



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192\_168\_37\_234-9\_47\_1-MERGED.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.04 & #12326812.04

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 2-MAR-2021

[MANUFAC] WILLIAMS INDOOR

[MORE] H.E. WILLIAMS, INC. - CARTHAGE, MO

[LUMCAT] 8CRDI-TL-P29-835U-P29-835D-xxx-POE PR-LW-CSU-OM-CSD-WM

[LUMINAIRE] White formed aluminum housing, wide distribution reflector

[MORE] trims, flush upright frosted lens enclosure, no downlight enclosure

[LAMP] Two white LEDs (one up/one down)

[SEARCH\_SOURCETYPE] LED

[SEARCH\_APPLICATION] INDOOR, DIRECT, INDIRECT

[SEARCH\_MOUNTING] WALL

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5288
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	106
Total Luminaire Watts	50
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	0.65 ft (Diameter)
Luminous Width (90-270)	0.65 ft (Diameter)
Luminous Height	2.17 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	583	583	583
55	160	160	160
65	44	44	44
75	12	12	12
85	3	3	3

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**CANDELA TABULATION**

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
<b>0.0</b>	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343
<b>2.5</b>	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642
<b>5.0</b>	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521
<b>7.5</b>	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652
<b>10.0</b>	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976
<b>12.5</b>	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888
<b>15.0</b>	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615
<b>17.5</b>	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421
<b>20.0</b>	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095
<b>22.5</b>	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512
<b>25.0</b>	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758
<b>27.5</b>	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610
<b>30.0</b>	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977
<b>32.5</b>	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339
<b>35.0</b>	567.413	567.413	567.413	567.413	567.413	567.413	567.413	567.413	567.413	567.413
<b>37.5</b>	247.481	247.481	247.481	247.481	247.481	247.481	247.481	247.481	247.481	247.481
<b>40.0</b>	166.135	166.135	166.135	166.135	166.135	166.135	166.135	166.135	166.135	166.135
<b>42.5</b>	93.684	93.684	93.684	93.684	93.684	93.684	93.684	93.684	93.684	93.684
<b>45.0</b>	66.282	66.282	66.282	66.282	66.282	66.282	66.282	66.282	66.282	66.282
<b>47.5</b>	51.361	51.361	51.361	51.361	51.361	51.361	51.361	51.361	51.361	51.361
<b>50.0</b>	38.449	38.449	38.449	38.449	38.449	38.449	38.449	38.449	38.449	38.449
<b>52.5</b>	27.833	27.833	27.833	27.833	27.833	27.833	27.833	27.833	27.833	27.833
<b>55.0</b>	19.798	19.798	19.798	19.798	19.798	19.798	19.798	19.798	19.798	19.798
<b>57.5</b>	14.347	14.347	14.347	14.347	14.347	14.347	14.347	14.347	14.347	14.347
<b>60.0</b>	10.473	10.473	10.473	10.473	10.473	10.473	10.473	10.473	10.473	10.473
<b>62.5</b>	7.747	7.747	7.747	7.747	7.747	7.747	7.747	7.747	7.747	7.747
<b>65.0</b>	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739	5.739
<b>67.5</b>	4.161	4.161	4.161	4.161	4.161	4.161	4.161	4.161	4.161	4.161
<b>70.0</b>	3.156	3.156	3.156	3.156	3.156	3.156	3.156	3.156	3.156	3.156
<b>72.5</b>	2.295	2.295	2.295	2.295	2.295	2.295	2.295	2.295	2.295	2.295
<b>75.0</b>	1.578	1.578	1.578	1.578	1.578	1.578	1.578	1.578	1.578	1.578
<b>77.5</b>	1.148	1.148	1.148	1.148	1.148	1.148	1.148	1.148	1.148	1.148
<b>80.0</b>	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861	0.861
<b>82.5</b>	0.574	0.574	0.574	0.574	0.574	0.574	0.574	0.574	0.574	0.574
<b>85.0</b>	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430
<b>87.5</b>	0.287	0.287	0.287	0.287	0.287	0.287	0.287	0.287	0.287	0.287
<b>90.0</b>	5.919	5.919	5.919	5.919	5.919	5.919	5.919	5.919	5.919	5.919
<b>92.5</b>	8.894	8.894	8.894	8.894	8.894	8.894	8.894	8.894	8.894	8.894
<b>95.0</b>	15.541	15.541	15.541	15.541	15.541	15.541	15.541	15.541	15.541	15.541
<b>97.5</b>	26.359	26.359	26.359	26.359	26.359	26.359	26.359	26.359	26.359	26.359
<b>100.0</b>	39.240	39.240	39.240	39.240	39.240	39.240	39.240	39.240	39.240	39.240
<b>102.5</b>	52.764	52.764	52.764	52.764	52.764	52.764	52.764	52.764	52.764	52.764
<b>105.0</b>	67.343	67.343	67.343	67.343	67.343	67.343	67.343	67.343	67.343	67.343
<b>107.5</b>	83.799	83.799	83.799	83.799	83.799	83.799	83.799	83.799	83.799	83.799
<b>110.0</b>	102.961	102.961	102.961	102.961	102.961	102.961	102.961	102.961	102.961	102.961
<b>112.5</b>	124.507	124.507	124.507	124.507	124.507	124.507	124.507	124.507	124.507	124.507
<b>115.0</b>	148.895	148.895	148.895	148.895	148.895	148.895	148.895	148.895	148.895	148.895
<b>117.5</b>	176.218	176.218	176.218	176.218	176.218	176.218	176.218	176.218	176.218	176.218
<b>120.0</b>	206.793	206.793	206.793	206.793	206.793	206.793	206.793	206.793	206.793	206.793
<b>122.5</b>	240.809	240.809	240.809	240.809	240.809	240.809	240.809	240.809	240.809	240.809
<b>125.0</b>	278.399	278.399	278.399	278.399	278.399	278.399	278.399	278.399	278.399	278.399
<b>127.5</b>	318.511	318.511	318.511	318.511	318.511	318.511	318.511	318.511	318.511	318.511
<b>130.0</b>	360.227	360.227	360.227	360.227	360.227	360.227	360.227	360.227	360.227	360.227
<b>132.5</b>	402.173	402.173	402.173	402.173	402.173	402.173	402.173	402.173	402.173	402.173

