



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-C11-NL-12-30-32 (NO LOUVERS, 3000K)
Order Number
11263738
Test Number
1254192

Test Date

2016-05-26

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 11" copper shade with no 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: 11.00 in.
Luminous Height: 1.50 in.

Summary of Results

Roadway Classification: Type II, Very Short
Cutoff Classification: Noncutoff
BUG Rating: B0 U2 G1

Test Conditions

Test Temperature: 25.5 °C
Voltage: 12.03 VAC
Current: 1.897 A
Power: 12.47 W
Power Factor: 0.546
Frequency: 60 Hz
Current THD: 37.0 %

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
25.5 °C	12.03 VAC	1.897 A	12.47 W	0.546	60 Hz	37.0 %

Summary of Results

Spacing Criteria

0-180: 1.69
90-270: 1.55

Total Lumen Output:

546.0 Lumens

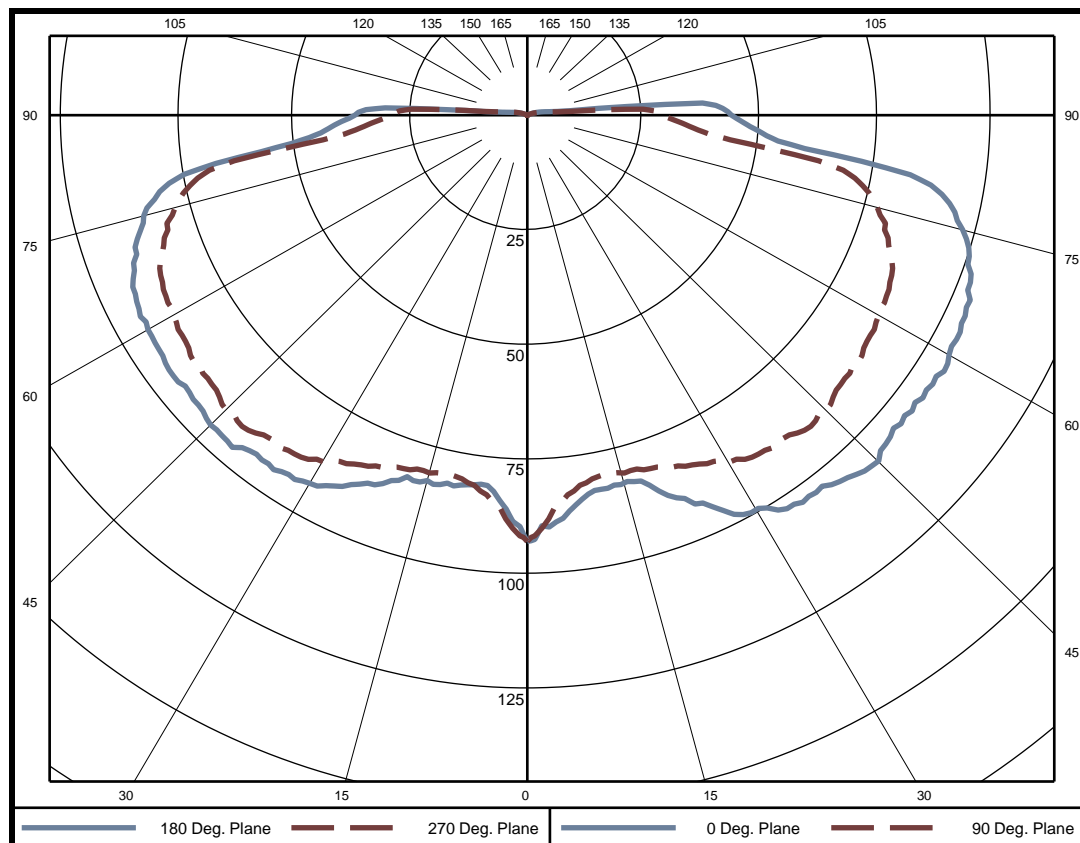
Luminaire Efficacy:

43.8 lm/w

Maximum Candela:

107 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	2.10	0.4%	60-65	45.14	8.3%	120-125	0.03	0.0%
5-10	5.93	1.1%	65-70	45.92	8.4%	125-130	0.02	0.0%
10-15	9.67	1.8%	70-75	45.35	8.3%	130-135	0.01	0.0%
15-20	13.57	2.5%	75-80	42.97	7.9%	135-140	0.01	0.0%
20-25	18.15	3.3%	80-85	31.24	5.7%	140-145	0.01	0.0%
25-30	22.96	4.2%	85-90	22.21	4.1%	145-150	0.01	0.0%
30-35	27.49	5.0%	90-95	16.81	3.1%	150-155	0.01	0.0%
35-40	31.51	5.8%	95-100	3.40	0.6%	155-160	0.01	0.0%
40-45	35.50	6.5%	100-105	1.65	0.3%	160-165	0.01	0.0%
45-50	38.47	7.0%	105-110	0.89	0.2%	165-170	0.00	0.0%
50-55	41.16	7.5%	110-115	0.31	0.1%	170-175	0.00	0.0%
55-60	43.45	8.0%	115-120	0.05	0.0%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	131	24.1%
0-60	290	53.1%
0-90	523	95.7%
90-180	23	4.3%



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	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0
	5	88.3	87.0	86.8	85.6	84.7	84.2	84.3	83.5	82.4	83.5	84.3	84.2	84.7	85.6	86.8
	10	83.1	83.6	83.2	81.8	80.6	79.9	80.6	81.5	81.9	81.5	80.6	79.9	80.6	81.8	83.2
	15	82.8	83.4	82.6	81.5	80.8	79.3	80.3	82.5	82.5	82.5	80.3	79.3	80.8	81.5	82.6
	20	88.3	86.1	85.8	84.3	81.7	81.3	81.4	84.2	84.8	84.2	81.4	81.3	81.7	84.3	85.8
	25	94.3	92.4	92.4	89.8	84.2	85.9	85.3	90.5	88.9	90.5	85.3	85.9	84.2	89.8	92.4
	30	99.1	94.1	94.7	92.7	87.4	88.3	88.6	94.7	92.8	94.7	88.6	88.3	87.4	92.7	94.7
	35	103.1	95.1	96.6	94.4	89.3	91.1	90.2	97.3	94.4	97.3	90.2	91.1	89.3	94.4	96.6
	40	104.3	96.3	98.1	96.3	90.5	92.8	90.6	99.2	94.7	99.2	90.6	92.8	90.5	96.3	98.1
	45	106.7	96.3	99.4	96.7	91.1	93.6	89.8	100.0	95.6	100.0	89.8	93.6	91.1	96.7	99.4
	50	104.7	95.0	98.4	95.7	89.3	93.0	87.8	99.2	94.1	99.2	87.8	93.0	89.3	95.7	98.4
	55	104.5	94.2	98.3	95.6	88.5	93.0	86.9	98.8	94.3	98.8	86.9	93.0	88.5	95.6	98.3
	60	104.5	93.2	98.1	94.5	87.4	92.0	85.2	98.7	93.5	98.7	85.2	92.0	87.4	94.5	98.1
	65	103.7	92.1	97.0	93.1	86.2	88.6	83.1	97.6	92.3	97.6	83.1	88.6	86.2	93.1	97.0
	70	101.4	89.4	95.3	89.9	82.9	86.3	79.3	94.6	88.7	94.6	79.3	86.3	82.9	89.9	95.3
	75	96.7	85.2	90.7	84.6	78.1	80.2	73.9	89.4	84.8	89.4	73.9	80.2	78.1	84.6	90.7
	80	88.0	77.1	82.7	75.7	69.2	70.9	64.5	78.6	74.4	78.6	64.5	70.9	69.2	75.7	82.7
	85	51.5	42.3	47.0	48.6	36.9	43.5	41.0	48.8	44.2	48.8	41.0	43.5	36.9	48.6	47.0
	90	43.8	35.0	39.7	41.3	29.2	37.5	32.9	40.7	36.8	40.7	32.9	37.5	29.2	41.3	39.7
	95	21.5	17.4	17.4	15.4	9.5	9.5	10.0	10.2	8.7	10.2	10.0	9.5	9.5	15.4	17.4
	100	4.2	3.9	3.9	4.2	3.9	3.6	4.1	4.1	3.6	4.1	4.1	3.6	3.9	4.2	3.9
	105	2.5	2.4	2.3	2.5	2.3	2.1	2.3	2.4	2.1	2.4	2.3	2.1	2.3	2.5	2.3
	110	1.2	1.2	1.2	1.2	1.1	1.0	1.1	1.1	0.9	1.1	1.1	1.0	1.1	1.2	1.2
	115	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.3
	120	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1
	125	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1
	130	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0
	135	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	140	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	145	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	150	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	155	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	160	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	165	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	170	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0
	175	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1
	180	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

