



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
LPL2-NS-30-16
Order Number
11745044
Test Number
11745044.02

Test Date

2017-05-02

Prepared By

Javier Caban, Technician

Approved By

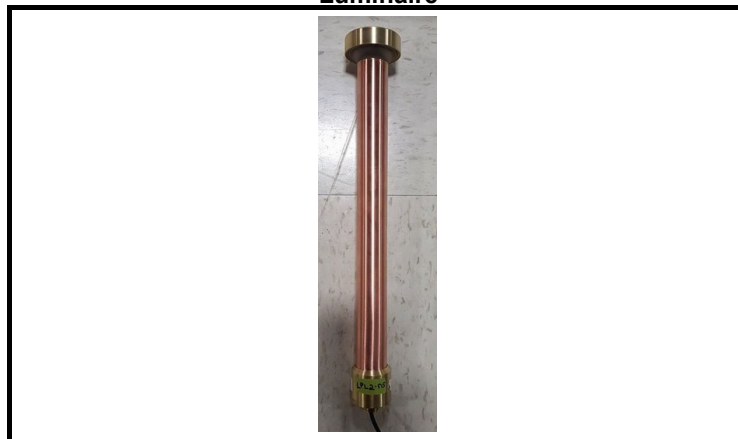
Tiffany Hamm, Project Handler

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Luminaire Description: Conical 4" copper shade with clear glass lens, cylindrical copper stem and brass base.
Lamp: Three white LEDs
Mounting: Bollard
Ballast/Driver: Integrated

Luminaire



Luminaire Characteristics

Luminous Diameter: 2.50 in.

Summary of Results

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

Test Conditions

Test Temperature: 25.9 °C
Voltage: 11.98 VAC
Current: 0.3914 A
Power: 4.608 W
Power Factor: 0.983
Frequency: 60 Hz
Current THD: 10.2 %

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
25.9 °C	11.98 VAC	0.3914 A	4.608 W	0.983	60 Hz	10.2 %

Summary of Results

Spacing Criteria

0-180: 3.32
90-270: 3.32

Total Lumen Output:

186.3 Lumens

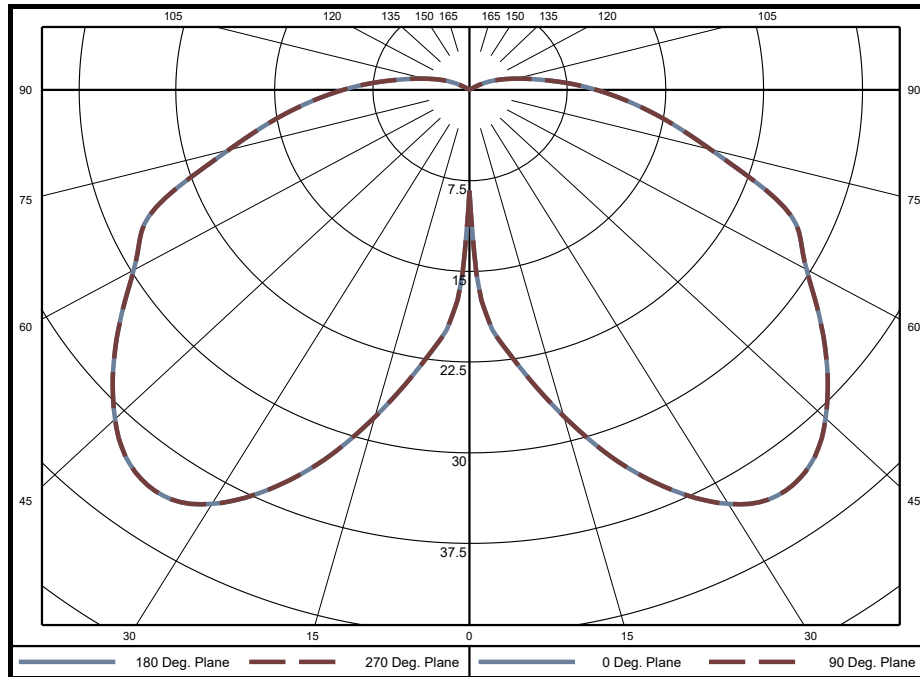
Luminaire Efficacy:

40.4 lm/w

Maximum Candela:

41 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.41	0.2%	60-65	13.93	7.5%	120-125	0.17	0.1%
5-10	1.57	0.8%	65-70	13.22	7.1%	125-130	0.04	0.0%
10-15	3.08	1.7%	70-75	11.17	6.0%	130-135	0.03	0.0%
15-20	5.01	2.7%	75-80	9.22	4.9%	135-140	0.03	0.0%
20-25	7.27	3.9%	80-85	7.60	4.1%	140-145	0.02	0.0%
25-30	9.66	5.2%	85-90	6.05	3.2%	145-150	0.02	0.0%
30-35	11.91	6.4%	90-95	4.61	2.5%	150-155	0.02	0.0%
35-40	13.62	7.3%	95-100	3.30	1.8%	155-160	0.01	0.0%
40-45	14.64	7.9%	100-105	2.31	1.2%	160-165	0.01	0.0%
45-50	14.96	8.0%	105-110	1.59	0.9%	165-170	0.01	0.0%
50-55	14.82	8.0%	110-115	1.04	0.6%	170-175	0.00	0.0%
55-60	14.36	7.7%	115-120	0.57	0.3%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	53	28.2%
0-60	111	59.7%
0-90	173	92.6%
90-180	14	7.4%



