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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-LM-OF-WH-x-xx
Order Number
13257153
Test Number
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Test Date

2020-03-10

Prepared By

Jesse Litchfield, Technician

Approved By

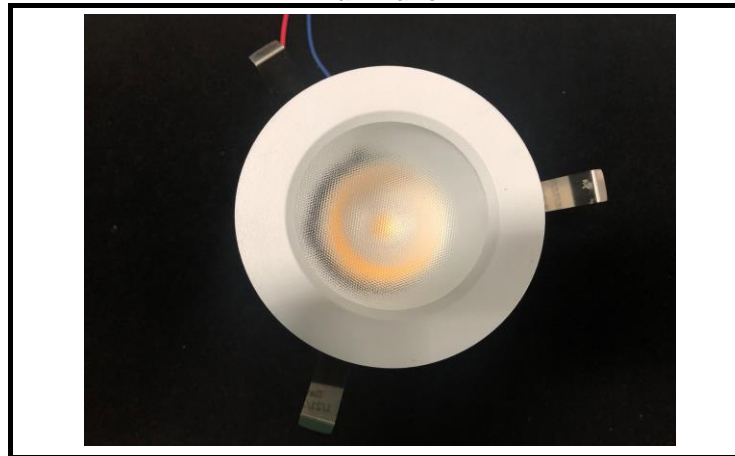
Alexa Lambert, Project Handler

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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:	1620 Lumens
Luminaire Efficacy:	93.6 lm/w
Maximum Candela:	3927 Candela

Test Conditions

Test Temperature:	24.8 °C
Voltage:	120.1 VAC
Current:	0.1452 A
Power:	17.30 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

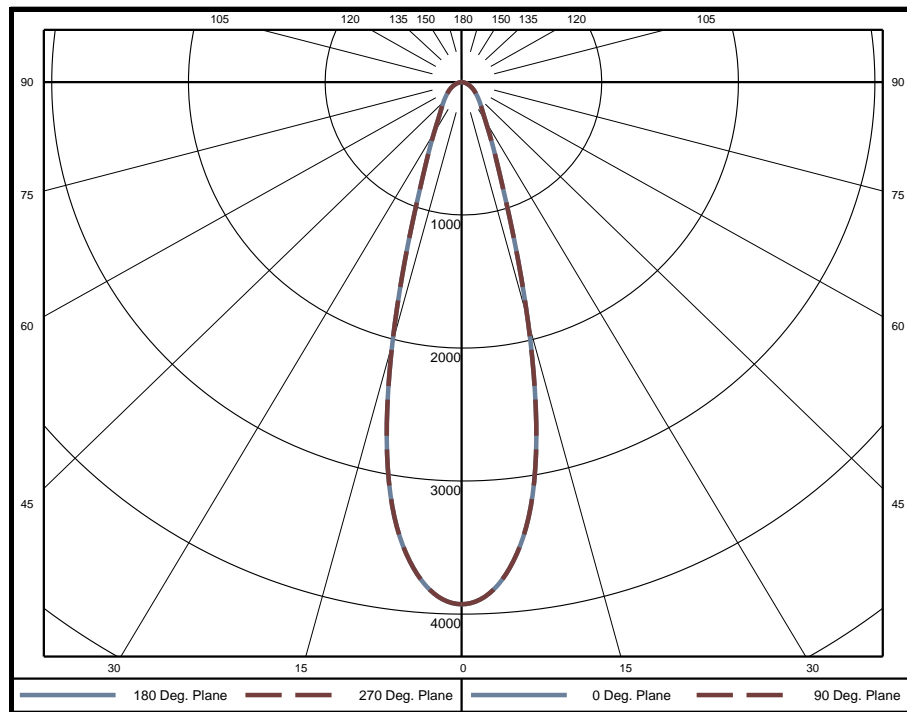
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.8 °C	120.1 VAC	0.1452 A	17.30 W	0.992	60 Hz	11.0 %

