



UL Verification Services Inc.
7036 Snowdrift Road
Allentown, PA 18106
610-774-1300



Indoor Distribution Test Report

Relevant Standards
IES LM-79-2008, ANSI C82.77-10-2014

Prepared For
H E Williams Inc
831 W Fairview Ave
PO Box 837
Carthage, MO 64836-0837
United States

Catalog Number
2AR-L12/835-DIM-UNV-RW-OF-WH-x-xx (0° TILT)
Order Number
13257190
Test Number
13257190.05

Test Date

2020-03-16

Prepared By

Jesse Litchfield, Technician

Approved By

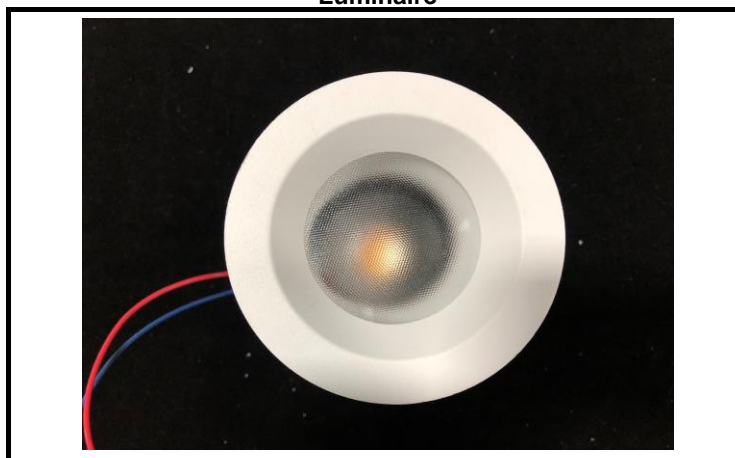
Alexa Lambert, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Aluminum housing, optics, and trim enclosure
Lamp: One white LED
Mounting: Recessed
Ballast/Driver: One Philips Advance XI025C070V054DSM1 Driver

Luminaire



Luminaire Characteristics
Luminous Diameter: 2.50 in.

Summary of Results

Total Luminaire Output:	1034 Lumens
Luminaire Efficacy:	49.4 lm/w
Maximum Candela:	3324 Candela

Test Conditions

Test Temperature:	25.1 °C
Voltage:	120.0 VAC
Current:	0.1756 A
Power:	20.95 W
Power Factor:	0.995
Frequency:	60 Hz
Current THD:	8.86 %

Laboratory results may not be representative of field performance
Ballast factors have not been applied



Distribution - Goniophotometer

Distribution Test Conditions

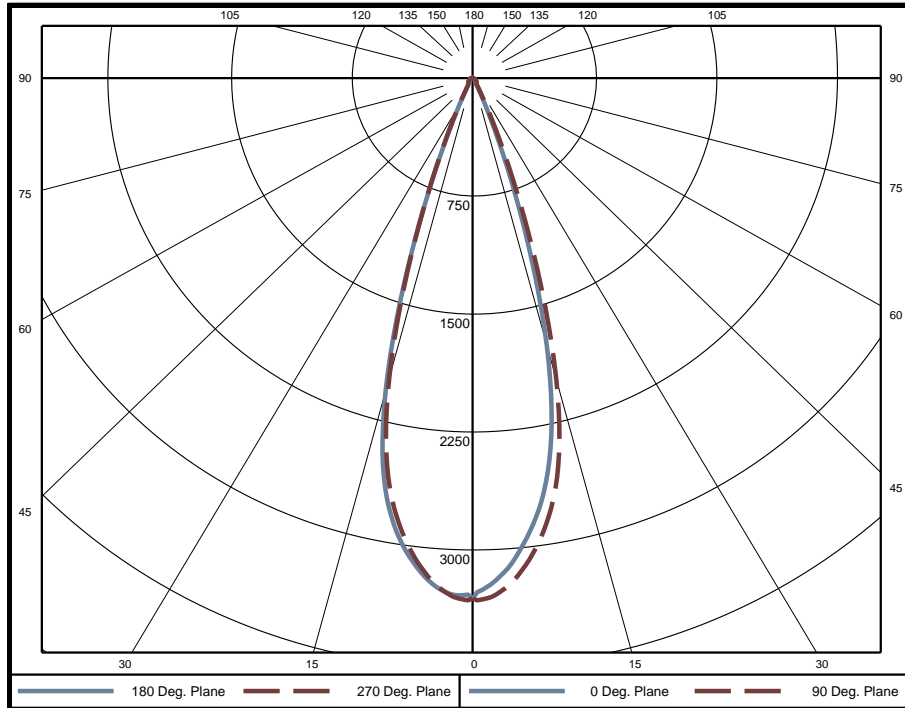
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.1 °C	120.0 VAC	0.1756 A	20.95 W	0.995	60 Hz	8.86 %

