



UL Verification Services Inc.  
7036 Snowdrift Road  
Allentown, PA 18106  
610-774-1300

## Photometric Test Report

Relevant Standards  
IES LM-79-2008, ANSI C82.77-2002

**Prepared For**  
**Auroralight Inc**

2742 Loker Ave W  
#100  
Carlsbad, CA 92010-6619  
United States

**Catalog Number**  
**HSL11-6-M-45 (6W, 25° OPTIC, 4500K)**

Order Number  
12250114  
Test Number  
12250114.43

Report Date

2018-05-07

Prepared By

Sean Gregory, Project Handler

Approved By

Alexa Lambert, Project Handler

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:** Cylindrical metal housing, with adjustable knuckle, clear glass lens and internal LED module

**Lamp:** One (1) Cree XHP 4500K LED with 25°, medium optic

**Mounting:** Flood

**Ballast/Driver:** Integrated

**Note:** This report has been pro-rated using data from report numbers 12250114.41, 12250114.01, 12250114.02, 12250114.03, 12250114.04, 12250114.05, and 12250114.06 to account for differences in color temperature.

**Luminaire**



**Luminaire Characteristics**

Luminous Diameter: 1.50 in.  
Luminous Height: 1.000 in.

**Summary of Results**

Roadway Classification: Type II, Very Short  
Cutoff Classification: Full Cutoff  
BUG Rating: B1 U0 G0

**Test Conditions**

Test Temperature: 24.8 °C  
Voltage: 12.00 VAC  
Current: 0.5308 A  
Power: 6.309 W  
Power Factor: 0.990  
Frequency: 60 Hz  
Current THD: 7.22 %

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	12.00 VAC	0.5308 A	6.309 W	0.990	60 Hz	7.22 %

### Summary of Results

#### Spacing Criteria

0-180: 0.51  
90-270: 0.44

#### Total Lumen Output:

342.8 Lumens

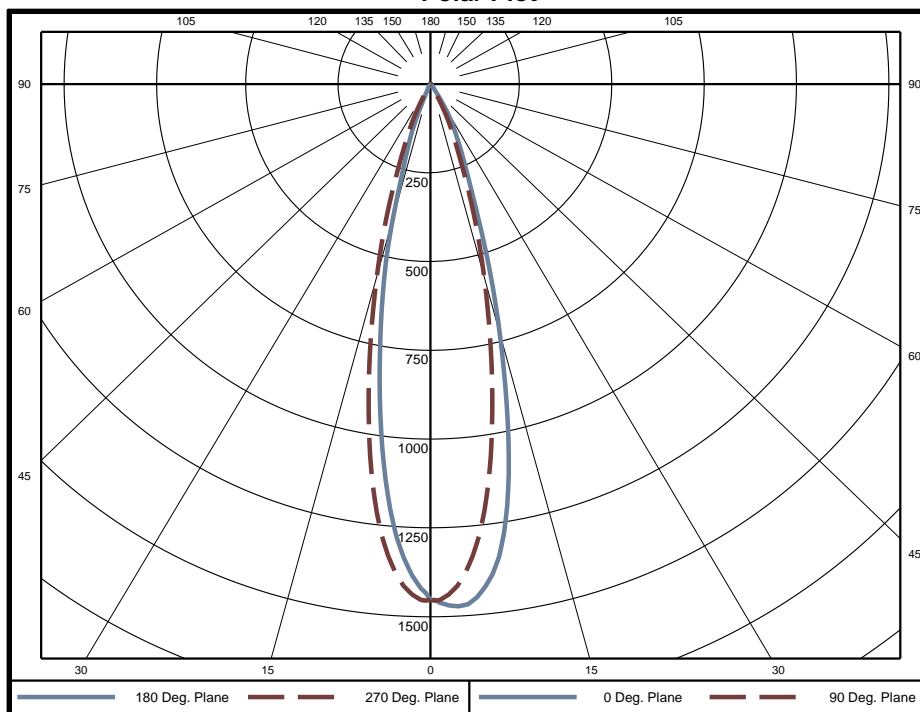
#### Luminaire Efficacy:

