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-PL-M-40 (25° OPTIC, 4000K)

Order Number
12250114
Test Number
12250114.102

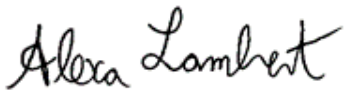
Report Date

2018-05-09

Prepared By

Sean Gregory, Project Handler

Approved By

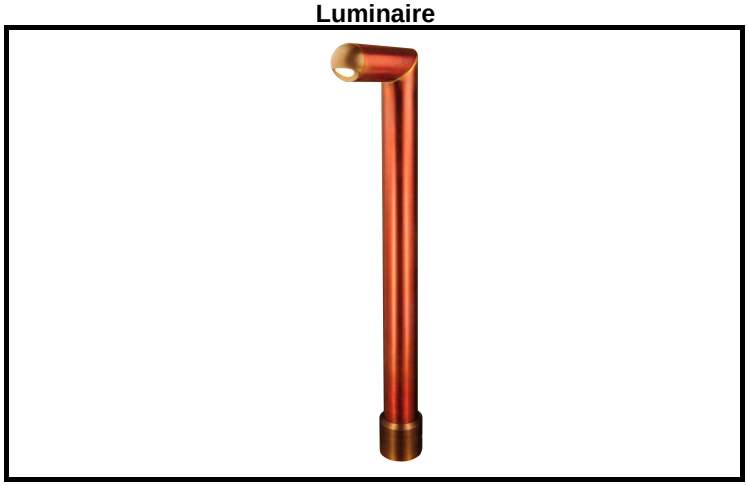


Alexa Lambert, Project Handler

Luminaire Description: Cylindrical copper housing with circular metal domed faceplate
Lamp: One (1) Cree XP-L 4000K LED with 25° medium optic
Mounting: Step/Wall
Ballast/Driver: Integrated
Note:

This report has been pro-rated using data from report numbers 12250114.100, 12250114.01, 12250114.02, 12250114.03, 12250114.04, 12250114.05, and 12250114.06 to account for differences in color temperature.

Luminaire



Luminaire Characteristics

Luminous Length:	0.50	in.
Luminous Width:	0.5000	in.
Luminous Height:	1.00	in.

Summary of Results

Roadway Classification:	Type II, Very Short
Cutoff Classification:	Noncutoff
BUG Rating:	B0 U1 G0

Test Conditions

Test Temperature:	24.1	°C
Voltage:	12.01	VAC
Current:	0.1680	A
Power:	1.236	W
Power Factor:	0.612	
Frequency:	60	Hz
Current THD:	81.2	%

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

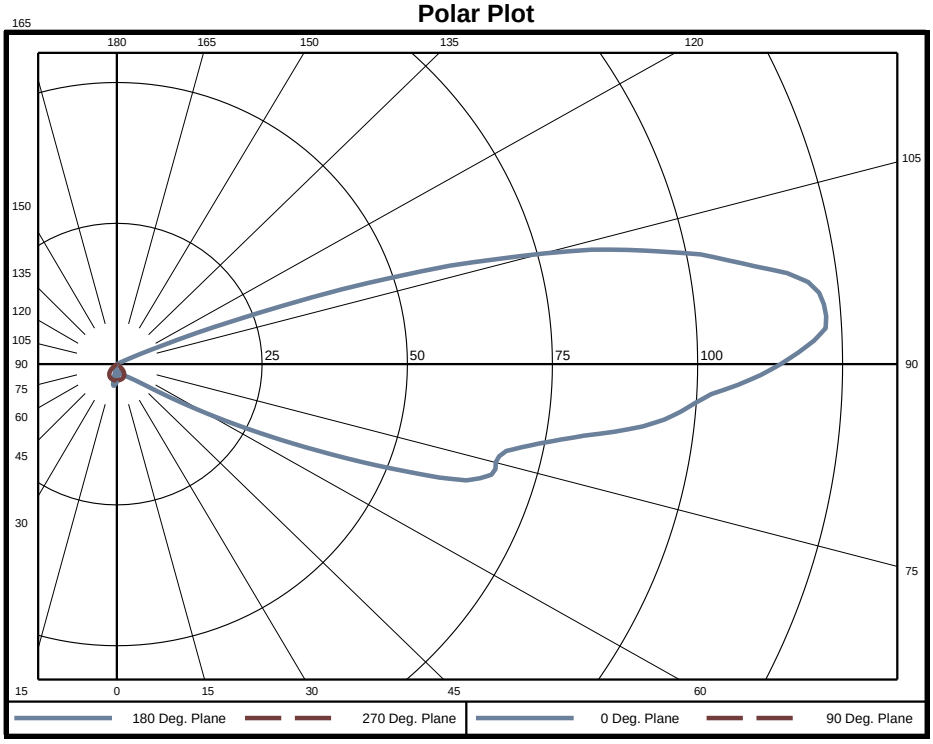
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.1 °C	12.01 VAC	0.1680 A	1.236 W	0.612	60 Hz	81.2 %

