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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
831 W Fairview Ave
PO Box 837
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United States

Catalog Number
2AS-L12/835-DIM-UNV-LN-OF-WH-x-xx (45° TILT)
Order Number
13257190
Test Number
13257190.38

Test Date

2020-03-23

Prepared By

Jesse Litchfield, Technician

Approved By

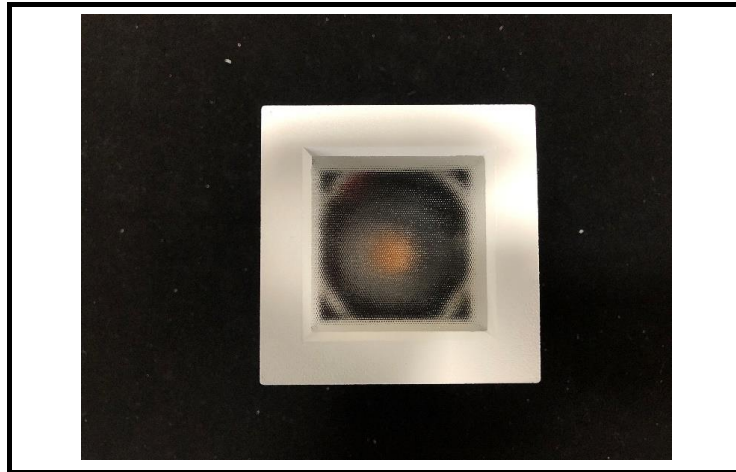
Alexa Lambert, Project Handler

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 Length: 2.50 in.
Luminous Width: 2.500 in.

Summary of Results

Total Luminaire Output:	742.4 Lumens
Luminaire Efficacy:	34.9 lm/w
Maximum Candela:	6368 Candela

Test Conditions

Test Temperature:	24.9 °C
Voltage:	120.0 VAC
Current:	0.1782 A
Power:	21.28 W
Power Factor:	0.995
Frequency:	60 Hz
Current THD:	8.69 %

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



Distribution - Goniophotometer

Distribution Test Conditions

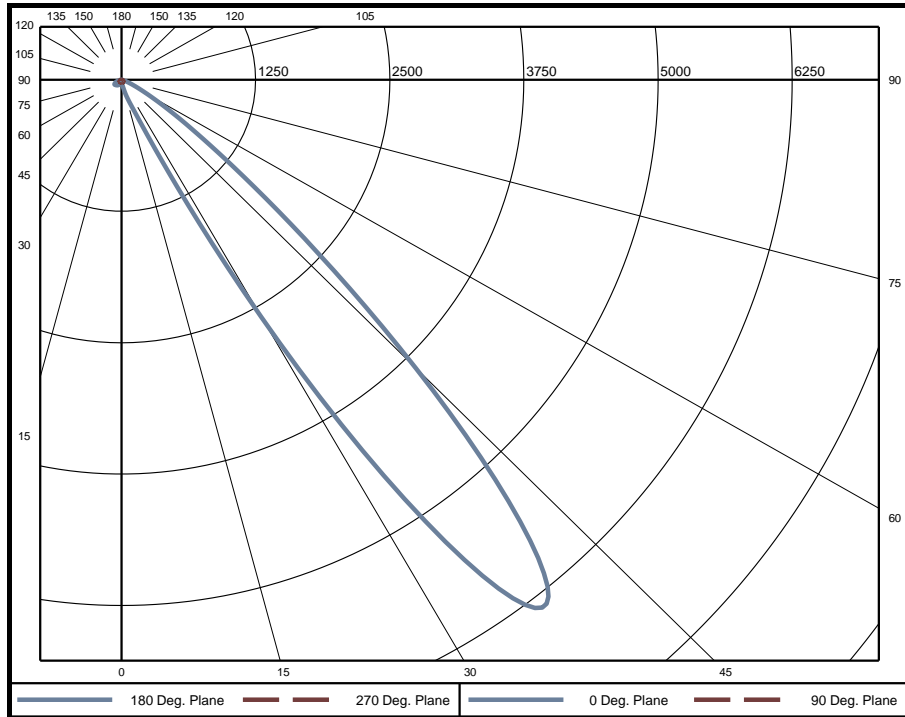
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.9 °C	120.0 VAC	0.1782 A	21.28 W	0.995	60 Hz	8.69 %

