



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-S5-GTL-GL-12-30-25 (GRADUATED LOUVERS, 3000K)
Order Number
11263738
Test Number
1254212

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: Spherical 5" stacked copper shades with graduated 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: 5.00 in.
Luminous Height: 2.000 in.

Summary of Results

Roadway Classification: Type V, Very Short
Cutoff Classification: Noncutoff
BUG Rating: B0 U1 G1

Test Conditions

Test Temperature: 24.7 °C
Voltage: 12.04 VAC
Current: 1.870 A
Power: 13.30 W
Power Factor: 0.590
Frequency: 60 Hz
Current THD: 77.0 %

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	1.870 A	13.30 W	0.590	60 Hz	77.0 %

Summary of Results

Spacing Criteria

0-180: 1.54
90-270: 1.54

Total Lumen Output:

182.9 Lumens

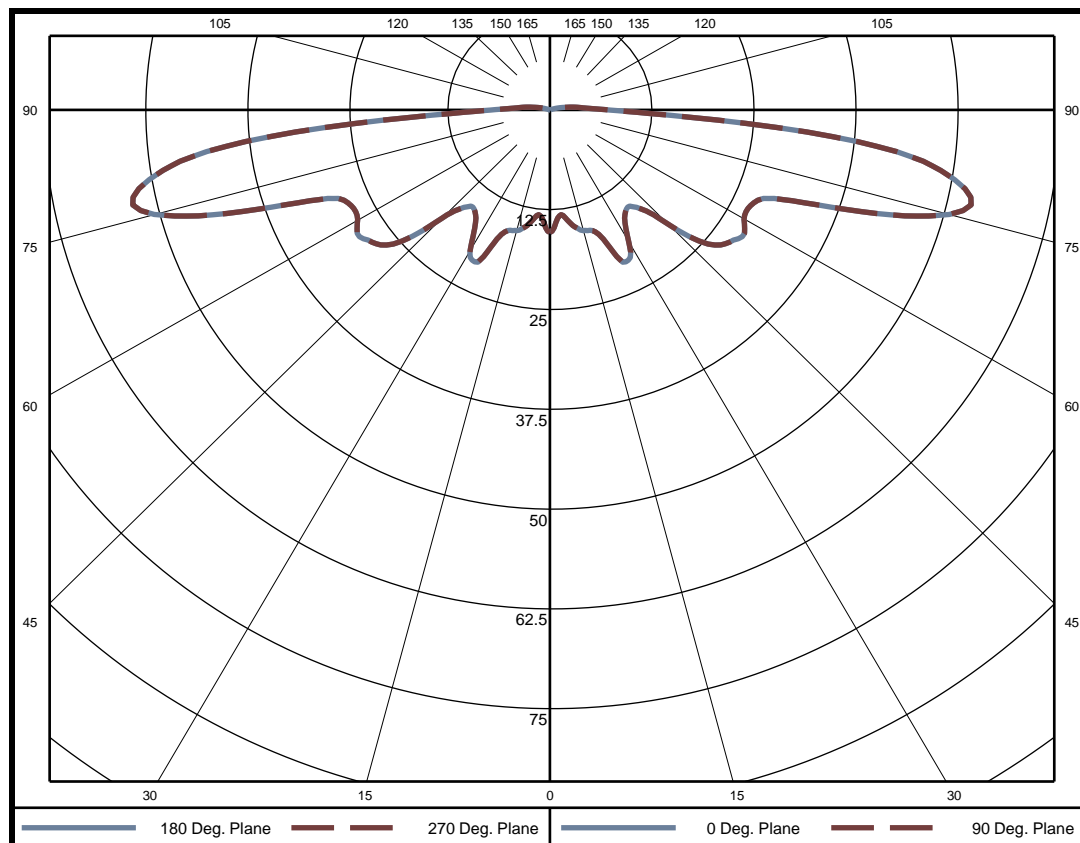
Luminaire Efficacy:

13.8 lm/w

Maximum Candela:

53 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.34	0.2%	60-65	13.26	7.2%	120-125	0	0.0%
5-10	0.98	0.5%	65-70	15.06	8.2%	125-130	0	0.0%
10-15	1.80	1.0%	70-75	22.66	12.4%	130-135	0	0.0%
15-20	2.62	1.4%	75-80	27.80	15.2%	135-140	0	0.0%
20-25	3.86	2.1%	80-85	23.47	12.8%	140-145	0	0.0%
25-30	5.25	2.9%	85-90	8.99	4.9%	145-150	0	0.0%
30-35	5.10	2.8%	90-95	2.79	1.5%	150-155	0	0.0%
35-40	5.22	2.9%	95-100	1.55	0.8%	155-160	0	0.0%
40-45	6.40	3.5%	100-105	0.80	0.4%	160-165	0	0.0%
45-50	9.56	5.2%	105-110	0.36	0.2%	165-170	0	0.0%
50-55	11.89	6.5%	110-115	0.12	0.1%	170-175	0	0.0%
55-60	12.98	7.1%	115-120	0.01	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	25	13.8%
0-60	66	36.1%
0-90	177	96.9%
90-180	6	3.1%



