



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

HPL10-2-27

Order Number

11745044

Test Number

11745044.33

Test Date

2017-05-23

Prepared By

Javier Caban, Technician

Approved By

Tiffany Hamm, Project Handler

The results contained in this report pertain only to the tested sample.
This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.
This report must not be used by the client to claim product certification, approval, or endorsement by
NVLAP, NIST, or any agency of the Federal Government.



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:	25.0 °C
Voltage:	12.00 VAC
Current:	0.3062 A
Power:	2.216 W
Power Factor:	0.603
Frequency:	60 Hz
Current THD:	85.9 %

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
25.0 °C	12.00 VAC	0.3062 A	2.216 W	0.603	60 Hz	85.9 %

Summary of Results

Spacing Criteria

0-180: 1.44
90-270: 1.44

Total Lumen Output:

120.0 Lumens

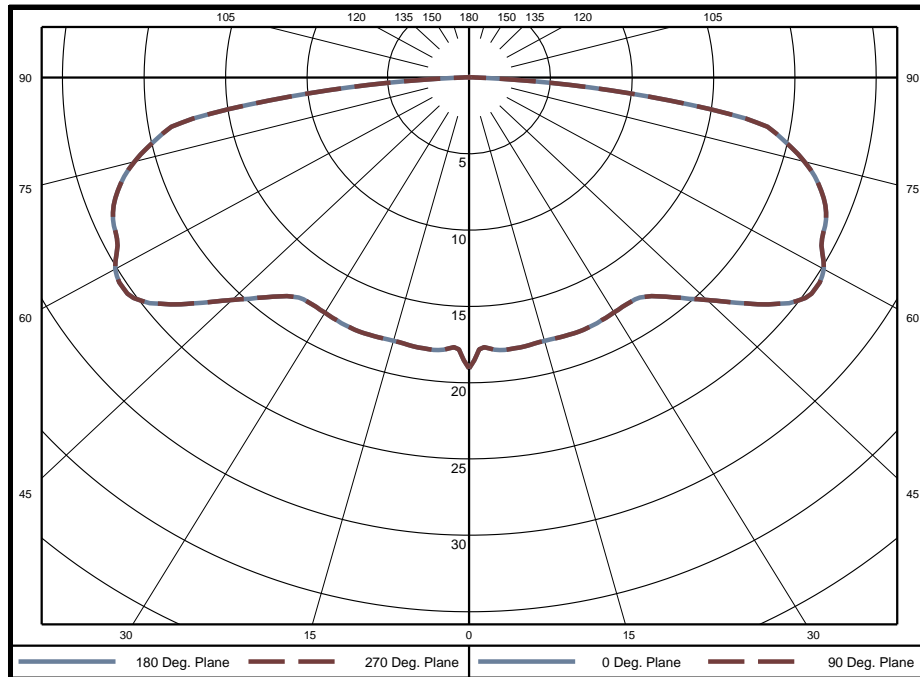
Luminaire Efficacy:

54.1 lm/w

Maximum Candela:

25 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.43	0.4%	60-65	11.88	9.9%	120-125	0.01	0.0%
5-10	1.29	1.1%	65-70	11.97	10.0%	125-130	0.01	0.0%
10-15	2.12	1.8%	70-75	11.65	9.7%	130-135	0.01	0.0%
15-20	2.95	2.5%	75-80	10.68	8.9%	135-140	0.01	0.0%
20-25	3.77	3.1%	80-85	7.32	6.1%	140-145	0.01	0.0%
25-30	4.52	3.8%	85-90	1.50	1.3%	145-150	0.01	0.0%
30-35	5.22	4.4%	90-95	0.13	0.1%	150-155	0.01	0.0%
35-40	6.05	5.0%	95-100	0.04	0.0%	155-160	0.01	0.0%
40-45	7.28	6.1%	100-105	0.03	0.0%	160-165	0.00	0.0%
45-50	8.82	7.4%	105-110	0.02	0.0%	165-170	0.00	0.0%
50-55	10.55	8.8%	110-115	0.02	0.0%	170-175	0.00	0.0%
55-60	11.69	9.7%	115-120	0.01	0.0%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	26	22.0%
0-60	65	53.9%
0-90	120	99.7%
90-180	0	0.3%



