



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
LBD250-C4-12-30-25 (3000K)
Order Number
11263738
Test Number
1254214

Test Date

2016-07-28

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 4" copper shade with stacked louvers and cylindrical 25" copper stem with brass base
Lamp: Six (6) Cree XPL-L 3000K LEDs
Mounting: Path/Area
Ballast/Driver: L.T.F. DL112W480C24LP6?-0000

Luminaire



Luminaire Characteristics

Luminous Diameter: 4.00 in.
Luminous Height: 2.250 in.

Summary of Results

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

Test Conditions

Test Temperature: 24.7 °C
Voltage: 12.04 VAC
Current: 1.876 A
Power: 13.29 W
Power Factor: 0.588
Frequency: 60 Hz
Current THD: 78.0 %

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
24.7 °C	12.04 VAC	1.876 A	13.29 W	0.588	60 Hz	78.0 %

Summary of Results

Spacing Criteria

0-180: 10.76

90-270: 10.76

Total Lumen Output:

143.0 Lumens

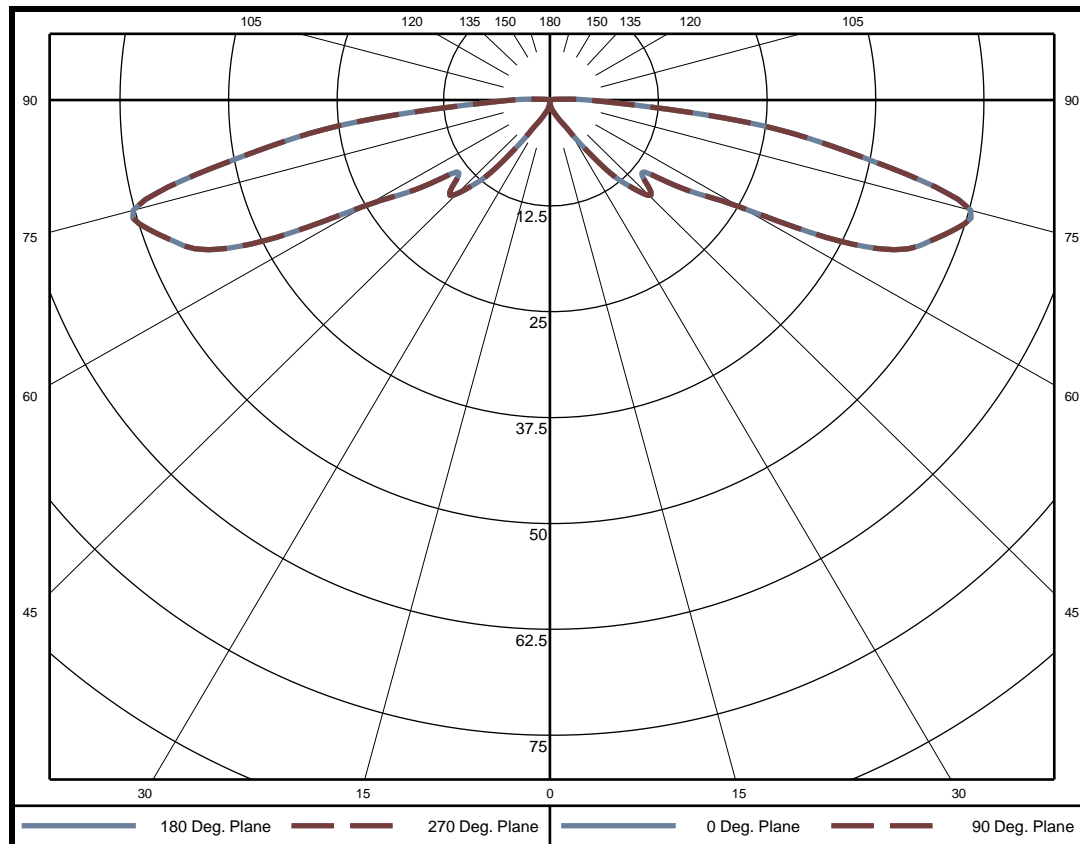
Luminaire Efficacy:

10.8 lm/w

Maximum Candela:

