



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-WF-30

Order Number
12790877
Test Number
12790877.04

Test Date

2019-04-04

Prepared By

Josh Mitchell, Technician

Approved By

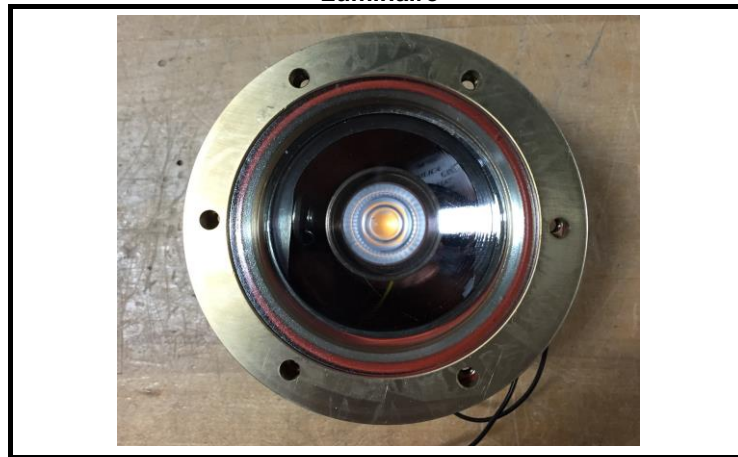
Alexa Lambert, Project Handler

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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 50° wide 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: B1 U1 G0

Test Conditions

Test Temperature: 24.9 °C
Voltage: 12.05 VAC
Current: 0.7332 A
Power: 8.770 W
Power Factor: 0.992
Frequency: 60 Hz
Current THD: 7.80 %

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	12.05 VAC	0.7332 A	8.770 W	0.992	60 Hz	7.80 %

Summary of Results

Spacing Criteria

0-180: 0.97

90-270: 0.97

Total Lumen Output:

522.0 Lumens

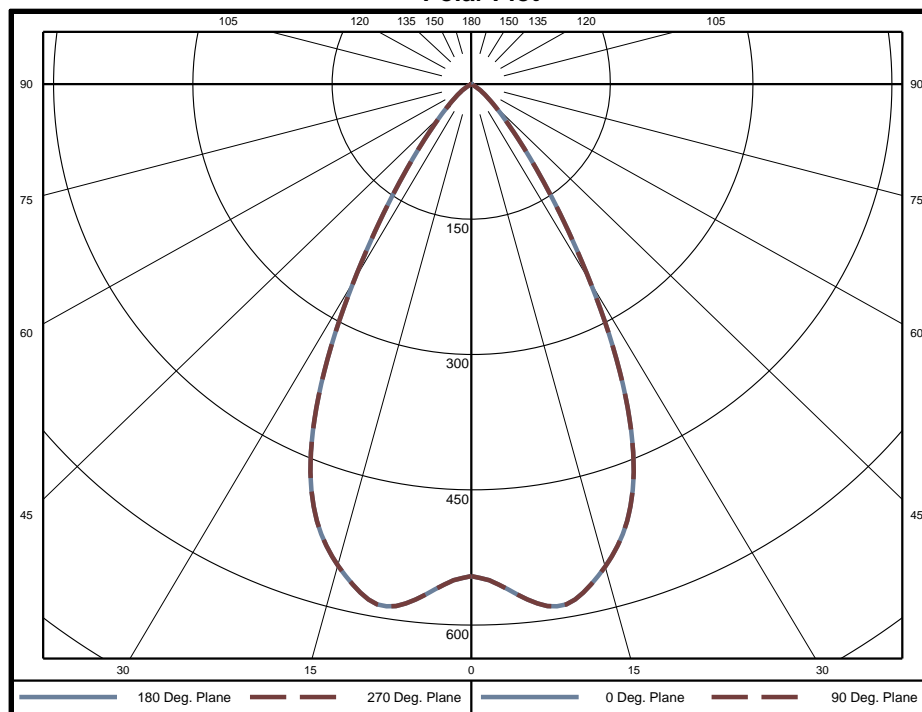
Luminaire Efficacy:

59.5 lm/w

Maximum Candela:

586 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	13.35	2.6%	60-65	0.65	0.1%	120-125	0	0.0%
5-10	41.61	8.0%	65-70	0.36	0.1%	125-130	0	0.0%
10-15	67.75	13.0%	70-75	0.25	0.0%	130-135	0	0.0%
15-20	86.97	16.7%	75-80	0.19	0.0%	135-140	0	0.0%
20-25	94.37	18.1%	80-85	0.16	0.0%	140-145	0	0.0%
25-30	82.43	15.8%	85-90	0.11	0.0%	145-150	0	0.0%
30-35	57.23	11.0%	90-95	0.01	0.0%	150-155	0	0.0%
35-40	34.75	6.7%	95-100	0	0.0%	155-160	0	0.0%
40-45	20.21	3.9%	100-105	0	0.0%	160-165	0	0.0%
45-50	11.89	2.3%	105-110	0	0.0%	165-170	0	0.0%
50-55	6.88	1.3%	110-115	0	0.0%	170-175	0	0.0%
55-60	2.79	0.5%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	478	91.7%
0-60	520	99.7%
0-90	522	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	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7	545.7
	5	568.4	568.4	568.4	568.4	568.4	568.4	568.4	568.4	568.4	568.4	568.4	568.4	568.4	568.4	568.4
	10	586.0	586.0	586.0	586.0	586.0	586.0	586.0	586.0	586.0	586.0	586.0	586.0	586.0	586.0	586.0
	15	554.0	554.0	554.0	554.0	554.0	554.0	554.0	554.0	554.0	554.0	554.0	554.0	554.0	554.0	554.0
	20	498.2	498.2	498.2	498.2	498.2	498.2	498.2	498.2	498.2	498.2	498.2	498.2	498.2	498.2	498.2
	25	396.2	396.2	396.2	396.2	396.2	396.2	396.2	396.2	396.2	396.2	396.2	396.2	396.2	396.2	396.2
	30	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8	256.8
	35	142.0	142.0	142.0	142.0	142.0	142.0	142.0	142.0	142.0	142.0	142.0	142.0	142.0	142.0	142.0
	40	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1	74.1
	45	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4
	50	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4
	55	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
	60	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	65	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
	70	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	75	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
	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	102000	102000
	45	10420	10420
	55	3631	3631
	65	369	369
	75	283	283
	85	543	543



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	621	621	621	621	607	607	607	607	580	580	580	555	555	555	533	533	533	522
1	593	578	566	554	580	567	556	545	546	537	528	527	519	513	509	503	498	489
2	564	539	518	500	552	530	511	495	513	497	484	497	485	473	483	473	464	455
3	536	503	477	456	525	495	472	453	482	462	446	469	453	439	457	444	432	424
4	509	470	442	420	500	464	438	417	453	430	412	443	423	407	433	416	403	395
5	484	441	410	388	475	436	408	386	426	402	383	418	396	380	410	391	376	369
6	460	414	383	361	452	410	381	360	402	376	357	395	372	355	388	368	352	345
7	437	390	359	337	430	386	357	336	379	353	334	373	350	332	367	346	331	323
8	416	367	337	315	410	364	335	315	359	332	313	353	330	312	348	327	311	304
9	397	347	317	296	391	345	316	296	340	313	295	335	311	294	331	309	293	286
10	379	329	299	279	374	327	298	279	322	296	278	318	294	277	315	292	276	270

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	545.7 Candela
Central Cone Intensity:	555 Candela
Beam Flux:	378.5 Lumens
Beam Angle (0-180):	58.9 Degrees
Beam Angle (90-270):	58.9 Degrees
Field Angle (0-180):	84.8 Degrees
Field Angle (90-270):	84.8 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
6.00		15.2	5.81
10.0		5.46	9.69
14.0		2.78	13.6
18.0		1.68	17.4
22.0		1.13	21.3
26.0		0.807	25.2
30.0		0.606	29.1



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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	192.9	37.0%
FM	(30-60)	67.2	12.9%
FH	(60-80)	0.7	0.1%
FVH	(80-90)	0.1	0.0%
BL	(0-30)	192.9	37.0%
BM	(30-60)	67.2	12.9%
BH	(60-80)	0.7	0.1%
BVH	(80-90)	0.1	0.0%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		522.0	100.0%
BUG Rating	B1 U1 G0		