



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-WF-30 (60° OPTIC, 3000K)

Order Number
12250114
Test Number
12250114.108

Test Date

2018-05-04

Prepared By

Cordaryl Cousar, Technician

Approved By

Alexa Lambert, Project Handler

The results contained in this report pertain only to the tested sample.
This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.
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.



Luminaire Description: Cylindrical copper housing with circular metal domed faceplate
Lamp: One (1) Cree XP-L 3000K LED with 60° wide flood optic
Mounting: Step/Wall
Ballast/Driver: Integrated

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: 24.4 °C
Voltage: 12.01 VAC
Current: 0.1678 A
Power: 1.235 W
Power Factor: 0.613
Frequency: 60 Hz
Current THD: 81.0 %

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	0.1678 A	1.235 W	0.613	60 Hz	81.0 %

Summary of Results

Spacing Criteria

0-180: 6.52

90-270: 1.38

Total Lumen Output:

39.65 Lumens

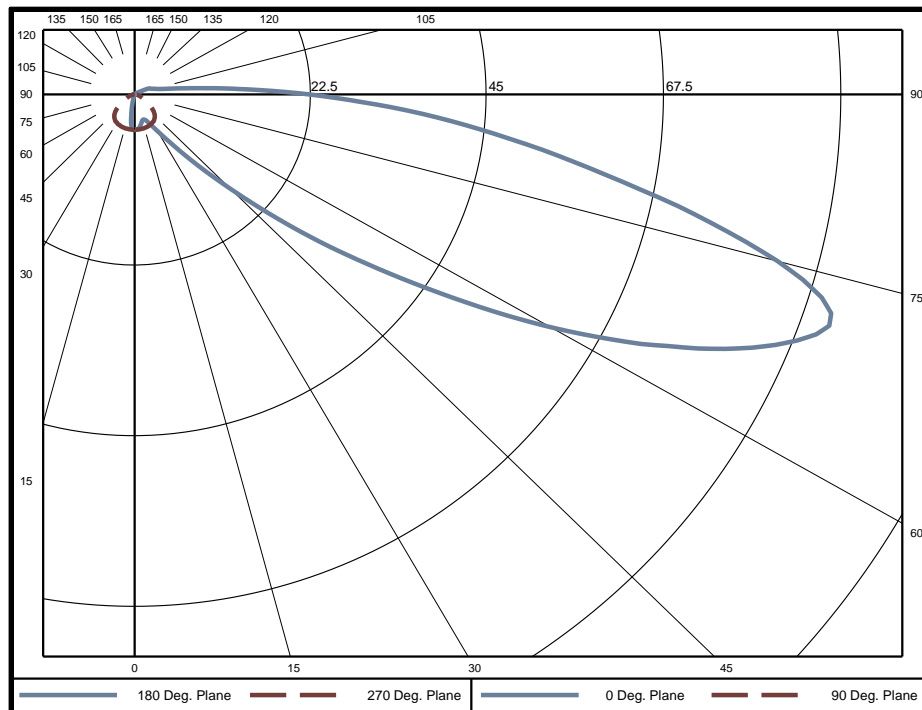
Luminaire Efficacy:

32.1 lm/w

Maximum Candela:

94 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.111	0.3%	60-65	4.954	12.5%	120-125	0.027	0.1%
5-10	0.307	0.8%	65-70	5.725	14.4%	125-130	0.007	0.0%
10-15	0.426	1.1%	70-75	5.395	13.6%	130-135	0.001	0.0%
15-20	0.493	1.2%	75-80	3.880	9.8%	135-140	0.000	0.0%
20-25	0.549	1.4%	80-85	2.478	6.2%	140-145	0	0.0%
25-30	0.631	1.6%	85-90	1.523	3.8%	145-150	0	0.0%
30-35	0.758	1.9%	90-95	0.809	2.0%	150-155	0	0.0%
35-40	0.964	2.4%	95-100	0.413	1.0%	155-160	0	0.0%
40-45	1.300	3.3%	100-105	0.257	0.6%	160-165	0	0.0%
45-50	1.848	4.7%	105-110	0.184	0.5%	165-170	0	0.0%
50-55	2.666	6.7%	110-115	0.126	0.3%	170-175	0	0.0%
55-60	3.760	9.5%	115-120	0.060	0.2%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	4	10.7%
0-60	14	34.8%
0-90	38	95.3%
90-180	2	4.8%



