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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
2DR-L15/835-DIM-UNV-RN-OF-WH-x-xx
Order Number
13257153
Test Number
13257153.09

Test Date

2020-03-11

Prepared By

Jesse Litchfield, Technician

Approved By

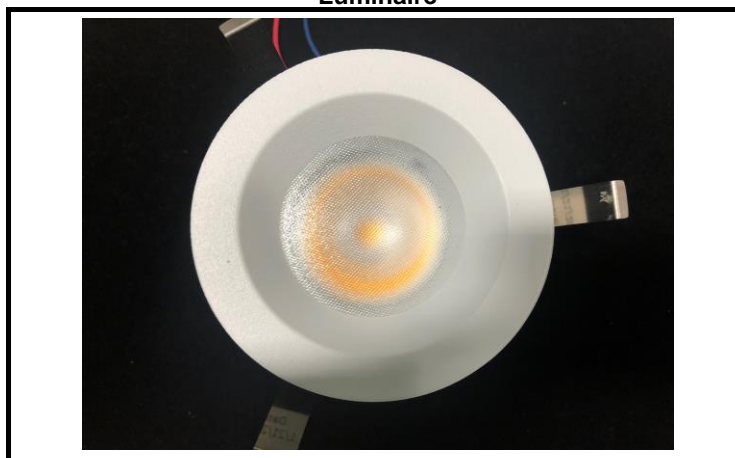
Alexa Lambert, Project Handler

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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:	1567 Lumens
Luminaire Efficacy:	90.6 lm/w
Maximum Candela:	5673 Candela

Test Conditions

Test Temperature:	25.5 °C
Voltage:	120.1 VAC
Current:	0.1451 A
Power:	17.29 W
Power Factor:	0.992
Frequency:	60 Hz
Current THD:	11.0 %

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



Distribution - Goniophotometer

Distribution Test Conditions

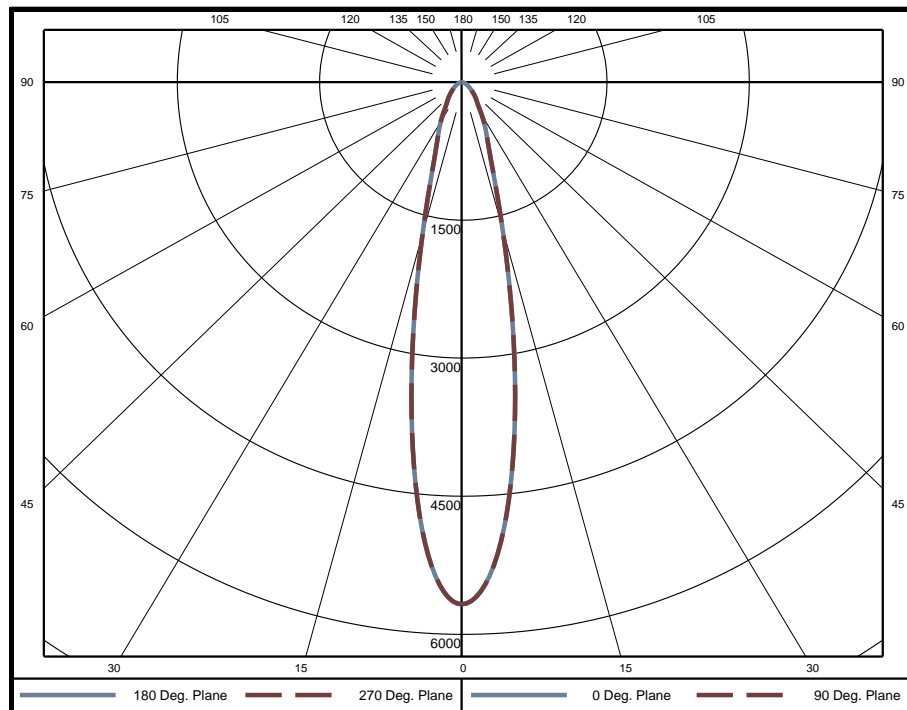
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.5 °C	120.1 VAC	0.1451 A	17.29 W	0.992	60 Hz	11.0 %

