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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-CS-x-xx

Order Number
13131414
Test Number
13131414.01

Test Date

2019-11-22

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:	2479 Lumens
Luminaire Efficacy:	82.3 lm/w
Maximum Candela:	2106 Candela

Test Conditions

Test Temperature:	24.8 °C
Voltage:	120.1 VAC
Current:	0.2517 A
Power:	30.12 W
Power Factor:	0.996
Frequency:	60 Hz
Current THD:	6.66 %

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



Distribution - Goniophotometer

Distribution Test Conditions

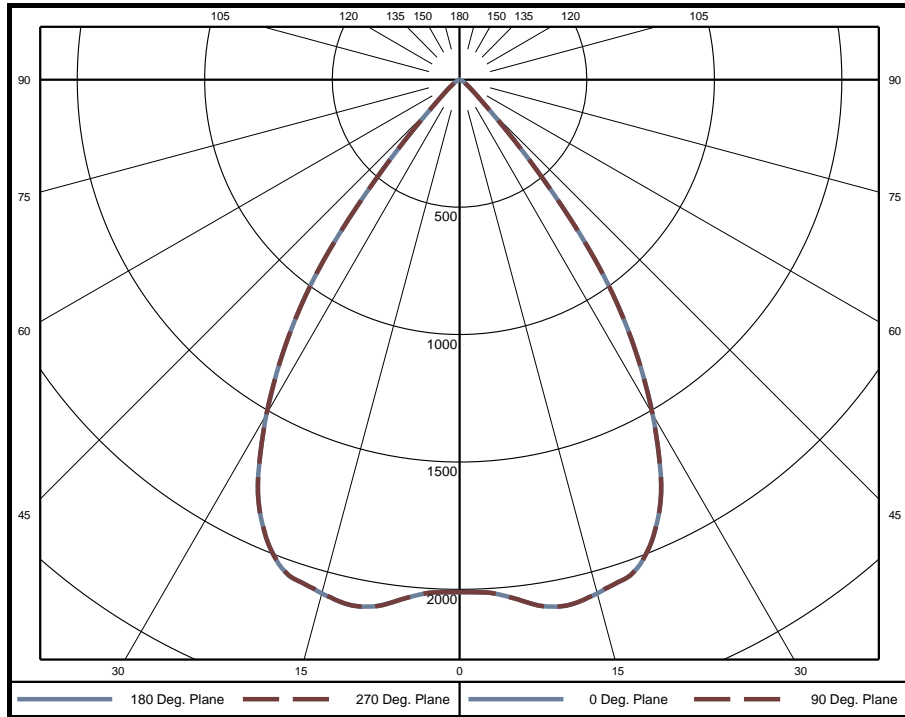
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.8 °C	120.1 VAC	0.2517 A	30.12 W	0.996	60 Hz	6.66 %

Summary of Results

Spacing Criteria
 0-180: 1.14
 90-270: 1.14

Total Lumen Output: 2479 Lumens
 Luminaire Efficacy: 82.3 lm/w
 Maximum Candela: 2106 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	48.3	1.9%	60-65	7.7	0.3%	120-125	0	0.0%
5-10	148.3	6.0%	65-70	4.2	0.2%	125-130	0	0.0%
10-15	249.1	10.0%	70-75	1.9	0.1%	130-135	0	0.0%
15-20	340.7	13.7%	75-80	0.7	0.0%	135-140	0	0.0%
20-25	410.6	16.6%	80-85	0.3	0.0%	140-145	0	0.0%
25-30	428.8	17.3%	85-90	0.1	0.0%	145-150	0	0.0%
30-35	383.9	15.5%	90-95	0	0.0%	150-155	0	0.0%
35-40	270.8	10.9%	95-100	0	0.0%	155-160	0	0.0%
40-45	111.0	4.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	39.4	1.6%	105-110	0	0.0%	165-170	0	0.0%
50-55	21.0	0.8%	110-115	0	0.0%	170-175	0	0.0%
55-60	12.3	0.5%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	2281	92.0%
0-60	2464	99.4%
0-90	2479	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	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011
	5	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033	2033
	10	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
	15	2087	2087	2087	2087	2087	2087	2087	2087	2087	2087	2087	2087	2087	2087	2087
	20	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040
	25	1859	1859	1859	1859	1859	1859	1859	1859	1859	1859	1859	1859	1859	1859	1859
	30	1516	1516	1516	1516	1516	1516	1516	1516	1516	1516	1516	1516	1516	1516	1516
	35	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089
	40	522	522	522	522	522	522	522	522	522	522	522	522	522	522	522
	45	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
	50	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
	55	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
	60	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
	65	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	70	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	75	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	80	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	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)

Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
	0	635000	635000
	45	67120	67120
	55	19120	19120
	65	8697	8697
	75	2690	2690
	85	815	815



