



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  
**LML350-C11-30-P (3000K)**  
Order Number  
11263738  
Test Number  
1258675

Test Date

2016-06-09

Prepared By

Khang Nguyen, 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 louvers, painted white underside and frosted glass lens  
**Lamp:** One (1) Cree XHP 3000K LED  
**Mounting:** Pendant

**Luminaire**



**Luminaire Characteristics**

Luminous Diameter: 11.00 in.  
Luminous Height: 4.00 in.

**Summary of Results**

Roadway Classification: Type VS, Very Short  
Cutoff Classification: Semicutoff  
BUG Rating: B0 U1 G1

**Test Conditions**

Test Temperature: 24.8 °C  
Voltage: 12.10 VAC  
Current: 1.460 A  
Power: 17.43 W  
Power Factor: 0.986  
Frequency: 60 Hz  
Current THD: 15.1 %

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
24.8 °C	12.10 VAC	1.460 A	17.43 W	0.986	60 Hz	15.1 %

### Summary of Results

#### Spacing Criteria

0-180: 0.86  
90-270: 0.86

#### Total Lumen Output:

330.6 Lumens

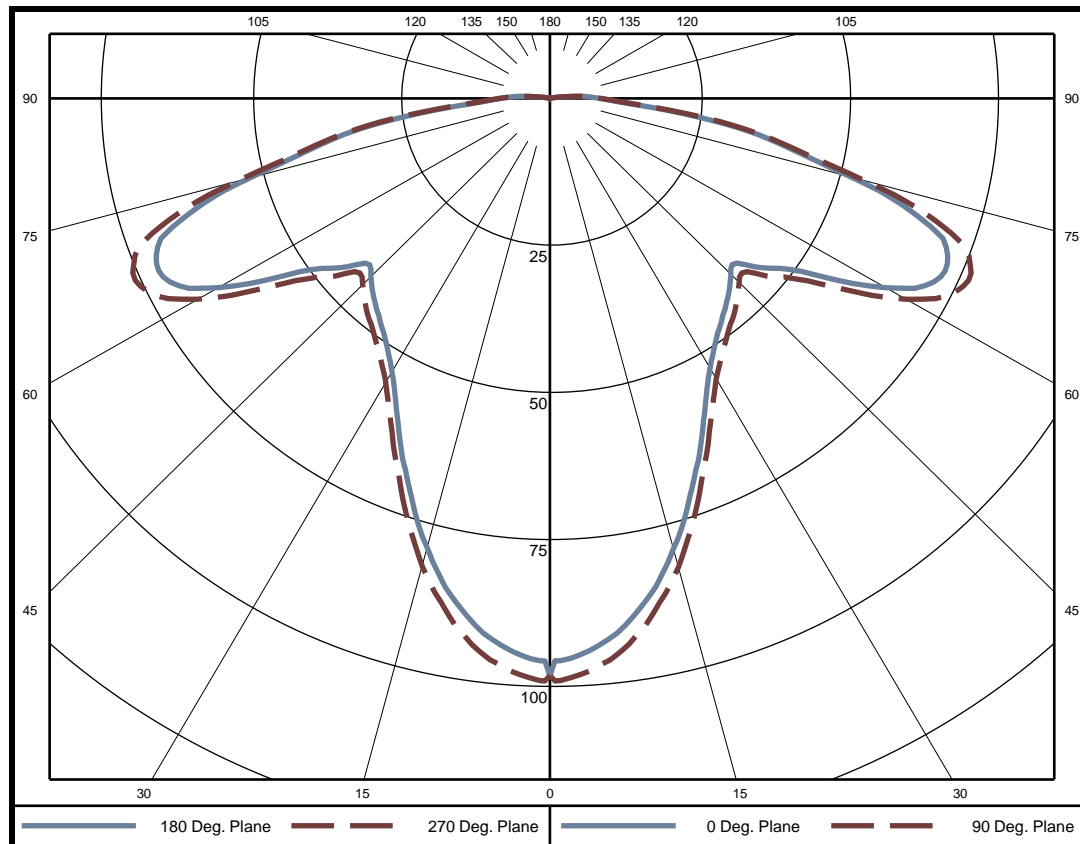
#### Luminaire Efficacy:

19.0 lm/w

#### Maximum Candela:

99 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	2.32	0.7%	60-65	34.66	10.5%	120-125	0	0.0%
5-10	6.66	2.0%	65-70	37.28	11.3%	125-130	0	0.0%
10-15	10.18	3.1%	70-75	33.39	10.1%	130-135	0	0.0%
15-20	12.58	3.8%	75-80	23.34	7.1%	135-140	0	0.0%
20-25	13.95	4.2%	80-85	14.37	4.3%	140-145	0	0.0%
25-30	14.66	4.4%	85-90	6.50	2.0%	145-150	0	0.0%
30-35	15.34	4.6%	90-95	3.56	1.1%	150-155	0	0.0%
35-40	16.16	4.9%	95-100	1.28	0.4%	155-160	0	0.0%
40-45	16.80	5.1%	100-105	0.41	0.1%	160-165	0.00	0.0%
45-50	17.67	5.3%	105-110	0.12	0.0%	165-170	0.00	0.0%
50-55	21.48	6.5%	110-115	0.03	0.0%	170-175	0.00	0.0%
55-60	27.87	8.4%	115-120	0.00	0.0%	175-180	0.00	0.0%

Zone	Lumens	% of Luminaire
0-40	92	27.8%
0-60	176	53.1%
0-90	325	98.4%
90-180	5	1.6%



### 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	98.20	98.20	98.20	98.20	98.20	98.20	98.20	98.20	98.20	98.20	98.20	98.20	98.20	98.20	98.20
	5	93.37	95.84	96.01	96.84	96.70	96.84	96.01	95.84	93.37	95.84	96.01	96.84	96.70	96.84	96.01
	10	87.72	90.05	90.27	91.02	91.11	91.02	90.27	90.05	87.72	90.05	90.27	91.02	91.11	91.02	90.27
	15	79.34	81.44	81.55	82.32	82.52	82.32	81.55	81.44	79.34	81.44	81.55	82.32	82.52	82.32	81.55
	20	69.69	71.23	71.55	72.10	72.24	72.10	71.55	71.23	69.69	71.23	71.55	72.10	72.24	72.10	71.55
	25	60.51	61.90	62.10	62.65	62.60	62.65	62.10	61.90	60.51	61.90	62.10	62.65	62.60	62.65	62.10
	30	53.25	54.36	54.57	55.06	55.18	55.06	54.57	54.36	53.25	54.36	54.57	55.06	55.18	55.06	54.57
	35	48.70	49.84	50.12	50.60	50.76	50.60	50.12	49.84	48.70	49.84	50.12	50.60	50.76	50.60	50.12
	40	45.64	46.80	47.02	47.41	47.64	47.41	47.02	46.80	45.64	46.80	47.02	47.41	47.64	47.41	47.02
	45	42.59	43.60	43.97	44.14	44.42	44.14	43.97	43.60	42.59	43.60	43.97	44.14	44.42	44.14	43.97
	50	44.52	45.65	46.13	46.31	47.00	46.31	46.13	45.65	44.52	45.65	46.13	46.31	47.00	46.31	46.13
	55	51.32	53.16	54.18	53.76	55.08	53.76	54.18	53.16	51.32	53.16	54.18	53.76	55.08	53.76	54.18
	60	64.33	66.66	67.65	66.51	68.32	66.51	67.65	66.66	64.33	66.66	67.65	66.51	68.32	66.51	67.65
	65	71.78	73.96	74.90	73.64	75.67	73.64	74.90	73.96	71.78	73.96	74.90	73.64	75.67	73.64	74.90
	70	69.65	71.90	72.25	71.28	73.16	71.28	72.25	71.90	69.65	71.90	72.25	71.28	73.16	71.28	72.25
	75	52.31	54.35	53.95	53.53	54.09	53.53	53.95	54.35	52.31	54.35	53.95	53.53	54.09	53.53	53.95
	80	35.13	35.86	35.47	35.74	35.83	35.74	35.47	35.86	35.13	35.86	35.47	35.74	35.83	35.74	35.47
	85	16.69	17.20	17.20	17.45	17.45	17.45	17.20	17.20	16.69	17.20	17.20	17.45	17.45	17.45	17.20
	90	8.39	8.56	8.48	8.63	8.57	8.63	8.48	8.56	8.39	8.56	8.48	8.63	8.57	8.63	8.48
	95	4.23	4.37	4.31	4.32	4.32	4.32	4.31	4.37	4.23	4.37	4.31	4.32	4.32	4.32	4.31
	100	1.20	1.23	1.23	1.24	1.24	1.24	1.23	1.23	1.20	1.23	1.23	1.24	1.24	1.24	1.23
	105	0.40	0.41	0.41	0.42	0.42	0.42	0.41	0.41	0.40	0.41	0.41	0.42	0.42	0.42	0.41
	110	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.11	0.11	0.11	0.11	0.11	0.11
	115	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.01	0.01	0.01	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	0.01	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.01	0.00
	175	0.02	0.02	0.03	0.03	0.04	0.03	0.03	0.02	0.02	0.02	0.03	0.03	0.04	0.03	0.03
	180	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03