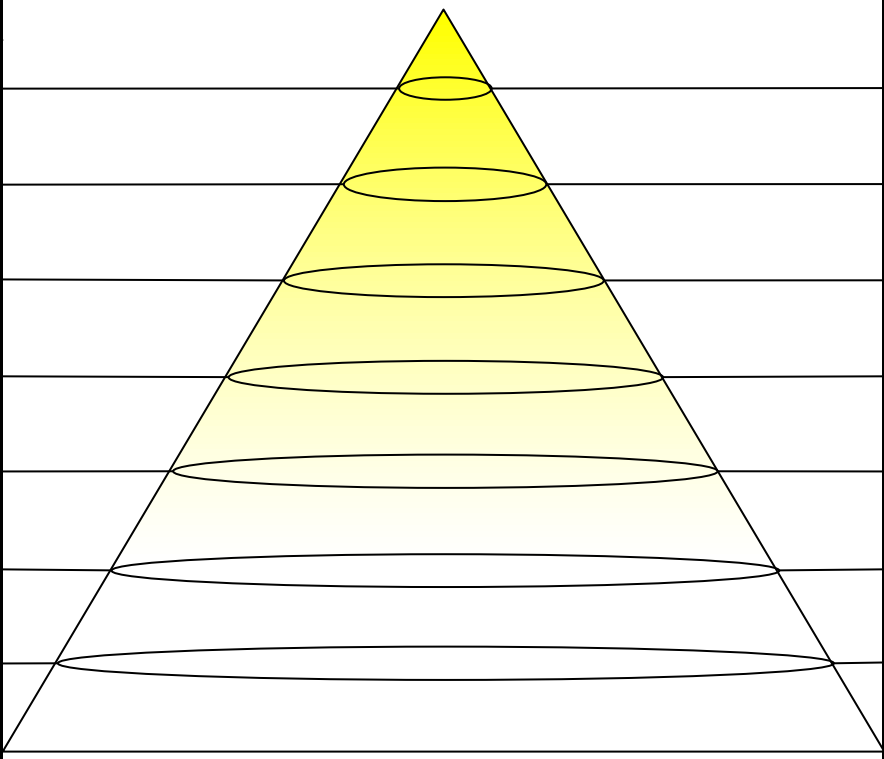
Vertical Angle (Degrees)	0	45	90
	0	1517	1517
	45	5222	4867
	55	3254	3061
	65	2903	2716
	75	2493	2336
	85	1279	1166



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	644	644	644	644	627	627	627	627	594	594	594	564	564	564	536	536	536	523
1	559	520	485	454	540	505	473	444	476	449	425	449	428	408	425	407	391	376
2	493	433	383	341	475	420	374	334	395	356	322	372	340	311	351	324	300	285
3	441	368	311	266	423	356	304	262	335	290	253	316	278	245	298	266	238	223
4	398	318	259	214	382	308	254	211	291	243	205	274	233	200	259	223	194	179
5	362	279	221	178	348	271	216	175	256	208	171	241	199	166	228	191	162	148
6	332	247	191	150	319	241	187	148	228	180	145	215	173	141	204	167	138	124
7	306	222	167	129	294	216	164	128	205	158	125	194	153	122	184	147	119	106
8	283	200	148	112	273	195	146	111	186	141	109	177	136	107	168	132	104	92
9	264	182	133	99	254	178	131	98	170	126	96	162	122	94	154	118	92	81
10	246	167	120	88	238	163	118	87	156	114	86	149	111	84	142	108	82	72

