



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-N-27 (20° OPTIC, 2700K)

Order Number
12250114
Test Number
12250114.112

Report Date

2018-05-09

Prepared By

Sean Gregory, Project Handler

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 side wire feed
Lamp: One (1) Cree MHD-E 2700K LED with 20°, narrow optic
Mounting: Flood
Ballast/Driver: Integrated
Note: This report has been pro-rated using data from report numbers 12250114.111, 12250114.01, 12250114.02, 12250114.03, 12250114.04, 12250114.05, and 12250114.06 to account for differences in color temperature.

Luminaire



Luminaire Characteristics

Luminous Diameter: 1.25 in.

Summary of Results

Roadway Classification: Type V, Very Short
Cutoff Classification: Full Cutoff
BUG Rating: B0 U0 G0

Test Conditions

Test Temperature: 25.1 °C
Voltage: 12.03 VAC
Current: 0.3818 A
Power: 4.511 W
Power Factor: 0.982
Frequency: 60 Hz
Current THD: 10.3 %

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
25.1 °C	12.03 VAC	0.3818 A	4.511 W	0.982	60 Hz	10.3 %

Summary of Results

Spacing Criteria

0-180: 0.37

90-270: 0.37

Total Lumen Output:

270.2 Lumens

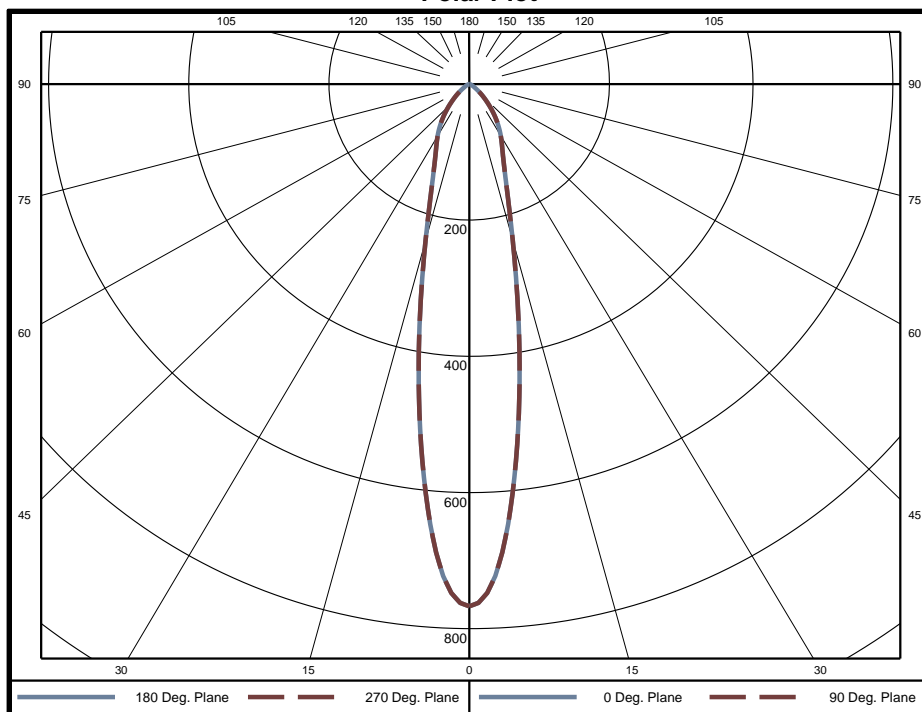
Luminaire Efficacy:

59.9 lm/w

Maximum Candela:

767 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	16.91	6.3%	60-65	2.69	1.0%	120-125	0	0.0%
5-10	37.41	13.8%	65-70	1.81	0.7%	125-130	0	0.0%
10-15	38.31	14.2%	70-75	1.18	0.4%	130-135	0	0.0%
15-20	32.24	11.9%	75-80	0.69	0.3%	135-140	0	0.0%
20-25	28.11	10.4%	80-85	0.27	0.1%	140-145	0	0.0%
25-30	26.23	9.7%	85-90	0.01	0.0%	145-150	0	0.0%
30-35	24.45	9.0%	90-95	0	0.0%	150-155	0	0.0%
35-40	21.05	7.8%	95-100	0	0.0%	155-160	0	0.0%
40-45	16.27	6.0%	100-105	0	0.0%	160-165	0	0.0%
45-50	11.36	4.2%	105-110	0	0.0%	165-170	0	0.0%
50-55	7.09	2.6%	110-115	0	0.0%	170-175	0	0.0%
55-60	4.16	1.5%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	225	83.2%
0-60	264	97.6%
0-90	270	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	767.0	767.0	767.0	767.0	767.0	767.0	767.0	767.0	767.0	767.0	767.0	767.0	767.0	767.0	767.0
	5	649.0	649.0	649.0	649.0	649.0	649.0	649.0	649.0	649.0	649.0	649.0	649.0	649.0	649.0	649.0
	10	422.1	422.1	422.1	422.1	422.1	422.1	422.1	422.1	422.1	422.1	422.1	422.1	422.1	422.1	422.1
	15	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5	248.5
	20	158.0	158.0	158.0	158.0	158.0	158.0	158.0	158.0	158.0	158.0	158.0	158.0	158.0	158.0	158.0
	25	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2	116.2
	30	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2
	35	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3
	40	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4
	45	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4
	50	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
	55	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
	60	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
	65	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
	70	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
	75	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
	80	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
	85	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
	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)

