



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-S10-SL-12-30-32 (STACKED LOUVERS, 3000K)
Order Number
11263738
Test Number
1254197

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: Spherical 10" 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: 9.75 in.
Luminous Height: 1.500 in.

Summary of Results

Roadway Classification: Type II, Very Short
Cutoff Classification: Semicutoff
BUG Rating: B0 U1 G0

Test Conditions

Test Temperature: 24.6 °C
Voltage: 12.03 VAC
Current: 1.900 A
Power: 12.45 W
Power Factor: 0.545
Frequency: 60 Hz
Current THD: 83.7 %

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
24.6 °C	12.03 VAC	1.900 A	12.45 W	0.545	60 Hz	83.7 %

Summary of Results

Spacing Criteria

0-180: 0.39
90-270: 0.33

Total Lumen Output:

247.3 Lumens

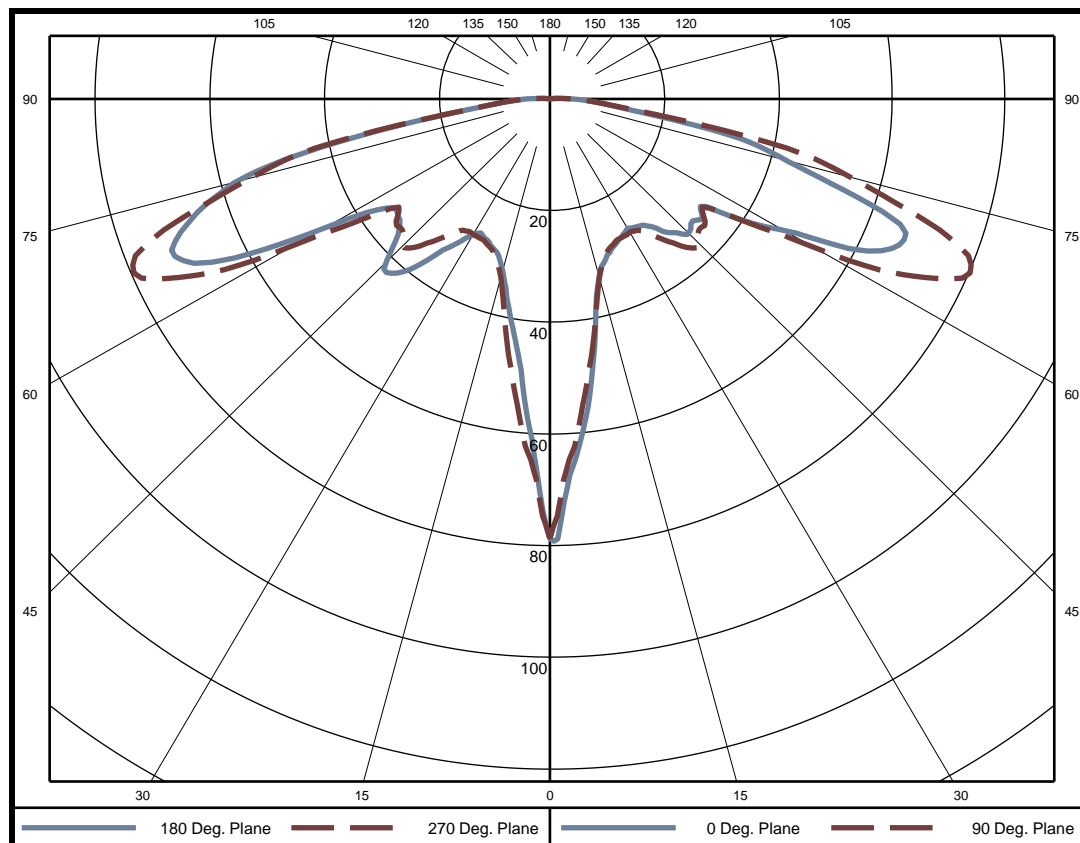
Luminaire Efficacy:

19.9 lm/w

Maximum Candela:

83 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	1.53	0.6%	60-65	31.43	12.7%	120-125	0	0.0%
5-10	3.57	1.4%	65-70	38.22	15.5%	125-130	0	0.0%
10-15	4.35	1.8%	70-75	33.59	13.6%	130-135	0	0.0%
15-20	5.04	2.0%	75-80	22.36	9.0%	135-140	0	0.0%
20-25	5.96	2.4%	80-85	8.38	3.4%	140-145	0	0.0%
25-30	7.01	2.8%	85-90	3.51	1.4%	145-150	0	0.0%
30-35	8.42	3.4%	90-95	1.23	0.5%	150-155	0	0.0%
35-40	10.67	4.3%	95-100	0.31	0.1%	155-160	0	0.0%
40-45	13.52	5.5%	100-105	0.02	0.0%	160-165	0	0.0%
45-50	14.49	5.9%	105-110	0	0.0%	165-170	0	0.0%
50-55	14.63	5.9%	110-115	0	0.0%	170-175	0	0.0%
55-60	19.07	7.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	47	18.8%
0-60	108	43.8%
0-90	246	99.4%
90-180	2	0.6%



