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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
831 W Fairview Ave
PO Box 837
Carthage, MO 64836-0837
United States

Catalog Number
2DR-L25/835-DIM-UNV-ON-OF-CS-AD-x-xx
Order Number
13131414
Test Number
13131414.10

Test Date

2019-11-27

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, frosted lens 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:	1354 Lumens
Luminaire Efficacy:	45.1 lm/w
Maximum Candela:	3890 Candela

Test Conditions

Test Temperature:	24.4 °C
Voltage:	120.0 VAC
Current:	0.2511 A
Power:	30.02 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

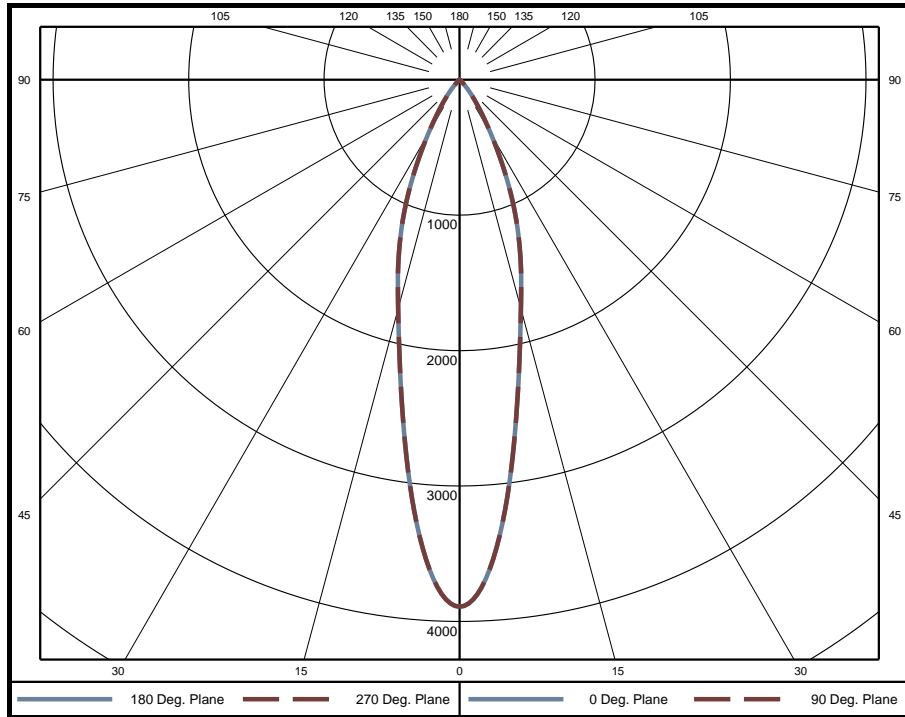
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.4 °C	120.0 VAC	0.2511 A	30.02 W	0.996	60 Hz	6.68 %

Summary of Results

Spacing Criteria
 0-180: 0.44
 90-270: 0.44

Total Lumen Output: 1354 Lumens
Luminaire Efficacy: 45.1 lm/w
Maximum Candela: 3890 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	86.8	6.4%	60-65	0.7	0.1%	120-125	0	0.0%
5-10	204.7	15.1%	65-70	0.4	0.0%	125-130	0	0.0%
10-15	242.7	17.9%	70-75	0.2	0.0%	130-135	0	0.0%
15-20	247.9	18.3%	75-80	0.1	0.0%	135-140	0	0.0%
20-25	223.6	16.5%	80-85	0.1	0.0%	140-145	0	0.0%
25-30	162.9	12.0%	85-90	0.0	0.0%	145-150	0	0.0%
30-35	98.5	7.3%	90-95	0	0.0%	150-155	0	0.0%
35-40	53.6	4.0%	95-100	0	0.0%	155-160	0	0.0%
40-45	22.6	1.7%	100-105	0	0.0%	160-165	0	0.0%
45-50	6.2	0.5%	105-110	0	0.0%	165-170	0	0.0%
50-55	2.2	0.2%	110-115	0	0.0%	170-175	0	0.0%
55-60	1.2	0.1%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1321	97.5%
0-60	1353	99.9%
0-90	1354	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	3890	3890	3890	3890	3890	3890	3890	3890	3890	3890	3890	3890	3890	3890	3890
	5	3383	3383	3383	3383	3383	3383	3383	3383	3383	3383	3383	3383	3383	3383	3383
	10	2443	2443	2443	2443	2443	2443	2443	2443	2443	2443	2443	2443	2443	2443	2443
	15	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
	20	1292	1292	1292	1292	1292	1292	1292	1292	1292	1292	1292	1292	1292	1292	1292
	25	853	853	853	853	853	853	853	853	853	853	853	853	853	853	853
	30	467	467	467	467	467	467	467	467	467	467	467	467	467	467	467
	35	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232
	40	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103
	45	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
	50	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	55	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	60	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	65	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	70	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	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)
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	45	90
	0	1228000	1228000
	45	13450	13450
	55	1884	1884
	65	747	747
	75	357	357
	85	197	197



