



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**

**HPL7-5-27**

Order Number

**11745044**

Test Number

**11745044.19**

Test Date

2017-05-18

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 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: 25.5 °C  
Voltage: 12.00 VAC  
Current: 0.6216 A  
Power: 4.671 W  
Power Factor: 0.626  
Frequency: 60 Hz  
Current THD: 72.2 %

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
25.5 °C	12.00 VAC	0.6216 A	4.671 W	0.626	60 Hz	72.2 %

### Summary of Results

#### Spacing Criteria

0-180: 1.05  
90-270: 1.05

#### Total Lumen Output:

191.3 Lumens

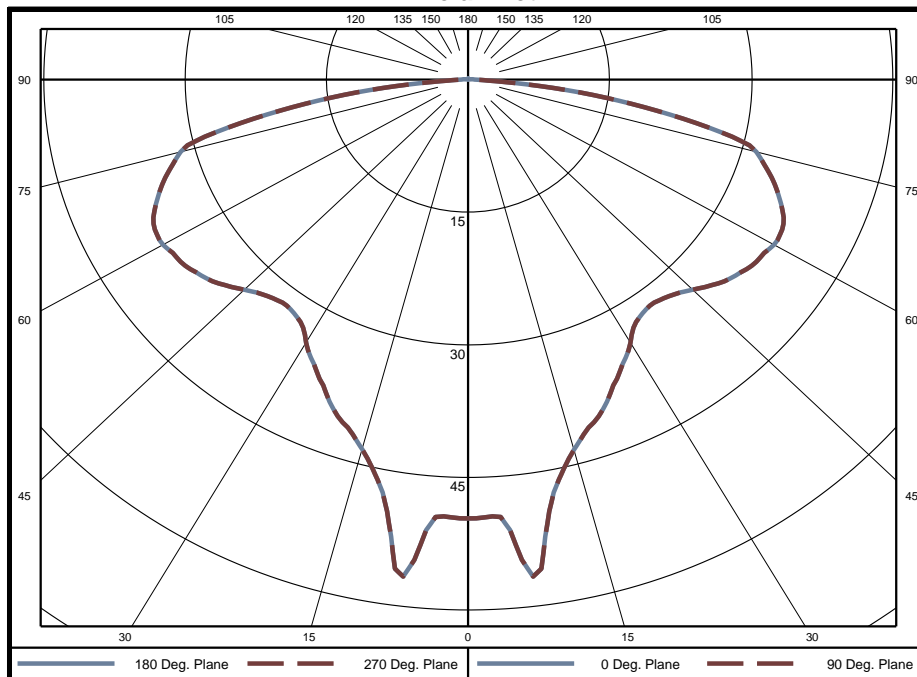
#### Luminaire Efficacy:

