



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
H2O-P-WF-30 (50° OPTIC, 3000K)

Order Number
12250114
Test Number
12250114.113

Test Date

2018-05-07

Prepared By

Cordaryl Cousar, Technician

Approved By

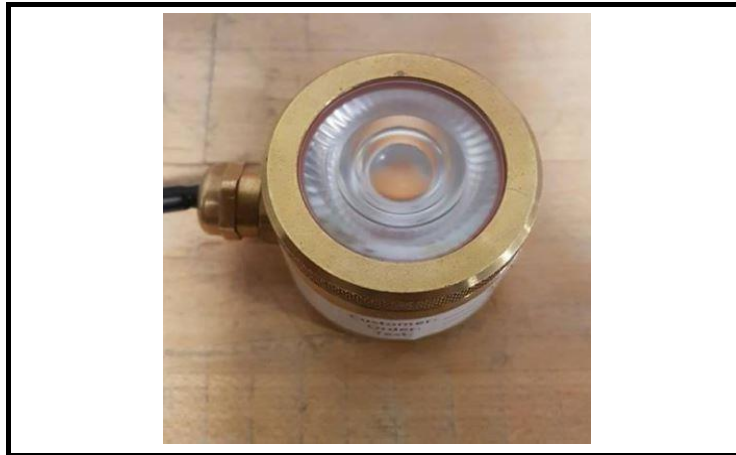
Alexa Lambert, Project Handler

The results contained in this report pertain only to the tested sample.
This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.
This report must not be used by the client to claim product certification, approval, or endorsement by
NVLAP, NIST, or any agency of the Federal Government.



Luminaire Description: Cylindrical brass housing with side wire feed
Lamp: One (1) Cree MHD-E 3000K LED with 50°, wide flood optic
Mounting: Flood
Ballast/Driver: Integrated

Luminaire



Luminaire Characteristics

Luminous Diameter: 1.25 in.

Summary of Results

Roadway Classification: Type V, Very Short
Cutoff Classification: Full Cutoff
BUG Rating: B1 U0 G0

Test Conditions

Test Temperature: 24.9 °C
Voltage: 12.03 VAC
Current: 0.3873 A
Power: 4.578 W
Power Factor: 0.982
Frequency: 60 Hz
Current THD: 10.1 %

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	12.03 VAC	0.3873 A	4.578 W	0.982	60 Hz	10.1 %

Summary of Results

Spacing Criteria

0-180: 0.85

90-270: 0.85

Total Lumen Output:

335.9 Lumens

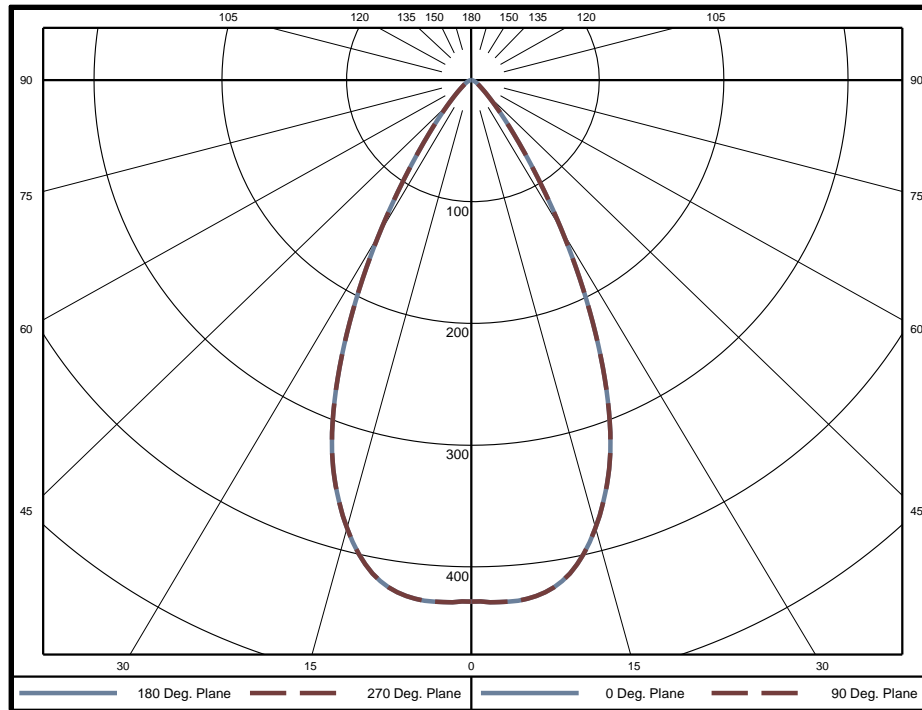
Luminaire Efficacy:

