



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**

**HPL10-3-30**

Order Number

**11745044**

Test Number

**11745044.36**

Test Date

2017-05-23

Prepared By

Alexa Lambert, Project Handler

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:	24.8 °C
Voltage:	11.99 VAC
Current:	0.4915 A
Power:	3.292 W
Power Factor:	0.559
Frequency:	60 Hz
Current THD:	79.4 %

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
24.8 °C	11.99 VAC	0.4915 A	3.292 W	0.559	60 Hz	79.4 %

### Summary of Results

#### Spacing Criteria

0-180: 1.52

90-270: 1.52

Total Lumen Output:

154.7 Lumens

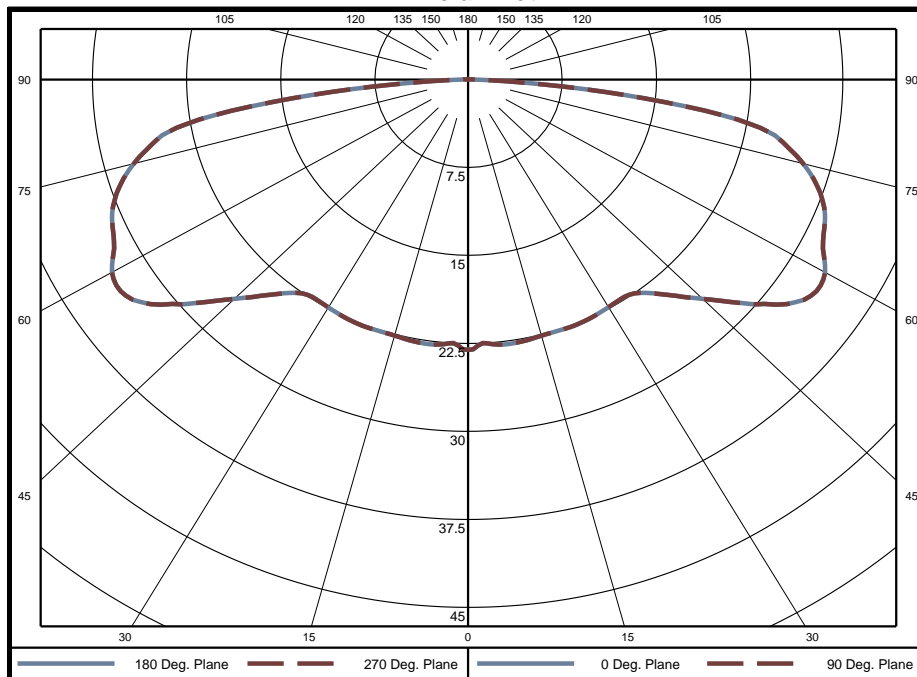
Luminaire Efficacy:

47.0 lm/w

Maximum Candela:

33 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.54	0.3%	60-65	15.56	10.1%	120-125	0.02	0.0%
5-10	1.63	1.1%	65-70	15.58	10.1%	125-130	0.01	0.0%
10-15	2.69	1.7%	70-75	15.15	9.8%	130-135	0.01	0.0%
15-20	3.73	2.4%	75-80	13.87	9.0%	135-140	0.01	0.0%
20-25	4.74	3.1%	80-85	9.30	6.0%	140-145	0.01	0.0%
25-30	5.70	3.7%	85-90	1.90	1.2%	145-150	0.01	0.0%
30-35	6.59	4.3%	90-95	0.17	0.1%	150-155	0.01	0.0%
35-40	7.68	5.0%	95-100	0.06	0.0%	155-160	0.01	0.0%
40-45	9.31	6.0%	100-105	0.04	0.0%	160-165	0.01	0.0%
45-50	11.35	7.3%	105-110	0.03	0.0%	165-170	0.00	0.0%
50-55	13.66	8.8%	110-115	0.02	0.0%	170-175	0.00	0.0%
55-60	15.27	9.9%	115-120	0.02	0.0%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	33	21.5%
0-60	83	53.6%
0-90	154	99.7%
90-180	0	0.3%