Summary of Results

Spacing Criteria
0-180: 0.36
90-270: 0.36

Total Lumen Output: 1567 Lumens
Luminaire Efficacy: 90.6 lm/w
Maximum Candela: 5673 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	126.1	8.0%	60-65	27.7	1.8%	120-125	0	0.0%
5-10	279.6	17.8%	65-70	19.2	1.2%	125-130	0	0.0%
10-15	259.1	16.5%	70-75	11.3	0.7%	130-135	0	0.0%
15-20	182.3	11.6%	75-80	5.2	0.3%	135-140	0	0.0%
20-25	143.6	9.2%	80-85	2.7	0.2%	140-145	0	0.0%
25-30	122.3	7.8%	85-90	0.8	0.1%	145-150	0	0.0%
30-35	96.6	6.2%	90-95	0	0.0%	150-155	0	0.0%
35-40	81.8	5.2%	95-100	0	0.0%	155-160	0	0.0%
40-45	69.9	4.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	56.7	3.6%	105-110	0	0.0%	165-170	0	0.0%
50-55	45.4	2.9%	110-115	0	0.0%	170-175	0	0.0%
55-60	36.4	2.3%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1291	82.4%
0-60	1500	95.7%
0-90	1567	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	5673	5673	5673	5673	5673	5673	5673	5673	5673	5673	5673	5673	5673	5673	5673
	5	4877	4877	4877	4877	4877	4877	4877	4877	4877	4877	4877	4877	4877	4877	4877
	10	3069	3069	3069	3069	3069	3069	3069	3069	3069	3069	3069	3069	3069	3069	3069
	15	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532
	20	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833
	25	576	576	576	576	576	576	576	576	576	576	576	576	576	576	576
	30	398	398	398	398	398	398	398	398	398	398	398	398	398	398	398
	35	278	278	278	278	278	278	278	278	278	278	278	278	278	278	278
	40	217	217	217	217	217	217	217	217	217	217	217	217	217	217	217
	45	163	163	163	163	163	163	163	163	163	163	163	163	163	163	163
	50	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
	55	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91
	60	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
	65	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
	70	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
	75	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	80	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	85	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	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)

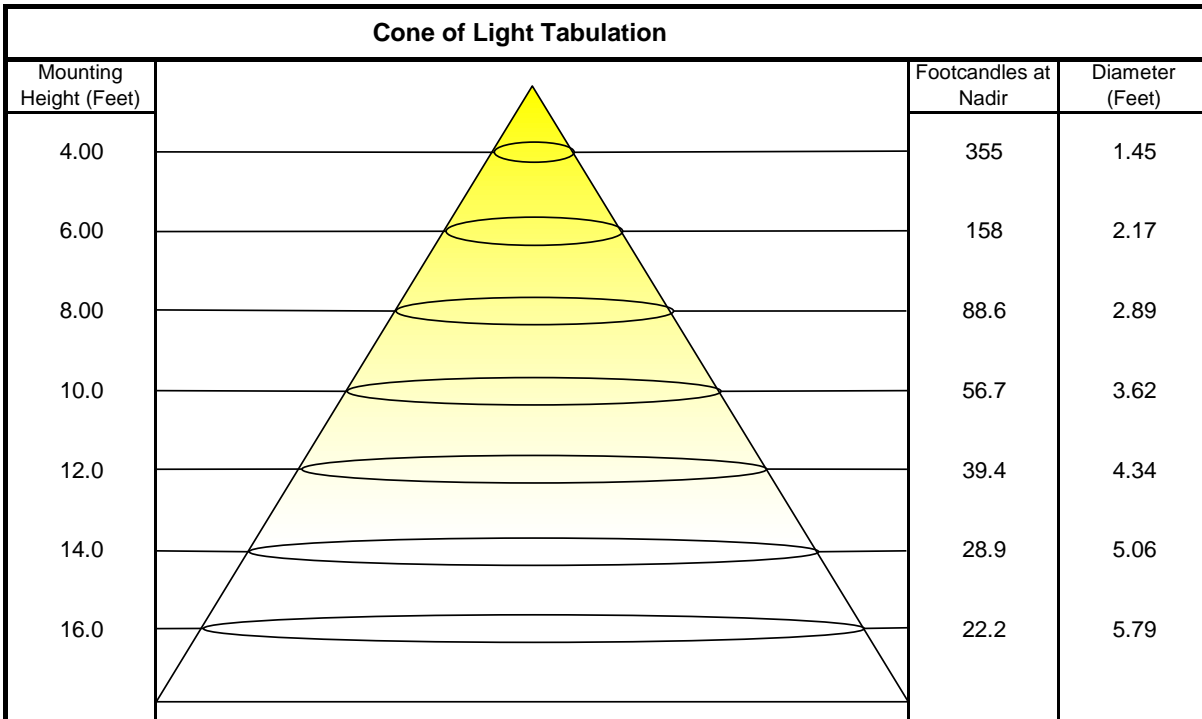
Vertical Angle (Degrees)	0	45	90
	0	1791000	1791000
	45	72740	72740
	55	49960	49960
	65	35190	35190
	75	17530	17530
	85	11000	11000



