



UL Verification Services Inc.  
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Allentown, PA 18106  
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## Indoor Distribution Test Report

Relevant Standards  
IES LM-79-2008, ANSI C82.77-2002

**Prepared For**  
**H E Williams Inc**

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

**Catalog Number**  
**6DR-L20/835-DIM-UNV-L-W-OF-WH**

Order Number  
12326812  
Test Number  
12326812.07

Test Date

2018-06-01

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:** Black formed aluminum housing, white reflector, clear glass patterned lens enclosure  
**Lamp:** One white LED  
**Mounting:** Recessed  
**Ballast/Driver:** Philips XI025C070V054DSM5

**Luminaire**



**Luminaire Characteristics**

Luminous Diameter: 5.50 in.

**Summary of Results**

Total Luminaire Output:	1561 Lumens
Luminaire Efficacy:	81.7 lm/w
Maximum Candela:	993 Candela

**Test Conditions**

Test Temperature:	24.9 °C
Voltage:	120.1 VAC
Current:	0.1601 A
Power:	19.10 W
Power Factor:	0.994
Frequency:	60 Hz
Current THD:	9.66 %

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



## Distribution - Goniophotometer

### Distribution Test Conditions

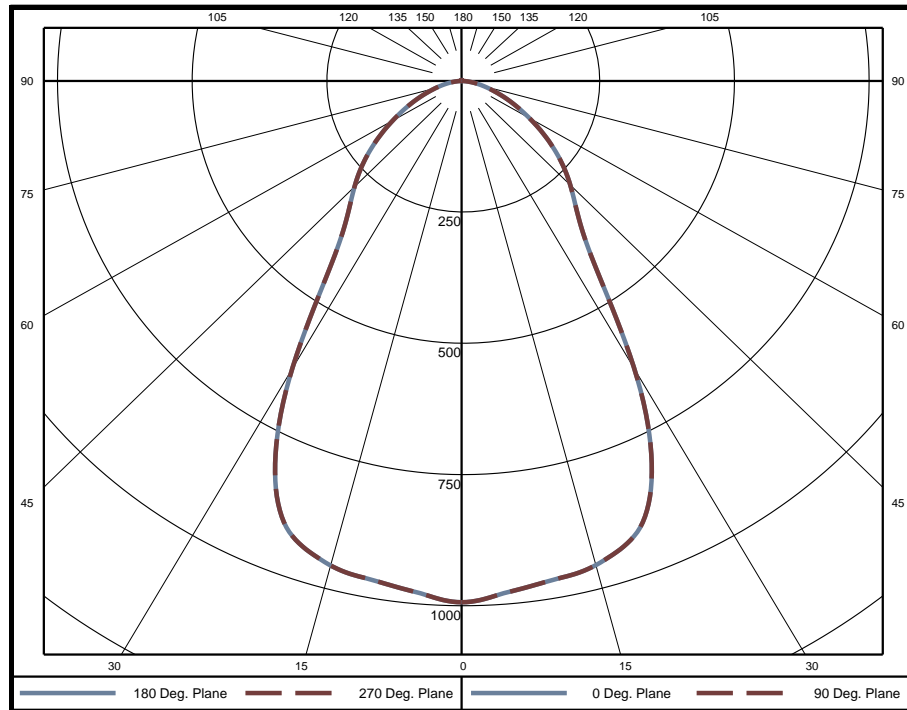
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.9 °C	120.1 VAC	0.1601 A	19.10 W	0.994	60 Hz	9.66 %

