



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 Avenue West
Carlsbad
CA, 92010
United States

Catalog Number

HPL10-2-30

Order Number

11745044

Test Number

11745044.34

Test Date

2017-05-23

Prepared By

Javier Caban, Technician

Approved By

Tiffany Hamm, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Conical 10" copper shade with clear glass lens, cylindrical copper stem and brass base
Lamp: 64 white LEDs
Mounting: Path/Area
Ballast/Driver: Integrated

Luminaire



Luminaire Characteristics

Luminous Diameter: 10.00 in.
Luminous Height: 23.00 in.

Summary of Results

Roadway Classification: Type V, Short
Cutoff Classification: Semicutoff
BUG Rating: B0 U1 G0

Test Conditions

Test Temperature: 25.2 °C
Voltage: 12.00 VAC
Current: 0.2907 A
Power: 2.151 W
Power Factor: 0.617
Frequency: 60 Hz
Current THD: 89.4 %

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	12.00 VAC	0.2907 A	2.151 W	0.617	60 Hz	89.4 %

Summary of Results

Spacing Criteria

0-180: 1.44
90-270: 1.44

Total Lumen Output:

110.0 Lumens

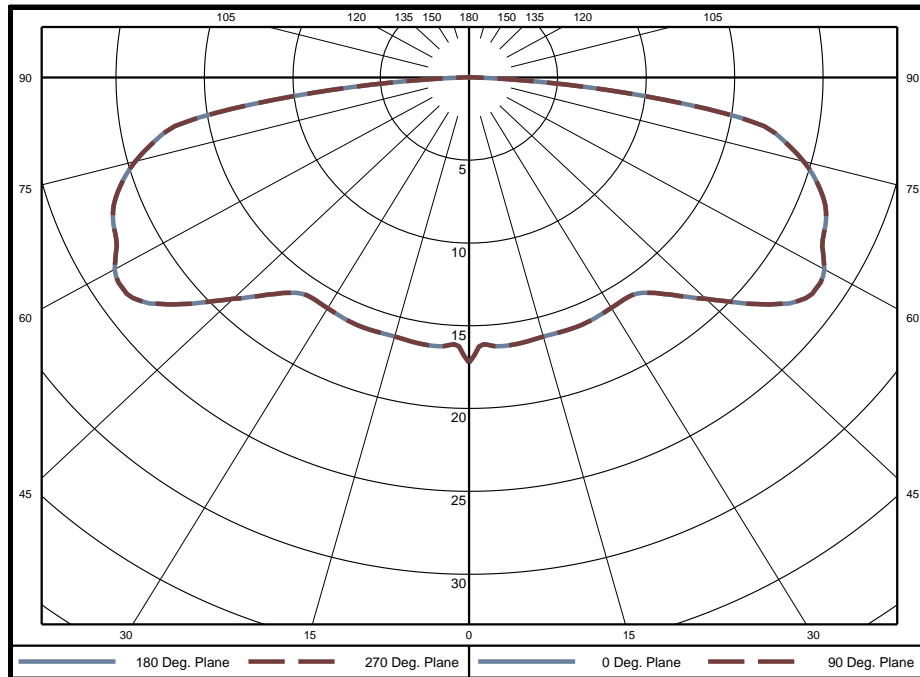
Luminaire Efficacy:

51.1 lm/w

Maximum Candela:

23 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.39	0.4%	60-65	10.97	10.0%	120-125	0.01	0.0%
5-10	1.17	1.1%	65-70	11.04	10.0%	125-130	0.01	0.0%
10-15	1.93	1.8%	70-75	10.71	9.7%	130-135	0.01	0.0%
15-20	2.67	2.4%	75-80	9.81	8.9%	135-140	0.01	0.0%
20-25	3.41	3.1%	80-85	6.62	6.0%	140-145	0.01	0.0%
25-30	4.08	3.7%	85-90	1.36	1.2%	145-150	0.01	0.0%
30-35	4.72	4.3%	90-95	0.12	0.1%	150-155	0.01	0.0%
35-40	5.49	5.0%	95-100	0.04	0.0%	155-160	0.00	0.0%
40-45	6.65	6.0%	100-105	0.03	0.0%	160-165	0.00	0.0%
45-50	8.12	7.4%	105-110	0.02	0.0%	165-170	0.00	0.0%
50-55	9.74	8.9%	110-115	0.02	0.0%	170-175	0.00	0.0%
55-60	10.79	9.8%	115-120	0.01	0.0%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	24	21.7%
0-60	59	53.8%
0-90	110	99.7%
90-180	0	0.3%