41.0 lm/w

#### Maximum Candela:

57 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	1.19	0.6%	60-65	18.15	9.5%	120-125	0.03	0.0%
5-10	3.85	2.0%	65-70	18.12	9.5%	125-130	0.03	0.0%
10-15	5.43	2.8%	70-75	17.32	9.1%	130-135	0.03	0.0%
15-20	6.88	3.6%	75-80	14.42	7.5%	135-140	0.02	0.0%
20-25	8.15	4.3%	80-85	7.23	3.8%	140-145	0.02	0.0%
25-30	9.07	4.7%	85-90	1.27	0.7%	145-150	0.02	0.0%
30-35	9.73	5.1%	90-95	0.30	0.2%	150-155	0.02	0.0%
35-40	10.72	5.6%	95-100	0.12	0.1%	155-160	0.02	0.0%
40-45	12.17	6.4%	100-105	0.07	0.0%	160-165	0.01	0.0%
45-50	13.97	7.3%	105-110	0.05	0.0%	165-170	0.01	0.0%
50-55	15.71	8.2%	110-115	0.04	0.0%	170-175	0.01	0.0%
55-60	17.12	8.9%	115-120	0.03	0.0%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	55	28.8%
0-60	114	59.6%
0-90	191	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	49.63	49.63	49.63	49.63	49.63	49.63	49.63	49.63	49.63	49.63	49.63	49.63	49.63	49.63	49.63
	5	51.15	51.15	51.15	51.15	51.15	51.15	51.15	51.15	51.15	51.15	51.15	51.15	51.15	51.15	51.15
	10	49.58	49.58	49.58	49.58	49.58	49.58	49.58	49.58	49.58	49.58	49.58	49.58	49.58	49.58	49.58
	15	43.35	43.35	43.35	43.35	43.35	43.35	43.35	43.35	43.35	43.35	43.35	43.35	43.35	43.35	43.35
	20	40.52	40.52	40.52	40.52	40.52	40.52	40.52	40.52	40.52	40.52	40.52	40.52	40.52	40.52	40.52
	25	37.35	37.35	37.35	37.35	37.35	37.35	37.35	37.35	37.35	37.35	37.35	37.35	37.35	37.35	37.35
	30	34.42	34.42	34.42	34.42	34.42	34.42	34.42	34.42	34.42	34.42	34.42	34.42	34.42	34.42	34.42
	35	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26	32.26
	40	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28	32.28
	45	33.62	33.62	33.62	33.62	33.62	33.62	33.62	33.62	33.62	33.62	33.62	33.62	33.62	33.62	33.62
	50	35.49	35.49	35.49	35.49	35.49	35.49	35.49	35.49	35.49	35.49	35.49	35.49	35.49	35.49	35.49
	55	36.71	36.71	36.71	36.71	36.71	36.71	36.71	36.71	36.71	36.71	36.71	36.71	36.71	36.71	36.71
	60	37.42	37.42	37.42	37.42	37.42	37.42	37.42	37.42	37.42	37.42	37.42	37.42	37.42	37.42	37.42
	65	36.92	36.92	36.92	36.92	36.92	36.92	36.92	36.92	36.92	36.92	36.92	36.92	36.92	36.92	36.92
	70	34.59	34.59	34.59	34.59	34.59	34.59	34.59	34.59	34.59	34.59	34.59	34.59	34.59	34.59	34.59
	75	31.65	31.65	31.65	31.65	31.65	31.65	31.65	31.65	31.65	31.65	31.65	31.65	31.65	31.65	31.65
	80	20.35	20.35	20.35	20.35	20.35	20.35	20.35	20.35	20.35	20.35	20.35	20.35	20.35	20.35	20.35
	85	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25	6.25
	90	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
	95	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
	100	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
	105	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
	110	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
	115	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
	120	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
	125	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
	130	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
	135	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
	140	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
	145	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
	150	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
	155	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
	160	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
	165	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
	170	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
	175	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
	180	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

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

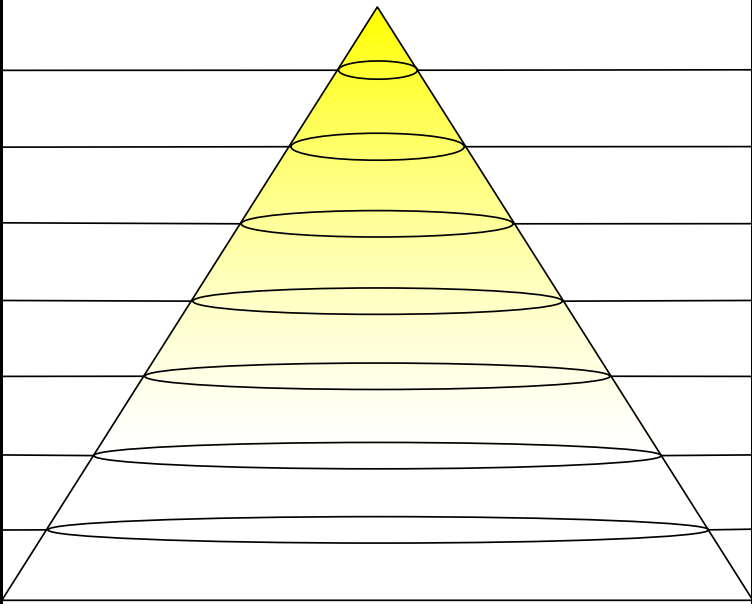
Vertical Angle (Degrees)	Horizontal Angle (Degrees)			
		0	45	90
	0	1999	1999	1999
	45	1915	1915	1915
	55	2578	2578	2578
	65	3518	3518	3518
	75	4925	4925	4925
	85	2889	2889	2889



### 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	228	228	228	228	222	222	222	222	212	212	212	203	203	203	194	194	194	190
1	201	189	178	169	195	185	175	166	176	168	160	168	161	155	161	155	150	146
2	178	158	142	128	173	154	139	126	147	134	123	140	130	120	134	125	117	112
3	159	135	116	101	154	132	114	100	125	110	98	120	107	96	114	103	94	89
4	144	117	97	82	139	114	96	81	109	93	80	104	90	79	100	87	77	72
5	131	103	83	69	127	101	82	68	96	80	67	92	78	66	88	75	65	61
6	121	92	72	59	117	90	72	58	86	70	57	83	68	57	79	66	56	52
7	112	83	64	51	108	81	63	51	78	62	50	75	60	50	72	59	49	45
8	104	75	57	45	100	74	57	45	71	55	44	68	54	44	66	53	43	39
9	97	69	52	40	94	67	51	40	65	50	40	63	49	39	61	48	39	35
10	91	63	47	36	88	62	47	36	60	46	36	58	45	35	56	44	35	32

