



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-SL-12-30-32 (STACKED LOUVERS, 3000K)**  
Order Number  
11263738  
Test Number  
1254196

Test Date

2016-05-27

Prepared By

Jeremy Lewis, 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 stacked 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: Semicutoff  
BUG Rating: B0 U1 G0

**Test Conditions**

Test Temperature: 24.7 °C  
Voltage: 12.03 VAC  
Current: 1.902 A  
Power: 12.44 W  
Power Factor: 0.543  
Frequency: 60 Hz  
Current THD: 83.8 %

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	12.03 VAC	1.902 A	12.44 W	0.543	60 Hz	83.8 %

### Summary of Results

#### Spacing Criteria

0-180: 1.95  
90-270: 2.02

#### Total Lumen Output:

262.4 Lumens

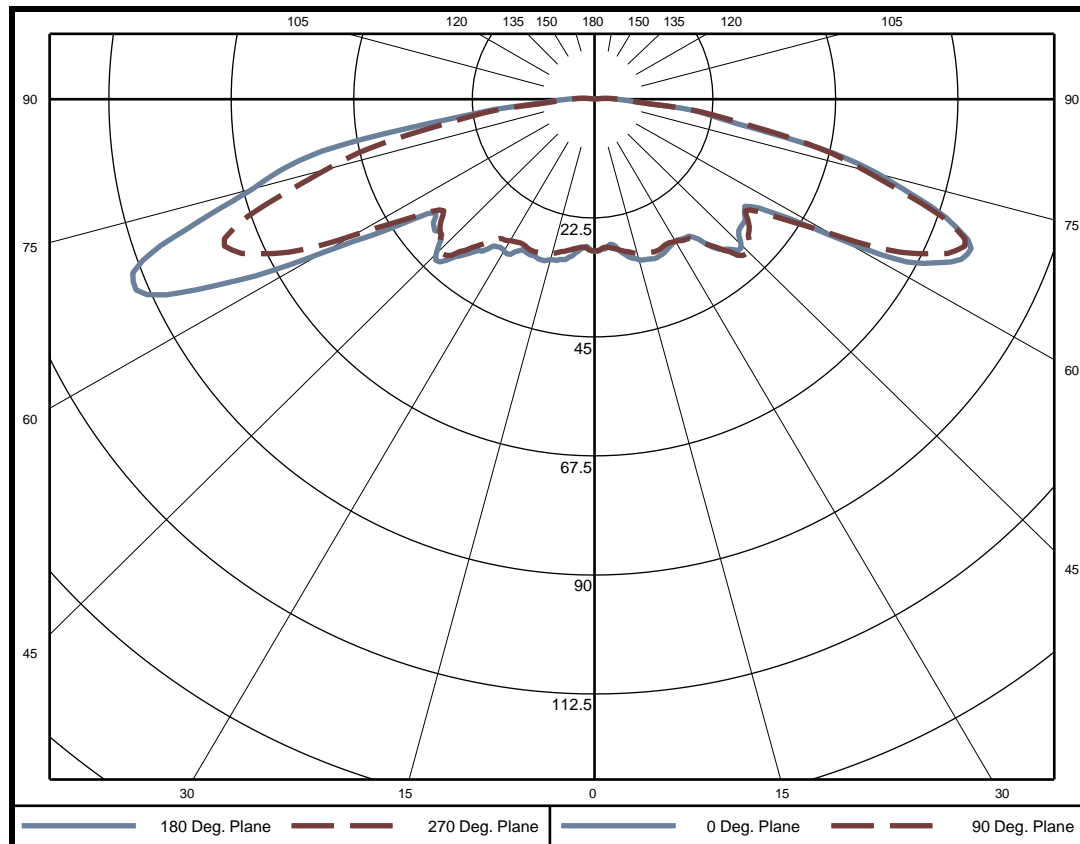
#### Luminaire Efficacy:

21.1 lm/w

#### Maximum Candela:

92 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.68	0.3%	60-65	32.17	12.3%	120-125	0	0.0%
5-10	2.07	0.8%	65-70	39.46	15.0%	125-130	0	0.0%
10-15	3.60	1.4%	70-75	35.02	13.3%	130-135	0	0.0%
15-20	5.15	2.0%	75-80	25.05	9.5%	135-140	0	0.0%
20-25	6.54	2.5%	80-85	11.83	4.5%	140-145	0	0.0%
25-30	7.88	3.0%	85-90	3.79	1.4%	145-150	0	0.0%
30-35	9.44	3.6%	90-95	1.69	0.6%	150-155	0	0.0%
35-40	11.72	4.5%	95-100	0.53	0.2%	155-160	0	0.0%
40-45	14.52	5.5%	100-105	0.10	0.0%	160-165	0	0.0%
45-50	15.39	5.9%	105-110	0	0.0%	165-170	0	0.0%
50-55	15.59	5.9%	110-115	0	0.0%	170-175	0	0.0%
55-60	20.16	7.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	47	17.9%
0-60	113	43.0%
0-90	260	99.1%
90-180	2	0.9%



