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## 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**  
**LWW-2-40 (4000K)**

Order Number

12250114

Test Number

12250114.06

Test Date

2018-04-12

Prepared By

Samuel DePue, Technician

Approved By

Alexa Lambert, Project Handler

The results contained in this report pertain only to the tested sample.  
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**Luminaire Description:** Brass housing with brass glare shield, dual light source and adjustable knuckle  
**Lamp:** Two (2) XP-L 4000K LEDs with two (2) acrylic optics  
**Mounting:** Flood  
**Ballast/Driver:** Integrated

**Luminaire**



**Luminaire Characteristics**

Luminous Length: 2.00 in.  
Luminous Width: 3.250 in.  
Luminous Height: 1.00 in.

**Summary of Results**

Roadway Classification: Type I, Very Short  
Cutoff Classification: Cutoff  
BUG Rating: B0 U1 G0

**Test Conditions**

Test Temperature: 24.4 °C  
Voltage: 12.01 VAC  
Current: 0.5656 A  
Power: 4.224 W  
Power Factor: 0.622  
Frequency: 60 Hz  
Current THD: 93.0 %

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
24.4 °C	12.01 VAC	0.5656 A	4.224 W	0.622	60 Hz	93.0 %

### Summary of Results

#### Spacing Criteria

0-180: 1.25  
90-270: 1.19

#### Total Lumen Output:

215.6 Lumens

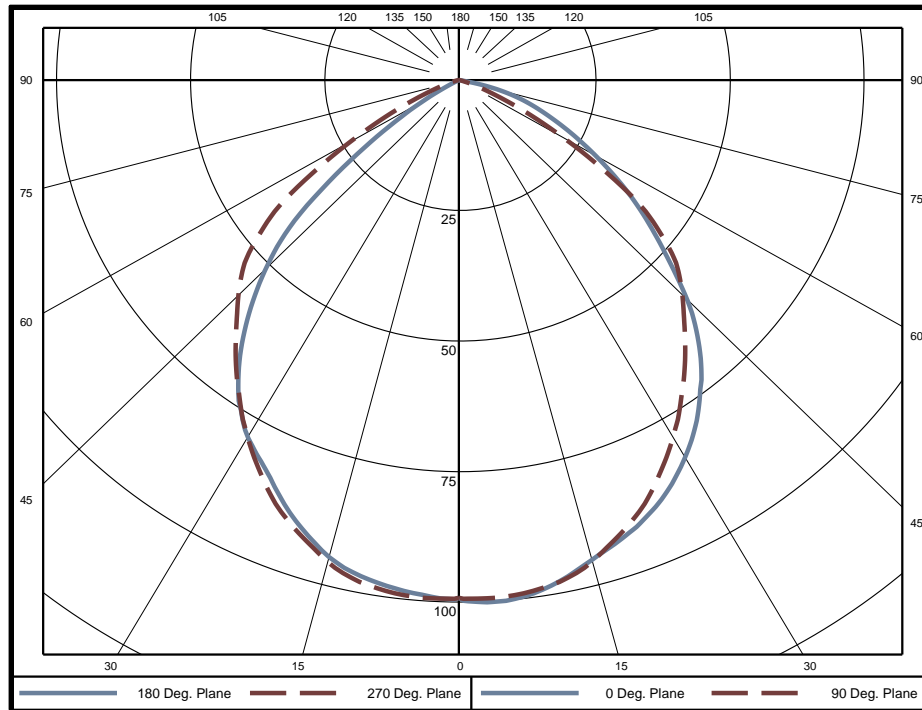
#### Luminaire Efficacy:

51.0 lm/w

#### Maximum Candela:

100 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	2.37	1.1%	60-65	9.04	4.2%	120-125	0	0.0%
5-10	7.04	3.3%	65-70	5.04	2.3%	125-130	0	0.0%
10-15	11.46	5.3%	70-75	2.64	1.2%	130-135	0	0.0%
15-20	15.34	7.1%	75-80	1.30	0.6%	135-140	0	0.0%
20-25	18.54	8.6%	80-85	0.62	0.3%	140-145	0	0.0%
25-30	20.92	9.7%	85-90	0.22	0.1%	145-150	0	0.0%
30-35	22.50	10.4%	90-95	0.02	0.0%	150-155	0	0.0%
35-40	22.93	10.6%	95-100	0	0.0%	155-160	0	0.0%
40-45	22.28	10.3%	100-105	0	0.0%	160-165	0	0.0%
45-50	20.89	9.7%	105-110	0	0.0%	165-170	0	0.0%
50-55	18.35	8.5%	110-115	0	0.0%	170-175	0	0.0%
55-60	14.08	6.5%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	121	56.2%
0-60	197	91.2%
0-90	216	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	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2
	5	100.1	99.4	99.3	99.4	99.3	98.9	98.5	98.3	98.7	98.3	98.5	98.9	99.3	99.4	99.3
	10	98.4	97.8	98.0	98.4	98.2	97.8	97.4	97.1	97.2	97.1	97.4	97.8	98.2	98.4	98.0
	15	95.2	94.8	95.2	95.6	95.5	95.4	95.2	94.6	94.6	94.6	95.2	95.4	95.5	95.6	95.2
	20	92.2	91.3	91.4	91.4	91.1	91.0	90.9	90.1	89.9	90.1	90.9	91.0	91.1	91.4	91.4
	25	88.7	86.9	86.6	86.2	85.8	85.1	84.3	84.0	84.1	84.0	84.3	85.1	85.8	86.2	86.6
	30	83.6	82.2	81.3	80.0	79.3	78.8	77.4	78.2	79.3	78.2	77.4	78.8	79.3	80.0	81.3
	35	77.2	75.9	73.7	72.7	72.3	71.8	70.4	71.2	72.5	71.2	70.4	71.8	72.3	72.7	73.7
	40	69.6	67.7	64.9	64.8	65.3	64.0	62.4	61.4	62.8	61.4	62.4	64.0	65.3	64.8	64.9
	45	59.8	58.3	56.4	57.6	58.7	56.6	54.2	50.3	51.7	50.3	54.2	56.6	58.7	57.6	56.4
	50	48.5	49.1	48.8	51.1	51.5	49.7	46.0	40.1	37.3	40.1	46.0	49.7	51.5	51.1	48.8
	55	38.9	39.3	41.5	43.2	40.0	38.9	37.6	24.1	18.8	24.1	37.6	38.9	40.0	43.2	41.5
	60	29.5	30.3	33.8	32.0	23.4	20.9	27.2	9.8	6.2	9.8	27.2	20.9	23.4	32.0	33.8
	65	21.5	22.4	25.3	18.5	11.1	8.6	10.4	1.1	0.0	1.1	10.4	8.6	11.1	18.5	25.3
	70	14.9	15.4	16.3	8.6	4.1	2.8	1.7	0.0	0.0	0.0	1.7	2.8	4.1	8.6	16.3
	75	8.7	8.7	9.8	3.3	1.1	0.4	0.0	0.0	0.0	0.0	0.0	0.4	1.1	3.3	9.8
	80	1.5	5.4	5.9	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	5.9
	85	0.3	2.6	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	2.6
	90	0.0	0.2	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.2
	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	23650	23650
	45	13450	12100
	55	9425	9490
	65	5853	6428
	75	2783	2872
	85	118	1121



### 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	257	257	257	257	251	251	251	251	240	240	240	229	229	229	220	220	220	216
1	239	231	223	216	233	226	219	213	217	211	206	209	204	200	201	198	194	190
2	221	206	193	183	215	202	191	181	194	185	177	188	180	173	181	175	169	165
3	204	184	169	157	199	181	167	155	174	162	153	169	159	150	163	155	148	143
4	188	165	148	136	183	162	147	135	157	144	133	152	141	131	148	138	130	125
5	174	149	132	119	170	147	130	118	142	128	117	138	126	116	134	123	114	110
6	161	135	118	105	157	133	117	104	129	115	104	126	113	103	123	111	102	98
7	150	123	106	94	147	122	105	93	118	103	93	115	102	92	113	101	91	87
8	140	113	96	84	137	111	95	84	109	94	83	106	93	83	104	92	82	79
9	131	104	87	76	128	103	87	76	100	86	76	98	85	75	96	84	75	71
10	123	96	80	69	120	95	80	69	93	79	69	91	78	69	89	77	68	65

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	99.2 Candela
Central Cone Intensity:	99 Candela
Beam Flux:	160.7 Lumens
Beam Angle (0-180):	95.3 Degrees
Beam Angle (90-270):	101.9 Degrees
Field Angle (0-180):	132.4 Degrees
Field Angle (90-270):	131.2 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
6.00		2.76	7.20
10.0		0.992	12.0
14.0		0.506	16.8
18.0		0.306	21.6
22.0		0.205	26.4
26.0		0.147	31.2
30.0		0.110	36.0



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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	38.1	17.7%
FM	(30-60)	63.5	29.5%
FH	(60-80)	14.1	6.6%
FVH	(80-90)	0.8	0.4%
BL	(0-30)	37.6	17.5%
BM	(30-60)	57.1	26.5%
BH	(60-80)	3.8	1.8%
BVH	(80-90)	0.0	0.0%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		215.2	100.0%
<b>BUG Rating</b>	<b>B0 U1 G0</b>		