



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-16_28_43-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #13537338.04 & #12326812.07

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 19-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L20-8TWU-L20-8TWD-xxx-DALI-UNV-LW-CSU-LW-WHD-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	3913
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	82
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	3112	3112	3112
55	1924	1924	1924
65	1021	1021	1021
75	444	444	444
85	98	98	98

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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	1248.938	1248.938	1248.938	1248.938	1248.938
2.5	1241.771	1241.771	1241.771	1241.771	1241.771
5.0	1229.197	1229.197	1229.197	1229.197	1229.197
7.5	1220.773	1220.773	1220.773	1220.773	1220.773
10.0	1213.606	1213.606	1213.606	1213.606	1213.606
12.5	1209.457	1209.457	1209.457	1209.457	1209.457
15.0	1199.901	1199.901	1199.901	1199.901	1199.901
17.5	1183.681	1183.681	1183.681	1183.681	1183.681
20.0	1160.168	1160.168	1160.168	1160.168	1160.168
22.5	1113.646	1113.646	1113.646	1113.646	1113.646
25.0	1034.683	1034.683	1034.683	1034.683	1034.683
27.5	927.430	927.430	927.430	927.430	927.430
30.0	792.138	792.138	792.138	792.138	792.138
32.5	644.147	644.147	644.147	644.147	644.147
35.0	528.595	528.595	528.595	528.595	528.595
37.5	458.434	458.434	458.434	458.434	458.434
40.0	414.552	414.552	414.552	414.552	414.552
42.5	382.112	382.112	382.112	382.112	382.112
45.0	353.570	353.570	353.570	353.570	353.570
47.5	325.908	325.908	325.908	325.908	325.908
50.0	297.366	297.366	297.366	297.366	297.366
52.5	268.070	268.070	268.070	268.070	268.070
55.0	238.773	238.773	238.773	238.773	238.773
57.5	210.105	210.105	210.105	210.105	210.105
60.0	182.317	182.317	182.317	182.317	182.317
62.5	156.919	156.919	156.919	156.919	156.919
65.0	133.658	133.658	133.658	133.658	133.658
67.5	112.119	112.119	112.119	112.119	112.119
70.0	92.139	92.139	92.139	92.139	92.139
72.5	74.587	74.587	74.587	74.587	74.587
75.0	59.360	59.360	59.360	59.360	59.360
77.5	45.894	45.894	45.894	45.894	45.894
80.0	33.924	33.924	33.924	33.924	33.924
82.5	23.047	23.047	23.047	23.047	23.047
85.0	13.026	13.026	13.026	13.026	13.026
87.5	4.539	4.539	4.539	4.539	4.539
90.0	5.326	5.326	5.326	5.326	5.326
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	454.89	N.A.	11.60
0-30	918.77	N.A.	23.50
0-40	1265.09	N.A.	32.30
0-60	1751.94	N.A.	44.80
0-80	1949.36	N.A.	49.80
0-90	1965.75	N.A.	50.20
10-90	1848.83	N.A.	47.30
20-40	810.20	N.A.	20.70
20-50	1083.43	N.A.	27.70
40-70	620.26	N.A.	15.90
60-80	197.43	N.A.	5.00
70-80	64.01	N.A.	1.60
80-90	16.39	N.A.	0.40
90-110	74.08	N.A.	1.90
90-120	193.61	N.A.	4.90
90-130	393.82	N.A.	10.10
90-150	1021.13	N.A.	26.10
90-180	1946.88	N.A.	49.80
110-180	1872.8	N.A.	47.90
0-180	3912.63	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	116.92
10-20	337.98
20-30	463.87
30-40	346.33
40-50	273.24
50-60	213.61
60-70	133.42
70-80	64.01
80-90	16.39
90-100	16.06
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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	99	95	91	88	91	88	85	82	75	73	71	63	61	60	51	50	50	44
2	91	84	79	74	84	78	73	69	67	63	60	56	54	52	47	45	43	39
3	84	75	68	63	77	70	64	59	60	56	52	51	48	45	42	40	38	34
4	77	67	60	54	71	63	56	51	54	49	46	46	43	40	39	36	34	31
5	71	61	53	48	66	57	50	45	49	44	40	42	38	35	36	33	31	28
6	66	55	47	42	61	52	45	40	45	40	36	39	35	32	33	30	28	25
7	62	50	43	38	57	47	40	36	41	36	32	36	32	29	30	27	25	23
8	58	46	39	34	53	43	37	32	38	33	29	33	29	26	28	25	23	21
9	54	42	35	30	50	40	33	29	35	30	26	31	27	24	26	23	21	19
10	51	39	32	28	47	37	31	27	33	28	24	29	25	22	25	22	20	18