73.4 lm/w

Maximum Candela:

430 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	10.27	3.1%	60-65	2.23	0.7%	120-125	0	0.0%
5-10	30.38	9.0%	65-70	1.63	0.5%	125-130	0	0.0%
10-15	47.57	14.2%	70-75	1.10	0.3%	130-135	0	0.0%
15-20	58.34	17.4%	75-80	0.60	0.2%	135-140	0	0.0%
20-25	59.33	17.7%	80-85	0.18	0.1%	140-145	0	0.0%
25-30	48.78	14.5%	85-90	0.00	0.0%	145-150	0	0.0%
30-35	32.52	9.7%	90-95	0	0.0%	150-155	0	0.0%
35-40	18.81	5.6%	95-100	0	0.0%	155-160	0	0.0%
40-45	10.64	3.2%	100-105	0	0.0%	160-165	0	0.0%
45-50	6.37	1.9%	105-110	0	0.0%	165-170	0	0.0%
50-55	4.14	1.2%	110-115	0	0.0%	170-175	0	0.0%
55-60	2.97	0.9%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	306	91.1%
0-60	330	98.3%
0-90	336	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	428.5	428.5	428.5	428.5	428.5	428.5	428.5	428.5	428.5	428.5	428.5	428.5	428.5	428.5	428.5
	5	429.5	429.5	429.5	429.5	429.5	429.5	429.5	429.5	429.5	429.5	429.5	429.5	429.5	429.5	429.5
	10	418.0	418.0	418.0	418.0	418.0	418.0	418.0	418.0	418.0	418.0	418.0	418.0	418.0	418.0	418.0
	15	381.9	381.9	381.9	381.9	381.9	381.9	381.9	381.9	381.9	381.9	381.9	381.9	381.9	381.9	381.9
	20	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0
	25	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0
	30	149.1	149.1	149.1	149.1	149.1	149.1	149.1	149.1	149.1	149.1	149.1	149.1	149.1	149.1	149.1
	35	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4
	40	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
	45	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6
	50	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9
	55	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
	60	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
	65	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	70	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	75	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	80	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	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	541300	541300
	45	36870	36870
	55	16880	16880
	65	11530	11530
	75	7750	7750
	85	522	522



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	400	400	400	400	391	391	391	391	373	373	373	357	357	357	343	343	343	336
1	381	372	364	356	373	365	357	350	351	345	340	339	334	330	327	323	320	314
2	363	346	333	321	355	341	328	318	330	320	311	320	312	304	310	304	298	292
3	345	323	307	294	338	319	304	291	310	297	287	302	291	282	294	285	278	273
4	328	303	285	271	322	299	282	269	292	277	266	285	273	263	279	269	260	255
5	312	285	265	251	307	281	263	250	275	260	248	270	256	246	265	253	243	239
6	297	268	248	234	292	265	247	233	260	244	232	256	241	230	251	239	229	224
7	283	253	233	219	279	251	232	219	246	230	218	242	228	217	239	225	215	211
8	270	239	220	206	266	237	219	206	234	217	205	230	215	204	227	213	203	199
9	258	227	208	195	255	225	207	194	222	205	194	219	204	193	216	202	192	188
10	247	215	196	184	244	214	196	184	211	195	183	209	193	183	206	192	182	178

Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	428.5 Candela
Central Cone Intensity:	429 Candela
Beam Flux:	220.4 Lumens
Beam Angle (0-180):	52.8 Degrees
Beam Angle (90-270):	52.8 Degrees
Field Angle (0-180):	78.8 Degrees
Field Angle (90-270):	78.8 Degrees

Cone of Light Tabulation

Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
6.00		11.9	5.11
10.0		4.29	8.52
14.0		2.19	11.9
18.0		1.32	15.3
22.0		0.885	18.7
26.0		0.634	22.2
30.0		0.476	25.6



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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	127.4	37.8%
FM	(30-60)	38.0	11.3%
FH	(60-80)	2.8	0.8%
FVH	(80-90)	0.1	0.0%
BL	(0-30)	127.4	37.8%
BM	(30-60)	38.0	11.3%
BH	(60-80)	2.8	0.8%
BVH	(80-90)	0.1	0.0%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		336.6	100.0%
BUG Rating	B1 U0 G0		