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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	106	102	99	108	104	101	98	101	98	96	98	96	94	95	93	92	90
3	105	100	96	92	103	98	95	91	96	93	90	94	91	89	91	89	87	86
4	101	95	90	86	99	94	89	86	92	88	85	90	87	84	88	85	83	82
5	97	90	85	82	96	89	85	81	87	84	80	86	82	80	84	81	79	78
6	93	86	81	77	92	85	80	77	84	80	76	82	79	76	81	78	75	74
7	90	82	77	73	89	81	77	73	80	76	73	79	75	72	78	75	72	71
8	86	78	73	70	85	78	73	70	77	73	70	76	72	69	75	72	69	68
9	83	75	70	67	82	75	70	67	74	70	67	73	69	66	72	69	66	65
10	80	72	67	64	79	72	67	64	71	67	64	70	66	64	70	66	63	62

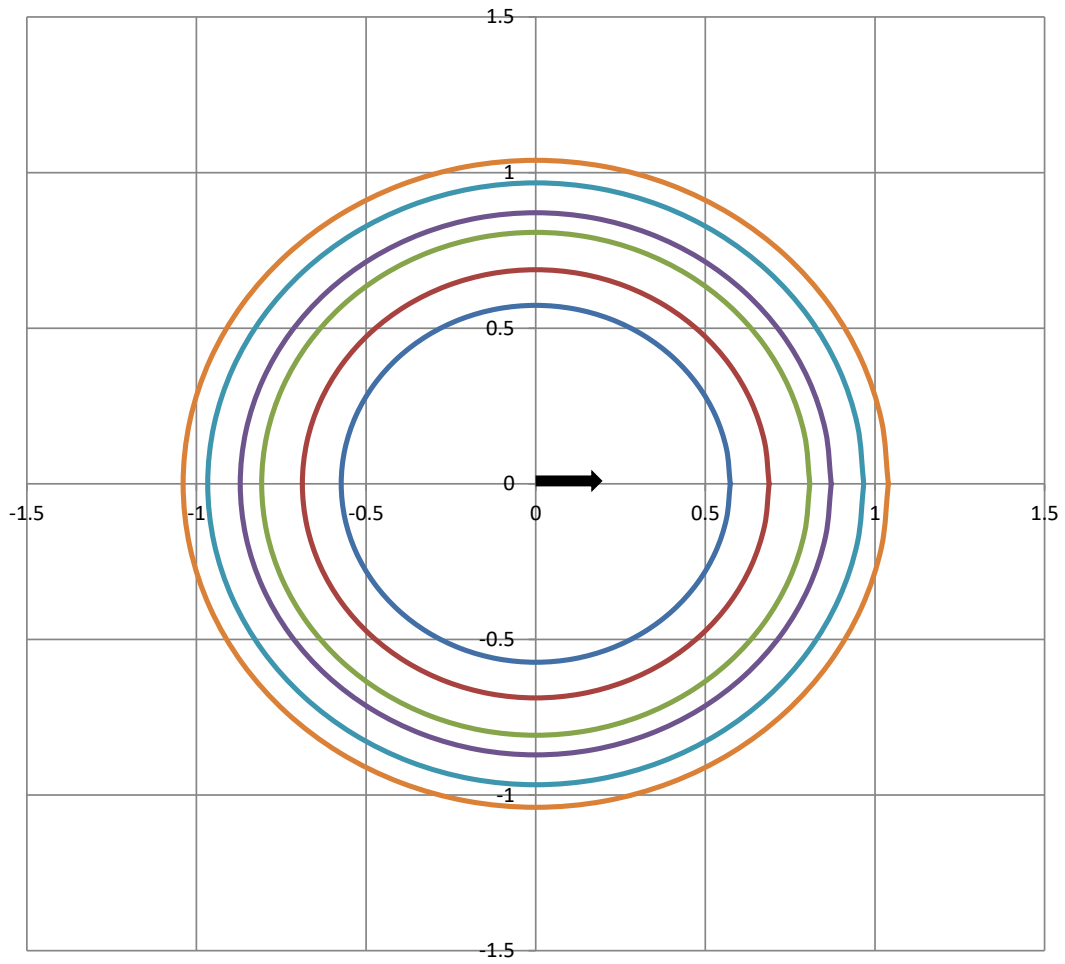
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	3890 Candela
Central Cone Intensity:	3704 Candela
Beam Flux:	452.3 Lumens
Beam Angle (0-180):	26.6 Degrees
Beam Angle (90-270):	26.6 Degrees
Field Angle (0-180):	62.7 Degrees
Field Angle (90-270):	62.7 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		243	1.74
6.00		108	2.61
8.00		60.8	3.48
10.0		38.9	4.35
12.0		27.0	5.22
14.0		19.8	6.09
16.0		15.2	6.96



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