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**CANDELA TABULATION - (Cont.)**

135.0	444.073	444.073	444.073	444.073	444.073	444.073	444.073	444.073	444.073	444.073
137.5	487.761	487.761	487.761	487.761	487.761	487.761	487.761	487.761	487.761	487.761
140.0	538.187	538.187	538.187	538.187	538.187	538.187	538.187	538.187	538.187	538.187
142.5	602.824	602.824	602.824	602.824	602.824	602.824	602.824	602.824	602.824	602.824
145.0	689.924	689.924	689.924	689.924	689.924	689.924	689.924	689.924	689.924	689.924
147.5	802.696	802.696	802.696	802.696	802.696	802.696	802.696	802.696	802.696	802.696
150.0	942.515	942.515	942.515	942.515	942.515	942.515	942.515	942.515	942.515	942.515
152.5	1088.293	1088.293	1088.293	1088.293	1088.293	1088.293	1088.293	1088.293	1088.293	1088.293
155.0	1236.363	1236.363	1236.363	1236.363	1236.363	1236.363	1236.363	1236.363	1236.363	1236.363
157.5	1368.388	1368.388	1368.388	1368.388	1368.388	1368.388	1368.388	1368.388	1368.388	1368.388
160.0	1471.533	1471.533	1471.533	1471.533	1471.533	1471.533	1471.533	1471.533	1471.533	1471.533
162.5	1540.755	1540.755	1540.755	1540.755	1540.755	1540.755	1540.755	1540.755	1540.755	1540.755
165.0	1580.179	1580.179	1580.179	1580.179	1580.179	1580.179	1580.179	1580.179	1580.179	1580.179
167.5	1601.266	1601.266	1601.266	1601.266	1601.266	1601.266	1601.266	1601.266	1601.266	1601.266
170.0	1613.185	1613.185	1613.185	1613.185	1613.185	1613.185	1613.185	1613.185	1613.185	1613.185
172.5	1621.895	1621.895	1621.895	1621.895	1621.895	1621.895	1621.895	1621.895	1621.895	1621.895
175.0	1629.689	1629.689	1629.689	1629.689	1629.689	1629.689	1629.689	1629.689	1629.689	1629.689
177.5	1633.356	1633.356	1633.356	1633.356	1633.356	1633.356	1633.356	1633.356	1633.356	1633.356
180.0	1632.542	1632.542	1632.542	1632.542	1632.542	1632.542	1632.542	1632.542	1632.542	1632.542