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	113	111	108	106	111	108	106	104	104	102	101	101	99	98	97	96	95	93
2	108	103	99	95	106	101	97	94	98	95	92	95	92	90	92	90	88	87
3	103	96	91	87	101	95	90	87	92	88	85	90	86	84	87	85	83	81
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	77	76
5	93	85	80	75	92	84	79	75	83	78	74	81	77	74	79	76	73	72
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	69	68
7	86	77	71	67	84	76	71	67	75	70	67	74	70	66	73	69	66	65
8	82	73	68	64	81	73	68	64	72	67	64	71	67	63	70	66	63	62
9	79	70	65	61	78	70	65	61	69	64	61	68	64	61	67	63	61	59
10	76	68	62	59	76	67	62	59	66	62	59	66	61	58	65	61	58	57

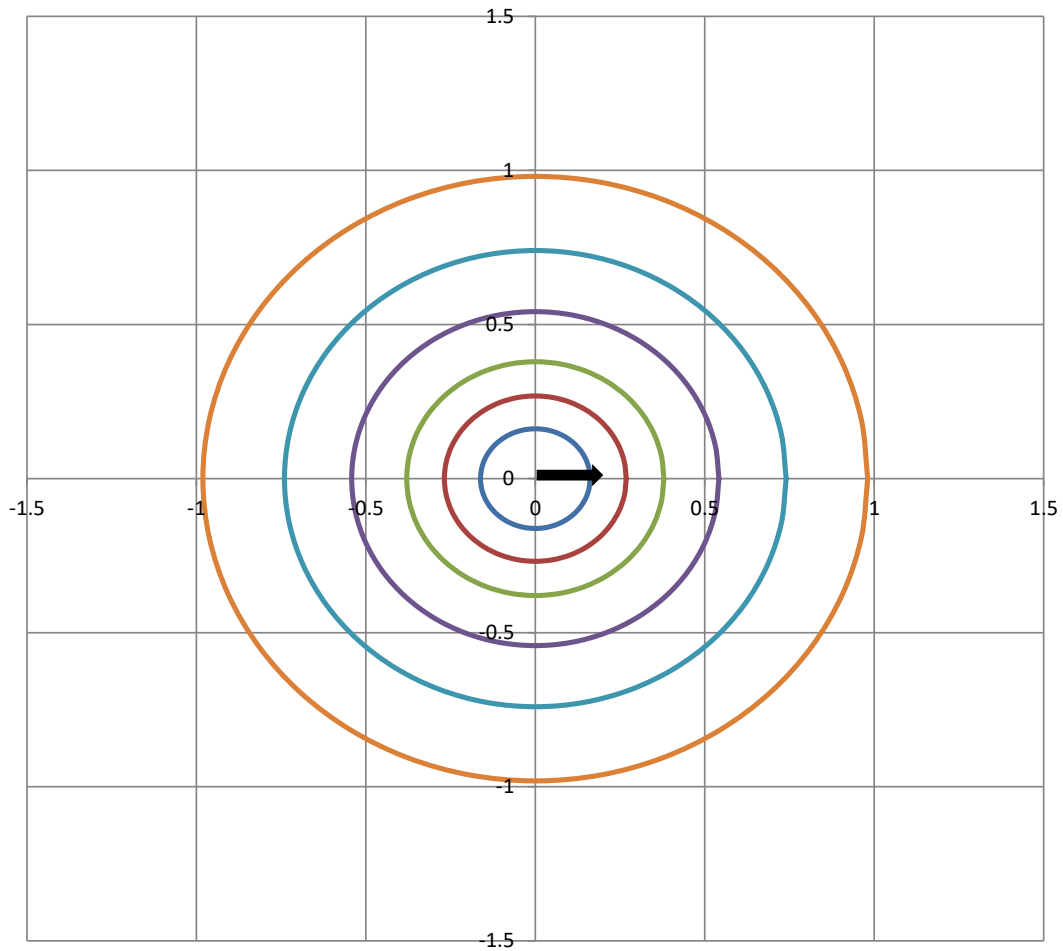
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	5673 Candela
Central Cone Intensity:	5387 Candela
Beam Flux:	442.8 Lumens
Beam Angle (0-180):	21.3 Degrees
Beam Angle (90-270):	21.3 Degrees
Field Angle (0-180):	50.5 Degrees
Field Angle (90-270):	50.5 Degrees





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