



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-NL-12-30-32 (NO LOUVERS, 3000K)**  
Order Number  
11263738  
Test Number  
1254193

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.  
This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.  
This report must not be used by the client to claim product certification, approval, or endorsement by  
NVLAP, NIST, or any agency of the Federal Government.



**Luminaire Description:** Spherical 10" 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: 9.75 in.  
Luminous Height: 1.500 in.

**Summary of Results**

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

**Test Conditions**

Test Temperature: 24.5 °C  
Voltage: 12.04 VAC  
Current: 1.901 A  
Power: 12.45 W  
Power Factor: 0.544  
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
24.5 °C	12.04 VAC	1.901 A	12.45 W	0.544	60 Hz	83.7 %

### Summary of Results

#### Spacing Criteria

0-180: 1.31

90-270: 1.17

Total Lumen Output:

507.3 Lumens

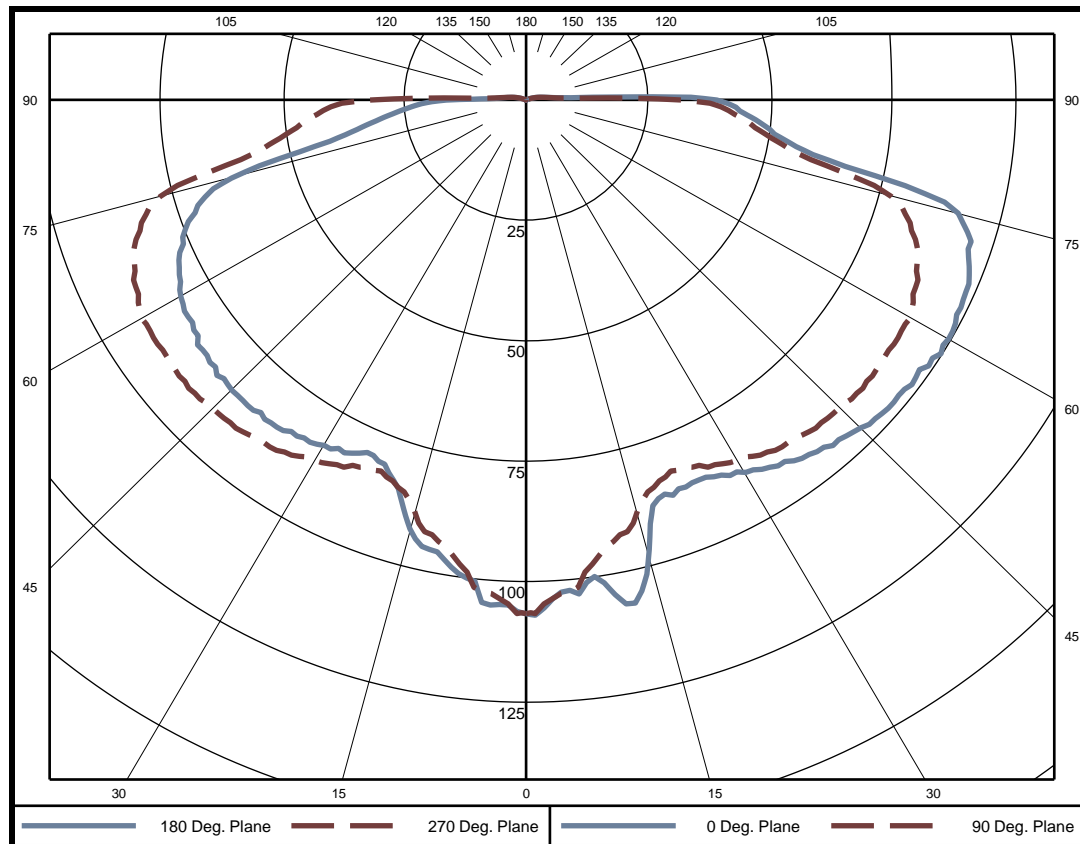
Luminaire Efficacy:

40.7 lm/w

Maximum Candela:

112 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	2.48	0.5%	60-65	44.09	8.7%	120-125	0.01	0.0%
5-10	7.06	1.4%	65-70	44.66	8.8%	125-130	0.00	0.0%
10-15	11.65	2.3%	70-75	43.53	8.6%	130-135	0.00	0.0%
15-20	14.68	2.9%	75-80	33.92	6.7%	135-140	0.00	0.0%
20-25	17.67	3.5%	80-85	24.96	4.9%	140-145	0.00	0.0%
25-30	21.44	4.2%	85-90	20.50	4.0%	145-150	0	0.0%
30-35	25.64	5.1%	90-95	7.12	1.4%	150-155	0.00	0.0%
35-40	29.84	5.9%	95-100	2.28	0.4%	155-160	0.00	0.0%
40-45	33.69	6.6%	100-105	1.39	0.3%	160-165	0.00	0.0%
45-50	37.16	7.3%	105-110	0.74	0.1%	165-170	0.00	0.0%
50-55	40.04	7.9%	110-115	0.23	0.0%	170-175	0.00	0.0%
55-60	42.48	8.4%	115-120	0.02	0.0%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	130	25.7%
0-60	284	55.9%
0-90	495	97.7%
90-180	12	2.3%



