



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
AR-L12/835-DIM-UNV-LM-OF-WH-x-xx (0° TILT)
Order Number
13257190
Test Number
13257190.11

Test Date

2020-03-17

Prepared By

Jesse Litchfield, Technician

Approved By

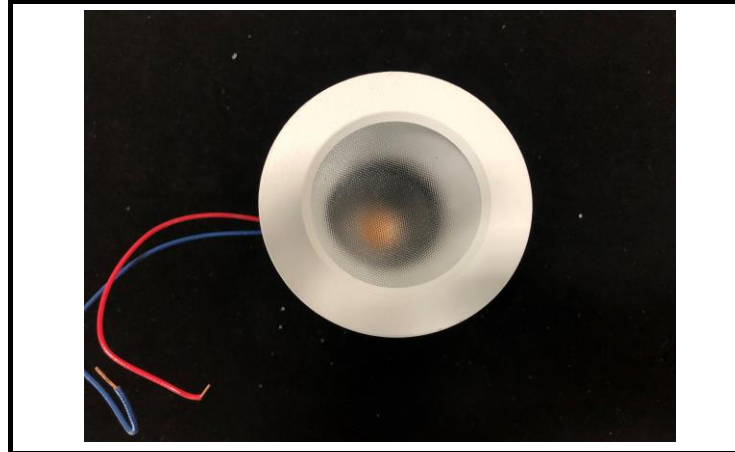
Alexa Lambert, Project Handler

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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:	709.9 Lumens
Luminaire Efficacy:	33.9 lm/w
Maximum Candela:	5963 Candela

Test Conditions

Test Temperature:	24.5 °C
Voltage:	120.0 VAC
Current:	0.1753 A
Power:	20.92 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

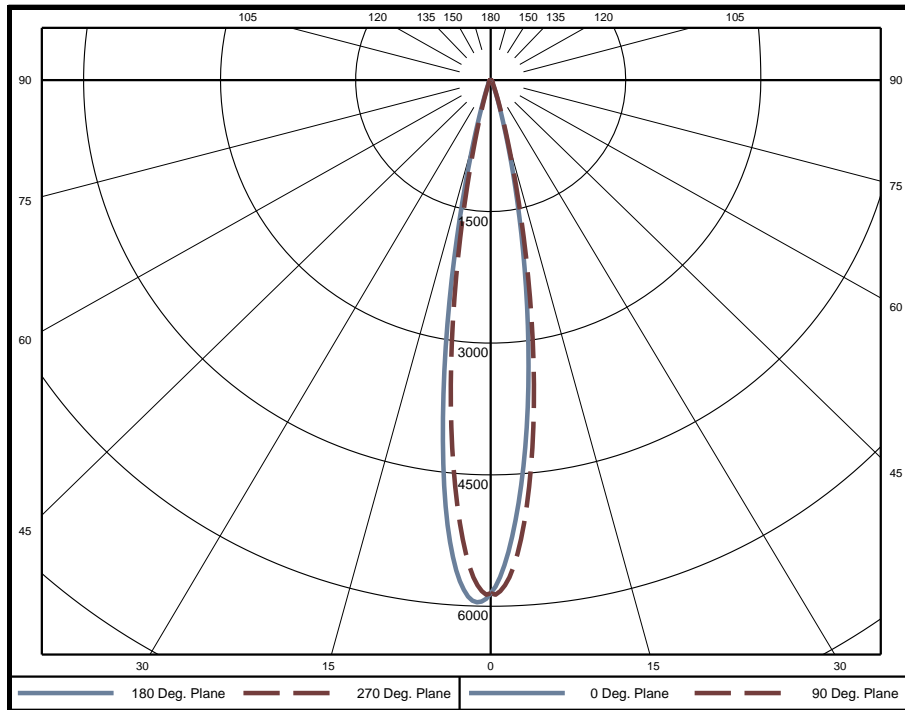
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.5 °C	120.0 VAC	0.1753 A	20.92 W	0.995	60 Hz	8.86 %