### 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	23.06	23.06	23.06	23.06	23.06	23.06	23.06	23.06	23.06	23.06	23.06	23.06	23.06	23.06	23.06
	5	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66	22.66
	10	22.77	22.77	22.77	22.77	22.77	22.77	22.77	22.77	22.77	22.77	22.77	22.77	22.77	22.77	22.77
	15	22.61	22.61	22.61	22.61	22.61	22.61	22.61	22.61	22.61	22.61	22.61	22.61	22.61	22.61	22.61
	20	22.62	22.62	22.62	22.62	22.62	22.62	22.62	22.62	22.62	22.62	22.62	22.62	22.62	22.62	22.62
	25	22.59	22.59	22.59	22.59	22.59	22.59	22.59	22.59	22.59	22.59	22.59	22.59	22.59	22.59	22.59
	30	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41
	35	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41	22.41
	40	23.89	23.89	23.89	23.89	23.89	23.89	23.89	23.89	23.89	23.89	23.89	23.89	23.89	23.89	23.89
	45	26.46	26.46	26.46	26.46	26.46	26.46	26.46	26.46	26.46	26.46	26.46	26.46	26.46	26.46	26.46
	50	29.83	29.83	29.83	29.83	29.83	29.83	29.83	29.83	29.83	29.83	29.83	29.83	29.83	29.83	29.83
	55	32.74	32.74	32.74	32.74	32.74	32.74	32.74	32.74	32.74	32.74	32.74	32.74	32.74	32.74	32.74
	60	32.88	32.88	32.88	32.88	32.88	32.88	32.88	32.88	32.88	32.88	32.88	32.88	32.88	32.88	32.88
	65	31.29	31.29	31.29	31.29	31.29	31.29	31.29	31.29	31.29	31.29	31.29	31.29	31.29	31.29	31.29
	70	30.08	30.08	30.08	30.08	30.08	30.08	30.08	30.08	30.08	30.08	30.08	30.08	30.08	30.08	30.08
	75	27.67	27.67	27.67	27.67	27.67	27.67	27.67	27.67	27.67	27.67	27.67	27.67	27.67	27.67	27.67
	80	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65
	85	9.25	9.25	9.25	9.25	9.25	9.25	9.25	9.25	9.25	9.25	9.25	9.25	9.25	9.25	9.25
	90	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
	95	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
	100	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
	105	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
	110	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	115	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
	120	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
	125	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
	130	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
	135	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
	140	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
	145	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
	150	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
	155	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
	160	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
	165	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
	170	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
	175	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
	180	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

### Average Luminance (cd/m<sup>2</sup>)

Horizontal Angle (Degrees)

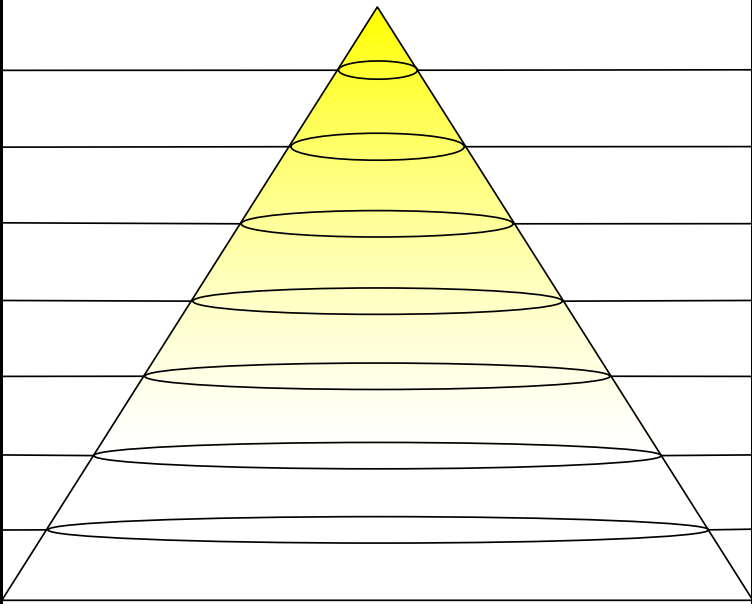
Vertical Angle (Degrees)	0	45	90
	0	455	455
	45	738	738
	55	1126	1126
	65	1461	1461
	75	2110	2110
	85	2094	2094



### 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	184	184	184	184	180	180	180	180	172	172	172	164	164	164	157	157	157	154
1	160	149	139	131	155	145	136	128	138	131	124	132	126	120	126	121	116	112
2	140	123	108	96	136	120	106	95	114	102	92	108	98	90	103	95	88	84
3	125	103	87	74	120	101	85	73	95	82	71	91	79	70	86	77	68	64
4	112	88	71	58	108	86	70	58	82	68	57	78	66	56	74	63	55	51
5	101	77	60	48	98	75	59	47	71	57	46	68	56	46	65	54	45	41
6	93	68	52	40	89	66	51	39	63	49	39	60	48	38	58	47	38	34
7	85	61	45	34	82	59	44	34	57	43	33	54	42	33	52	41	32	29
8	79	55	40	29	76	54	39	29	51	38	29	49	37	28	47	36	28	25
9	73	50	35	26	71	49	35	26	47	34	25	45	33	25	43	33	25	22
10	69	46	32	23	66	45	32	23	43	31	22	41	30	22	40	30	22	19

