



UL Verification Services Inc.  
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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-M-27 (25° OPTIC, 2700K)**

Order Number  
12043087  
Test Number  
12043087.02

Test Date

2018-02-20

Prepared By

Samuel DePue, Technician

Approved By

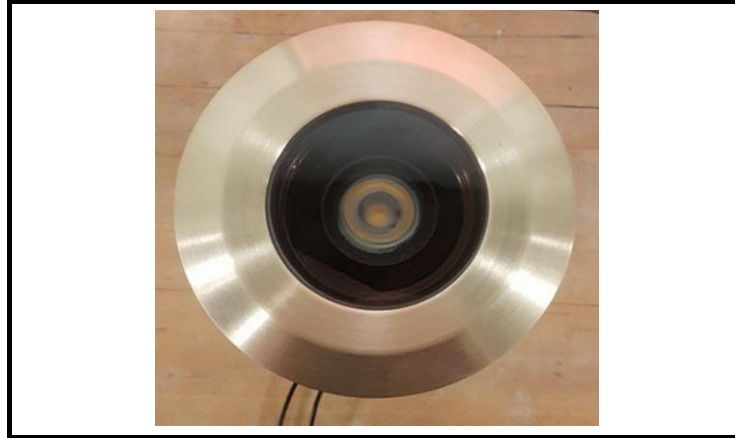
Alexa Lambert, Project Handler

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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 2700K LED with 25° medium 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: 25.0 °C  
Voltage: 12.00 VAC  
Current: 0.4365 A  
Power: 3.133 W  
Power Factor: 0.598  
Frequency: 60 Hz  
Current THD: 81.8 %

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
25.0 °C	12.00 VAC	0.4365 A	3.133 W	0.598	60 Hz	81.8 %

### Summary of Results

#### Spacing Criteria

0-180: 0.44

90-270: 0.44

Total Lumen Output:

195.1 Lumens

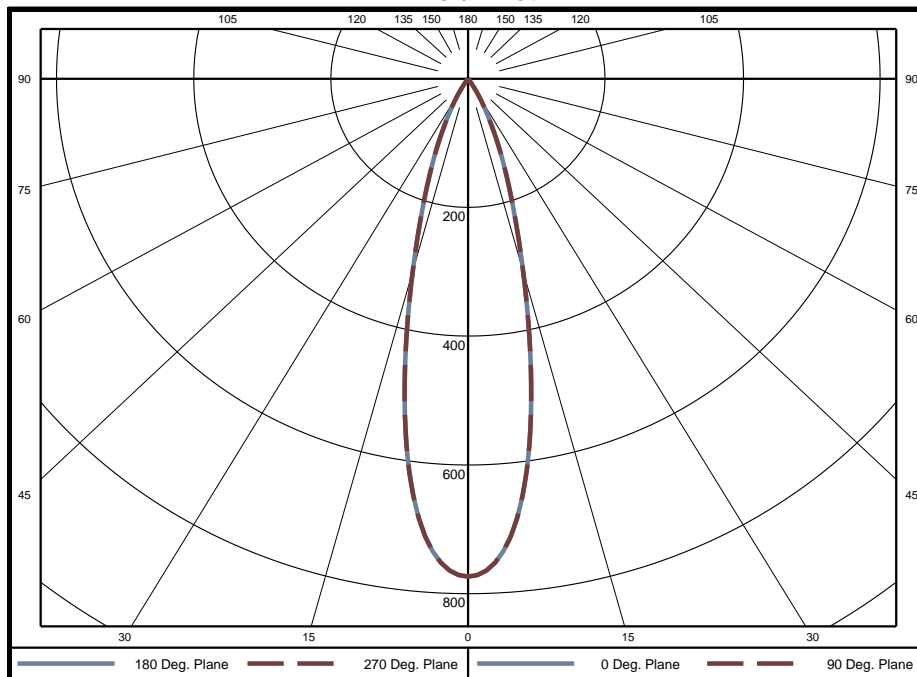
Luminaire Efficacy:

62.3 lm/w

Maximum Candela:

773 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	17.79	9.1%	60-65	0	0.0%	120-125	0	0.0%
5-10	44.37	22.7%	65-70	0	0.0%	125-130	0	0.0%
10-15	48.66	24.9%	70-75	0	0.0%	130-135	0	0.0%
15-20	38.09	19.5%	75-80	0	0.0%	135-140	0	0.0%
20-25	25.87	13.3%	80-85	0	0.0%	140-145	0	0.0%
25-30	14.33	7.3%	85-90	0	0.0%	145-150	0	0.0%
30-35	5.17	2.6%	90-95	0	0.0%	150-155	0	0.0%
35-40	0.77	0.4%	95-100	0	0.0%	155-160	0	0.0%
40-45	0.04	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	195	100.0%
0-60	195	100.0%
0-90	195	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	773.4	773.4	773.4	773.4	773.4	773.4	773.4	773.4	773.4	773.4	773.4	773.4	773.4	773.4	773.4	773.4
5	714.0	714.0	714.0	714.0	714.0	714.0	714.0	714.0	714.0	714.0	714.0	714.0	714.0	714.0	714.0	714.0
10	529.2	529.2	529.2	529.2	529.2	529.2	529.2	529.2	529.2	529.2	529.2	529.2	529.2	529.2	529.2	529.2
15	311.8	311.8	311.8	311.8	311.8	311.8	311.8	311.8	311.8	311.8	311.8	311.8	311.8	311.8	311.8	311.8
20	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8
25	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8	84.8
30	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
35	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	5.2	5.2
40	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	0.6
45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.0

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

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	381600	381600	381600
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			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	232	232	232	232	227	227	227	227	217	217	217	208	208	208	199	199	199	195
1	224	220	216	213	220	216	213	210	208	206	203	201	199	197	195	193	192	188
2	217	210	204	199	213	207	201	197	200	196	192	195	191	188	190	187	185	182
3	210	201	194	188	206	198	192	186	193	188	184	189	184	181	185	181	178	176
4	203	193	185	179	200	191	183	178	187	181	176	183	178	174	180	175	172	170
5	197	185	177	171	194	184	176	170	180	174	169	178	172	168	175	170	166	164
6	191	179	170	164	189	177	170	164	175	168	163	172	166	162	170	165	161	159
7	185	173	164	159	183	171	164	158	169	162	157	167	161	157	165	160	156	154
8	180	167	159	153	178	166	158	153	164	157	152	163	156	152	161	155	151	149
9	175	162	154	148	173	161	153	148	159	152	148	158	152	147	157	151	147	145
10	170	157	149	144	169	156	149	144	155	148	143	154	147	143	153	147	143	141

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	773.4 Candela
Central Cone Intensity:	753 Candela
Beam Flux:	93.6 Lumens
Beam Angle (0-180):	26.3 Degrees
Beam Angle (90-270):	26.3 Degrees
Field Angle (0-180):	51.2 Degrees
Field Angle (90-270):	51.2 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
6.00		21.5	2.66
10.0		7.73	4.43
14.0		3.95	6.21
18.0		2.39	7.98
22.0		1.60	9.75
26.0		1.14	11.5
30.0		0.859	13.3



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



**Luminaire Classification System (LCS)**

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	94.4	48.4%
FM	(30-60)	3.1	1.6%
FH	(60-80)	0.0	0.0%
FVH	(80-90)	0.0	0.0%
BL	(0-30)	94.4	48.4%
BM	(30-60)	3.1	1.6%
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		195.0	100.0%
BUG Rating	B0 U0 G0		