



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

LSW4-W-30

Order Number

12790877

Test Number

12790877.15

Test Date

2019-04-08

Prepared By

Josh Mitchell, 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: Cylindrical brass housing with circular brass domed faceplate, clear glass lens and PVC sleeve
Lamp: One (1) Cree MHD-E 3000K LED with 40° wide acrylic optic
Mounting: Step/Wall

Luminaire



Luminaire Characteristics

Luminous Length: 1.25 in.
Luminous Width: 2.250 in.
Luminous Height: 0.50 in.

Summary of Results

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

Test Conditions

Test Temperature: 25.5 °C
Voltage: 12.02 VAC
Current: 0.4870 A
Power: 5.780 W
Power Factor: 0.987
Frequency: 60 Hz
Current THD: 9.29 %

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
25.5 °C	12.02 VAC	0.4870 A	5.780 W	0.987	60 Hz	9.29 %

Summary of Results

Spacing Criteria

0-180: 1.11

90-270: 0.67

Total Lumen Output:

183.7 Lumens

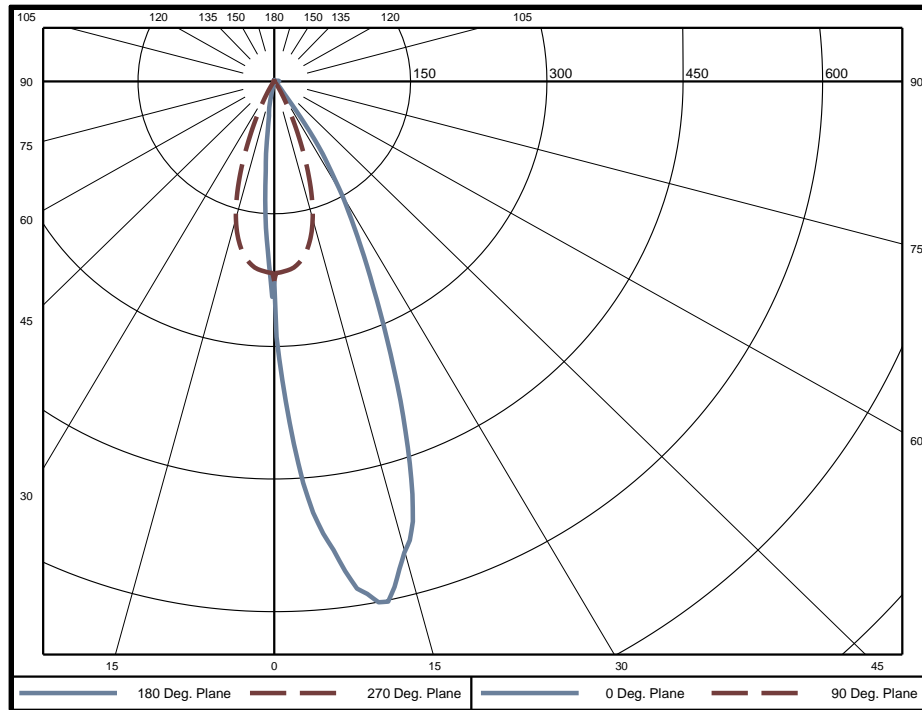
Luminaire Efficacy:

31.8 lm/w

Maximum Candela:

602 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	5.70	3.1%	60-65	0.66	0.4%	120-125	0.01	0.0%
5-10	18.25	9.9%	65-70	0.67	0.4%	125-130	0.01	0.0%
10-15	30.32	16.5%	70-75	0.70	0.4%	130-135	0.01	0.0%
15-20	36.80	20.0%	75-80	0.72	0.4%	135-140	0.03	0.0%
20-25	33.37	18.2%	80-85	0.76	0.4%	140-145	0.04	0.0%
25-30	24.75	13.5%	85-90	0.81	0.4%	145-150	0.07	0.0%
30-35	15.88	8.6%	90-95	0.85	0.5%	150-155	0.09	0.0%
35-40	6.76	3.7%	95-100	0.79	0.4%	155-160	0.12	0.1%
40-45	1.88	1.0%	100-105	0.61	0.3%	160-165	0.13	0.1%
45-50	0.93	0.5%	105-110	0.31	0.2%	165-170	0.13	0.1%
50-55	0.69	0.4%	110-115	0.06	0.0%	170-175	0.10	0.1%
55-60	0.66	0.4%	115-120	0.01	0.0%	175-180	0.03	0.0%

Zone	Lumens	% of Luminaire
0-40	172	93.5%
0-60	176	95.8%
0-90	180	98.2%
90-180	3	1.9%



