



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-S7-GTL-12-30-32 (3000K)
Order Number
11263738
Test Number
1254200

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: Spherical 7" stacked copper shades 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: 7.50 in.
Luminous Height: 2.000 in.

Summary of Results

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

Test Conditions

Test Temperature: 24.0 °C
Voltage: 12.03 VAC
Current: 1.897 A
Power: 12.47 W
Power Factor: 0.546
Frequency: 60 Hz
Current THD: 83.3 %

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
24.0 °C	12.03 VAC	1.897 A	12.47 W	0.546	60 Hz	83.3 %

Summary of Results

Spacing Criteria

0-180: 1.75

90-270: 1.62

Total Lumen Output:

322.1 Lumens

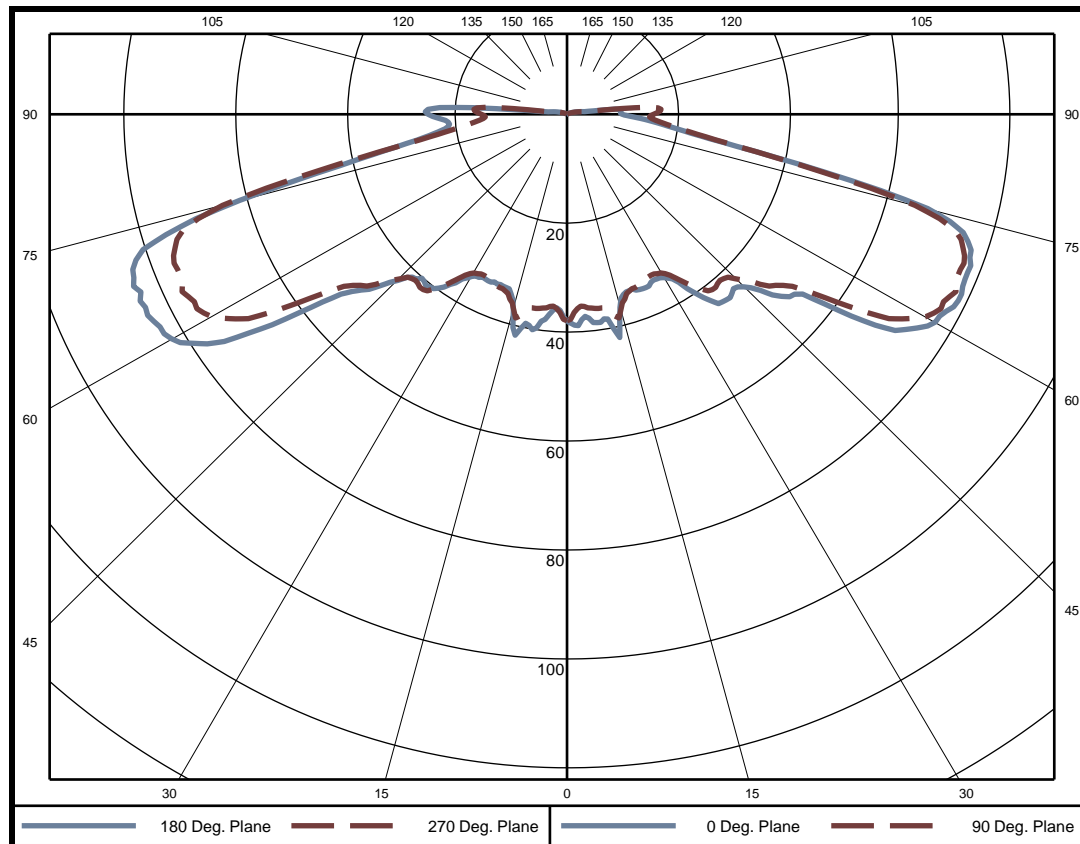
Luminaire Efficacy:

25.8 lm/w

Maximum Candela:

85 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.87	0.3%	60-65	38.18	11.9%	120-125	0	0.0%
5-10	2.65	0.8%	65-70	40.22	12.5%	125-130	0	0.0%
10-15	4.54	1.4%	70-75	38.72	12.0%	130-135	0	0.0%
15-20	5.90	1.8%	75-80	22.86	7.1%	135-140	0	0.0%
20-25	7.14	2.2%	80-85	11.53	3.6%	140-145	0	0.0%
25-30	8.47	2.6%	85-90	9.07	2.8%	145-150	0	0.0%
30-35	10.61	3.3%	90-95	9.31	2.9%	150-155	0	0.0%
35-40	13.80	4.3%	95-100	2.96	0.9%	155-160	0	0.0%
40-45	15.71	4.9%	100-105	1.03	0.3%	160-165	0	0.0%
45-50	18.86	5.9%	105-110	0.49	0.2%	165-170	0	0.0%
50-55	25.42	7.9%	110-115	0.15	0.0%	170-175	0	0.0%
55-60	33.58	10.4%	115-120	0.00	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	54	16.8%
0-60	148	45.8%
0-90	308	95.7%
90-180	14	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	37.95	37.95	37.95	37.95	37.95	37.95	37.95	37.95	37.95	37.95	37.95	37.95	37.95	37.95	37.95	37.95
	5	37.29	36.25	35.83	35.62	35.47	35.88	35.96	36.98	36.93	36.98	35.96	35.88	35.47	35.62	35.83	36.25
	10	38.18	36.64	36.23	36.12	36.14	37.75	38.20	39.06	39.40	39.06	38.20	37.75	36.14	36.12	36.23	36.64
	15	36.74	36.29	36.34	36.18	37.31	38.54	38.30	37.91	37.45	37.91	38.30	38.54	37.31	36.18	36.34	36.29
	20	34.20	34.49	34.89	35.85	34.14	33.46	35.61	35.72	33.64	35.72	35.61	33.46	34.14	35.85	34.89	34.49
	25	34.83	33.53	33.47	33.74	33.81	32.90	32.85	33.36	33.77	33.36	32.85	32.90	33.81	33.74	33.47	33.53
	30	34.67	34.09	33.90	34.14	33.70	33.55	33.37	33.84	34.42	33.84	33.37	33.55	33.70	34.14	33.90	34.09
	35	40.13	39.99	39.73	39.04	38.21	38.00	38.39	38.19	38.78	38.19	38.39	38.00	38.21	39.04	39.73	39.99
	40	44.52	46.15	44.67	42.96	41.55	40.73	41.98	39.86	40.12	39.86	41.98	40.73	41.55	42.96	44.67	46.15
	45	44.86	45.14	43.47	43.70	42.77	41.43	43.11	41.93	43.19	41.93	43.11	41.43	42.77	43.70	43.47	45.14
	50	52.18	54.09	51.44	50.12	48.94	49.68	51.82	48.96	50.66	48.96	51.82	49.68	50.12	51.44	54.09	52.18
	55	67.59	69.64	65.08	69.23	61.31	61.17	70.92	68.90	70.03	68.90	70.92	61.17	61.31	69.23	65.08	69.64
	60	76.38	81.16	73.82	77.80	74.44	72.33	79.15	76.08	82.49	76.08	79.15	72.33	74.44	77.80	73.82	81.16
	65	78.18	84.66	76.87	80.98	77.13	75.06	82.61	78.68	84.00	78.68	82.61	75.06	77.13	80.98	76.87	84.66
	70	76.99	83.97	76.12	81.68	76.03	73.44	81.59	77.38	83.46	77.38	81.59	73.44	76.03	81.68	76.12	83.97
	75	67.07	73.80	65.39	69.17	64.75	58.94	58.88	54.75	61.22	54.75	58.88	58.94	64.75	69.17	65.39	73.80
	80	25.96	29.19	27.88	26.00	26.97	27.70	26.38	25.36	27.52	25.36	26.38	27.70	26.97	26.00	27.88	29.19
	85	15.29	16.61	16.31	16.08	16.86	18.08	18.72	18.84	21.31	18.84	18.72	18.08	16.86	16.08	16.31	16.61
	90	9.80	12.56	13.66	14.69	15.62	18.21	22.44	21.54	25.13	21.54	22.44	18.21	15.62	14.69	13.66	12.56
	95	9.52	13.13	14.29	16.77	14.56	13.11	15.54	10.99	8.58	10.99	15.54	13.11	14.56	16.77	14.29	13.13
	100	2.57	2.75	2.66	2.52	2.46	2.52	2.39	2.31	2.49	2.31	2.39	2.52	2.46	2.52	2.66	2.75
	105	1.42	1.53	1.47	1.40	1.35	1.34	1.29	1.21	1.35	1.21	1.29	1.34	1.35	1.40	1.47	1.53
	110	0.58	0.63	0.58	0.59	0.55	0.52	0.54	0.49	0.55	0.49	0.54	0.52	0.55	0.59	0.58	0.63
	115	0.07	0.05	0.07	0.06	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.03	0.06	0.06	0.07	0.05
	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	1331	1331	1331
	45	2659	2576	2535
	55	3695	3558	3352
	65	4093	4024	4038
	75	3498	3410	3377
	85	824	879	909



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	380	380	380	380	370	370	370	370	350	350	350	332	332	332	316	316	316	308
1	329	306	286	267	318	297	279	262	280	265	250	265	252	240	250	240	230	221
2	287	250	219	193	276	242	214	190	227	203	183	214	194	176	201	185	170	160
3	253	208	173	145	243	201	169	142	189	161	138	177	153	133	166	146	129	119
4	226	177	140	113	217	171	137	111	160	131	107	150	125	104	141	119	101	92
5	205	153	117	90	196	148	114	89	139	109	86	130	104	84	122	100	81	73
6	187	134	99	74	178	130	97	73	122	93	71	115	89	69	108	85	67	59
7	171	120	86	63	164	116	84	62	109	81	60	103	77	58	97	74	57	49
8	158	108	76	54	152	104	74	53	99	71	52	93	68	50	88	66	49	42
9	147	98	67	47	141	95	66	46	90	63	45	85	61	44	81	59	43	36
10	137	89	60	41	132	87	59	41	83	57	40	78	55	39	74	53	38	31

