



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

Catalog Number
LSW8-PL-N-40 (Narrow Optic, 4000K)
Order Number
11912334
Test Number
11912334.01

Test Date

2017-08-16

Prepared By

Alexa Lambert, Project Handler

Approved By

Carissa Samonte-cam, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Cylindrical copper housing with circular metal tapered flush faceplate.
Lamp: One white LED
Mounting: Surface – Wall
Ballast/Driver: Integrated

Luminaire



Luminaire Characteristics

Luminous Length: 0.50 in.
Luminous Width: 0.7500 in.
Luminous Height: 1.00 in.

Summary of Results

Roadway Classification: Type I, Very Short
Cutoff Classification: Noncutoff
BUG Rating: B0 U1 G0

Test Conditions

Test Temperature: 24.3 °C
Voltage: 11.95 VAC
Current: 0.1699 A
Power: 1.239 W
Power Factor: 0.610
Frequency: 60 Hz
Current THD: 81.0 %

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
24.3 °C	11.95 VAC	0.1699 A	1.239 W	0.610	60 Hz	81.0 %

Summary of Results

Spacing Criteria

0-180: 1.59

90-270: 0.47

Total Lumen Output:

37.41 Lumens

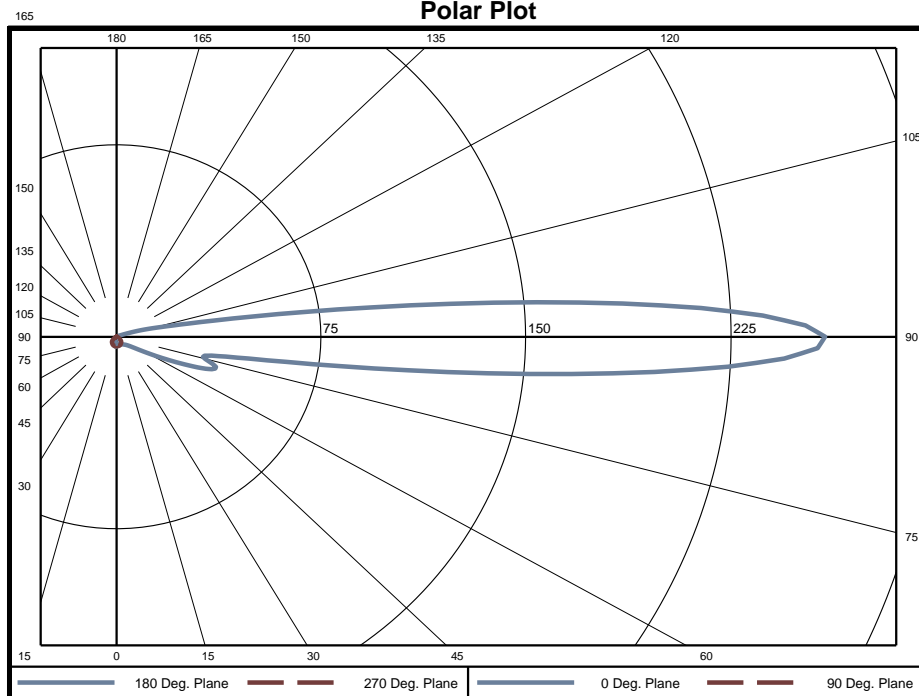
Luminaire Efficacy:

30.2 lm/w

Maximum Candela:

259 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.089	0.2%	60-65	1.155	3.1%	120-125	0.029	0.1%
5-10	0.262	0.7%	65-70	1.724	4.6%	125-130	0.013	0.0%
10-15	0.389	1.0%	70-75	1.903	5.1%	130-135	0.007	0.0%
15-20	0.442	1.2%	75-80	1.753	4.7%	135-140	0.004	0.0%
20-25	0.478	1.3%	80-85	3.849	10.3%	140-145	0.003	0.0%
25-30	0.526	1.4%	85-90	8.187	21.9%	145-150	0.002	0.0%
30-35	0.572	1.5%	90-95	7.842	21.0%	150-155	0.001	0.0%
35-40	0.619	1.7%	95-100	3.229	8.6%	155-160	0.001	0.0%
40-45	0.654	1.7%	100-105	0.933	2.5%	160-165	0.001	0.0%
45-50	0.679	1.8%	105-110	0.345	0.9%	165-170	0.001	0.0%
50-55	0.715	1.9%	110-115	0.111	0.3%	170-175	0.000	0.0%
55-60	0.832	2.2%	115-120	0.058	0.2%	175-180	0.000	0.0%

