



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-12-M-30 (12W, 30° MEDIUM OPTIC, 3000K)

Order Number

13931356

Test Number

13931356.08A

Revision of Test Number 13931356.08 on:

2021-08-04

Test Date

2021-07-29

Prepared By

Josh Mitchell, Technician

Approved By

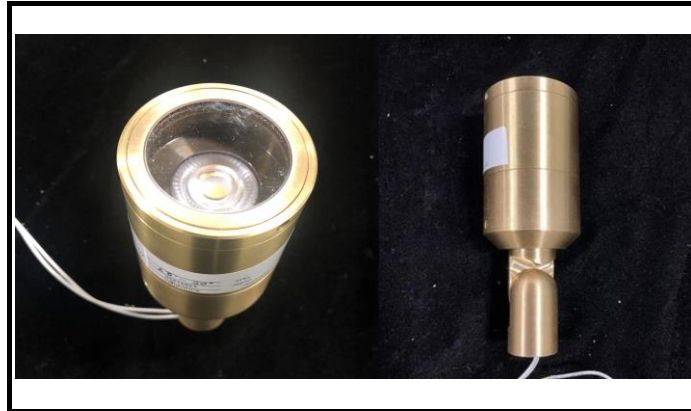
Alexa Lambert, Project Handler

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

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: 25.2 °C
Voltage: 12.08 VAC
Current: 0.9084 A
Power: 10.96 W
Power Factor: 0.998
Frequency: 60 Hz
Current THD: 5.12 %

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
25.2 °C	12.08 VAC	0.9084 A	10.96 W	0.998	60 Hz	5.12 %

Summary of Results

Spacing Criteria

0-180: 0.45
90-270: 0.45

Total Lumen Output:

610.9 Lumens

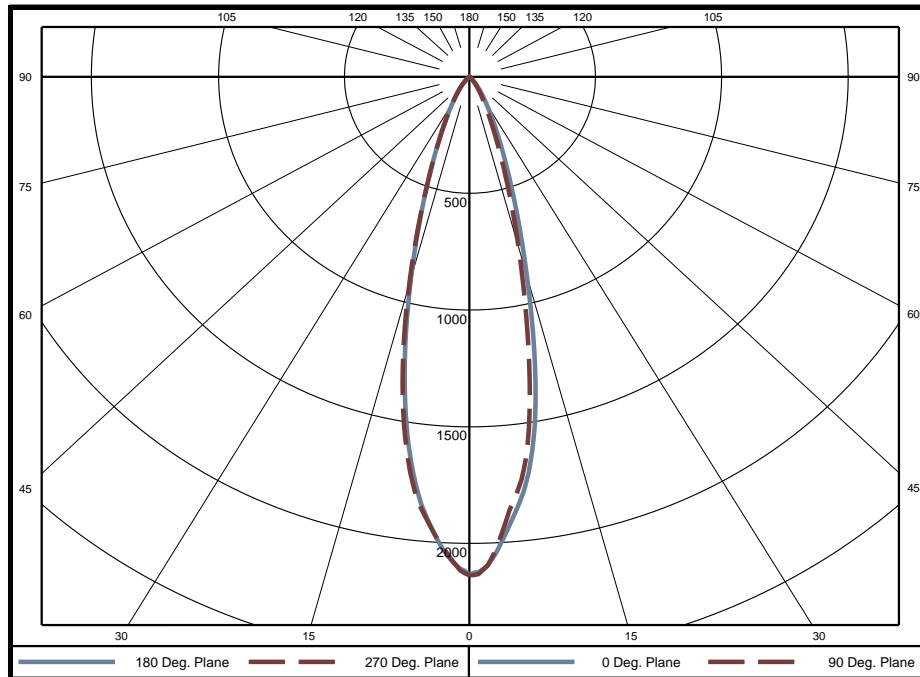
Luminaire Efficacy:

55.7 lm/w

Maximum Candela:

2136 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	48.0	7.9%	60-65	0.6	0.1%	120-125	0	0.0%
5-10	120.9	19.8%	65-70	0.5	0.1%	125-130	0	0.0%
10-15	137.8	22.6%	70-75	0.4	0.1%	130-135	0	0.0%
15-20	107.7	17.6%	75-80	0.3	0.0%	135-140	0	0.0%
20-25	73.0	11.9%	80-85	0.1	0.0%	140-145	0	0.0%
25-30	48.3	7.9%	85-90	0.0	0.0%	145-150	0	0.0%
30-35	32.2	5.3%	90-95	0	0.0%	150-155	0	0.0%
35-40	20.9	3.4%	95-100	0	0.0%	155-160	0	0.0%
40-45	11.7	1.9%	100-105	0	0.0%	160-165	0	0.0%
45-50	5.3	0.9%	105-110	0	0.0%	165-170	0	0.0%
50-55	2.0	0.3%	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	589	96.4%
0-60	609	99.7%
0-90	611	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	2136	2136	2136	2136	2136	2136	2136	2136	2136	2136	2136	2136	2136	2136	2136	2136
5	1901	1901	1901	1901	1901	1901	1901	1901	1901	1901	1901	1901	1901	1901	1901	1901
10	1478	1478	1478	1478	1478	1478	1478	1478	1478	1478	1478	1478	1478	1478	1478	1478
15	889	889	889	889	889	889	889	889	889	889	889	889	889	889	889	889
20	474	474	474	474	474	474	474	474	474	474	474	474	474	474	474	474
25	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253
30	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143
35	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
40	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
45	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
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	2	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	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/m²)