### Summary of Results

**Spacing Criteria**  
 0-180: 1.06  
 90-270: 1.06

**Total Lumen Output:** 1561 Lumens  
**Luminaire Efficacy:** 81.7 lm/w  
**Maximum Candela:** 993 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	23.5	1.5%	60-65	60.7	3.9%	120-125	0	0.0%
5-10	69.4	4.4%	65-70	45.2	2.9%	125-130	0	0.0%
10-15	114.0	7.3%	70-75	31.1	2.0%	130-135	0	0.0%
15-20	154.9	9.9%	75-80	19.6	1.3%	135-140	0	0.0%
20-25	184.6	11.8%	80-85	10.0	0.6%	140-145	0	0.0%
25-30	185.1	11.9%	85-90	2.3	0.1%	145-150	0	0.0%
30-35	151.4	9.7%	90-95	0	0.0%	150-155	0	0.0%
35-40	122.5	7.8%	95-100	0	0.0%	155-160	0	0.0%
40-45	112.6	7.2%	100-105	0	0.0%	160-165	0	0.0%
45-50	104.6	6.7%	105-110	0	0.0%	165-170	0	0.0%
50-55	92.6	5.9%	110-115	0	0.0%	170-175	0	0.0%
55-60	77.2	4.9%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1005	64.4%
0-60	1392	89.2%
0-90	1561	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	993.3	993.3	993.3	993.3	993.3	993.3	993.3	993.3	993.3	993.3	993.3	993.3	993.3	993.3	993.3
	5	977.6	977.6	977.6	977.6	977.6	977.6	977.6	977.6	977.6	977.6	977.6	977.6	977.6	977.6	977.6
	10	965.2	965.2	965.2	965.2	965.2	965.2	965.2	965.2	965.2	965.2	965.2	965.2	965.2	965.2	965.2
	15	954.3	954.3	954.3	954.3	954.3	954.3	954.3	954.3	954.3	954.3	954.3	954.3	954.3	954.3	954.3
	20	922.7	922.7	922.7	922.7	922.7	922.7	922.7	922.7	922.7	922.7	922.7	922.7	922.7	922.7	922.7
	25	822.9	822.9	822.9	822.9	822.9	822.9	822.9	822.9	822.9	822.9	822.9	822.9	822.9	822.9	822.9
	30	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0
	35	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4
	40	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7	329.7
	45	281.2	281.2	281.2	281.2	281.2	281.2	281.2	281.2	281.2	281.2	281.2	281.2	281.2	281.2	281.2
	50	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5
	55	189.9	189.9	189.9	189.9	189.9	189.9	189.9	189.9	189.9	189.9	189.9	189.9	189.9	189.9	189.9
	60	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0	145.0
	65	106.3	106.3	106.3	106.3	106.3	106.3	106.3	106.3	106.3	106.3	106.3	106.3	106.3	106.3	106.3
	70	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3	73.3
	75	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2
	80	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
	85	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
	90	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

### Average Luminance (cd/m<sup>2</sup>)

Horizontal Angle (Degrees)

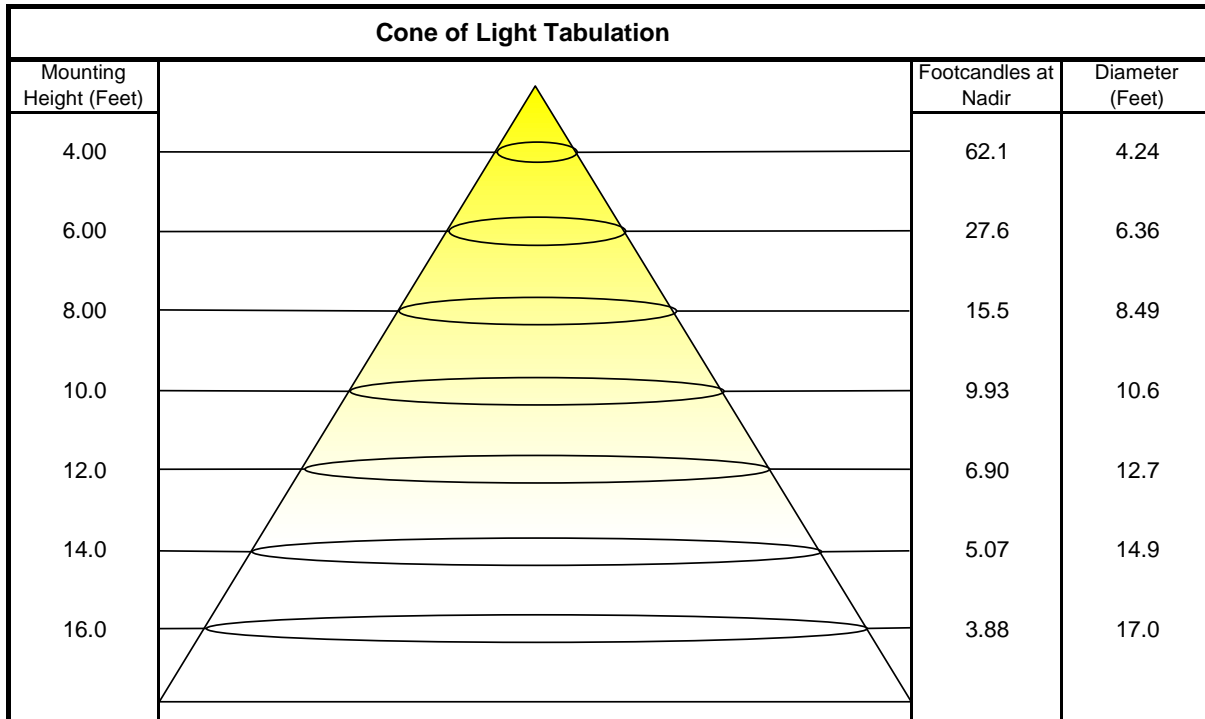
Vertical Angle (Degrees)	0	45	90
	0	64810	64810
	45	25950	25950
	55	21600	21600
	65	16410	16410
	75	11900	11900
	85	7756	7756



