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## Photometric Test Report

Relevant Standards  
IES LM-79-2008, ANSI C82.77-2002

**Prepared For**  
**Auroralight Inc**

Stacia Elmore  
2742 Loker Ave W  
#100  
Carlsbad, CA 92010-6619  
United States

**Catalog Number**  
**HSL16/HSL20-LM-8-W-30 (8W, 40° WIDE OPTIC, 3000K)**

Order Number  
13931356  
Test Number  
13931356.17

Test Date

2021-07-30

Prepared By

Josh Mitchell, Technician

Approved By

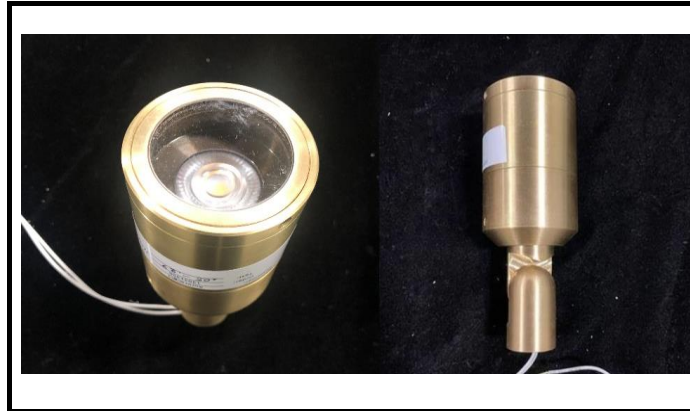
Alexa Lambert, Project Handler

The results contained in this report pertain only to the tested sample.  
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**Luminaire Description:** Cylindrical brass body with adjustable knuckle  
**Lamp:** One white LED  
**Mounting:** Flood  
**Ballast/Driver:** Integral  
**Note:** Report extrapolated using data from Test Numbers 13931356.07, 13931356.08, and 13931356.12

#### Luminaire



#### Luminaire Characteristics

Luminous Diameter: 1.88 in.

#### Summary of Results

Roadway Classification: Type V, Very Short  
Cutoff Classification: Full Cutoff  
BUG Rating: B1 U0 G0

#### Test Conditions

Test Temperature: 24.2 °C  
Voltage: 12.20 VAC  
Current: 0.7024 A  
Power: 7.824 W  
Power Factor: 0.905  
Frequency: 60 Hz  
Current THD: 41.9 %

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
24.2 °C	12.20 VAC	0.7024 A	7.824 W	0.905	60 Hz	41.9 %

### Summary of Results

#### Spacing Criteria

0-180: 0.66  
90-270: 0.66

#### Total Lumen Output:

629.7 Lumens

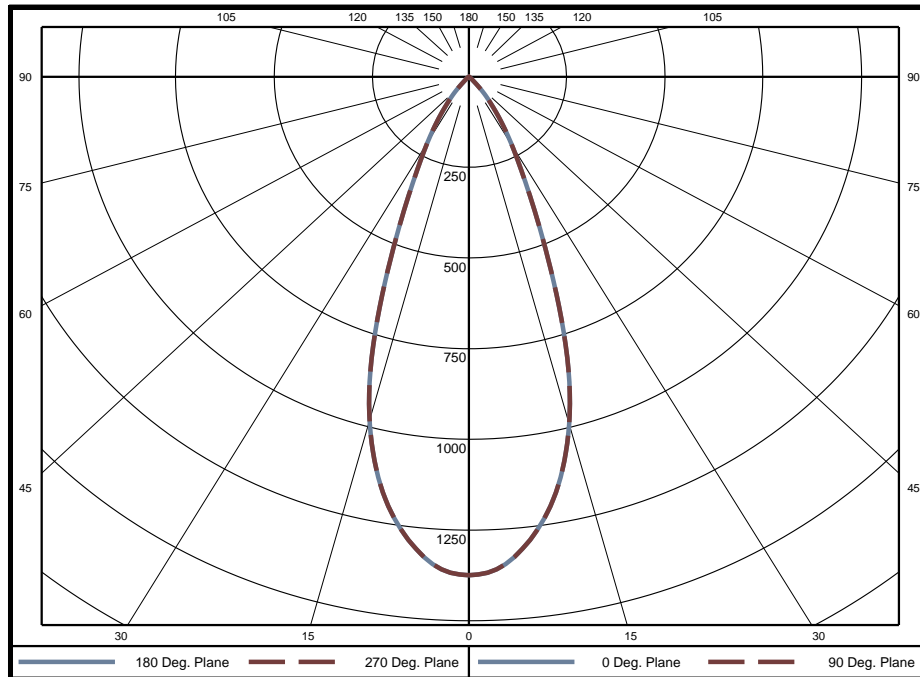
#### Luminaire Efficacy:

80.5 lm/w

#### Maximum Candela:

1279 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	30.1	4.8%	60-65	0.5	0.1%	120-125	0	0.0%
5-10	84.2	13.4%	65-70	0.4	0.1%	125-130	0	0.0%
10-15	121.2	19.2%	70-75	0.3	0.0%	130-135	0	0.0%
15-20	128.2	20.4%	75-80	0.2	0.0%	135-140	0	0.0%
20-25	100.0	15.9%	80-85	0.1	0.0%	140-145	0	0.0%
25-30	69.0	11.0%	85-90	0.1	0.0%	145-150	0	0.0%
30-35	47.2	7.5%	90-95	0	0.0%	150-155	0	0.0%
35-40	28.5	4.5%	95-100	0	0.0%	155-160	0	0.0%
40-45	12.8	2.0%	100-105	0	0.0%	160-165	0	0.0%
45-50	4.3	0.7%	105-110	0	0.0%	165-170	0	0.0%
50-55	1.8	0.3%	110-115	0	0.0%	170-175	0	0.0%
55-60	0.9	0.1%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	608	96.6%
0-60	628	99.8%
0-90	630	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	1279	1279	1279	1279	1279	1279	1279	1279	1279	1279	1279	1279	1279	1279	1279	1279
5	1237	1237	1237	1237	1237	1237	1237	1237	1237	1237	1237	1237	1237	1237	1237	1237
10	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119
15	923	923	923	923	923	923	923	923	923	923	923	923	923	923	923	923
20	628	628	628	628	628	628	628	628	628	628	628	628	628	628	628	628
25	356	356	356	356	356	356	356	356	356	356	356	356	356	356	356	356
30	209	209	209	209	209	209	209	209	209	209	209	209	209	209	209	209
35	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119
40	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
45	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
50	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
55	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
60	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
65	1	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	1
75	1	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	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)

