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7036 Snowdrift Road  
Allentown, PA 18106  
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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  
**2AS-L12/835-DIM-UNV-RW-OF-WH-x-xx (45° TILT)**  
Order Number  
13257190  
Test Number  
13257190.32

Test Date

2020-03-20

Prepared By

Jesse Litchfield, Technician

Approved By

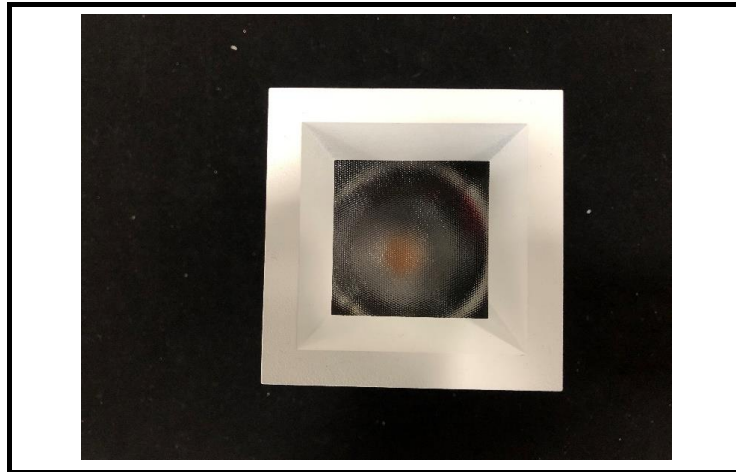
Alexa Lambert, Project Handler

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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:	934.1 Lumens
Luminaire Efficacy:	43.9 lm/w
Maximum Candela:	3430 Candela

**Test Conditions**

Test Temperature:	24.4 °C
Voltage:	120.0 VAC
Current:	0.1782 A
Power:	21.29 W
Power Factor:	0.995
Frequency:	60 Hz
Current THD:	8.68 %

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



## Distribution - Goniophotometer

### Distribution Test Conditions

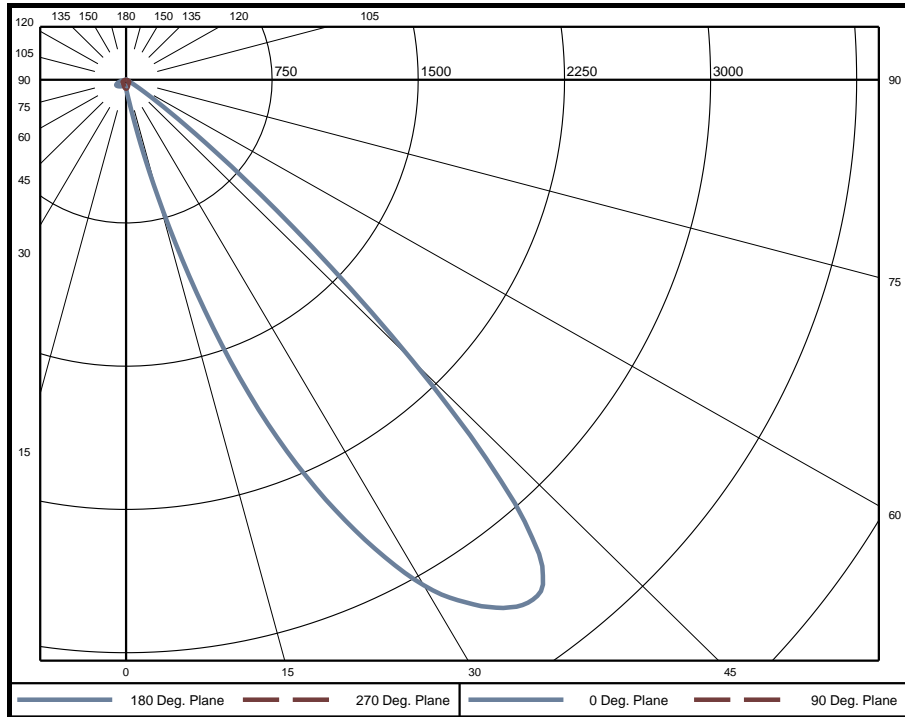
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.4 °C	120.0 VAC	0.1782 A	21.29 W	0.995	60 Hz	8.68 %