### 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	106.7	106.7	106.7	106.7	106.7	106.7	106.7	106.7	106.7	106.7	106.7	106.7	106.7	106.7	106.7
	5	102.2	102.9	101.4	102.3	102.5	102.5	102.3	103.1	104.7	103.1	102.3	102.5	102.5	102.3	101.4
	10	104.3	97.2	94.5	92.5	94.2	100.0	97.3	98.0	96.9	98.0	97.3	100.0	94.2	92.5	94.5
	15	96.7	102.4	98.8	90.1	88.2	92.3	108.8	96.9	92.2	96.9	108.8	92.3	88.2	90.1	98.8
	20	87.4	85.1	87.9	85.3	83.3	85.2	85.9	85.3	82.4	85.3	85.9	85.2	83.3	85.3	87.9
	25	86.4	84.0	84.9	85.6	83.7	84.8	82.4	82.5	80.9	82.5	82.4	84.8	83.7	85.6	84.9
	30	89.3	85.3	86.5	87.5	86.4	86.5	83.3	84.3	82.8	84.3	83.3	86.5	86.4	87.5	86.5
	35	91.6	87.1	90.1	90.5	88.8	89.0	85.5	87.6	84.0	87.6	85.5	89.0	88.8	90.5	90.1
	40	94.1	89.0	93.4	93.3	89.9	91.1	86.8	89.9	84.7	89.9	86.8	91.1	89.9	93.3	93.4
	45	96.2	89.9	94.9	95.2	90.5	92.3	87.8	91.5	85.3	91.5	87.8	92.3	90.5	95.2	94.9
	50	97.6	90.3	95.7	96.6	90.9	93.0	88.0	91.7	84.8	91.7	88.0	93.0	90.9	96.6	95.7
	55	97.6	90.0	96.1	96.5	90.5	92.5	86.9	91.4	83.3	91.4	86.9	92.5	90.5	96.5	96.1
	60	99.2	89.7	96.3	96.9	90.6	92.5	86.4	90.7	81.8	90.7	86.4	92.5	90.6	96.9	96.3
	65	98.0	87.8	94.1	95.1	88.4	91.2	84.0	88.7	78.7	88.7	84.0	91.2	88.4	95.1	94.1
	70	95.7	84.2	91.4	92.7	84.7	88.9	80.5	84.5	73.8	84.5	80.5	88.9	84.7	92.7	91.4
	75	90.9	78.2	84.6	85.8	77.3	80.6	70.9	75.1	62.6	75.1	70.9	80.6	77.3	85.8	84.6
	80	55.7	55.8	56.4	55.4	53.2	53.2	41.0	45.5	35.2	45.5	41.0	53.2	53.2	55.4	56.4
	85	46.8	47.6	47.8	46.3	44.5	42.3	32.2	36.5	26.0	36.5	32.2	42.3	44.5	46.3	47.8
	90	38.8	38.6	37.5	35.0	31.9	30.1	19.4	21.2	16.4	21.2	19.4	30.1	31.9	35.0	37.5
	95	5.7	5.9	5.7	5.6	5.5	4.9	5.0	5.0	5.1	5.0	5.0	4.9	5.5	5.6	5.7
	100	3.4	3.5	3.4	3.3	3.3	3.0	3.1	3.2	3.3	3.2	3.1	3.0	3.3	3.3	3.4
	105	2.1	2.1	2.0	2.0	2.0	1.8	1.9	1.9	1.9	1.9	1.9	1.8	2.0	2.0	2.1
	110	1.1	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.9	0.9	1.0
	115	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
	120	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
	125	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
	130	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
	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	170	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	175	0.1	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
	180	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

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

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)			
	0	45	90	
	0	2215	2215	2215
	45	3607	3556	3392
	55	3738	3681	3467
	65	3395	3259	3062
	75	2934	2732	2493
	85	1470	1502	1398



### 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	601	601	601	601	586	586	586	586	557	557	557	531	531	531	507	507	507	496
1	524	489	457	429	507	475	447	421	451	427	405	428	408	390	407	391	376	363
2	463	408	362	324	447	397	355	319	376	340	309	356	326	300	338	313	291	277
3	414	347	295	254	399	338	290	251	320	278	244	303	268	238	288	258	232	218
4	374	301	247	206	360	293	242	203	277	234	199	263	225	194	250	217	190	177
5	341	264	211	171	328	257	207	169	244	200	166	232	193	163	221	187	159	147
6	313	235	182	145	301	229	180	144	218	174	141	208	168	139	198	163	136	124
7	288	211	160	125	278	206	158	124	196	153	122	187	149	120	179	144	118	107
8	267	191	143	109	258	186	141	109	178	137	107	171	133	105	163	129	104	93
9	249	174	128	97	241	170	126	96	163	123	95	157	120	94	150	117	92	82
10	233	160	116	87	226	157	114	86	150	112	85	145	109	84	139	106	83	73

### Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	106.7 Candela
Central Cone Intensity:	104 Candela
Beam Flux:	448.9 Lumens
Beam Angle (0-180):	157.3 Degrees
Beam Angle (90-270):	159.9 Degrees
Field Angle (0-180):	183.8 Degrees
Field Angle (90-270):	184.4 Degrees

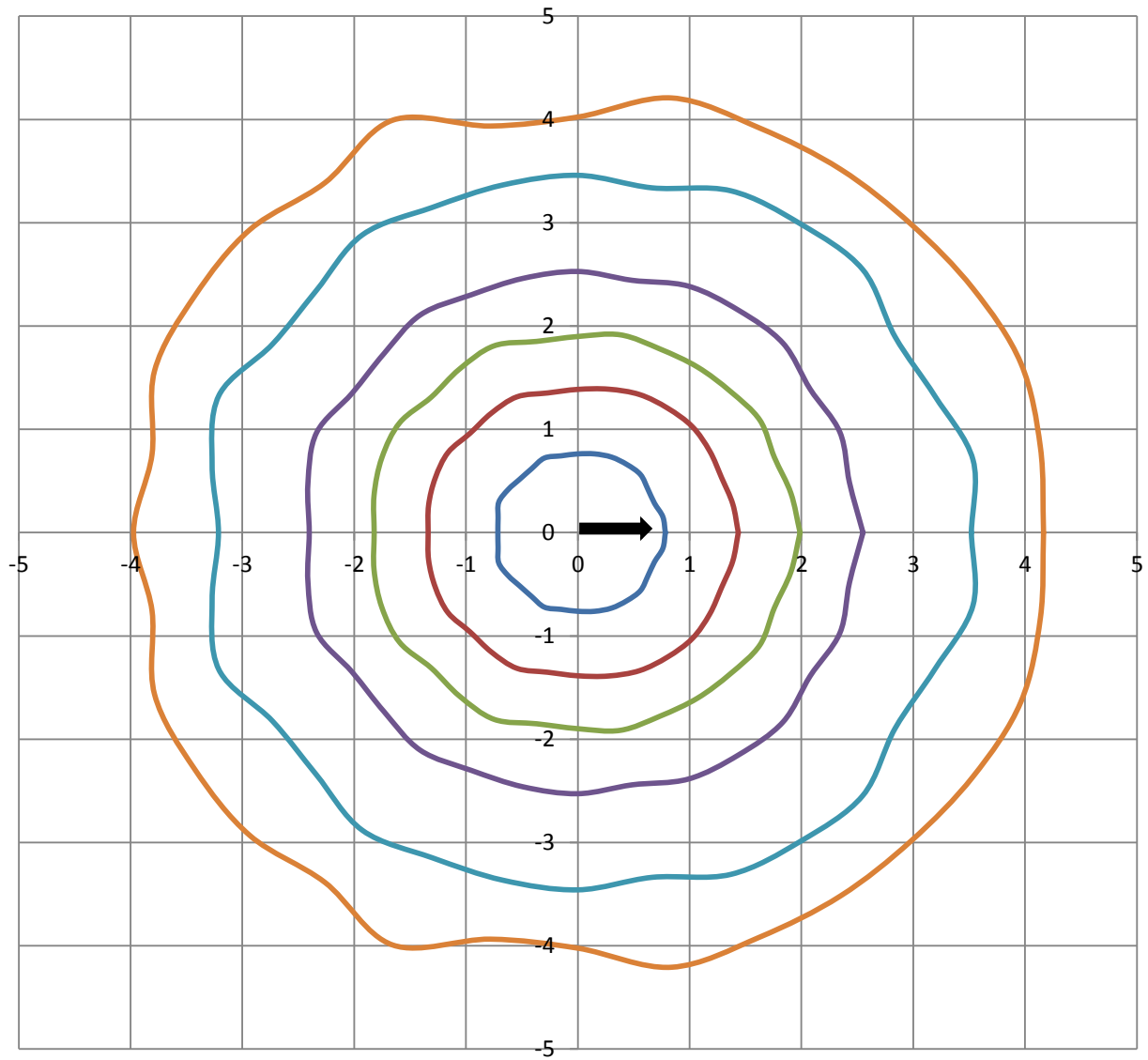
### Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		6.67	4.94
6.00		2.96	7.41
8.00		1.67	9.87
10.0		1.07	12.3
12.0		0.741	14.8
14.0		0.544	17.3
16.0		0.417	19.7



## 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)	37.6	7.4%
FM	(30-60)	106.3	20.8%
FH	(60-80)	86.5	17.0%
FVH	(80-90)	25.3	5.0%
BL	(0-30)	37.5	7.4%
BM	(30-60)	103.1	20.2%
BH	(60-80)	80.6	15.8%
BVH	(80-90)	20.7	4.1%
UL	(90-100)	9.9	1.9%
UH	(100-180)	2.4	0.5%
Total		509.9	100.0%
BUG Rating	B0 U1 G1		