Candela Tabulation

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal 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	19.06	19.06	19.06	19.06	19.06	19.06	19.06	19.06	19.06	19.06	19.06	19.06	19.06	19.06	19.06	19.06
5	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90
10	17.96	17.96	17.96	17.96	17.96	17.96	17.96	17.96	17.96	17.96	17.96	17.96	17.96	17.96	17.96	17.96
15	17.87	17.87	17.87	17.87	17.87	17.87	17.87	17.87	17.87	17.87	17.87	17.87	17.87	17.87	17.87	17.87
20	17.93	17.93	17.93	17.93	17.93	17.93	17.93	17.93	17.93	17.93	17.93	17.93	17.93	17.93	17.93	17.93
25	17.92	17.92	17.92	17.92	17.92	17.92	17.92	17.92	17.92	17.92	17.92	17.92	17.92	17.92	17.92	17.92
30	17.77	17.77	17.77	17.77	17.77	17.77	17.77	17.77	17.77	17.77	17.77	17.77	17.77	17.77	17.77	17.77
35	17.74	17.74	17.74	17.74	17.74	17.74	17.74	17.74	17.74	17.74	17.74	17.74	17.74	17.74	17.74	17.74
40	18.74	18.74	18.74	18.74	18.74	18.74	18.74	18.74	18.74	18.74	18.74	18.74	18.74	18.74	18.74	18.74
45	20.61	20.61	20.61	20.61	20.61	20.61	20.61	20.61	20.61	20.61	20.61	20.61	20.61	20.61	20.61	20.61
50	23.12	23.12	23.12	23.12	23.12	23.12	23.12	23.12	23.12	23.12	23.12	23.12	23.12	23.12	23.12	23.12
55	25.18	25.18	25.18	25.18	25.18	25.18	25.18	25.18	25.18	25.18	25.18	25.18	25.18	25.18	25.18	25.18
60	25.11	25.11	25.11	25.11	25.11	25.11	25.11	25.11	25.11	25.11	25.11	25.11	25.11	25.11	25.11	25.11
65	23.97	23.97	23.97	23.97	23.97	23.97	23.97	23.97	23.97	23.97	23.97	23.97	23.97	23.97	23.97	23.97
70	23.14	23.14	23.14	23.14	23.14	23.14	23.14	23.14	23.14	23.14	23.14	23.14	23.14	23.14	23.14	23.14
75	21.28	21.28	21.28	21.28	21.28	21.28	21.28	21.28	21.28	21.28	21.28	21.28	21.28	21.28	21.28	21.28
80	18.58	18.58	18.58	18.58	18.58	18.58	18.58	18.58	18.58	18.58	18.58	18.58	18.58	18.58	18.58	18.58
85	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42
90	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
95	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	0.11
100	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	0.06
105	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	0.05
110	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	0.04
115	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	0.03
120	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	0.03
125	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
130	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
135	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
140	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
145	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
150	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
155	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
160	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	0.03
165	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	0.03
170	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	0.03
175	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	0.03
180	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	0.03

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

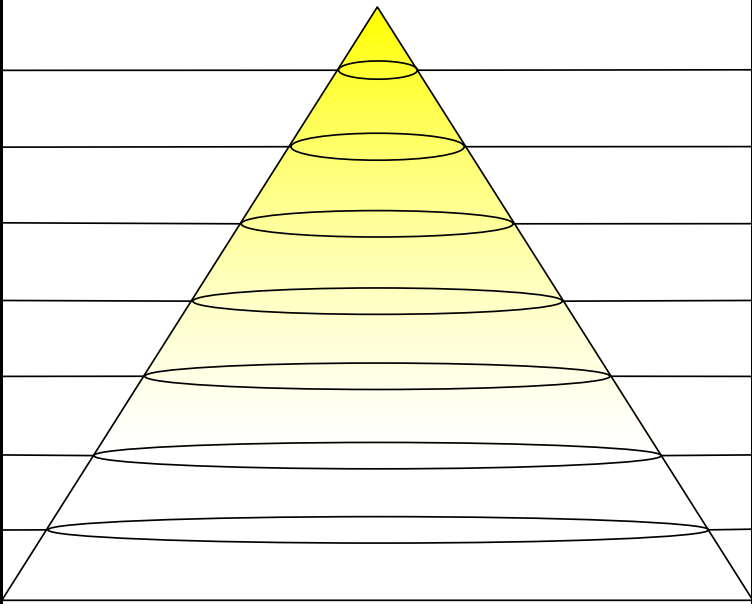
Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	376	376	376
45	575	575	575
55	866	866	866
65	1119	1119	1119
75	1623	1623	1623
85	1680	1680	1680



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	143	143	143	143	139	139	139	139	133	133	133	127	127	127	122	122	122	120
1	124	116	108	101	120	113	106	100	107	102	96	102	98	93	98	94	90	87
2	109	95	84	75	105	93	83	74	88	79	72	84	77	70	80	74	68	65
3	97	80	68	57	93	78	66	57	74	64	55	71	62	54	67	60	53	50
4	87	69	56	46	84	67	55	45	64	53	44	61	51	44	58	50	43	40
5	79	60	47	37	76	59	46	37	56	45	36	53	43	36	51	42	35	32
6	72	53	40	31	69	52	40	31	49	39	30	47	37	30	45	36	30	27
7	66	47	35	27	64	46	35	26	44	34	26	42	33	26	41	32	25	23
8	61	43	31	23	59	42	31	23	40	30	23	38	29	22	37	28	22	20
9	57	39	28	20	55	38	27	20	37	27	20	35	26	20	34	26	20	17
10	53	36	25	18	52	35	25	18	34	24	18	32	24	18	31	23	17	15

