



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**

**HPL7-2-27**

Order Number

**11745044**

Test Number

**11745044.15**

Test Date

2017-05-12

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 7" 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: 7.00 in.

**Summary of Results**

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

**Test Conditions**

Test Temperature: 24.7 °C  
Voltage: 12.00 VAC  
Current: 0.3049 A  
Power: 2.209 W  
Power Factor: 0.604  
Frequency: 60 Hz  
Current THD: 86.0 %

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
24.7 °C	12.00 VAC	0.3049 A	2.209 W	0.604	60 Hz	86.0 %

### Summary of Results

#### Spacing Criteria

0-180: 1.06  
90-270: 1.06

#### Total Lumen Output:

126.8 Lumens

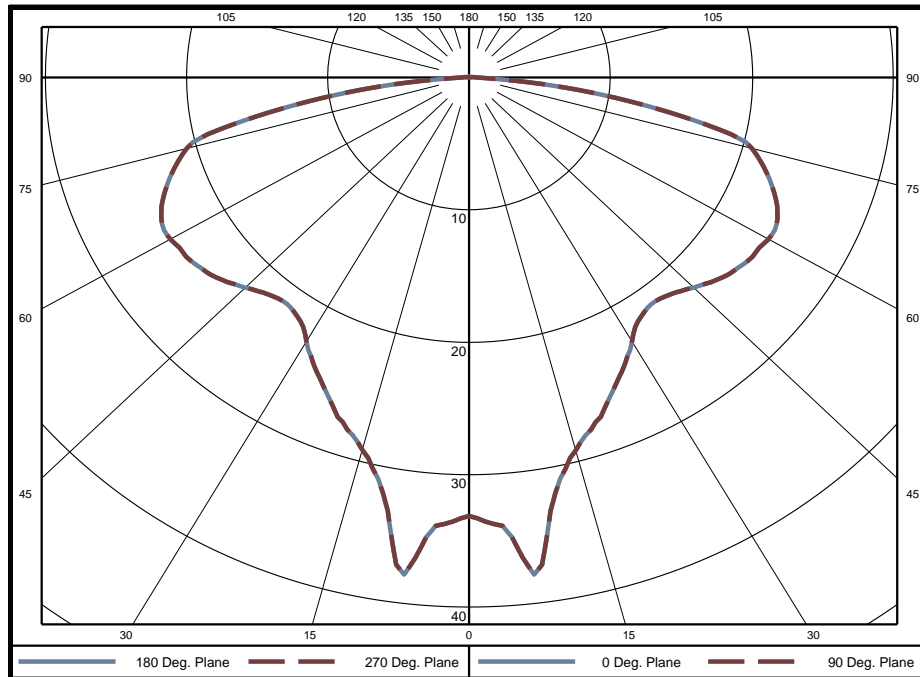
#### Luminaire Efficacy:

57.4 lm/w

#### Maximum Candela:

38 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.81	0.6%	60-65	11.87	9.4%	120-125	0.02	0.0%
5-10	2.58	2.0%	65-70	11.87	9.4%	125-130	0.02	0.0%
10-15	3.64	2.9%	70-75	11.37	9.0%	130-135	0.01	0.0%
15-20	4.63	3.7%	75-80	9.51	7.5%	135-140	0.01	0.0%
20-25	5.47	4.3%	80-85	4.79	3.8%	140-145	0.01	0.0%
25-30	6.09	4.8%	85-90	0.90	0.7%	145-150	0.01	0.0%
30-35	6.53	5.1%	90-95	0.21	0.2%	150-155	0.01	0.0%
35-40	7.17	5.7%	95-100	0.09	0.1%	155-160	0.01	0.0%
40-45	8.14	6.4%	100-105	0.05	0.0%	160-165	0.01	0.0%
45-50	9.28	7.3%	105-110	0.03	0.0%	165-170	0.01	0.0%
50-55	10.36	8.2%	110-115	0.03	0.0%	170-175	0.00	0.0%
55-60	11.22	8.8%	115-120	0.02	0.0%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	37	29.1%
0-60	76	59.9%
0-90	126	99.6%
90-180	1	0.4%



