



UL Verification Services Inc.  
7036 Snowdrift Road  
Allentown, PA 18106  
610-774-1300

## 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-WF-30 (8W, 50° WIDE FLOOD OPTIC, 3000K)**

Order Number  
13931356  
Test Number  
13931356.18

Test Date

2021-07-30

Prepared By

A handwritten signature in black ink, appearing to read 'Josh Mitchell'.

Josh Mitchell, Technician

Approved By

A handwritten signature in black ink, appearing to read 'Alexa Lambert'.

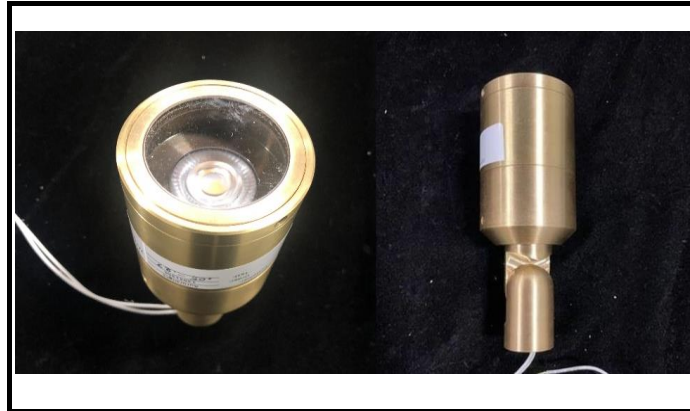
Alexa Lambert, Project Handler

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 13931356.13

**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: 24.1 °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
24.1 °C	12.20 VAC	0.7024 A	7.824 W	0.905	60 Hz	41.9 %

### Summary of Results

#### Spacing Criteria

0-180: 0.79

90-270: 0.79

Total Lumen Output:

622.4 Lumens

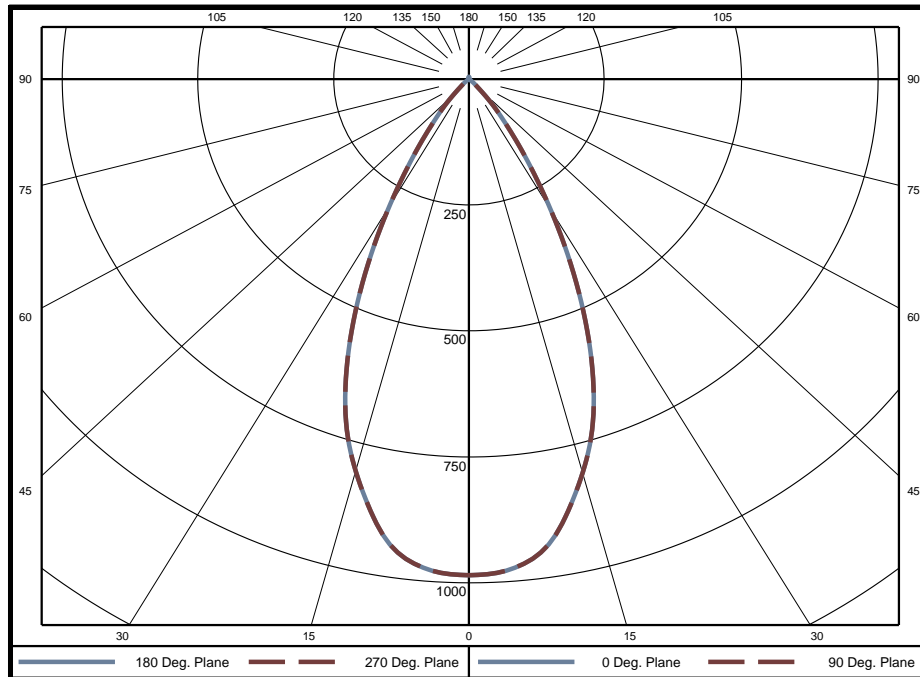
Luminaire Efficacy:

79.6 lm/w

Maximum Candela:

916 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	21.8	3.5%	60-65	0.6	0.1%	120-125	0	0.0%
5-10	63.2	10.2%	65-70	0.5	0.1%	125-130	0	0.0%
10-15	95.1	15.3%	70-75	0.4	0.1%	130-135	0	0.0%
15-20	113.6	18.3%	75-80	0.3	0.0%	135-140	0	0.0%
20-25	112.9	18.1%	80-85	0.1	0.0%	140-145	0	0.0%
25-30	92.2	14.8%	85-90	0.1	0.0%	145-150	0	0.0%
30-35	61.5	9.9%	90-95	0	0.0%	150-155	0	0.0%
35-40	34.7	5.6%	95-100	0	0.0%	155-160	0	0.0%
40-45	16.0	2.6%	100-105	0	0.0%	160-165	0	0.0%
45-50	6.1	1.0%	105-110	0	0.0%	165-170	0	0.0%
50-55	2.6	0.4%	110-115	0	0.0%	170-175	0	0.0%
55-60	1.0	0.2%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	595	95.6%
0-60	621	99.7%
0-90	623	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	916.5	916.5	916.5	916.5	916.5	916.5	916.5	916.5	916.5	916.5	916.5	916.5	916.5	916.5	916.5
	5	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9	905.9
	10	854.7	854.7	854.7	854.7	854.7	854.7	854.7	854.7	854.7	854.7	854.7	854.7	854.7	854.7	854.7
	15	751.9	751.9	751.9	751.9	751.9	751.9	751.9	751.9	751.9	751.9	751.9	751.9	751.9	751.9	751.9
	20	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9	623.9
	25	454.2	454.2	454.2	454.2	454.2	454.2	454.2	454.2	454.2	454.2	454.2	454.2	454.2	454.2	454.2
	30	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5
	35	148.5	148.5	148.5	148.5	148.5	148.5	148.5	148.5	148.5	148.5	148.5	148.5	148.5	148.5	148.5
	40	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
	45	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8
	50	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
	55	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
	60	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	65	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
	70	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
	75	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
	80	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
	85	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	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>)**