Summary of Results

Spacing Criteria
0-180: 0.29
90-270: 1.20

Total Lumen Output: 33.61 Lumens
Luminaire Efficacy: 27.2 lm/w
Maximum Candela: 122 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.070	0.2%	60-65	1.320	3.9%	120-125	0	0.0%
5-10	0.200	0.6%	65-70	2.229	6.6%	125-130	0	0.0%
10-15	0.274	0.8%	70-75	2.786	8.3%	130-135	0	0.0%
15-20	0.271	0.8%	75-80	2.681	8.0%	135-140	0	0.0%
20-25	0.289	0.9%	80-85	3.189	9.5%	140-145	0	0.0%
25-30	0.330	1.0%	85-90	3.747	11.1%	145-150	0	0.0%
30-35	0.345	1.0%	90-95	4.230	12.6%	150-155	0	0.0%
35-40	0.341	1.0%	95-100	4.056	12.1%	155-160	0	0.0%
40-45	0.345	1.0%	100-105	3.137	9.3%	160-165	0	0.0%
45-50	0.377	1.1%	105-110	1.773	5.3%	165-170	0	0.0%
50-55	0.466	1.4%	110-115	0.412	1.2%	170-175	0	0.0%
55-60	0.735	2.2%	115-120	0.005	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	2	6.3%
0-60	4	12.0%
0-90	20	59.5%
90-180	14	40.5%

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	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	3.0
5	2.3	2.2	2.4	2.6	2.9	3.2	3.4	3.6	3.7	3.6	3.4	3.2	2.9	2.6	2.4	2.2
10	1.3	1.3	1.6	2.3	2.9	3.4	3.7	3.8	3.6	3.8	3.7	3.4	2.9	2.3	1.6	1.3
15	1.4	1.2	1.1	1.8	2.8	3.6	3.3	0.9	0.0	0.9	3.3	3.6	2.8	1.8	1.1	1.2
20	1.7	1.4	1.0	1.4	2.7	3.6	0.6	0.0	0.0	0.0	0.6	3.6	2.7	1.4	1.0	1.4
25	2.1	1.7	1.1	1.0	2.6	3.3	0.0	0.0	0.0	0.0	0.0	3.3	2.6	1.0	1.1	1.7
30	2.3	1.8	1.3	0.8	2.4	2.5	0.0	0.0	0.0	0.0	0.0	2.5	2.4	0.8	1.3	1.8
35	2.6	2.0	1.4	0.6	2.1	1.3	0.0	0.0	0.0	0.0	0.0	1.3	2.1	0.6	1.4	2.0
40	3.0	2.3	1.4	0.5	1.7	0.3	0.0	0.0	0.0	0.0	0.0	0.3	1.7	0.5	1.4	2.3
45	3.7	2.7	1.3	0.3	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.3	1.3	2.7
50	5.0	3.4	1.2	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	1.2	3.4
55	8.2	4.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	4.8
60	16.6	7.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	7.2
65	33.5	10.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	10.9
70	58.9	12.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	12.3
75	67.3	6.7	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	6.7
80	77.3	3.5	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	3.5
85	97.1	2.6	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	2.6
90	113.9	2.1	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	2.1
95	121.8	1.8	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	1.8
100	106.3	1.1	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	1.1
105	75.9	0.1	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	0.1
110	30.3	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	1.7	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/m^2)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
0	#VALUE!	#VALUE!	#VALUE!
45	#VALUE!	#VALUE!	#VALUE!
55	#VALUE!	#VALUE!	#VALUE!
65	#VALUE!	#VALUE!	#VALUE!
75	#VALUE!	#VALUE!	#VALUE!
85	#VALUE!	#VALUE!	#VALUE!