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	15.35	15.35	15.35	15.35	15.35	15.35	15.35	15.35	15.35	15.35	15.35	15.35	15.35	15.35	15.35
	5	13.33	13.33	13.33	13.33	13.33	13.33	13.33	13.33	13.33	13.33	13.33	13.33	13.33	13.33	13.33
	10	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40
	15	15.65	15.65	15.65	15.65	15.65	15.65	15.65	15.65	15.65	15.65	15.65	15.65	15.65	15.65	15.65
	20	16.26	16.26	16.26	16.26	16.26	16.26	16.26	16.26	16.26	16.26	16.26	16.26	16.26	16.26	16.26
	25	21.05	21.05	21.05	21.05	21.05	21.05	21.05	21.05	21.05	21.05	21.05	21.05	21.05	21.05	21.05
	30	19.39	19.39	19.39	19.39	19.39	19.39	19.39	19.39	19.39	19.39	19.39	19.39	19.39	19.39	19.39
	35	16.01	16.01	16.01	16.01	16.01	16.01	16.01	16.01	16.01	16.01	16.01	16.01	16.01	16.01	16.01
	40	15.83	15.83	15.83	15.83	15.83	15.83	15.83	15.83	15.83	15.83	15.83	15.83	15.83	15.83	15.83
	45	19.82	19.82	19.82	19.82	19.82	19.82	19.82	19.82	19.82	19.82	19.82	19.82	19.82	19.82	19.82
	50	26.34	26.34	26.34	26.34	26.34	26.34	26.34	26.34	26.34	26.34	26.34	26.34	26.34	26.34	26.34
	55	28.14	28.14	28.14	28.14	28.14	28.14	28.14	28.14	28.14	28.14	28.14	28.14	28.14	28.14	28.14
	60	27.42	27.42	27.42	27.42	27.42	27.42	27.42	27.42	27.42	27.42	27.42	27.42	27.42	27.42	27.42
	65	27.53	27.53	27.53	27.53	27.53	27.53	27.53	27.53	27.53	27.53	27.53	27.53	27.53	27.53	27.53
	70	34.71	34.71	34.71	34.71	34.71	34.71	34.71	34.71	34.71	34.71	34.71	34.71	34.71	34.71	34.71
	75	50.59	50.59	50.59	50.59	50.59	50.59	50.59	50.59	50.59	50.59	50.59	50.59	50.59	50.59	50.59
	80	50.26	50.26	50.26	50.26	50.26	50.26	50.26	50.26	50.26	50.26	50.26	50.26	50.26	50.26	50.26
	85	31.57	31.57	31.57	31.57	31.57	31.57	31.57	31.57	31.57	31.57	31.57	31.57	31.57	31.57	31.57
	90	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38
	95	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69
	100	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03
	105	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
	110	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41
	115	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
	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 (Degrees)			
	0	45	90	
	0	1212	1212	1212
	45	2215	2215	2215
	55	3126	3126	3126
	65	3148	3148	3148
	75	6143	6143	6143
	85	4191	4191	4191



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	216	216	216	216	211	211	211	211	200	200	200	190	190	190	181	181	181	177
1	178	162	147	133	172	157	143	130	147	135	125	138	128	119	130	122	115	109
2	154	129	109	92	147	125	106	90	116	100	86	109	95	83	102	90	80	74
3	136	107	85	67	130	103	83	66	96	78	64	90	74	62	84	71	59	54
4	122	91	69	52	116	88	67	51	82	64	50	77	61	48	71	58	46	41
5	111	80	58	42	106	77	57	41	72	54	40	67	51	39	63	49	38	33
6	101	70	50	35	97	68	49	34	64	46	33	60	44	32	56	42	31	27
7	93	63	43	29	89	61	42	29	57	41	28	54	39	28	51	37	27	22
8	87	57	38	25	83	55	37	25	52	36	24	49	34	24	46	33	23	19
9	81	52	34	22	77	50	34	22	48	32	21	45	31	21	43	30	20	16
10	76	48	31	20	73	46	30	19	44	29	19	42	28	19	40	27	18	14

Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	15.35 Candela
Central Cone Intensity:	14 Candela
Beam Flux:	177.1 Lumens
Beam Angle (0-180):	179.7 Degrees
Beam Angle (90-270):	179.7 Degrees
Field Angle (0-180):	204.5 Degrees
Field Angle (90-270):	204.5 Degrees