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	226.0	226.0	226.0	226.0	226.0	226.0	226.0	226.0	226.0	226.0	226.0	226.0	226.0	226.0	226.0
	5	489.9	424.6	374.8	295.6	213.4	161.9	119.4	85.6	101.6	85.6	119.4	161.9	213.4	295.6	374.8
	10	589.0	547.9	483.0	362.8	199.3	107.4	44.2	23.8	30.1	23.8	44.2	107.4	199.3	362.8	483.0
	15	552.1	565.7	505.1	382.1	167.3	59.4	15.4	2.1	2.1	2.1	15.4	59.4	167.3	382.1	505.1
	20	421.7	453.6	431.7	328.3	115.1	24.4	1.8	1.3	1.3	1.3	1.8	24.4	115.1	328.3	431.7
	25	257.4	291.0	285.6	235.6	58.4	6.1	1.2	0.9	0.9	0.9	1.2	6.1	58.4	235.6	285.6
	30	150.6	174.3	173.3	146.2	21.6	1.9	0.8	0.7	0.7	0.7	0.8	1.9	21.6	146.2	173.3
	35	58.4	85.0	87.2	72.6	6.8	1.0	0.7	0.7	0.7	0.7	1.0	6.8	72.6	87.2	85.0
	40	13.0	18.4	20.9	18.9	2.6	0.7	0.6	0.7	0.7	0.7	0.6	0.7	2.6	18.9	20.9
	45	6.2	7.0	6.8	5.3	1.1	0.5	0.5	0.6	0.7	0.6	0.5	0.5	1.1	5.3	6.8
	50	4.2	3.7	3.4	2.7	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.8	2.7	3.4
	55	4.0	3.2	2.8	2.2	0.6	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.6	2.2	2.8
	60	4.0	3.1	2.8	2.1	0.5	0.3	0.2	0.1	0.0	0.1	0.2	0.3	0.5	2.1	2.8
	65	3.9	3.0	2.7	2.1	0.5	0.2	0.1	0.0	0.0	0.0	0.1	0.2	0.5	2.1	2.7
	70	4.0	3.1	2.8	2.0	0.4	0.2	0.1	0.0	0.0	0.0	0.1	0.2	0.4	2.0	2.8
	75	4.2	3.2	2.9	2.0	0.4	0.1	0.0	0.0	0.0	0.0	0.1	0.4	2.0	2.9	3.2
	80	4.5	3.4	3.0	1.9	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.3	1.9	3.0	3.4
	85	4.8	3.6	3.1	2.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.1	3.1	3.6
	90	5.2	3.9	3.3	2.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.2	3.3	3.9
	95	5.3	4.0	3.4	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.4	4.0
	100	4.6	3.5	2.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.9	3.5
	105	3.0	2.4	1.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.9	2.4
	110	0.7	0.7	0.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.7	0.7
	115	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
	140	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0
	145	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.2	0.1	0.0
	150	0.0	0.0	0.1	0.1	0.3	0.4	0.5	0.6	0.6	0.6	0.5	0.4	0.3	0.1	0.1
	155	0.1	0.1	0.2	0.3	0.4	0.6	0.8	0.9	0.9	0.9	0.8	0.6	0.4	0.3	0.2
	160	0.2	0.2	0.4	0.5	0.7	0.9	1.0	1.1	1.1	1.1	1.0	0.9	0.7	0.5	0.4
	165	0.6	0.6	0.7	0.8	1.0	1.1	1.2	1.3	1.3	1.3	1.2	1.1	1.0	0.8	0.7
	170	1.2	1.1	1.2	1.2	1.2	1.3	1.4	1.4	1.4	1.4	1.3	1.2	1.2	1.2	1.1
	175	1.5	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
	180	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	1.4

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	124500	124500
	45	3477	716
	55	2448	445
	65	2769	428
	75	3608	435
	85	5409	355



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	218	218	218	218	212	212	212	212	202	202	202	193	193	193	184	184	184	180
1	208	202	198	194	203	198	194	190	190	187	184	183	180	178	176	174	172	169
2	198	189	182	176	194	186	179	174	179	174	169	173	169	165	168	164	161	158
3	189	178	169	162	185	175	167	161	170	163	158	165	159	155	160	156	152	149
4	180	167	158	150	177	165	156	149	161	153	147	157	150	145	153	148	143	140
5	172	158	148	141	169	156	147	140	153	145	138	149	142	137	146	140	135	133
6	165	150	139	132	162	148	138	132	145	137	130	142	135	129	140	133	128	126
7	158	142	132	125	155	141	131	124	138	129	123	136	128	122	133	127	122	119
8	151	135	125	118	149	134	124	117	131	123	117	129	122	116	127	121	115	113
9	145	128	118	112	143	127	118	111	125	117	111	124	116	110	122	115	110	107
10	139	122	113	106	137	122	112	106	120	111	105	118	110	105	117	110	105	102