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	108	106	111	108	106	104	104	102	101	100	99	98	97	96	95	93
2	107	102	98	95	105	101	97	94	97	94	92	94	92	90	92	90	88	86
3	102	95	90	86	100	94	89	85	91	87	84	88	85	82	86	83	81	79
4	96	88	83	78	94	87	82	78	85	80	77	83	79	76	81	78	75	73
5	91	82	76	72	89	81	76	71	79	74	71	78	73	70	76	72	69	68
6	86	77	71	66	85	76	70	66	74	69	65	73	68	65	72	68	64	63
7	81	72	65	61	80	71	65	61	70	64	61	69	64	60	67	63	60	58
8	77	67	61	57	76	67	61	57	66	60	56	64	60	56	64	59	56	54
9	73	63	57	53	72	63	57	53	62	56	52	61	56	52	60	55	52	51
10	70	59	53	49	68	59	53	49	58	53	49	57	52	49	57	52	49	47

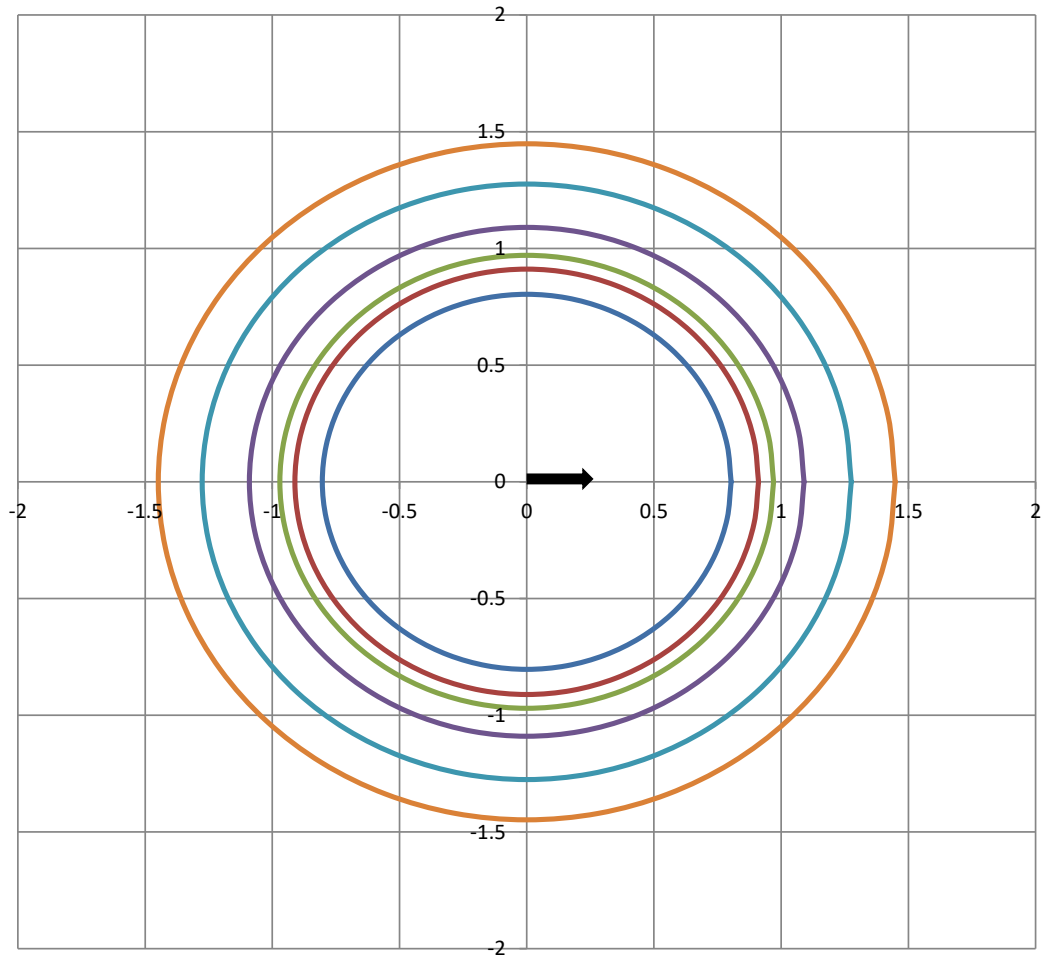
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	2011 Candela
Central Cone Intensity:	2017 Candela
Beam Flux:	2065.9 Lumens
Beam Angle (0-180):	71.7 Degrees
Beam Angle (90-270):	71.7 Degrees
Field Angle (0-180):	87.6 Degrees
Field Angle (90-270):	87.6 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		126	4.57
6.00		55.9	6.86
8.00		31.4	9.14
10.0		20.1	11.4
12.0		14.0	13.7
14.0		10.3	16.0
16.0		7.86	18.3



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