### 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	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	78	74	70	69
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61
5	83	72	64	59	81	71	64	58	69	63	58	67	62	57	65	61	57	55
6	78	66	58	53	76	65	58	53	64	57	52	62	56	52	61	55	52	50
7	73	61	53	48	71	60	53	48	59	52	48	58	52	47	56	51	47	45
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38
10	61	49	42	37	60	49	42	37	48	42	37	47	41	37	46	41	37	35

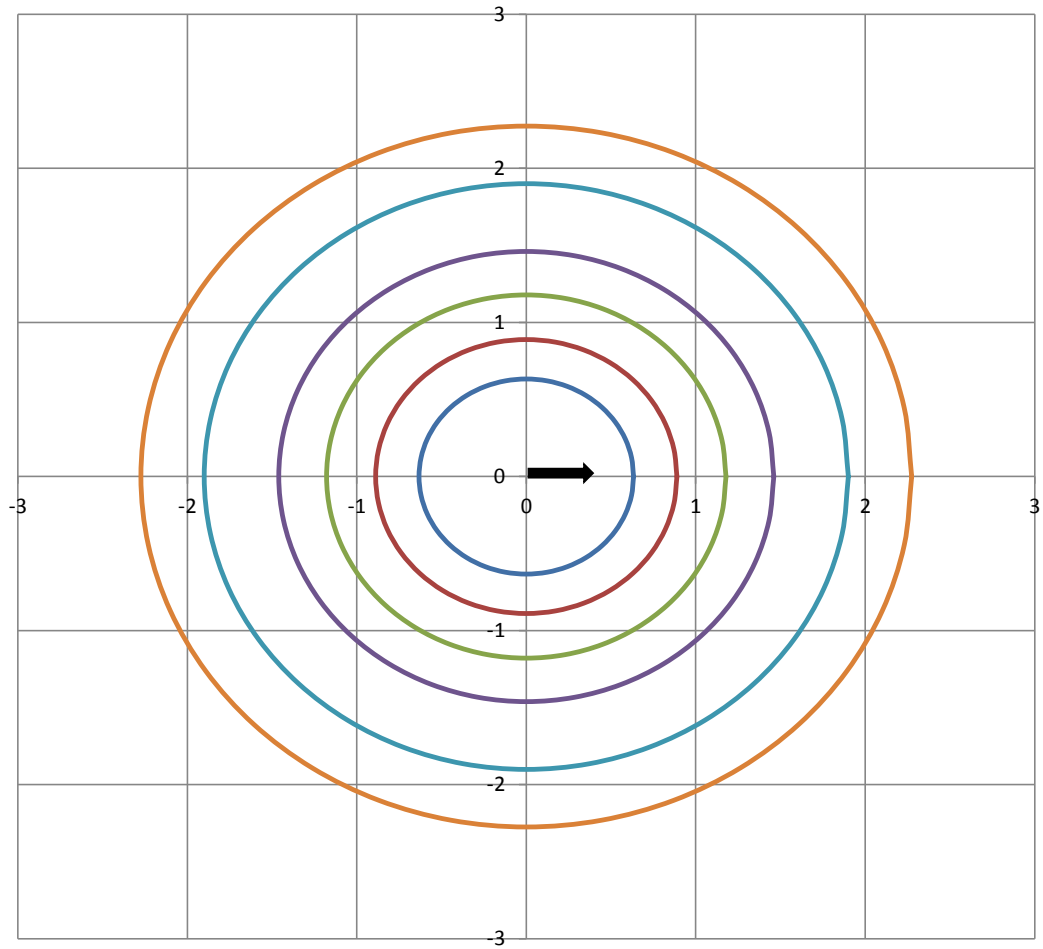
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	993.3 Candela
Central Cone Intensity:	987 Candela
Beam Flux:	822.9 Lumens
Beam Angle (0-180):	65.7 Degrees
Beam Angle (90-270):	65.7 Degrees
Field Angle (0-180):	132.0 Degrees
Field Angle (90-270):	132.0 Degrees





## ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

5 fc    2 fc    1 fc    0.5 fc    0.2 fc    0.1 fc