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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
LMWL-N-40 (15° OPTIC, 4000K)

Order Number
12043087
Test Number
12043087.06

Report Date

2018-02-13

Prepared By

Alexa Lambert, Project Handler

Approved By

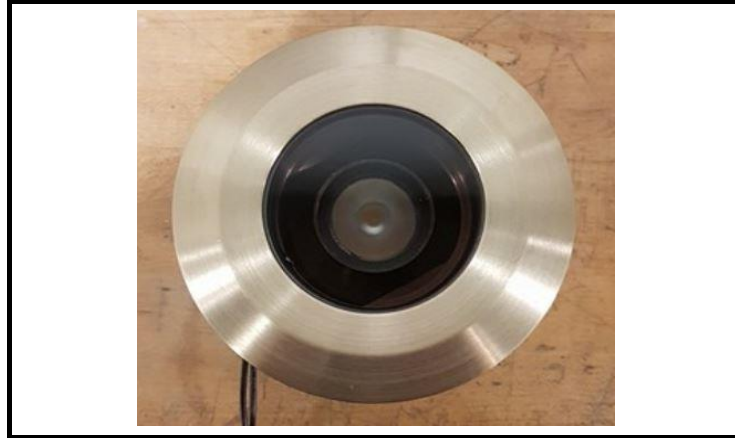
Kevin Rodriguez, Project Handler

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 15° narrow 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 12043087.04 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: 24.7 °C
Voltage: 11.99 VAC
Current: 0.4336 A
Power: 3.143 W
Power Factor: 0.605
Frequency: 60 Hz
Current THD: 80.8 %

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
24.7 °C	11.99 VAC	0.4336 A	3.143 W	0.605	60 Hz	80.8 %

Summary of Results

Spacing Criteria

0-180: 0.25

90-270: 0.25

Total Lumen Output:

179.0 Lumens

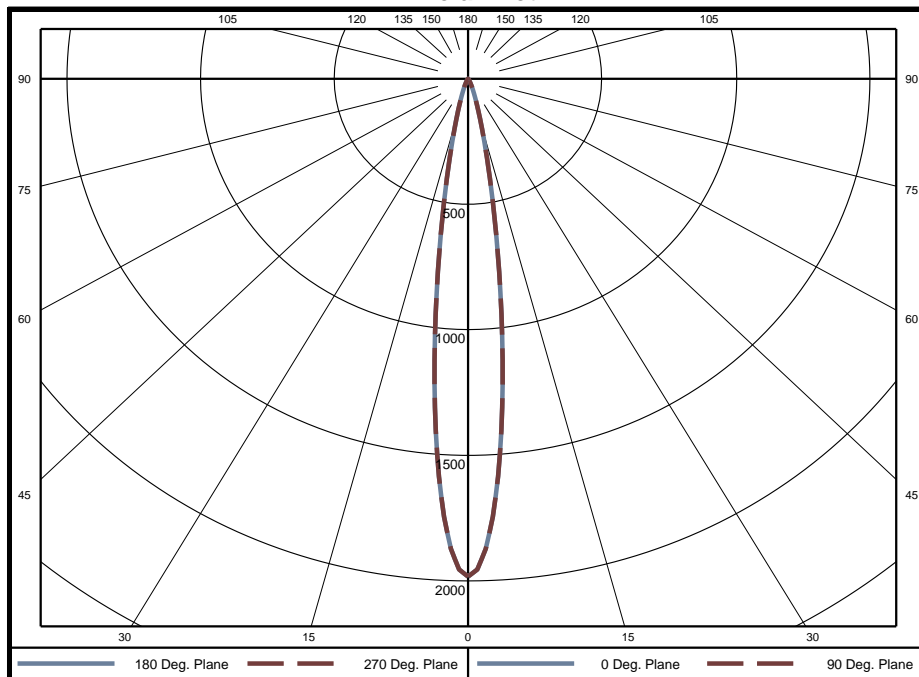
Luminaire Efficacy:

56.9 lm/w

Maximum Candela:

1983 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	40.09	22.4%	60-65	0	0.0%	120-125	0	0.0%
5-10	65.31	36.5%	65-70	0	0.0%	125-130	0	0.0%
10-15	38.82	21.7%	70-75	0	0.0%	130-135	0	0.0%
15-20	18.60	10.4%	75-80	0	0.0%	135-140	0	0.0%
20-25	9.28	5.2%	80-85	0	0.0%	140-145	0	0.0%
25-30	4.47	2.5%	85-90	0	0.0%	145-150	0	0.0%
30-35	1.97	1.1%	90-95	0	0.0%	150-155	0	0.0%
35-40	0.44	0.2%	95-100	0	0.0%	155-160	0	0.0%
40-45	0	0.0%	100-105	0	0.0%	160-165	0	0.0%
45-50	0	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	179	100.0%
0-60	179	100.0%
0-90	179	100.0%
90-180	0	0.0%



Candela Tabulation
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	Horizontal 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	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983
5	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409	1409
10	561	561	561	561	561	561	561	561	561	561	561	561	561	561	561	561
15	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184
20	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
25	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
30	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
35	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	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
60	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
70	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
80	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
90	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
100	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
110	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
120	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
130	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
140	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
150	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
160	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
170	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
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Average Luminance (cd/m²)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	978200	978200	978200
45	0	0	0
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	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	213	213	213	213	208	208	208	208	199	199	199	190	190	190	183	183	183
1	207	204	201	198	203	200	198	195	193	191	189	187	185	184	181	179	178
2	202	196	192	188	198	193	189	186	188	185	182	183	180	178	178	176	175
3	197	190	185	180	194	188	183	179	183	180	176	180	176	174	176	173	171
4	193	185	179	174	190	183	178	173	179	175	172	176	173	170	173	170	168
5	188	180	174	170	186	179	173	169	176	171	168	173	169	166	171	168	165
6	185	176	170	166	183	175	169	165	172	168	164	170	166	163	168	165	162
7	181	172	166	162	180	171	166	162	169	164	161	168	163	160	166	162	159
8	178	169	163	159	176	168	162	159	166	162	158	165	161	158	164	160	157
9	175	166	160	156	174	165	160	156	164	159	155	162	158	155	161	157	155
10	172	163	157	154	171	162	157	153	161	156	153	160	156	153	159	155	152

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1983 Candela
Central Cone Intensity:	1765 Candela
Beam Flux:	71.2 Lumens
Beam Angle (0-180):	14.5 Degrees
Beam Angle (90-270):	14.5 Degrees
Field Angle (0-180):	29.4 Degrees
Field Angle (90-270):	29.4 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
6.00		55.1	1.50
10.0		19.8	2.49
14.0		10.1	3.49
18.0		6.12	4.49
22.0		4.10	5.48
26.0		2.93	6.48
30.0		2.20	7.48



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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	88.6	49.3%
FM	(30-60)	1.3	0.7%
FH	(60-80)	0.0	0.0%
FVH	(80-90)	0.0	0.0%
BL	(0-30)	88.6	49.3%
BM	(30-60)	1.3	0.7%
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		179.8	100.0%
BUG Rating	B0 U1 G0		