



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192\_168\_37\_234-16\_19\_5-MERGED.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.04 & #12326812.09

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 19-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRDI-TL-L20-8TWU-L20-8TWD-xxx-DIM1-UNV-LW-CS-WM 4000k

[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	4074
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
Total Luminaire Watts	48
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	902	902	902
55	490	490	490
65	279	279	279
75	136	136	136
85	30	30	30

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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>
0.0	4999.207	4999.207	4999.207	4999.207	4999.207
2.5	4946.195	4946.195	4946.195	4946.195	4946.195
5.0	4803.295	4803.295	4803.295	4803.295	4803.295
7.5	4568.201	4568.201	4568.201	4568.201	4568.201
10.0	4219.017	4219.017	4219.017	4219.017	4219.017
12.5	3741.914	3741.914	3741.914	3741.914	3741.914
15.0	3143.807	3143.807	3143.807	3143.807	3143.807
17.5	2501.908	2501.908	2501.908	2501.908	2501.908
20.0	1887.667	1887.667	1887.667	1887.667	1887.667
22.5	1375.992	1375.992	1375.992	1375.992	1375.992
25.0	976.101	976.101	976.101	976.101	976.101
27.5	688.457	688.457	688.457	688.457	688.457
30.0	489.203	489.203	489.203	489.203	489.203
32.5	351.143	351.143	351.143	351.143	351.143
35.0	255.261	255.261	255.261	255.261	255.261
37.5	190.611	190.611	190.611	190.611	190.611
40.0	148.893	148.893	148.893	148.893	148.893
42.5	121.465	121.465	121.465	121.465	121.465
45.0	102.450	102.450	102.450	102.450	102.450
47.5	88.506	88.506	88.506	88.506	88.506
50.0	77.673	77.673	77.673	77.673	77.673
52.5	68.684	68.684	68.684	68.684	68.684
55.0	60.848	60.848	60.848	60.848	60.848
57.5	53.818	53.818	53.818	53.818	53.818
60.0	47.710	47.710	47.710	47.710	47.710
62.5	41.948	41.948	41.948	41.948	41.948
65.0	36.532	36.532	36.532	36.532	36.532
67.5	31.461	31.461	31.461	31.461	31.461
70.0	26.736	26.736	26.736	26.736	26.736
72.5	22.357	22.357	22.357	22.357	22.357
75.0	18.208	18.208	18.208	18.208	18.208
77.5	14.290	14.290	14.290	14.290	14.290
80.0	10.602	10.602	10.602	10.602	10.602
82.5	7.145	7.145	7.145	7.145	7.145
85.0	4.033	4.033	4.033	4.033	4.033
87.5	1.613	1.613	1.613	1.613	1.613
90.0	4.968	4.968	4.968	4.968	4.968
92.5	7.118	7.118	7.118	7.118	7.118
95.0	12.438	12.438	12.438	12.438	12.438
97.5	21.096	21.096	21.096	21.096	21.096
100.0	31.405	31.405	31.405	31.405	31.405
102.5	42.228	42.228	42.228	42.228	42.228
105.0	53.896	53.896	53.896	53.896	53.896
107.5	67.067	67.067	67.067	67.067	67.067
110.0	82.403	82.403	82.403	82.403	82.403
112.5	99.646	99.646	99.646	99.646	99.646
115.0	119.165	119.165	119.165	119.165	119.165
117.5	141.032	141.032	141.032	141.032	141.032
120.0	165.503	165.503	165.503	165.503	165.503
122.5	192.726	192.726	192.726	192.726	192.726
125.0	222.811	222.811	222.811	222.811	222.811
127.5	254.913	254.913	254.913	254.913	254.913
130.0	288.300	288.300	288.300	288.300	288.300
132.5	321.870	321.870	321.870	321.870	321.870

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CANDELA TABULATION - (Cont.)

