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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-RN-OF-WH-x-xx (0° TILT)
Order Number
13257190
Test Number
13257190.39

Test Date

2020-03-23

Prepared By

Jesse Litchfield, Technician

Approved By

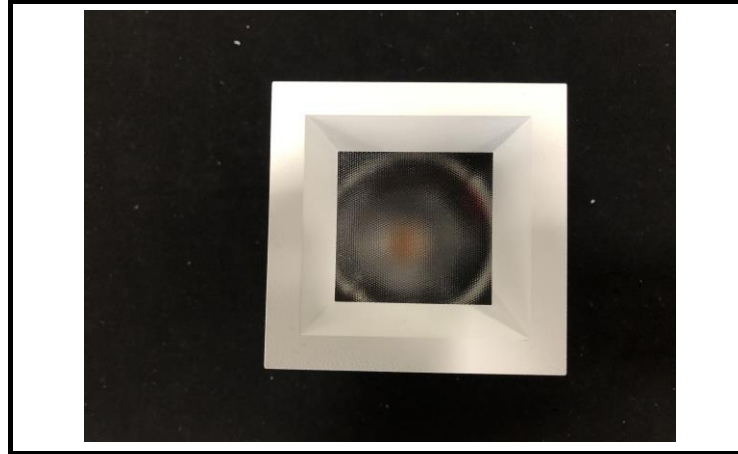
Alexa Lambert, Project Handler

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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: 1051 Lumens
Luminaire Efficacy: 49.4 lm/w
Maximum Candela: 14753 Candela

Test Conditions

Test Temperature: 24.7 °C
Voltage: 120.0 VAC
Current: 0.1784 A
Power: 21.29 W
Power Factor: 0.995
Frequency: 60 Hz
Current THD: 8.67 %

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



Distribution - Goniophotometer

Distribution Test Conditions

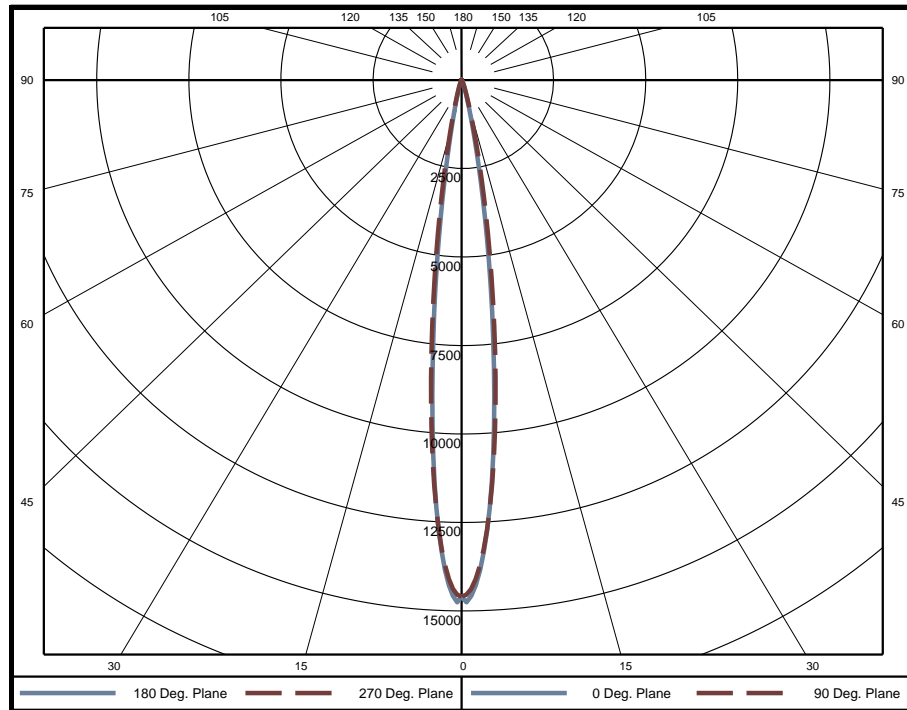
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.7 °C	120.0 VAC	0.1784 A	21.29 W	0.995	60 Hz	8.67 %

