



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**

**HPL7-3-30**

Order Number

**11745044**

Test Number

**11745044.18**

Test Date

2017-05-15

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: 24.6 °C  
Voltage: 12.00 VAC  
Current: 0.4891 A  
Power: 3.294 W  
Power Factor: 0.561  
Frequency: 60 Hz  
Current THD: 78.9 %

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
24.6 °C	12.00 VAC	0.4891 A	3.294 W	0.561	60 Hz	78.9 %

### Summary of Results

#### Spacing Criteria

0-180: 1.05  
90-270: 1.05

#### Total Lumen Output:

161.7 Lumens

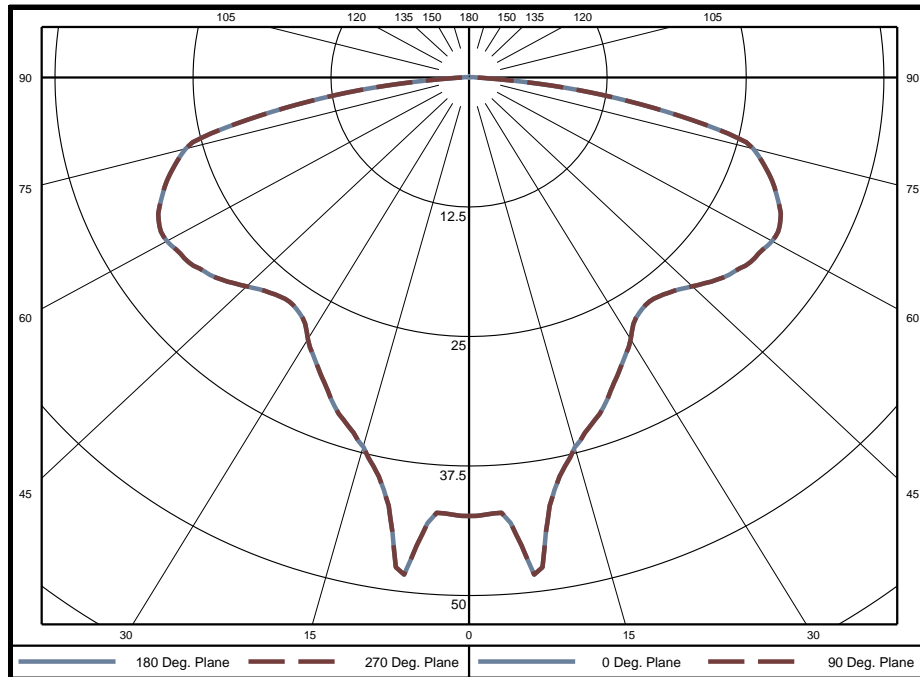
#### Luminaire Efficacy:

49.1 lm/w

#### Maximum Candela:

48 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	1.01	0.6%	60-65	15.32	9.5%	120-125	0.02	0.0%
5-10	3.26	2.0%	65-70	15.27	9.4%	125-130	0.02	0.0%
10-15	4.63	2.9%	70-75	14.61	9.0%	130-135	0.02	0.0%
15-20	5.87	3.6%	75-80	12.07	7.5%	135-140	0.02	0.0%
20-25	6.94	4.3%	80-85	6.02	3.7%	140-145	0.02	0.0%
25-30	7.71	4.8%	85-90	1.08	0.7%	145-150	0.02	0.0%
30-35	8.24	5.1%	90-95	0.26	0.2%	150-155	0.01	0.0%
35-40	9.07	5.6%	95-100	0.11	0.1%	155-160	0.01	0.0%
40-45	10.32	6.4%	100-105	0.06	0.0%	160-165	0.01	0.0%
45-50	11.84	7.3%	105-110	0.04	0.0%	165-170	0.01	0.0%
50-55	13.29	8.2%	110-115	0.03	0.0%	170-175	0.00	0.0%
55-60	14.48	9.0%	115-120	0.03	0.0%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	47	28.9%
0-60	97	59.8%
0-90	161	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	42.32	42.32	42.32	42.32	42.32	42.32	42.32	42.32	42.32	42.32	42.32	42.32	42.32	42.32	42.32
	5	43.16	43.16	43.16	43.16	43.16	43.16	43.16	43.16	43.16	43.16	43.16	43.16	43.16	43.16	43.16
	10	41.98	41.98	41.98	41.98	41.98	41.98	41.98	41.98	41.98	41.98	41.98	41.98	41.98	41.98	41.98
	15	36.95	36.95	36.95	36.95	36.95	36.95	36.95	36.95	36.95	36.95	36.95	36.95	36.95	36.95	36.95
	20	34.55	34.55	34.55	34.55	34.55	34.55	34.55	34.55	34.55	34.55	34.55	34.55	34.55	34.55	34.55
	25	31.74	31.74	31.74	31.74	31.74	31.74	31.74	31.74	31.74	31.74	31.74	31.74	31.74	31.74	31.74
	30	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22	29.22
	35	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
	40	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34	27.34
	45	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51	28.51
	50	30.02	30.02	30.02	30.02	30.02	30.02	30.02	30.02	30.02	30.02	30.02	30.02	30.02	30.02	30.02
	55	31.07	31.07	31.07	31.07	31.07	31.07	31.07	31.07	31.07	31.07	31.07	31.07	31.07	31.07	31.07
	60	31.63	31.63	31.63	31.63	31.63	31.63	31.63	31.63	31.63	31.63	31.63	31.63	31.63	31.63	31.63
	65	31.11	31.11	31.11	31.11	31.11	31.11	31.11	31.11	31.11	31.11	31.11	31.11	31.11	31.11	31.11
	70	29.18	29.18	29.18	29.18	29.18	29.18	29.18	29.18	29.18	29.18	29.18	29.18	29.18	29.18	29.18
	75	26.63	26.63	26.63	26.63	26.63	26.63	26.63	26.63	26.63	26.63	26.63	26.63	26.63	26.63	26.63
	80	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99	16.99
	85	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
	90	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
	95	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
	100	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
	105	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
	110	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
	115	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
	120	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
	125	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
	130	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
	135	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
	140	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
	145	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
	150	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
	155	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
	160	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
	165	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
	170	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
	175	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
	180	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

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

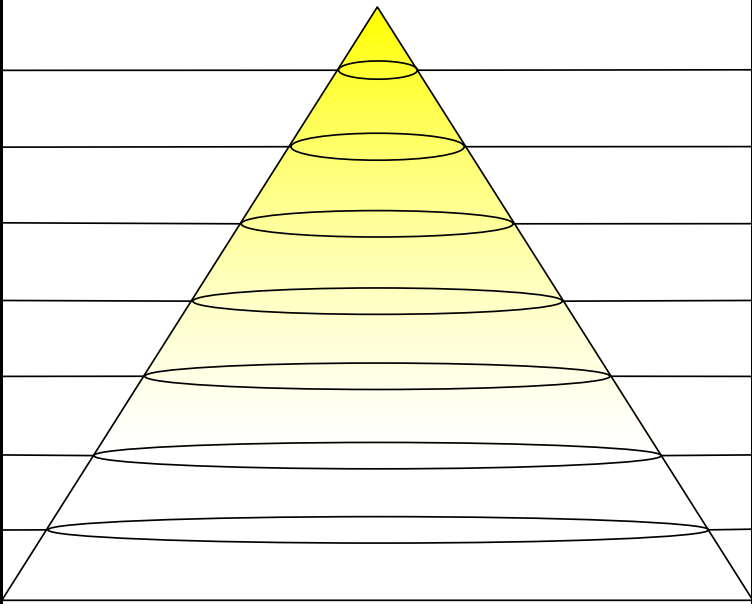
Vertical Angle (Degrees)	Horizontal Angle (Degrees)			
		0	45	90
	0	1705	1705	1705
	45	1624	1624	1624
	55	2182	2182	2182
	65	2965	2965	2965
	75	4144	4144	4144
	85	2395	2395	2395



### 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	192	192	192	192	188	188	188	188	179	179	179	172	172	172	164	164	164	161
1	170	160	151	143	165	156	148	140	149	142	136	142	136	131	136	131	127	123
2	151	134	120	108	146	131	118	107	124	114	104	119	110	102	113	106	99	95
3	135	114	98	85	130	111	97	85	106	93	83	101	90	81	97	87	79	75
4	122	99	82	70	118	97	81	69	92	79	68	88	76	67	84	74	66	61
5	111	87	70	58	107	85	69	58	82	68	57	78	66	56	75	64	55	51
6	102	78	61	50	99	76	61	49	73	59	49	70	58	48	67	56	48	44
7	94	70	54	43	91	69	54	43	66	52	42	63	51	42	61	50	42	38
8	88	64	48	38	85	62	48	38	60	47	38	58	46	37	56	45	37	33
9	82	58	44	34	79	57	43	34	55	42	34	53	42	33	51	41	33	30
10	77	54	40	31	74	53	39	31	51	39	30	49	38	30	48	37	30	27

