



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

HPL10-5-27

Order Number

11745044

Test Number

11745044.37

Test Date

2017-05-25

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.

Summary of Results

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

Test Conditions

Test Temperature:	24.3 °C
Voltage:	12.01 VAC
Current:	0.6268 A
Power:	4.675 W
Power Factor:	0.621
Frequency:	60 Hz
Current THD:	74.6 %

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
24.3 °C	12.01 VAC	0.6268 A	4.675 W	0.621	60 Hz	74.6 %

Summary of Results

Spacing Criteria

0-180: 1.48

90-270: 1.48

Total Lumen Output:

184.2 Lumens

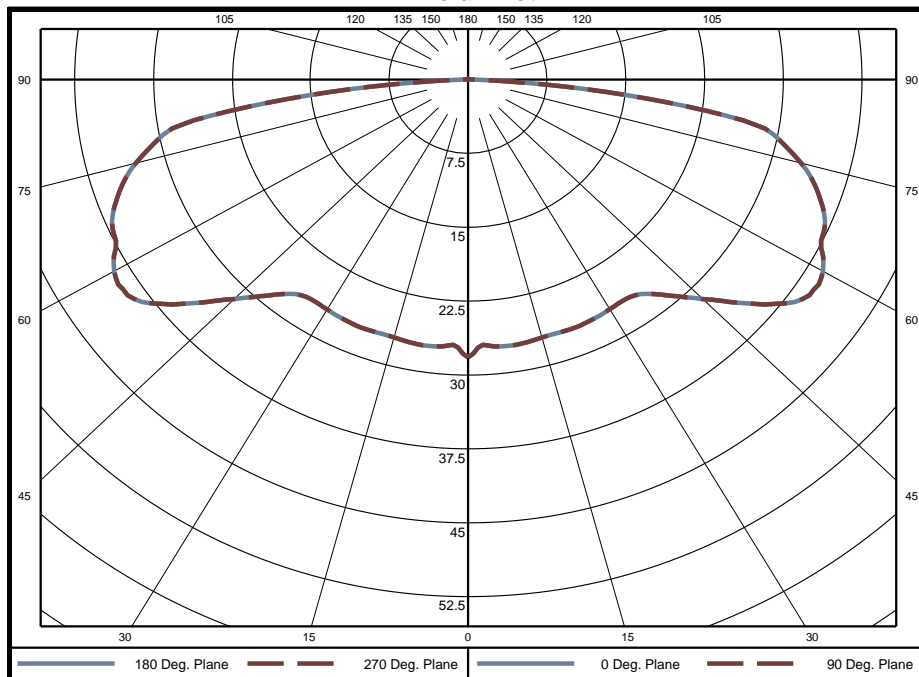
Luminaire Efficacy:

39.4 lm/w

Maximum Candela:

39 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.65	0.4%	60-65	18.45	10.0%	120-125	0.02	0.0%
5-10	1.95	1.1%	65-70	18.52	10.1%	125-130	0.02	0.0%
10-15	3.23	1.8%	70-75	17.93	9.7%	130-135	0.02	0.0%
15-20	4.47	2.4%	75-80	16.47	8.9%	135-140	0.01	0.0%
20-25	5.69	3.1%	80-85	11.27	6.1%	140-145	0.01	0.0%
25-30	6.84	3.7%	85-90	2.24	1.2%	145-150	0.01	0.0%
30-35	7.91	4.3%	90-95	0.20	0.1%	150-155	0.01	0.0%
35-40	9.19	5.0%	95-100	0.07	0.0%	155-160	0.01	0.0%
40-45	11.09	6.0%	100-105	0.05	0.0%	160-165	0.01	0.0%
45-50	13.50	7.3%	105-110	0.03	0.0%	165-170	0.01	0.0%
50-55	16.23	8.8%	110-115	0.03	0.0%	170-175	0.00	0.0%
55-60	18.08	9.8%	115-120	0.02	0.0%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	40	21.7%
0-60	99	53.7%
0-90	184	99.7%
90-180	1	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	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20
	5	27.18	27.18	27.18	27.18	27.18	27.18	27.18	27.18	27.18	27.18	27.18	27.18	27.18	27.18	27.18
	10	27.30	27.30	27.30	27.30	27.30	27.30	27.30	27.30	27.30	27.30	27.30	27.30	27.30	27.30	27.30
	15	27.11	27.11	27.11	27.11	27.11	27.11	27.11	27.11	27.11	27.11	27.11	27.11	27.11	27.11	27.11
	20	27.12	27.12	27.12	27.12	27.12	27.12	27.12	27.12	27.12	27.12	27.12	27.12	27.12	27.12	27.12
	25	27.09	27.09	27.09	27.09	27.09	27.09	27.09	27.09	27.09	27.09	27.09	27.09	27.09	27.09	27.09
	30	26.91	26.91	26.91	26.91	26.91	26.91	26.91	26.91	26.91	26.91	26.91	26.91	26.91	26.91	26.91
	35	26.92	26.92	26.92	26.92	26.92	26.92	26.92	26.92	26.92	26.92	26.92	26.92	26.92	26.92	26.92
	40	28.49	28.49	28.49	28.49	28.49	28.49	28.49	28.49	28.49	28.49	28.49	28.49	28.49	28.49	28.49
	45	31.51	31.51	31.51	31.51	31.51	31.51	31.51	31.51	31.51	31.51	31.51	31.51	31.51	31.51	31.51
	50	35.40	35.40	35.40	35.40	35.40	35.40	35.40	35.40	35.40	35.40	35.40	35.40	35.40	35.40	35.40
	55	38.81	38.81	38.81	38.81	38.81	38.81	38.81	38.81	38.81	38.81	38.81	38.81	38.81	38.81	38.81
	60	38.92	38.92	38.92	38.92	38.92	38.92	38.92	38.92	38.92	38.92	38.92	38.92	38.92	38.92	38.92
	65	37.20	37.20	37.20	37.20	37.20	37.20	37.20	37.20	37.20	37.20	37.20	37.20	37.20	37.20	37.20
	70	35.61	35.61	35.61	35.61	35.61	35.61	35.61	35.61	35.61	35.61	35.61	35.61	35.61	35.61	35.61
	75	32.75	32.75	32.75	32.75	32.75	32.75	32.75	32.75	32.75	32.75	32.75	32.75	32.75	32.75	32.75
	80	28.63	28.63	28.63	28.63	28.63	28.63	28.63	28.63	28.63	28.63	28.63	28.63	28.63	28.63	28.63
	85	11.38	11.38	11.38	11.38	11.38	11.38	11.38	11.38	11.38	11.38	11.38	11.38	11.38	11.38	11.38
	90	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
	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	0.10	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
	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	0.05	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	0.04	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	0.04	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
	135	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
	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	0.04	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
	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	0.04	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
	175	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
	180	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

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

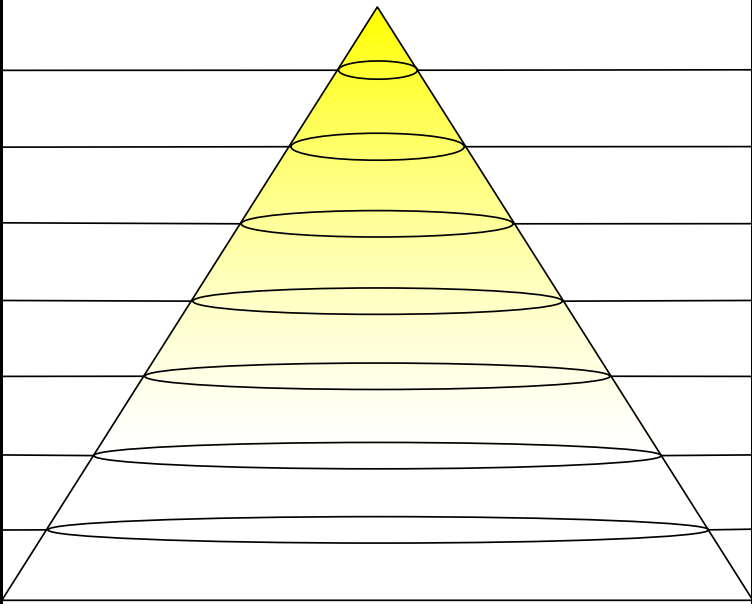
Vertical Angle (Degrees)		0	45	90
	0	557	557	557
	45	880	880	880
	55	1335	1335	1335
	65	1737	1737	1737
	75	2497	2497	2497
	85	2577	2577	2577



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	219	219	219	219	214	214	214	214	204	204	204	196	196	196	188	188	188	184
1	190	178	166	155	185	173	162	153	165	156	148	157	150	143	150	144	138	134
2	167	146	129	115	162	142	127	113	135	122	110	129	117	107	123	113	105	100
3	148	123	103	88	143	120	101	87	114	98	85	108	94	83	103	91	81	76
4	133	105	85	70	128	103	84	69	98	81	68	93	78	66	88	76	65	60
5	121	92	72	57	116	90	71	56	85	68	55	81	66	55	77	64	54	49
6	111	81	62	47	106	79	61	47	76	59	46	72	57	46	69	56	45	41
7	102	73	54	40	98	71	53	40	68	51	40	65	50	39	62	49	39	35
8	94	65	47	35	91	64	47	35	61	46	34	59	44	34	56	43	34	30
9	88	59	42	31	85	58	42	31	56	41	30	54	40	30	52	39	30	26
10	82	55	38	27	79	53	38	27	51	37	27	50	36	27	48	35	26	23