Zone	Lumens	% of Luminaire
0-40	3	9.0%
0-60	6	16.7%
0-90	25	66.4%
90-180	13	33.6%



Candela Tabulation

Horizontal Angle (Degrees)

Vertical 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	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
	5	3.5	3.5	3.6	3.7	3.7	3.8	3.9	3.9	3.9	3.9	3.8	3.7	3.7	3.6	3.5
	10	3.1	3.1	3.3	3.5	3.7	4.0	4.0	3.7	3.5	3.7	4.0	3.7	3.5	3.3	3.1
	15	2.8	2.8	2.9	3.3	3.7	4.0	3.4	1.8	1.3	1.8	3.4	4.0	3.7	3.3	2.9
	20	2.8	2.7	2.6	2.9	3.6	4.0	1.7	0.5	0.3	0.5	1.7	4.0	3.6	2.9	2.6
	25	3.1	3.0	2.5	2.5	3.4	3.7	0.7	0.0	0.0	0.0	0.7	3.7	3.4	2.5	2.5
	30	3.3	3.1	2.7	2.2	3.1	3.0	0.1	0.0	0.0	0.0	0.1	3.0	3.1	2.2	2.7
	35	3.6	3.4	2.8	2.1	2.9	2.2	0.0	0.0	0.0	0.0	0.0	2.2	2.9	2.1	2.8
	40	4.0	3.6	2.8	1.9	2.6	1.5	0.0	0.0	0.0	0.0	0.0	1.5	2.6	1.9	2.8
	45	4.4	3.9	2.7	1.8	2.3	0.9	0.0	0.0	0.0	0.0	0.0	0.9	2.3	1.8	2.7
	50	5.3	4.2	2.6	1.5	1.8	0.5	0.0	0.0	0.0	0.0	0.0	0.5	1.8	1.5	2.6
	55	7.1	4.7	2.4	1.2	1.3	0.2	0.0	0.0	0.0	0.0	0.0	0.2	1.3	1.2	2.4
	60	12.0	5.8	2.1	1.0	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.9	1.0	2.1
	65	22.5	8.0	1.8	0.9	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.9	1.8
	70	37.1	9.3	1.7	0.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.7	1.7
	75	33.6	6.5	1.4	0.6	0.4	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.4	0.6	1.4
	80	49.2	5.1	1.3	0.5	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.5	1.3
	85	167.2	4.7	1.1	0.4	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.4	1.1
	90	259.4	4.1	0.9	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3	0.9
	95	154.4	3.6	0.7	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.7
	100	36.3	3.3	0.6	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.6
	105	11.3	2.5	0.4	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.4
	110	2.3	1.0	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.3
	115	0.8	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
	120	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	125	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	130	0.1	0.1	0.0	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	0.1	0.0	0.0	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/m²)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	15260	15260
	45	8628	4736
	55	13360	3879
	65	41650	2964
	75	63410	2360
	85	332300	1849



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	42	42	42	42	39	39	39	39	35	35	35	30	30	30	27	27	27	25
1	33	29	26	23	31	27	24	22	23	21	19	19	18	16	16	14	13	11
2	29	24	20	17	27	23	19	16	19	16	13	16	13	11	13	11	9	7
3	26	21	17	13	24	19	15	12	16	13	11	13	11	9	11	9	7	5
4	24	18	14	11	22	17	13	10	14	11	9	12	9	7	10	7	6	4
5	22	16	12	9	20	15	11	9	13	10	7	11	8	6	9	7	5	4
6	20	15	11	8	19	13	10	7	11	8	6	10	7	5	8	6	4	3
7	19	13	9	7	17	12	9	6	10	8	5	9	6	5	7	5	4	3
8	17	12	8	6	16	11	8	6	10	7	5	8	6	4	7	5	3	2
9	16	11	8	5	15	10	7	5	9	6	4	7	5	4	6	4	3	2
10	15	10	7	5	14	9	6	4	8	6	4	7	5	3	6	4	3	2

