



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**  
**LSL10-WF-40 (60° OPTIC, 4000K)**

Order Number  
12250114  
Test Number  
12250114.71

Report Date

2018-05-08

Prepared By

Sean Gregory, Project Handler

Approved By

Alexa Lambert, Project Handler

The results contained in this report pertain only to the tested sample.  
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**Luminaire Description:** Cylindrical metal housing with adjustable knuckle  
**Lamp:** One (1) Cree XP-L 4000K LED with 60° wide flood optic  
**Mounting:** Flood  
**Ballast/Driver:** Integrated  
**Note:** This report has been pro-rated using data from report numbers 12250114.69, 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: 1.00 in.

#### Summary of Results

Roadway Classification: Type V, Very Short  
Cutoff Classification: Full Cutoff  
BUG Rating: B0 U0 G0

#### Test Conditions

Test Temperature: 24.2 °C  
Voltage: 12.02 VAC  
Current: 0.4242 A  
Power: 3.198 W  
Power Factor: 0.627  
Frequency: 60 Hz  
Current THD: 92.0 %

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
24.2 °C	12.02 VAC	0.4242 A	3.198 W	0.627	60 Hz	92.0 %

### Summary of Results

#### Spacing Criteria

0-180: 0.90

90-270: 0.90

#### Total Lumen Output:

282.6 Lumens

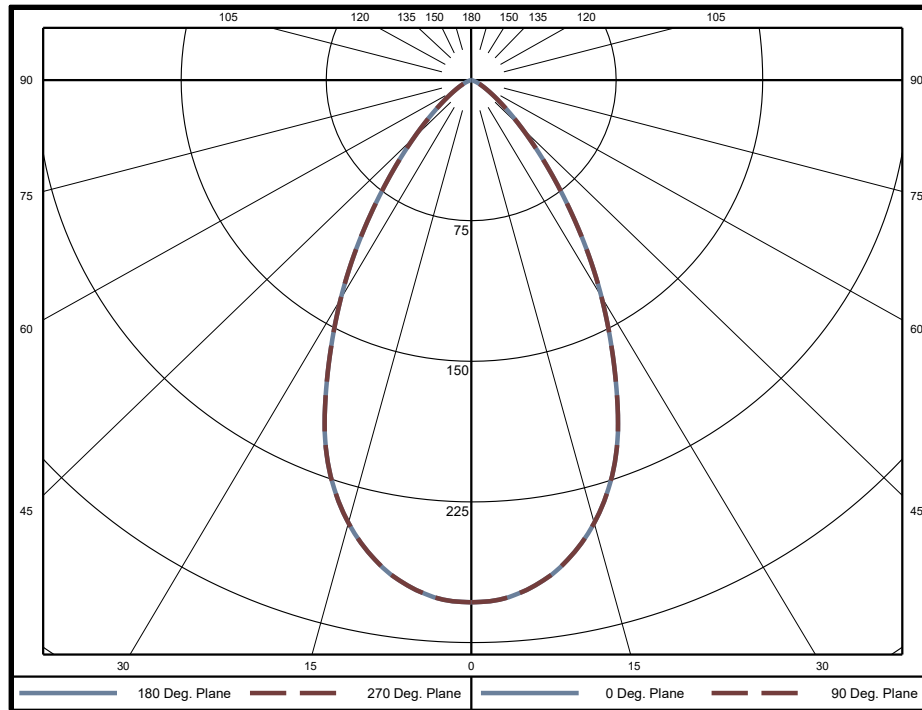
#### Luminaire Efficacy:

88.4 lm/w

#### Maximum Candela:

279 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	6.62	2.3%	60-65	2.70	1.0%	120-125	0	0.0%
5-10	19.29	6.8%	65-70	1.50	0.5%	125-130	0	0.0%
10-15	30.19	10.7%	70-75	0.66	0.2%	130-135	0	0.0%
15-20	38.10	13.5%	75-80	0.15	0.1%	135-140	0	0.0%
20-25	41.34	14.6%	80-85	0.00	0.0%	140-145	0	0.0%
25-30	39.28	13.9%	85-90	0	0.0%	145-150	0	0.0%
30-35	33.92	12.0%	90-95	0	0.0%	150-155	0	0.0%
35-40	26.19	9.3%	95-100	0	0.0%	155-160	0	0.0%
40-45	18.47	6.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	12.11	4.3%	105-110	0	0.0%	165-170	0	0.0%
50-55	7.54	2.7%	110-115	0	0.0%	170-175	0	0.0%
55-60	4.55	1.6%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	235	83.1%
0-60	278	98.2%
0-90	283	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	278.6	278.6	278.6	278.6	278.6	278.6	278.6	278.6	278.6	278.6	278.6	278.6	278.6	278.6	278.6
	5	275.1	275.1	275.1	275.1	275.1	275.1	275.1	275.1	275.1	275.1	275.1	275.1	275.1	275.1	275.1
	10	264.1	264.1	264.1	264.1	264.1	264.1	264.1	264.1	264.1	264.1	264.1	264.1	264.1	264.1	264.1
	15	244.9	244.9	244.9	244.9	244.9	244.9	244.9	244.9	244.9	244.9	244.9	244.9	244.9	244.9	244.9
	20	217.0	217.0	217.0	217.0	217.0	217.0	217.0	217.0	217.0	217.0	217.0	217.0	217.0	217.0	217.0
	25	176.7	176.7	176.7	176.7	176.7	176.7	176.7	176.7	176.7	176.7	176.7	176.7	176.7	176.7	176.7
	30	135.4	135.4	135.4	135.4	135.4	135.4	135.4	135.4	135.4	135.4	135.4	135.4	135.4	135.4	135.4
	35	96.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1
	40	62.9	62.9	62.9	62.9	62.9	62.9	62.9	62.9	62.9	62.9	62.9	62.9	62.9	62.9	62.9
	45	38.6	38.6	38.6	38.6	38.6	38.6	38.6	38.6	38.6	38.6	38.6	38.6	38.6	38.6	38.6
	50	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7
	55	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9
	60	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
	65	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
	70	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	75	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	80	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
	85	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
	90	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
	95	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
	100	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
	105	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
	110	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
	115	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
	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	0.0	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	0.0	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)

