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Indoor Distribution Test Report

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

Prepared For
H E Williams Inc
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United States

Catalog Number
2AS-L12/835-DIM-UNV-RW-OF-WH-x-xx (0° TILT)
Order Number
13257190
Test Number
13257190.31

Test Date

2020-03-20

Prepared By

Jesse Litchfield, Technician

Approved By

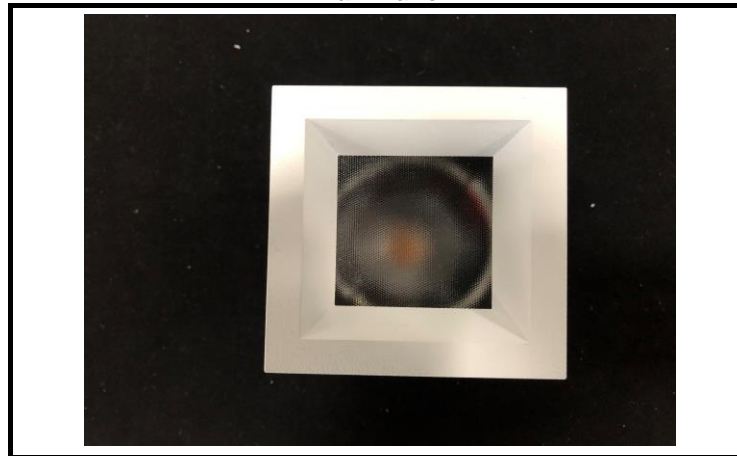
Alexa Lambert, Project Handler

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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 Length: 2.50 in.
Luminous Width: 2.500 in.

Summary of Results

Total Luminaire Output:	1125 Lumens
Luminaire Efficacy:	52.8 lm/w
Maximum Candela:	3670 Candela

Test Conditions

Test Temperature:	24.5 °C
Voltage:	120.0 VAC
Current:	0.1783 A
Power:	21.30 W
Power Factor:	0.995
Frequency:	60 Hz
Current THD:	8.68 %

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



Distribution - Goniophotometer

Distribution Test Conditions

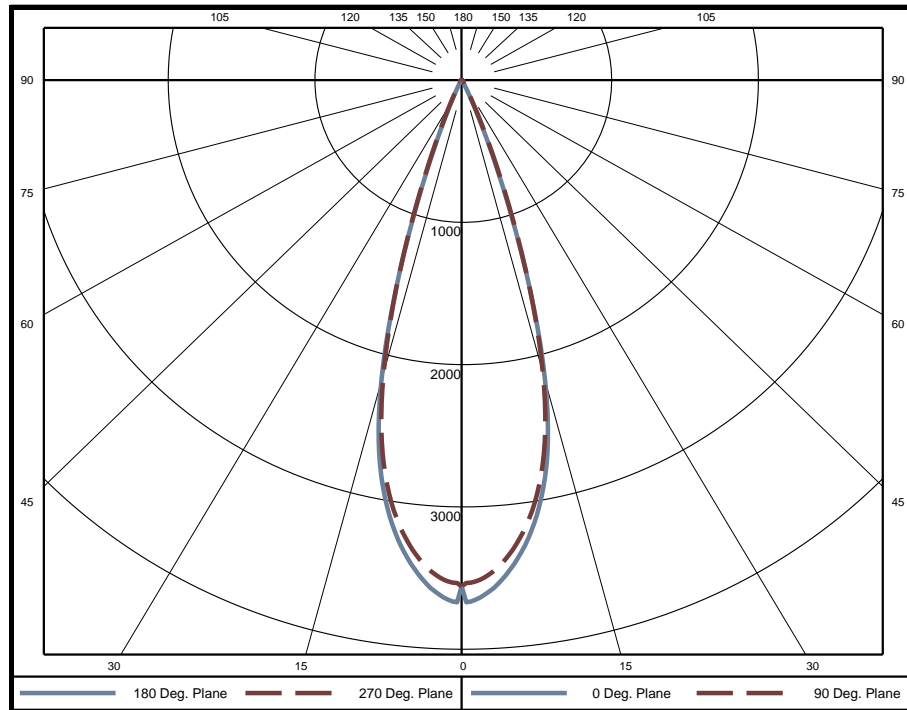
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.5 °C	120.0 VAC	0.1783 A	21.30 W	0.995	60 Hz	8.68 %