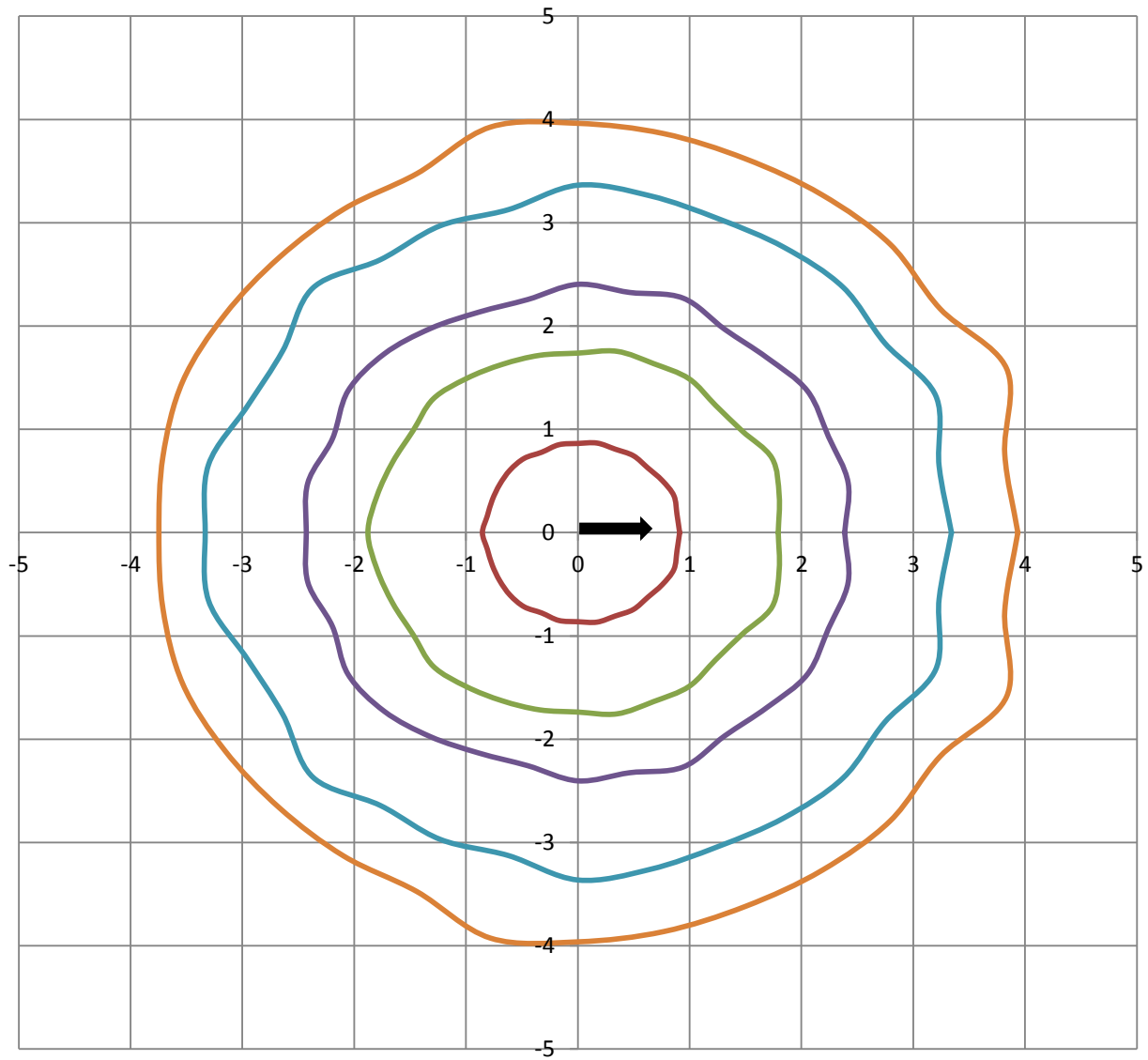
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	37.95 Candela
Central Cone Intensity:	37 Candela
Beam Flux:	302.4 Lumens
Beam Angle (0-180):	176.3 Degrees
Beam Angle (90-270):	166.6 Degrees
Field Angle (0-180):	194.2 Degrees
Field Angle (90-270):	194.8 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		2.37	6.75
6.00		1.05	10.1
8.00		0.593	13.5
10.0		0.379	16.9
12.0		0.264	20.3
14.0		0.194	23.6
16.0		0.148	27.0



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)	14.8	4.6%
FM	(30-60)	59.8	18.6%
FH	(60-80)	71.3	22.2%
FVH	(80-90)	9.6	3.0%
BL	(0-30)	14.8	4.6%
BM	(30-60)	58.2	18.1%
BH	(60-80)	68.2	21.2%
BVH	(80-90)	11.2	3.5%
UL	(90-100)	12.4	3.8%
UH	(100-180)	1.7	0.5%
Total		322.0	100.0%
BUG Rating	B0 U2 G1		