135.0	355.405	355.405	355.405	355.405	355.405
137.5	390.369	390.369	390.369	390.369	390.369
140.0	430.726	430.726	430.726	430.726	430.726
142.5	482.458	482.458	482.458	482.458	482.458
145.0	552.166	552.166	552.166	552.166	552.166
147.5	642.421	642.421	642.421	642.421	642.421
150.0	754.322	754.322	754.322	754.322	754.322
152.5	870.992	870.992	870.992	870.992	870.992
155.0	989.497	989.497	989.497	989.497	989.497
157.5	1095.160	1095.160	1095.160	1095.160	1095.160
160.0	1177.710	1177.710	1177.710	1177.710	1177.710
162.5	1233.110	1233.110	1233.110	1233.110	1233.110
165.0	1264.663	1264.663	1264.663	1264.663	1264.663
167.5	1281.539	1281.539	1281.539	1281.539	1281.539
170.0	1291.078	1291.078	1291.078	1291.078	1291.078
172.5	1298.049	1298.049	1298.049	1298.049	1298.049
175.0	1304.286	1304.286	1304.286	1304.286	1304.286
177.5	1307.222	1307.222	1307.222	1307.222	1307.222
180.0	1306.570	1306.570	1306.570	1306.570	1306.570

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1287.35	N.A.	31.60
0-30	1757.88	N.A.	43.10
0-40	1929.08	N.A.	47.40
0-60	2065.69	N.A.	50.70
0-80	2121.46	N.A.	52.10
0-90	2127.07	N.A.	52.20
10-90	1686.86	N.A.	41.40
20-40	641.72	N.A.	15.80
20-50	723.41	N.A.	17.80
40-70	173.00	N.A.	4.20
60-80	55.77	N.A.	1.40
70-80	19.38	N.A.	0.50
80-90	5.60	N.A.	0.10
90-110	74.03	N.A.	1.80
90-120	193.56	N.A.	4.80
90-130	393.77	N.A.	9.70
90-150	1021.08	N.A.	25.10
90-180	1946.83	N.A.	47.80
110-180	1872.8	N.A.	46.00
0-180	4073.89	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	440.20
10-20	847.15
20-30	470.53
30-40	171.20
40-50	81.69
50-60	54.93
60-70	36.39
70-80	19.38
80-90	5.60
90-100	16.01
100-110	58.01
110-120	119.53
120-130	200.21
130-140	274.83
140-150	352.49
150-160	447.93
160-170	353.77
170-180	124.04

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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	85	85	85	71	71	71	58	58	58	52
1	101	98	95	92	93	91	88	86	78	76	75	66	65	64	55	55	54	49
2	94	89	84	80	88	83	79	76	72	69	67	62	60	58	53	51	50	46
3	89	81	76	71	82	76	72	68	67	63	61	58	56	54	50	49	47	44
4	83	75	69	64	78	71	65	61	62	59	56	55	52	50	48	46	45	41
5	78	69	63	59	73	66	60	56	59	54	51	52	49	47	46	44	42	39
6	74	65	58	54	69	61	56	52	55	51	48	49	46	44	44	42	40	37
7	70	61	54	50	66	58	52	48	52	48	45	47	44	41	42	40	38	36
8	67	57	51	47	63	54	49	45	49	45	42	45	41	39	40	38	36	34
9	63	54	48	44	60	51	46	42	47	43	40	43	39	37	39	36	35	33
10	60	51	45	41	57	49	43	40	45	40	38	41	38	35	37	35	33	32