Summary of Results

Spacing Criteria
0-180: 0.57
90-270: 0.56

Total Lumen Output: 1125 Lumens
Luminaire Efficacy: 52.8 lm/w
Maximum Candela: 3670 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	83.1	7.4%	60-65	5.2	0.5%	120-125	0	0.0%
5-10	227.0	20.2%	65-70	4.3	0.4%	125-130	0	0.0%
10-15	307.6	27.3%	70-75	2.7	0.2%	130-135	0	0.0%
15-20	271.8	24.2%	75-80	1.0	0.1%	135-140	0	0.0%
20-25	139.4	12.4%	80-85	0.3	0.0%	140-145	0	0.0%
25-30	42.9	3.8%	85-90	0.1	0.0%	145-150	0	0.0%
30-35	12.4	1.1%	90-95	0	0.0%	150-155	0	0.0%
35-40	6.5	0.6%	95-100	0	0.0%	155-160	0	0.0%
40-45	5.3	0.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	5.0	0.4%	105-110	0	0.0%	165-170	0	0.0%
50-55	5.2	0.5%	110-115	0	0.0%	170-175	0	0.0%
55-60	5.4	0.5%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1091	97.0%
0-60	1112	98.8%
0-90	1125	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	3558	3558	3558	3558	3558	3558	3558	3558	3558	3558	3558	3558	3558	3558	3558
	5	3488	3393	3365	3375	3383	3375	3365	3393	3488	3393	3365	3375	3383	3375	3365
	10	3038	2951	2937	2945	2950	2945	2937	2951	3038	2951	2937	2945	2950	2945	2937
	15	2189	2203	2270	2195	2127	2195	2270	2203	2189	2203	2270	2195	2127	2195	2270
	20	902	1084	1366	1118	938	1118	1366	1084	902	1084	1366	1118	938	1118	1366
	25	185	288	519	330	223	330	519	288	185	288	519	330	223	330	519
	30	40	59	122	72	48	72	122	59	40	59	122	72	48	72	122
	35	20	22	32	25	22	25	32	22	20	22	32	25	22	25	32
	40	15	15	17	16	16	16	17	15	15	15	17	16	16	16	17
	45	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
	50	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	55	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	60	12	12	11	11	11	11	12	12	12	11	11	11	11	11	12
	65	11	10	9	10	10	9	10	11	10	9	10	10	10	9	10
	70	8	7	6	7	7	6	7	8	7	6	7	7	7	6	7
	75	4	4	3	3	3	3	4	4	4	3	3	3	3	3	4
	80	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	85	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
	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)

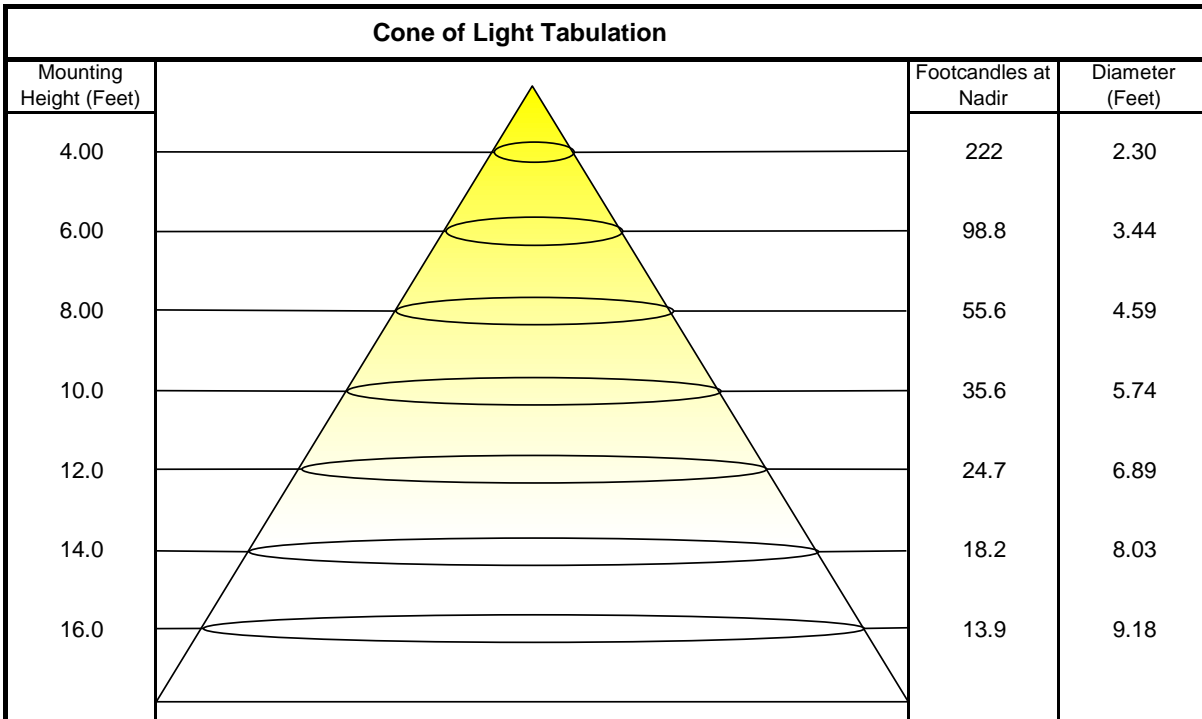
Vertical Angle (Degrees)	0	45	90
	0	882300	882300
	45	4386	4680
	55	5260	4989
	65	6333	5253
	75	3487	2922
	85	1020	1098



