



UL Verification Services Inc.  
7036 Snowdrift Road  
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**  
**HSL11-2-N-27 (2W, 15° OPTIC, 2700K)**

Order Number  
12250114  
Test Number  
12250114.21

Report Date

2018-05-07

Prepared By

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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 metal housing, with adjustable knuckle, clear glass lens and internal LED module

**Lamp:** One (1) Cree XHP 2700K LED with 15°, narrow optic

**Mounting:** Flood

**Ballast/Driver:** Integrated

**Note:** This report has been pro-rated using data from report numbers 12250114.20, 12250114.01, 12250114.02, 12250114.03, 12250114.04, 12250114.05, and 12250114.06 to account for differences in color temperature.

**Luminaire**



**Luminaire Characteristics**

Luminous Diameter: 1.50 in.  
Luminous Height: 1.000 in.

**Summary of Results**

Roadway Classification: Type V, Very Short  
Cutoff Classification: Full Cutoff  
BUG Rating: B0 U0 G0

**Test Conditions**

Test Temperature: 24.4 °C  
Voltage: 12.02 VAC  
Current: 0.1591 A  
Power: 1.794 W  
Power Factor: 0.937  
Frequency: 60 Hz  
Current THD: 21.6 %

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	12.02 VAC	0.1591 A	1.794 W	0.937	60 Hz	21.6 %

### Summary of Results

#### Spacing Criteria

0-180: 0.29

90-270: 0.29

#### Total Lumen Output:

99.00 Lumens

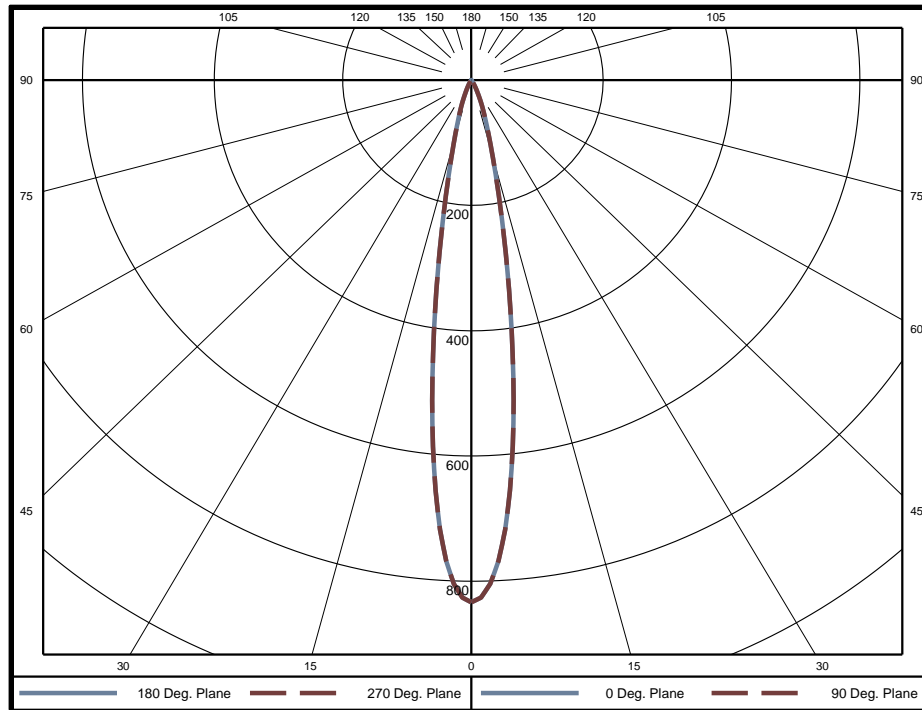
#### Luminaire Efficacy:

55.2 lm/w

#### Maximum Candela:

833 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	17.80	18.0%	60-65	0	0.0%	120-125	0	0.0%
5-10	32.92	33.3%	65-70	0	0.0%	125-130	0	0.0%
10-15	22.55	22.8%	70-75	0	0.0%	130-135	0	0.0%
15-20	12.78	12.9%	75-80	0	0.0%	135-140	0	0.0%
20-25	7.30	7.4%	80-85	0	0.0%	140-145	0	0.0%
25-30	3.50	3.5%	85-90	0	0.0%	145-150	0	0.0%
30-35	1.34	1.4%	90-95	0	0.0%	150-155	0	0.0%
35-40	0.52	0.5%	95-100	0	0.0%	155-160	0	0.0%
40-45	0.22	0.2%	100-105	0	0.0%	160-165	0	0.0%
45-50	0.07	0.1%	105-110	0	0.0%	165-170	0	0.0%
50-55	0.00	0.0%	110-115	0	0.0%	170-175	0	0.0%
55-60	0	0.0%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	99	99.7%
0-60	99	100.0%
0-90	99	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	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3	833.3
	5	657.4	657.4	657.4	657.4	657.4	657.4	657.4	657.4	657.4	657.4	657.4	657.4	657.4	657.4	657.4
	10	307.6	307.6	307.6	307.6	307.6	307.6	307.6	307.6	307.6	307.6	307.6	307.6	307.6	307.6	307.6
	15	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2
	20	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0	52.0
	25	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4
	30	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	35	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	40	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
	45	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
	50	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
	55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	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)

