



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

HPL10-5-30

Order Number

11745044

Test Number

11745044.38

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:	24.2 °C
Voltage:	12.01 VAC
Current:	0.6018 A
Power:	4.462 W
Power Factor:	0.618
Frequency:	60 Hz
Current THD:	75.2 %

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
24.2 °C	12.01 VAC	0.6018 A	4.462 W	0.618	60 Hz	75.2 %

Summary of Results

Spacing Criteria

0-180: 1.47

90-270: 1.47

Total Lumen Output:

197.4 Lumens

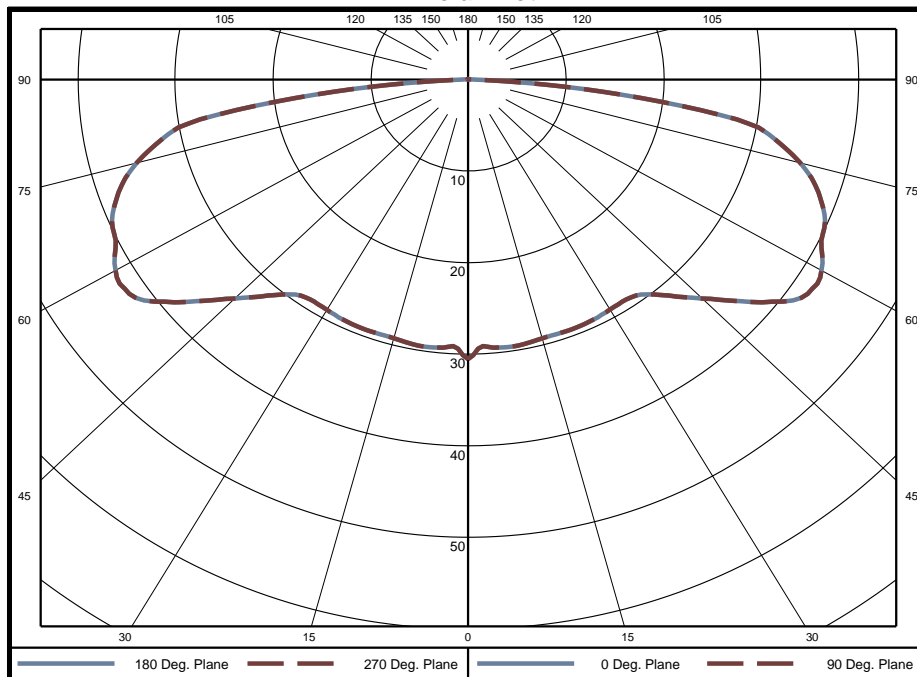
Luminaire Efficacy:

44.2 lm/w

Maximum Candela:

42 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.70	0.4%	60-65	19.83	10.0%	120-125	0.02	0.0%
5-10	2.11	1.1%	65-70	19.93	10.1%	125-130	0.02	0.0%
10-15	3.49	1.8%	70-75	19.29	9.8%	130-135	0.02	0.0%
15-20	4.82	2.4%	75-80	17.52	8.9%	135-140	0.02	0.0%
20-25	6.14	3.1%	80-85	11.78	6.0%	140-145	0.01	0.0%
25-30	7.37	3.7%	85-90	2.34	1.2%	145-150	0.01	0.0%
30-35	8.53	4.3%	90-95	0.21	0.1%	150-155	0.01	0.0%
35-40	9.91	5.0%	95-100	0.07	0.0%	155-160	0.01	0.0%
40-45	11.94	6.0%	100-105	0.05	0.0%	160-165	0.01	0.0%
45-50	14.45	7.3%	105-110	0.04	0.0%	165-170	0.01	0.0%
50-55	17.33	8.8%	110-115	0.03	0.0%	170-175	0.00	0.0%
55-60	19.37	9.8%	115-120	0.02	0.0%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	43	21.8%
0-60	106	53.8%
0-90	197	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	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54	30.54
	5	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40	29.40
	10	29.51	29.51	29.51	29.51	29.51	29.51	29.51	29.51	29.51	29.51	29.51	29.51	29.51	29.51	29.51
	15	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27
	20	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27	29.27
	25	29.21	29.21	29.21	29.21	29.21	29.21	29.21	29.21	29.21	29.21	29.21	29.21	29.21	29.21	29.21
	30	29.01	29.01	29.01	29.01	29.01	29.01	29.01	29.01	29.01	29.01	29.01	29.01	29.01	29.01	29.01
	35	29.05	29.05	29.05	29.05	29.05	29.05	29.05	29.05	29.05	29.05	29.05	29.05	29.05	29.05	29.05
	40	30.74	30.74	30.74	30.74	30.74	30.74	30.74	30.74	30.74	30.74	30.74	30.74	30.74	30.74	30.74
	45	33.84	33.84	33.84	33.84	33.84	33.84	33.84	33.84	33.84	33.84	33.84	33.84	33.84	33.84	33.84
	50	37.80	37.80	37.80	37.80	37.80	37.80	37.80	37.80	37.80	37.80	37.80	37.80	37.80	37.80	37.80
	55	41.57	41.57	41.57	41.57	41.57	41.57	41.57	41.57	41.57	41.57	41.57	41.57	41.57	41.57	41.57
	60	41.69	41.69	41.69	41.69	41.69	41.69	41.69	41.69	41.69	41.69	41.69	41.69	41.69	41.69	41.69
	65	39.99	39.99	39.99	39.99	39.99	39.99	39.99	39.99	39.99	39.99	39.99	39.99	39.99	39.99	39.99
	70	38.35	38.35	38.35	38.35	38.35	38.35	38.35	38.35	38.35	38.35	38.35	38.35	38.35	38.35	38.35
	75	35.14	35.14	35.14	35.14	35.14	35.14	35.14	35.14	35.14	35.14	35.14	35.14	35.14	35.14	35.14
	80	30.14	30.14	30.14	30.14	30.14	30.14	30.14	30.14	30.14	30.14	30.14	30.14	30.14	30.14	30.14
	85	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80	11.80
	90	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
	95	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
	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	0.08	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
	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	0.05	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/m²)

Horizontal Angle (Degrees)

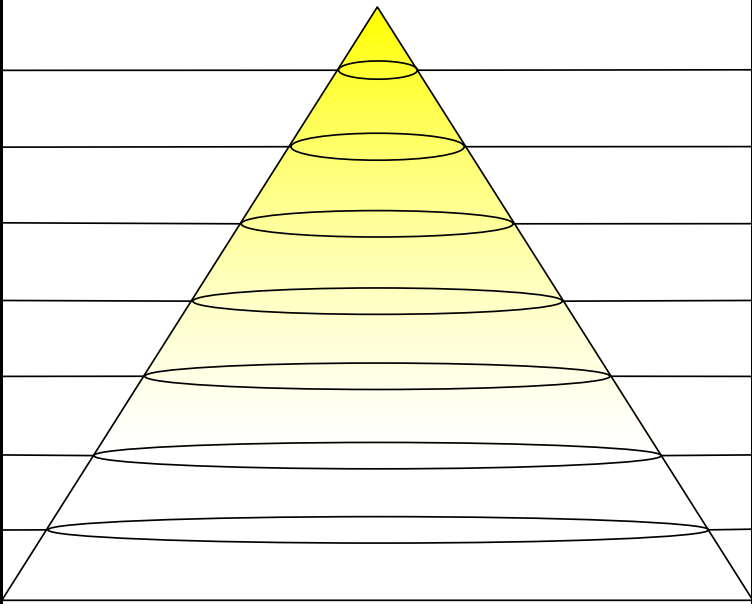
Vertical Angle (Degrees)	0	45	90
	0	603	603
	45	944	944
	55	1430	1430
	65	1867	1867
	75	2679	2679
	85	2673	2673



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	235	235	235	235	229	229	229	229	219	219	219	210	210	210	201	201	201	197
1	204	190	178	167	198	186	174	164	177	167	158	168	161	153	161	154	148	144
2	179	157	139	123	173	153	136	121	145	131	118	138	126	115	132	121	112	107
3	159	132	111	94	153	129	109	93	122	105	91	116	101	89	110	98	87	82
4	143	113	91	75	138	110	90	74	105	87	73	100	84	71	95	81	70	65
5	130	99	77	61	125	96	76	61	92	73	60	87	71	59	83	69	58	53
6	119	87	66	51	114	85	65	51	81	63	50	77	61	49	74	60	49	44
7	109	78	58	43	105	76	57	43	73	55	43	70	54	42	67	52	42	37
8	101	70	51	38	97	69	50	37	66	49	37	63	48	37	61	47	36	32
9	94	64	45	33	91	63	45	33	60	44	33	58	43	32	55	42	32	28
10	88	59	41	29	85	57	41	29	55	40	29	53	39	29	51	38	28	25