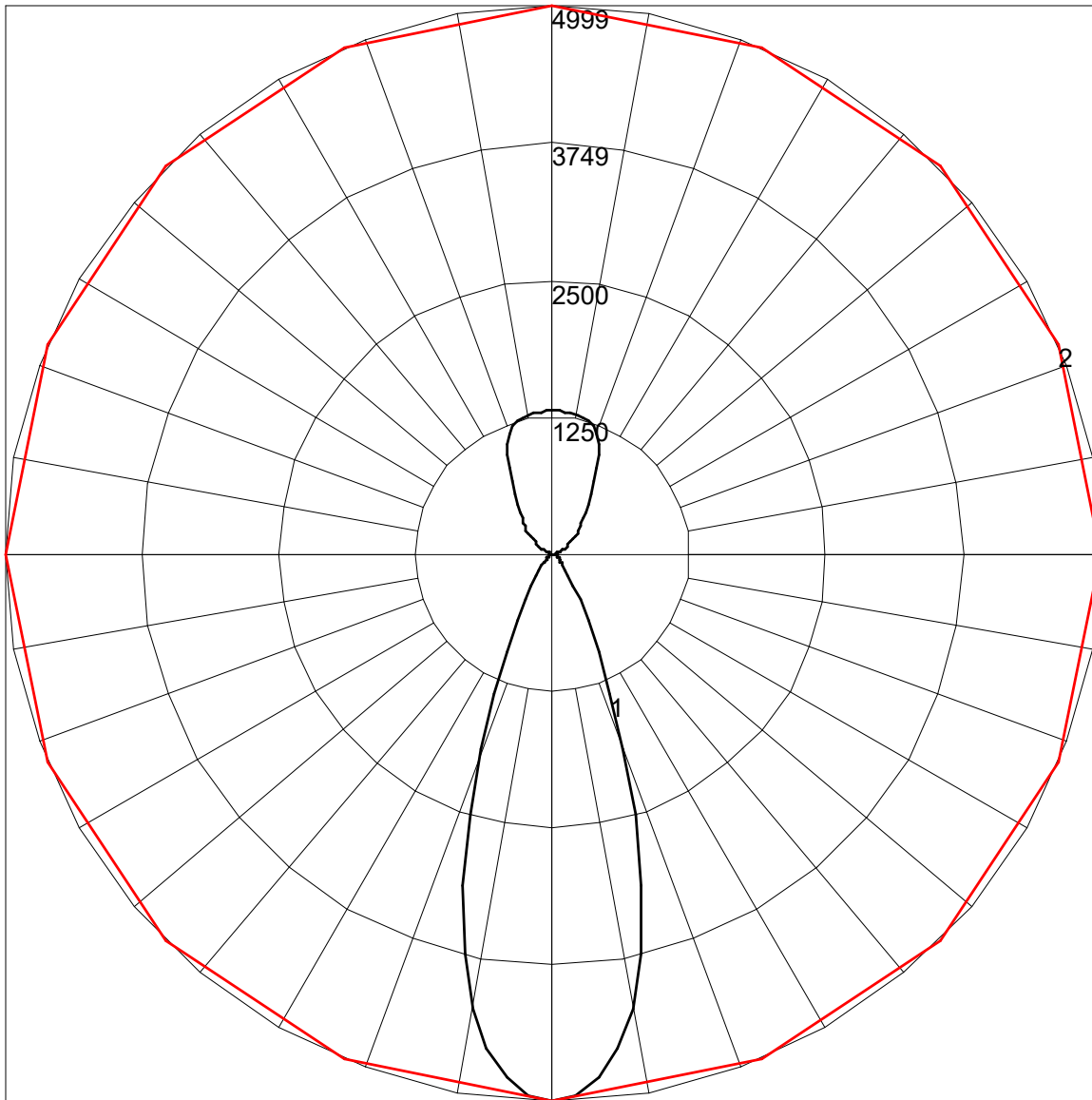
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**UGR TABLE - CORRECTED**

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	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	3H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	4H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	6H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	8H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	12H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
4H	2H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	3H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	4H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	6H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	8H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	12H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
8H	4H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	6H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	8H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	12H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
12H	4H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	6H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	8H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9

Maximum UGR = 4.9

POLAR GRAPH



Maximum Candela = 4999.207 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.)