



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L40-835-XXX-DIM-UNV-LW-WH-AD-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12326812.11

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 1-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L40-835-xxx-DIM-UNV-LW-WH-AD-xx

[LUMINAIRE] 8" DIA. SURFACE CYLINDER

[LAMP] One white LED

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Healthcare, Office, Downlight

[_SEARCH_MOUNTING] Surface

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2622
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	72
Total Luminaire Watts	36.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.94
Spacing Criterion (90-270)	0.94
Spacing Criterion (Diagonal)	1.02
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.46 ft (Diameter)
Luminous Width (90-270)	0.46 ft (Diameter)
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	46874	46874	46874
55	42720	42720	42720
65	42331	42331	42331
75	44203	44203	44203
85	36103	36103	36103

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CANDELA TABULATION

	<u>0</u>
0.0	1475.840
0.5	1475.444
1.0	1474.455
1.5	1472.674
2.0	1470.101
2.5	1466.935
3.0	1463.175
3.5	1459.019
4.0	1454.270
4.5	1449.323
5.0	1444.376
5.5	1438.835
6.0	1432.898
6.5	1426.764
7.0	1420.036
7.5	1413.110
8.0	1405.788
8.5	1398.070
9.0	1390.155
9.5	1381.844
10.0	1373.334
10.5	1364.429
11.0	1355.129
11.5	1345.234
12.0	1335.142
12.5	1324.456
13.0	1313.573
13.5	1302.095
14.0	1290.222
14.5	1278.151
15.0	1265.486
15.5	1252.623
16.0	1239.563
16.5	1226.305
17.0	1213.046
17.5	1199.590
18.0	1186.133
18.5	1172.479
19.0	1159.023
19.5	1145.369
20.0	1131.517
20.5	1117.863
21.0	1103.813
21.5	1089.565
22.0	1075.119
22.5	1060.277
23.0	1045.238
23.5	1030.001
24.0	1014.566
24.5	998.933
25.0	983.300
25.5	967.666
26.0	952.033
26.5	936.598

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27.0	921.361
27.5	906.124
28.0	891.282
28.5	876.441
29.0	862.193
29.5	847.945
30.0	834.093
30.5	820.439
31.0	806.784
31.5	793.526
32.0	780.268
32.5	767.207
33.0	754.147
33.5	741.482
34.0	728.619
34.5	716.350
35.0	704.279
35.5	692.208
36.0	680.335
36.5	668.659
37.0	657.380
37.5	646.298
38.0	635.415
38.5	624.729
39.0	614.439
39.5	604.346
40.0	594.452
40.5	584.755
41.0	575.455
41.5	566.352
42.0	557.447
42.5	548.740
43.0	540.231
43.5	531.920
44.0	523.608
44.5	515.693
45.0	507.778
45.5	500.060
46.0	492.540
46.5	485.021
47.0	477.501
47.5	470.377
48.0	463.055
48.5	455.931
49.0	449.005
49.5	442.277
50.0	435.549
50.5	429.019
51.0	422.488
51.5	416.156
52.0	409.824
52.5	403.689
53.0	397.555
53.5	392.014
54.0	386.671
54.5	381.130

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55.0	375.391
55.5	369.653
56.0	364.112
56.5	358.769
57.0	354.217
57.5	349.072
58.0	343.729
58.5	338.584
59.0	333.439
59.5	328.294
60.0	323.149
60.5	318.202
61.0	313.255
61.5	308.308
62.0	303.360
62.5	298.413
63.0	293.466
63.5	288.717
64.0	283.770
64.5	278.823
65.0	274.073
65.5	269.126
66.0	264.179
66.5	259.232
67.0	254.285
67.5	249.535
68.0	244.588
68.5	239.839
69.0	234.892
69.5	230.142
70.0	225.195
70.5	220.446
71.0	215.697
71.5	210.749
72.0	206.000
72.5	201.053
73.0	196.086
73.5	191.020
74.0	185.855
74.5	180.591
75.0	175.268
75.5	169.866
76.0	164.345
76.5	158.725
77.0	152.986
77.5	147.149
78.0	141.172
78.5	135.097
79.0	128.963
79.5	122.690
80.0	116.338
80.5	109.906
81.0	103.376
81.5	96.747
82.0	90.019
82.5	83.192

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CANDELA TABULATION - (Cont.)

