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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
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United States

Catalog Number
2DR-L12/835-DIM-UNV-LS-OF-WH-x-xx
Order Number
13257153
Test Number
13257153.10

Test Date

2020-03-11

Prepared By

Jesse Litchfield, Technician

Approved By

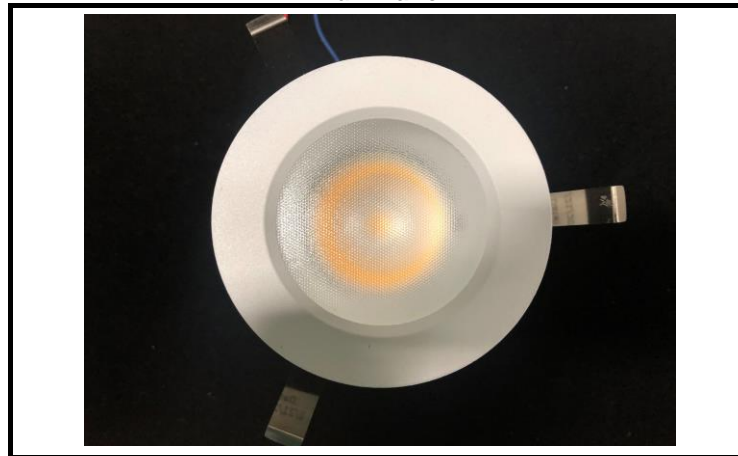
Alexa Lambert, Project Handler

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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 Diameter: 2.50 in.

Summary of Results

Total Luminaire Output:	1480 Lumens
Luminaire Efficacy:	72.3 lm/w
Maximum Candela:	13231 Candela

Test Conditions

Test Temperature:	25.1 °C
Voltage:	120.1 VAC
Current:	0.1716 A
Power:	20.48 W
Power Factor:	0.994
Frequency:	60 Hz
Current THD:	9.23 %

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



Distribution - Goniophotometer

Distribution Test Conditions

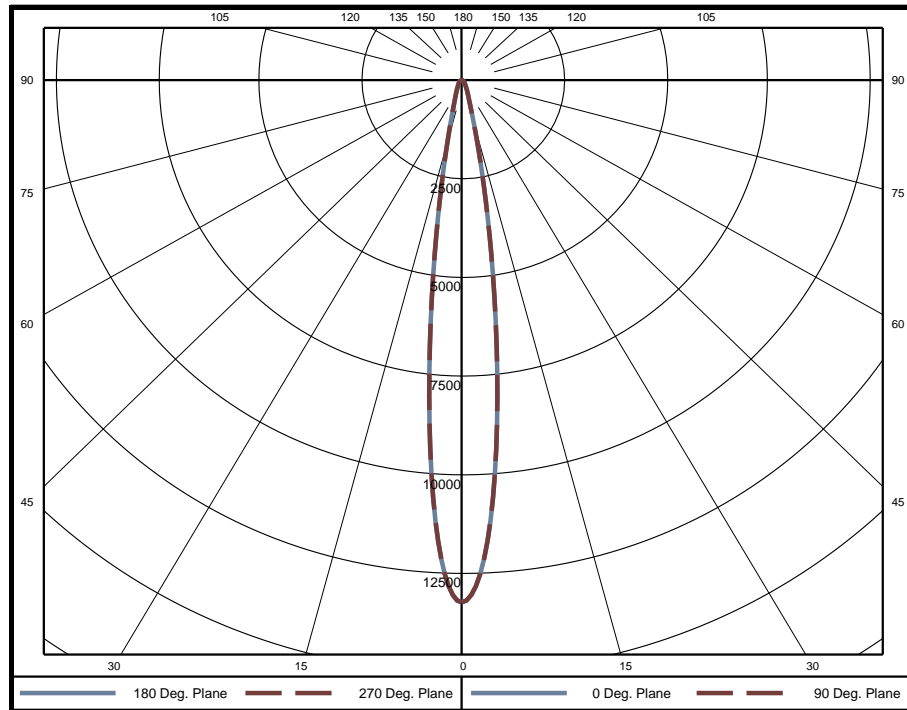
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.1 °C	120.1 VAC	0.1716 A	20.48 W	0.994	60 Hz	9.23 %

Summary of Results

Spacing Criteria
0-180: 0.25
90-270: 0.25

Total Lumen Output: 1480 Lumens
Luminaire Efficacy: 72.3 lm/w
Maximum Candela: 13231 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	268.4	18.1%	60-65	20.9	1.4%	120-125	0	0.0%
5-10	425.3	28.7%	65-70	16.1	1.1%	125-130	0	0.0%
10-15	233.5	15.8%	70-75	11.5	0.8%	130-135	0	0.0%
15-20	115.9	7.8%	75-80	7.3	0.5%	135-140	0	0.0%
20-25	81.7	5.5%	80-85	3.6	0.2%	140-145	0	0.0%
25-30	64.6	4.4%	85-90	0.8	0.1%	145-150	0	0.0%
30-35	53.0	3.6%	90-95	0	0.0%	150-155	0	0.0%
35-40	46.1	3.1%	95-100	0	0.0%	155-160	0	0.0%
40-45	40.2	2.7%	100-105	0	0.0%	160-165	0	0.0%
45-50	34.9	2.4%	105-110	0	0.0%	165-170	0	0.0%
50-55	30.4	2.1%	110-115	0	0.0%	170-175	0	0.0%
55-60	25.9	1.8%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1289	87.1%
0-60	1420	95.9%
0-90	1480	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	13230	13230	13230	13230	13230	13230	13230	13230	13230	13230	13230	13230	13230	13230	13230
	5	9369	9369	9369	9369	9369	9369	9369	9369	9369	9369	9369	9369	9369	9369	9369
	10	3550	3550	3550	3550	3550	3550	3550	3550	3550	3550	3550	3550	3550	3550	3550
	15	1075	1075	1075	1075	1075	1075	1075	1075	1075	1075	1075	1075	1075	1075	1075
	20	495	495	495	495	495	495	495	495	495	495	495	495	495	495	495
	25	313	313	313	313	313	313	313	313	313	313	313	313	313	313	313
	30	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210
	35	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156
	40	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122
	45	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
	50	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
	55	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
	60	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
	65	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
	70	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
	75	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
	80	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	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	4178000	4178000
	45	43060	43060
	55	34620	34620
	65	27740	27740
	75	21540	21540
	85	12370	12370



