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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
2DS-L15/835-DIM-UNV-OW-OF-CS-x-xx
Order Number
13257153
Test Number
13257153.12

Test Date

2020-03-11

Prepared By

Jesse Litchfield, Technician

Approved By

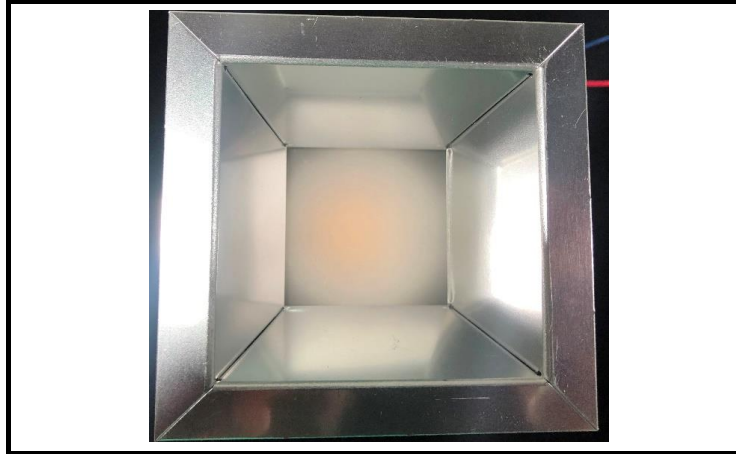
Alexa Lambert, Project Handler

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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 Length: 2.50 in.
Luminous Width: 2.500 in.

Summary of Results

Total Luminaire Output: 1160 Lumens
Luminaire Efficacy: 66.9 lm/w
Maximum Candela: 1470 Candela

Test Conditions

Test Temperature: 25.1 °C
Voltage: 120.1 VAC
Current: 0.1455 A
Power: 17.33 W
Power Factor: 0.992
Frequency: 60 Hz
Current THD: 10.8 %

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



Distribution - Goniophotometer

Distribution Test Conditions

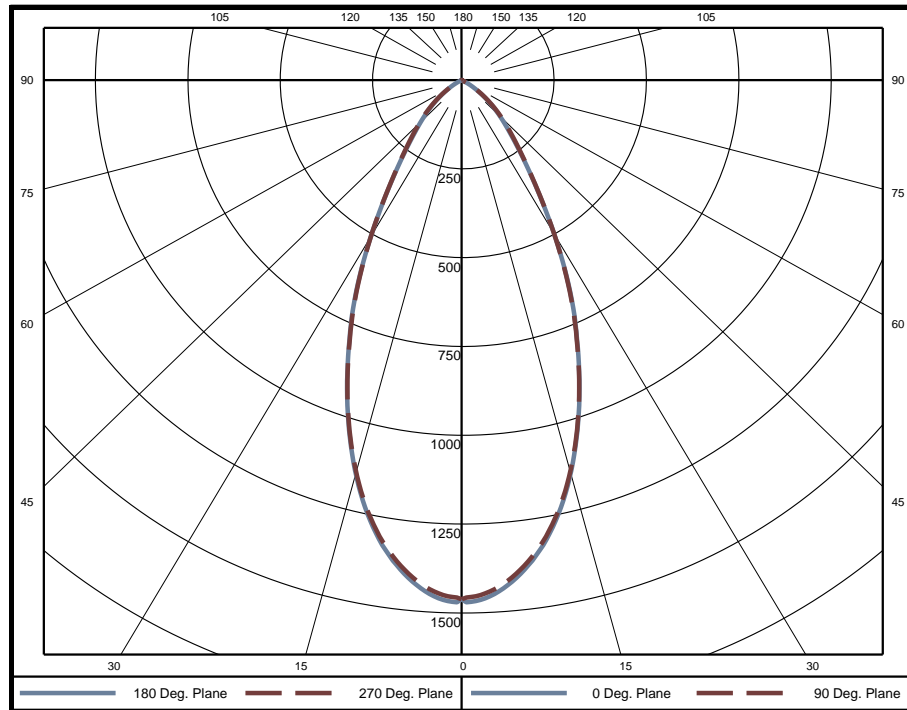
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.1 °C	120.1 VAC	0.1455 A	17.33 W	0.992	60 Hz	10.8 %

