



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-30 (25° OPTIC, 3000K)

Order Number
12250114
Test Number
12250114.89

Test Date

2018-05-07

Prepared By

Cordaryl Cousar, Technician

Approved By

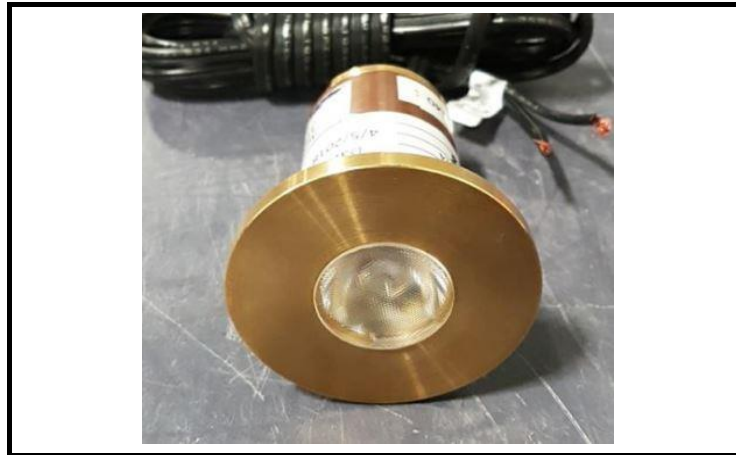
Alexa Lambert, Project Handler

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Luminaire Description: Cylindrical copper housing with circular metal flush faceplate
Lamp: One (1) Cree XP-L 3000K LED with 25° medium optic
Mounting: Recessed Downlight
Ballast/Driver: Integrated

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:

136.1 Lumens

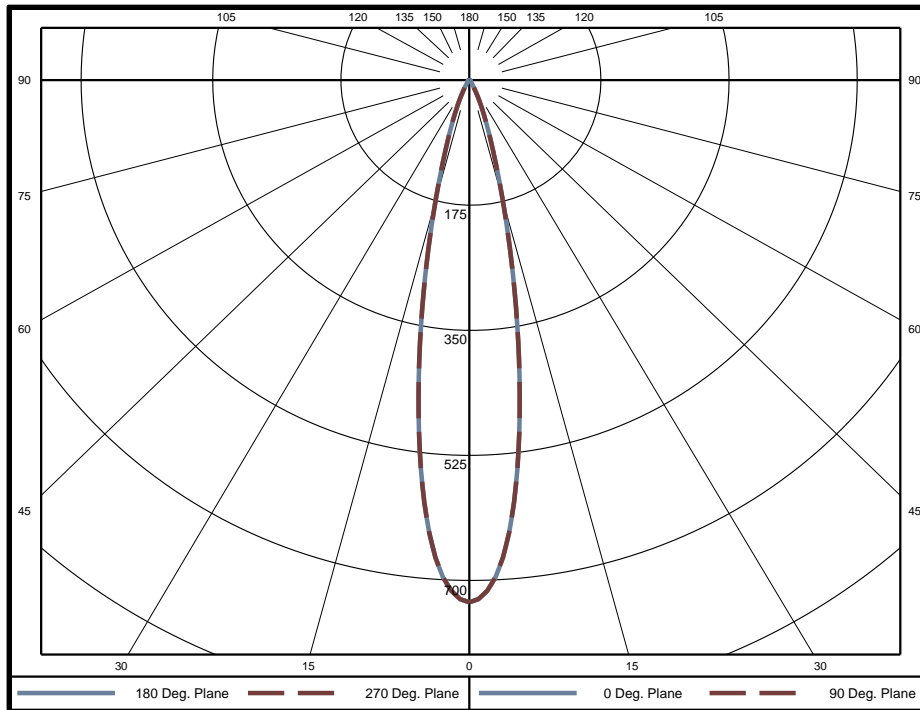
Luminaire Efficacy:

109.1 lm/w

Maximum Candela:

730 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	16.32	12.0%	60-65	0.85	0.6%	120-125	0	0.0%
5-10	36.34	26.7%	65-70	0.72	0.5%	125-130	0	0.0%
10-15	33.04	24.3%	70-75	0.58	0.4%	130-135	0	0.0%
15-20	20.50	15.1%	75-80	0.42	0.3%	135-140	0	0.0%
20-25	11.53	8.5%	80-85	0.26	0.2%	140-145	0	0.0%
25-30	6.01	4.4%	85-90	0.11	0.1%	145-150	0	0.0%
30-35	2.96	2.2%	90-95	0.00	0.0%	150-155	0	0.0%
35-40	1.82	1.3%	95-100	0	0.0%	155-160	0	0.0%
40-45	1.39	1.0%	100-105	0	0.0%	160-165	0	0.0%
45-50	1.19	0.9%	105-110	0	0.0%	165-170	0	0.0%
50-55	1.07	0.8%	110-115	0	0.0%	170-175	0	0.0%
55-60	0.96	0.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	129	94.4%
0-60	133	97.8%
0-90	136	100.0%
90-180	0	0.0%



Candela Tabulation

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal 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	730.4	730.4	730.4	730.4	730.4	730.4	730.4	730.4	730.4	730.4	730.4	730.4	730.4	730.4	730.4	730.4
5	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0	635.0
10	397.4	397.4	397.4	397.4	397.4	397.4	397.4	397.4	397.4	397.4	397.4	397.4	397.4	397.4	397.4	397.4
15	187.7	187.7	187.7	187.7	187.7	187.7	187.7	187.7	187.7	187.7	187.7	187.7	187.7	187.7	187.7	187.7
20	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9
25	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2
30	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
35	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	7.0	7.0
40	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
45	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
50	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
55	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
60	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
65	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
70	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
75	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
80	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
85	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	0.3	0.3
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.0