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	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64
	5	4.58	4.51	4.54	4.60	4.66	4.71	4.59	4.50	4.34	4.50	4.59	4.71	4.66	4.60	4.54
	10	4.20	4.15	4.35	4.53	4.64	4.57	3.71	2.76	2.19	2.76	3.71	4.57	4.64	4.53	4.35
	15	3.65	3.60	3.96	4.42	4.61	4.20	2.04	1.12	0.74	1.12	2.04	4.20	4.61	4.42	3.96
	20	3.55	3.35	3.49	4.20	4.56	3.40	0.99	0.33	0.14	0.33	0.99	3.40	4.56	4.20	3.49
	25	4.08	3.62	3.19	3.90	4.44	2.49	0.40	0.00	0.00	0.00	0.40	2.49	4.44	3.90	3.19
	30	5.31	4.42	3.17	3.54	4.31	1.79	0.09	0.00	0.00	0.00	0.09	1.79	4.31	3.54	3.17
	35	7.51	5.85	3.39	3.14	4.15	1.22	0.00	0.00	0.00	0.00	0.00	1.22	4.15	3.14	3.39
	40	11.57	8.16	3.73	2.72	3.85	0.79	0.00	0.00	0.00	0.00	0.00	0.79	3.85	2.72	3.73
	45	18.37	12.02	4.17	2.36	3.37	0.49	0.00	0.00	0.00	0.00	0.00	0.49	3.37	2.36	4.17
	50	29.17	17.99	4.58	2.02	2.67	0.27	0.00	0.00	0.00	0.00	0.00	0.27	2.67	2.02	4.58
	55	43.36	26.19	4.76	1.73	1.93	0.12	0.00	0.00	0.00	0.00	0.00	0.12	1.93	1.73	4.76
	60	61.49	35.71	4.43	1.47	1.37	0.04	0.00	0.00	0.00	0.00	0.00	0.04	1.37	1.47	4.43
	65	79.28	42.44	3.70	1.27	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.27	3.70	42.44
	70	92.50	39.30	2.78	1.10	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.73	1.10	2.78	39.30
	75	84.84	25.58	2.05	0.94	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.94	2.05	25.58
	80	60.92	12.17	1.65	0.80	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.80	1.65	12.17
	85	40.53	6.28	1.36	0.65	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.65	1.36	6.28
	90	22.17	3.65	1.12	0.51	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.51	1.12	3.65
	95	9.23	2.20	0.91	0.35	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.35	0.91	2.20
	100	4.20	1.56	0.70	0.20	0.00	0.00	0.00	0.01	0.04	0.01	0.00	0.00	0.20	0.70	1.56
	105	2.77	1.21	0.50	0.11	0.00	0.00	0.00	0.03	0.06	0.03	0.00	0.00	0.11	0.50	1.21
	110	2.18	0.86	0.31	0.04	0.00	0.00	0.00	0.03	0.08	0.03	0.00	0.00	0.04	0.31	0.86
	115	1.45	0.51	0.17	0.00	0.00	0.00	0.00	0.03	0.07	0.03	0.00	0.00	0.00	0.17	0.51
	120	0.52	0.27	0.07	0.00	0.00	0.00	0.00	0.02	0.07	0.02	0.00	0.00	0.00	0.07	0.27
	125	0.26	0.10	0.01	0.00	0.00	0.00	0.00	0.01	0.06	0.01	0.00	0.00	0.00	0.01	0.10
	130	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.01	0.00	0.00	0.00	0.00	0.00
	135	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

Vertical Angle (Degrees)	0	45	90
	0	28760	28760
	45	53680	9546
	55	121500	10210
	65	219900	7686
	75	240100	4238
	85	120800	2897



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	47	47	47	47	45	45	45	45	43	43	43	41	41	41	39	39	39	38
1	40	36	33	31	38	35	33	30	33	31	29	31	29	28	29	28	26	25
2	34	29	25	21	33	28	24	21	26	23	20	24	22	19	23	21	18	17
3	30	24	19	15	28	23	19	15	21	18	15	20	17	14	18	16	13	12
4	27	20	15	12	25	19	15	11	18	14	11	17	13	11	15	13	10	9
5	24	17	13	9	23	17	12	9	15	12	9	14	11	8	13	10	8	7
6	22	15	11	7	21	15	10	7	14	10	7	13	9	7	12	9	6	5
7	20	13	9	6	19	13	9	6	12	8	6	11	8	6	11	8	5	4
8	19	12	8	5	18	12	8	5	11	7	5	10	7	5	10	7	5	4
9	17	11	7	5	16	11	7	4	10	7	4	9	6	4	9	6	4	3
10	16	10	6	4	15	10	6	4	9	6	4	9	6	4	8	5	4	3