**Vert. Horizontal Angles**

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343	5757.343
2.5	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642	5827.642
5.0	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521	5698.521
7.5	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652	5124.652
10.0	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976	4293.976
12.5	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888	3735.888
15.0	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615	3335.615
17.5	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421	3021.421
20.0	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095	2743.095
22.5	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512	2404.512
25.0	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758	2025.758
27.5	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610	1688.610
30.0	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977	1438.977
32.5	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339	1020.339
35.0	567.413	567.413	567.413	567.413	567.413	567.413	567.413
37.5	247.481	247.481	247.481	247.481	247.481	247.481	247.481
40.0	166.135	166.135	166.135	166.135	166.135	166.135	166.135
42.5	93.684	93.684	93.684	93.684	93.684	93.684	93.684
45.0	66.282	66.282	66.282	66.282	66.282	66.282	66.282
47.5	51.361	51.361	51.361	51.361	51.361	51.361	51.361
50.0	38.449	38.449	38.449	38.449	38.449	38.449	38.449
52.5	27.833	27.833	27.833	27.833	27.833	27.833	27.833
55.0	19.798	19.798	19.798	19.798	19.798	19.798	19.798
57.5	14.347	14.347	14.347	14.347	14.347	14.347	14.347
60.0	10.473	10.473	10.473	10.473	10.473	10.473	10.473
62.5	7.747	7.747	7.747	7.747	7.747	7.747	7.747
65.0	5.739	5.739	5.739	5.739	5.739	5.739	5.739
67.5	4.161	4.161	4.161	4.161	4.161	4.161	4.161
70.0	3.156	3.156	3.156	3.156	3.156	3.156	3.156
72.5	2.295	2.295	2.295	2.295	2.295	2.295	2.295
75.0	1.578	1.578	1.578	1.578	1.578	1.578	1.578
77.5	1.148	1.148	1.148	1.148	1.148	1.148	1.148
80.0	0.861	0.861	0.861	0.861	0.861	0.861	0.861

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**CANDELA TABULATION - (Cont.)**

82.5	0.574	0.574	0.574	0.574	0.574	0.574	0.574
85.0	0.430	0.430	0.430	0.430	0.430	0.430	0.430
87.5	0.287	0.287	0.287	0.287	0.287	0.287	0.287
90.0	5.919	5.919	5.919	5.919	5.919	5.919	5.919
92.5	8.894	8.894	8.894	8.894	8.894	8.894	8.894
95.0	15.541	15.541	15.541	15.541	15.541	15.541	15.541
97.5	26.359	26.359	26.359	26.359	26.359	26.359	26.359
100.0	39.240	39.240	39.240	39.240	39.240	39.240	39.240
102.5	52.764	52.764	52.764	52.764	52.764	52.764	52.764
105.0	67.343	67.343	67.343	67.343	67.343	67.343	67.343
107.5	83.799	83.799	83.799	83.799	83.799	83.799	83.799
110.0	102.961	102.961	102.961	102.961	102.961	102.961	102.961
112.5	124.507	124.507	124.507	124.507	124.507	124.507	124.507
115.0	148.895	148.895	148.895	148.895	148.895	148.895	148.895
117.5	176.218	176.218	176.218	176.218	176.218	176.218	176.218
120.0	206.793	206.793	206.793	206.793	206.793	206.793	206.793
122.5	240.809	240.809	240.809	240.809	240.809	240.809	240.809
125.0	278.399	278.399	278.399	278.399	278.399	278.399	278.399
127.5	318.511	318.511	318.511	318.511	318.511	318.511	318.511
130.0	360.227	360.227	360.227	360.227	360.227	360.227	360.227
132.5	402.173	402.173	402.173	402.173	402.173	402.173	402.173
135.0	444.073	444.073	444.073	444.073	444.073	444.073	444.073
137.5	487.761	487.761	487.761	487.761	487.761	487.761	487.761
140.0	538.187	538.187	538.187	538.187	538.187	538.187	538.187
142.5	602.824	602.824	602.824	602.824	602.824	602.824	602.824
145.0	689.924	689.924	689.924	689.924	689.924	689.924	689.924
147.5	802.696	802.696	802.696	802.696	802.696	802.696	802.696
150.0	942.515	942.515	942.515	942.515	942.515	942.515	942.515
152.5	1088.293	1088.293	1088.293	1088.293	1088.293	1088.293	1088.293
155.0	1236.363	1236.363	1236.363	1236.363	1236.363	1236.363	1236.363
157.5	1368.388	1368.388	1368.388	1368.388	1368.388	1368.388	1368.388
160.0	1471.533	1471.533	1471.533	1471.533	1471.533	1471.533	1471.533
162.5	1540.755	1540.755	1540.755	1540.755	1540.755	1540.755	1540.755
165.0	1580.179	1580.179	1580.179	1580.179	1580.179	1580.179	1580.179
167.5	1601.266	1601.266	1601.266	1601.266	1601.266	1601.266	1601.266
170.0	1613.185	1613.185	1613.185	1613.185	1613.185	1613.185	1613.185
172.5	1621.895	1621.895	1621.895	1621.895	1621.895	1621.895	1621.895
175.0	1629.689	1629.689	1629.689	1629.689	1629.689	1629.689	1629.689
177.5	1633.356	1633.356	1633.356	1633.356	1633.356	1633.356	1633.356
180.0	1632.542	1632.542	1632.542	1632.542	1632.542	1632.542	1632.542