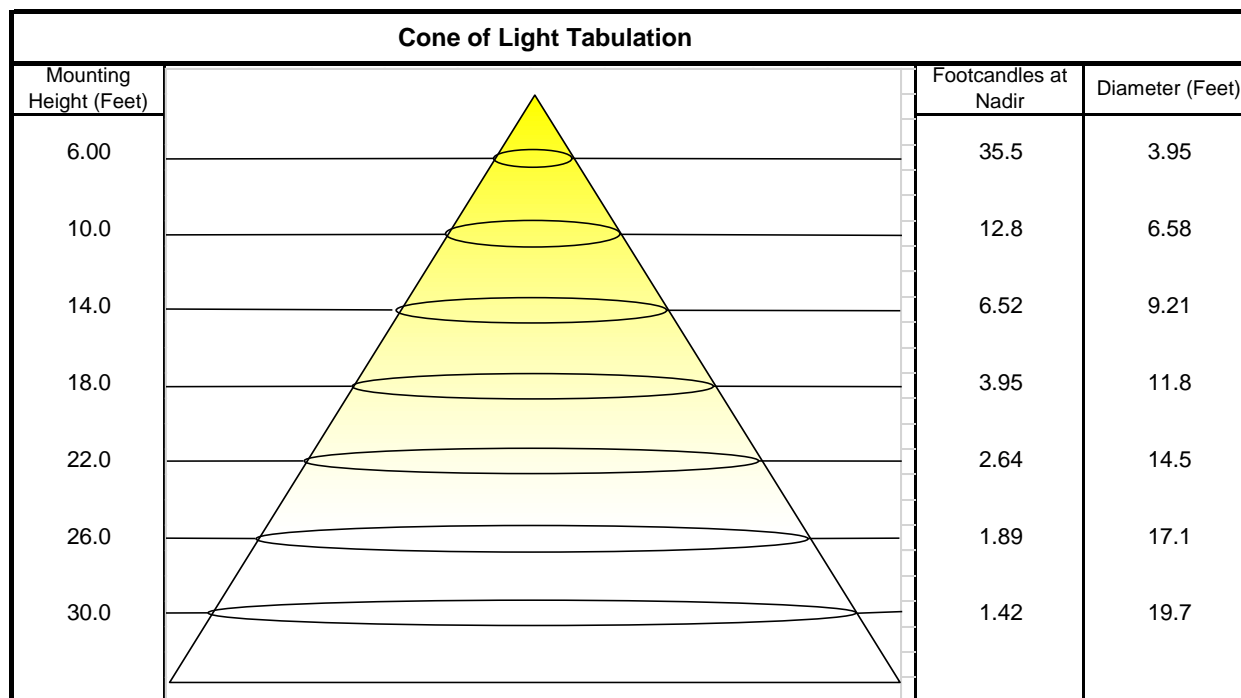
Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	714100	714100	714100
45	13020	13020	13020
55	2532	2532	2532
65	1173	1173	1173
75	1170	1170	1170
85	1007	1007	1007



### 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	750	750	750	750	732	732	732	732	700	700	700	670	670	670	643	643	643	630
1	719	704	690	677	704	690	678	666	665	655	646	642	634	627	620	614	609	598
2	689	662	640	621	676	652	631	614	632	615	601	613	600	588	596	585	576	566
3	660	625	598	576	649	617	592	572	601	580	563	586	569	554	572	558	546	537
4	633	592	562	539	622	585	557	536	572	548	529	560	540	523	549	532	518	509
5	607	562	530	507	598	556	527	504	545	520	500	535	513	496	526	507	492	483
6	583	534	502	479	574	530	499	477	521	494	474	512	489	471	505	484	468	460
7	560	509	477	454	552	505	475	453	498	470	450	491	466	448	484	462	446	438
8	538	486	454	432	531	483	452	431	477	449	429	471	446	427	465	442	426	418
9	517	465	433	411	511	462	432	411	457	429	410	452	426	408	447	424	407	400
10	498	446	414	393	493	443	413	393	438	411	392	434	409	391	430	406	390	383

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1279 Candela
Central Cone Intensity:	1265 Candela
Beam Flux:	360.0 Lumens
Beam Angle (0-180):	39.7 Degrees
Beam Angle (90-270):	39.7 Degrees
Field Angle (0-180):	68.8 Degrees
Field Angle (90-270):	68.8 Degrees





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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	286.3	42.3%
FM	(30-60)	51.6	7.6%
FH	(60-80)	0.8	0.1%
FVH	(80-90)	0.1	0.0%
BL	(0-30)	286.3	42.3%
BM	(30-60)	51.6	7.6%
BH	(60-80)	0.8	0.1%
BVH	(80-90)	0.1	0.0%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		677.4	100.0%
<b>BUG Rating</b>	<b>B1 U0 G0</b>		