83.0	76.285
83.5	69.340
84.0	62.315
84.5	55.270
85.0	48.205
85.5	41.160
86.0	34.175
86.5	27.506
87.0	21.589
87.5	16.781
88.0	12.605
88.5	8.905
89.0	5.620
89.5	3.146
90.0	1.603
90.5	0.000
91.0	0.000
91.5	0.000
92.0	0.000
92.5	0.000
93.0	0.000
93.5	0.000
94.0	0.000
94.5	0.000
95.0	0.000
95.5	0.000
96.0	0.000
96.5	0.000
97.0	0.000
97.5	0.000
98.0	0.000
98.5	0.000
99.0	0.000
99.5	0.000
100.0	0.000
100.5	0.000
101.0	0.000
101.5	0.000
102.0	0.000
102.5	0.000
103.0	0.000
103.5	0.000
104.0	0.000
104.5	0.000
105.0	0.000
105.5	0.000
106.0	0.000
106.5	0.000
107.0	0.000
107.5	0.000
108.0	0.000
108.5	0.000
109.0	0.000
109.5	0.000
110.0	0.000
110.5	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CR-TL-L40-835-XXX-DIM-UNV-LW-WH-AD-XX_.IES****CANDELA TABULATION - (Cont.)**

111.0	0.000
111.5	0.000
112.0	0.000
112.5	0.000
113.0	0.000
113.5	0.000
114.0	0.000
114.5	0.000
115.0	0.000
115.5	0.000
116.0	0.000
116.5	0.000
117.0	0.000
117.5	0.000
118.0	0.000
118.5	0.000
119.0	0.000
119.5	0.000
120.0	0.000
120.5	0.000
121.0	0.000
121.5	0.000
122.0	0.000
122.5	0.000
123.0	0.000
123.5	0.000
124.0	0.000
124.5	0.000
125.0	0.000
125.5	0.000
126.0	0.000
126.5	0.000
127.0	0.000
127.5	0.000
128.0	0.000
128.5	0.000
129.0	0.000
129.5	0.000
130.0	0.000
130.5	0.000
131.0	0.000
131.5	0.000
132.0	0.000
132.5	0.000
133.0	0.000
133.5	0.000
134.0	0.000
134.5	0.000
135.0	0.000
135.5	0.000
136.0	0.000
136.5	0.000
137.0	0.000
137.5	0.000
138.0	0.000
138.5	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CR-TL-L40-835-XXX-DIM-UNV-LW-WH-AD-XX_.IES****CANDELA TABULATION - (Cont.)**

139.0	0.000
139.5	0.000
140.0	0.000
140.5	0.000
141.0	0.000
141.5	0.000
142.0	0.000
142.5	0.000
143.0	0.000
143.5	0.000
144.0	0.000
144.5	0.000
145.0	0.000
145.5	0.000
146.0	0.000
146.5	0.000
147.0	0.000
147.5	0.000
148.0	0.000
148.5	0.000
149.0	0.000
149.5	0.000
150.0	0.000
150.5	0.000
151.0	0.000
151.5	0.000
152.0	0.000
152.5	0.000
153.0	0.000
153.5	0.000
154.0	0.000
154.5	0.000
155.0	0.000
155.5	0.000
156.0	0.000
156.5	0.000
157.0	0.000
157.5	0.000
158.0	0.000
158.5	0.000
159.0	0.000
159.5	0.000
160.0	0.000
160.5	0.000
161.0	0.000
161.5	0.000
162.0	0.000
162.5	0.000
163.0	0.000
163.5	0.000
164.0	0.000
164.5	0.000
165.0	0.000
165.5	0.000
166.0	0.000
166.5	0.000

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CANDELA TABULATION - (Cont.)