Summary of Results

Spacing Criteria
0-180: 4.05
90-270: 1.35

Total Lumen Output: 742.4 Lumens
Luminaire Efficacy: 34.9 lm/w
Maximum Candela: 6368 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.7	0.1%	60-65	21.8	2.9%	120-125	0	0.0%
5-10	2.2	0.3%	65-70	15.5	2.1%	125-130	0	0.0%
10-15	5.0	0.7%	70-75	10.7	1.4%	130-135	0	0.0%
15-20	10.4	1.4%	75-80	6.7	0.9%	135-140	0	0.0%
20-25	19.8	2.7%	80-85	3.3	0.4%	140-145	0	0.0%
25-30	45.9	6.2%	85-90	0.7	0.1%	145-150	0	0.0%
30-35	108.7	14.6%	90-95	0	0.0%	150-155	0	0.0%
35-40	164.2	22.1%	95-100	0	0.0%	155-160	0	0.0%
40-45	149.2	20.1%	100-105	0	0.0%	160-165	0	0.0%
45-50	93.3	12.6%	105-110	0	0.0%	165-170	0	0.0%
50-55	51.9	7.0%	110-115	0	0.0%	170-175	0	0.0%
55-60	32.2	4.3%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	357	48.1%
0-60	684	92.1%
0-90	742	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	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	5	30	30	28	27	27	28	28	28	29	28	28	28	27	27	28
	10	56	50	36	28	27	29	31	33	34	33	31	29	27	28	36
	15	132	108	58	30	26	30	34	37	39	37	34	30	26	30	58
	20	252	192	95	34	26	31	37	42	44	42	37	31	26	34	95
	25	643	305	123	35	25	31	40	48	50	48	40	31	25	35	123
	30	2605	482	116	30	24	33	44	53	57	53	44	33	24	30	116
	35	5573	591	77	26	23	34	48	58	62	58	48	34	23	26	77
	40	6124	502	51	24	22	35	51	63	67	63	51	35	22	24	51
	45	3883	304	36	23	22	36	53	67	71	67	53	36	22	23	36
	50	1756	148	29	21	22	37	55	70	75	70	55	37	22	21	29
	55	734	71	24	20	22	36	55	72	79	72	55	36	22	20	24
	60	300	40	20	18	20	33	51	69	75	69	51	33	20	18	40
	65	118	27	16	15	17	28	42	59	64	59	42	28	17	15	27
	70	46	18	12	11	13	21	32	45	50	45	32	21	13	11	18
	75	18	12	8	8	9	14	22	31	35	31	22	14	9	8	12
	80	8	6	4	4	5	8	12	18	21	18	12	8	5	4	6
	85	2	1	1	1	2	3	5	8	9	8	5	3	2	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)	Horizontal Angle (Degrees)			
	0	45	90	
	0	6525	6525	6525
	45	1362000	12800	7714
	55	317400	10400	9422
	65	69490	9169	10020
	75	17150	7769	8855
	85	4625	3312	5473



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	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	63
4	84	73	64	58	82	71	63	57	69	62	57	67	61	56	64	59	55	53
5	77	64	55	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	70	57	48	42	68	56	48	41	54	47	41	53	46	41	51	45	40	38
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	46	39	35	33
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	54	41	32	26	53	40	32	26	39	31	26	38	31	26	37	30	26	24
10	50	37	28	23	49	36	28	23	35	28	23	34	27	23	33	27	22	21