Summary of Results

Spacing Criteria
0-180: 0.27
90-270: 0.30

Total Lumen Output: 709.9 Lumens
Luminaire Efficacy: 33.9 lm/w
Maximum Candela: 5963 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	126.0	17.7%	60-65	6.5	0.9%	120-125	0	0.0%
5-10	245.2	34.5%	65-70	5.3	0.7%	125-130	0	0.0%
10-15	158.1	22.3%	70-75	4.0	0.6%	130-135	0	0.0%
15-20	57.6	8.1%	75-80	2.8	0.4%	135-140	0	0.0%
20-25	24.7	3.5%	80-85	1.5	0.2%	140-145	0	0.0%
25-30	15.1	2.1%	85-90	0.3	0.0%	145-150	0	0.0%
30-35	12.7	1.8%	90-95	0	0.0%	150-155	0	0.0%
35-40	11.6	1.6%	95-100	0	0.0%	155-160	0	0.0%
40-45	11.1	1.6%	100-105	0	0.0%	160-165	0	0.0%
45-50	10.5	1.5%	105-110	0	0.0%	165-170	0	0.0%
50-55	9.3	1.3%	110-115	0	0.0%	170-175	0	0.0%
55-60	7.9	1.1%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	651	91.7%
0-60	690	97.2%
0-90	710	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	5851	5851	5851	5851	5851	5851	5851	5851	5851	5851	5851	5851	5851	5851	5851
	5	4202	4085	4214	4418	4657	4947	5210	5399	5286	5399	5210	4947	4657	4418	4214
	10	1972	1856	1932	2084	2277	2520	2779	2988	2824	2988	2779	2520	2277	2084	1932
	15	550	508	524	566	622	705	799	881	817	881	799	705	622	566	524
	20	152	139	146	160	177	198	216	234	220	234	216	198	177	160	146
	25	61	59	62	69	78	87	95	102	100	102	95	87	78	69	62
	30	35	35	37	42	49	54	58	60	61	60	58	54	49	42	37
	35	26	27	29	34	40	44	46	47	47	47	46	44	40	34	29
	40	22	22	24	28	34	38	39	40	39	40	39	38	34	28	24
	45	20	20	22	25	30	33	34	34	33	34	34	33	30	25	22
	50	19	19	20	22	25	27	27	27	26	27	27	25	22	20	19
	55	17	17	18	19	20	20	20	20	20	20	20	20	19	18	17
	60	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
	65	12	12	12	12	12	12	12	11	12	12	12	12	12	12	12
	70	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	75	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	80	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	85	1	1	1	1	1	1	2	2	2	2	2	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)

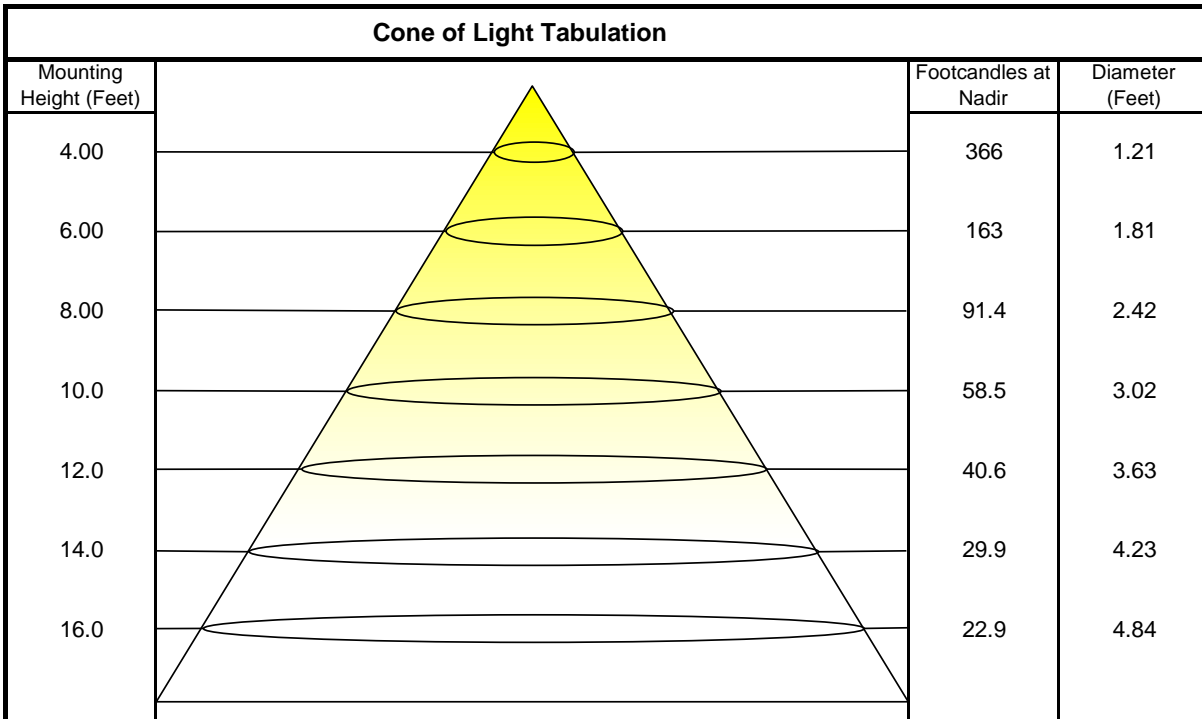
Vertical Angle (Degrees)	0	45	90
	0	1848000	1848000
	45	8791	9801
	55	9424	9825
	65	9149	8958
	75	8183	7852
	85	5110	4208