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	1442000	1442000	1442000
45	9164	9164	9164
55	7769	7769	7769
65	7417	7417	7417
75	7182	7182	7182
85	7503	7503	7503



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	162	162	162	162	158	158	158	158	151	151	151	145	145	145	139	139	139	136
1	156	153	150	148	153	150	147	145	145	143	141	140	138	137	135	134	133	130
2	150	145	141	137	148	143	139	136	139	135	133	135	132	130	131	129	127	125
3	145	139	133	129	143	137	132	128	133	129	126	130	127	124	127	125	122	121
4	141	133	127	123	139	132	126	122	129	124	121	126	123	120	124	121	118	117
5	136	128	122	118	134	127	121	117	125	120	116	123	119	115	121	117	114	113
6	132	124	118	113	131	123	117	113	121	116	112	119	115	112	118	114	111	110
7	129	120	114	110	127	119	113	109	117	112	109	116	112	108	115	111	108	106
8	125	116	110	106	124	115	110	106	114	109	106	113	109	105	112	108	105	104
9	122	113	107	103	121	112	107	103	111	106	103	110	106	103	109	105	102	101
10	119	110	104	101	118	109	104	101	108	104	100	108	103	100	107	103	100	99

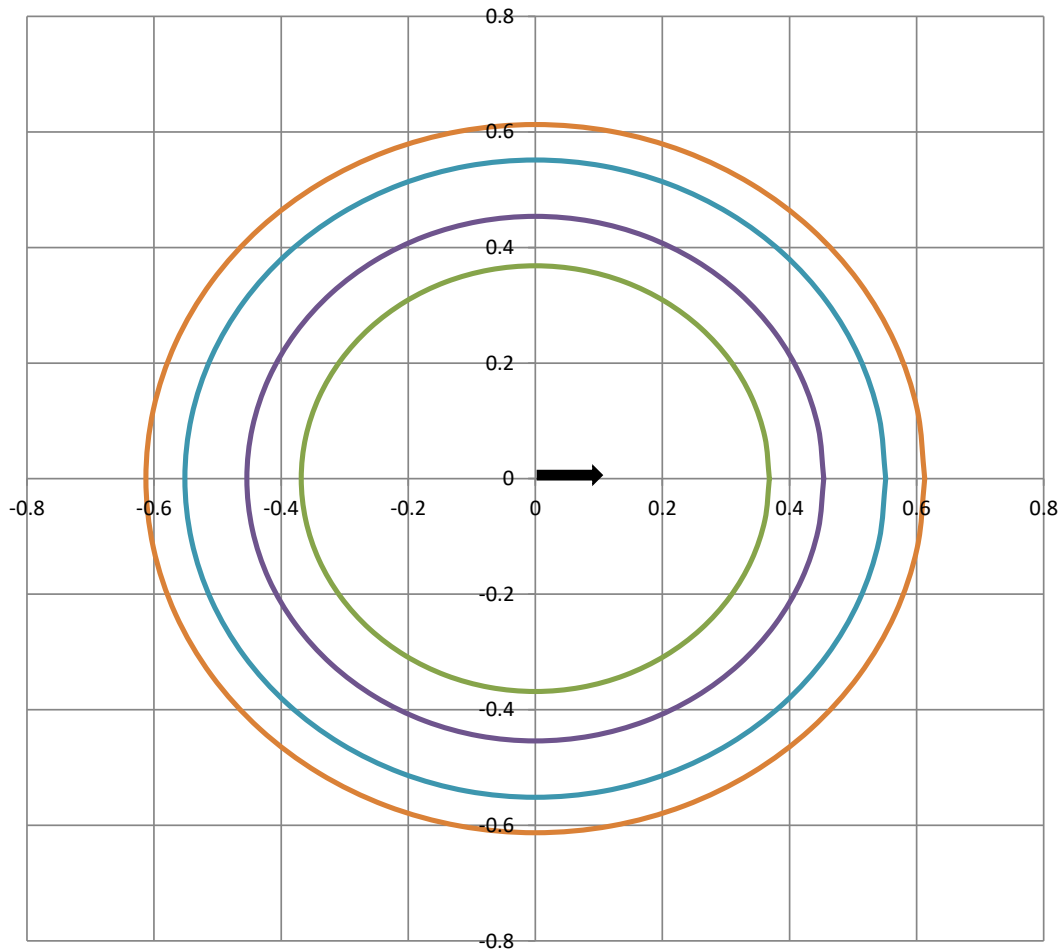
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	730.4 Candela
Central Cone Intensity:	696 Candela
Beam Flux:	57.5 Lumens
Beam Angle (0-180):	21.3 Degrees
Beam Angle (90-270):	21.3 Degrees
Field Angle (0-180):	41.3 Degrees
Field Angle (90-270):	41.3 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		45.7	1.45
6.00		20.3	2.18
8.00		11.4	2.90
10.0		7.30	3.63
12.0		5.07	4.36
14.0		3.73	5.08
16.0		2.85	5.81



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

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)	62.0	45.5%
FM	(30-60)	4.7	3.5%
FH	(60-80)	1.3	0.9%
FVH	(80-90)	0.2	0.1%
BL	(0-30)	62.0	45.5%
BM	(30-60)	4.7	3.5%
BH	(60-80)	1.3	0.9%
BVH	(80-90)	0.2	0.1%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		136.3	100.0%
BUG Rating	B0 U1 G0		