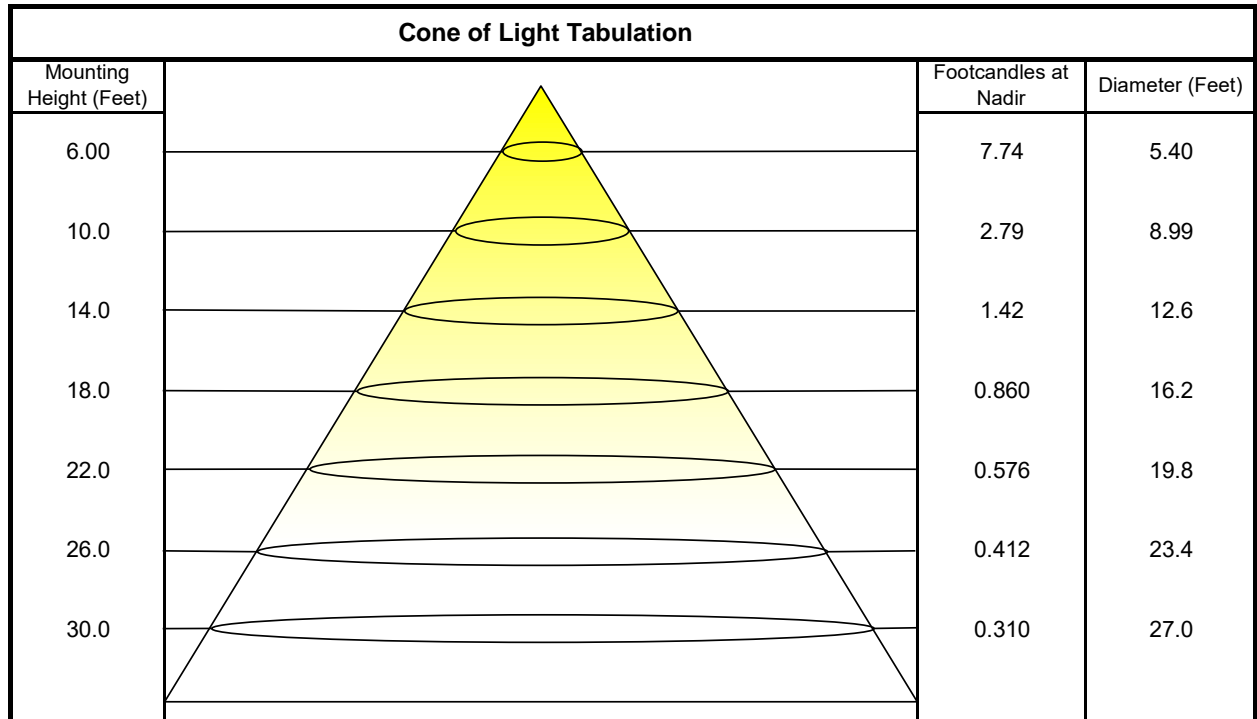
Vertical Angle (Degrees)	0	45	90
	0	549800	549800
	45	107800	107800
	55	44480	44480
	65	19000	19000
	75	4869	4869
	85	0	0



### 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	336	336	336	336	329	329	329	329	314	314	314	301	301	301	288	288	288	283
1	319	311	303	296	312	305	298	292	293	288	283	283	278	274	273	270	266	261
2	302	287	274	264	295	282	270	261	272	263	255	264	256	250	256	250	244	239
3	285	265	249	237	279	261	247	235	253	241	231	246	236	228	240	231	224	220
4	268	245	228	215	263	242	226	214	236	222	211	230	218	209	224	214	206	202
5	253	228	210	197	249	225	208	196	220	205	194	215	202	192	210	199	190	186
6	239	212	194	181	235	210	193	180	205	190	179	201	188	177	197	186	176	172
7	226	198	180	167	222	196	179	166	192	177	165	189	175	165	186	173	164	159
8	215	186	167	155	211	184	167	155	181	165	154	178	163	153	175	162	152	148
9	204	174	156	144	200	173	156	144	170	154	144	167	153	143	165	152	142	138
10	193	164	147	135	190	163	146	135	160	145	134	158	144	134	156	143	134	130

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	278.6 Candela
Central Cone Intensity:	277 Candela
Beam Flux:	171.4 Lumens
Beam Angle (0-180):	59.0 Degrees
Beam Angle (90-270):	59.0 Degrees
Field Angle (0-180):	96.2 Degrees
Field Angle (90-270):	96.2 Degrees





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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	87.4	30.9%
FM	(30-60)	51.5	18.2%
FH	(60-80)	2.5	0.9%
FVH	(80-90)	0.0	0.0%
BL	(0-30)	87.4	30.9%
BM	(30-60)	51.5	18.2%
BH	(60-80)	2.5	0.9%
BVH	(80-90)	0.0	0.0%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		282.8	100.0%
<b>BUG Rating</b>	<b>B0 U0 G0</b>		