



UL LLC
1075 W Lambert Rd Suite B
Brea, CA 92821

Photometric Test Report

Relevant Standards
IES LM-79-2008
ANSI C82.77-2002

Prepared For
Auroralight Inc
2742 Loker Ave. West
Carlsbad, CA 92010

Catalog Number
LBD350-C7-12-30-32 (3000K)
Order Number
11263738
Test Number
1254201

Test Date

2016-05-29

Prepared By

Tony Rubio, Technician

Approved By

Eric Gaudreau, Senior Engineering Associate

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Conical 7" copper shade with graduated louvers and cylindrical 32" copper stem with brass base
Lamp: Eight (8) Cree XP-L 3000K LEDs
Mounting: Path/Area
Ballast/Driver: L.T.F. DL112W480C24LP65-0000

Luminaire



Luminaire Characteristics

Luminous Diameter: 6.75 in.
Luminous Height: 2.500 in.

Summary of Results

Roadway Classification: Type V, Very Short
Cutoff Classification: Semicutoff
BUG Rating: B0 U1 G1

Test Conditions

Test Temperature: 24.1 °C
Voltage: 12.09 VAC
Current: 1.908 A
Power: 12.49 W
Power Factor: 0.541
Frequency: 60 Hz
Current THD: 84.2 %

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
24.1 °C	12.09 VAC	1.908 A	12.49 W	0.541	60 Hz	84.2 %

Summary of Results

Spacing Criteria

0-180: 4.75
90-270: 4.75

Total Lumen Output:

204.8 Lumens

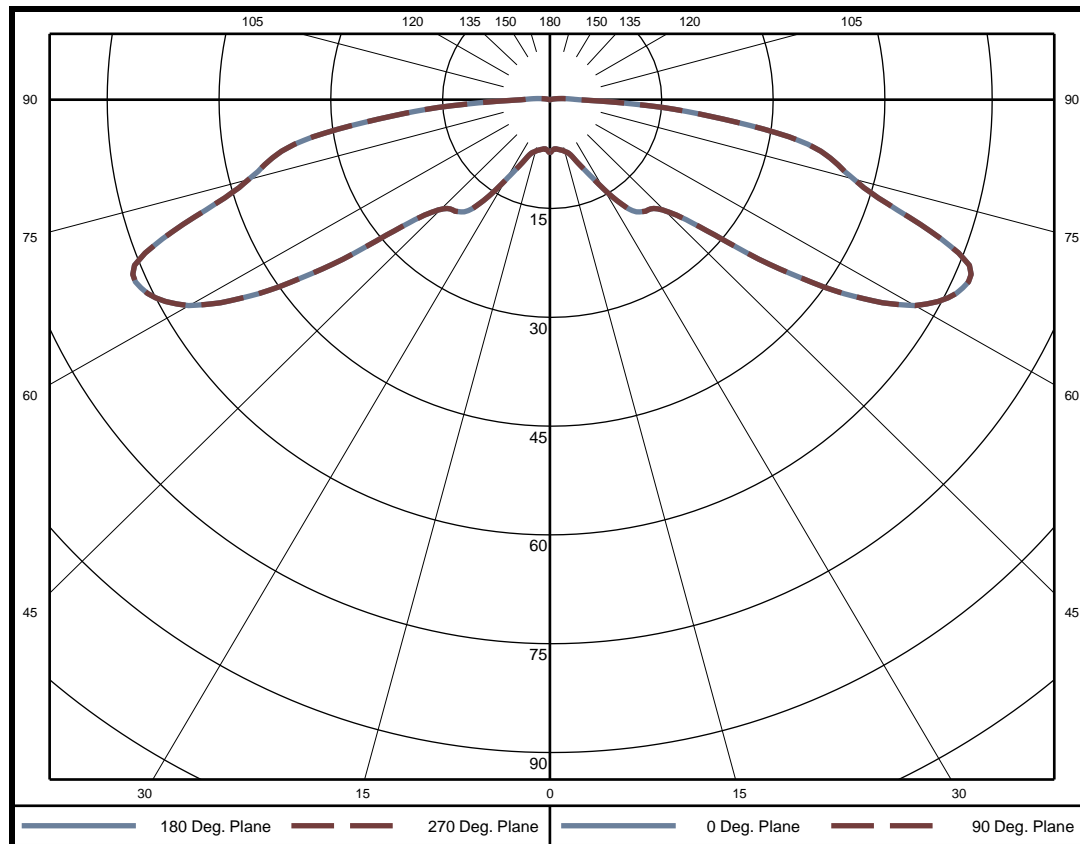
Luminaire Efficacy:

16.4 lm/w

Maximum Candela:

62 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.17	0.1%	60-65	28.91	14.1%	120-125	0	0.0%
5-10	0.49	0.2%	65-70	30.56	14.9%	125-130	0	0.0%
10-15	0.85	0.4%	70-75	25.21	12.3%	130-135	0	0.0%
15-20	1.26	0.6%	75-80	20.89	10.2%	135-140	0	0.0%
20-25	1.91	0.9%	80-85	14.71	7.2%	140-145	0	0.0%
25-30	3.02	1.5%	85-90	5.63	2.7%	145-150	0	0.0%
30-35	4.75	2.3%	90-95	1.53	0.7%	150-155	0	0.0%
35-40	6.47	3.2%	95-100	0.71	0.3%	155-160	0	0.0%
40-45	7.60	3.7%	100-105	0.29	0.1%	160-165	0	0.0%
45-50	9.89	4.8%	105-110	0.07	0.0%	165-170	0	0.0%
50-55	16.15	7.9%	110-115	0.00	0.0%	170-175	0	0.0%
55-60	23.74	11.6%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	19	9.2%
0-60	76	37.3%
0-90	202	98.7%
90-180	3	1.3%



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	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20	7.20
5	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79	6.79
10	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95
15	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30
20	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04	8.04
25	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26
30	13.81	13.81	13.81	13.81	13.81	13.81	13.81	13.81	13.81	13.81	13.81	13.81	13.81	13.81	13.81	13.81
35	18.26	18.26	18.26	18.26	18.26	18.26	18.26	18.26	18.26	18.26	18.26	18.26	18.26	18.26	18.26	18.26
40	20.05	20.05	20.05	20.05	20.05	20.05	20.05	20.05	20.05	20.05	20.05	20.05	20.05	20.05	20.05	20.05
45	21.47	21.47	21.47	21.47	21.47	21.47	21.47	21.47	21.47	21.47	21.47	21.47	21.47	21.47	21.47	21.47
50	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	29.01
55	44.95	44.95	44.95	44.95	44.95	44.95	44.95	44.95	44.95	44.95	44.95	44.95	44.95	44.95	44.95	44.95
60	56.71	56.71	56.71	56.71	56.71	56.71	56.71	56.71	56.71	56.71	56.71	56.71	56.71	56.71	56.71	56.71
65	61.32	61.32	61.32	61.32	61.32	61.32	61.32	61.32	61.32	61.32	61.32	61.32	61.32	61.32	61.32	61.32
70	56.04	56.04	56.04	56.04	56.04	56.04	56.04	56.04	56.04	56.04	56.04	56.04	56.04	56.04	56.04	56.04
75	42.39	42.39	42.39	42.39	42.39	42.39	42.39	42.39	42.39	42.39	42.39	42.39	42.39	42.39	42.39	42.39
80	35.23	35.23	35.23	35.23	35.23	35.23	35.23	35.23	35.23	35.23	35.23	35.23	35.23	35.23	35.23	35.23
85	18.49	18.49	18.49	18.49	18.49	18.49	18.49	18.49	18.49	18.49	18.49	18.49	18.49	18.49	18.49	18.49
90	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95
95	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90
100	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
105	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
110	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
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)