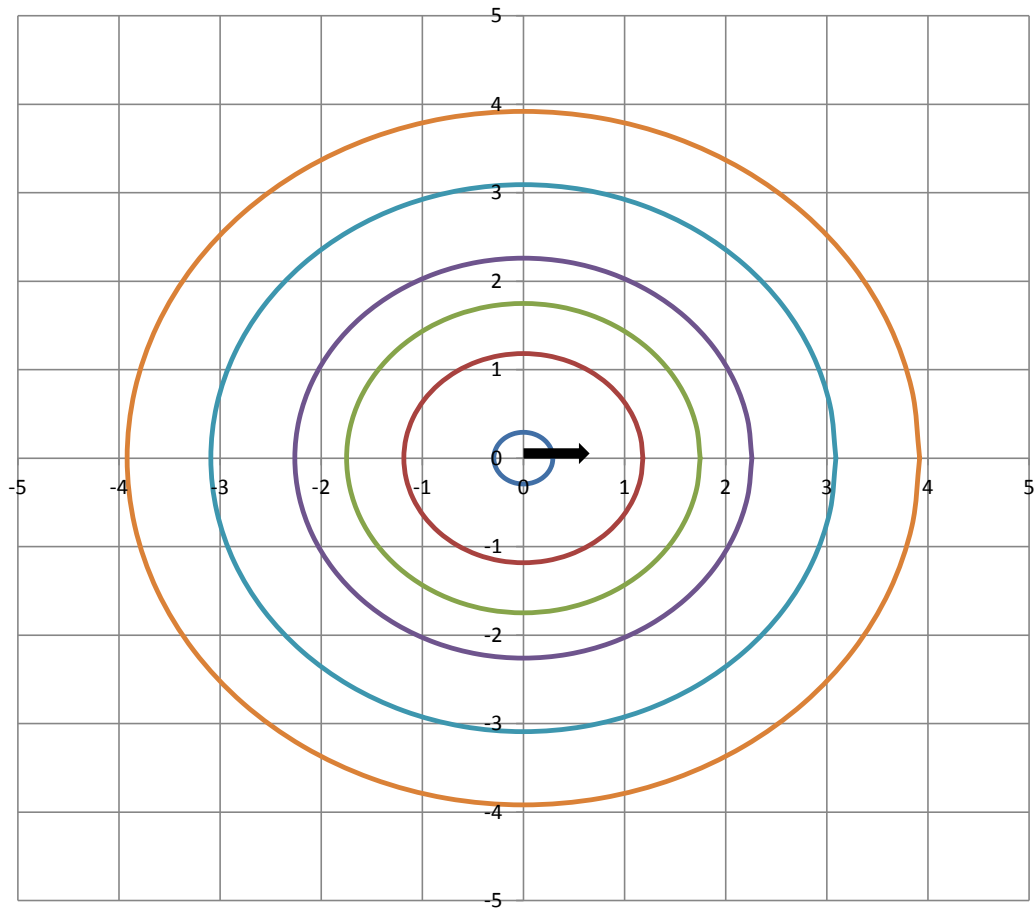
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	23.06 Candela
Central Cone Intensity:	23 Candela
Beam Flux:	151.6 Lumens
Beam Angle (0-180):	168.6 Degrees
Beam Angle (90-270):	168.6 Degrees
Field Angle (0-180):	175.5 Degrees
Field Angle (90-270):	175.5 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		1.44	6.08
6.00		0.640	9.13
8.00		0.360	12.2
10.0		0.231	15.2
12.0		0.160	18.3
14.0		0.118	21.3
16.0		0.0901	24.3



## 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)	9.5	6.2%
FM	(30-60)	31.9	20.7%
FH	(60-80)	30.0	19.4%
FVH	(80-90)	5.6	3.6%
BL	(0-30)	9.5	6.2%
BM	(30-60)	31.9	20.7%
BH	(60-80)	30.0	19.4%
BVH	(80-90)	5.6	3.6%
UL	(90-100)	0.2	0.2%
UH	(100-180)	0.2	0.1%
Total		154.6	100.0%
<b>BUG Rating</b>	<b>B0 U1 G0</b>		