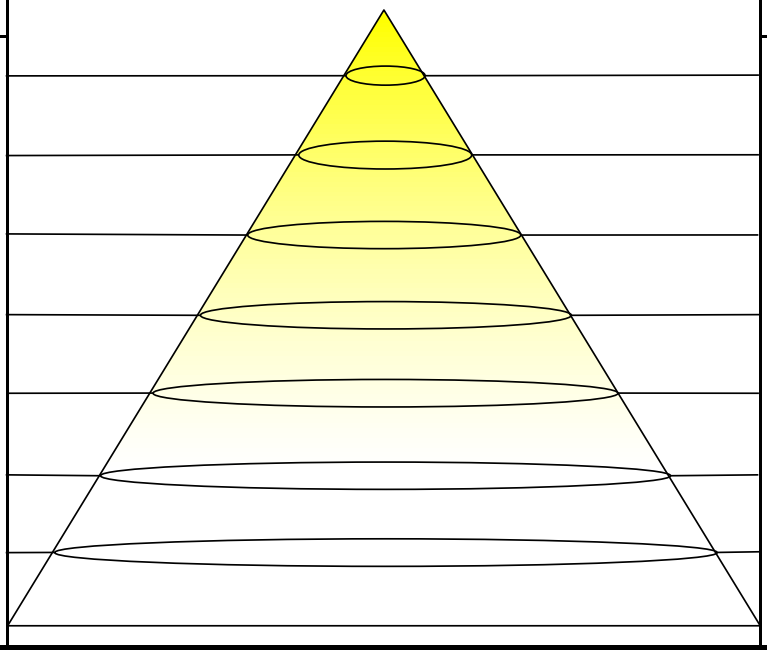
Utilization of Lumens - Zonal Cavity Method

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	37	37	37	37	34	34	34	34	30	30	30	26	26	26	22	22	22	20
1	30	27	25	22	28	25	23	21	21	19	18	17	16	15	14	13	12	10
2	26	22	19	16	24	20	17	15	17	15	12	14	12	10	11	9	8	6
3	24	19	15	12	21	17	14	11	14	12	9	11	9	8	9	7	6	4
4	21	16	13	10	19	15	12	9	12	10	8	10	8	6	8	6	4	3
5	20	14	11	8	18	13	10	8	11	8	6	9	7	5	7	5	4	2
6	18	13	9	7	16	12	9	6	10	7	5	8	6	4	6	4	3	2
7	17	12	8	6	15	11	8	6	9	6	5	7	5	4	6	4	3	2
8	15	11	7	5	14	10	7	5	8	6	4	7	5	3	5	4	2	2
9	14	10	7	5	13	9	6	4	7	5	4	6	4	3	5	3	2	1
10	13	9	6	4	12	8	6	4	7	5	3	6	4	3	5	3	2	1

Beam and Field Information	
CIE Type:	Direct/Indirect
Center Beam Intenisty:	3.0 Candela
Central Cone Intensity:	3 Candela
Beam Flux:	32.7 Lumens
Beam Angle (0-180):	127.7 Degrees
Beam Angle (90-270):	85.8 Degrees
Field Angle (0-180):	129.9 Degrees
Field Angle (90-270):	103.1 Degrees

