



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L20-835-XXX-DIM-UNV-ON-CS-TD-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.05

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 2-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L20-835-xxx-DIM-UNV-ON-CS-TD-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	1722
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	90
Total Luminaire Watts	19.0907
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.18
Spacing Criterion (90-270)	0.18
Spacing Criterion (Diagonal)	0.20
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	856	856	856
55	325	325	325
65	110	110	110
75	0	0	0
85	0	0	0

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CANDELA TABULATION

	<u>0</u>
0.0	18700.001
0.5	18496.001
1.0	17833.001
1.5	16898.000
2.0	15835.500
2.5	14730.500
3.0	13549.000
3.5	12299.500
4.0	10973.500
4.5	9639.000
5.0	8355.500
5.5	7309.150
6.0	6470.200
6.5	5783.400
7.0	5201.150
7.5	4701.350
8.0	4264.450
8.5	3881.100
9.0	3544.500
9.5	3250.400
10.0	2997.100
10.5	2777.800
11.0	2584.850
11.5	2419.100
12.0	2274.600
12.5	2148.800
13.0	2040.000
13.5	1945.650
14.0	1863.200
14.5	1790.950
15.0	1727.200
15.5	1670.250
16.0	1618.400
16.5	1571.650
17.0	1529.150
17.5	1489.200
18.0	1454.350
18.5	1422.050
19.0	1389.750
19.5	1357.450
20.0	1324.300
20.5	1289.450
21.0	1252.900
21.5	1213.800
22.0	1169.600
22.5	1121.150
23.0	1067.600
23.5	1013.200
24.0	961.350
24.5	912.900
25.0	867.850
25.5	824.500
26.0	785.400
26.5	749.700

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	721.650
<b>27.5</b>	699.550
<b>28.0</b>	684.250
<b>28.5</b>	672.350
<b>29.0</b>	662.150
<b>29.5</b>	652.800
<b>30.0</b>	641.750
<b>30.5</b>	618.800
<b>31.0</b>	587.350
<b>31.5</b>	548.250
<b>32.0</b>	505.750
<b>32.5</b>	460.700
<b>33.0</b>	414.800
<b>33.5</b>	363.800
<b>34.0</b>	307.700
<b>34.5</b>	254.150
<b>35.0</b>	205.700
<b>35.5</b>	162.350
<b>36.0</b>	120.700
<b>36.5</b>	84.150
<b>37.0</b>	52.700
<b>37.5</b>	32.300
<b>38.0</b>	22.950
<b>38.5</b>	21.250
<b>39.0</b>	20.400
<b>39.5</b>	19.550
<b>40.0</b>	17.850
<b>40.5</b>	17.850
<b>41.0</b>	17.000
<b>41.5</b>	16.150
<b>42.0</b>	15.300
<b>42.5</b>	14.450
<b>43.0</b>	13.600
<b>43.5</b>	12.750
<b>44.0</b>	12.750
<b>44.5</b>	11.900
<b>45.0</b>	11.050
<b>45.5</b>	11.050
<b>46.0</b>	10.200
<b>46.5</b>	10.200
<b>47.0</b>	9.350
<b>47.5</b>	8.500
<b>48.0</b>	8.500
<b>48.5</b>	7.650
<b>49.0</b>	7.650
<b>49.5</b>	6.800
<b>50.0</b>	6.800
<b>50.5</b>	5.950
<b>51.0</b>	5.950
<b>51.5</b>	5.100
<b>52.0</b>	5.100
<b>52.5</b>	4.250
<b>53.0</b>	4.250
<b>53.5</b>	4.250
<b>54.0</b>	3.400
<b>54.5</b>	3.400

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CANDELA TABULATION - (Cont.)

55.0	3.400
55.5	3.400
56.0	3.400
56.5	2.550
57.0	2.550
57.5	2.550
58.0	2.550
58.5	2.550
59.0	1.700
59.5	1.700
60.0	1.700
60.5	1.700
61.0	1.700
61.5	1.700
62.0	1.700
62.5	1.700
63.0	1.700
63.5	0.850
64.0	0.850
64.5	0.850
65.0	0.850
65.5	0.850
66.0	0.850
66.5	0.850
67.0	0.850
67.5	0.850
68.0	0.850
68.5	0.850
69.0	0.850
69.5	0.850
70.0	0.850
70.5	0.850
71.0	0.850
71.5	0.850
72.0	0.850
72.5	0.850
73.0	0.850
73.5	0.850
74.0	0.000
74.5	0.000
75.0	0.000
75.5	0.000
76.0	0.000
76.5	0.000
77.0	0.000
77.5	0.000
78.0	0.000
78.5	0.000
79.0	0.000
79.5	0.000
80.0	0.000
80.5	0.000
81.0	0.000
81.5	0.000
82.0	0.000
82.5	0.000

IES INDOOR REPORT  
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CANDELA TABULATION - (Cont.)