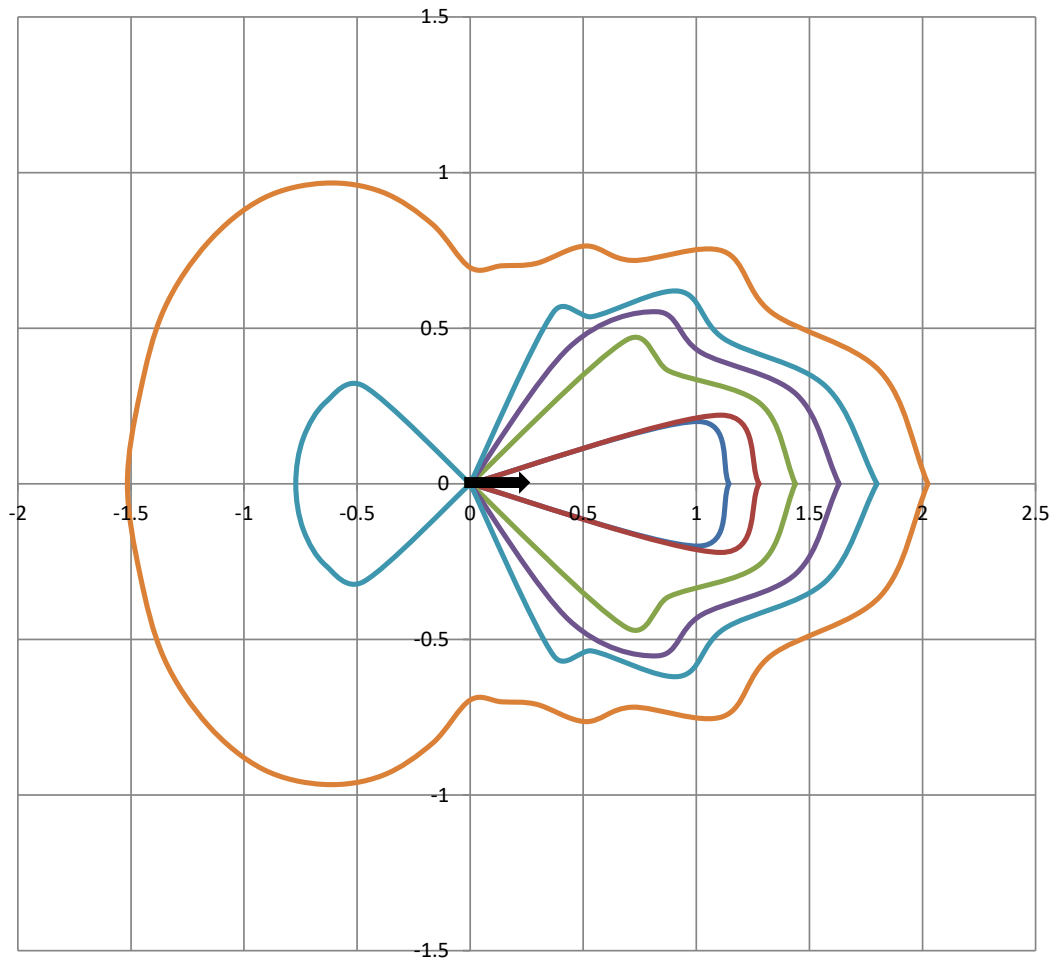
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	26 Candela
Central Cone Intensity:	27 Candela
Beam Flux:	733.6 Lumens
Beam Angle (0-180):	160.1 Degrees
Beam Angle (90-270):	140.6 Degrees
Field Angle (0-180):	171.4 Degrees
Field Angle (90-270):	167.8 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		1.64	12.0
6.00		0.731	18.0
8.00		0.411	24.0
10.0		0.263	30.0
12.0		0.183	36.0
14.0		0.134	42.0
16.0		0.103	48.0



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

10 fc 5 fc 2 fc 1 fc 0.5 fc 0.2 fc