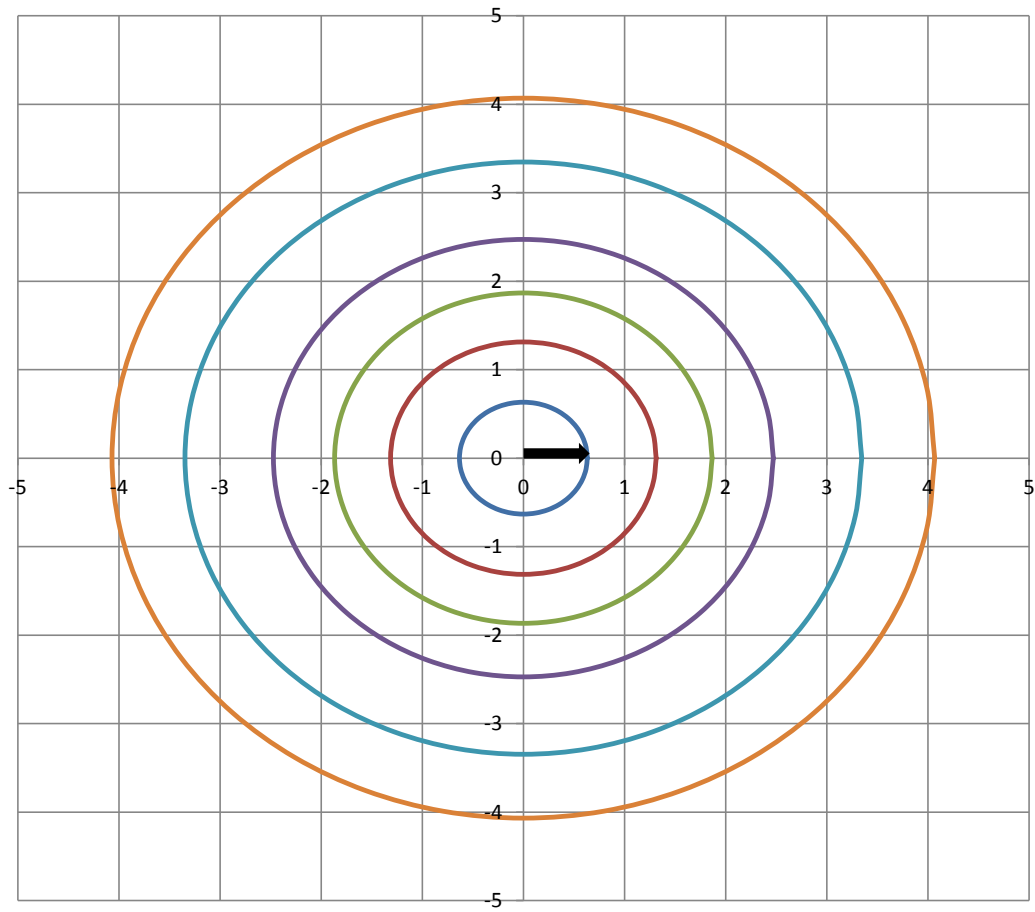
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	49.63 Candela
Central Cone Intensity:	50 Candela
Beam Flux:	178.2 Lumens
Beam Angle (0-180):	156.9 Degrees
Beam Angle (90-270):	156.9 Degrees
Field Angle (0-180):	171.0 Degrees
Field Angle (90-270):	171.0 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		3.10	4.20
6.00		1.38	6.30
8.00		0.775	8.40
10.0		0.496	10.5
12.0		0.345	12.6
14.0		0.253	14.7
16.0		0.194	16.8



## 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)	17.3	9.1%
FM	(30-60)	39.7	20.8%
FH	(60-80)	33.6	17.6%
FVH	(80-90)	4.2	2.2%
BL	(0-30)	17.3	9.1%
BM	(30-60)	39.7	20.8%
BH	(60-80)	33.6	17.6%
BVH	(80-90)	4.2	2.2%
UL	(90-100)	0.4	0.2%
UH	(100-180)	0.4	0.2%
Total		190.5	100.0%
BUG Rating	B0 U1 G0		