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	78.77	78.77	78.77	78.77	78.77	78.77	78.77	78.77	78.77	78.77	78.77	78.77	78.77	78.77	78.77
	5	61.55	64.77	63.10	59.08	58.57	60.14	54.54	51.48	53.10	51.48	54.54	60.14	58.57	59.08	63.10
	10	45.25	43.03	44.19	45.92	43.86	41.70	40.13	40.14	40.00	40.14	40.13	41.70	43.86	45.92	44.19
	15	33.26	33.07	33.07	32.82	33.32	33.13	31.86	31.99	32.14	31.99	31.86	33.13	33.32	32.82	33.07
	20	29.63	29.22	29.44	29.43	29.18	29.04	28.99	28.99	28.74	28.99	28.99	29.04	29.18	29.43	29.44
	25	28.20	27.72	27.82	27.79	27.83	27.98	27.72	27.47	27.48	27.47	27.72	27.98	27.83	27.79	27.82
	30	27.01	27.01	27.12	27.35	27.69	27.96	28.88	29.28	28.33	29.28	28.88	27.96	27.69	27.35	27.12
	35	27.73	27.74	28.24	28.50	29.30	30.55	31.80	32.88	33.00	32.88	31.80	30.55	29.30	28.50	28.24
	40	30.96	30.61	30.33	32.65	33.70	36.09	35.96	38.70	40.37	38.70	35.96	36.09	33.70	32.65	30.33
	45	34.28	35.20	34.10	36.01	37.00	39.45	37.53	40.89	40.90	40.89	37.53	39.45	37.00	36.01	34.10
	50	33.75	34.58	33.83	34.68	35.31	36.06	34.77	36.75	34.74	36.75	34.77	36.06	35.31	34.68	33.83
	55	33.57	32.36	31.74	33.13	34.11	33.80	33.38	35.07	34.04	35.07	33.38	33.80	34.11	33.13	31.74
	60	46.77	52.70	51.20	51.84	52.85	53.92	54.30	57.00	46.34	57.00	54.30	53.92	52.85	51.84	51.20
	65	64.33	71.28	67.74	72.14	76.32	76.46	73.52	80.10	69.66	80.10	73.52	76.46	76.32	72.14	67.74
	70	65.63	75.33	71.84	72.31	75.53	77.47	72.34	79.11	69.69	79.11	72.34	77.47	75.53	72.31	71.84
	75	43.56	51.16	50.03	52.16	54.57	58.42	55.40	58.01	58.00	58.01	55.40	58.42	54.57	52.16	50.03
	80	23.24	27.86	28.04	25.46	27.44	27.02	23.40	24.29	26.95	24.29	23.40	27.02	27.44	25.46	28.04
	85	9.22	9.65	9.57	9.01	9.30	9.35	8.82	8.97	9.29	8.97	8.82	9.35	9.30	9.01	9.57
	90	3.89	4.09	4.04	3.83	3.97	4.11	3.88	3.96	4.18	3.96	3.88	4.11	3.97	3.83	4.04
	95	1.10	1.17	1.16	1.14	1.12	1.17	1.08	1.09	1.06	1.09	1.08	1.17	1.12	1.14	1.16
	100	0.17	0.20	0.20	0.20	0.18	0.20	0.18	0.18	0.16	0.18	0.18	0.20	0.18	0.20	0.20
	105	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
	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/m²)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal Angle (deg/sec)			
	0	45	90	
	0	1635	1635	1635
	45	1285	1278	1387
	55	1286	1216	1307
	65	2228	2346	2643
	75	1406	1615	1761
	85	289	301	292



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	294	294	294	294	287	287	287	287	274	274	274	262	262	262	251	251	251	246
1	255	237	221	207	247	231	217	203	220	208	197	209	199	190	200	191	184	178
2	221	192	168	148	214	187	165	146	177	158	142	168	152	138	160	147	135	128
3	195	160	132	111	188	155	130	109	147	125	107	139	120	104	132	116	102	95
4	175	136	108	86	168	132	106	85	125	102	84	118	98	82	112	95	80	74
5	158	118	90	70	152	115	89	69	109	86	68	103	83	67	98	80	65	59
6	145	104	77	58	139	102	76	57	96	74	57	92	71	56	87	69	55	49
7	133	93	67	49	128	91	66	49	87	64	48	82	63	48	79	61	47	41
8	123	84	60	43	119	82	59	43	79	57	42	75	56	42	72	54	41	36
9	115	77	54	38	111	75	53	38	72	52	37	69	50	37	66	49	36	31
10	108	71	49	34	104	69	48	34	67	47	33	64	46	33	61	45	33	28