Summary of Results

Spacing Criteria
 0-180: 0.76
 90-270: 0.76

Total Lumen Output: 1160 Lumens
Luminaire Efficacy: 66.9 lm/w
Maximum Candela: 1470 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	34.4	3.0%	60-65	6.7	0.6%	120-125	0	0.0%
5-10	97.4	8.4%	65-70	0.9	0.1%	125-130	0	0.0%
10-15	144.8	12.5%	70-75	0.4	0.0%	130-135	0	0.0%
15-20	169.4	14.6%	75-80	0.2	0.0%	135-140	0	0.0%
20-25	170.5	14.7%	80-85	0.1	0.0%	140-145	0	0.0%
25-30	152.5	13.1%	85-90	0.0	0.0%	145-150	0	0.0%
30-35	120.7	10.4%	90-95	0	0.0%	150-155	0	0.0%
35-40	89.5	7.7%	95-100	0	0.0%	155-160	0	0.0%
40-45	66.9	5.8%	100-105	0	0.0%	160-165	0	0.0%
45-50	50.5	4.4%	105-110	0	0.0%	165-170	0	0.0%
50-55	35.1	3.0%	110-115	0	0.0%	170-175	0	0.0%
55-60	19.8	1.7%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	979	84.4%
0-60	1152	99.3%
0-90	1160	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	1461	1461	1461	1461	1461	1461	1461	1461	1461	1461	1461	1461	1461	1461	1461
	5	1427	1421	1417	1416	1415	1416	1417	1421	1427	1421	1417	1416	1415	1416	1421
	10	1313	1307	1306	1305	1304	1305	1306	1307	1313	1307	1306	1305	1304	1305	1307
	15	1137	1136	1137	1135	1133	1135	1137	1136	1137	1136	1137	1135	1133	1135	1136
	20	925	925	926	926	922	926	926	925	925	925	926	926	922	926	925
	25	709	712	713	711	705	711	713	712	709	712	713	711	705	711	712
	30	492	503	514	502	493	502	514	503	492	503	514	502	493	502	503
	35	322	327	343	328	324	328	343	327	322	327	343	328	324	328	327
	40	215	213	220	218	222	218	220	213	215	213	220	218	222	218	213
	45	149	146	150	152	156	152	150	146	149	146	150	152	156	152	146
	50	97	99	105	104	102	104	105	99	97	99	105	104	102	104	99
	55	53	59	67	63	55	63	67	59	53	59	67	63	55	63	59
	60	21	26	32	28	21	28	32	26	21	26	32	28	21	28	26
	65	2	4	8	4	2	4	8	4	2	4	8	4	2	4	8
	70	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	75	1	0	0	1	1	1	0	0	1	0	0	1	1	1	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)

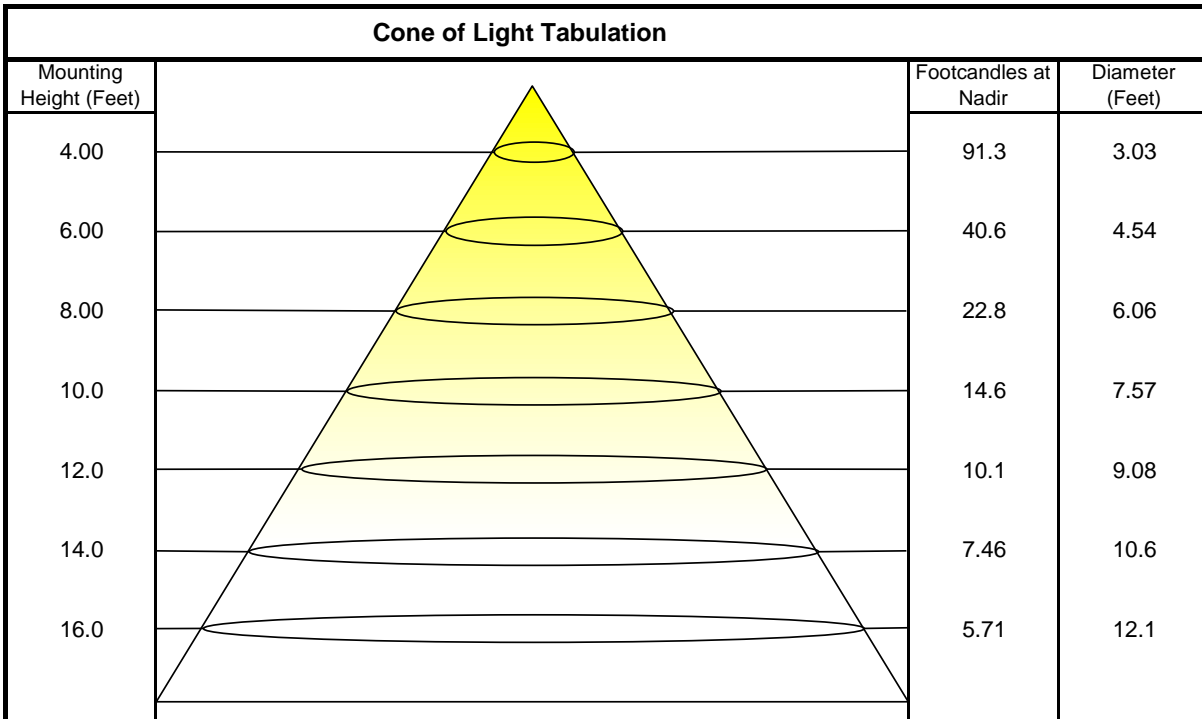
Vertical Angle (Degrees)	0	45	90
	0	362400	362400
	45	52210	54700
	55	22940	23980
	65	1001	1026
	75	490	516
	85	354	360



