



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L15-835-XXX-DIM-UNV-OM-CS-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 3-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L15-835-xxx-DIM-UNV-OM-CS-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	1495
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	13.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.58
Spacing Criterion (90-270)	0.58
Spacing Criterion (Diagonal)	0.68
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.50 ft (Diameter)
Luminous Width (90-270)	0.50 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	2698	2698	2698
55	993	993	993
65	391	391	391
75	175	175	175
85	142	142	142

CANDELA TABULATION

	<u>0</u>
0.0	3025.434
0.5	3029.957
1.0	3039.004
1.5	3044.281
2.0	3057.098
2.5	3062.375
3.0	3071.422
3.5	3073.684
4.0	3066.899
4.5	3030.711
5.0	2994.523
5.5	2956.074
6.0	2894.254
6.5	2832.433
7.0	2766.843
7.5	2692.960
8.0	2607.015
8.5	2518.807
9.0	2427.584
9.5	2338.623
10.0	2256.447
10.5	2184.072
11.0	2121.498
11.5	2067.970
12.0	2015.197
12.5	1963.177
13.0	1913.419
13.5	1866.677
14.0	1824.458
14.5	1786.762
15.0	1752.837
15.5	1720.419
16.0	1688.754
16.5	1655.582
17.0	1621.657
17.5	1587.731
18.0	1556.820
18.5	1529.680
19.0	1501.785
19.5	1473.137
20.0	1441.473
20.5	1407.547
21.0	1372.867
21.5	1337.433
22.0	1299.738
22.5	1263.550
23.0	1225.101
23.5	1185.898
24.0	1145.187
24.5	1104.476
25.0	1064.518
25.5	1024.561
26.0	987.620
26.5	952.186

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	919.014
<b>27.5</b>	887.350
<b>28.0</b>	858.701
<b>28.5</b>	833.069
<b>29.0</b>	808.944
<b>29.5</b>	785.572
<b>30.0</b>	756.170
<b>30.5</b>	719.379
<b>31.0</b>	677.160
<b>31.5</b>	630.720
<b>32.0</b>	583.600
<b>32.5</b>	536.180
<b>33.0</b>	488.759
<b>33.5</b>	439.001
<b>34.0</b>	388.489
<b>34.5</b>	342.425
<b>35.0</b>	298.171
<b>35.5</b>	256.404
<b>36.0</b>	216.221
<b>36.5</b>	180.259
<b>37.0</b>	150.782
<b>37.5</b>	130.049
<b>38.0</b>	118.891
<b>38.5</b>	111.352
<b>39.0</b>	103.813
<b>39.5</b>	95.822
<b>40.0</b>	87.303
<b>40.5</b>	78.256
<b>41.0</b>	69.586
<b>41.5</b>	61.519
<b>42.0</b>	54.658
<b>42.5</b>	49.230
<b>43.0</b>	45.008
<b>43.5</b>	41.767
<b>44.0</b>	39.052
<b>44.5</b>	36.866
<b>45.0</b>	34.831
<b>45.5</b>	33.097
<b>46.0</b>	31.438
<b>46.5</b>	29.930
<b>47.0</b>	28.422
<b>47.5</b>	26.990
<b>48.0</b>	25.557
<b>48.5</b>	24.125
<b>49.0</b>	22.693
<b>49.5</b>	21.411
<b>50.0</b>	20.205
<b>50.5</b>	18.998
<b>51.0</b>	17.868
<b>51.5</b>	16.737
<b>52.0</b>	15.606
<b>52.5</b>	14.626
<b>53.0</b>	13.646
<b>53.5</b>	12.741
<b>54.0</b>	11.912
<b>54.5</b>	11.158

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CANDELA TABULATION - (Cont.)

55.0	10.404
55.5	9.801
56.0	9.122
56.5	8.595
57.0	8.067
57.5	7.539
58.0	7.087
58.5	6.634
59.0	6.257
59.5	5.880
60.0	5.504
60.5	5.127
61.0	4.825
61.5	4.523
62.0	4.297
62.5	4.071
63.0	3.770
63.5	3.619
64.0	3.393
64.5	3.166
65.0	3.016
65.5	2.789
66.0	2.639
66.5	2.488
67.0	2.337
67.5	2.186
68.0	2.111
68.5	1.960
69.0	1.809
69.5	1.734
70.0	1.659
70.5	1.508
71.0	1.432
71.5	1.357
72.0	1.282
72.5	1.206
73.0	1.131
73.5	1.055
74.0	0.980
74.5	0.905
75.0	0.829
75.5	0.829
76.0	0.754
76.5	0.679
77.0	0.679
77.5	0.603
78.0	0.603
78.5	0.528
79.0	0.528
79.5	0.452
80.0	0.452
80.5	0.377
81.0	0.377
81.5	0.377
82.0	0.302
82.5	0.302

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CANDELA TABULATION - (Cont.)

