



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
LWL5-UF-30

Order Number
12790877
Test Number
12790877.06

Test Date

2019-04-05

Prepared By

Josh Mitchell, Technician

Approved By

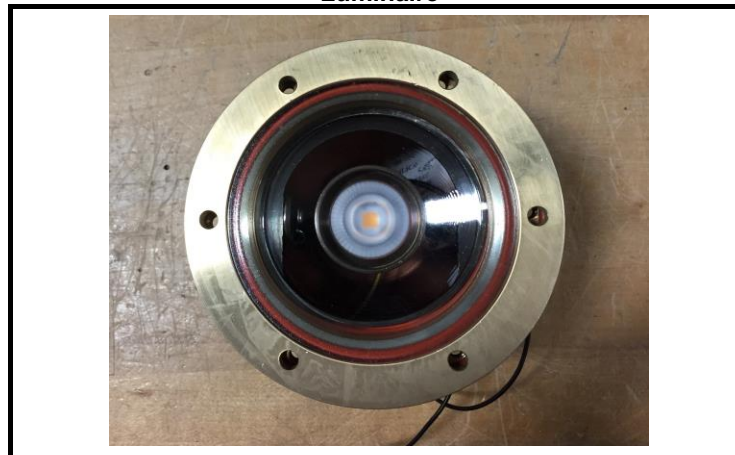
Alexa Lambert, Project Handler

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Luminaire Description: Cylindrical copper housing with circular brass faceplate and clear glass lens
Lamp: One (1) Cree MHD-E 3000K LED with 75° ultra flood acrylic optic
Mounting: Recessed

Luminaire



Luminaire Characteristics

Luminous Diameter: 3.25 in.

Summary of Results

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

Test Conditions

Test Temperature: 25.0 °C
Voltage: 12.05 VAC
Current: 0.7340 A
Power: 8.779 W
Power Factor: 0.992
Frequency: 60 Hz
Current THD: 7.78 %

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
25.0 °C	12.05 VAC	0.7340 A	8.779 W	0.992	60 Hz	7.78 %

Summary of Results

Spacing Criteria

0-180: 1.33

90-270: 1.33

Total Lumen Output:

440.1 Lumens

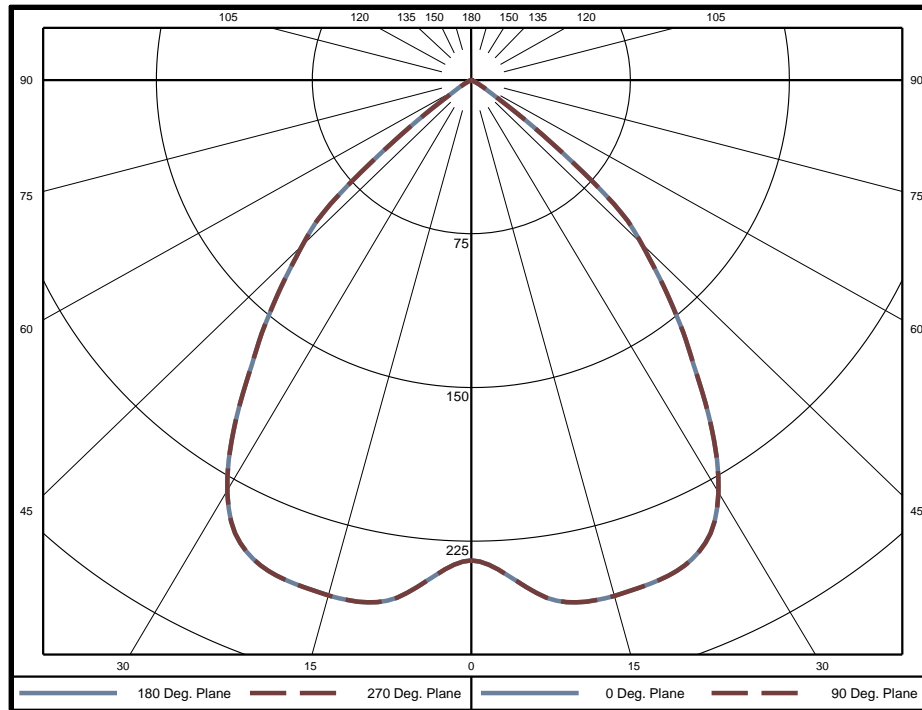
Luminaire Efficacy:

50.1 lm/w

Maximum Candela:

261 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	5.75	1.3%	60-65	1.19	0.3%	120-125	0	0.0%
5-10	18.16	4.1%	65-70	0.62	0.1%	125-130	0	0.0%
10-15	30.87	7.0%	70-75	0.38	0.1%	130-135	0	0.0%
15-20	42.87	9.7%	75-80	0.21	0.0%	135-140	0	0.0%
20-25	53.98	12.3%	80-85	0.16	0.0%	140-145	0	0.0%
25-30	61.97	14.1%	85-90	0.11	0.0%	145-150	0	0.0%
30-35	62.76	14.3%	90-95	0.01	0.0%	150-155	0	0.0%
35-40	56.81	12.9%	95-100	0	0.0%	155-160	0	0.0%
40-45	48.67	11.1%	100-105	0	0.0%	160-165	0	0.0%
45-50	37.30	8.5%	105-110	0	0.0%	165-170	0	0.0%
50-55	14.61	3.3%	110-115	0	0.0%	170-175	0	0.0%
55-60	3.66	0.8%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	333	75.7%
0-60	437	99.4%
0-90	440	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	234.4	234.4	234.4	234.4	234.4	234.4	234.4	234.4	234.4	234.4	234.4	234.4	234.4	234.4	234.4
	5	245.4	245.4	245.4	245.4	245.4	245.4	245.4	245.4	245.4	245.4	245.4	245.4	245.4	245.4	245.4
	10	258.7	258.7	258.7	258.7	258.7	258.7	258.7	258.7	258.7	258.7	258.7	258.7	258.7	258.7	258.7
	15	260.6	260.6	260.6	260.6	260.6	260.6	260.6	260.6	260.6	260.6	260.6	260.6	260.6	260.6	260.6
	20	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5
	25	253.9	253.9	253.9	253.9	253.9	253.9	253.9	253.9	253.9	253.9	253.9	253.9	253.9	253.9	253.9
	30	232.7	232.7	232.7	232.7	232.7	232.7	232.7	232.7	232.7	232.7	232.7	232.7	232.7	232.7	232.7
	35	192.1	192.1	192.1	192.1	192.1	192.1	192.1	192.1	192.1	192.1	192.1	192.1	192.1	192.1	192.1
	40	150.6	150.6	150.6	150.6	150.6	150.6	150.6	150.6	150.6	150.6	150.6	150.6	150.6	150.6	150.6
	45	113.9	113.9	113.9	113.9	113.9	113.9	113.9	113.9	113.9	113.9	113.9	113.9	113.9	113.9	113.9
	50	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7	61.7
	55	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
	60	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	65	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
	70	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	75	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	80	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	85	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	90	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	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	43800	43800
	45	30090	30090
	55	4340	4340
	65	621	621
	75	331	331
	85	538	538



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	524	524	524	524	512	512	512	512	489	489	489	468	468	468	449	449	449	440
1	495	481	469	458	484	472	460	450	454	445	436	437	430	423	422	416	411	403
2	465	440	420	402	455	433	414	398	418	402	389	405	392	380	392	382	372	365
3	436	403	377	357	427	396	373	354	384	364	348	373	356	342	363	349	337	329
4	408	369	340	318	400	364	337	316	354	331	312	344	325	309	336	319	305	297
5	382	339	308	286	374	334	306	285	326	301	282	318	296	279	311	292	277	269
6	358	312	281	258	351	308	279	257	301	275	255	294	271	253	288	268	252	244
7	336	287	256	234	329	284	255	234	278	252	232	272	249	231	267	246	230	222
8	315	266	235	214	309	263	234	213	258	231	212	253	229	211	248	227	210	203
9	296	247	216	196	291	244	215	195	240	213	195	235	211	194	231	209	193	186
10	279	230	200	180	274	227	199	180	223	197	179	220	196	178	216	194	178	171

Beam and Field Information

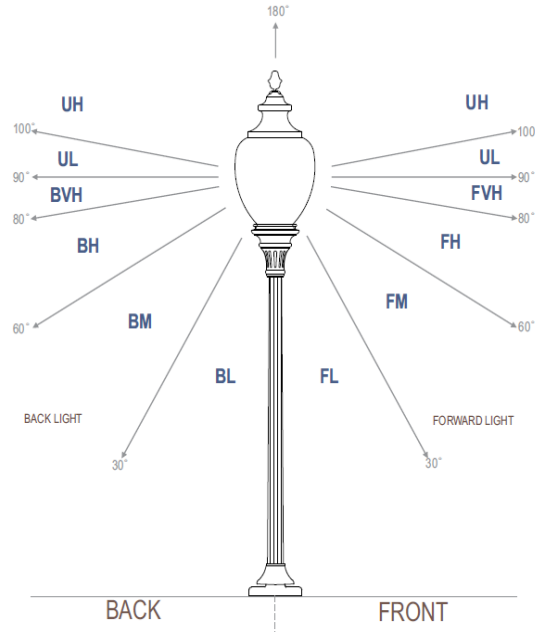
CIE Type:	Direct
Center Beam Intensity:	234.4 Candela
Central Cone Intensity:	239 Candela
Beam Flux:	376.9 Lumens
Beam Angle (0-180):	89.0 Degrees
Beam Angle (90-270):	89.0 Degrees
Field Angle (0-180):	106.9 Degrees
Field Angle (90-270):	106.9 Degrees

Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
6.00		6.51	8.01
10.0		2.34	13.3
14.0		1.20	18.7
18.0		0.724	24.0
22.0		0.484	29.4
26.0		0.347	34.7
30.0		0.260	40.0



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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	106.8	24.3%
FM	(30-60)	111.9	25.4%
FH	(60-80)	1.2	0.3%
FVH	(80-90)	0.1	0.0%
BL	(0-30)	106.8	24.3%
BM	(30-60)	111.9	25.4%
BH	(60-80)	1.2	0.3%
BVH	(80-90)	0.1	0.0%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		440.1	100.0%
BUG Rating	B0 U1 G0		