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	17.23	17.23	17.23	17.23	17.23	17.23	17.23	17.23	17.23	17.23	17.23	17.23	17.23	17.23	17.23	17.23
5	16.29	16.29	16.29	16.29	16.29	16.29	16.29	16.29	16.29	16.29	16.29	16.29	16.29	16.29	16.29	16.29
10	16.31	16.31	16.31	16.31	16.31	16.31	16.31	16.31	16.31	16.31	16.31	16.31	16.31	16.31	16.31	16.31
15	16.20	16.20	16.20	16.20	16.20	16.20	16.20	16.20	16.20	16.20	16.20	16.20	16.20	16.20	16.20	16.20
20	16.24	16.24	16.24	16.24	16.24	16.24	16.24	16.24	16.24	16.24	16.24	16.24	16.24	16.24	16.24	16.24
25	16.21	16.21	16.21	16.21	16.21	16.21	16.21	16.21	16.21	16.21	16.21	16.21	16.21	16.21	16.21	16.21
30	16.07	16.07	16.07	16.07	16.07	16.07	16.07	16.07	16.07	16.07	16.07	16.07	16.07	16.07	16.07	16.07
35	16.05	16.05	16.05	16.05	16.05	16.05	16.05	16.05	16.05	16.05	16.05	16.05	16.05	16.05	16.05	16.05
40	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07
45	18.90	18.90	18.90	18.90	18.90	18.90	18.90	18.90	18.90	18.90	18.90	18.90	18.90	18.90	18.90	18.90
50	21.29	21.29	21.29	21.29	21.29	21.29	21.29	21.29	21.29	21.29	21.29	21.29	21.29	21.29	21.29	21.29
55	23.23	23.23	23.23	23.23	23.23	23.23	23.23	23.23	23.23	23.23	23.23	23.23	23.23	23.23	23.23	23.23
60	23.18	23.18	23.18	23.18	23.18	23.18	23.18	23.18	23.18	23.18	23.18	23.18	23.18	23.18	23.18	23.18
65	22.13	22.13	22.13	22.13	22.13	22.13	22.13	22.13	22.13	22.13	22.13	22.13	22.13	22.13	22.13	22.13
70	21.30	21.30	21.30	21.30	21.30	21.30	21.30	21.30	21.30	21.30	21.30	21.30	21.30	21.30	21.30	21.30
75	19.56	19.56	19.56	19.56	19.56	19.56	19.56	19.56	19.56	19.56	19.56	19.56	19.56	19.56	19.56	19.56
80	16.93	16.93	16.93	16.93	16.93	16.93	16.93	16.93	16.93	16.93	16.93	16.93	16.93	16.93	16.93	16.93
85	6.66	6.66	6.66	6.66	6.66	6.66	6.66	6.66	6.66	6.66	6.66	6.66	6.66	6.66	6.66	6.66
90	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
95	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
100	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
105	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
110	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
115	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
120	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
125	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
130	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
135	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
140	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
145	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
150	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
155	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
160	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
165	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
170	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
175	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
180	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

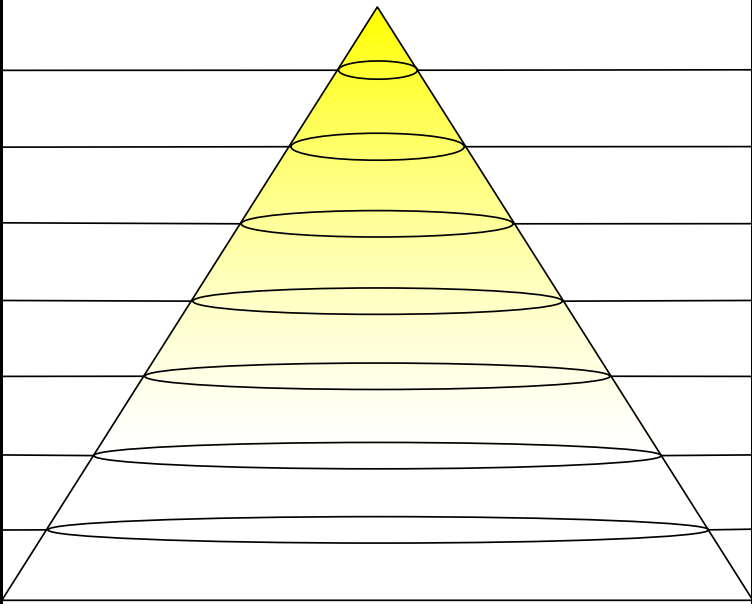
Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	340	340	340
45	528	528	528
55	799	799	799
65	1033	1033	1033
75	1492	1492	1492
85	1507	1507	1507



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	131	131	131	131	128	128	128	128	122	122	122	117	117	117	112	112	112	110
1	114	106	99	93	110	103	97	91	98	93	88	94	89	85	90	86	83	80
2	100	87	77	68	96	85	76	68	81	73	66	77	70	64	73	68	62	60
3	89	73	62	52	85	72	61	52	68	59	51	65	56	50	61	55	49	46
4	80	63	51	42	77	61	50	41	58	48	40	55	47	40	53	45	39	36
5	72	55	43	34	70	54	42	34	51	41	33	49	40	33	46	38	32	29
6	66	49	37	28	64	47	36	28	45	35	28	43	34	27	41	33	27	24
7	61	43	32	24	59	42	32	24	40	31	24	39	30	23	37	29	23	21
8	56	39	28	21	54	38	28	21	37	27	21	35	27	20	34	26	20	18
9	52	36	25	18	51	35	25	18	33	24	18	32	24	18	31	23	18	15
10	49	33	23	16	47	32	23	16	31	22	16	30	22	16	29	21	16	14