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1438.77	N.A.	27.20
0-30	2370.43	N.A.	44.80
0-40	2767.74	N.A.	52.30
0-60	2846.44	N.A.	53.80
0-80	2854.31	N.A.	54.00
0-90	2855.59	N.A.	54.00
10-90	2359.73	N.A.	44.60
20-40	1328.97	N.A.	25.10
20-50	1388.52	N.A.	26.30
40-70	84.72	N.A.	1.60
60-80	7.87	N.A.	0.10
70-80	1.85	N.A.	0.00
80-90	1.28	N.A.	0.00
90-110	92.46	N.A.	1.70
90-120	241.81	N.A.	4.60
90-130	491.97	N.A.	9.30
90-150	1275.79	N.A.	24.10
90-180	2432.5	N.A.	46.00
110-180	2340.04	N.A.	44.30
0-180	5288.09	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	495.86
10-20	942.91
20-30	931.66
30-40	397.31
40-50	59.55
50-60	19.15
60-70	6.02
70-80	1.85
80-90	1.28
90-100	19.97
100-110	72.49
110-120	149.35
120-130	250.16
130-140	343.40
140-150	440.43
150-160	559.69
160-170	442.03
170-180	154.99

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 192\_168\_37\_234-9\_47\_1-MERGED.IES**

**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54
1	101	98	95	93	94	92	89	87	79	77	76	68	67	66	57	57	56	51
2	95	90	85	81	89	84	80	77	73	71	68	64	62	60	54	53	52	48
3	89	82	77	72	83	77	73	69	68	65	62	60	57	55	52	50	49	46
4	84	76	70	65	79	72	66	62	64	60	57	56	54	51	49	48	46	43
5	79	70	64	59	74	67	61	57	60	56	52	53	50	48	47	45	43	41
6	75	65	59	55	70	62	57	53	56	52	49	50	47	45	45	43	41	39
7	71	61	55	50	66	58	53	49	53	48	45	48	44	42	43	41	39	37
8	67	57	51	47	63	55	49	45	50	45	42	45	42	40	41	39	37	35
9	63	54	48	44	60	51	46	42	47	43	40	43	40	37	39	37	35	33
10	60	51	45	41	57	49	43	40	45	40	38	41	38	35	37	35	33	32