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	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33	8.33
	5	19.88	19.88	19.88	19.88	19.88	19.88	19.88	19.88	19.88	19.88	19.88	19.88	19.88	19.88	19.88
	10	23.64	23.64	23.64	23.64	23.64	23.64	23.64	23.64	23.64	23.64	23.64	23.64	23.64	23.64	23.64
	15	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00
	20	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55	32.55
	25	36.49	36.49	36.49	36.49	36.49	36.49	36.49	36.49	36.49	36.49	36.49	36.49	36.49	36.49	36.49
	30	39.53	39.53	39.53	39.53	39.53	39.53	39.53	39.53	39.53	39.53	39.53	39.53	39.53	39.53	39.53
	35	40.95	40.95	40.95	40.95	40.95	40.95	40.95	40.95	40.95	40.95	40.95	40.95	40.95	40.95	40.95
	40	40.44	40.44	40.44	40.44	40.44	40.44	40.44	40.44	40.44	40.44	40.44	40.44	40.44	40.44	40.44
	45	38.41	38.41	38.41	38.41	38.41	38.41	38.41	38.41	38.41	38.41	38.41	38.41	38.41	38.41	38.41
	50	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
	55	32.57	32.57	32.57	32.57	32.57	32.57	32.57	32.57	32.57	32.57	32.57	32.57	32.57	32.57	32.57
	60	29.70	29.70	29.70	29.70	29.70	29.70	29.70	29.70	29.70	29.70	29.70	29.70	29.70	29.70	29.70
	65	27.72	27.72	27.72	27.72	27.72	27.72	27.72	27.72	27.72	27.72	27.72	27.72	27.72	27.72	27.72
	70	23.95	23.95	23.95	23.95	23.95	23.95	23.95	23.95	23.95	23.95	23.95	23.95	23.95	23.95	23.95
	75	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
	80	15.54	15.54	15.54	15.54	15.54	15.54	15.54	15.54	15.54	15.54	15.54	15.54	15.54	15.54	15.54
	85	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46	12.46
	90	9.70	9.70	9.70	9.70	9.70	9.70	9.70	9.70	9.70	9.70	9.70	9.70	9.70	9.70	9.70
	95	7.18	7.18	7.18	7.18	7.18	7.18	7.18	7.18	7.18	7.18	7.18	7.18	7.18	7.18	7.18
	100	5.09	5.09	5.09	5.09	5.09	5.09	5.09	5.09	5.09	5.09	5.09	5.09	5.09	5.09	5.09
	105	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62	3.62
	110	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51
	115	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
	120	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
	125	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
	130	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
	135	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
	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	0.06	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
	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/m²)

Horizontal Angle (Degrees)

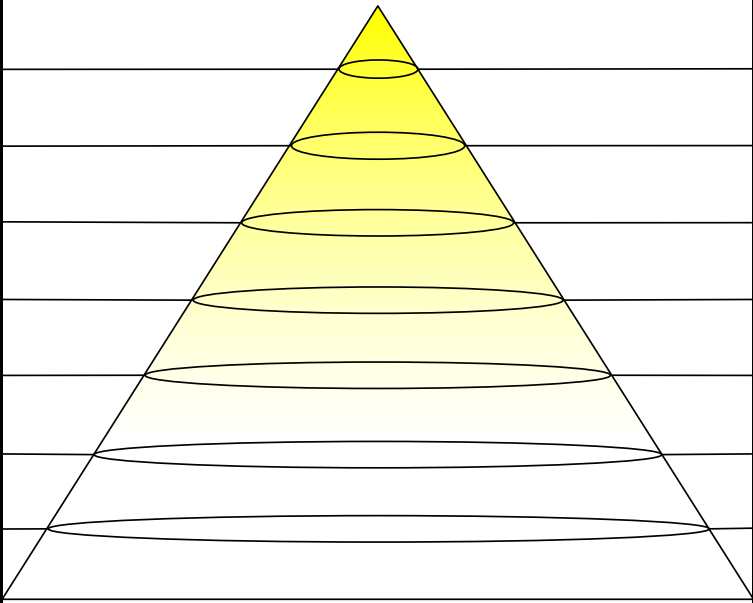
Vertical Angle (Degrees)	0	45	90
	0	2631	2631
	45	17150	17150
	55	17930	17930
	65	20710	20710
	75	23260	23260
	85	45150	45150



Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%																	
Ceiling Cavity Reflectance	80				70				50			30			10		
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **																
0	218	218	218	218	212	212	212	212	199	199	199	188	188	188	177	177	177
1	193	181	171	161	186	176	166	157	165	157	150	155	149	143	146	141	136
2	172	154	138	125	166	149	134	122	139	128	117	131	121	113	123	115	108
3	155	132	114	100	149	128	111	98	120	106	94	113	101	91	106	96	88
4	140	115	96	82	134	111	94	80	104	89	78	98	85	75	92	81	72
5	128	101	82	68	122	98	80	67	92	77	65	87	73	63	82	70	61
6	117	89	71	58	112	87	70	57	82	67	55	77	64	54	73	61	52
7	108	80	62	50	103	78	61	49	74	59	48	70	56	46	66	54	45
8	100	72	55	43	96	70	54	43	67	52	42	63	50	40	60	48	39
9	93	66	49	38	89	64	48	38	61	46	37	58	45	36	55	43	35
10	86	60	44	34	83	58	43	33	56	42	32	53	40	32	50	39	31

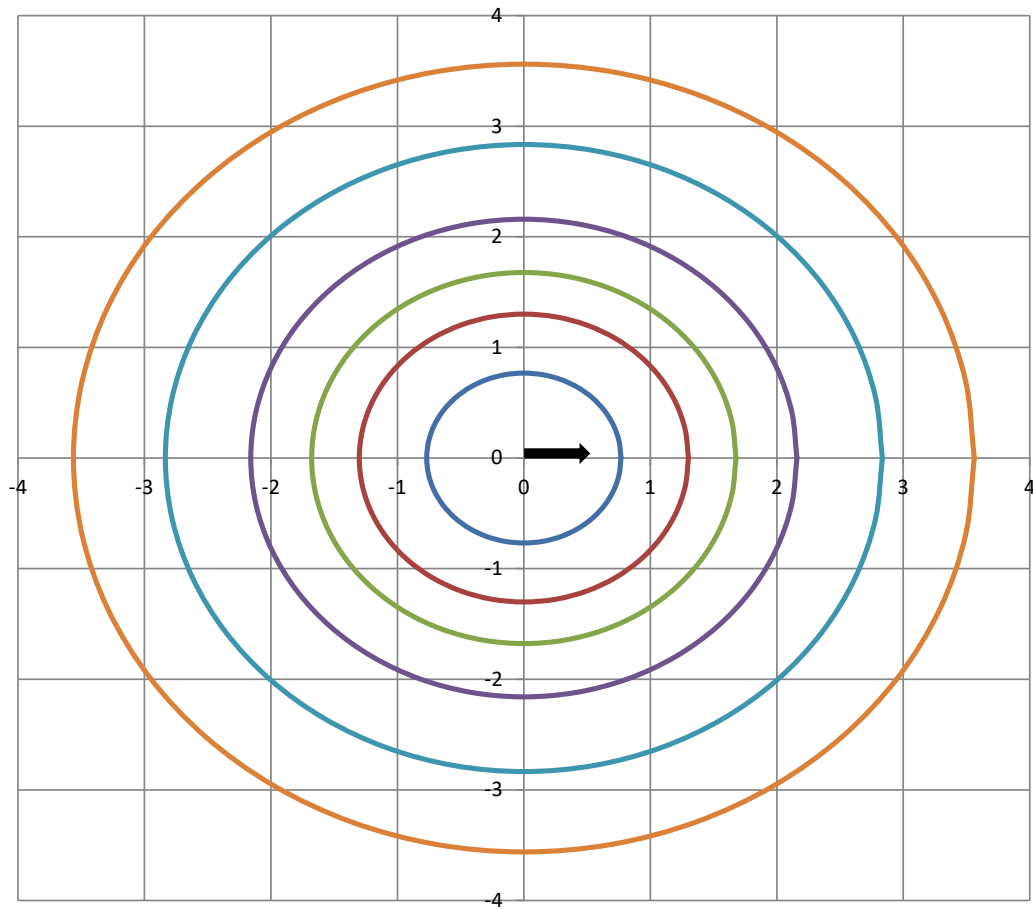
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	8.33 Candela
Central Cone Intensity:	15 Candela
Beam Flux:	181.9 Lumens
Beam Angle (0-180):	205.9 Degrees
Beam Angle (90-270):	205.9 Degrees
Field Angle (0-180):	238.7 Degrees
Field Angle (90-270):	238.7 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		0.521	13.3
6.00		0.231	19.9
8.00		0.130	26.5
10.0		0.0833	33.2
12.0		0.0579	39.8
14.0		0.0425	46.4
16.0		0.0326	53.1



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)	13.6	7.3%
FM	(30-60)	42.1	22.6%
FH	(60-80)	23.7	12.7%
FVH	(80-90)	6.8	3.7%
BL	(0-30)	13.6	7.3%
BM	(30-60)	42.1	22.6%
BH	(60-80)	23.7	12.7%
BVH	(80-90)	6.8	3.7%
UL	(90-100)	7.9	4.3%
UH	(100-180)	5.9	3.2%
Total		186.3	100.0%
BUG Rating	B0 U1 G0		