Horizontal Angle (Degrees)

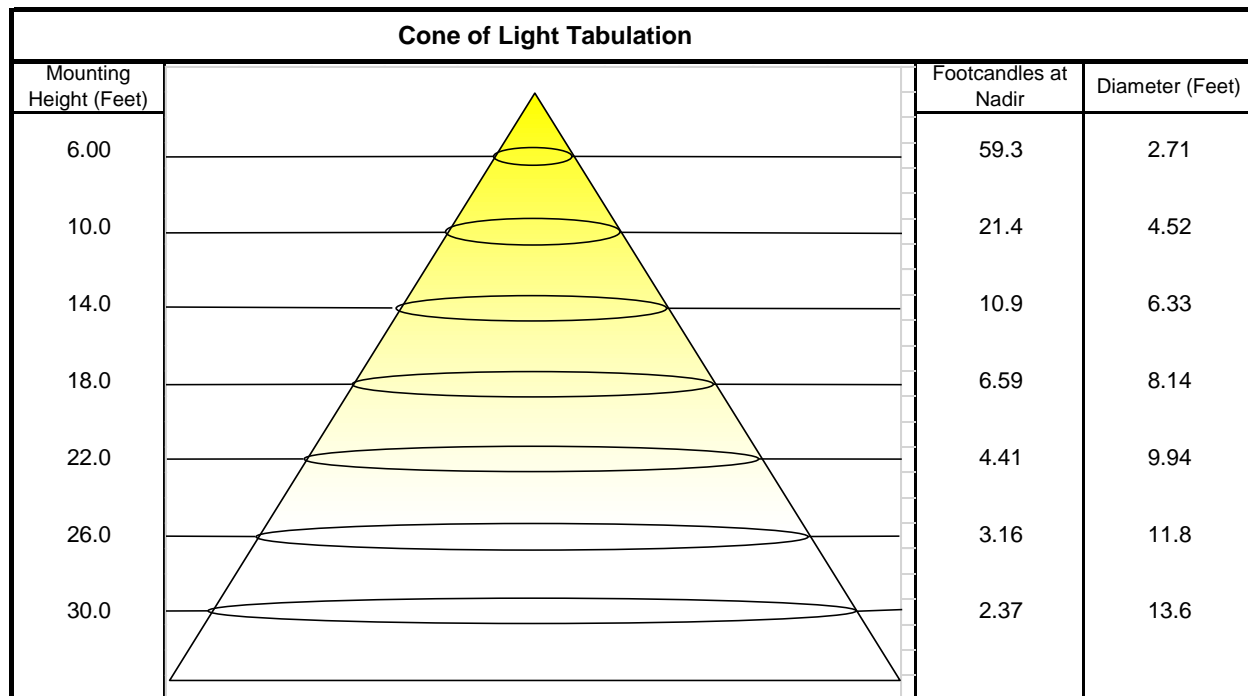
Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	1193000	1193000	1193000
45	15930	15930	15930
55	2875	2875	2875
65	1435	1435	1435
75	1378	1378	1378
85	964	964	964



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	727	727	727	727	710	710	710	710	679	679	679	650	650	650	623	623	623	611
1	700	686	673	661	685	673	661	651	648	639	631	626	619	612	605	600	595	584
2	673	649	629	612	661	639	620	605	619	605	592	602	590	579	585	576	567	558
3	648	616	592	572	637	608	586	568	593	574	559	579	563	550	566	553	542	534
4	624	588	561	540	615	581	556	537	569	548	531	557	539	525	546	531	519	511
5	602	562	533	513	593	556	530	510	546	523	506	537	517	502	528	511	498	490
6	581	538	509	489	573	534	507	487	525	502	484	518	497	481	510	492	478	471
7	561	517	488	468	554	513	486	467	506	482	464	499	478	462	493	474	460	453
8	543	497	469	449	536	494	467	448	488	464	446	483	461	445	477	458	443	436
9	525	479	451	432	520	477	450	431	472	447	430	467	445	429	462	442	428	421
10	509	463	435	417	504	460	434	416	456	432	415	452	430	414	448	428	413	407

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	2136 Candela
Central Cone Intensity:	2043 Candela
Beam Flux:	265.9 Lumens
Beam Angle (0-180):	26.9 Degrees
Beam Angle (90-270):	26.9 Degrees
Field Angle (0-180):	52.9 Degrees
Field Angle (90-270):	52.9 Degrees





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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	268.0	43.8%
FM	(30-60)	36.6	6.0%
FH	(60-80)	0.9	0.1%
FVH	(80-90)	0.1	0.0%
BL	(0-30)	268.0	43.8%
BM	(30-60)	36.6	6.0%
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		611.3	100.0%
BUG Rating	B1 U0 G0		



Attachment A

Amended Report Documentation

[illegible]