### Summary of Results

**Spacing Criteria**  
 0-180: 2.90  
 90-270: 0.87

**Total Lumen Output:** 934.1 Lumens  
**Luminaire Efficacy:** 43.9 lm/w  
**Maximum Candela:** 3430 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	1.1	0.1%	60-65	12.9	1.4%	120-125	0	0.0%
5-10	4.2	0.4%	65-70	10.6	1.1%	125-130	0	0.0%
10-15	12.1	1.3%	70-75	7.6	0.8%	130-135	0	0.0%
15-20	36.8	3.9%	75-80	4.1	0.4%	135-140	0	0.0%
20-25	80.5	8.6%	80-85	2.0	0.2%	140-145	0	0.0%
25-30	127.3	13.6%	85-90	0.7	0.1%	145-150	0	0.0%
30-35	161.9	17.3%	90-95	0	0.0%	150-155	0	0.0%
35-40	176.6	18.9%	95-100	0	0.0%	155-160	0	0.0%
40-45	154.1	16.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	88.0	9.4%	105-110	0	0.0%	165-170	0	0.0%
50-55	36.1	3.9%	110-115	0	0.0%	170-175	0	0.0%
55-60	17.4	1.9%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	601	64.3%
0-60	896	95.9%
0-90	934	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	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
	5	76	73	63	53	45	40	37	35	34	35	37	40	45	53	63
	10	179	151	95	60	42	35	32	30	30	30	32	35	42	60	95
	15	641	462	172	67	37	31	29	28	28	28	29	31	37	67	172
	20	1571	1100	327	72	32	28	27	29	30	29	27	28	32	72	327
	25	2425	1725	482	67	28	26	28	32	33	32	28	26	28	67	482
	30	3055	2127	471	52	26	26	31	35	37	35	31	26	26	52	471
	35	3376	2227	300	35	24	26	33	38	41	38	33	26	24	35	300
	40	3324	1992	142	24	23	27	36	42	45	42	36	27	23	24	142
	45	2077	1288	52	20	22	28	38	45	49	45	38	28	22	20	52
	50	708	502	26	18	21	29	40	48	52	48	40	29	21	18	26
	55	140	131	18	16	21	29	41	51	56	51	41	29	21	16	18
	60	29	31	14	14	19	27	39	52	57	52	39	27	19	14	31
	65	15	14	11	12	16	23	34	48	53	48	34	23	16	12	11
	70	9	8	7	9	12	18	26	38	43	38	26	18	12	9	8
	75	5	5	4	5	6	11	17	25	26	25	17	11	6	5	4
	80	2	2	2	2	3	5	9	12	13	12	9	5	3	2	2
	85	1	1	1	1	1	2	4	6	6	6	4	2	1	1	1
	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/m<sup>2</sup>)

Horizontal Angle (Degrees)

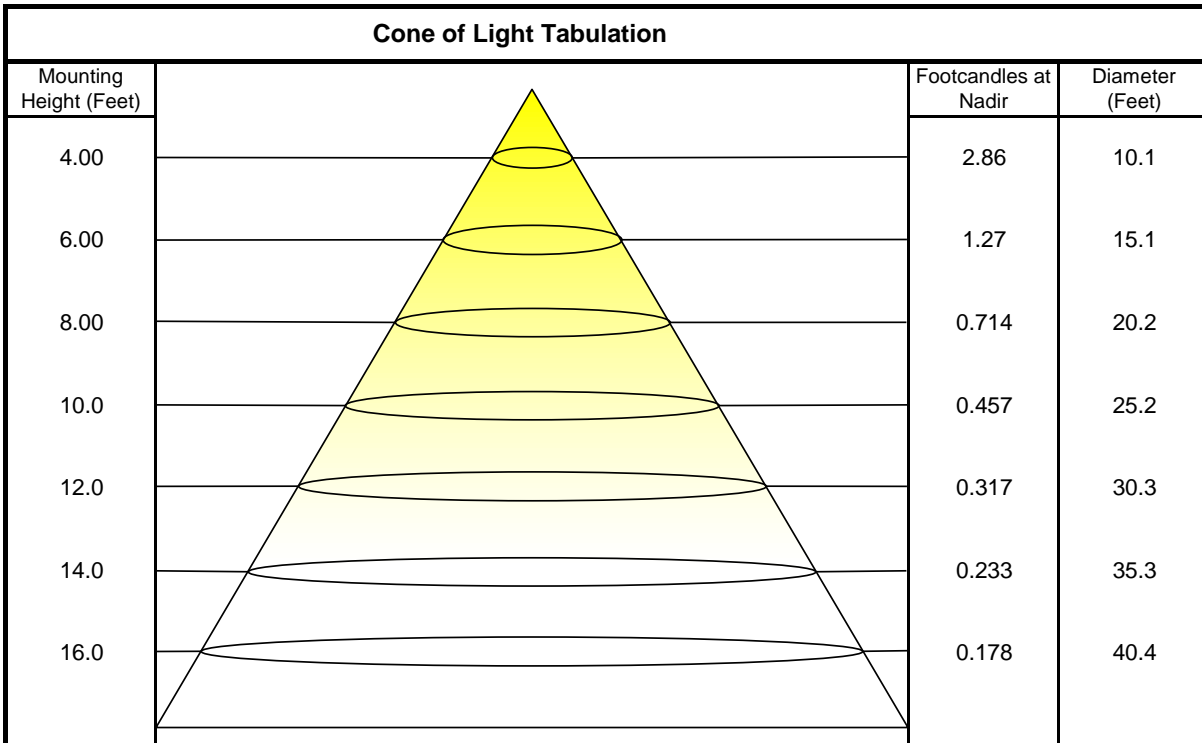
Vertical Angle (Degrees)	0	45	90
	0	11330	11330
	45	728300	18120
	55	60670	7983
	65	8897	6178
	75	4765	4101
	85	3251	2760



