



UL Verification Services Inc.
7036 Snowdrift Road
Allentown, PA 18106
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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-1-40 (4000K)

Order Number

12250114

Test Number

12250114.03

Test Date

2018-04-11

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, single light source and adjustable knuckle
Lamp: One (1) XP-L 4000K LED with one (1) acrylic optic
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: 24.3 °C
Voltage: 12.04 VAC
Current: 0.4363 A
Power: 3.211 W
Power Factor: 0.611
Frequency: 60 Hz
Current THD: 88.0 %

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
24.3 °C	12.04 VAC	0.4363 A	3.211 W	0.611	60 Hz	88.0 %

Summary of Results

Spacing Criteria

0-180: 1.19

90-270: 1.13

Total Lumen Output:

175.7 Lumens

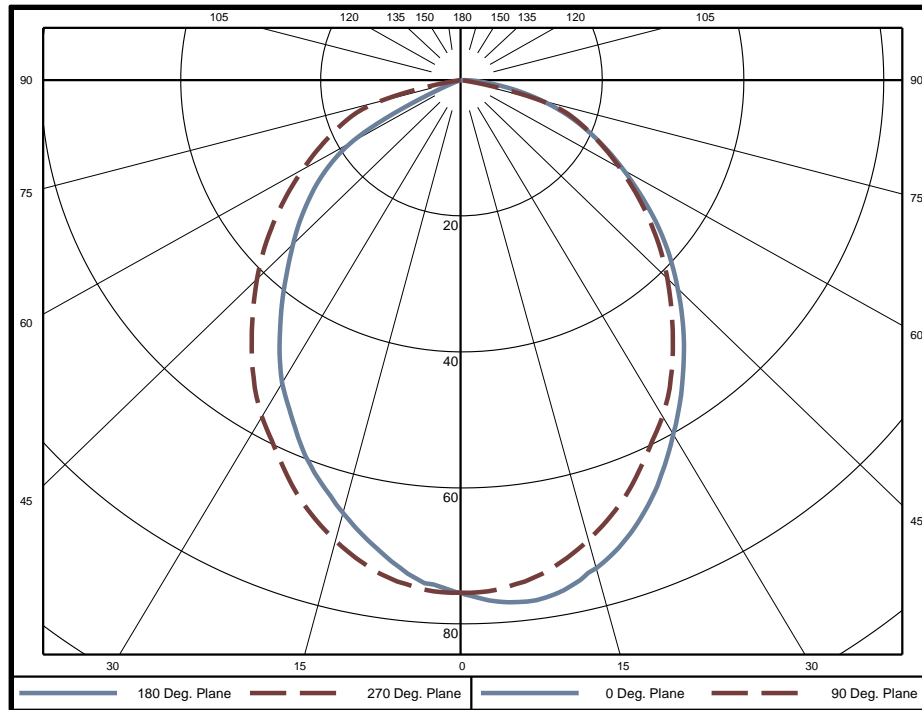
Luminaire Efficacy:

54.7 lm/w

Maximum Candela:

77 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	1.80	1.0%	60-65	10.78	6.1%	120-125	0	0.0%
5-10	5.30	3.0%	65-70	8.38	4.8%	125-130	0	0.0%
10-15	8.49	4.8%	70-75	6.13	3.5%	130-135	0	0.0%
15-20	11.20	6.4%	75-80	3.45	2.0%	135-140	0	0.0%
20-25	13.32	7.6%	80-85	1.59	0.9%	140-145	0	0.0%
25-30	14.80	8.4%	85-90	0.61	0.3%	145-150	0	0.0%
30-35	15.75	9.0%	90-95	0.13	0.1%	150-155	0	0.0%
35-40	16.05	9.1%	95-100	0.00	0.0%	155-160	0	0.0%
40-45	15.86	9.0%	100-105	0	0.0%	160-165	0	0.0%
45-50	15.24	8.7%	105-110	0	0.0%	165-170	0	0.0%
50-55	14.16	8.1%	110-115	0	0.0%	170-175	0	0.0%
55-60	12.71	7.2%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	87	49.4%
0-60	145	82.3%
0-90	176	100.0%
90-180	0	0.1%