83.0	0.302
83.5	0.226
84.0	0.226
84.5	0.226
85.0	0.226
85.5	0.151
86.0	0.151
86.5	0.151
87.0	0.151
87.5	0.151
88.0	0.075
88.5	0.075
89.0	0.075
89.5	0.075
90.0	0.075
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

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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
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127.0	0.000
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129.0	0.000
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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

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
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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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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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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	754.49	N.A.	50.50
0-30	1243.21	N.A.	83.20
0-40	1450.02	N.A.	97.00
0-60	1490.66	N.A.	99.70
0-80	1494.75	N.A.	100.00
0-90	1494.98	N.A.	100.00
10-90	1234.3	N.A.	82.60
20-40	695.53	N.A.	46.50
20-50	726.19	N.A.	48.60
40-70	43.76	N.A.	2.90
60-80	4.09	N.A.	0.30
70-80	0.97	N.A.	0.10
80-90	0.23	N.A.	0.00
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1494.99	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	260.68
10-20	493.81
20-30	488.72
30-40	206.81
40-50	30.66
50-60	9.98
60-70	3.12
70-80	0.97
80-90	0.23
90-100	0.00
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	114	112	109	107	112	109	107	106	105	104	102	102	100	99	98	97	96	95
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89
3	104	99	94	91	103	97	93	90	95	91	89	92	90	87	90	88	86	84
4	100	93	88	84	98	92	88	84	90	86	83	88	85	82	86	83	81	80
5	96	88	83	79	94	87	82	79	86	81	78	84	80	77	82	79	77	75
6	92	84	78	75	90	83	78	74	81	77	74	80	76	73	79	75	73	72
7	88	80	74	70	87	79	74	70	78	73	70	77	73	70	75	72	69	68
8	84	76	70	67	83	75	70	67	74	70	66	73	69	66	72	69	66	65
9	81	72	67	63	80	72	67	63	71	66	63	70	66	63	69	65	63	62
10	78	69	64	60	77	69	64	60	68	63	60	67	63	60	66	63	60	59

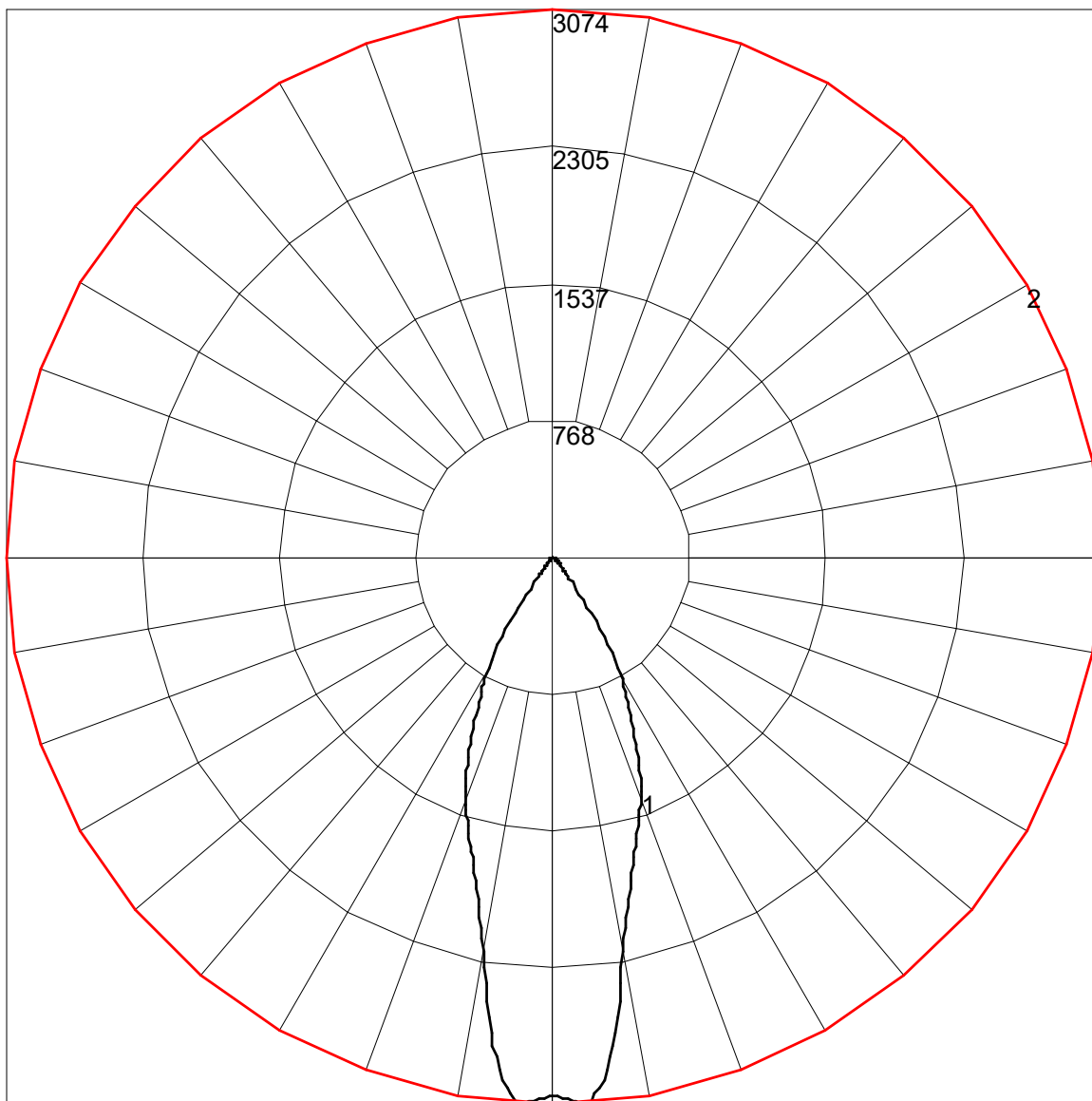
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**UGR TABLE - CORRECTED**

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	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	3H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	4H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	6H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	8H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	12H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
4H	2H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	3H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	4H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	6H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	8H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	12H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
8H	4H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	6H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	8H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	12H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
12H	4H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	6H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	8H	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

Maximum UGR = 1.5

POLAR GRAPH



Maximum Candela = 3073.684 Located At Horizontal Angle = 0, Vertical Angle = 3.5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (3.5) (Through Max. Cd.)