### 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	33.11	33.11	33.11	33.11	33.11	33.11	33.11	33.11	33.11	33.11	33.11	33.11	33.11	33.11	33.11
	5	34.83	34.83	34.83	34.83	34.83	34.83	34.83	34.83	34.83	34.83	34.83	34.83	34.83	34.83	34.83
	10	33.22	33.22	33.22	33.22	33.22	33.22	33.22	33.22	33.22	33.22	33.22	33.22	33.22	33.22	33.22
	15	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
	20	27.28	27.28	27.28	27.28	27.28	27.28	27.28	27.28	27.28	27.28	27.28	27.28	27.28	27.28	27.28
	25	25.06	25.06	25.06	25.06	25.06	25.06	25.06	25.06	25.06	25.06	25.06	25.06	25.06	25.06	25.06
	30	23.07	23.07	23.07	23.07	23.07	23.07	23.07	23.07	23.07	23.07	23.07	23.07	23.07	23.07	23.07
	35	21.63	21.63	21.63	21.63	21.63	21.63	21.63	21.63	21.63	21.63	21.63	21.63	21.63	21.63	21.63
	40	21.59	21.59	21.59	21.59	21.59	21.59	21.59	21.59	21.59	21.59	21.59	21.59	21.59	21.59	21.59
	45	22.45	22.45	22.45	22.45	22.45	22.45	22.45	22.45	22.45	22.45	22.45	22.45	22.45	22.45	22.45
	50	23.47	23.47	23.47	23.47	23.47	23.47	23.47	23.47	23.47	23.47	23.47	23.47	23.47	23.47	23.47
	55	24.12	24.12	24.12	24.12	24.12	24.12	24.12	24.12	24.12	24.12	24.12	24.12	24.12	24.12	24.12
	60	24.46	24.46	24.46	24.46	24.46	24.46	24.46	24.46	24.46	24.46	24.46	24.46	24.46	24.46	24.46
	65	24.10	24.10	24.10	24.10	24.10	24.10	24.10	24.10	24.10	24.10	24.10	24.10	24.10	24.10	24.10
	70	22.68	22.68	22.68	22.68	22.68	22.68	22.68	22.68	22.68	22.68	22.68	22.68	22.68	22.68	22.68
	75	20.76	20.76	20.76	20.76	20.76	20.76	20.76	20.76	20.76	20.76	20.76	20.76	20.76	20.76	20.76
	80	13.41	13.41	13.41	13.41	13.41	13.41	13.41	13.41	13.41	13.41	13.41	13.41	13.41	13.41	13.41
	85	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34
	90	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
	95	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
	100	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
	105	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
	110	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
	115	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
	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	0.04	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
	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	0.04	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
	145	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
	150	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
	155	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
	160	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
	165	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
	170	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
	175	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
	180	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

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

Horizontal Angle (Degrees)

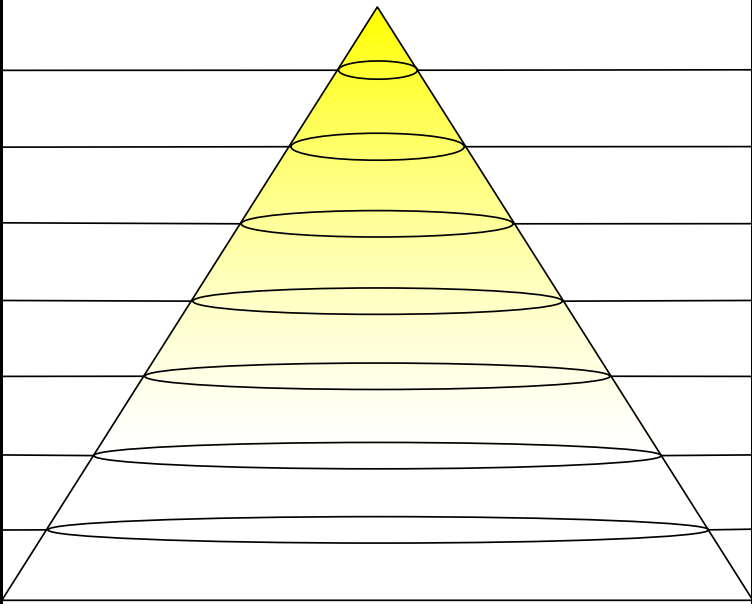
Vertical Angle (Degrees)	0	45	90
	0	1334	1334
	45	1279	1279
	55	1694	1694
	65	2297	2297
	75	3230	3230
	85	2008	2008



### Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%																	
Ceiling Cavity Reflectance	80				70				50			30			10		
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **																
0	151	151	151	151	147	147	147	147	141	141	141	134	134	134	129	129	129
1	133	125	118	112	130	122	116	110	117	111	106	111	107	103	107	103	100
2	118	105	94	85	114	102	92	84	98	89	82	93	86	80	89	83	78
3	106	90	77	67	102	87	76	66	83	73	65	79	71	64	76	69	62
4	96	78	65	55	92	76	64	54	72	62	53	69	60	52	66	58	51
5	87	69	55	46	84	67	55	45	64	53	45	61	52	44	59	50	43
6	80	61	48	39	77	60	48	39	57	46	38	55	45	38	53	44	37
7	74	55	43	34	72	54	42	34	52	41	33	50	40	33	48	39	33
8	69	50	38	30	67	49	38	30	47	37	30	45	36	29	44	35	29
9	64	46	34	27	62	45	34	27	43	33	26	42	33	26	40	32	26
10	60	42	31	24	58	41	31	24	40	31	24	39	30	24	38	29	24

