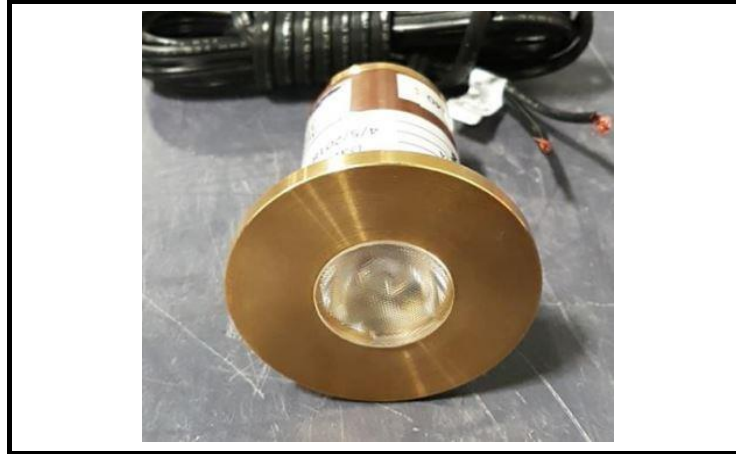
Alexa Lambert, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Cylindrical copper housing with circular metal flush faceplate
Lamp: One (1) Cree XP-L 4000K LED with 25° medium optic
Mounting: Recessed Downlight
Ballast/Driver: Integrated
Note: This report has been pro-rated using data from report numbers 12250114.89, 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: Cutoff
BUG Rating: B0 U1 G0

Test Conditions

Test Temperature: 24.4 °C
Voltage: 12.01 VAC
Current: 0.1699 A
Power: 1.248 W
Power Factor: 0.611
Frequency: 60 Hz
Current THD: 80.5 %

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
24.4 °C	12.01 VAC	0.1699 A	1.248 W	0.611	60 Hz	80.5 %

Summary of Results

Spacing Criteria

0-180: 0.36

90-270: 0.36

Total Lumen Output:

152.4 Lumens

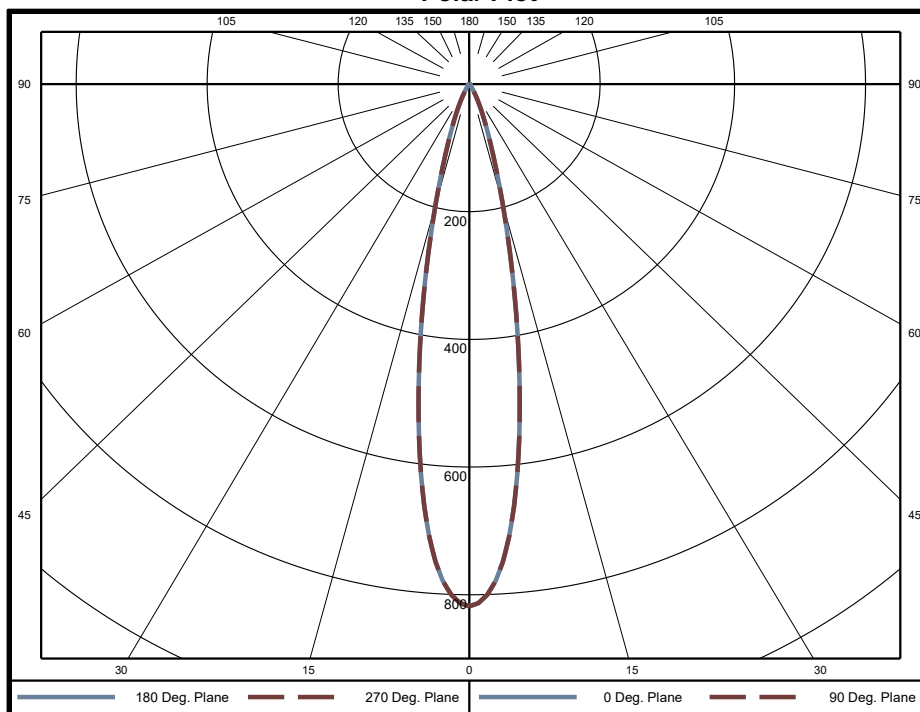
Luminaire Efficacy:

122.1 lm/w

Maximum Candela:

818 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	18.28	12.0%	60-65	0.95	0.6%	120-125	0	0.0%
5-10	40.70	26.7%	65-70	0.81	0.5%	125-130	0	0.0%
10-15	37.01	24.3%	70-75	0.65	0.4%	130-135	0	0.0%
15-20	22.95	15.1%	75-80	0.47	0.3%	135-140	0	0.0%
20-25	12.92	8.5%	80-85	0.29	0.2%	140-145	0	0.0%
25-30	6.73	4.4%	85-90	0.13	0.1%	145-150	0	0.0%
30-35	3.31	2.2%	90-95	0.01	0.0%	150-155	0	0.0%
35-40	2.04	1.3%	95-100	0	0.0%	155-160	0	0.0%
40-45	1.56	1.0%	100-105	0	0.0%	160-165	0	0.0%
45-50	1.33	0.9%	105-110	0	0.0%	165-170	0	0.0%
50-55	1.19	0.8%	110-115	0	0.0%	170-175	0	0.0%
55-60	1.08	0.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	144	94.4%
0-60	149	97.8%
0-90	152	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	818.1	818.1	818.1	818.1	818.1	818.1	818.1	818.1	818.1	818.1	818.1	818.1	818.1	818.1	818.1
	5	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2
	10	445.1	445.1	445.1	445.1	445.1	445.1	445.1	445.1	445.1	445.1	445.1	445.1	445.1	445.1	445.1
	15	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2
	20	90.6	90.6	90.6	90.6	90.6	90.6	90.6	90.6	90.6	90.6	90.6	90.6	90.6	90.6	90.6
	25	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5
	30	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4
	35	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
	40	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	45	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
	50	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	55	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	60	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
	65	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
	70	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	75	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	80	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	85	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	90	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	1614000	1614000
	45	10260	10260
	55	8702	8702
	65	8307	8307
	75	8044	8044
	85	8403	8403



