



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
LMWL-W-40 (40° OPTIC, 4000K)

Order Number
12043087
Test Number
12043087.09

Report Date

2018-02-13

Prepared By

Alexa Lambert, Project Handler

Approved By

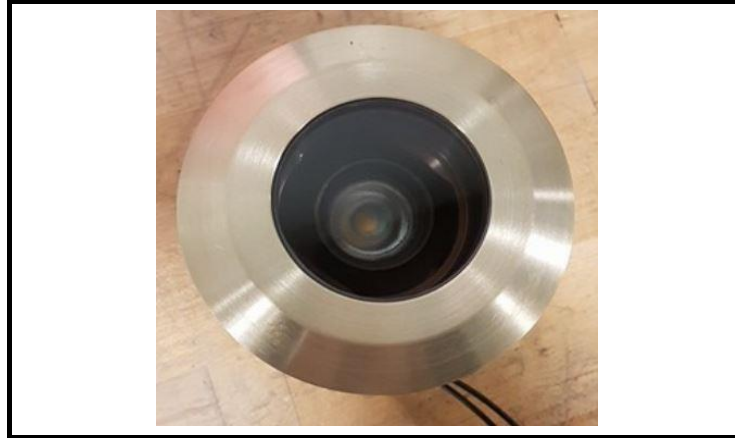
Kevin Rodriguez, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Cylindrical brass housing with circular brass faceplate, clear glass lens and PVC sleeve
Lamp: One (1) Cree XP-L 4000K LED with 40° wide silicone optic
Mounting: Ground recessed
Ballast/Driver: Integrated
Note: This report has been pro-rated using data from report number 12043087.01, 12043087.02, 12043087.03, and 12043087.07 to account for differences in color temperature.

Luminaire



Luminaire Characteristics

Luminous Diameter: 2.00 in.

Summary of Results

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

Test Conditions

Test Temperature: 24.9 °C
Voltage: 11.99 VAC
Current: 0.4335 A
Power: 3.152 W
Power Factor: 0.607
Frequency: 60 Hz
Current THD: 80.4 %

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
24.9 °C	11.99 VAC	0.4335 A	3.152 W	0.607	60 Hz	80.4 %

Summary of Results

Spacing Criteria

0-180: 0.68

90-270: 0.68

Total Lumen Output:

210.3 Lumens

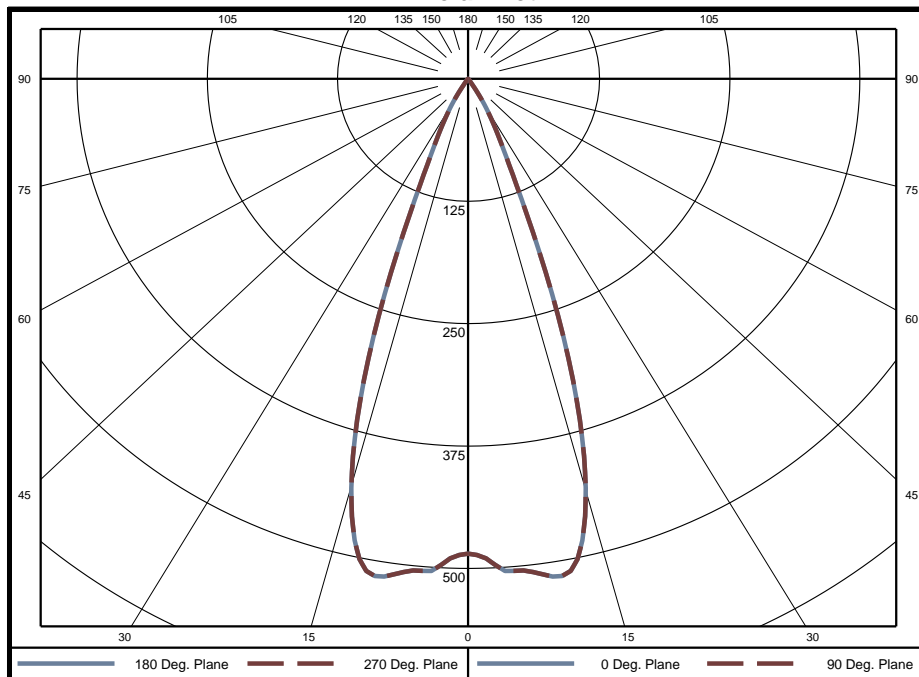
Luminaire Efficacy:

66.7 lm/w

Maximum Candela:

515 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	11.91	5.7%	60-65	0	0.0%	120-125	0	0.0%
5-10	36.50	17.4%	65-70	0	0.0%	125-130	0	0.0%
10-15	57.36	27.3%	70-75	0	0.0%	130-135	0	0.0%
15-20	55.29	26.3%	75-80	0	0.0%	135-140	0	0.0%
20-25	29.16	13.9%	80-85	0	0.0%	140-145	0	0.0%
25-30	13.73	6.5%	85-90	0	0.0%	145-150	0	0.0%
30-35	5.11	2.4%	90-95	0	0.0%	150-155	0	0.0%
35-40	0.93	0.4%	95-100	0	0.0%	155-160	0	0.0%
40-45	0.27	0.1%	100-105	0	0.0%	160-165	0	0.0%
45-50	0.05	0.0%	105-110	0	0.0%	165-170	0	0.0%
50-55	0	0.0%	110-115	0	0.0%	170-175	0	0.0%
55-60	0	0.0%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	210	99.9%
0-60	210	100.0%
0-90	210	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	484.8	484.8	484.8	484.8	484.8	484.8	484.8	484.8	484.8	484.8	484.8	484.8	484.8	484.8	484.8
	5	504.2	504.2	504.2	504.2	504.2	504.2	504.2	504.2	504.2	504.2	504.2	504.2	504.2	504.2	504.2
	10	515.4	515.4	515.4	515.4	515.4	515.4	515.4	515.4	515.4	515.4	515.4	515.4	515.4	515.4	515.4
	15	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6
	20	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6	233.6
	25	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2
	30	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5
	35	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	40	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
	45	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	50	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
	55	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
	60	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
	65	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
	70	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
	75	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
	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/m²)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	239200	239200
	45	292	292
	55	0	0
	65	0	0
	75	0	0
	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	250	250	250	250	245	245	245	245	234	234	234	224	224	224	215	215	215	210
1	241	237	233	229	236	232	229	225	224	221	218	216	214	212	209	207	206	202
2	233	225	218	213	229	222	216	211	215	210	206	209	205	202	203	200	198	195
3	225	215	207	200	221	212	205	199	207	201	196	202	197	193	197	193	190	187
4	217	206	197	190	214	203	195	189	199	192	187	195	189	185	192	187	183	180
5	210	197	188	181	207	195	187	180	192	185	179	189	182	177	186	180	176	174
6	203	189	180	173	201	188	179	173	185	178	172	183	176	171	180	174	170	167
7	197	182	173	167	195	181	172	166	179	171	165	177	170	165	175	168	164	161
8	191	176	167	160	189	175	166	160	173	165	159	171	164	159	169	163	158	156
9	185	170	161	154	183	169	160	154	167	159	154	166	158	153	164	158	153	151
10	179	164	155	149	178	163	155	149	162	154	149	161	153	148	159	153	148	146

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	484.8 Candela
Central Cone Intensity:	494 Candela
Beam Flux:	159.7 Lumens
Beam Angle (0-180):	39.6 Degrees
Beam Angle (90-270):	39.6 Degrees
Field Angle (0-180):	56.2 Degrees
Field Angle (90-270):	56.2 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
6.00		13.5	4.10
10.0		4.85	6.83
14.0		2.47	9.56
18.0		1.50	12.3
22.0		1.00	15.0
26.0		0.717	17.7
30.0		0.539	20.5



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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	102.1	48.4%
FM	(30-60)	3.3	1.6%
FH	(60-80)	0.0	0.0%
FVH	(80-90)	0.0	0.0%
BL	(0-30)	102.1	48.4%
BM	(30-60)	3.3	1.6%
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		210.8	100.0%
BUG Rating	B0 U1 G0		