### 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	28.64	28.64	28.64	28.64	28.64	28.64	28.64	28.64	28.64	28.64	28.64	28.64	28.64	28.64	28.64
	5	27.97	27.67	27.87	28.07	28.07	28.13	28.26	28.48	28.40	28.48	28.26	28.13	28.07	28.07	27.87
	10	29.47	29.23	29.39	29.29	29.05	29.38	30.29	30.71	30.83	30.71	30.29	29.38	29.05	29.29	29.39
	15	31.38	30.77	30.74	30.24	30.18	30.84	31.13	31.46	31.43	31.46	31.13	30.84	30.18	30.24	30.74
	20	32.11	31.67	31.33	31.07	30.77	31.30	31.06	31.54	31.79	31.54	31.06	31.30	30.77	31.07	31.33
	25	31.53	31.14	30.70	30.83	30.54	30.98	30.55	30.82	31.42	30.82	30.55	30.98	30.54	30.83	30.70
	30	30.73	31.17	30.84	31.61	30.89	31.17	32.10	32.34	33.38	32.34	32.10	31.17	30.89	31.61	30.84
	35	31.83	31.75	31.70	32.97	32.39	34.06	34.33	33.66	34.62	33.66	34.33	34.06	32.39	32.97	31.70
	40	37.06	36.52	36.04	36.68	37.28	39.31	38.07	36.50	38.68	36.50	38.07	39.31	37.28	36.68	36.04
	45	38.36	40.35	38.99	38.73	40.62	41.18	38.54	37.60	41.62	37.60	38.54	41.18	40.62	38.73	38.99
	50	36.20	37.11	35.55	37.05	37.49	38.23	37.80	36.74	38.71	36.74	37.80	38.23	37.49	37.05	35.55
	55	35.38	35.28	35.35	36.01	37.03	37.65	37.03	36.30	37.73	36.30	37.03	37.65	37.03	36.01	35.35
	60	53.76	52.86	49.75	52.51	51.11	59.59	57.49	52.40	57.79	52.40	57.49	59.59	51.11	52.51	49.75
	65	72.84	71.90	67.91	72.07	69.09	82.01	82.19	76.17	87.66	76.17	82.19	82.01	69.09	72.07	67.91
	70	71.70	74.34	69.99	73.14	71.24	84.08	82.78	75.03	89.24	75.03	82.78	84.08	71.24	73.14	69.99
	75	54.37	54.11	53.65	56.51	51.79	64.66	62.18	55.69	65.74	55.69	62.18	64.66	51.79	56.51	53.65
	80	27.09	30.99	30.79	28.36	30.22	35.92	36.11	35.24	44.04	35.24	36.11	35.92	30.22	28.36	30.79
	85	10.20	11.50	10.33	10.19	10.66	11.47	11.21	11.01	12.95	11.01	11.21	11.47	10.66	10.19	10.33
	90	4.13	4.43	4.31	4.12	4.36	4.75	4.43	4.35	4.96	4.35	4.43	4.75	4.36	4.12	4.31
	95	1.59	1.64	1.68	1.76	1.79	1.99	1.99	1.95	2.15	1.95	1.99	1.99	1.79	1.76	1.68
	100	0.41	0.40	0.37	0.39	0.38	0.45	0.48	0.50	0.53	0.50	0.48	0.45	0.38	0.39	0.37
	105	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.03	0.01	0.01	0.00	0.00	0.00	0.00
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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

### Average Luminance (cd/m<sup>2</sup>)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)			
	0	45	90	
	0	467	467	467
	45	1878	1909	1989
	55	1101	1100	1152
	65	2039	1901	1935
	75	1401	1383	1335
	85	253	256	265



### 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	312	312	312	312	304	304	304	304	290	290	290	277	277	277	266	266	266	260
1	269	250	232	217	261	243	227	213	231	218	206	220	209	199	209	200	192	185
2	233	202	176	154	225	196	172	152	186	165	148	176	159	144	167	153	140	133
3	205	167	138	115	198	163	135	113	154	130	110	145	125	108	137	120	105	98
4	184	142	112	89	176	138	110	88	130	106	86	123	102	84	117	98	82	75
5	166	123	93	71	159	120	92	70	113	88	69	107	85	68	101	82	67	60
6	152	108	80	59	146	106	78	58	100	76	57	95	73	56	90	71	55	49
7	139	97	69	50	134	94	68	49	90	66	49	85	64	48	81	62	47	41
8	129	87	61	43	124	85	60	42	81	58	42	77	56	41	74	55	41	35
9	120	79	54	37	116	77	54	37	74	52	37	71	51	36	68	49	36	30
10	112	73	49	33	108	71	48	33	68	47	33	65	46	32	63	45	32	27

### Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	28.64 Candela
Central Cone Intensity:	28 Candela
Beam Flux:	255.5 Lumens
Beam Angle (0-180):	169.1 Degrees
Beam Angle (90-270):	168.8 Degrees
Field Angle (0-180):	186.1 Degrees
Field Angle (90-270):	185.6 Degrees

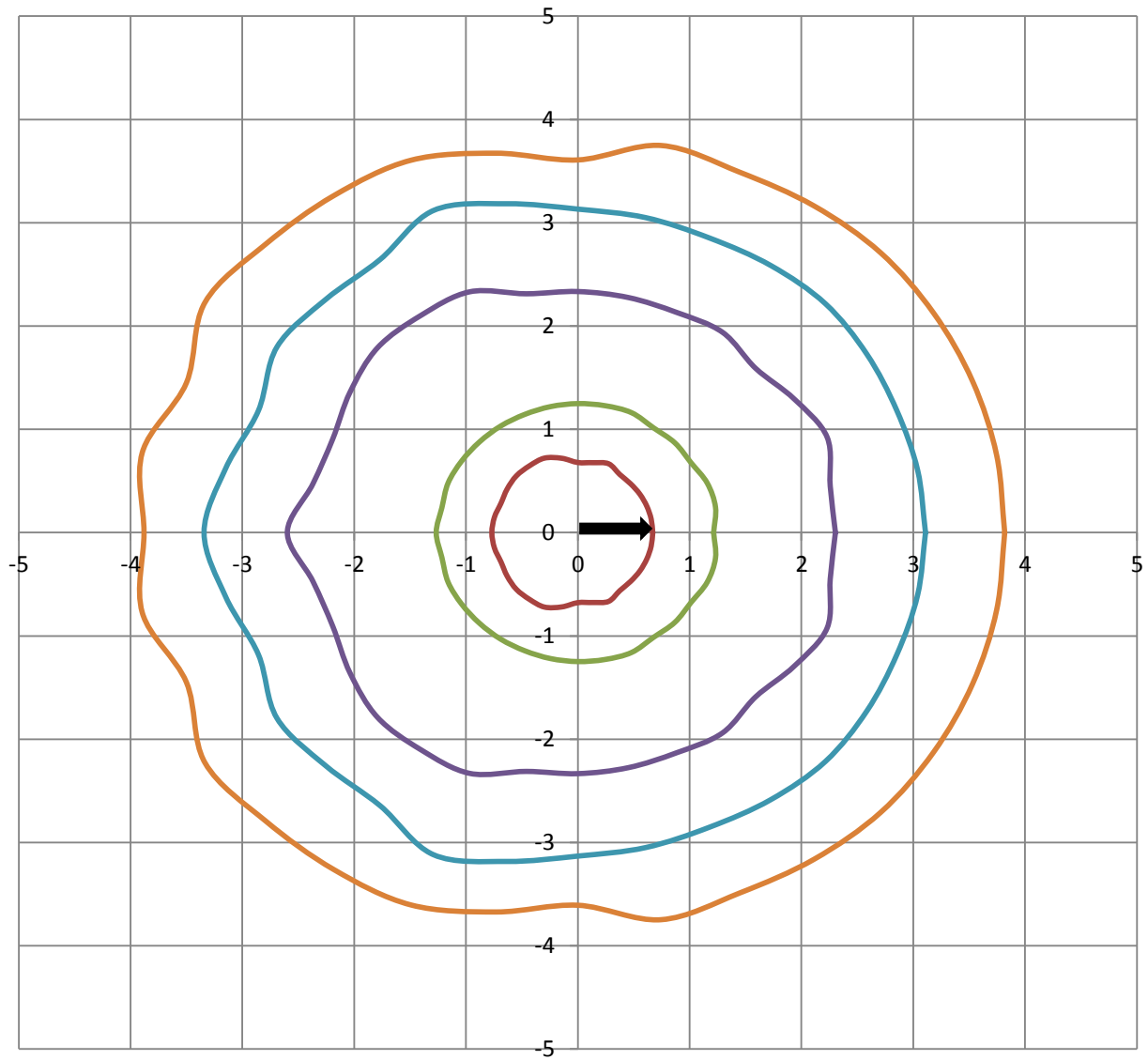
### Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		1.79	7.89
6.00		0.796	11.8
8.00		0.448	15.8
10.0		0.286	19.7
12.0		0.199	23.7
14.0		0.146	27.6
16.0		0.112	31.6



## 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)	12.9	4.9%
FM	(30-60)	43.0	16.4%
FH	(60-80)	62.2	23.8%
FVH	(80-90)	7.5	2.9%
BL	(0-30)	13.1	5.0%
BM	(30-60)	44.2	16.9%
BH	(60-80)	68.5	26.1%
BVH	(80-90)	8.2	3.1%
UL	(90-100)	2.2	0.9%
UH	(100-180)	0.1	0.0%
Total		262.0	100.0%
<b>BUG Rating</b>	<b>B0 U1 G0</b>		