	0	45	90
0	312	312	312
45	1362	1362	1362
55	2780	2780	2780
65	3845	3845	3845
75	2785	2785	2785
85	1313	1313	1313



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	243	243	243	243	237	237	237	237	226	226	226	216	216	216	207	207	207	202
1	206	189	174	161	199	184	170	158	174	162	152	165	155	147	156	149	141	136
2	177	150	129	110	170	146	126	108	137	120	105	129	115	102	122	110	99	93
3	154	122	98	78	148	118	96	77	111	91	75	104	87	73	98	83	71	65
4	136	102	77	58	130	99	75	57	93	72	56	87	69	54	81	66	53	47
5	122	87	62	44	117	84	61	44	79	58	43	74	56	42	69	53	41	35
6	111	76	52	35	106	73	51	34	69	49	34	64	46	33	60	44	32	27
7	102	67	44	28	97	65	43	28	61	41	27	57	40	27	54	38	26	21
8	94	59	38	23	90	58	37	23	54	36	22	51	34	22	48	33	21	17
9	87	54	33	20	83	52	33	19	49	31	19	47	30	19	44	29	18	14
10	81	49	30	17	78	48	29	17	45	28	16	43	27	16	41	26	16	11

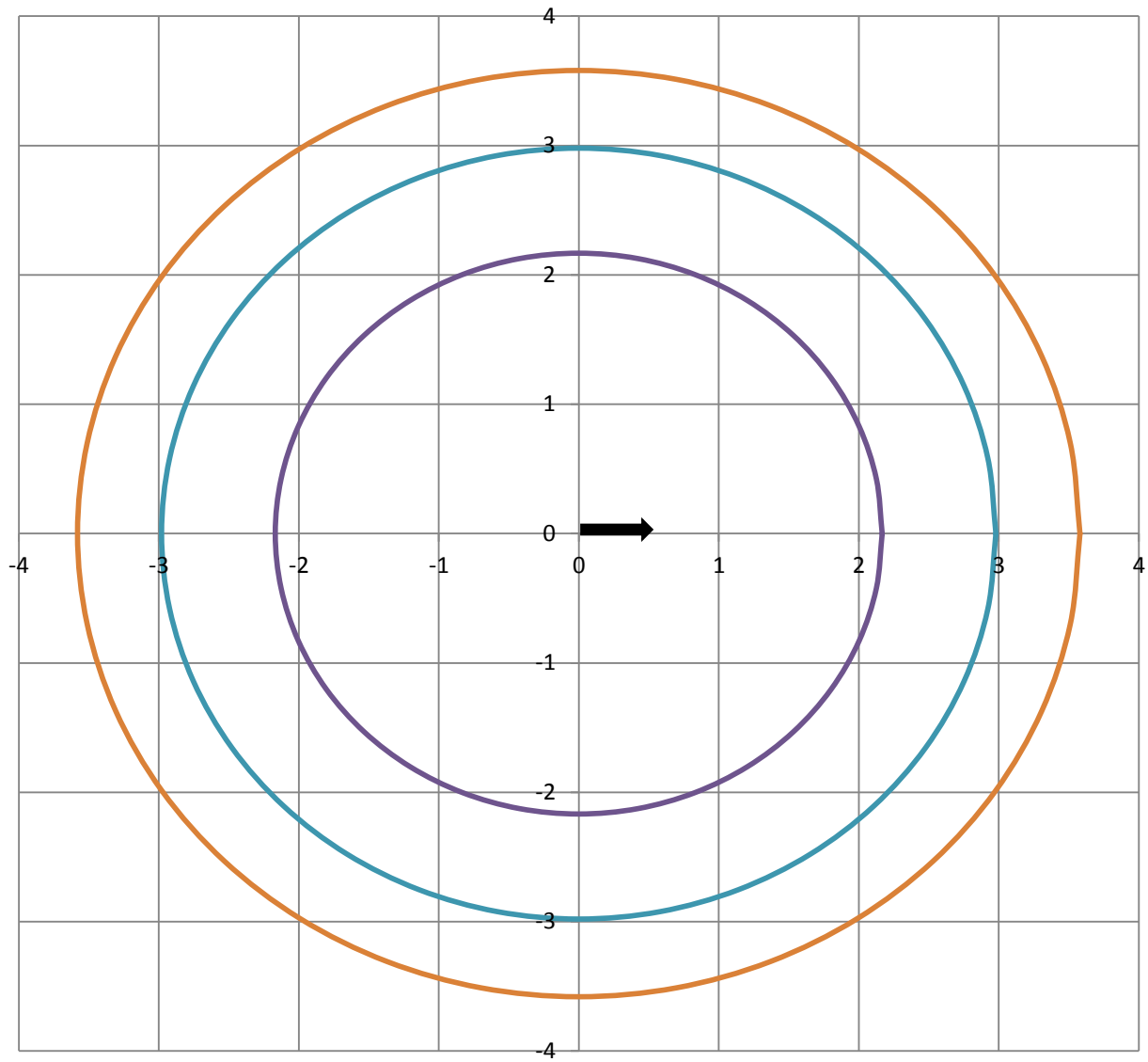
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	7.20 Candela
Central Cone Intensity:	7 Candela
Beam Flux:	202.4 Lumens
Beam Angle (0-180):	181.2 Degrees
Beam Angle (90-270):	181.2 Degrees
Field Angle (0-180):	201.7 Degrees
Field Angle (90-270):	201.7 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		0.450	19.0
6.00		0.200	28.5
8.00		0.112	38.0
10.0		0.0720	47.5
12.0		0.0500	57.0
14.0		0.0367	66.5
16.0		0.0281	76.0