54.3 lm/w

#### Maximum Candela:

1477 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	33.34	9.7%	60-65	0.43	0.1%	120-125	0	0.0%
5-10	82.58	24.1%	65-70	0.29	0.1%	125-130	0	0.0%
10-15	90.14	26.3%	70-75	0.18	0.1%	130-135	0	0.0%
15-20	65.16	19.0%	75-80	0.09	0.0%	135-140	0	0.0%
20-25	36.61	10.7%	80-85	0.03	0.0%	140-145	0	0.0%
25-30	18.63	5.4%	85-90	0.01	0.0%	145-150	0	0.0%
30-35	7.43	2.2%	90-95	0.00	0.0%	150-155	0	0.0%
35-40	3.04	0.9%	95-100	0	0.0%	155-160	0	0.0%
40-45	1.93	0.6%	100-105	0	0.0%	160-165	0	0.0%
45-50	1.35	0.4%	105-110	0	0.0%	165-170	0	0.0%
50-55	0.94	0.3%	110-115	0	0.0%	170-175	0	0.0%
55-60	0.64	0.2%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	337	98.3%
0-60	342	99.7%
0-90	343	100.0%
90-180	0	0.0%



### 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	1453	1453	1453	1453	1453	1453	1453	1453	1453	1453	1453	1453	1453	1453	1453
	5	1451	1454	1429	1386	1334	1282	1239	1215	1204	1215	1239	1282	1334	1386	1429
	10	1205	1207	1153	1070	975	888	820	773	759	773	820	888	975	1070	1153
	15	732	738	707	650	577	509	446	377	351	377	446	509	577	650	707
	20	342	356	350	323	276	228	191	151	137	151	191	228	276	323	350
	25	181	186	182	156	122	75	41	27	23	27	41	75	122	156	182
	30	94	93	86	62	28	18	13	10	9	10	13	18	28	62	93
	35	23	23	22	16	12	8	6	4	3	4	6	8	12	16	22
	40	12	12	11	9	6	4	2	2	2	2	2	4	6	9	11
	45	8	8	7	5	4	2	2	1	1	1	2	2	4	5	7
	50	5	5	5	4	2	2	1	0	0	0	1	2	2	4	5
	55	4	4	3	2	2	1	0	0	0	0	0	1	2	2	3
	60	2	2	2	2	1	0	0	0	0	0	0	0	1	2	2
	65	2	2	2	1	1	0	0	0	0	0	0	0	1	1	2
	70	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1
	75	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1
	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120	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
	130	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
	140	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
	150	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
	160	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
	170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	175	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

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

Horizontal Angle (Degrees)