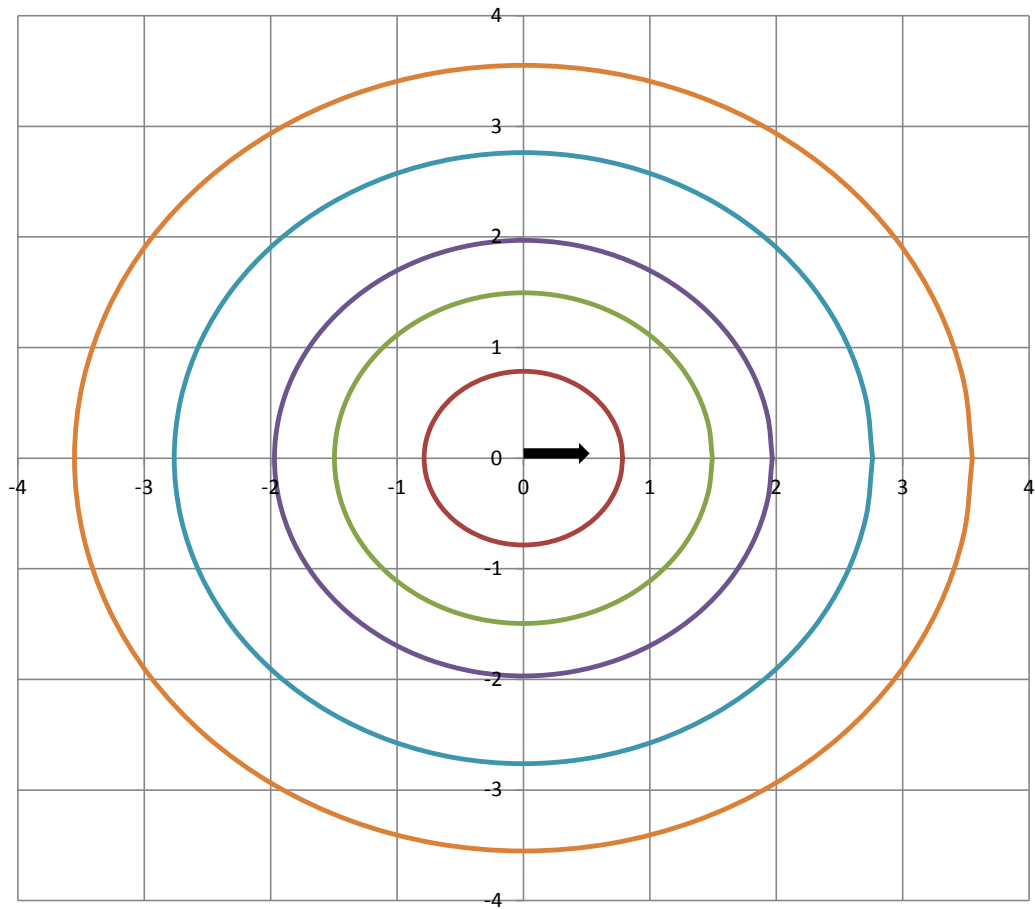
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	17.23 Candela
Central Cone Intensity:	16 Candela
Beam Flux:	107.6 Lumens
Beam Angle (0-180):	168.3 Degrees
Beam Angle (90-270):	168.3 Degrees
Field Angle (0-180):	175.3 Degrees
Field Angle (90-270):	175.3 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		1.08	5.76
6.00		0.479	8.64
8.00		0.269	11.5
10.0		0.172	14.4
12.0		0.120	17.3
14.0		0.0879	20.2
16.0		0.0673	23.0

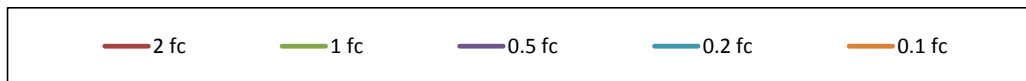


ISOFootcandle Plot

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)	6.8	6.2%
FM	(30-60)	22.8	20.7%
FH	(60-80)	21.2	19.3%
FVH	(80-90)	4.0	3.6%
BL	(0-30)	6.8	6.2%
BM	(30-60)	22.8	20.7%
BH	(60-80)	21.2	19.3%
BVH	(80-90)	4.0	3.6%
UL	(90-100)	0.2	0.1%
UH	(100-180)	0.1	0.1%
Total		109.8	100.0%
BUG Rating	B0 U1 G0		