167.0	0.000
167.5	0.000
168.0	0.000
168.5	0.000
169.0	0.000
169.5	0.000
170.0	0.000
170.5	0.000
171.0	0.000
171.5	0.000
172.0	0.000
172.5	0.000
173.0	0.000
173.5	0.000
174.0	0.000
174.5	0.000
175.0	0.000
175.5	0.000
176.0	0.000
176.5	0.000
177.0	0.000
177.5	0.000
178.0	0.000
178.5	0.000
179.0	0.000
179.5	0.000
180.0	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	489.29	N.A.	18.70
0-30	939.99	N.A.	35.80
0-40	1381.35	N.A.	52.70
0-60	2111.55	N.A.	80.50
0-80	2566.23	N.A.	97.90
0-90	2621.98	N.A.	100.00
10-90	2486.37	N.A.	94.80
20-40	892.05	N.A.	34.00
20-50	1285.35	N.A.	49.00
40-70	1001.54	N.A.	38.20
60-80	454.68	N.A.	17.30
70-80	183.34	N.A.	7.00
80-90	55.75	N.A.	2.10
90-110	0.04	N.A.	0.00
90-120	0.04	N.A.	0.00
90-130	0.04	N.A.	0.00
90-150	0.04	N.A.	0.00
90-180	0.04	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2622.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	135.61
10-20	353.68
20-30	450.70
30-40	441.35
40-50	393.30
50-60	336.91
60-70	271.34
70-80	183.34
80-90	55.75
90-100	0.04
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	77	83	79	76	80	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	52	46	71	59	51	46	58	50	45	56	50	45	54	49	44	42
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	45	40	38
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35
9	60	47	39	34	59	47	39	34	45	39	34	44	38	34	43	38	33	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

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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