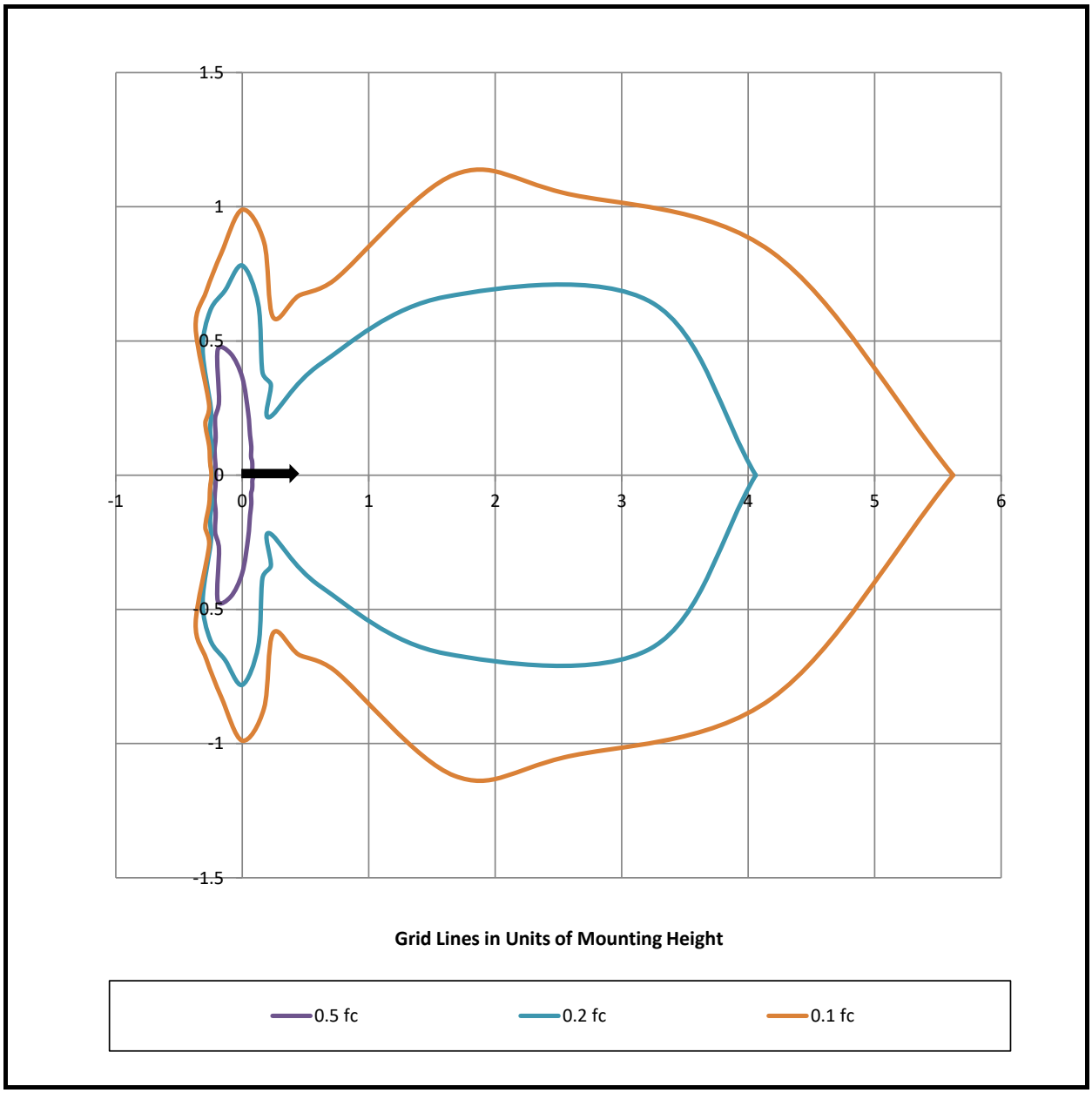
Cone of Light Tabulation

Mounting Height (Feet)	Footcandles at Nadir	Diameter (Feet)
4.00	0.185	2.44
6.00	0.0821	3.66
8.00	0.0462	4.88
10.0	0.0295	6.10
12.0	0.0205	7.32
14.0	0.0151	8.54
16.0	0.0115	9.76

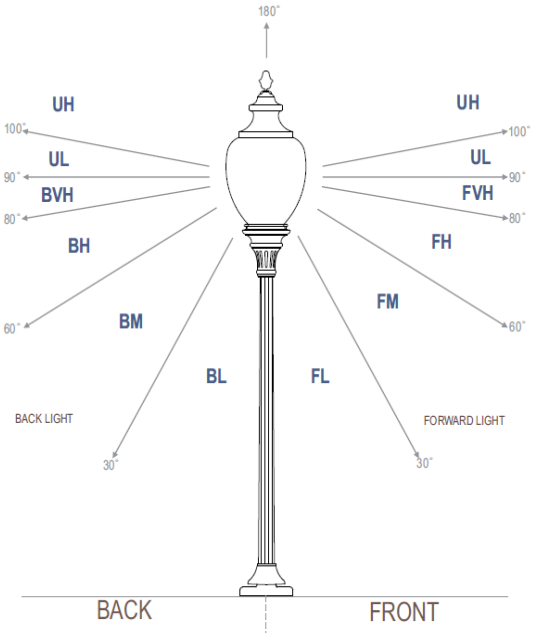


ISOFootcandle Plot

Mounting Height - 2 Feet



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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	0.7	2.3%
FM	(30-60)	2.4	8.0%
FH	(60-80)	8.7	29.3%
FVH	(80-90)	5.8	19.7%
BL	(0-30)	0.8	2.6%
BM	(30-60)	0.4	1.3%
BH	(60-80)	0.0	0.0%
BVH	(80-90)	0.0	0.0%
UL	(90-100)	6.9	23.2%
UH	(100-180)	4.1	13.8%
Total		29.6	100.0%
BUG Rating	**B0 U1 G0**		