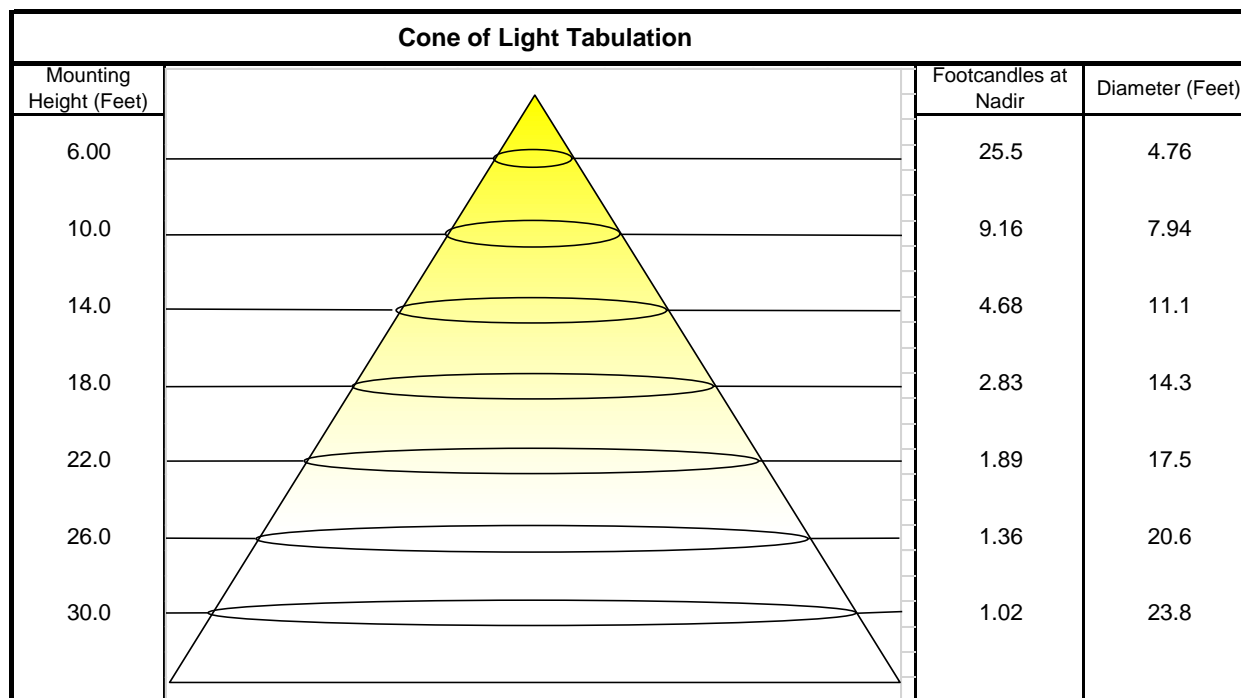
Vertical Angle (Degrees)	Horizontal Angle (Degrees)			
		0	45	90
	0	511700	511700	511700
	45	18020	18020	18020
	55	3144	3144	3144
	65	1344	1344	1344
	75	1298	1298	1298
	85	979	979	979



### 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	741	741	741	741	724	724	724	724	692	692	692	662	662	662	635	635	635	622
1	709	693	678	665	694	679	666	654	654	644	634	631	623	615	610	604	598	587
2	677	649	625	605	663	638	617	599	618	601	586	600	586	573	583	571	561	551
3	646	609	580	557	634	600	574	553	584	562	544	569	551	536	556	541	527	518
4	617	573	541	517	606	566	537	514	553	528	508	541	519	502	529	511	496	487
5	589	540	507	482	579	535	503	480	524	497	476	514	490	472	504	484	468	459
6	562	511	476	452	553	506	474	450	497	468	447	488	463	444	481	458	441	433
7	537	484	449	425	529	480	447	424	472	443	421	465	439	419	458	435	417	409
8	514	459	424	401	506	455	423	400	449	419	398	443	416	397	437	413	395	387
9	492	436	402	379	485	433	401	378	427	398	377	422	395	376	417	393	375	367
10	471	415	382	359	465	413	380	359	408	378	358	403	376	357	399	374	356	348

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	916.5 Candela
Central Cone Intensity:	913 Candela
Beam Flux:	403.2 Lumens
Beam Angle (0-180):	49.8 Degrees
Beam Angle (90-270):	49.8 Degrees
Field Angle (0-180):	76.5 Degrees
Field Angle (90-270):	76.5 Degrees





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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	267.8	40.0%
FM	(30-60)	65.9	9.8%
FH	(60-80)	0.9	0.1%
FVH	(80-90)	0.1	0.0%
BL	(0-30)	267.8	40.0%
BM	(30-60)	65.9	9.8%
BH	(60-80)	0.9	0.1%
BVH	(80-90)	0.1	0.0%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		669.2	100.0%
<b>BUG Rating</b>	<b>B1 U0 G0</b>		