Summary of Results

Spacing Criteria
 0-180: 0.50
 90-270: 0.50

Total Lumen Output: 1620 Lumens
Luminaire Efficacy: 93.6 lm/w
Maximum Candela: 3927 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	91.4	5.6%	60-65	38.3	2.4%	120-125	0	0.0%
5-10	242.8	15.0%	65-70	29.7	1.8%	125-130	0	0.0%
10-15	290.9	18.0%	70-75	21.5	1.3%	130-135	0	0.0%
15-20	219.8	13.6%	75-80	13.8	0.9%	135-140	0	0.0%
20-25	148.5	9.2%	80-85	6.8	0.4%	140-145	0	0.0%
25-30	112.2	6.9%	85-90	1.1	0.1%	145-150	0	0.0%
30-35	90.4	5.6%	90-95	0	0.0%	150-155	0	0.0%
35-40	79.0	4.9%	95-100	0	0.0%	155-160	0	0.0%
40-45	70.4	4.3%	100-105	0	0.0%	160-165	0	0.0%
45-50	62.1	3.8%	105-110	0	0.0%	165-170	0	0.0%
50-55	54.3	3.4%	110-115	0	0.0%	170-175	0	0.0%
55-60	46.7	2.9%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1275	78.7%
0-60	1509	93.1%
0-90	1620	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	3927	3927	3927	3927	3927	3927	3927	3927	3927	3927	3927	3927	3927	3927	3927
	5	3714	3714	3714	3714	3714	3714	3714	3714	3714	3714	3714	3714	3714	3714	3714
	10	3051	3051	3051	3051	3051	3051	3051	3051	3051	3051	3051	3051	3051	3051	3051
	15	1880	1880	1880	1880	1880	1880	1880	1880	1880	1880	1880	1880	1880	1880	1880
	20	937	937	937	937	937	937	937	937	937	937	937	937	937	937	937
	25	551	551	551	551	551	551	551	551	551	551	551	551	551	551	551
	30	361	361	361	361	361	361	361	361	361	361	361	361	361	361	361
	35	266	266	266	266	266	266	266	266	266	266	266	266	266	266	266
	40	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212
	45	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171
	50	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138
	55	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113
	60	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
	65	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
	70	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	75	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
	80	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
	85	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	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)

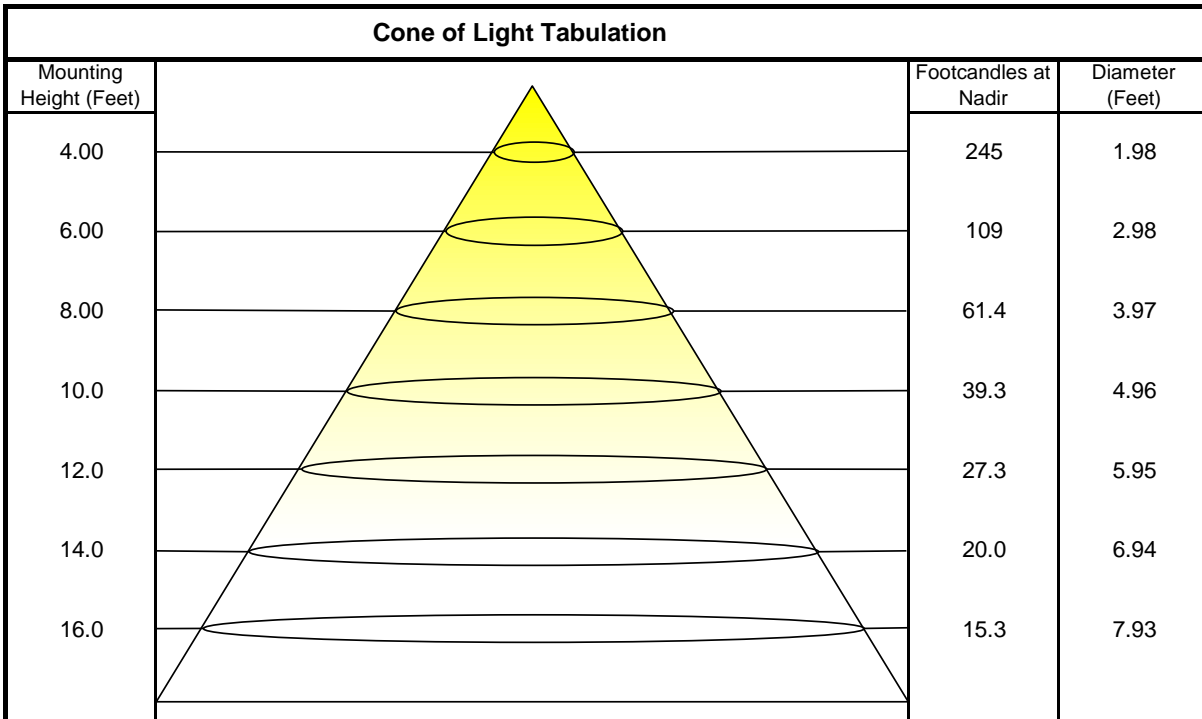
Vertical Angle (Degrees)	0	45	90
	0	1240000	1240000
	45	76250	76250
	55	61980	61980
	65	50930	50930
	75	40390	40390
	85	22470	22470



