



UL Verification Services Inc.  
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Allentown, PA 18106  
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## 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-WF-30 (60° OPTIC, 3000K)**

Order Number  
12250114  
Test Number  
12250114.97

Test Date

2018-05-04

Prepared By

Cordaryl Cousar, Technician

Approved By

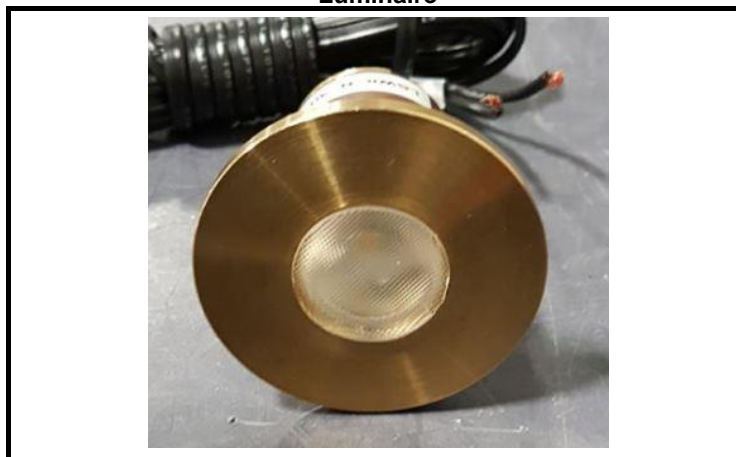
Alexa Lambert, Project Handler

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**Luminaire Description:** Cylindrical copper housing with circular metal flush faceplate  
**Lamp:** One (1) Cree XP-L 3000K LED with 60° wide flood 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:	1.247 W
Power Factor:	0.612
Frequency:	60 Hz
Current THD:	80.6 %

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	1.247 W	0.612	60 Hz	80.6 %

### Summary of Results

#### Spacing Criteria

0-180: 1.00

90-270: 1.00

Total Lumen Output:

131.9 Lumens

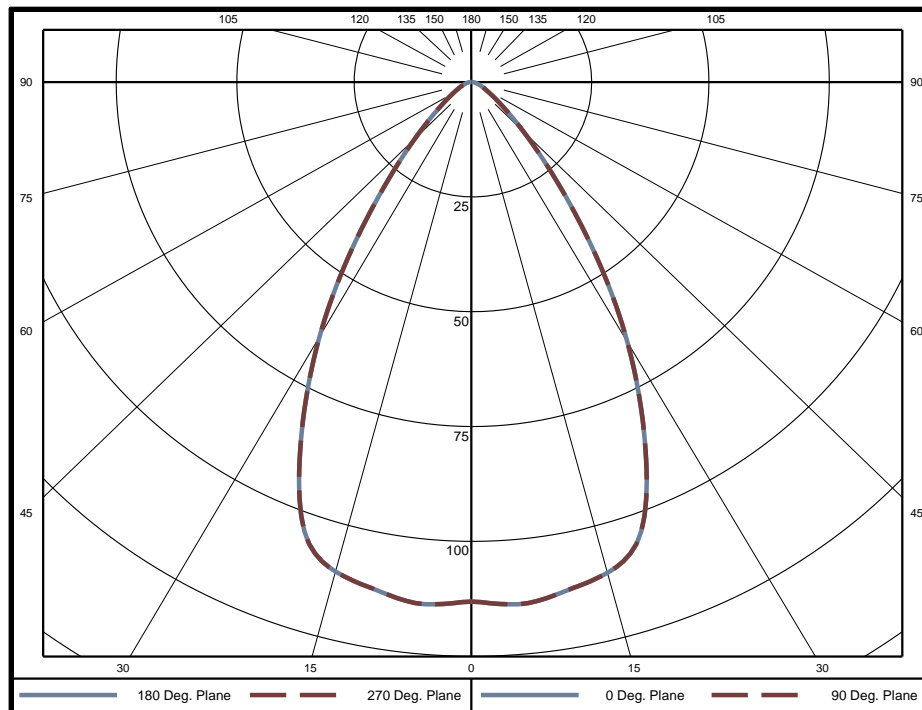
Luminaire Efficacy:

105.7 lm/w

Maximum Candela:

114 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	2.72	2.1%	60-65	1.57	1.2%	120-125	0	0.0%
5-10	8.12	6.2%	65-70	1.14	0.9%	125-130	0	0.0%
10-15	13.24	10.0%	70-75	0.82	0.6%	130-135	0	0.0%
15-20	17.80	13.5%	75-80	0.57	0.4%	135-140	0	0.0%
20-25	20.00	15.2%	80-85	0.37	0.3%	140-145	0	0.0%
25-30	19.10	14.5%	85-90	0.21	0.2%	145-150	0	0.0%
30-35	16.11	12.2%	90-95	0.01	0.0%	150-155	0	0.0%
35-40	11.74	8.9%	95-100	0	0.0%	155-160	0	0.0%
40-45	7.81	5.9%	100-105	0	0.0%	160-165	0	0.0%
45-50	5.04	3.8%	105-110	0	0.0%	165-170	0	0.0%
50-55	3.27	2.5%	110-115	0	0.0%	170-175	0	0.0%
55-60	2.22	1.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	109	82.5%
0-60	127	96.4%
0-90	132	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	113.1	113.1	113.1	113.1	113.1	113.1	113.1	113.1	113.1	113.1	113.1	113.1	113.1	113.1	113.1
	5	114.1	114.1	114.1	114.1	114.1	114.1	114.1	114.1	114.1	114.1	114.1	114.1	114.1	114.1	114.1
	10	112.6	112.6	112.6	112.6	112.6	112.6	112.6	112.6	112.6	112.6	112.6	112.6	112.6	112.6	112.6
	15	110.6	110.6	110.6	110.6	110.6	110.6	110.6	110.6	110.6	110.6	110.6	110.6	110.6	110.6	110.6
	20	104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1	104.1
	25	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0
	30	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5
	35	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5	44.5
	40	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2
	45	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1
	50	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
	55	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
	60	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	65	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
	70	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
	75	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
	80	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
	85	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	90	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	0.2
	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	223200	223200
	45	44850	44850
	55	20320	20320
	65	12530	12530
	75	9847	9847
	85	11840	11840



### 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	157	157	157	157	153	153	153	153	146	146	146	140	140	140	135	135	135	132
1	148	144	141	137	145	141	138	135	136	133	131	131	129	127	127	125	123	121
2	140	133	127	122	137	130	125	120	126	121	118	122	118	115	118	115	113	110
3	132	122	115	109	129	120	114	108	117	111	106	114	109	105	111	107	103	101
4	124	113	105	99	122	112	104	98	109	102	97	106	100	96	103	99	95	93
5	117	105	96	90	115	104	96	90	101	94	89	99	93	88	97	92	87	85
6	111	98	89	83	109	97	88	82	95	87	82	93	86	81	91	85	81	79
7	105	91	83	76	103	90	82	76	89	81	76	87	80	75	85	79	75	73
8	99	85	77	71	97	85	76	71	83	76	70	82	75	70	80	74	70	68
9	94	80	72	66	92	79	71	66	78	71	66	77	70	65	76	70	65	63
10	89	75	67	62	88	75	67	62	74	66	61	73	66	61	72	65	61	59

#### Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	113.1 Candela
Central Cone Intensity:	114 Candela
Beam Flux:	88.4 Lumens
Beam Angle (0-180):	64.2 Degrees
Beam Angle (90-270):	64.2 Degrees
Field Angle (0-180):	96.7 Degrees
Field Angle (90-270):	96.7 Degrees