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	112	110	109	112	110	109	107	106	105	104	103	102	101	99	98	98	96
2	111	107	104	101	109	105	102	100	102	100	98	99	97	96	96	95	94	92
3	107	102	98	95	105	101	97	94	98	95	93	96	93	91	94	92	90	89
4	103	98	93	90	102	96	93	90	94	91	89	93	90	88	91	89	87	85
5	100	94	89	86	99	93	89	86	91	88	85	90	87	84	88	86	84	82
6	97	90	86	83	96	90	85	82	88	85	82	87	84	81	86	83	81	80
7	94	87	83	80	93	86	82	79	85	82	79	84	81	79	83	80	78	77
8	91	84	80	77	90	84	80	77	83	79	76	82	78	76	81	78	76	75
9	88	81	77	74	88	81	77	74	80	77	74	79	76	74	79	76	73	72
10	86	79	75	72	85	79	75	72	78	74	72	77	74	71	77	74	71	70

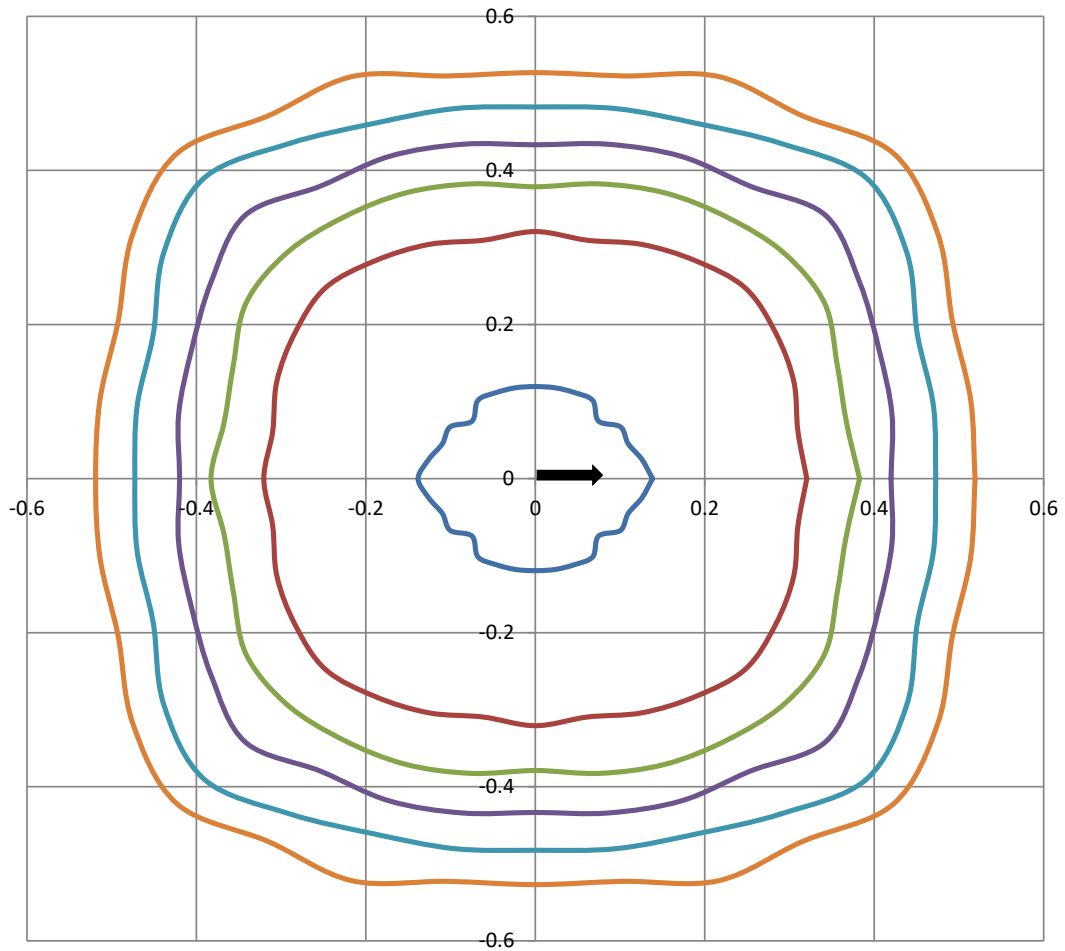
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	3558 Candela
Central Cone Intensity:	3500 Candela
Beam Flux:	745.6 Lumens
Beam Angle (0-180):	33.3 Degrees
Beam Angle (90-270):	33.0 Degrees
Field Angle (0-180):	46.3 Degrees
Field Angle (90-270):	47.1 Degrees





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