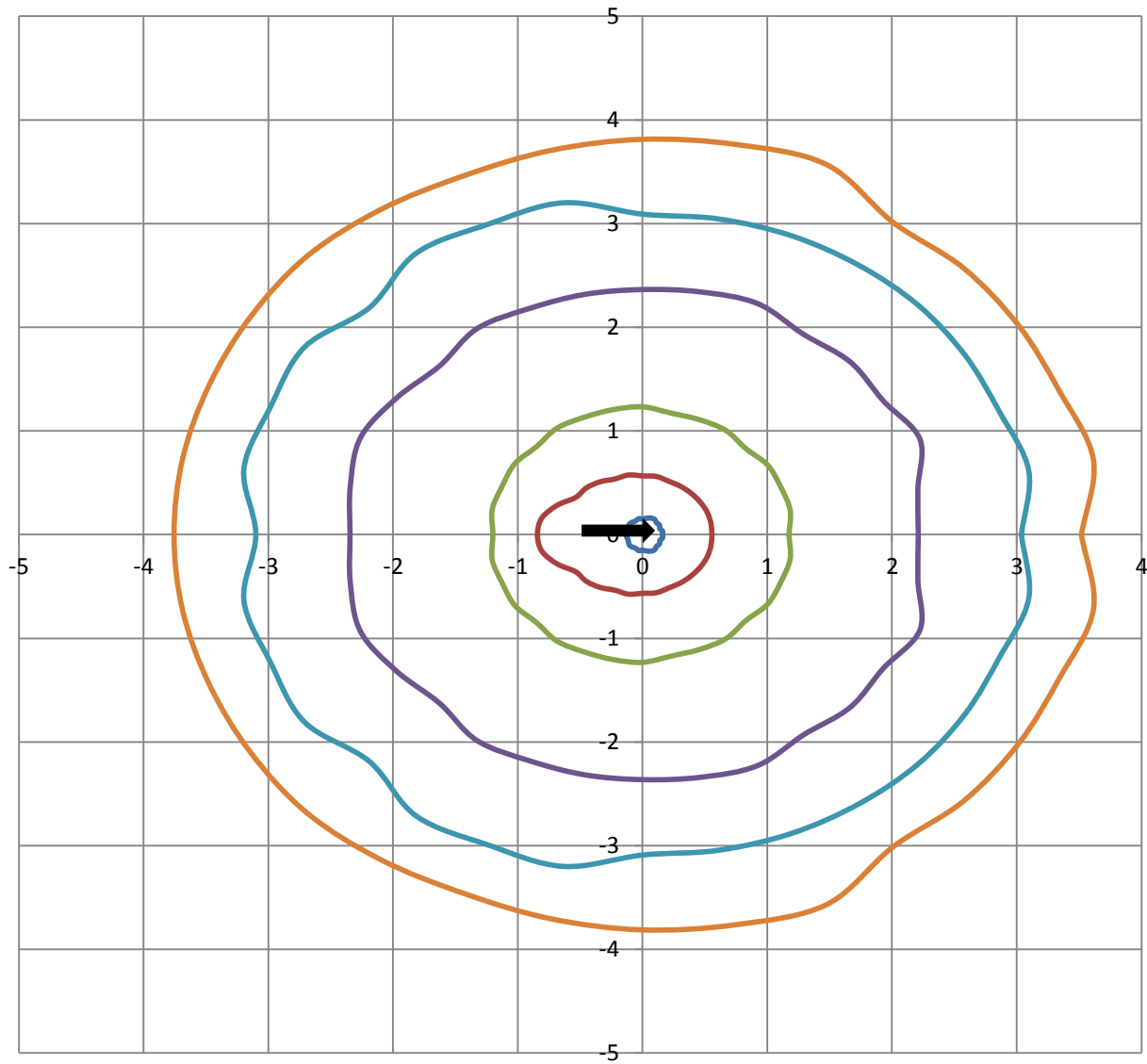
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	78.77 Candela
Central Cone Intensity:	67 Candela
Beam Flux:	140.8 Lumens
Beam Angle (0-180):	90.1 Degrees
Beam Angle (90-270):	23.6 Degrees
Field Angle (0-180):	172.1 Degrees
Field Angle (90-270):	172.3 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		4.92	1.48
6.00		2.19	2.22
8.00		1.23	2.95
10.0		0.788	3.69
12.0		0.547	4.43
14.0		0.402	5.17
16.0		0.308	5.91



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)	13.9	5.6%
FM	(30-60)	39.1	15.8%
FH	(60-80)	60.3	24.4%
FVH	(80-90)	6.2	2.5%
BL	(0-30)	13.6	5.5%
BM	(30-60)	42.2	17.1%
BH	(60-80)	64.7	26.2%
BVH	(80-90)	6.0	2.4%
UL	(90-100)	1.6	0.6%
UH	(100-180)	0.0	0.0%
Total		247.5	100.0%
BUG Rating	B0 U1 G0		