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	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	90	88	86	85
3	101	94	89	85	99	93	88	84	90	86	82	88	84	81	85	82	80	78
4	96	88	82	78	94	87	81	77	85	80	76	83	79	75	81	77	75	73
5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	69
6	87	78	72	68	86	77	72	68	76	71	67	74	70	67	73	69	66	65
7	83	74	68	64	82	73	68	64	72	67	63	71	66	63	70	66	63	61
8	80	71	65	61	79	70	64	61	69	64	60	68	63	60	67	63	60	58
9	77	67	62	58	76	67	61	58	66	61	57	65	61	57	64	60	57	56
10	74	65	59	55	73	64	59	55	63	58	55	63	58	55	62	58	55	53

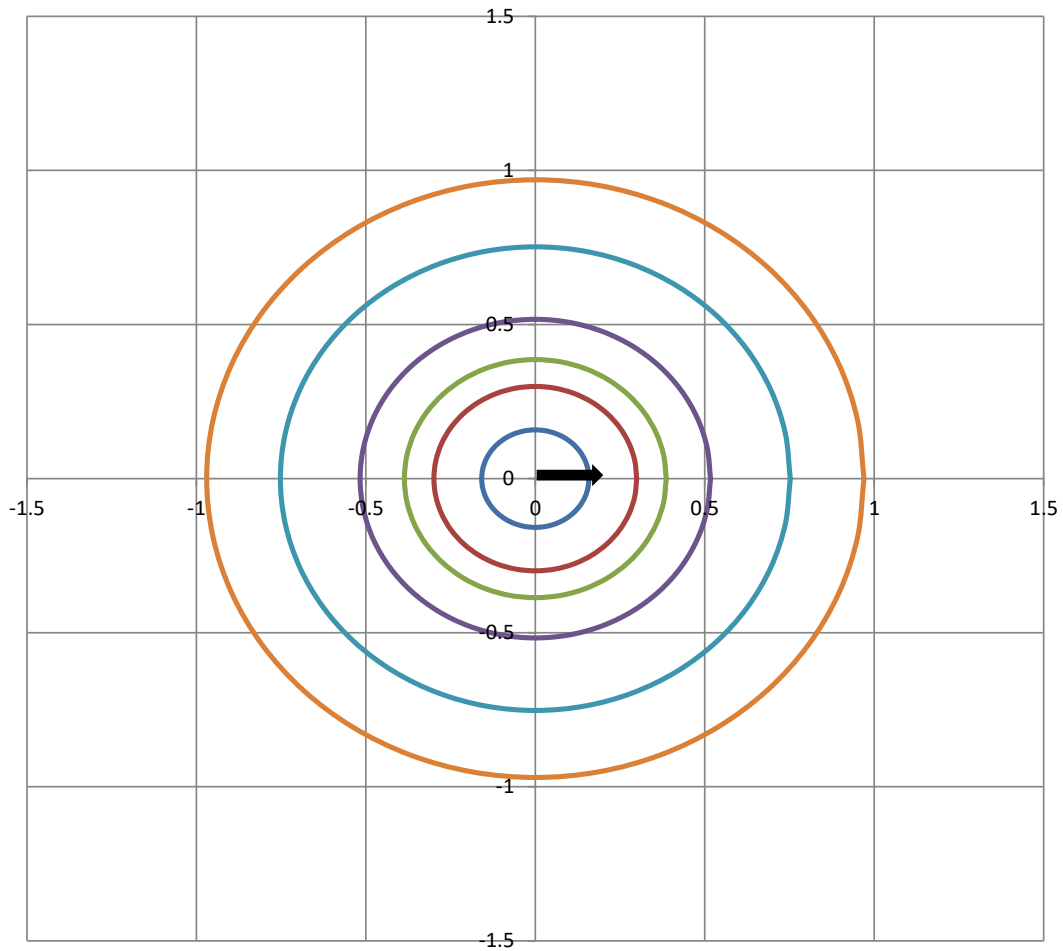
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	3927 Candela
Central Cone Intensity:	3853 Candela
Beam Flux:	605.7 Lumens
Beam Angle (0-180):	29.3 Degrees
Beam Angle (90-270):	29.3 Degrees
Field Angle (0-180):	57.8 Degrees
Field Angle (90-270):	57.8 Degrees





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