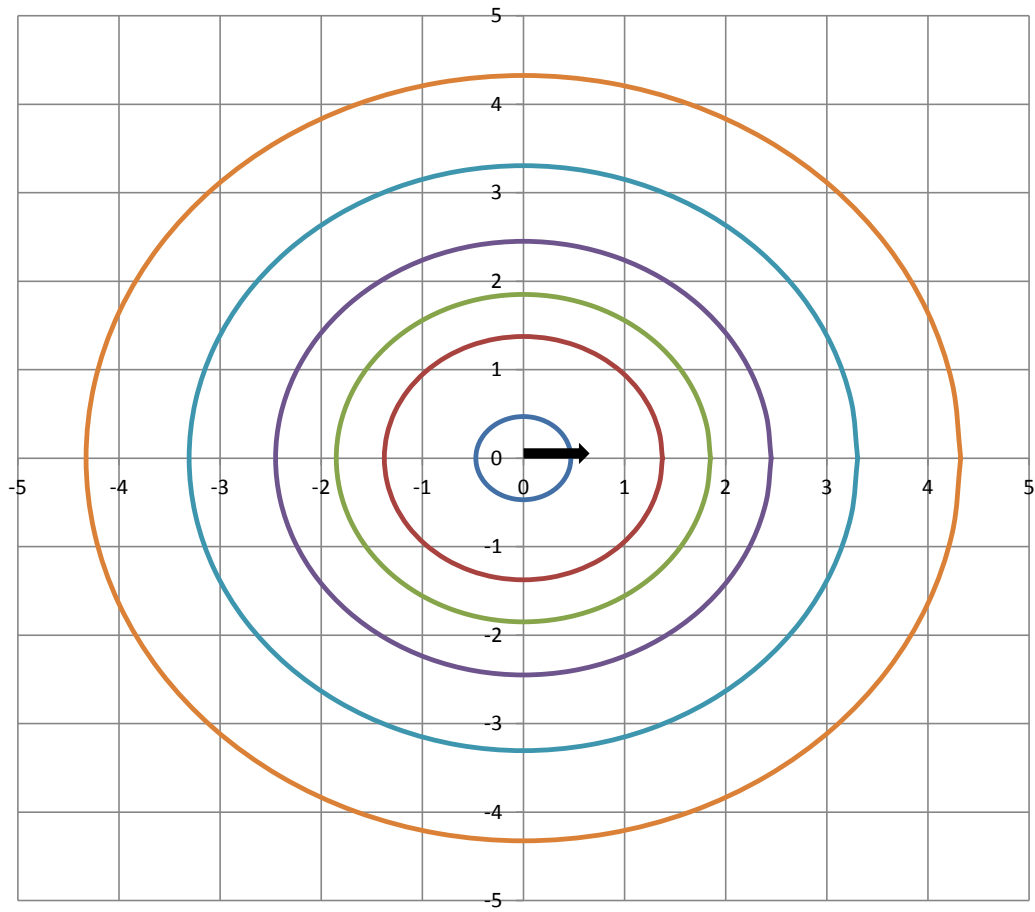
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	28.20 Candela
Central Cone Intensity:	27 Candela
Beam Flux:	180.4 Lumens
Beam Angle (0-180):	168.6 Degrees
Beam Angle (90-270):	168.6 Degrees
Field Angle (0-180):	175.1 Degrees
Field Angle (90-270):	175.1 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		1.76	5.92
6.00		0.783	8.88
8.00		0.441	11.8
10.0		0.282	14.8
12.0		0.196	17.8
14.0		0.144	20.7
16.0		0.110	23.7



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)	11.4	6.2%
FM	(30-60)	38.0	20.7%
FH	(60-80)	35.6	19.3%
FVH	(80-90)	6.7	3.6%
BL	(0-30)	11.4	6.2%
BM	(30-60)	38.0	20.7%
BH	(60-80)	35.6	19.3%
BVH	(80-90)	6.7	3.6%
UL	(90-100)	0.3	0.1%
UH	(100-180)	0.3	0.1%
Total		184.0	100.0%
BUG Rating	B0 U1 G0		