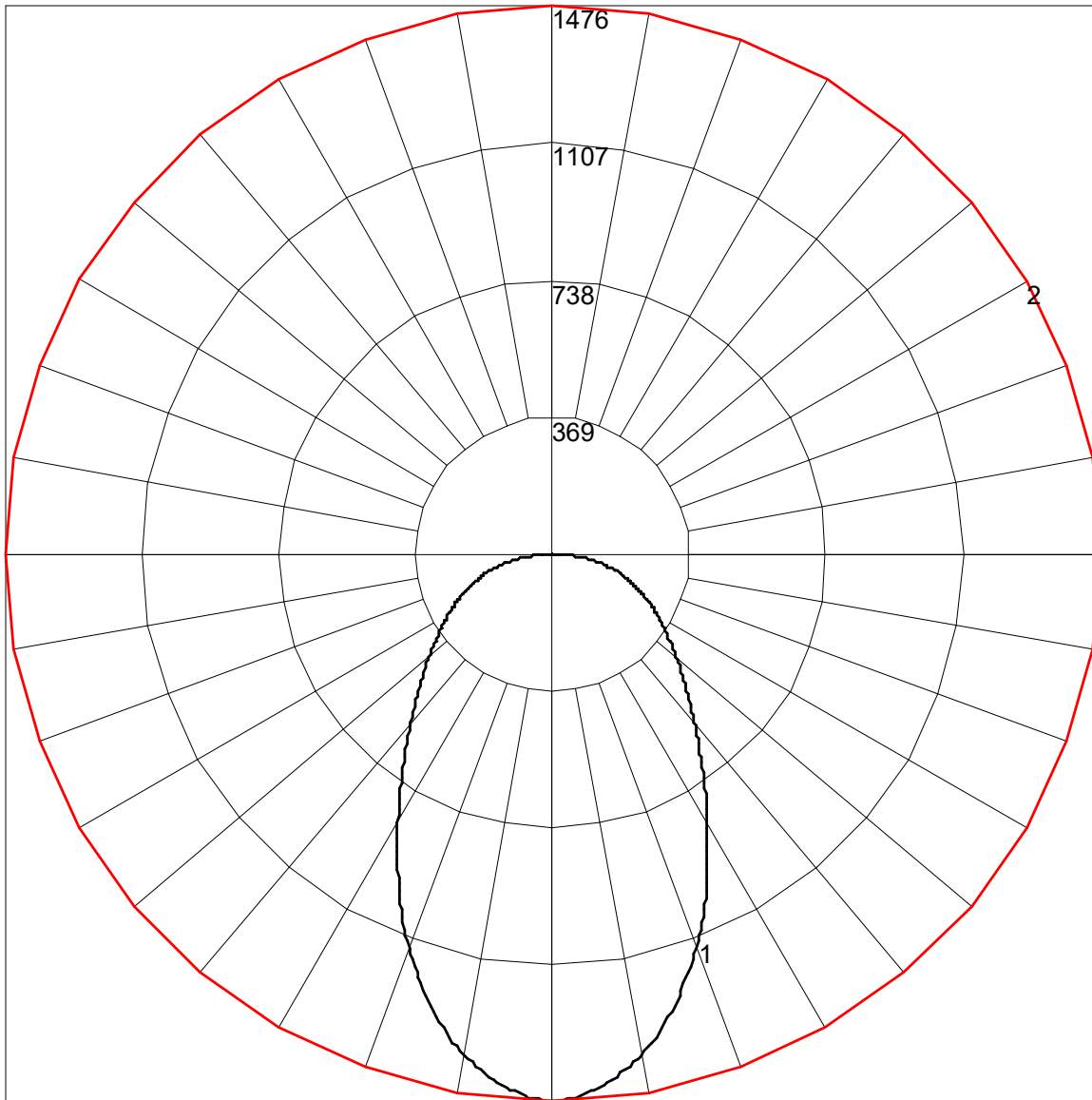
X=2H	Y=2H	23.8	25.3	24.1	25.6	25.9	23.8	25.3	24.1	25.6	25.9
	3H	25.9	27.3	26.3	27.6	28.0	25.9	27.3	26.3	27.6	28.0
	4H	26.8	28.1	27.2	28.5	28.8	26.8	28.1	27.2	28.5	28.8
	6H	27.5	28.8	27.9	29.1	29.5	27.5	28.8	27.9	29.1	29.5
	8H	27.8	29.0	28.2	29.4	29.8	27.8	29.0	28.2	29.4	29.8
	12H	27.9	29.1	28.4	29.5	29.9	27.9	29.1	28.4	29.5	29.9

UGR Viewed Endwise

4H	2H	24.4	25.8	24.8	26.1	26.5	24.4	25.8	24.8	26.1	26.5
	3H	26.8	27.9	27.2	28.3	28.7	26.8	27.9	27.2	28.3	28.7
	4H	27.9	28.9	28.3	29.3	29.7	27.9	28.9	28.3	29.3	29.7
	6H	28.8	29.7	29.2	30.1	30.6	28.8	29.7	29.2	30.1	30.6
	8H	29.1	29.9	29.6	30.4	30.8	29.1	29.9	29.6	30.4	30.8
	12H	29.3	30.1	29.8	30.5	31.0	29.3	30.1	29.8	30.5	31.0
8H	4H	28.3	29.1	28.8	29.6	30.0	28.3	29.1	28.8	29.6	30.0
	6H	29.4	30.0	29.9	30.5	31.0	29.4	30.0	29.9	30.5	31.0
	8H	29.8	30.4	30.3	30.9	31.4	29.8	30.4	30.3	30.9	31.4
	12H	30.1	30.6	30.6	31.1	31.7	30.1	30.6	30.6	31.1	31.7
12H	4H	28.4	29.1	28.8	29.6	30.0	28.4	29.1	28.8	29.6	30.0
	6H	29.5	30.1	30.0	30.5	31.1	29.5	30.1	30.0	30.5	31.1
	8H	29.9	30.5	30.4	31.0	31.5	29.9	30.5	30.4	31.0	31.5

Maximum UGR = 31.7

POLAR GRAPH



Maximum Candela = 1475.84 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.)