



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-W-30 (40° OPTIC, 3000K)**

Order Number  
12250114  
Test Number  
12250114.94

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.  
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**Luminaire Description:** Cylindrical copper housing with circular metal flush faceplate  
**Lamp:** One (1) Cree XP-L 3000K LED with 40° wide 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: 24.3 °C  
Voltage: 12.01 VAC  
Current: 0.1704 A  
Power: 1.251 W  
Power Factor: 0.611  
Frequency: 60 Hz  
Current THD: 80.4 %

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
24.3 °C	12.01 VAC	0.1704 A	1.251 W	0.611	60 Hz	80.4 %

### Summary of Results

#### Spacing Criteria

0-180: 0.66

90-270: 0.66

#### Total Lumen Output:

137.9 Lumens

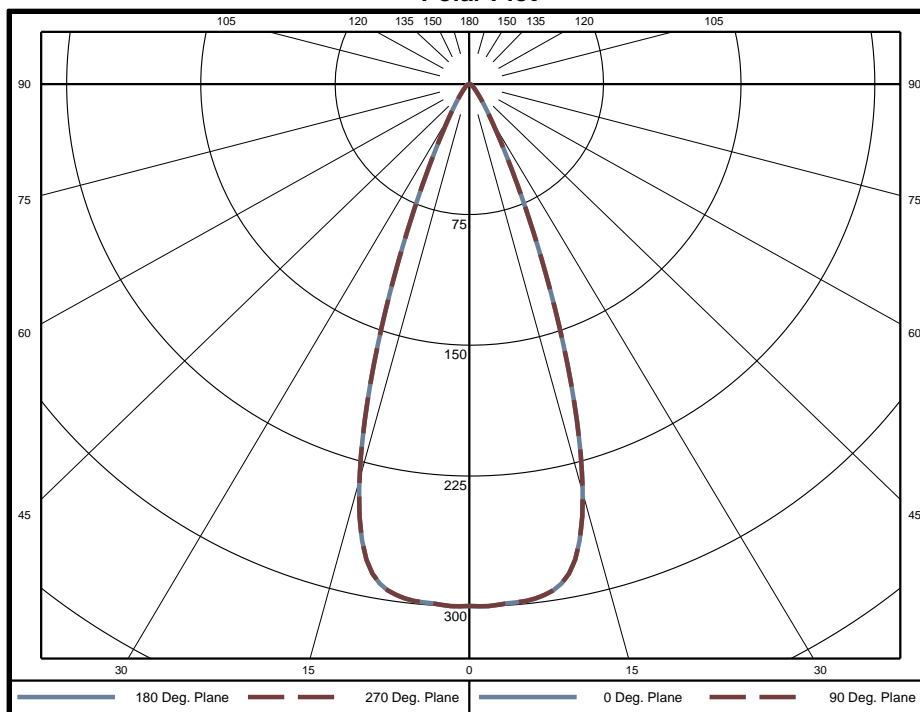
#### Luminaire Efficacy:

110.3 lm/w

#### Maximum Candela:

300 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	7.16	5.2%	60-65	0.87	0.6%	120-125	0	0.0%
5-10	21.17	15.4%	65-70	0.72	0.5%	125-130	0	0.0%
10-15	31.99	23.2%	70-75	0.57	0.4%	130-135	0	0.0%
15-20	30.99	22.5%	75-80	0.41	0.3%	135-140	0	0.0%
20-25	19.38	14.1%	80-85	0.26	0.2%	140-145	0	0.0%
25-30	9.74	7.1%	85-90	0.12	0.1%	145-150	0	0.0%
30-35	5.31	3.9%	90-95	0.01	0.0%	150-155	0	0.0%
35-40	3.24	2.3%	95-100	0	0.0%	155-160	0	0.0%
40-45	2.16	1.6%	100-105	0	0.0%	160-165	0	0.0%
45-50	1.58	1.1%	105-110	0	0.0%	165-170	0	0.0%
50-55	1.25	0.9%	110-115	0	0.0%	170-175	0	0.0%
55-60	1.03	0.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	129	93.5%
0-60	135	97.9%
0-90	138	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	299.7	299.7	299.7	299.7	299.7	299.7	299.7	299.7	299.7	299.7	299.7	299.7	299.7	299.7	299.7
	5	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7	298.7
	10	291.2	291.2	291.2	291.2	291.2	291.2	291.2	291.2	291.2	291.2	291.2	291.2	291.2	291.2	291.2
	15	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1	240.1
	20	137.7	137.7	137.7	137.7	137.7	137.7	137.7	137.7	137.7	137.7	137.7	137.7	137.7	137.7	137.7
	25	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2	58.2
	30	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1
	35	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9
	40	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	7.3
	45	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	50	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
	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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	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
	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
	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
	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
	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
	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/m<sup>2</sup>)**  
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	591400	591400
	45	13020	13020
	55	8606	8606
	65	7465	7465
	75	7027	7027
	85	7590	7590



