



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192\_168\_37\_234-15\_34\_20-MERGED.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.03 & #12326812.05

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 3-MAR-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-P29-835U-P29-835D-xxx-PoE PR-OW-CSU-ON-CSD-WM

[LUMINAIRE] White formed aluminum housing, wide distribution reflector

[MORE] trims, clear uplight glass lens enclosure, no downlight enclosure

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

[\_SEARCH\_SOURCE TYPE] LED

[\_SEARCH\_APPLICATION] INDOOR, DIRECT, INDIRECT

[\_SEARCH\_MOUNTING] WALL

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5577
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
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	151	151	151
55	43	43	43
65	10	10	10
75	0	0	0
85	0	0	0

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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</b>	29109.498	29109.498	29109.498	29109.498	29109.498	29109.498	29109.498	29109.498	29109.498	29109.498
<b>5</b>	13006.653	13006.653	13006.653	13006.653	13006.653	13006.653	13006.653	13006.653	13006.653	13006.653
<b>10</b>	4665.459	4665.459	4665.459	4665.459	4665.459	4665.459	4665.459	4665.459	4665.459	4665.459
<b>15</b>	2688.659	2688.659	2688.659	2688.659	2688.659	2688.659	2688.659	2688.659	2688.659	2688.659
<b>20</b>	2061.482	2061.482	2061.482	2061.482	2061.482	2061.482	2061.482	2061.482	2061.482	2061.482
<b>25</b>	1350.945	1350.945	1350.945	1350.945	1350.945	1350.945	1350.945	1350.945	1350.945	1350.945
<b>30</b>	998.985	998.985	998.985	998.985	998.985	998.985	998.985	998.985	998.985	998.985
<b>35</b>	320.204	320.204	320.204	320.204	320.204	320.204	320.204	320.204	320.204	320.204
<b>40</b>	27.786	27.786	27.786	27.786	27.786	27.786	27.786	27.786	27.786	27.786
<b>45</b>	17.201	17.201	17.201	17.201	17.201	17.201	17.201	17.201	17.201	17.201
<b>50</b>	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585	10.585
<b>55</b>	5.293	5.293	5.293	5.293	5.293	5.293	5.293	5.293	5.293	5.293
<b>60</b>	2.646	2.646	2.646	2.646	2.646	2.646	2.646	2.646	2.646	2.646
<b>65</b>	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323
<b>70</b>	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323	1.323
<b>75</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>80</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>85</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>90</b>	5.270	5.270	5.270	5.270	5.270	5.270	5.270	5.270	5.270	5.270
<b>95</b>	5.981	5.981	5.981	5.981	5.981	5.981	5.981	5.981	5.981	5.981
<b>100</b>	7.236	7.236	7.236	7.236	7.236	7.236	7.236	7.236	7.236	7.236
<b>105</b>	8.952	8.952	8.952	8.952	8.952	8.952	8.952	8.952	8.952	8.952
<b>110</b>	11.294	11.294	11.294	11.294	11.294	11.294	11.294	11.294	11.294	11.294
<b>115</b>	14.808	14.808	14.808	14.808	14.808	14.808	14.808	14.808	14.808	14.808
<b>120</b>	20.496	20.496	20.496	20.496	20.496	20.496	20.496	20.496	20.496	20.496
<b>125</b>	31.037	31.037	31.037	31.037	31.037	31.037	31.037	31.037	31.037	31.037
<b>130</b>	49.317	49.317	49.317	49.317	49.317	49.317	49.317	49.317	49.317	49.317
<b>135</b>	78.554	78.554	78.554	78.554	78.554	78.554	78.554	78.554	78.554	78.554
<b>140</b>	312.921	312.921	312.921	312.921	312.921	312.921	312.921	312.921	312.921	312.921
<b>145</b>	1112.229	1112.229	1112.229	1112.229	1112.229	1112.229	1112.229	1112.229	1112.229	1112.229
<b>150</b>	1968.466	1968.466	1968.466	1968.466	1968.466	1968.466	1968.466	1968.466	1968.466	1968.466
<b>155</b>	2334.468	2334.468	2334.468	2334.468	2334.468	2334.468	2334.468	2334.468	2334.468	2334.468
<b>160</b>	2287.202	2287.202	2287.202	2287.202	2287.202	2287.202	2287.202	2287.202	2287.202	2287.202
<b>165</b>	2164.643	2164.643	2164.643	2164.643	2164.643	2164.643	2164.643	2164.643	2164.643	2164.643
<b>170</b>	2074.293	2074.293	2074.293	2074.293	2074.293	2074.293	2074.293	2074.293	2074.293	2074.293
<b>175</b>	1893.174	1893.174	1893.174	1893.174	1893.174	1893.174	1893.174	1893.174	1893.174	1893.174
<b>180</b>	1755.634	1755.634	1755.634	1755.634	1755.634	1755.634	1755.634	1755.634	1755.634	1755.634