Summary of Results

Spacing Criteria
0-180: 0.23
90-270: 0.23

Total Lumen Output: 1051 Lumens
Luminaire Efficacy: 49.4 lm/w
Maximum Candela: 14753 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	289.3	27.5%	60-65	3.4	0.3%	120-125	0	0.0%
5-10	420.2	40.0%	65-70	2.9	0.3%	125-130	0	0.0%
10-15	186.3	17.7%	70-75	2.1	0.2%	130-135	0	0.0%
15-20	67.6	6.4%	75-80	1.2	0.1%	135-140	0	0.0%
20-25	32.9	3.1%	80-85	0.9	0.1%	140-145	0	0.0%
25-30	15.5	1.5%	85-90	0.8	0.1%	145-150	0	0.0%
30-35	7.9	0.8%	90-95	0	0.0%	150-155	0	0.0%
35-40	5.3	0.5%	95-100	0	0.0%	155-160	0	0.0%
40-45	4.1	0.4%	100-105	0	0.0%	160-165	0	0.0%
45-50	3.5	0.3%	105-110	0	0.0%	165-170	0	0.0%
50-55	3.4	0.3%	110-115	0	0.0%	170-175	0	0.0%
55-60	3.5	0.3%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1025	97.5%
0-60	1040	98.9%
0-90	1051	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	14590	14590	14590	14590	14590	14590	14590	14590	14590	14590	14590	14590	14590	14590	14590
	5	9781	9715	9857	9945	9996	9945	9857	9715	9781	9715	9857	9945	9996	9945	9857
	10	2891	3045	3246	3349	3367	3349	3246	3045	2891	3045	3246	3349	3367	3349	3246
	15	589	665	771	765	740	765	771	665	589	665	771	765	740	765	771
	20	204	233	287	245	217	245	287	233	204	233	287	245	217	245	287
	25	70	85	128	97	80	97	128	85	70	85	128	97	80	97	128
	30	30	32	50	39	34	39	50	32	30	32	50	39	34	39	50
	35	18	18	21	21	19	21	21	18	18	18	21	21	19	21	21
	40	11	12	14	14	13	14	14	12	11	12	14	14	13	14	14
	45	8	9	10	10	10	10	10	9	8	9	10	10	10	10	9
	50	7	8	8	8	8	8	8	7	8	8	8	8	8	8	8
	55	7	8	7	8	8	8	7	8	7	8	7	8	8	7	8
	60	7	8	7	7	7	7	8	7	8	7	7	7	7	7	8
	65	7	7	6	6	7	6	7	7	7	6	6	7	6	6	7
	70	5	5	4	5	5	5	4	5	5	5	4	5	5	5	4
	75	3	3	3	3	4	3	3	3	3	3	3	4	3	3	3
	80	1	2	2	2	2	2	2	1	2	2	2	2	2	2	2
	85	1	2	1	2	2	2	1	2	1	2	1	2	2	2	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)

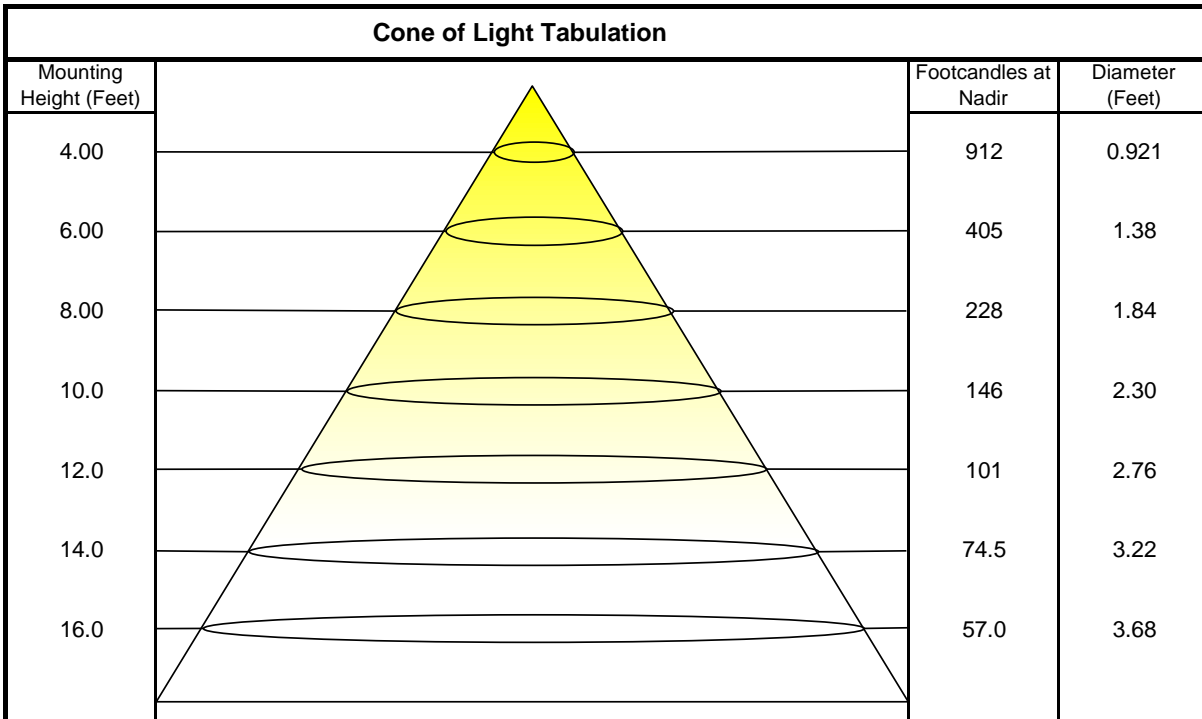
Vertical Angle (Degrees)	0	45	90
	0	3619000	3619000
	45	2889	3665
	55	3115	3196
	65	3845	3552
	75	3071	2662
	85	3115	3966



