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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-L25/835-DIM-UNV-OW-OF-SG-x-xx

Order Number
13131414
Test Number
13131414.04

Test Date

2019-11-26

Prepared By

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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 and reflector, no enclosure
Lamp: One white LED
Mounting: Recessed
Ballast/Driver: Philips Advance XI036C100V054DSM1

Luminaire



Luminaire Characteristics
Luminous Diameter: 2.50 in.

Summary of Results

Total Luminaire Output:	2243 Lumens
Luminaire Efficacy:	74.6 lm/w
Maximum Candela:	2036 Candela

Test Conditions

Test Temperature:	25.1 °C
Voltage:	120.0 VAC
Current:	0.2514 A
Power:	30.07 W
Power Factor:	0.996
Frequency:	60 Hz
Current THD:	6.68 %

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



Distribution - Goniophotometer

Distribution Test Conditions

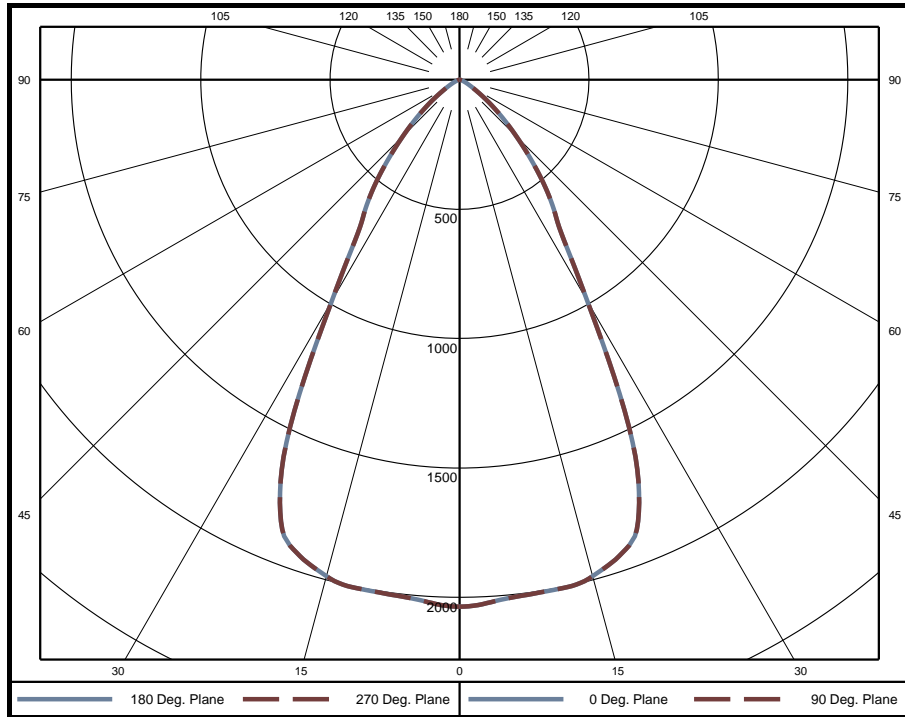
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.1 °C	120.0 VAC	0.2514 A	30.07 W	0.996	60 Hz	6.68 %

Summary of Results

Spacing Criteria
 0-180: 1.00
 90-270: 1.00

Total Lumen Output: 2243 Lumens
Luminaire Efficacy: 74.6 lm/w
Maximum Candela: 2036 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	48.4	2.2%	60-65	17.5	0.8%	120-125	0	0.0%
5-10	143.6	6.4%	65-70	9.6	0.4%	125-130	0	0.0%
10-15	237.3	10.6%	70-75	4.7	0.2%	130-135	0	0.0%
15-20	321.8	14.3%	75-80	2.0	0.1%	135-140	0	0.0%
20-25	375.3	16.7%	80-85	0.7	0.0%	140-145	0	0.0%
25-30	325.3	14.5%	85-90	0.1	0.0%	145-150	0	0.0%
30-35	231.3	10.3%	90-95	0	0.0%	150-155	0	0.0%
35-40	188.9	8.4%	95-100	0	0.0%	155-160	0	0.0%
40-45	144.8	6.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	99.2	4.4%	105-110	0	0.0%	165-170	0	0.0%
50-55	60.3	2.7%	110-115	0	0.0%	170-175	0	0.0%
55-60	32.1	1.4%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1872	83.5%
0-60	2208	98.5%
0-90	2243	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	2036	2036	2036	2036	2036	2036	2036	2036	2036	2036	2036	2036	2036	2036	2036
	5	2013	2013	2013	2013	2013	2013	2013	2013	2013	2013	2013	2013	2013	2013	2013
	10	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005	2005
	15	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986	1986
	20	1915	1915	1915	1915	1915	1915	1915	1915	1915	1915	1915	1915	1915	1915	1915
	25	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608	1608
	30	985	985	985	985	985	985	985	985	985	985	985	985	985	985	985
	35	651	651	651	651	651	651	651	651	651	651	651	651	651	651	651
	40	479	479	479	479	479	479	479	479	479	479	479	479	479	479	479
	45	312	312	312	312	312	312	312	312	312	312	312	312	312	312	312
	50	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187
	55	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97
	60	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
	65	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	70	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
	75	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	80	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	85	1	1	1	1	1	1	1	1	1	1	1	1	1	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)	0	45	90
	0	642900	642900
	45	139200	139200
	55	53600	53600
	65	19390	19390
	75	7035	7035
	85	2132	2132