**Vert. Angles**      **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>
<b>0</b>	29109.498	29109.498	29109.498	29109.498	29109.498	29109.498	29109.498
<b>5</b>	13006.653	13006.653	13006.653	13006.653	13006.653	13006.653	13006.653
<b>10</b>	4665.459	4665.459	4665.459	4665.459	4665.459	4665.459	4665.459
<b>15</b>	2688.659	2688.659	2688.659	2688.659	2688.659	2688.659	2688.659
<b>20</b>	2061.482	2061.482	2061.482	2061.482	2061.482	2061.482	2061.482
<b>25</b>	1350.945	1350.945	1350.945	1350.945	1350.945	1350.945	1350.945
<b>30</b>	998.985	998.985	998.985	998.985	998.985	998.985	998.985
<b>35</b>	320.204	320.204	320.204	320.204	320.204	320.204	320.204
<b>40</b>	27.786	27.786	27.786	27.786	27.786	27.786	27.786
<b>45</b>	17.201	17.201	17.201	17.201	17.201	17.201	17.201
<b>50</b>	10.585	10.585	10.585	10.585	10.585	10.585	10.585
<b>55</b>	5.293	5.293	5.293	5.293	5.293	5.293	5.293
<b>60</b>	2.646	2.646	2.646	2.646	2.646	2.646	2.646

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**CANDELA TABULATION - (Cont.)**

<b>65</b>	1.323	1.323	1.323	1.323	1.323	1.323	1.323
<b>70</b>	1.323	1.323	1.323	1.323	1.323	1.323	1.323
<b>75</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>80</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>85</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>90</b>	5.270	5.270	5.270	5.270	5.270	5.270	5.270
<b>95</b>	5.981	5.981	5.981	5.981	5.981	5.981	5.981
<b>100</b>	7.236	7.236	7.236	7.236	7.236	7.236	7.236
<b>105</b>	8.952	8.952	8.952	8.952	8.952	8.952	8.952
<b>110</b>	11.294	11.294	11.294	11.294	11.294	11.294	11.294
<b>115</b>	14.808	14.808	14.808	14.808	14.808	14.808	14.808
<b>120</b>	20.496	20.496	20.496	20.496	20.496	20.496	20.496
<b>125</b>	31.037	31.037	31.037	31.037	31.037	31.037	31.037
<b>130</b>	49.317	49.317	49.317	49.317	49.317	49.317	49.317
<b>135</b>	78.554	78.554	78.554	78.554	78.554	78.554	78.554
<b>140</b>	312.921	312.921	312.921	312.921	312.921	312.921	312.921
<b>145</b>	1112.229	1112.229	1112.229	1112.229	1112.229	1112.229	1112.229
<b>150</b>	1968.466	1968.466	1968.466	1968.466	1968.466	1968.466	1968.466
<b>155</b>	2334.468	2334.468	2334.468	2334.468	2334.468	2334.468	2334.468
<b>160</b>	2287.202	2287.202	2287.202	2287.202	2287.202	2287.202	2287.202
<b>165</b>	2164.643	2164.643	2164.643	2164.643	2164.643	2164.643	2164.643
<b>170</b>	2074.293	2074.293	2074.293	2074.293	2074.293	2074.293	2074.293
<b>175</b>	1893.174	1893.174	1893.174	1893.174	1893.174	1893.174	1893.174
<b>180</b>	1755.634	1755.634	1755.634	1755.634	1755.634	1755.634	1755.634

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1963.39	N.A.	35.20
0-30	2618.68	N.A.	47.00
0-40	2871.00	N.A.	51.50
0-60	2890.23	N.A.	51.80
0-80	2892.21	N.A.	51.90
0-90	2893.65	N.A.	51.90
10-90	1757.98	N.A.	31.50
20-40	907.61	N.A.	16.30
20-50	921.55	N.A.	16.50
40-70	20.87	N.A.	0.40
60-80	1.98	N.A.	0.00
70-80	0.35	N.A.	0.00
80-90	1.44	N.A.	0.00
90-110	16.30	N.A.	0.30
90-120	31.49	N.A.	0.60
90-130	60.87	N.A.	1.10
90-150	850.62	N.A.	15.30
90-180	2683.79	N.A.	48.10
110-180	2667.49	N.A.	47.80
0-180	5577.44	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	1135.67
10-20	827.72
20-30	655.29
30-40	252.32
40-50	13.94
50-60	5.29
60-70	1.63
70-80	0.35
80-90	1.44
90-100	6.67
100-110	9.62
110-120	15.19
120-130	29.38
130-140	98.32
140-150	691.43
150-160	1029.27
160-170	618.35
170-180	185.55