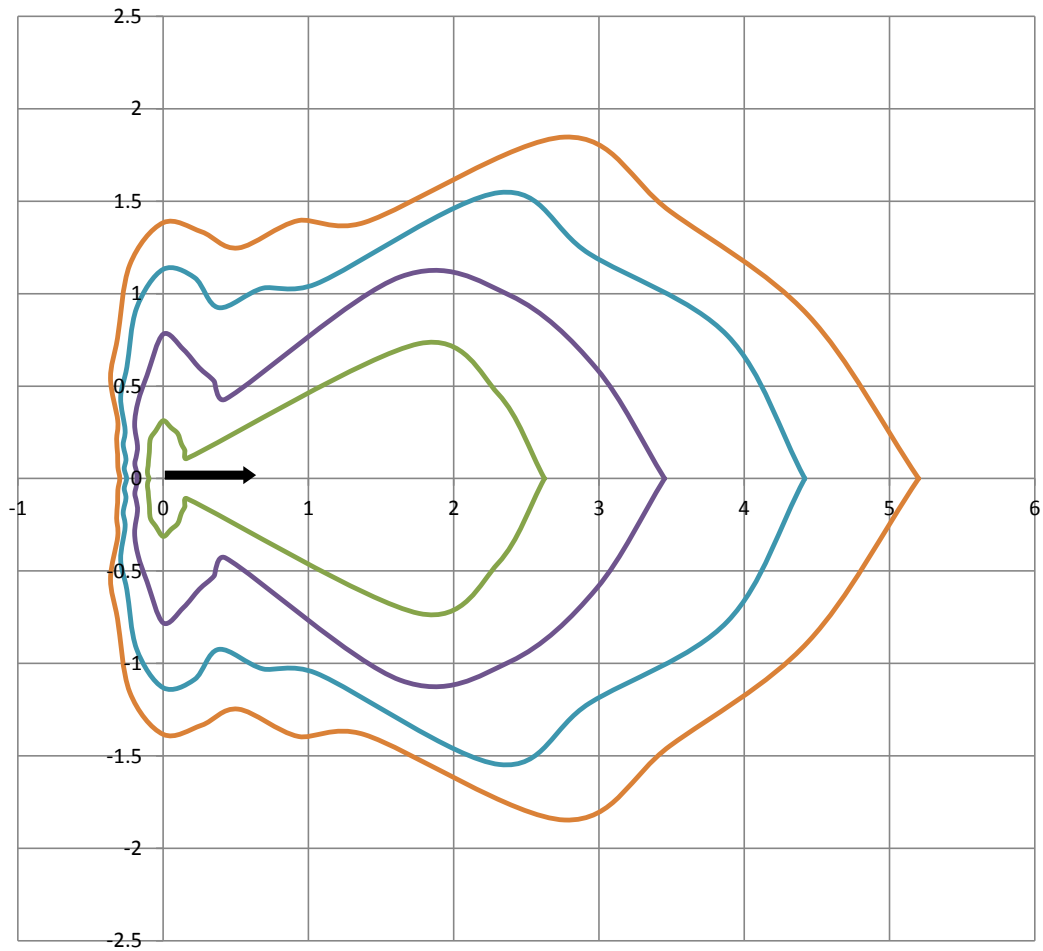
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	4.64 Candela
Central Cone Intensity:	5 Candela
Beam Flux:	37.1 Lumens
Beam Angle (0-180):	118.0 Degrees
Beam Angle (90-270):	104.6 Degrees
Field Angle (0-180):	137.9 Degrees
Field Angle (90-270):	152.4 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		0.290	2.88
6.00		0.129	4.33
8.00		0.0725	5.77
10.0		0.0464	7.21
12.0		0.0322	8.65
14.0		0.0237	10.1
16.0		0.0181	11.5



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)	1.7	4.3%
FM	(30-60)	10.8	27.6%
FH	(60-80)	19.5	49.9%
FVH	(80-90)	3.8	9.7%
BL	(0-30)	0.9	2.2%
BM	(30-60)	0.6	1.5%
BH	(60-80)	0.1	0.2%
BVH	(80-90)	0.0	0.0%
UL	(90-100)	1.1	2.9%
UH	(100-180)	0.6	1.7%
Total		39.1	100.0%
BUG Rating	B0 U1 G0		