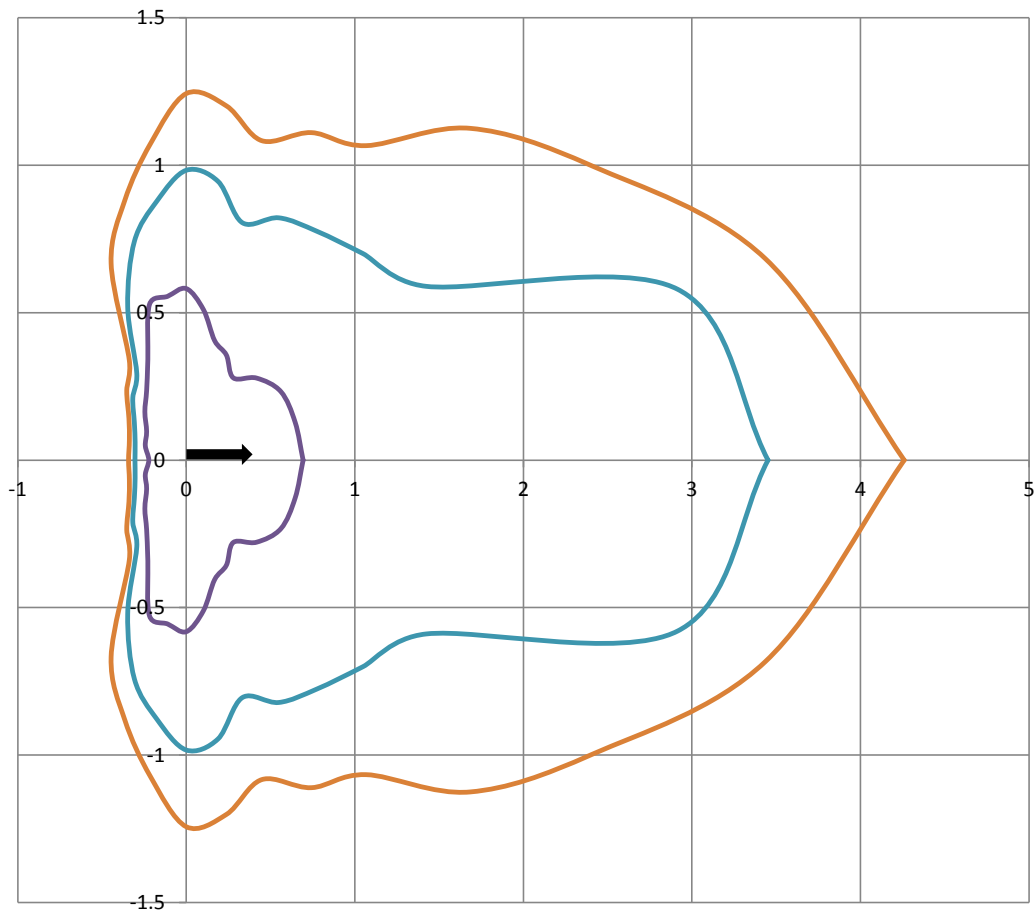
Beam and Field Information	
CIE Type:	Semi-Direct
Center Beam Intensity:	3.7 Candela
Central Cone Intensity:	4 Candela
Beam Flux:	35.4 Lumens
Beam Angle (0-180):	124.4 Degrees
Beam Angle (90-270):	98.6 Degrees
Field Angle (0-180):	140.7 Degrees
Field Angle (90-270):	149.4 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		0.231	3.21
6.00		0.103	4.81
8.00		0.0577	6.41
10.0		0.0369	8.02
12.0		0.0256	9.62
14.0		0.0188	11.2
16.0		0.0144	12.8

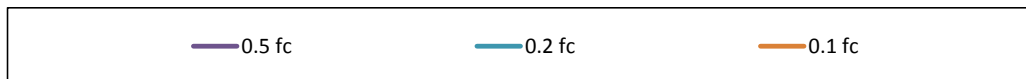


ISOFootcandle Plot

Mounting Height - 2 Feet



Grid Lines in Units of Mounting Height





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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	1.2	3.8%
FM	(30-60)	3.5	10.5%
FH	(60-80)	6.5	19.5%
FVH	(80-90)	9.6	29.1%
BL	(0-30)	0.9	2.9%
BM	(30-60)	0.7	2.1%
BH	(60-80)	0.1	0.3%
BVH	(80-90)	0.0	0.0%
UL	(90-100)	8.9	27.0%
UH	(100-180)	1.6	4.9%
Total		33.0	100.0%
BUG Rating	B0 U1 G0		