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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-L15/835-DIM-UNV-RW-OF-WH-x-xx
Order Number
13257153
Test Number
13257153.03

Test Date

2020-03-10

Prepared By

Jesse Litchfield, Technician

Approved By

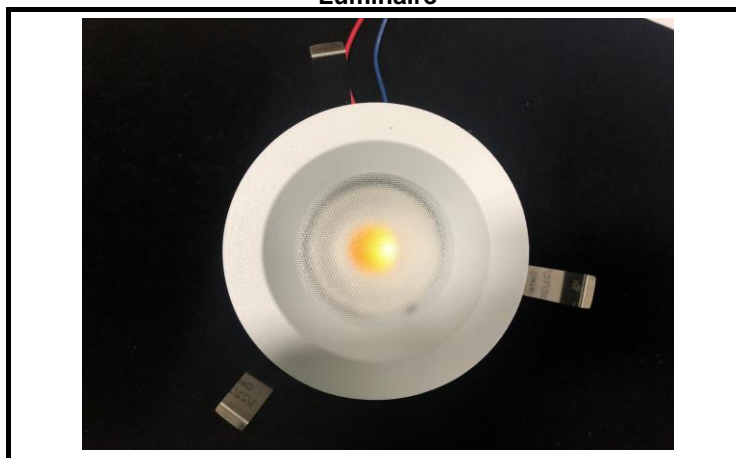
Alexa Lambert, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Aluminum housing, 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:	1628 Lumens
Luminaire Efficacy:	94.1 lm/w
Maximum Candela:	1940 Candela

Test Conditions

Test Temperature:	25.0 °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

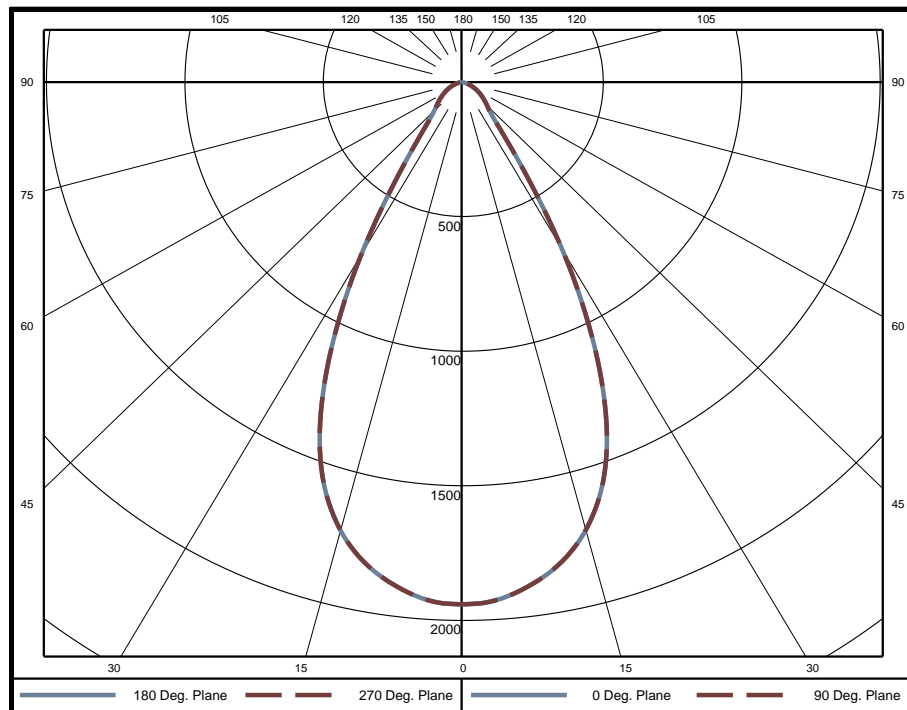
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.0 °C	120.1 VAC	0.1451 A	17.29 W	0.992	60 Hz	11.0 %