51 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.01	0.0%	60-65	16.37	11.4%	120-125	0	0.0%
5-10	0.05	0.0%	65-70	22.85	16.0%	125-130	0	0.0%
10-15	0.13	0.1%	70-75	25.83	18.1%	130-135	0	0.0%
15-20	0.25	0.2%	75-80	23.17	16.2%	135-140	0	0.0%
20-25	0.44	0.3%	80-85	14.09	9.9%	140-145	0	0.0%
25-30	0.77	0.5%	85-90	4.66	3.3%	145-150	0	0.0%
30-35	1.50	1.0%	90-95	1.46	1.0%	150-155	0	0.0%
35-40	3.17	2.2%	95-100	0.45	0.3%	155-160	0	0.0%
40-45	5.21	3.6%	100-105	0.19	0.1%	160-165	0	0.0%
45-50	6.20	4.3%	105-110	0.04	0.0%	165-170	0	0.0%
50-55	6.41	4.5%	110-115	0.00	0.0%	170-175	0	0.0%
55-60	9.73	6.8%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	6	4.4%
0-60	34	23.7%
0-90	141	98.5%
90-180	2	1.5%



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	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
5	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
10	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
15	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
20	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
25	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
30	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60	3.60
35	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82	6.82
40	12.12	12.12	12.12	12.12	12.12	12.12	12.12	12.12	12.12	12.12	12.12	12.12	12.12	12.12	12.12	12.12
45	15.87	15.87	15.87	15.87	15.87	15.87	15.87	15.87	15.87	15.87	15.87	15.87	15.87	15.87	15.87	15.87
50	13.88	13.88	13.88	13.88	13.88	13.88	13.88	13.88	13.88	13.88	13.88	13.88	13.88	13.88	13.88	13.88
55	17.47	17.47	17.47	17.47	17.47	17.47	17.47	17.47	17.47	17.47	17.47	17.47	17.47	17.47	17.47	17.47
60	25.17	25.17	25.17	25.17	25.17	25.17	25.17	25.17	25.17	25.17	25.17	25.17	25.17	25.17	25.17	25.17
65	41.43	41.43	41.43	41.43	41.43	41.43	41.43	41.43	41.43	41.43	41.43	41.43	41.43	41.43	41.43	41.43
70	47.55	47.55	47.55	47.55	47.55	47.55	47.55	47.55	47.55	47.55	47.55	47.55	47.55	47.55	47.55	47.55
75	50.21	50.21	50.21	50.21	50.21	50.21	50.21	50.21	50.21	50.21	50.21	50.21	50.21	50.21	50.21	50.21
80	34.62	34.62	34.62	34.62	34.62	34.62	34.62	34.62	34.62	34.62	34.62	34.62	34.62	34.62	34.62	34.62
85	15.59	15.59	15.59	15.59	15.59	15.59	15.59	15.59	15.59	15.59	15.59	15.59	15.59	15.59	15.59	15.59
90	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52
95	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
100	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
105	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
110	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
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	55	55	55
45	2165	2165	2165
55	2544	2544	2544
65	6552	6552	6552
75	8796	8796	8796
85	3092	3092	3092



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	170	170	170	170	166	166	166	166	158	158	158	151	151	151	144	144	144	141
1	139	126	114	103	134	122	111	101	115	106	97	108	101	93	102	96	90	86
2	118	97	80	66	113	94	78	65	87	74	62	82	70	60	76	67	58	54
3	102	78	59	44	97	75	57	43	69	54	42	64	51	41	60	49	39	35
4	90	64	46	31	85	62	44	31	57	42	30	53	40	29	49	37	28	23
5	81	55	37	23	77	53	36	23	49	34	22	45	32	21	42	30	21	17
6	73	48	30	18	70	46	30	18	43	28	17	40	27	17	37	25	16	12
7	67	42	26	14	64	41	25	14	38	24	14	35	23	13	33	21	13	9
8	62	38	22	12	59	36	22	11	34	21	11	32	20	11	30	19	10	7
9	58	34	20	10	55	33	19	10	31	18	9	29	17	9	27	17	9	6
10	54	31	17	8	52	30	17	8	28	16	8	27	16	8	25	15	7	4