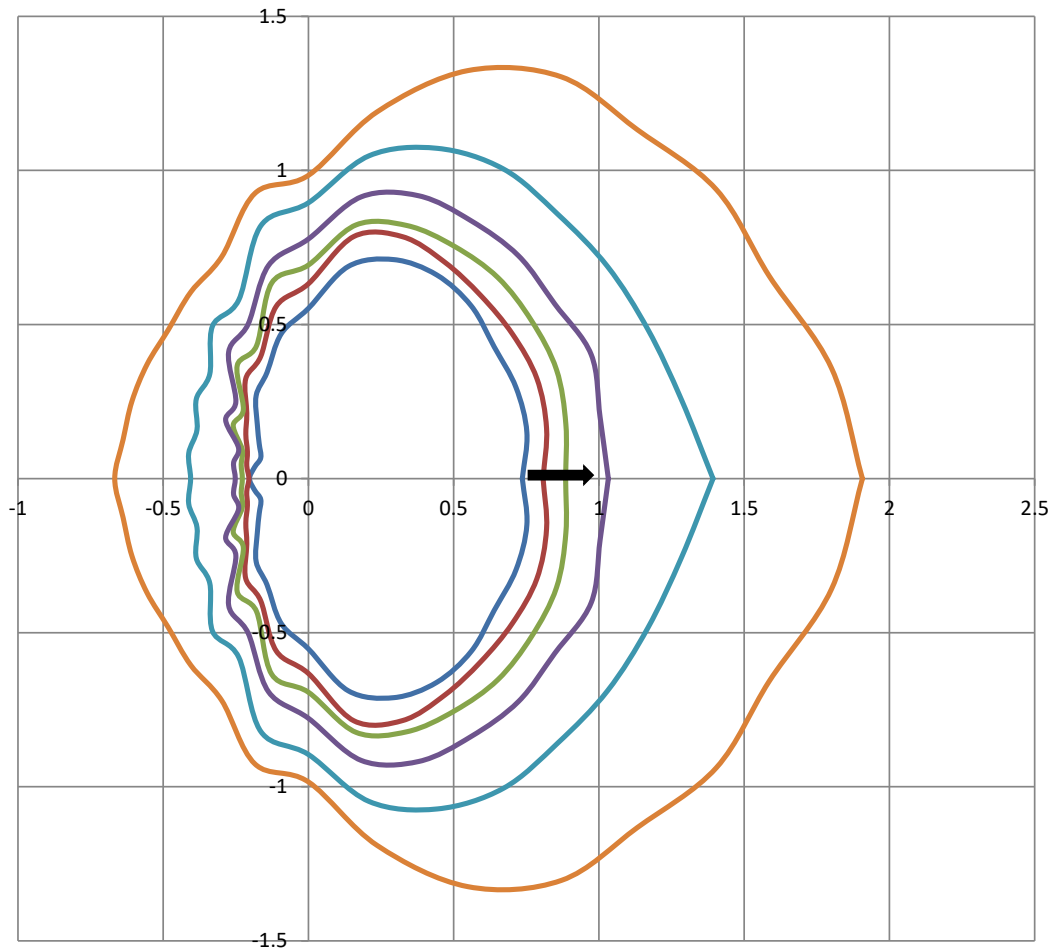
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	226.0 Candela
Central Cone Intensity:	235 Candela
Beam Flux:	150.8 Lumens
Beam Angle (0-180):	36.6 Degrees
Beam Angle (90-270):	40.4 Degrees
Field Angle (0-180):	48.4 Degrees
Field Angle (90-270):	59.6 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		14.1	3.47
6.00		6.28	5.21
8.00		3.53	6.94
10.0		2.26	8.68
12.0		1.57	10.4
14.0		1.15	12.1
16.0		0.883	13.9



ISOFootcandle Plot

Mounting Height - 2 Feet



Grid Lines in Units of Mounting Height

5 fc 2 fc 1 fc 0.5 fc 0.2 fc 0.1 fc



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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	137.7	74.3%
FM	(30-60)	26.7	14.4%
FH	(60-80)	2.6	1.4%
FVH	(80-90)	1.6	0.8%
BL	(0-30)	12.4	6.7%
BM	(30-60)	0.8	0.4%
BH	(60-80)	0.1	0.1%
BVH	(80-90)	0.0	0.0%
UL	(90-100)	1.6	0.9%
UH	(100-180)	1.8	1.0%
Total		185.3	100.0%
BUG Rating	B0 U1 G0		