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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**  
**LMWL-N-30 (15° OPTIC, 3000K)**

Order Number  
12043087  
Test Number  
12043087.04

Test Date

2018-02-13

Prepared By

Samuel DePue, Technician

Approved By

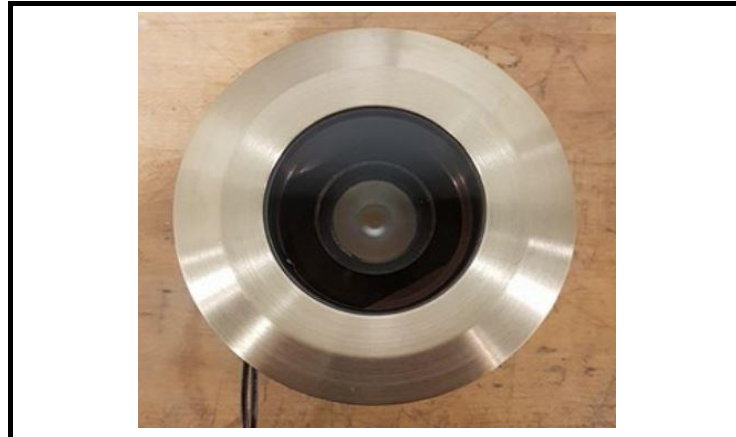
Alexa Lambert, Project Handler

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**Luminaire Description:** Cylindrical brass housing with circular brass faceplate, clear glass lens and PVC sleeve  
**Lamp:** One (1) Cree XP-L 3000K LED with 15° narrow silicone optic  
**Mounting:** Ground recessed  
**Ballast/Driver:** Integrated

**Luminaire**



**Luminaire Characteristics**

Luminous Diameter: 2.00 in.

**Summary of Results**

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

**Test Conditions**

Test Temperature: 24.7 °C  
Voltage: 11.99 VAC  
Current: 0.4336 A  
Power: 3.143 W  
Power Factor: 0.605  
Frequency: 60 Hz  
Current THD: 80.8 %

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
24.7 °C	11.99 VAC	0.4336 A	3.143 W	0.605	60 Hz	80.8 %

### Summary of Results

#### Spacing Criteria

0-180: 0.25

90-270: 0.25

Total Lumen Output:

163.6 Lumens

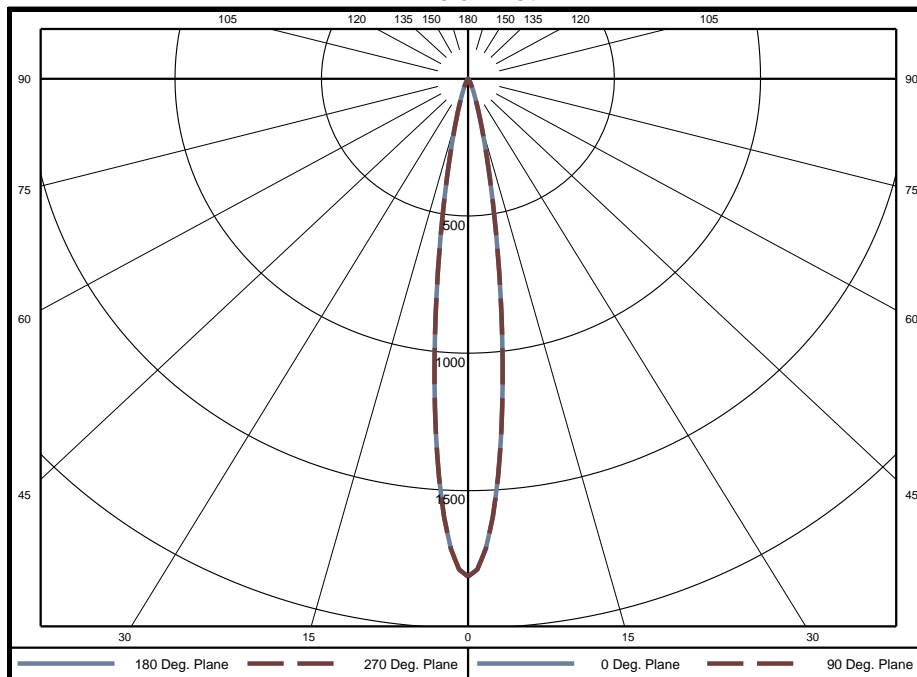
Luminaire Efficacy:

52.0 lm/w

Maximum Candela:

1813 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	36.65	22.4%	60-65	0	0.0%	120-125	0	0.0%
5-10	59.71	36.5%	65-70	0	0.0%	125-130	0	0.0%
10-15	35.49	21.7%	70-75	0	0.0%	130-135	0	0.0%
15-20	17.00	10.4%	75-80	0	0.0%	135-140	0	0.0%
20-25	8.48	5.2%	80-85	0	0.0%	140-145	0	0.0%
25-30	4.09	2.5%	85-90	0	0.0%	145-150	0	0.0%
30-35	1.80	1.1%	90-95	0	0.0%	150-155	0	0.0%
35-40	0.40	0.2%	95-100	0	0.0%	155-160	0	0.0%
40-45	0	0.0%	100-105	0	0.0%	160-165	0	0.0%
45-50	0	0.0%	105-110	0	0.0%	165-170	0	0.0%
50-55	0	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	164	100.0%
0-60	164	100.0%
0-90	164	100.0%
90-180	0	0.0%



### Candela Tabulation

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal 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	1813	1813	1813	1813	1813	1813	1813	1813	1813	1813	1813	1813	1813	1813	1813	1813
5	1288	1288	1288	1288	1288	1288	1288	1288	1288	1288	1288	1288	1288	1288	1288	1288
10	513	513	513	513	513	513	513	513	513	513	513	513	513	513	513	513
15	168	168	168	168	168	168	168	168	168	168	168	168	168	168	168	168
20	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
30	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
35	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	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
65	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
75	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
85	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
95	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
105	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
115	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
125	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
135	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
145	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
155	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
165	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
175	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

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

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	894400	894400	894400
45	0	0	0
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0



### Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%																	
Ceiling Cavity Reflectance	80				70				50			30			10		
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **																
0	195	195	195	195	190	190	190	190	182	182	182	174	174	174	167	167	167
1	189	186	184	181	186	183	181	178	176	175	173	171	169	168	165	164	163
2	184	179	175	172	181	177	173	170	172	169	166	167	165	163	163	161	160
3	180	174	169	165	177	172	167	164	168	164	161	164	161	159	161	158	156
4	176	169	164	160	174	167	162	159	164	160	157	161	158	155	159	156	154
5	172	165	159	155	170	163	158	154	161	156	153	158	155	152	156	153	151
6	169	161	155	151	167	160	155	151	158	153	150	156	152	149	154	151	148
7	166	157	152	148	164	156	151	148	155	150	147	153	149	146	152	148	146
8	163	154	149	145	161	154	149	145	152	148	145	151	147	144	150	146	144
9	160	151	146	143	159	151	146	143	150	145	142	149	145	142	148	144	141
10	157	149	144	140	156	148	143	140	147	143	140	146	142	140	146	142	139

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1813 Candela
Central Cone Intensity:	1614 Candela
Beam Flux:	65.1 Lumens
Beam Angle (0-180):	14.5 Degrees
Beam Angle (90-270):	14.5 Degrees
Field Angle (0-180):	29.4 Degrees
Field Angle (90-270):	29.4 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
6.00		50.4	1.50
10.0		18.1	2.49
14.0		9.25	3.49
18.0		5.60	4.49
22.0		3.75	5.48
26.0		2.68	6.48
30.0		2.01	7.48



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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	80.9	49.3%
FM	(30-60)	1.1	0.7%
FH	(60-80)	0.0	0.0%
FVH	(80-90)	0.0	0.0%
BL	(0-30)	80.9	49.3%
BM	(30-60)	1.1	0.7%
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		164.1	100.0%
<b>BUG Rating</b>	<b>B0 U0 G0</b>		