### 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	111	108	104	101	109	105	102	100	101	99	97	97	96	94	94	92	91	89
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68
4	88	78	70	64	86	77	69	64	74	68	63	72	67	62	70	65	62	60
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52
6	75	63	55	49	73	62	54	49	60	54	48	59	53	48	57	52	48	46
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40
8	64	52	44	38	63	51	43	38	50	43	38	48	42	37	47	42	37	35
9	60	47	39	34	58	46	39	34	45	38	33	44	38	33	43	37	33	31
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	29	28

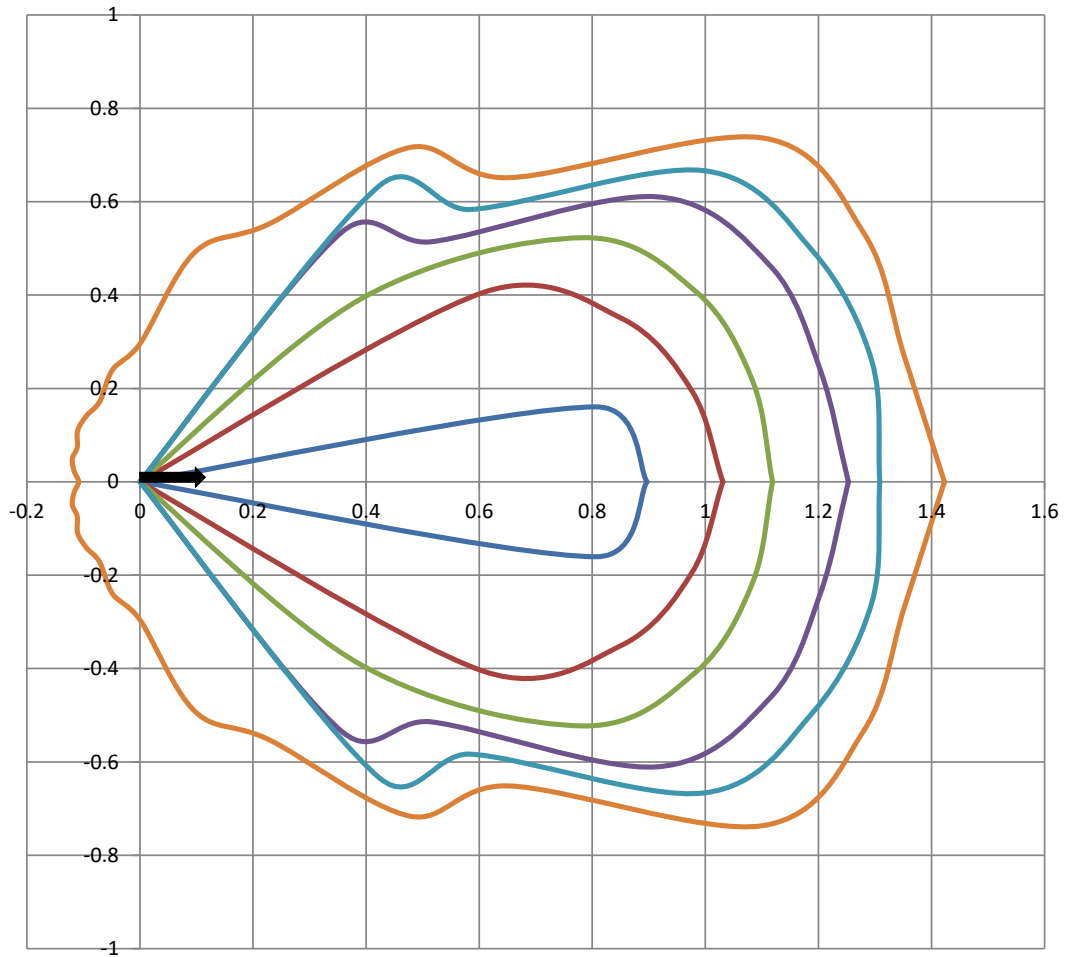
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	46 Candela
Central Cone Intensity:	47 Candela
Beam Flux:	905.4 Lumens
Beam Angle (0-180):	136.9 Degrees
Beam Angle (90-270):	76.3 Degrees
Field Angle (0-180):	161.3 Degrees
Field Angle (90-270):	152.9 Degrees





## 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