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	181	181	181	181	177	177	177	177	169	169	169	162	162	162	156	156	156	152
1	175	171	168	165	171	168	165	163	162	160	158	156	155	153	151	150	149	146
2	168	163	158	154	165	160	156	152	155	152	149	151	148	146	147	145	143	140
3	163	155	149	145	160	153	148	144	149	145	141	146	142	139	143	140	137	135
4	158	149	143	138	155	147	141	137	144	139	135	141	137	134	139	135	132	131
5	153	143	137	132	151	142	136	131	140	134	130	137	133	129	135	131	128	126
6	148	138	132	127	146	137	131	127	135	130	126	133	129	125	132	128	124	123
7	144	134	127	123	143	133	127	123	131	126	122	130	125	121	128	124	121	119
8	140	130	124	119	139	129	123	119	128	122	118	127	122	118	125	121	118	116
9	137	126	120	116	135	126	120	116	125	119	115	123	118	115	122	118	115	113
10	133	123	117	113	132	122	117	113	121	116	112	120	116	112	120	115	112	110

Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	818.1 Candela
Central Cone Intensity:	780 Candela
Beam Flux:	64.4 Lumens
Beam Angle (0-180):	21.3 Degrees
Beam Angle (90-270):	21.3 Degrees
Field Angle (0-180):	41.3 Degrees
Field Angle (90-270):	41.3 Degrees

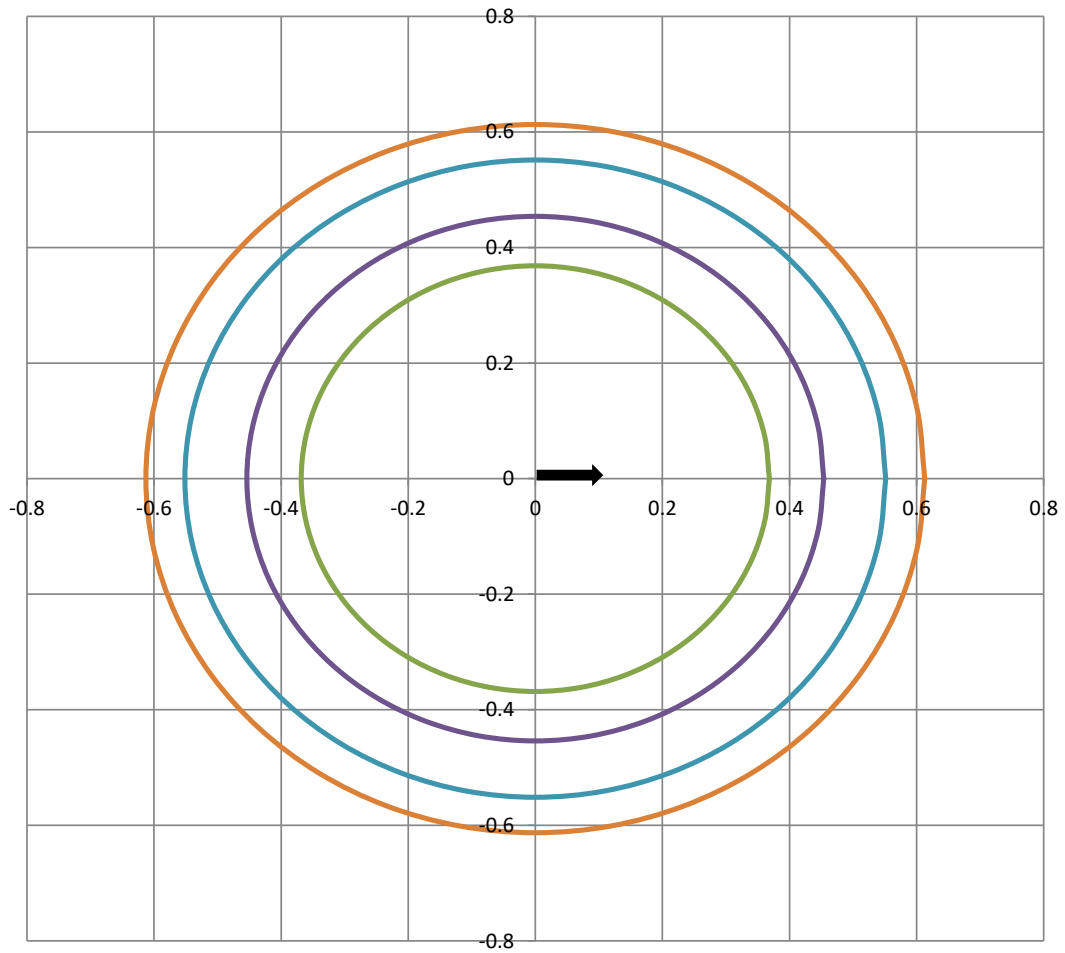
Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		51.1	1.45
6.00		22.7	2.18
8.00		12.8	2.90
10.0		8.18	3.63
12.0		5.68	4.36
14.0		4.17	5.08
16.0		3.20	5.81



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height





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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	69.4	45.5%
FM	(30-60)	5.3	3.5%
FH	(60-80)	1.4	0.9%
FVH	(80-90)	0.2	0.1%
BL	(0-30)	69.4	45.5%
BM	(30-60)	5.3	3.5%
BH	(60-80)	1.4	0.9%
BVH	(80-90)	0.2	0.1%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		152.7	100.0%
BUG Rating	B0 U1 G0		