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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-N-40 (Narrow Optic, 4000K)**

Order Number  
11912334  
Test Number  
11912334.03

Test Date

2017-08-15

Prepared By

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Approved By

Tiffany Hamm, 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 white LED  
**Mounting:** Recessed  
**Ballast/Driver:** Integrated

**Luminaire**



**Luminaire Characteristics**

Luminous Diameter: 1.00 in.

**Summary of Results**

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

**Test Conditions**

Test Temperature: 24.6 °C  
Voltage: 11.95 VAC  
Current: 0.1693 A  
Power: 1.236 W  
Power Factor: 0.611  
Frequency: 60 Hz  
Current THD: 81.1 %

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
24.6 °C	11.95 VAC	0.1693 A	1.236 W	0.611	60 Hz	81.1 %

### Summary of Results

#### Spacing Criteria

0-180: 0.24  
90-270: 0.24

#### Total Lumen Output:

138.1 Lumens

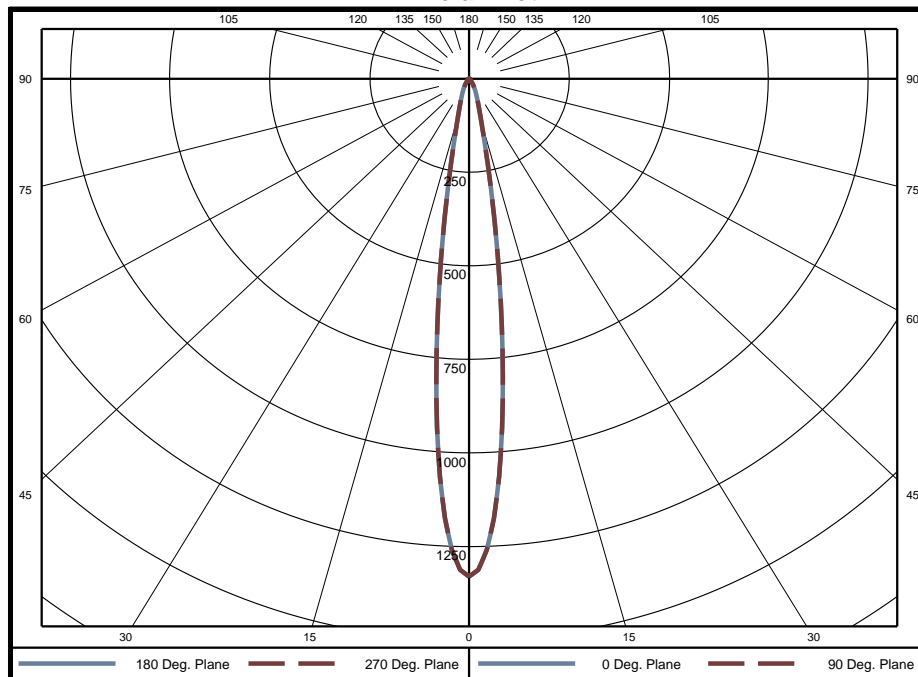
#### Luminaire Efficacy:

111.7 lm/w

#### Maximum Candela:

1330 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	26.91	19.5%	60-65	0.67	0.5%	120-125	0	0.0%
5-10	41.51	30.1%	65-70	0.54	0.4%	125-130	0	0.0%
10-15	22.70	16.4%	70-75	0.43	0.3%	130-135	0	0.0%
15-20	13.58	9.8%	75-80	0.31	0.2%	135-140	0	0.0%
20-25	10.01	7.2%	80-85	0.19	0.1%	140-145	0	0.0%
25-30	7.56	5.5%	85-90	0.06	0.0%	145-150	0	0.0%
30-35	5.21	3.8%	90-95	0	0.0%	150-155	0	0.0%
35-40	3.25	2.4%	95-100	0	0.0%	155-160	0	0.0%
40-45	2.00	1.4%	100-105	0	0.0%	160-165	0	0.0%
45-50	1.35	1.0%	105-110	0	0.0%	165-170	0	0.0%
50-55	1.02	0.7%	110-115	0	0.0%	170-175	0	0.0%
55-60	0.81	0.6%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	131	94.7%
0-60	136	98.4%
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	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330
	5	938	938	938	938	938	938	938	938	938	938	938	938	938	938	938
	10	333	333	333	333	333	333	333	333	333	333	333	333	333	333	333
	15	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115
	20	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
	25	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
	30	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
	35	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
	40	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	45	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	50	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	55	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	60	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	65	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	70	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	75	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80	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
	90	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
	100	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
	110	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
	120	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
	130	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
	140	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
	150	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
	160	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
	170	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
	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Average Luminance (cd/m<sup>2</sup>)**

Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
	0	2625000	2625000
	45	11490	11490
	55	6931	6931
	65	5614	5614
	75	5232	5232
	85	5458	5458