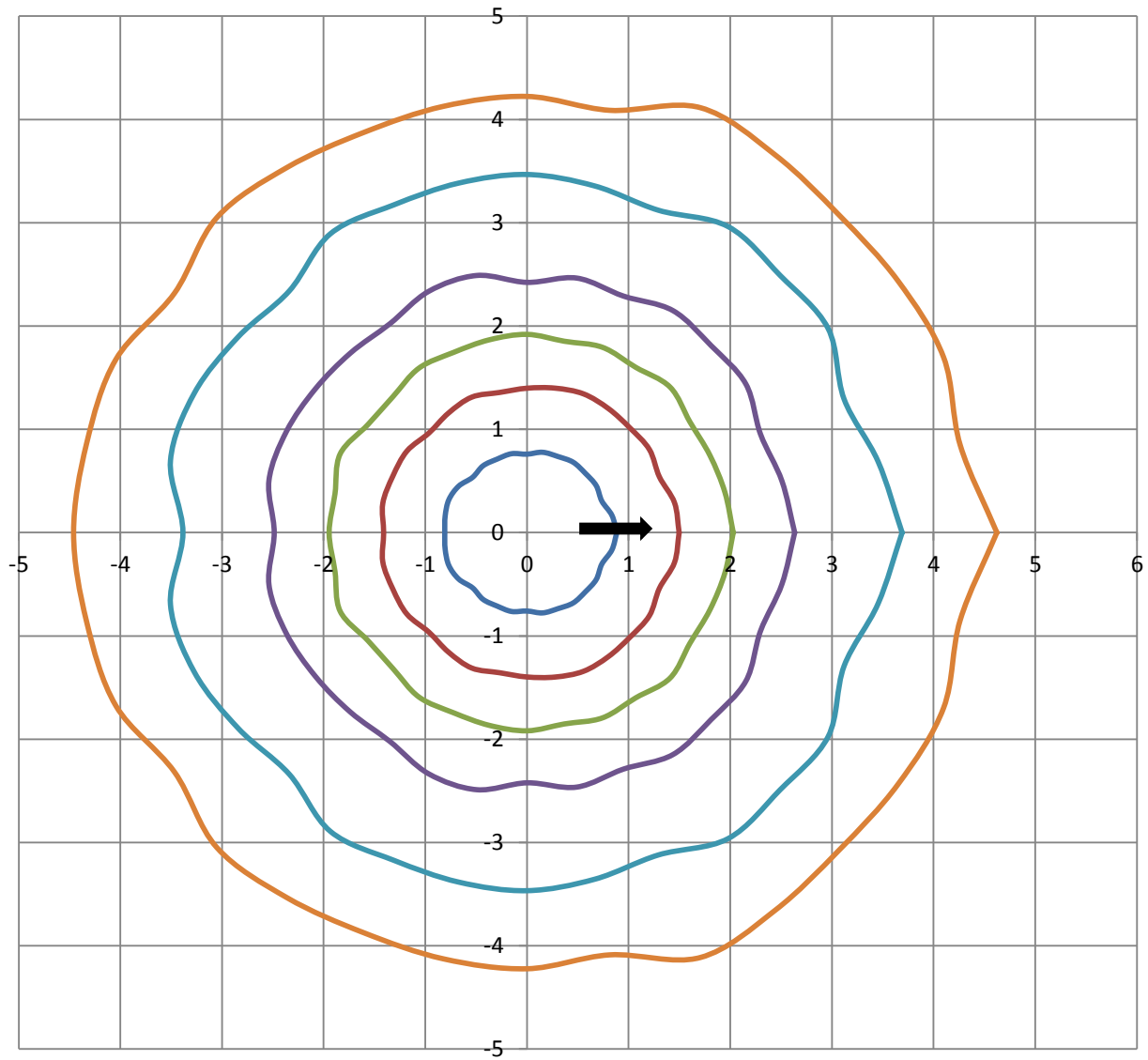
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	93.0 Candela
Central Cone Intensity:	89 Candela
Beam Flux:	499.1 Lumens
Beam Angle (0-180):	172.1 Degrees
Beam Angle (90-270):	165.5 Degrees
Field Angle (0-180):	190.9 Degrees
Field Angle (90-270):	190.1 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		5.81	6.21
6.00		2.58	9.31
8.00		1.45	12.4
10.0		0.930	15.5
12.0		0.646	18.6
14.0		0.474	21.7
16.0		0.363	24.8



ISOFootcandle Plot

Mounting Height - 3 Feet



Grid Lines in Units of Mounting Height

5 fc 2 fc 1 fc 0.5 fc 0.2 fc 0.1 fc



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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	36.8	6.8%
FM	(30-60)	109.9	20.2%
FH	(60-80)	91.0	16.8%
FVH	(80-90)	27.4	5.0%
BL	(0-30)	35.7	6.6%
BM	(30-60)	106.6	19.6%
BH	(60-80)	87.3	16.1%
BVH	(80-90)	25.9	4.8%
UL	(90-100)	19.8	3.7%
UH	(100-180)	3.0	0.6%
Total		543.5	100.0%
BUG Rating	B0 U2 G1		