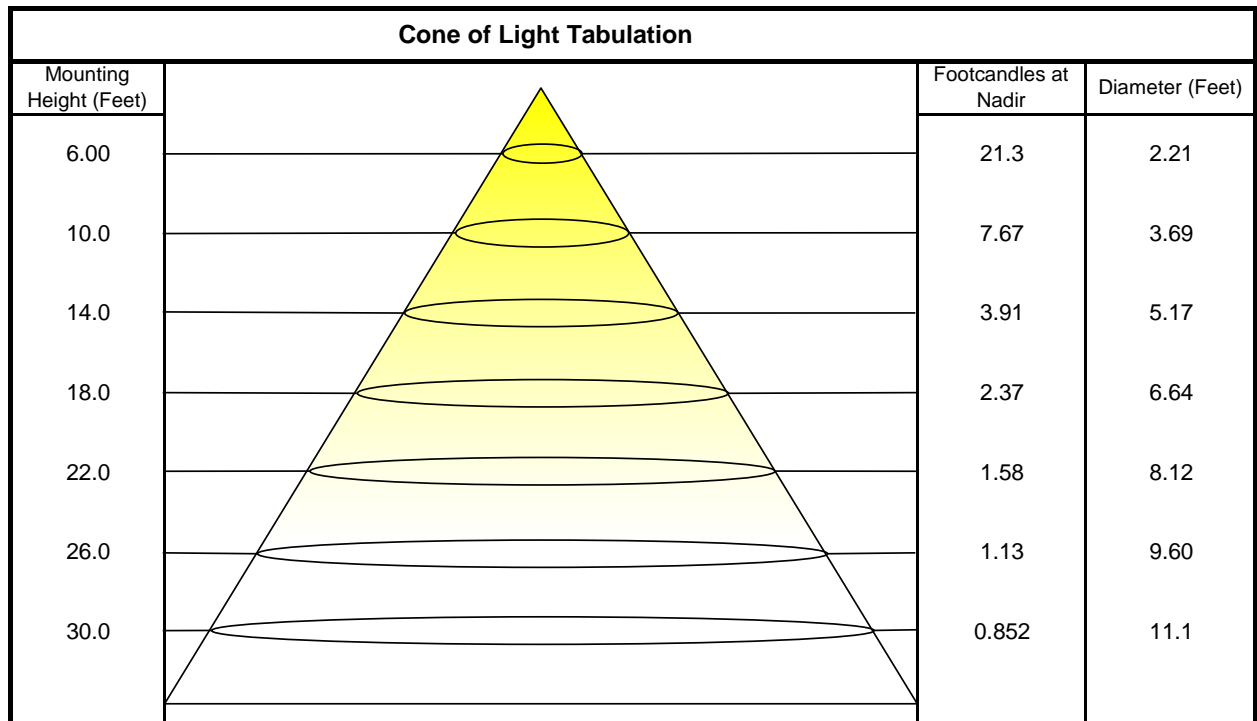
Vertical Angle (Degrees)	0	45	90
	0	968800	968800
	45	63160	63160
	55	25960	25960
	65	13160	13160
	75	8501	8501
	85	2173	2173



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	322	322	322	322	314	314	314	314	300	300	300	287	287	287	276	276	276	270
1	306	299	292	285	300	293	286	281	282	277	272	272	268	264	262	259	256	252
2	291	277	266	256	285	272	262	254	264	255	248	256	249	243	248	243	238	233
3	276	258	244	233	270	254	242	231	247	237	228	241	232	224	234	227	221	216
4	262	241	226	215	257	238	224	213	232	220	211	227	217	208	222	213	206	202
5	249	226	211	199	245	224	209	198	219	206	196	215	203	194	210	201	193	189
6	237	213	197	186	233	211	196	185	207	194	184	203	191	182	200	189	181	177
7	226	202	186	174	223	200	185	174	196	183	173	193	181	172	190	179	171	167
8	216	191	175	164	213	190	175	164	187	173	163	184	172	163	181	170	162	158
9	207	182	166	156	204	180	166	155	178	164	155	176	163	154	173	162	154	150
10	199	173	158	148	196	172	158	148	170	157	147	168	156	147	166	155	147	143

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	767.0 Candela
Central Cone Intensity:	725 Candela
Beam Flux:	61.9 Lumens
Beam Angle (0-180):	21.9 Degrees
Beam Angle (90-270):	21.9 Degrees
Field Angle (0-180):	68.3 Degrees
Field Angle (90-270):	68.3 Degrees





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



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	89.8	33.2%
FM	(30-60)	42.3	15.6%
FH	(60-80)	3.2	1.2%
FVH	(80-90)	0.1	0.1%
BL	(0-30)	89.8	33.2%
BM	(30-60)	42.3	15.6%
BH	(60-80)	3.2	1.2%
BVH	(80-90)	0.1	0.1%
UL	(90-100)	0.0	0.0%
UH	(100-180)	0.0	0.0%
Total		270.8	100.0%
BUG Rating	B0 U0 G0		