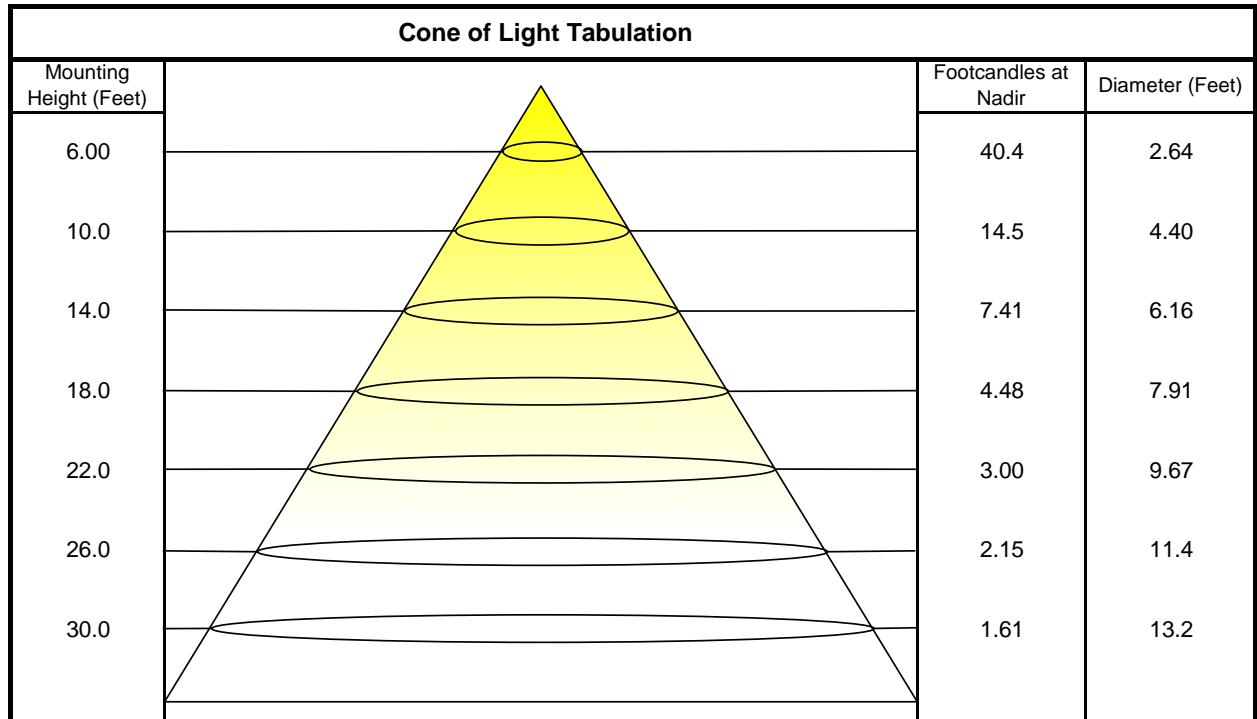
Vertical Angle (Degrees)	0	45	90
	0	1274000	1274000
	45	9324	8638
	55	5555	4879
	65	3689	3182
	75	2882	1843
	85	2131	400



### 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	408	408	408	408	399	399	399	399	381	381	381	365	365	365	350	350	350	343
1	394	387	380	374	386	379	374	368	366	361	357	353	350	347	342	339	337	331
2	381	368	358	349	374	363	353	345	352	345	338	342	336	331	333	328	324	319
3	369	352	340	330	362	348	337	327	340	330	322	332	324	317	324	318	313	308
4	357	338	325	314	352	335	322	313	328	317	309	322	313	306	316	308	302	298
5	346	326	312	301	342	323	310	300	317	306	297	312	303	295	307	299	292	289
6	336	314	300	290	332	312	299	289	308	296	287	303	293	285	299	290	283	280
7	326	304	290	280	323	302	288	279	298	286	277	295	284	276	291	282	275	271
8	317	295	280	270	314	293	279	270	290	278	269	287	276	268	284	274	267	264
9	309	286	272	262	306	284	271	262	282	270	261	279	268	260	277	267	260	256
10	301	278	264	255	298	276	263	254	274	262	254	272	261	253	270	260	253	249

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1453 Candela
Central Cone Intensity:	1411 Candela
Beam Flux:	175.5 Lumens
Beam Angle (0-180):	25.5 Degrees
Beam Angle (90-270):	26.0 Degrees
Field Angle (0-180):	46.5 Degrees
Field Angle (90-270):	47.9 Degrees





**IES "BUG" Rating**  
(Back Light, Uplight, Glare)  
Per IES TM-15-11



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	197.1	57.4%
FM	(30-60)	12.5	3.6%
FH	(60-80)	0.9	0.3%
FVH	(80-90)	0.0	0.0%
BL	(0-30)	129.5	37.7%
BM	(30-60)	3.1	0.9%
BH	(60-80)	0.0	0.0%
BVH	(80-90)	0.0	0.0%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		343.2	100.0%
<b>BUG Rating</b>	<b>B1 U0 G0</b>		