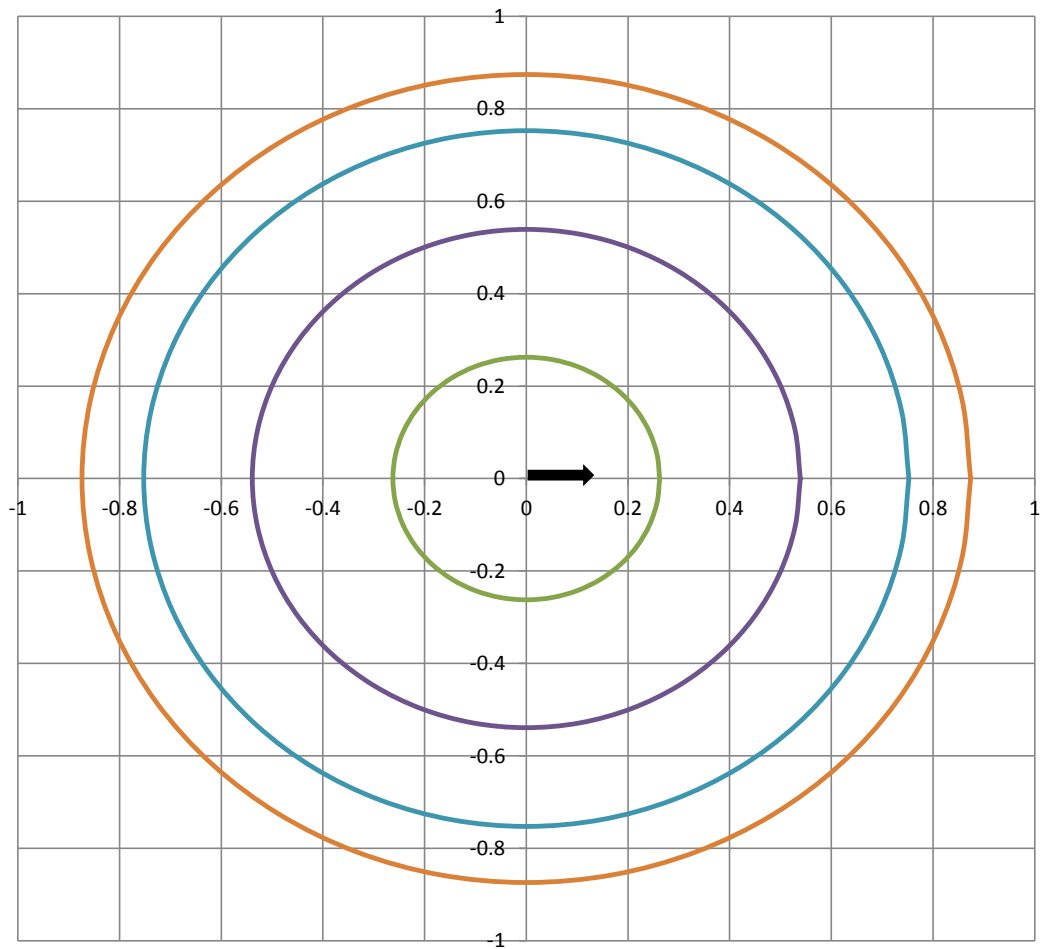
#### Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		7.07	4.02
6.00		3.14	6.02
8.00		1.77	8.03
10.0		1.13	10.0
12.0		0.785	12.0
14.0		0.577	14.1
16.0		0.442	16.1



## ISOFootcandle Plot

Mounting Height - 10 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)	40.5	30.7%
FM	(30-60)	23.1	17.5%
FH	(60-80)	2.1	1.6%
FVH	(80-90)	0.3	0.2%
BL	(0-30)	40.5	30.7%
BM	(30-60)	23.1	17.5%
BH	(60-80)	2.1	1.6%
BVH	(80-90)	0.3	0.2%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		132.0	100.0%
<b>BUG Rating</b>	<b>B0 U1 G0</b>		