### 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	164	164	164	164	160	160	160	160	153	153	153	147	147	147	141	141	141	138
1	157	154	151	148	154	151	148	146	145	143	141	140	138	137	136	134	133	131
2	151	145	140	136	148	142	138	134	138	134	131	134	131	128	130	128	126	124
3	145	137	131	126	142	135	130	125	132	127	123	128	124	121	125	122	119	117
4	139	130	123	118	137	128	122	118	126	120	116	123	119	115	121	117	114	112
5	134	124	117	112	132	123	116	111	120	115	110	118	113	110	116	112	109	107
6	129	118	111	106	127	117	111	106	115	110	105	113	108	105	112	107	104	102
7	124	113	106	101	122	112	106	101	111	105	101	109	104	100	108	103	100	98
8	119	109	102	97	118	108	101	97	106	101	96	105	100	96	104	99	96	94
9	115	104	98	93	114	104	97	93	102	97	93	101	96	92	100	95	92	90
10	111	100	94	89	110	100	94	89	99	93	89	98	93	89	97	92	89	87

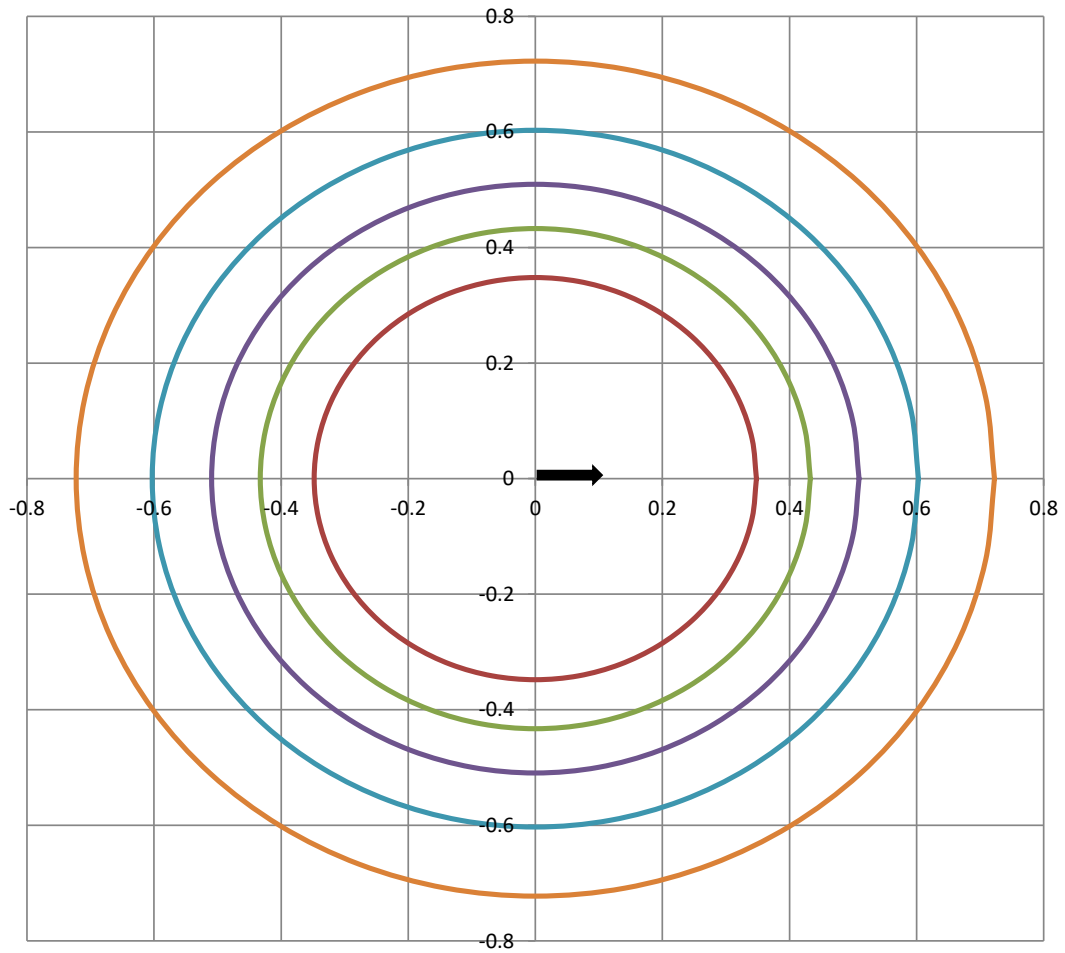
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	299.7 Candela
Central Cone Intensity:	299 Candela
Beam Flux:	88.4 Lumens
Beam Angle (0-180):	38.9 Degrees
Beam Angle (90-270):	38.9 Degrees
Field Angle (0-180):	57.7 Degrees
Field Angle (90-270):	57.7 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		18.7	2.64
6.00		8.32	3.96
8.00		4.68	5.28
10.0		3.00	6.60
12.0		2.08	7.92
14.0		1.53	9.24
16.0		1.17	10.6



## ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

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)	60.3	43.6%
FM	(30-60)	7.3	5.3%
FH	(60-80)	1.3	0.9%
FVH	(80-90)	0.2	0.1%
BL	(0-30)	60.3	43.6%
BM	(30-60)	7.3	5.3%
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		138.2	100.0%
<b>BUG Rating</b>	<b>B0 U1 G0</b>		