83.0	0.000
83.5	0.000
84.0	0.000
84.5	0.000
85.0	0.000
85.5	0.000
86.0	0.000
86.5	0.000
87.0	0.000
87.5	0.000
88.0	0.000
88.5	0.000
89.0	0.000
89.5	0.000
90.0	0.000
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-L20-835-XXX-DIM-UNV-ON-CS-TD-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
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129.5	0.000
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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

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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

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 8CR-TL-L20-835-XXX-DIM-UNV-ON-CS-TD-XX\_.IES****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



**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 8CR-TL-L20-835-XXX-DIM-UNV-ON-CS-TD-XX\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1143.83	N.A.	66.40
0-30	1556.57	N.A.	90.40
0-40	1708.22	N.A.	99.20
0-60	1720.39	N.A.	99.90
0-80	1721.83	N.A.	100.00
0-90	1721.83	N.A.	100.00
10-90	1082.96	N.A.	62.90
20-40	564.39	N.A.	32.80
20-50	573.36	N.A.	33.30
40-70	13.28	N.A.	0.80
60-80	1.44	N.A.	0.10
70-80	0.33	N.A.	0.00
80-90	0.00	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	1721.83	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	638.88
10-20	504.95
20-30	412.73
30-40	151.66
40-50	8.97
50-60	3.20
60-70	1.11
70-80	0.33
80-90	0.00
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	115	113	111	109	112	111	109	107	107	105	104	103	102	101	99	99	98	96
2	111	107	104	101	109	105	103	100	102	100	98	99	98	96	97	95	94	93
3	107	102	98	95	105	101	97	95	98	95	93	96	94	92	94	92	90	89
4	103	98	94	90	102	97	93	90	95	91	89	93	90	88	91	89	87	86
5	100	94	89	86	99	93	89	86	91	88	85	90	87	84	88	86	84	83
6	97	90	86	83	96	90	85	82	88	85	82	87	84	81	86	83	81	80
7	94	87	83	80	93	86	82	79	85	82	79	84	81	79	83	80	78	77
8	91	84	80	77	90	84	79	77	83	79	76	82	78	76	81	78	76	75
9	88	81	77	74	88	81	77	74	80	76	74	79	76	74	79	76	73	72
10	86	79	75	72	85	79	74	72	78	74	72	77	74	71	77	73	71	70

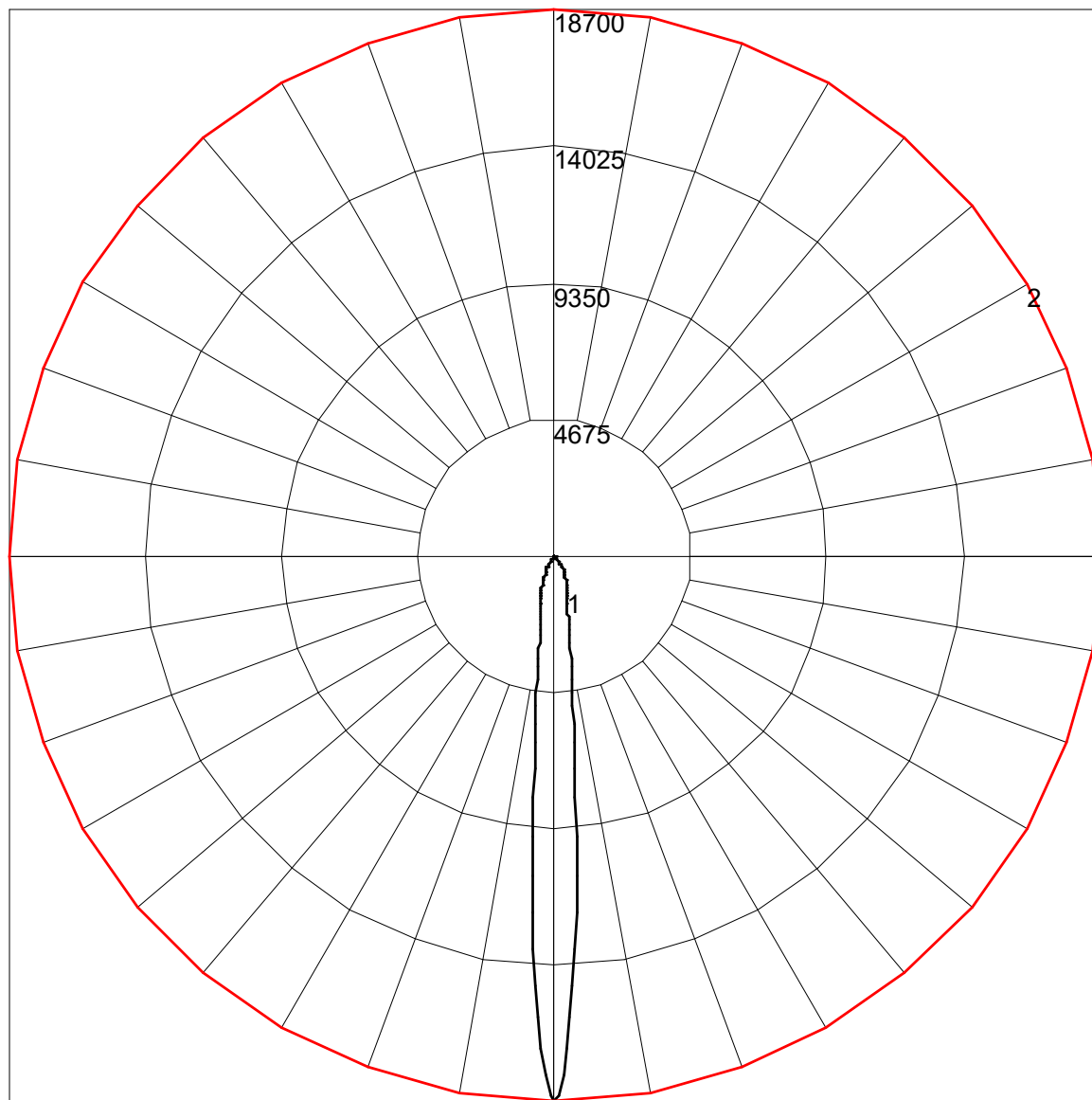
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**UGR TABLE - CORRECTED**

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	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	3H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	4H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	6H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	8H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	12H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
4H	2H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	3H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	4H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	6H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	8H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	12H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
8H	4H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	6H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	8H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	12H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
12H	4H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	6H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	8H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2

Maximum UGR = 2.2

POLAR GRAPH



Maximum Candela = 18700.001 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.)