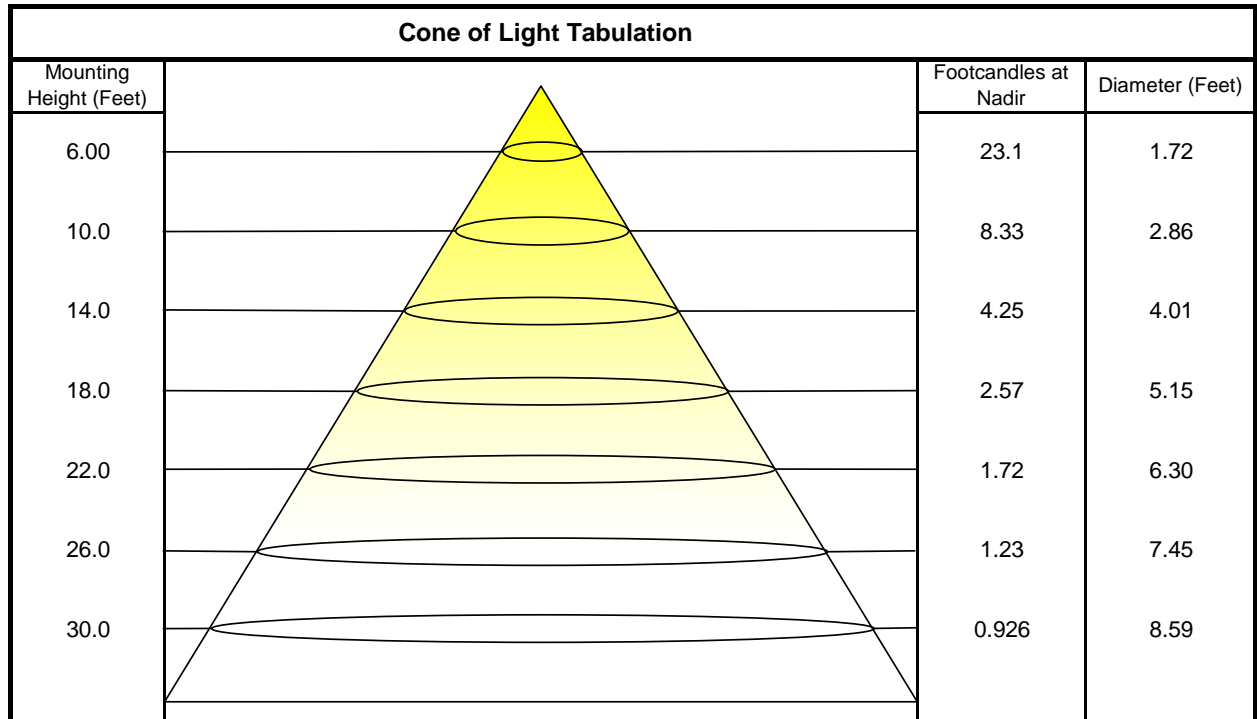
Vertical Angle (Degrees)	0	45	90
	0	730900	730900
	45	418	418
	55	0	0
	65	0	0
	75	0	0
	85	0	0



### 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	118	118	118	118	115	115	115	115	110	110	110	105	105	105	101	101	101	99
1	114	112	111	109	112	110	109	108	106	105	104	103	102	101	100	99	98	97
2	111	108	105	103	109	106	104	102	103	101	100	101	99	98	98	97	96	94
3	108	104	101	98	107	103	100	98	100	98	96	98	96	95	96	95	93	92
4	105	101	97	95	104	100	97	94	98	95	93	96	94	92	95	93	91	90
5	103	98	94	92	102	97	94	91	96	93	91	94	92	90	93	91	89	88
6	101	95	92	89	100	95	91	89	93	91	88	92	90	88	91	89	87	86
7	98	93	89	87	97	92	89	87	91	88	86	90	88	86	90	87	86	85
8	96	91	87	85	96	90	87	85	90	87	84	89	86	84	88	86	84	83
9	94	89	85	83	94	88	85	83	88	85	83	87	84	83	86	84	82	82
10	93	87	84	81	92	87	84	81	86	83	81	86	83	81	85	83	81	80

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	833.3 Candela
Central Cone Intensity:	770 Candela
Beam Flux:	40.3 Lumens
Beam Angle (0-180):	16.7 Degrees
Beam Angle (90-270):	16.7 Degrees
Field Angle (0-180):	33.9 Degrees
Field Angle (90-270):	33.9 Degrees





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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	48.6	49.0%
FM	(30-60)	1.0	1.0%
FH	(60-80)	0.0	0.0%
FVH	(80-90)	0.0	0.0%
BL	(0-30)	48.6	49.0%
BM	(30-60)	1.0	1.0%
BH	(60-80)	0.0	0.0%
BVH	(80-90)	0.0	0.0%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		99.2	100.0%
<b>BUG Rating</b>	<b>B0 U0 G0</b>		