Summary of Results

Spacing Criteria
0-180: 0.87
90-270: 0.87

Total Lumen Output: 1628 Lumens
Luminaire Efficacy: 94.1 lm/w
Maximum Candela: 1940 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	46.1	2.8%	60-65	26.7	1.6%	120-125	0	0.0%
5-10	134.4	8.3%	65-70	19.1	1.2%	125-130	0	0.0%
10-15	211.1	13.0%	70-75	11.5	0.7%	130-135	0	0.0%
15-20	264.8	16.3%	75-80	5.3	0.3%	135-140	0	0.0%
20-25	276.1	17.0%	80-85	2.7	0.2%	140-145	0	0.0%
25-30	229.5	14.1%	85-90	0.8	0.0%	145-150	0	0.0%
30-35	143.1	8.8%	90-95	0	0.0%	150-155	0	0.0%
35-40	79.1	4.9%	95-100	0	0.0%	155-160	0	0.0%
40-45	55.4	3.4%	100-105	0	0.0%	160-165	0	0.0%
45-50	47.3	2.9%	105-110	0	0.0%	165-170	0	0.0%
50-55	40.9	2.5%	110-115	0	0.0%	170-175	0	0.0%
55-60	34.1	2.1%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1384	85.0%
0-60	1562	95.9%
0-90	1628	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	1940	1940	1940	1940	1940	1940	1940	1940	1940	1940	1940	1940	1940	1940	1940
	5	1915	1915	1915	1915	1915	1915	1915	1915	1915	1915	1915	1915	1915	1915	1915
	10	1842	1842	1842	1842	1842	1842	1842	1842	1842	1842	1842	1842	1842	1842	1842
	15	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712	1712
	20	1490	1490	1490	1490	1490	1490	1490	1490	1490	1490	1490	1490	1490	1490	1490
	25	1132	1132	1132	1132	1132	1132	1132	1132	1132	1132	1132	1132	1132	1132	1132
	30	690	690	690	690	690	690	690	690	690	690	690	690	690	690	690
	35	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327
	40	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177
	45	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
	50	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
	55	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84
	60	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
	65	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
	70	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
	75	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
	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)

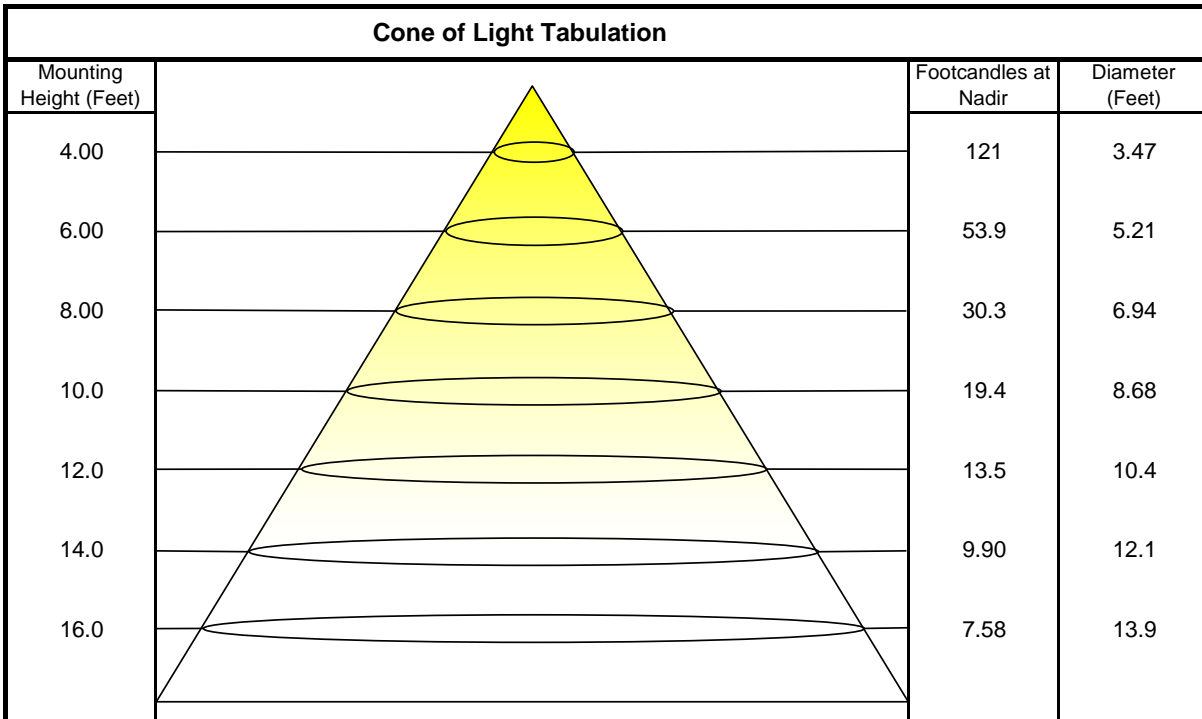
Vertical Angle (Degrees)	0	45	90
	0	612600	612600
	45	58210	58210
	55	46080	46080
	65	34440	34440
	75	17950	17950
	85	10980	10980