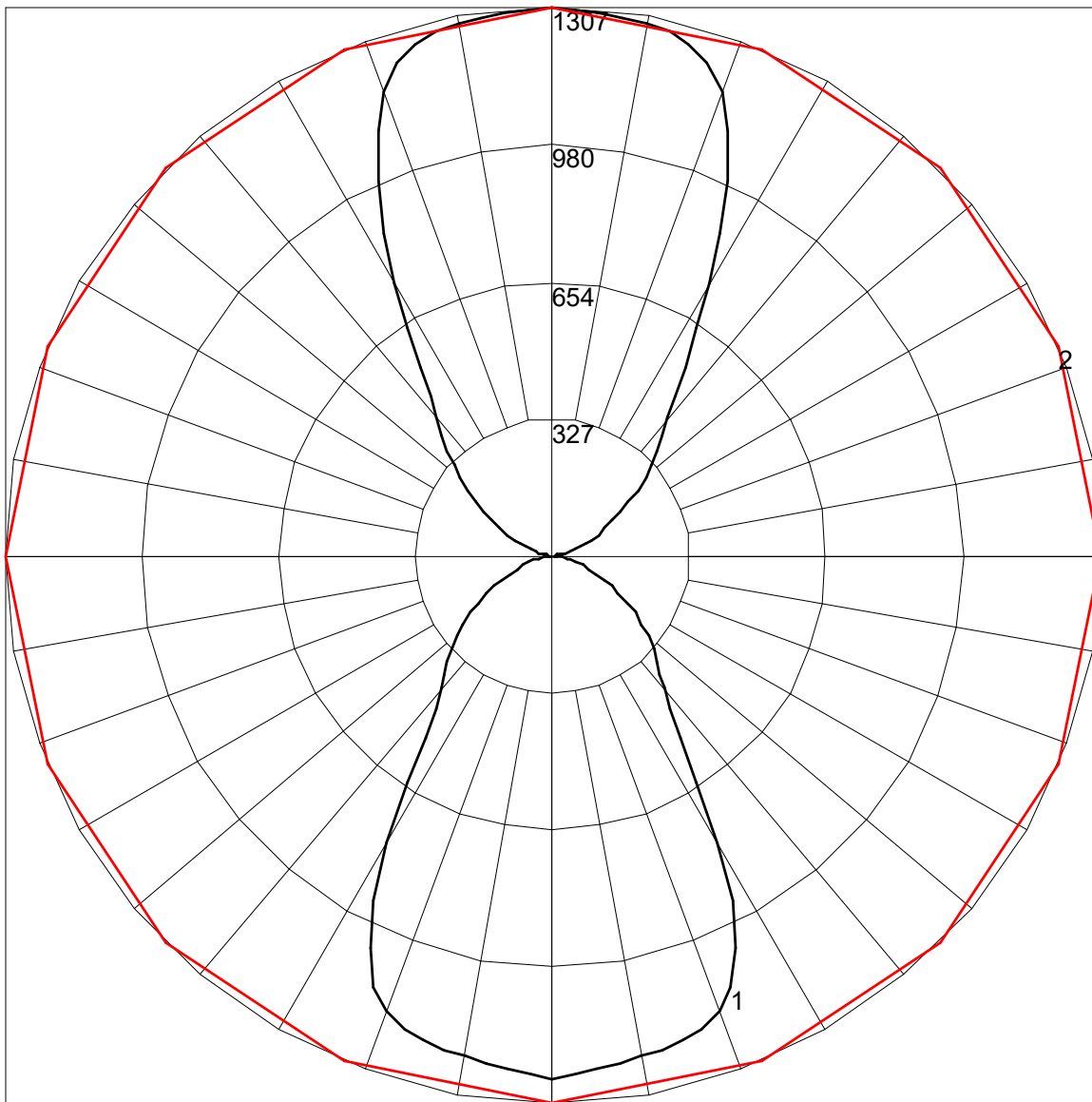
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UGR TABLE - CORRECTED

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	7.9	8.7	8.9	9.7	11.0	7.9	8.7	8.9	9.7	11.0
	3H	8.7	9.4	9.7	10.4	11.7	8.7	9.4	9.7	10.4	11.7
	4H	8.9	9.6	9.9	10.6	11.9	8.9	9.6	9.9	10.6	11.9
	6H	9.0	9.6	10.0	10.6	11.9	9.0	9.6	10.0	10.6	11.9
	8H	9.0	9.5	10.0	10.6	11.9	9.0	9.5	10.0	10.6	11.9
	12H	8.9	9.5	9.9	10.5	11.8	8.9	9.5	9.9	10.5	11.8
4H	2H	8.1	8.8	9.1	9.7	11.1	8.1	8.8	9.1	9.7	11.1
	3H	9.0	9.6	10.0	10.6	11.9	9.0	9.6	10.0	10.6	11.9
	4H	9.3	9.8	10.3	10.8	12.1	9.3	9.8	10.3	10.8	12.1
	6H	9.4	9.8	10.4	10.9	12.2	9.4	9.8	10.4	10.9	12.2
	8H	9.4	9.8	10.4	10.8	12.2	9.4	9.8	10.4	10.8	12.2
	12H	9.4	9.7	10.4	10.8	12.1	9.4	9.7	10.4	10.8	12.1
8H	4H	9.3	9.7	10.3	10.7	12.0	9.3	9.7	10.3	10.7	12.0
	6H	9.4	9.8	10.5	10.8	12.2	9.4	9.8	10.5	10.8	12.2
	8H	9.5	9.7	10.5	10.8	12.2	9.5	9.7	10.5	10.8	12.2
	12H	9.4	9.7	10.5	10.7	12.2	9.4	9.7	10.5	10.7	12.2
12H	4H	9.2	9.6	10.3	10.6	12.0	9.2	9.6	10.3	10.6	12.0
	6H	9.4	9.7	10.5	10.7	12.1	9.4	9.7	10.5	10.7	12.1
	8H	9.4	9.7	10.5	10.7	12.1	9.4	9.7	10.5	10.7	12.1

Maximum UGR = 12.2

POLAR GRAPH



Maximum Candela = 1307.222 Located At Horizontal Angle = 0, Vertical Angle = 177.5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (177.5) (Through Max. Cd.)