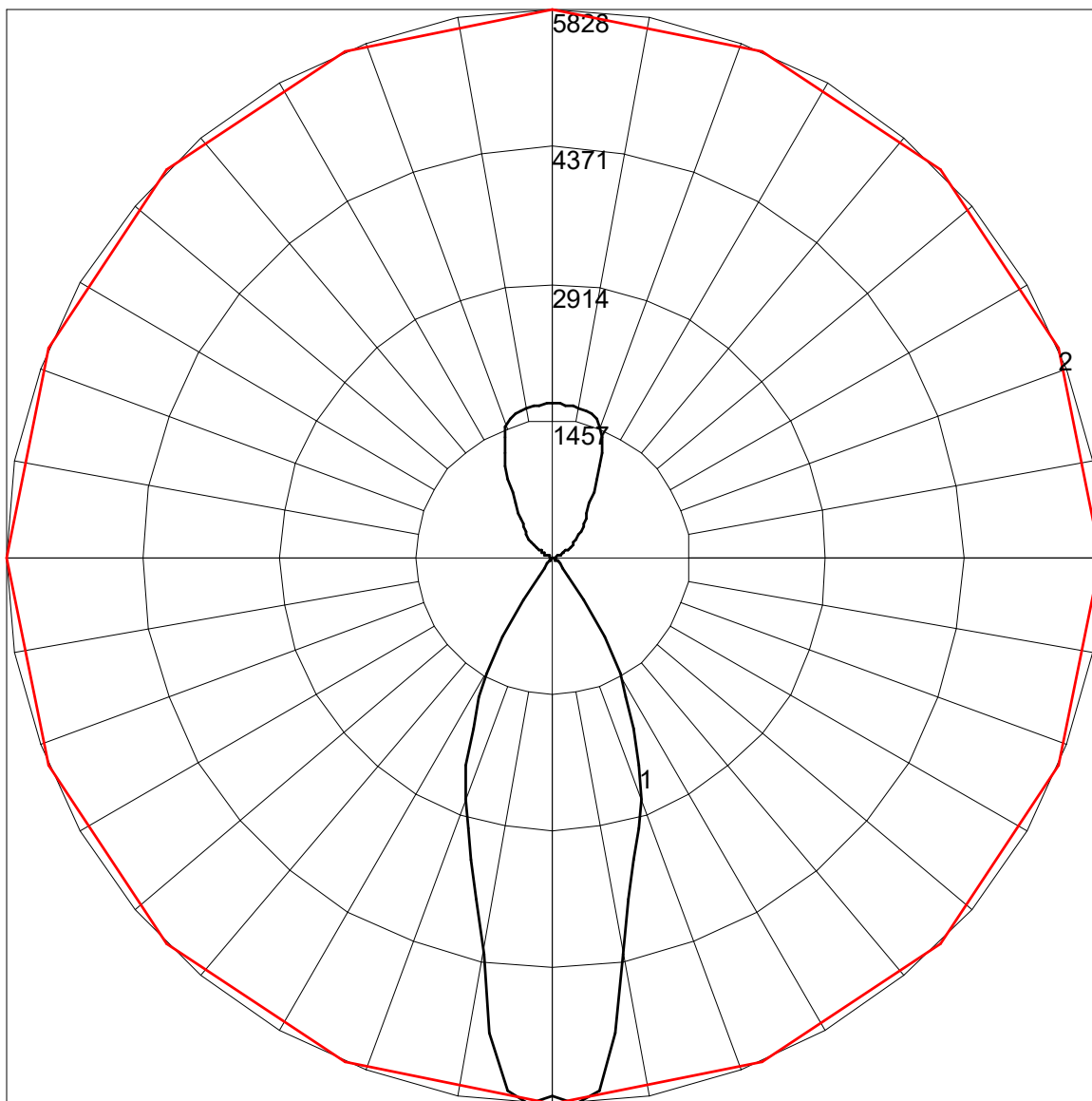
**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 192\_168\_37\_234-9\_47\_1-MERGED.IES**

**UGR TABLE - CORRECTED**

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	3H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	4H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	6H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	8H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	12H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
4H	2H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	3H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	4H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	6H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	8H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	12H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
8H	4H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	6H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	8H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	12H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
12H	4H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	6H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
	8H	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8

Maximum UGR = 5.8

POLAR GRAPH



Maximum Candela = 5827.642 Located At Horizontal Angle = 0, Vertical Angle = 2.5

# 1 - Vertical Plane Through Horizontal Angles (90 - 270)

# 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)