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## 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	84	84	84	71	71	71	58	58	58	52
1	101	98	95	93	94	91	89	87	79	77	76	67	66	65	56	55	55	50
2	95	90	86	82	89	84	81	78	73	71	69	63	62	60	54	53	52	48
3	90	83	78	74	84	78	74	71	69	66	63	60	58	57	52	51	50	46
4	85	78	72	68	80	73	69	65	65	62	59	57	55	53	50	49	48	45
5	81	73	67	63	76	69	64	60	62	58	55	55	52	51	49	47	46	43
6	77	68	62	58	72	65	60	56	59	55	52	53	50	48	47	45	44	42
7	73	64	59	55	69	61	56	53	56	52	49	51	48	46	46	44	43	40
8	70	61	55	51	66	58	53	50	53	50	47	49	46	44	44	42	41	39
9	67	58	53	49	63	56	51	47	51	47	45	47	44	42	43	41	40	38
10	64	55	50	46	61	53	49	45	49	46	43	45	43	41	42	40	39	37

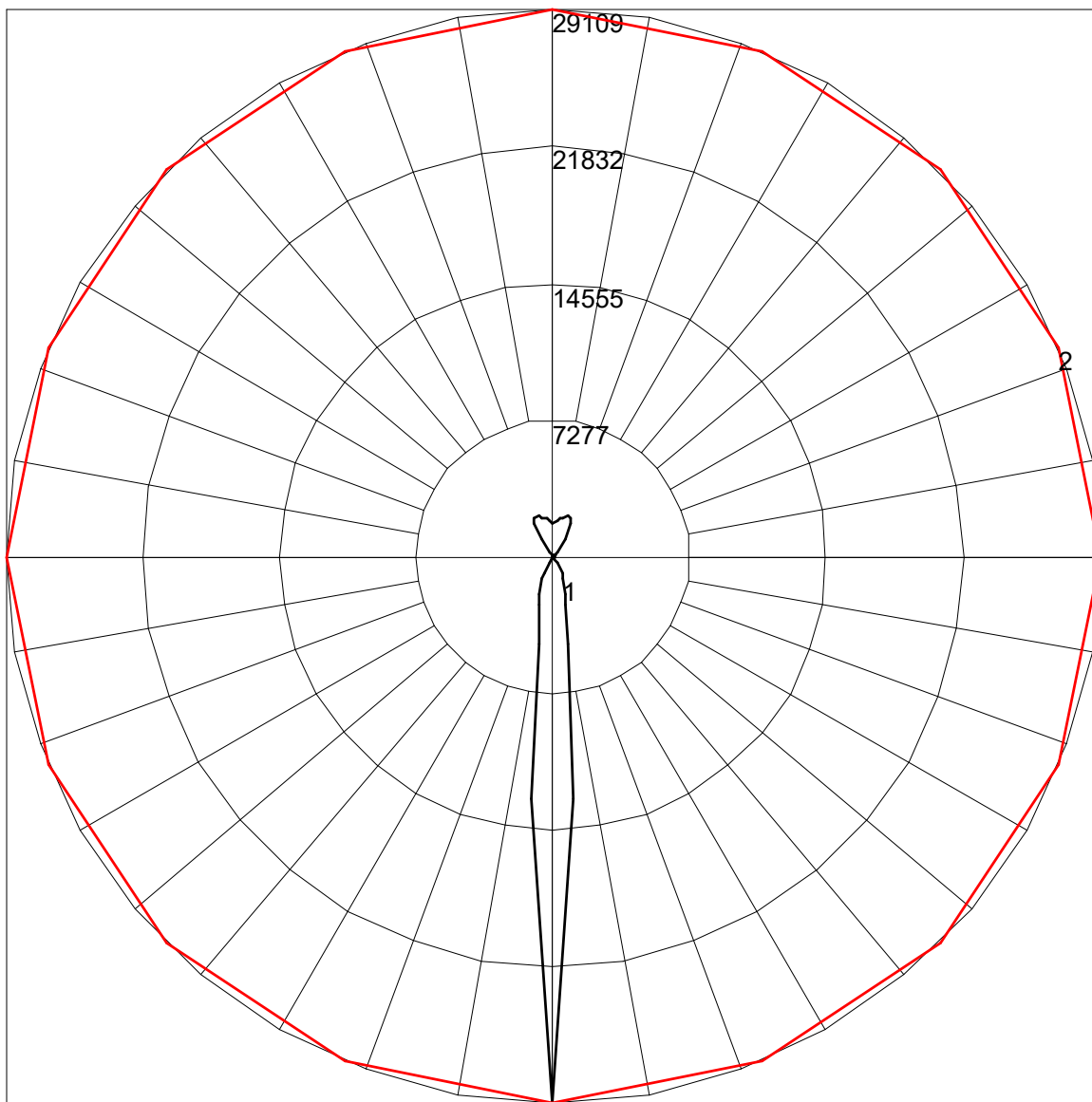
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**UGR TABLE - CORRECTED**

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	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	3H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	4H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	6H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	8H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	12H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
4H	2H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	3H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	4H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	6H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	8H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	12H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
8H	4H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	6H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	8H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	12H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
12H	4H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	6H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	8H	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0

Maximum UGR = 6.0

POLAR GRAPH



Maximum Candela = 29109.498 Located At Horizontal Angle = 0, Vertical Angle = 0

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

# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)