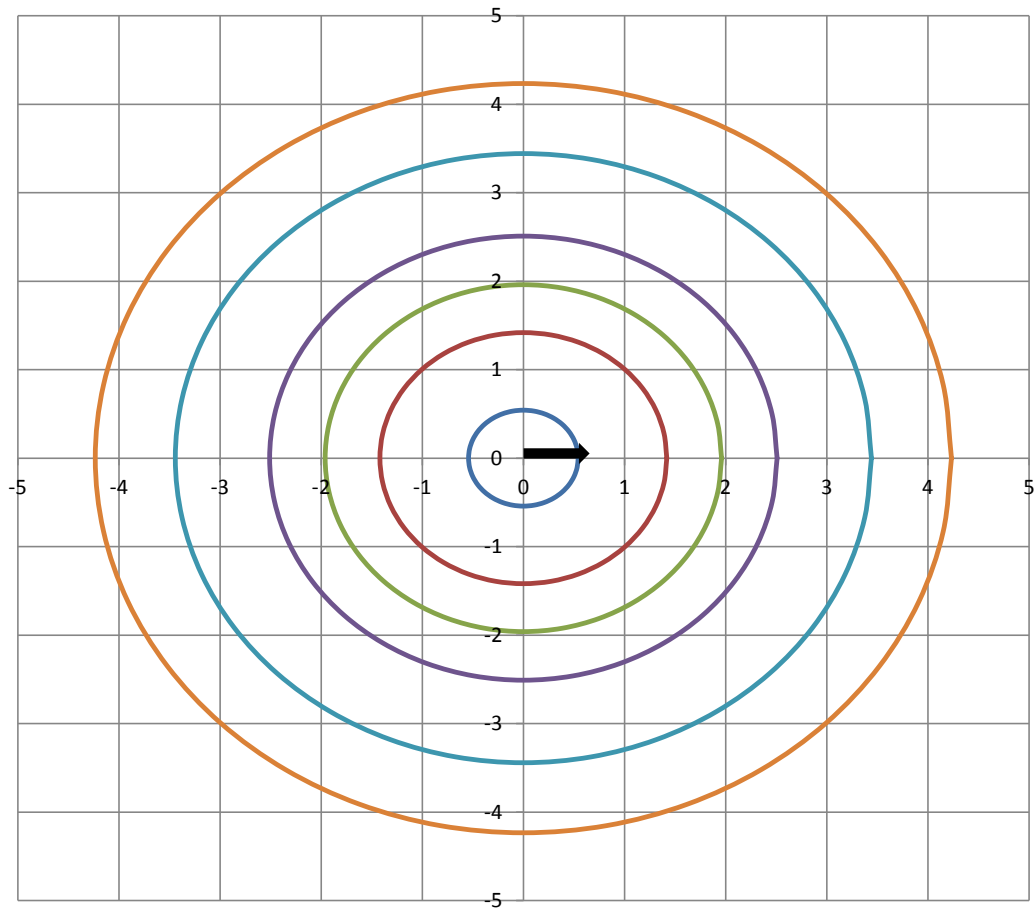
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	30.54 Candela
Central Cone Intensity:	30 Candela
Beam Flux:	193.2 Lumens
Beam Angle (0-180):	168.2 Degrees
Beam Angle (90-270):	168.2 Degrees
Field Angle (0-180):	175.1 Degrees
Field Angle (90-270):	175.1 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		1.91	5.89
6.00		0.848	8.84
8.00		0.477	11.8
10.0		0.305	14.7
12.0		0.212	17.7
14.0		0.156	20.6
16.0		0.119	23.6



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)	12.3	6.3%
FM	(30-60)	40.6	20.6%
FH	(60-80)	38.1	19.3%
FVH	(80-90)	7.1	3.6%
BL	(0-30)	12.3	6.3%
BM	(30-60)	40.6	20.6%
BH	(60-80)	38.1	19.3%
BVH	(80-90)	7.1	3.6%
UL	(90-100)	0.3	0.1%
UH	(100-180)	0.3	0.1%
Total		196.9	100.0%
BUG Rating	B0 U1 G0		