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

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)			
		0	45	90
	0	1602	1602	1602
	45	1026	1059	1070
	55	1200	1267	1288
	65	1695	1769	1787
	75	1291	1331	1334
	85	444	458	464



### 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	392	392	392	392	383	383	383	383	364	364	364	348	348	348	332	332	332	325
1	344	321	302	284	333	313	295	279	297	282	269	283	271	259	270	260	250	242
2	303	268	238	213	293	260	233	210	247	224	204	235	215	198	223	207	193	184
3	271	227	194	167	261	221	190	165	210	183	161	199	176	157	190	170	153	144
4	245	197	162	135	236	192	159	134	182	154	131	173	148	128	165	144	126	117
5	224	174	139	113	215	169	137	112	161	132	110	153	128	108	146	124	106	98
6	206	155	121	97	198	151	119	96	144	116	95	138	112	93	132	109	92	84
7	190	140	107	85	184	137	106	84	131	103	83	125	100	82	120	98	80	73
8	177	127	96	75	171	125	95	74	120	93	74	115	90	73	110	88	72	65
9	165	117	87	67	160	115	86	67	110	84	66	106	82	65	102	81	65	58
10	155	108	80	61	151	106	79	61	102	77	60	99	76	60	95	74	59	53

### Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	98.20 Candela
Central Cone Intensity:	97 Candela
Beam Flux:	230.1 Lumens
Beam Angle (0-180):	69.0 Degrees
Beam Angle (90-270):	74.7 Degrees
Field Angle (0-180):	177.2 Degrees
Field Angle (90-270):	177.6 Degrees