Summary of Results

Spacing Criteria
 0-180: 0.52
 90-270: 0.56

Total Lumen Output: 1034 Lumens
Luminaire Efficacy: 49.4 lm/w
Maximum Candela: 3324 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	77.4	7.5%	60-65	9.1	0.9%	120-125	0	0.0%
5-10	212.2	20.5%	65-70	6.9	0.7%	125-130	0	0.0%
10-15	284.1	27.5%	70-75	4.1	0.4%	130-135	0	0.0%
15-20	229.4	22.2%	75-80	1.5	0.1%	135-140	0	0.0%
20-25	101.0	9.8%	80-85	0.8	0.1%	140-145	0	0.0%
25-30	30.9	3.0%	85-90	0.8	0.1%	145-150	0	0.0%
30-35	14.5	1.4%	90-95	0	0.0%	150-155	0	0.0%
35-40	12.6	1.2%	95-100	0	0.0%	155-160	0	0.0%
40-45	12.6	1.2%	100-105	0	0.0%	160-165	0	0.0%
45-50	12.9	1.2%	105-110	0	0.0%	165-170	0	0.0%
50-55	12.4	1.2%	110-115	0	0.0%	170-175	0	0.0%
55-60	11.0	1.1%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	962	93.0%
0-60	1011	97.8%
0-90	1034	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	3309	3309	3309	3309	3309	3309	3309	3309	3309	3309	3309	3309	3309	3309	3309
	5	3056	3066	3101	3134	3176	3215	3239	3250	3205	3250	3239	3215	3176	3134	3101
	10	2603	2609	2656	2711	2773	2845	2893	2925	2878	2925	2893	2845	2773	2711	2656
	15	1767	1740	1802	1883	1977	2092	2159	2216	2164	2216	2159	2092	1977	1883	1802
	20	707	676	724	796	869	965	1016	1057	994	1057	1016	965	869	796	724
	25	165	160	184	211	232	261	276	285	262	285	276	261	232	211	184
	30	47	49	55	62	69	74	79	80	76	80	79	74	69	62	55
	35	29	31	33	38	43	46	48	49	49	49	48	46	43	38	33
	40	25	26	28	33	38	41	42	43	43	43	42	41	38	33	28
	45	23	24	26	30	35	38	40	40	40	40	40	38	35	30	26
	50	22	23	25	28	32	35	36	36	36	36	36	35	32	28	25
	55	21	21	23	25	28	29	29	30	29	30	29	29	28	25	23
	60	19	19	20	21	22	22	22	22	22	22	22	22	22	21	20
	65	16	16	16	16	16	17	17	17	16	17	17	17	16	16	16
	70	11	10	11	11	11	11	11	11	11	11	11	11	11	11	10
	75	4	4	4	5	5	5	5	6	5	6	5	5	5	5	4
	80	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	85	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	90	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
	100	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
	110	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
	120	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
	130	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
	140	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
	150	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
	160	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
	170	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
	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

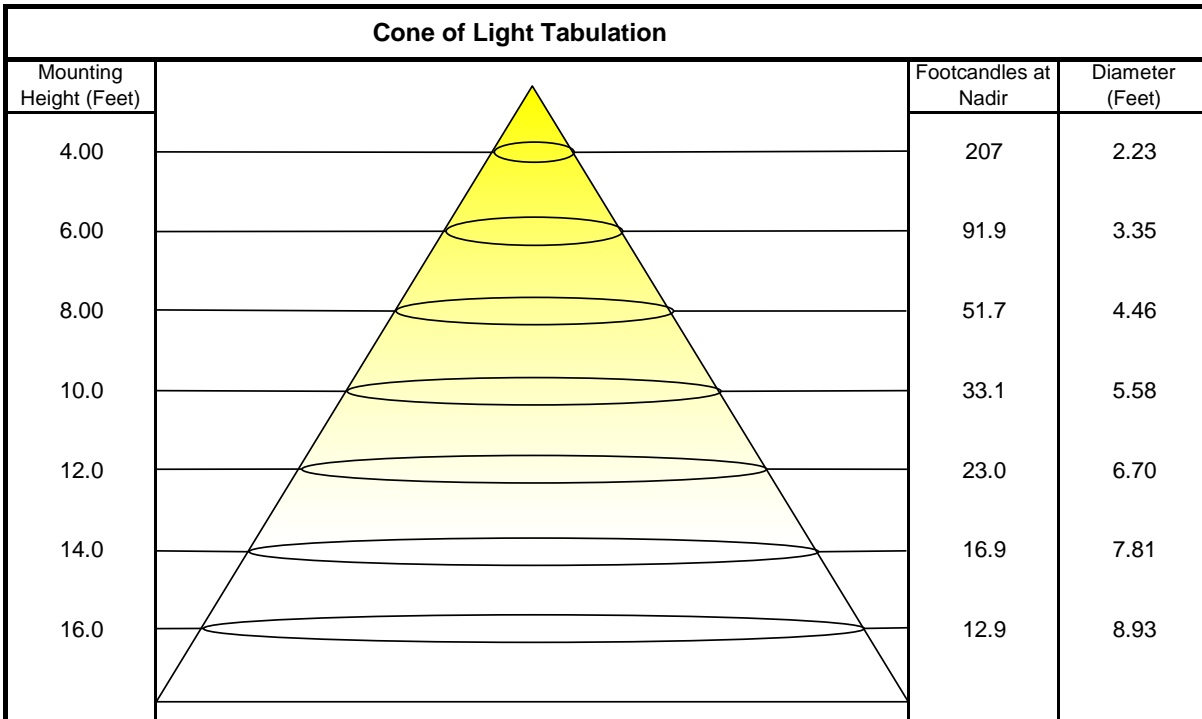
Vertical Angle (Degrees)	0	45	90
	0	1045000	1045000
	45	10200	11630
	55	11560	12640
	65	11870	11850
	75	5135	5315
	85	3388	3390