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	109	107	112	110	108	106	106	104	103	102	101	100	98	98	97	95
2	110	105	102	99	107	104	101	98	101	98	96	98	96	94	95	93	92	90
3	105	100	96	93	104	99	95	92	96	93	90	94	91	89	92	89	88	86
4	102	96	91	88	100	94	90	87	92	89	86	91	88	85	89	86	84	83
5	98	92	87	84	97	91	86	83	89	85	83	88	84	82	86	83	81	80
6	95	88	84	80	94	88	83	80	86	82	80	85	82	79	84	81	79	77
7	93	85	81	78	91	85	81	77	84	80	77	83	79	77	82	79	76	75
8	90	83	78	75	89	82	78	75	81	78	75	81	77	75	80	77	74	73
9	88	81	76	73	87	80	76	73	79	76	73	79	75	73	78	75	73	72
10	86	79	74	72	85	78	74	71	78	74	71	77	74	71	76	73	71	70

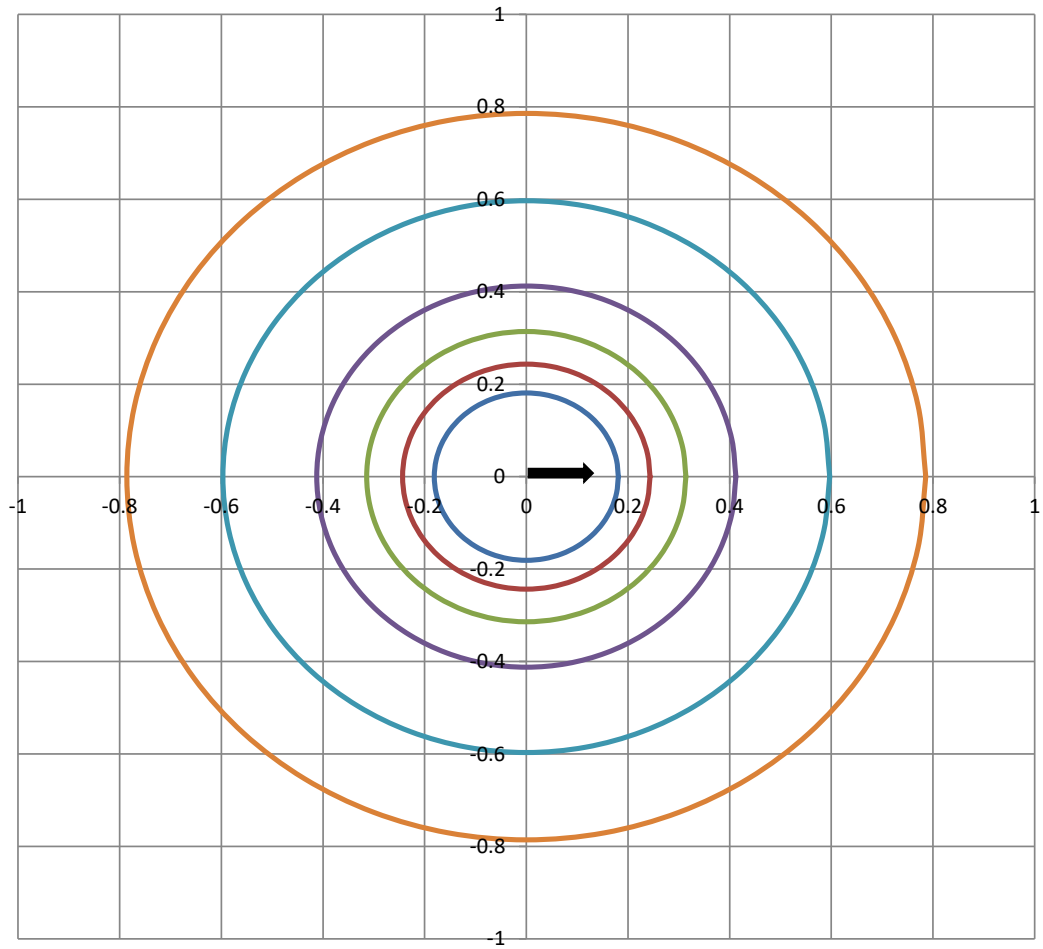
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	13230 Candela
Central Cone Intensity:	11801 Candela
Beam Flux:	464.3 Lumens
Beam Angle (0-180):	14.3 Degrees
Beam Angle (90-270):	14.3 Degrees
Field Angle (0-180):	28.1 Degrees
Field Angle (90-270):	28.1 Degrees

Cone of Light Tabulation			
Mounting Height (Feet)		Footcandles at Nadir	Diameter (Feet)
4.00		827	0.983
6.00		368	1.47
8.00		207	1.97
10.0		132	2.46
12.0		91.9	2.95
14.0		67.5	3.44
16.0		51.7	3.93



ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

50 fc 20 fc 10 fc 5 fc 2 fc 1 fc