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	75.41	75.41	75.41	75.41	75.41	75.41	75.41	75.41	75.41	75.41	75.41	75.41	75.41	75.41	75.41
	5	77.12	76.90	76.23	75.57	74.85	74.36	73.86	73.45	73.59	73.45	73.86	74.36	74.85	75.57	76.23
	10	76.81	76.52	75.35	74.10	73.03	72.06	70.87	69.83	69.88	69.83	70.87	72.06	73.03	74.10	75.35
	15	74.31	74.40	72.91	71.19	69.92	68.77	67.07	65.53	65.79	65.53	67.07	68.77	69.92	71.19	72.91
	20	70.73	70.91	68.93	67.14	66.10	64.92	62.60	61.10	61.48	61.10	62.60	64.92	66.10	67.14	68.93
	25	65.88	66.04	63.96	62.41	61.35	59.97	57.41	55.99	56.40	55.99	57.41	59.97	61.35	62.41	63.96
	30	60.16	61.14	59.13	58.05	56.94	54.96	52.24	50.69	51.41	50.69	52.24	54.96	56.94	58.05	59.13
	35	54.64	55.85	53.91	53.33	51.85	49.53	47.20	45.18	45.34	45.18	47.20	49.53	51.85	53.33	53.91
	40	49.11	50.19	48.48	48.25	46.31	44.16	42.35	39.85	39.43	39.85	42.35	44.16	46.31	48.25	48.48
	45	43.45	44.62	43.18	42.94	41.11	39.31	37.61	34.85	34.11	34.85	37.61	39.31	41.11	42.94	43.18
	50	37.97	38.91	38.00	37.67	35.93	34.48	32.75	30.04	29.21	30.04	32.75	34.48	35.93	37.67	38.00
	55	32.22	33.11	32.87	32.38	30.77	29.56	28.00	25.38	24.21	25.38	28.00	29.56	30.77	32.38	32.87
	60	26.76	27.77	27.95	27.38	25.91	24.96	23.52	20.03	17.84	20.03	23.52	24.96	25.91	27.38	27.95
	65	21.80	22.85	23.25	22.69	21.46	20.63	19.16	10.18	5.43	10.18	19.16	20.63	21.46	22.69	23.25
	70	17.12	18.19	18.85	18.38	17.40	16.65	13.83	1.12	0.24	1.12	13.83	16.65	17.40	18.38	18.85
	75	12.17	13.47	14.58	14.30	11.77	8.84	3.80	0.00	0.00	0.00	3.80	8.84	11.77	14.30	14.58
	80	7.25	8.78	10.40	8.98	2.21	0.21	0.00	0.00	0.00	0.00	0.00	0.21	2.21	8.98	10.40
	85	3.06	4.52	6.32	2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.12	6.32
	90	0.00	1.60	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.75	1.60
	95	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
	100	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
	105	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
	110	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
	115	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
	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	0.00	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
	175	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
	180	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

Average Luminance (cd/m²)
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	17980	17980
	45	9769	10600
	55	7816	8887
	65	5937	7295
	75	3912	5047
	85	1246	0



Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%																	
Ceiling Cavity Reflectance	80				70				50			30			10		
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **																
0	209	209	209	209	204	204	204	204	195	195	195	187	187	187	179	179	179
1	192	184	177	171	188	181	174	168	173	168	163	166	162	158	160	156	153
2	176	162	151	141	171	159	148	139	153	144	136	147	140	133	142	136	130
3	161	143	130	119	157	140	128	118	135	124	115	130	121	113	126	118	112
4	148	128	113	101	144	125	111	101	121	109	99	117	106	98	113	104	97
5	136	115	99	88	133	113	98	88	109	96	87	105	94	86	102	93	85
6	126	104	88	77	123	102	88	77	99	86	76	96	84	76	93	83	75
7	117	94	79	69	114	93	79	69	90	77	68	88	76	68	85	75	67
8	109	86	72	62	107	85	71	62	83	70	61	81	69	61	79	68	60
9	102	79	65	56	100	78	65	56	76	64	55	75	63	55	73	62	55
10	96	74	60	51	94	73	60	51	71	59	51	69	58	50	68	57	50

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	75.41 Candela
Central Cone Intensity:	75 Candela
Beam Flux:	110.7 Lumens
Beam Angle (0-180):	91.8 Degrees
Beam Angle (90-270):	96.6 Degrees
Field Angle (0-180):	143.8 Degrees
Field Angle (90-270):	154.1 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
6.00		2.09	6.73
10.0		0.754	11.2
14.0		0.385	15.7
18.0		0.233	20.2
22.0		0.156	24.7
26.0		0.112	29.2
30.0		0.0838	33.6



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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	28.7	16.3%
FM	(30-60)	48.2	27.4%
FH	(60-80)	18.4	10.5%
FVH	(80-90)	2.3	1.3%
BL	(0-30)	26.3	15.0%
BM	(30-60)	41.5	23.6%
BH	(60-80)	10.3	5.9%
BVH	(80-90)	0.0	0.0%
UL	(90-100)	0.1	0.1%
UH	(100-180)	0.0	0.0%
Total		175.8	100.0%
BUG Rating	B0 U1 G0		