ISOFootcandle Plot

Mounting Height - 3 Feet

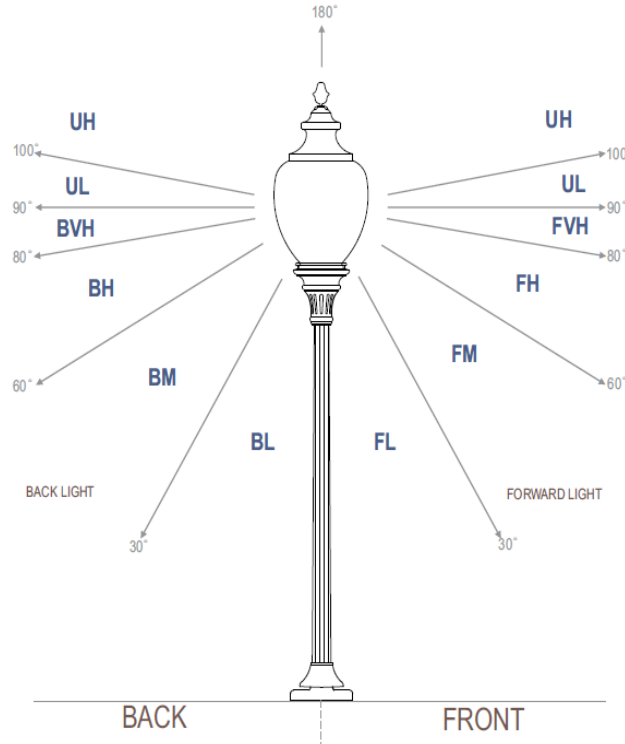


Grid Lines in Units of Mounting Height





IES "BUG" Rating
(Back Light, Uplight, Glare)
Per IES TM-15-11



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	3.9	1.9%
FM	(30-60)	34.2	16.7%
FH	(60-80)	52.7	25.8%
FVH	(80-90)	10.2	5.0%
BL	(0-30)	3.9	1.9%
BM	(30-60)	34.2	16.7%
BH	(60-80)	52.7	25.8%
BVH	(80-90)	10.2	5.0%
UL	(90-100)	2.3	1.1%
UH	(100-180)	0.4	0.2%
Total		204.6	100.0%
BUG Rating	B0 U1 G1		