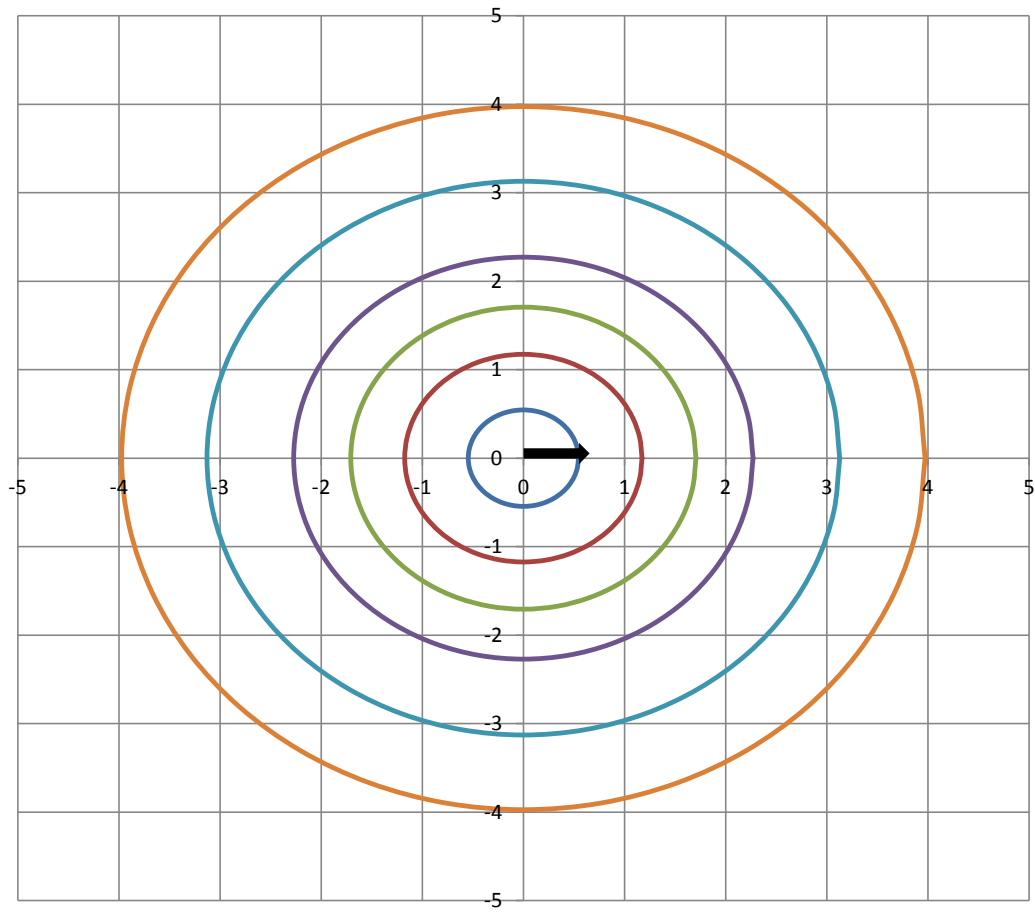
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	42.32 Candela
Central Cone Intensity:	42 Candela
Beam Flux:	150.3 Lumens
Beam Angle (0-180):	156.5 Degrees
Beam Angle (90-270):	156.5 Degrees
Field Angle (0-180):	170.9 Degrees
Field Angle (90-270):	170.9 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		2.65	4.18
6.00		1.18	6.27
8.00		0.661	8.37
10.0		0.423	10.5
12.0		0.294	12.5
14.0		0.216	14.6
16.0		0.165	16.7



## 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)	14.7	9.1%
FM	(30-60)	33.6	20.8%
FH	(60-80)	28.6	17.7%
FVH	(80-90)	3.6	2.2%
BL	(0-30)	14.7	9.1%
BM	(30-60)	33.6	20.8%
BH	(60-80)	28.6	17.7%
BVH	(80-90)	3.6	2.2%
UL	(90-100)	0.4	0.2%
UH	(100-180)	0.3	0.2%
Total		161.8	100.0%
<b>BUG Rating</b>	<b>B0 U1 G0</b>		