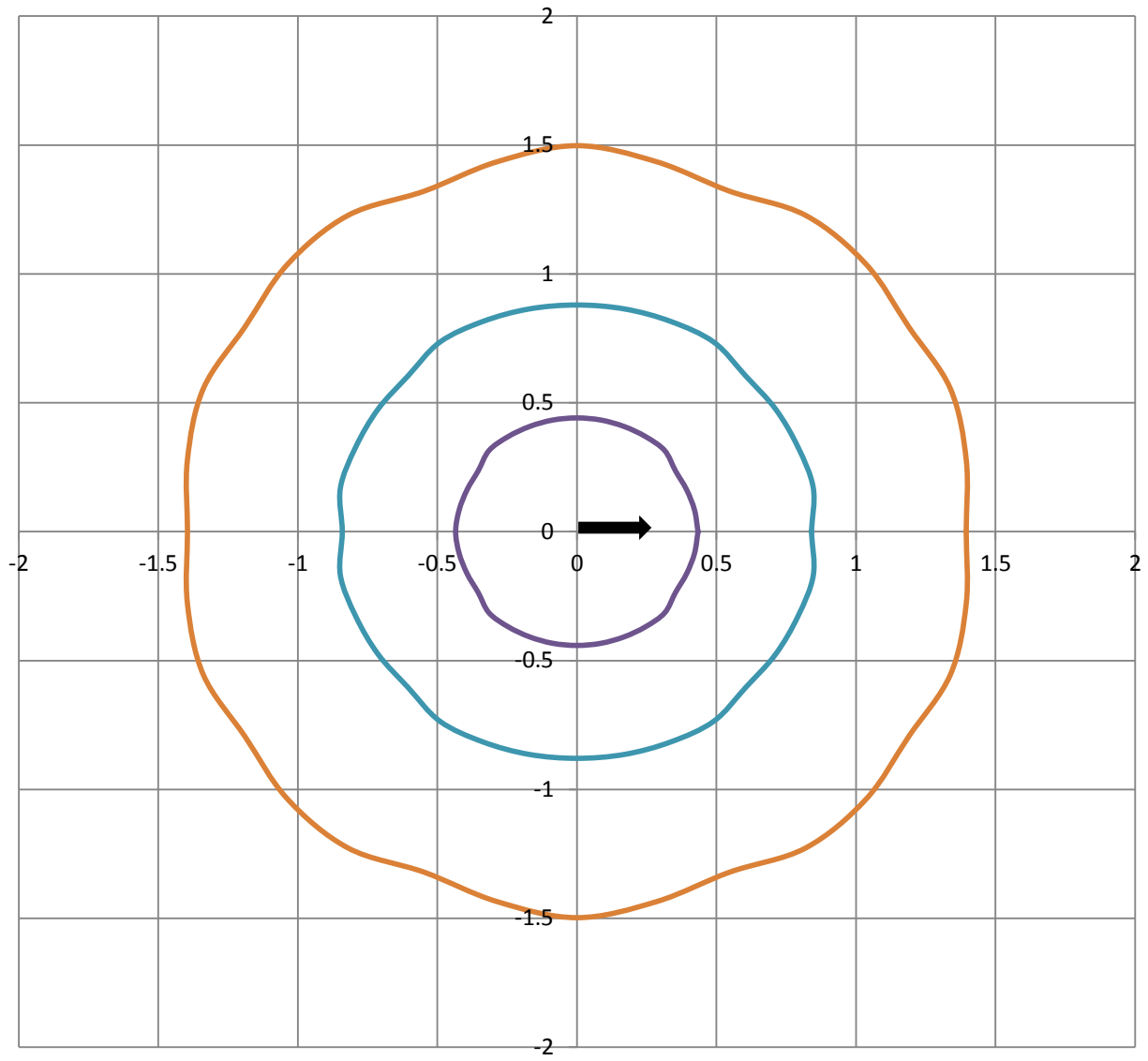
### Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		6.14	3.54
6.00		2.73	5.31
8.00		1.53	7.07
10.0		0.982	8.84
12.0		0.682	10.6
14.0		0.501	12.4
16.0		0.384	14.1



# ISOFootcandle Plot

Mounting Height - 10 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)	30.3	9.1%
FM	(30-60)	57.9	17.5%
FH	(60-80)	64.4	19.4%
FVH	(80-90)	10.5	3.2%
BL	(0-30)	30.3	9.1%
BM	(30-60)	57.9	17.5%
BH	(60-80)	64.4	19.4%
BVH	(80-90)	10.5	3.2%
UL	(90-100)	4.9	1.5%
UH	(100-180)	0.6	0.2%
Total		331.5	100.0%
<b>BUG Rating</b>	<b>B0 U1 G1</b>		