Coefficients of Utilization - 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 percent of total lumen output delivered to the task surface **																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	106	103	100	108	104	101	99	101	99	97	98	96	95	96	94	93	91
3	106	101	97	93	104	99	96	93	97	94	91	95	92	90	92	90	89	87
4	102	96	92	88	101	95	91	88	93	90	87	91	88	86	89	87	85	84
5	99	92	88	84	97	91	87	84	90	86	83	88	85	82	87	84	82	81
6	96	89	84	81	94	88	84	80	87	83	80	85	82	79	84	81	79	78
7	93	85	81	78	91	85	80	77	84	80	77	83	79	77	82	79	76	75
8	90	83	78	75	89	82	78	75	81	77	74	80	77	74	79	76	74	73
9	87	80	75	72	86	79	75	72	79	75	72	78	74	72	77	74	72	71
10	85	77	73	70	84	77	73	70	76	72	70	76	72	70	75	72	70	69

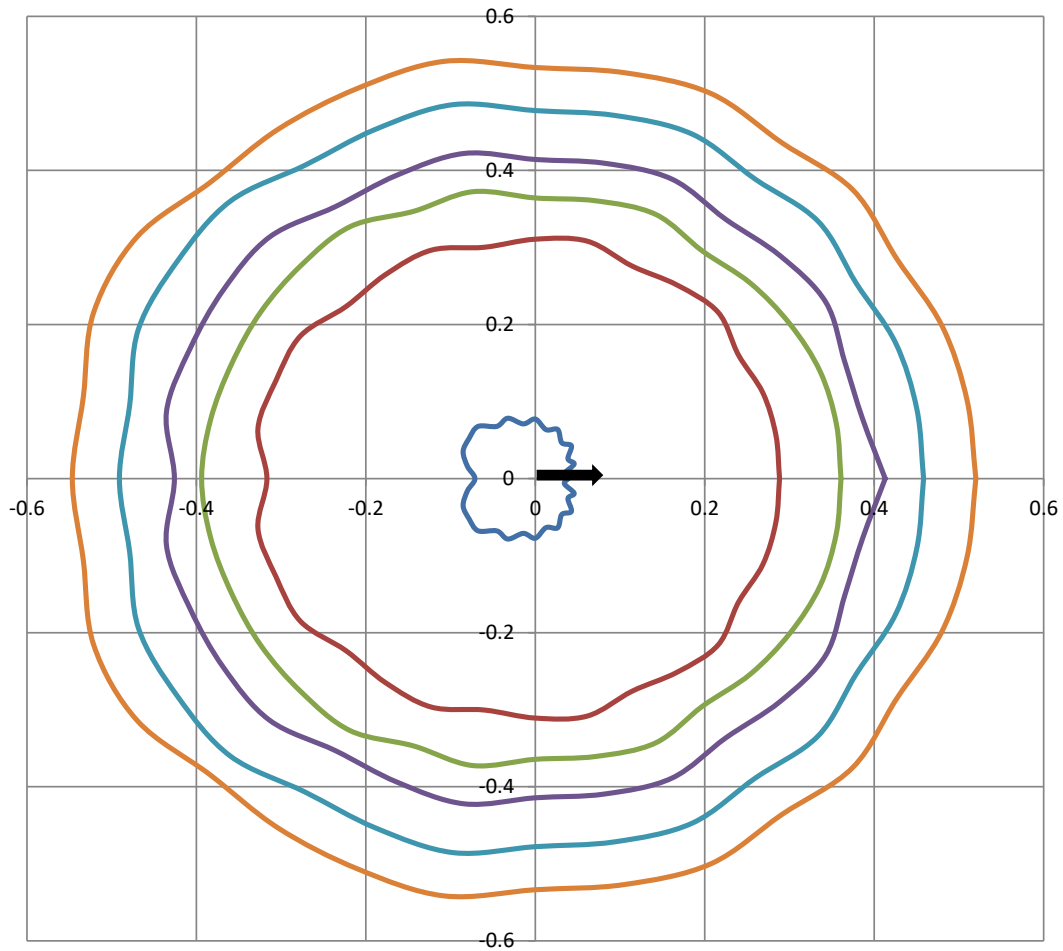
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	3309 Candela
Central Cone Intensity:	3259 Candela
Beam Flux:	654.4 Lumens
Beam Angle (0-180):	32.7 Degrees
Beam Angle (90-270):	32.9 Degrees
Field Angle (0-180):	46.9 Degrees
Field Angle (90-270):	47.6 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

50 fc 20 fc 10 fc 5 fc 2 fc 1 fc