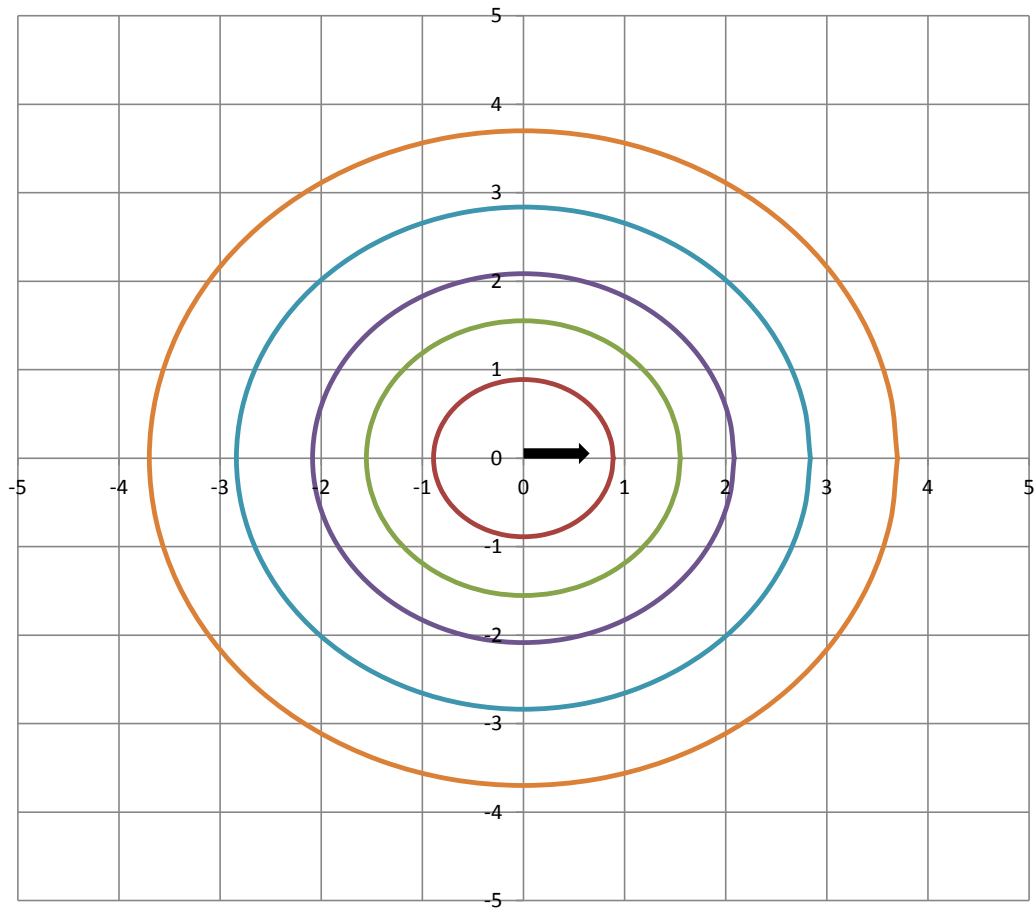
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	19.06 Candela
Central Cone Intensity:	18 Candela
Beam Flux:	117.4 Lumens
Beam Angle (0-180):	168.3 Degrees
Beam Angle (90-270):	168.3 Degrees
Field Angle (0-180):	175.2 Degrees
Field Angle (90-270):	175.2 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		1.19	5.75
6.00		0.530	8.62
8.00		0.298	11.5
10.0		0.191	14.4
12.0		0.132	17.2
14.0		0.0973	20.1
16.0		0.0745	23.0

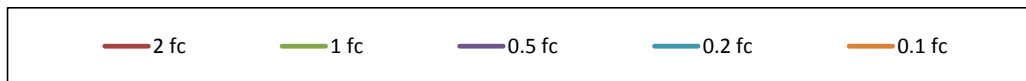


ISOFootcandle Plot

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)	7.5	6.3%
FM	(30-60)	24.8	20.7%
FH	(60-80)	23.1	19.2%
FVH	(80-90)	4.4	3.7%
BL	(0-30)	7.5	6.3%
BM	(30-60)	24.8	20.7%
BH	(60-80)	23.1	19.2%
BVH	(80-90)	4.4	3.7%
UL	(90-100)	0.2	0.1%
UH	(100-180)	0.2	0.1%
Total		119.9	100.0%
BUG Rating	B0 U1 G0		