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	110	108	105	103	104	102	100	100	98	97	97	95	94	92
2	107	102	97	94	105	100	96	93	97	93	91	94	91	89	91	89	87	85
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	85	83	80	79
4	96	88	82	78	94	87	81	77	85	80	76	82	78	75	81	77	74	73
5	91	82	76	72	89	81	75	71	79	74	71	78	73	70	76	72	69	68
6	86	77	71	66	85	76	70	66	75	70	66	73	69	65	72	68	65	63
7	82	73	66	62	81	72	66	62	71	65	61	69	65	61	68	64	61	59
8	78	68	62	58	77	68	62	58	67	61	58	66	61	57	65	60	57	56
9	75	65	59	55	73	64	58	55	63	58	54	62	58	54	62	57	54	53
10	71	61	55	52	70	61	55	51	60	55	51	59	55	51	59	54	51	50

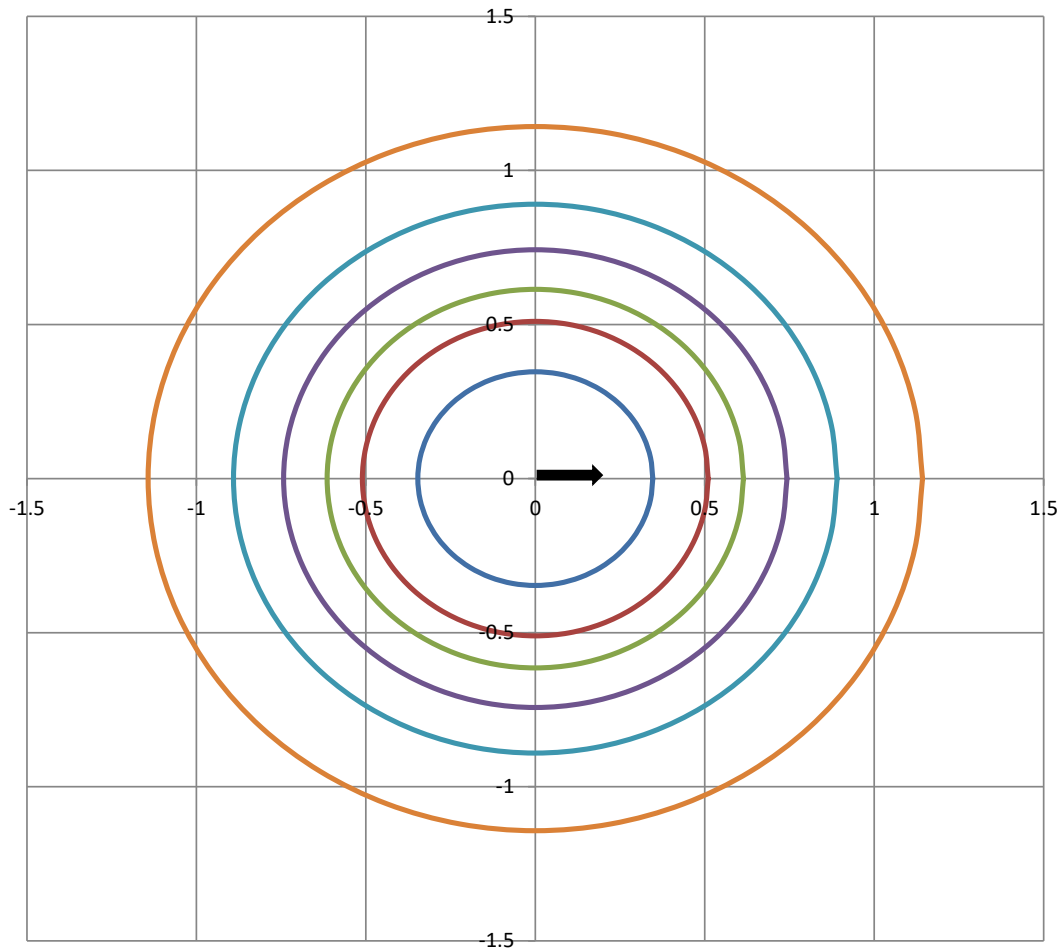
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1940 Candela
Central Cone Intensity:	1932 Candela
Beam Flux:	1025.3 Lumens
Beam Angle (0-180):	53.7 Degrees
Beam Angle (90-270):	53.7 Degrees
Field Angle (0-180):	78.1 Degrees
Field Angle (90-270):	78.1 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

20 fc 10 fc 5 fc 2 fc 1 fc 0.5 fc