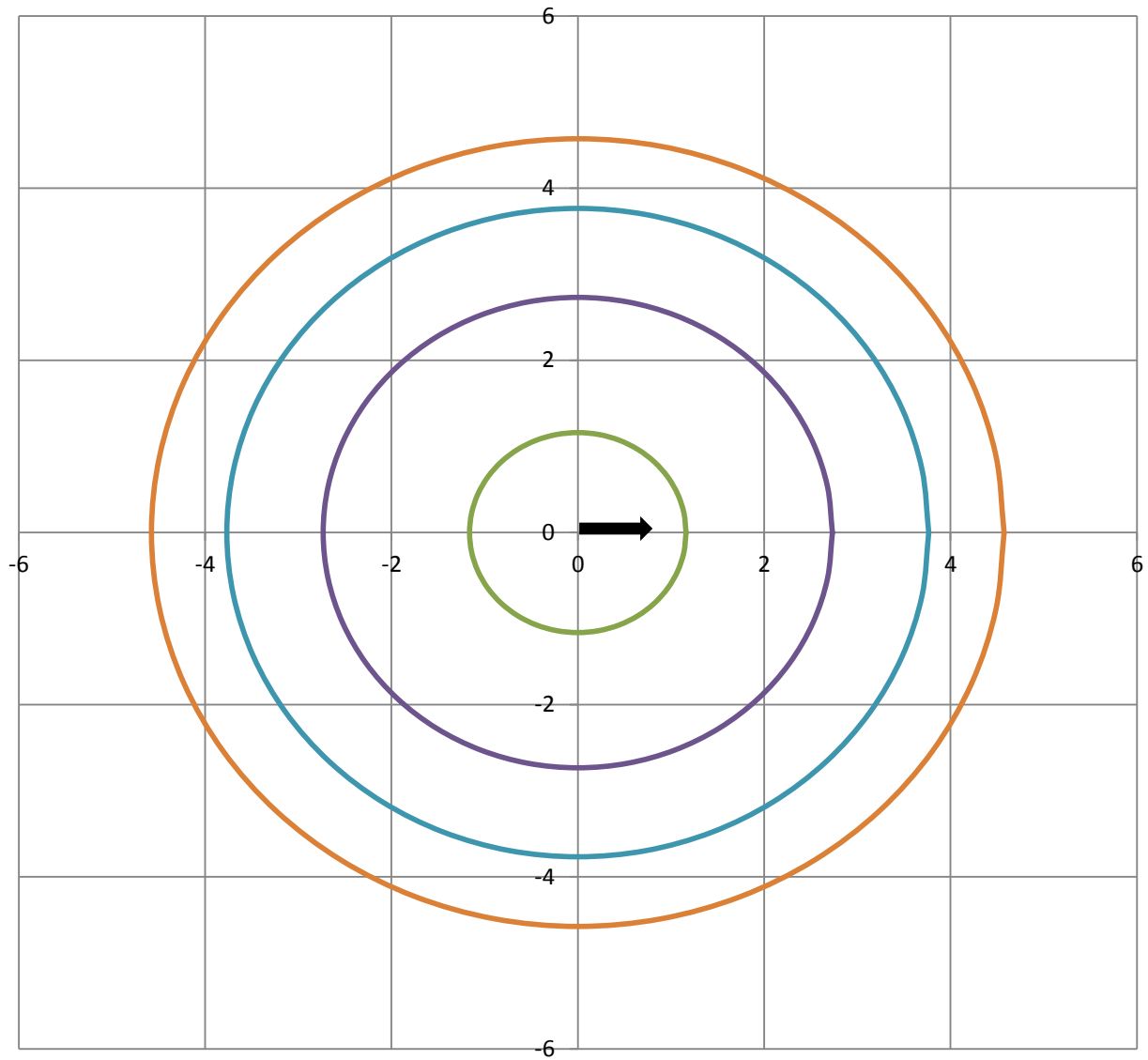
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	0.44 Candela
Central Cone Intensity:	0 Candela
Beam Flux:	142.9 Lumens
Beam Angle (0-180):	208.8 Degrees
Beam Angle (90-270):	208.8 Degrees
Field Angle (0-180):	216.8 Degrees
Field Angle (90-270):	216.8 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		0.0278	43.1
6.00		0.0124	64.6
8.00		0.00695	86.1
10.0		0.00445	108
12.0		0.00309	129
14.0		0.00227	151
16.0		0.00174	172



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)	0.8	0.6%
FM	(30-60)	16.2	11.3%
FH	(60-80)	44.2	30.7%
FVH	(80-90)	9.6	6.7%
BL	(0-30)	0.8	0.6%
BM	(30-60)	16.2	11.3%
BH	(60-80)	44.2	30.7%
BVH	(80-90)	9.6	6.7%
UL	(90-100)	2.0	1.4%
UH	(100-180)	0.2	0.2%
Total		144.0	100.0%
BUG Rating	B0 U1 G0		