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	105	111	108	105	103	104	102	100	100	99	97	97	95	94	93
2	107	102	97	94	105	100	96	92	97	93	90	94	91	89	91	89	87	85
3	101	94	89	84	99	93	88	84	90	86	82	87	84	81	85	82	80	78
4	95	87	81	77	93	86	80	76	84	79	75	82	78	74	80	76	73	72
5	90	81	75	70	88	80	74	70	78	73	69	76	72	68	75	71	68	66
6	85	75	69	64	83	75	69	64	73	68	64	72	67	63	70	66	63	61
7	80	71	64	60	79	70	64	59	68	63	59	67	62	59	66	62	58	57
8	76	66	60	55	75	65	59	55	64	59	55	63	58	55	62	58	54	53
9	72	62	56	52	71	62	56	51	61	55	51	60	55	51	59	54	51	49
10	69	58	52	48	68	58	52	48	57	52	48	56	51	48	56	51	48	46

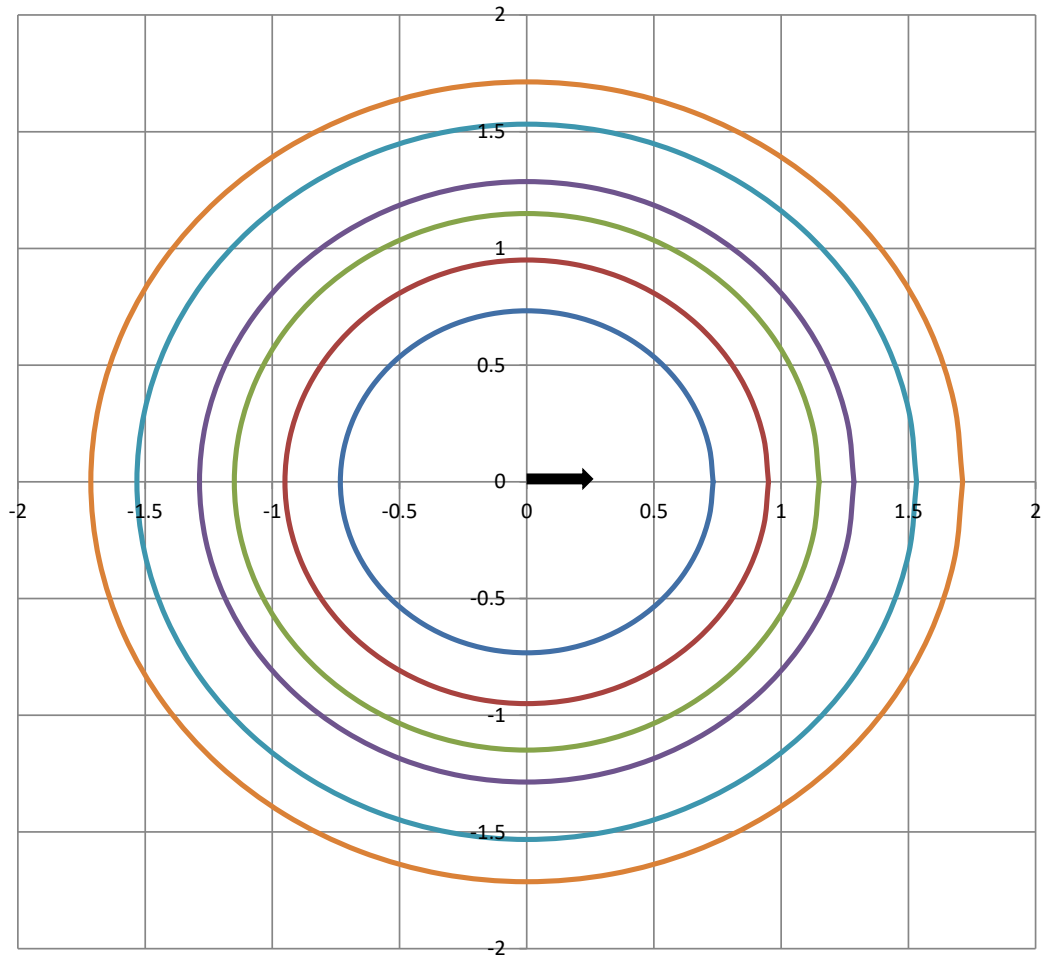
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	2036 Candela
Central Cone Intensity:	2027 Candela
Beam Flux:	1432.3 Lumens
Beam Angle (0-180):	59.4 Degrees
Beam Angle (90-270):	59.4 Degrees
Field Angle (0-180):	98.5 Degrees
Field Angle (90-270):	98.5 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		127	4.00
6.00		56.6	6.00
8.00		31.8	7.99
10.0		20.4	9.99
12.0		14.1	12.0
14.0		10.4	14.0
16.0		7.95	16.0



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

5 fc

2 fc

1 fc

0.5 fc

0.2 fc

0.1 fc