### Utilization of Lumens - Zonal Cavity Method

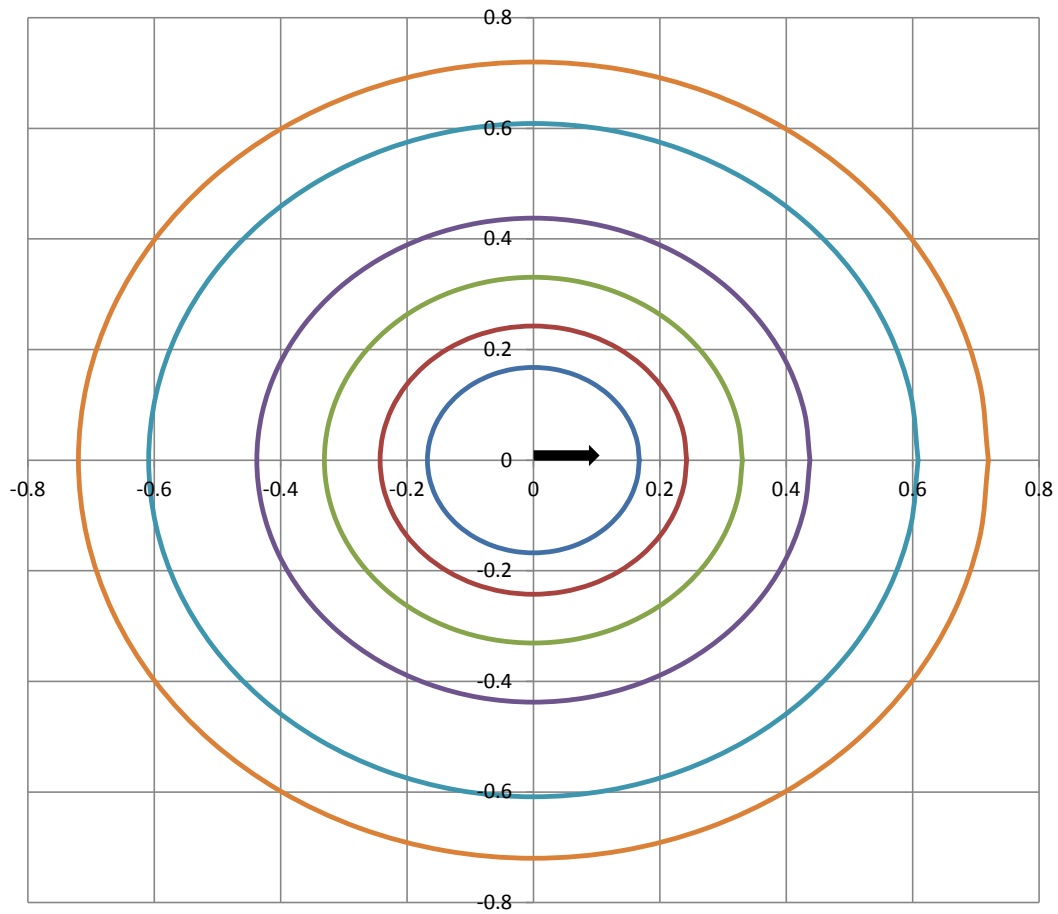
Effective Floor Cavity Reflectance 20%																		
Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **																	
0	164	164	164	164	161	161	161	161	153	153	153	147	147	147	141	141	141	138
1	159	156	153	150	155	153	150	148	147	145	144	142	141	139	137	136	135	133
2	153	148	144	140	150	146	142	139	142	139	136	138	135	133	134	132	130	128
3	148	142	137	133	146	140	135	132	137	133	130	133	130	128	131	128	126	124
4	144	136	131	127	142	135	130	126	132	128	125	130	126	123	127	124	122	120
5	140	132	126	122	138	130	125	121	128	124	120	126	122	119	124	121	118	117
6	136	127	122	118	134	127	121	117	125	120	117	123	119	116	121	118	115	114
7	132	124	118	114	131	123	118	114	121	117	113	120	116	113	119	115	112	111
8	129	120	115	111	128	120	114	111	118	114	110	117	113	110	116	112	110	108
9	126	117	112	108	125	117	112	108	116	111	108	115	111	107	114	110	107	106
10	124	115	109	106	122	114	109	106	113	109	105	112	108	105	112	108	105	104

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1330 Candela
Central Cone Intensity:	1185 Candela
Beam Flux:	44.6 Lumens
Beam Angle (0-180):	14.0 Degrees
Beam Angle (90-270):	14.0 Degrees
Field Angle (0-180):	28.3 Degrees
Field Angle (90-270):	28.3 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		83.1	0.966
6.00		37.0	1.45
8.00		20.8	1.93
10.0		13.3	2.42
12.0		9.24	2.90
14.0		6.79	3.38
16.0		5.20	3.87

### ISOFootcandle Plot

**Mounting Height - 8 Feet**



### Grid Lines in Units of Mounting Height





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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	61.3	44.3%
FM	(30-60)	6.8	4.9%
FH	(60-80)	1.0	0.7%
FVH	(80-90)	0.1	0.1%
BL	(0-30)	61.3	44.3%
BM	(30-60)	6.8	4.9%
BH	(60-80)	1.0	0.7%
BVH	(80-90)	0.1	0.1%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		138.6	100.0%
<b>BUG Rating</b>	<b>B0 U0 G0</b>		