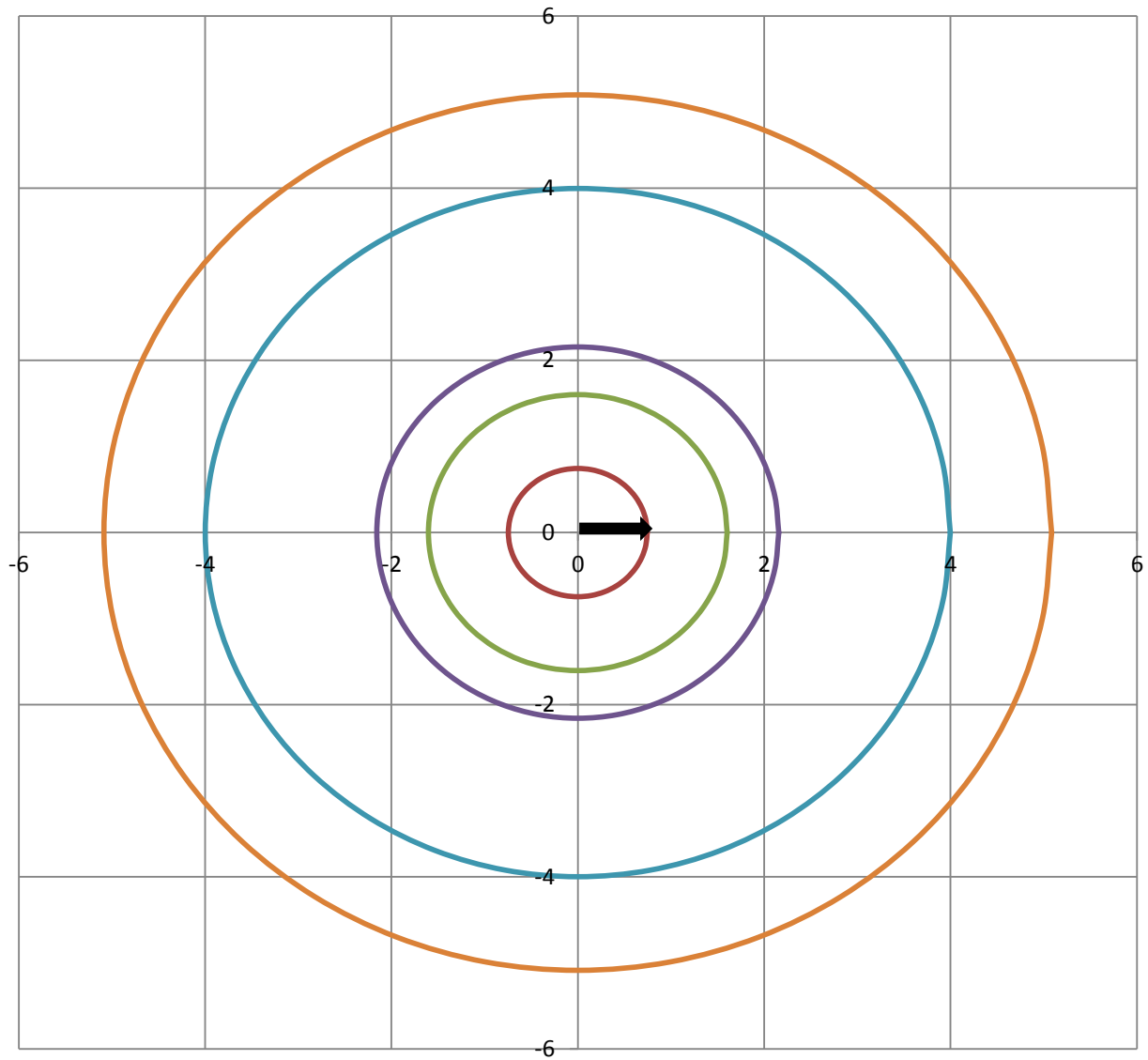
Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		0.959	6.18
6.00		0.426	9.27
8.00		0.240	12.4
10.0		0.153	15.4
12.0		0.107	18.5
14.0		0.0783	21.6
16.0		0.0600	24.7



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)	7.4	4.1%
FM	(30-60)	25.4	14.1%
FH	(60-80)	39.1	21.6%
FVH	(80-90)	15.7	8.7%
BL	(0-30)	7.4	4.1%
BM	(30-60)	25.4	14.1%
BH	(60-80)	39.1	21.6%
BVH	(80-90)	15.7	8.7%
UL	(90-100)	4.3	2.4%
UH	(100-180)	1.2	0.7%
Total		180.6	100.0%
BUG Rating	B0 U1 G1		