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	115	113	111	109	112	110	109	107	106	105	104	103	102	101	99	99	98	96
2	111	107	104	101	109	105	103	100	102	100	98	99	98	96	97	95	94	93
3	107	103	99	96	106	101	98	95	99	96	94	97	94	92	94	93	91	90
4	104	99	95	92	103	98	94	91	96	93	90	94	91	89	92	90	88	87
5	101	96	92	89	100	95	91	88	93	90	87	92	89	87	90	88	86	85
6	99	93	89	86	98	92	88	86	91	87	85	90	87	84	88	86	84	83
7	97	90	86	84	95	90	86	83	89	85	83	88	85	83	87	84	82	81
8	94	88	84	82	93	88	84	81	87	83	81	86	83	81	85	82	80	80
9	92	86	82	80	92	86	82	80	85	82	79	84	81	79	84	81	79	78
10	91	84	81	78	90	84	81	78	83	80	78	83	80	78	82	80	78	77

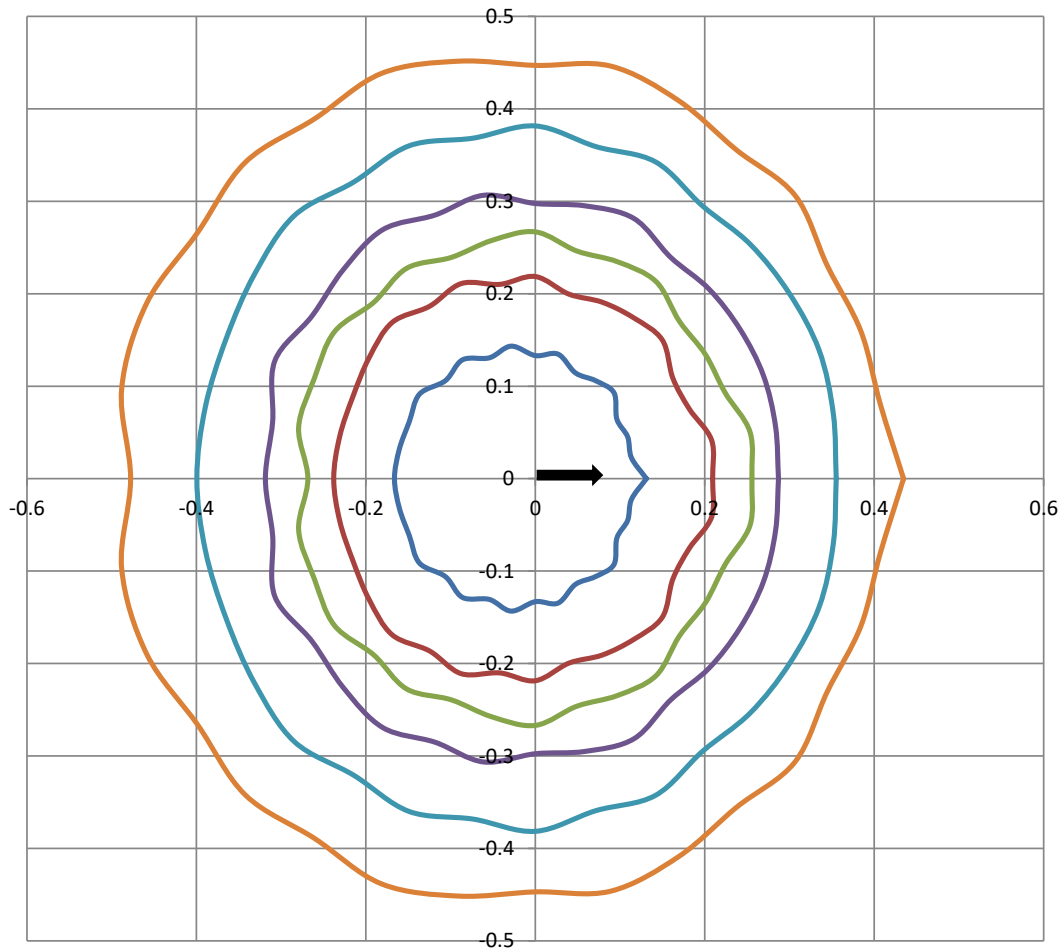
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	5851 Candela
Central Cone Intensity:	5437 Candela
Beam Flux:	317.2 Lumens
Beam Angle (0-180):	17.6 Degrees
Beam Angle (90-270):	17.3 Degrees
Field Angle (0-180):	31.0 Degrees
Field Angle (90-270):	30.5 Degrees





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