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	105	111	108	106	104	104	102	101	100	99	98	97	96	95	93
2	107	102	98	94	105	100	97	93	97	94	91	94	92	89	91	89	88	86
3	102	95	90	85	100	93	89	85	91	87	83	88	85	82	86	83	81	79
4	96	88	82	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	75	71	78	73	70	76	72	69	68
6	86	77	71	66	85	76	70	66	75	69	66	73	69	65	72	68	65	63
7	82	72	66	62	80	72	66	61	70	65	61	69	64	61	68	64	60	59
8	78	68	62	57	77	67	61	57	66	61	57	65	60	57	64	60	57	55
9	74	64	58	54	73	64	58	54	63	57	54	62	57	53	61	56	53	52
10	71	61	55	51	70	60	54	51	59	54	50	59	54	50	58	53	50	49

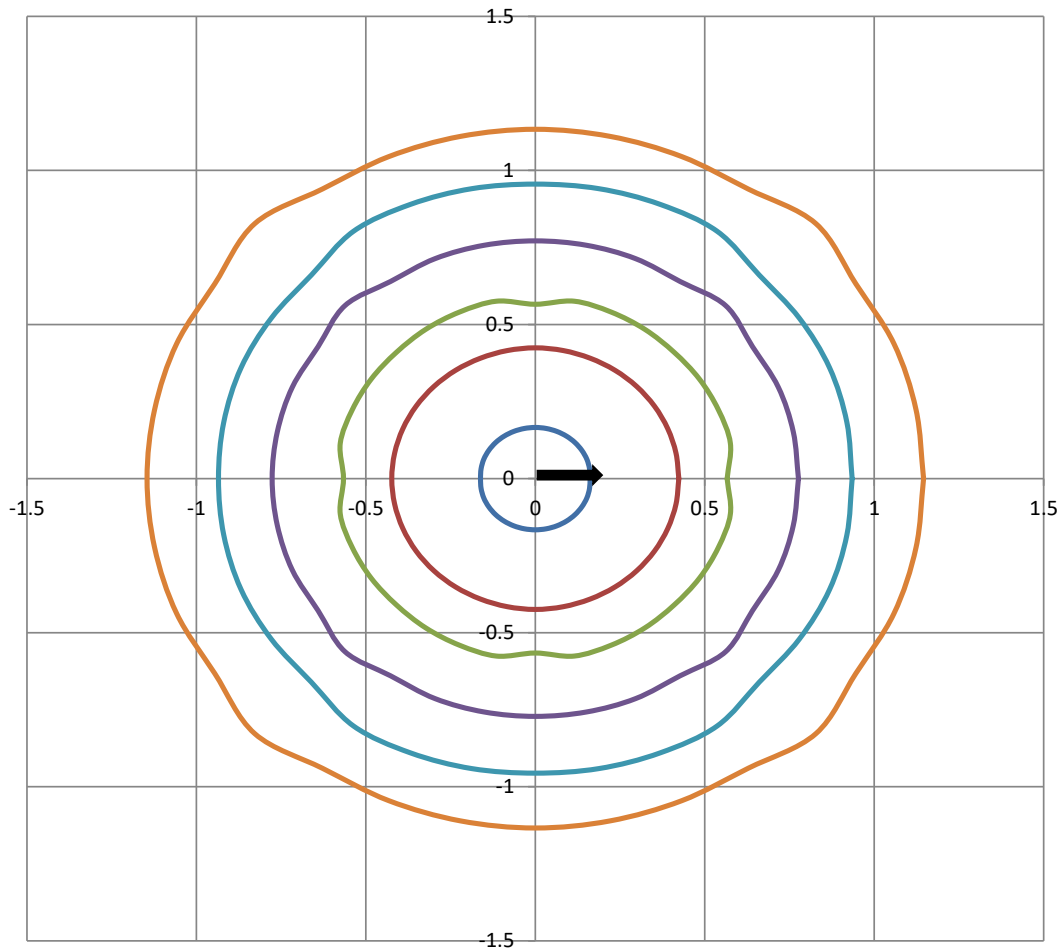
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1461 Candela
Central Cone Intensity:	1446 Candela
Beam Flux:	601.1 Lumens
Beam Angle (0-180):	49.0 Degrees
Beam Angle (90-270):	48.8 Degrees
Field Angle (0-180):	90.5 Degrees
Field Angle (90-270):	91.7 Degrees





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