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	116	114	112	111	113	112	110	109	108	107	106	104	103	102	101	100	98	96
2	113	110	107	105	111	108	106	104	105	103	102	102	101	99	100	98	97	96
3	110	106	103	101	108	105	102	100	103	100	99	100	99	97	98	97	96	94
4	108	103	100	98	106	102	99	97	100	98	96	99	97	95	97	95	94	93
5	106	101	98	95	104	100	97	95	99	96	94	97	95	93	96	94	93	92
6	104	99	96	93	103	98	95	93	97	94	92	96	94	92	95	93	91	90
7	102	97	94	92	101	96	94	91	95	93	91	95	92	91	94	92	90	89
8	100	95	92	90	100	95	92	90	94	92	90	93	91	89	93	91	89	88
9	99	94	91	89	98	94	91	89	93	90	89	92	90	88	92	90	88	87
10	98	93	90	88	97	92	90	88	92	89	87	91	89	87	91	89	87	86

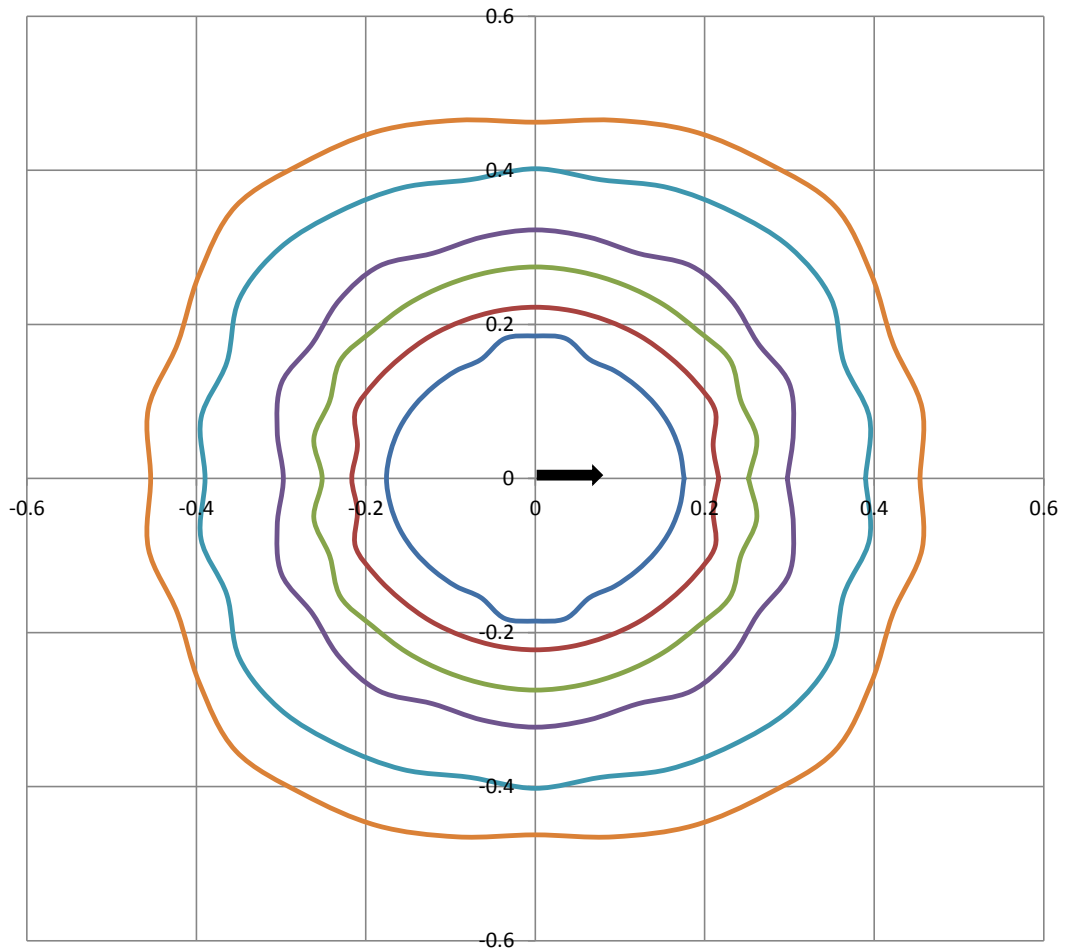
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	14590 Candela
Central Cone Intensity:	12811 Candela
Beam Flux:	444.7 Lumens
Beam Angle (0-180):	13.0 Degrees
Beam Angle (90-270):	13.6 Degrees
Field Angle (0-180):	24.2 Degrees
Field Angle (90-270):	25.6 Degrees





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