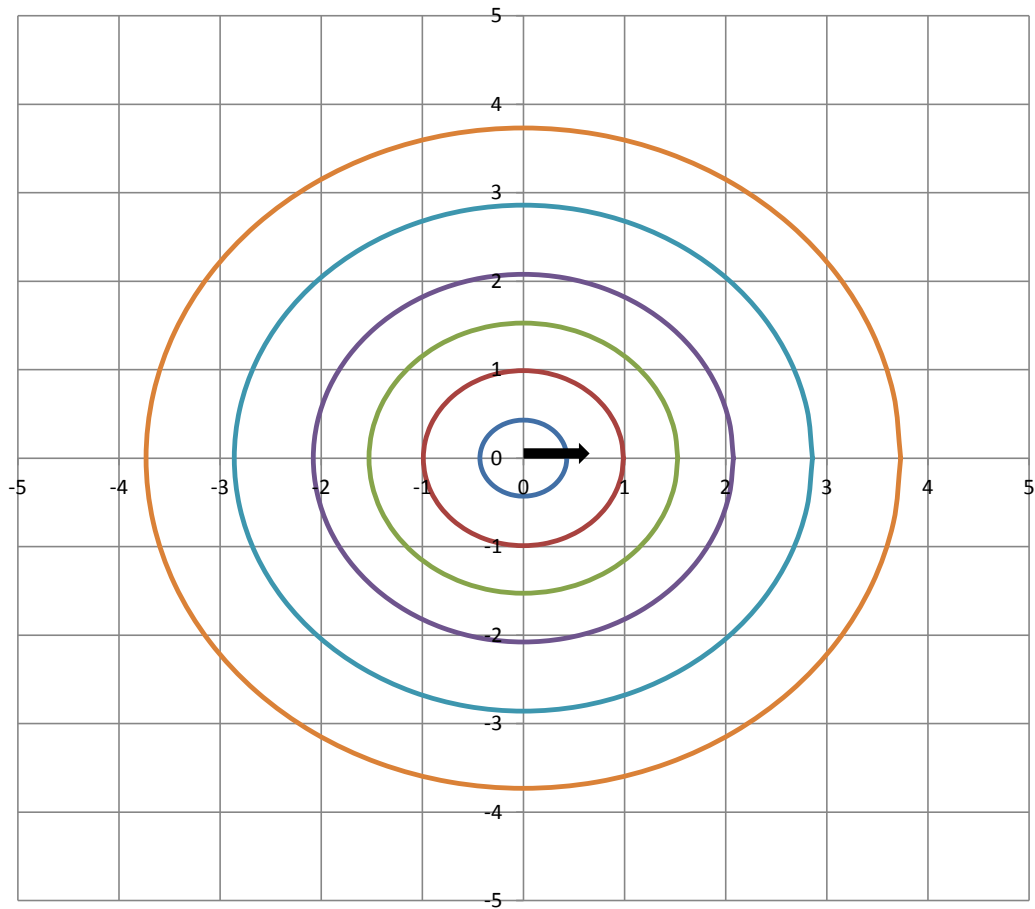
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	33.11 Candela
Central Cone Intensity:	34 Candela
Beam Flux:	117.9 Lumens
Beam Angle (0-180):	156.7 Degrees
Beam Angle (90-270):	156.7 Degrees
Field Angle (0-180):	171.2 Degrees
Field Angle (90-270):	171.2 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		2.07	4.23
6.00		0.920	6.34
8.00		0.517	8.45
10.0		0.331	10.6
12.0		0.230	12.7
14.0		0.169	14.8
16.0		0.129	16.9



## 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)	11.6	9.2%
FM	(30-60)	26.3	20.8%
FH	(60-80)	22.1	17.5%
FVH	(80-90)	2.9	2.3%
BL	(0-30)	11.6	9.2%
BM	(30-60)	26.3	20.8%
BH	(60-80)	22.1	17.5%
BVH	(80-90)	2.9	2.3%
UL	(90-100)	0.3	0.2%
UH	(100-180)	0.2	0.2%
Total		126.4	100.0%
BUG Rating	B0 U1 G0		