



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L20-835-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-L20-835-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	1983
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
Total Luminaire Watts	19.1077
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	3578	3578	3578
55	1318	1318	1318
65	518	518	518
75	233	233	233
85	189	189	189

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CANDELA TABULATION

	<u>0</u>
0.0	4013.0
0.5	4019.0
1.0	4031.0
1.5	4038.0
2.0	4055.0
2.5	4062.0
3.0	4074.0
3.5	4077.0
4.0	4068.0
4.5	4020.0
5.0	3972.0
5.5	3921.0
6.0	3839.0
6.5	3757.0
7.0	3670.0
7.5	3572.0
8.0	3458.0
8.5	3341.0
9.0	3220.0
9.5	3102.0
10.0	2993.0
10.5	2897.0
11.0	2814.0
11.5	2743.0
12.0	2673.0
12.5	2604.0
13.0	2538.0
13.5	2476.0
14.0	2420.0
14.5	2370.0
15.0	2325.0
15.5	2282.0
16.0	2240.0
16.5	2196.0
17.0	2151.0
17.5	2106.0
18.0	2065.0
18.5	2029.0
19.0	1992.0
19.5	1954.0
20.0	1912.0
20.5	1867.0
21.0	1821.0
21.5	1774.0
22.0	1724.0
22.5	1676.0
23.0	1625.0
23.5	1573.0
24.0	1519.0
24.5	1465.0
25.0	1412.0
25.5	1359.0
26.0	1310.0
26.5	1263.0

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CR-TL-L20-835-XXX-DIM-UNV-OM-CS-XX_.IES****CANDELA TABULATION - (Cont.)**

27.0	1219.0
27.5	1177.0
28.0	1139.0
28.5	1105.0
29.0	1073.0
29.5	1042.0
30.0	1003.0
30.5	954.2
31.0	898.2
31.5	836.6
32.0	774.1
32.5	711.2
33.0	648.3
33.5	582.3
34.0	515.3
34.5	454.2
35.0	395.5
35.5	340.1
36.0	286.8
36.5	239.1
37.0	200.0
37.5	172.5
38.0	157.7
38.5	147.7
39.0	137.7
39.5	127.1
40.0	115.8
40.5	103.8
41.0	92.3
41.5	81.6
42.0	72.5
42.5	65.3
43.0	59.7
43.5	55.4
44.0	51.8
44.5	48.9
45.0	46.2
45.5	43.9
46.0	41.7
46.5	39.7
47.0	37.7
47.5	35.8
48.0	33.9
48.5	32.0
49.0	30.1
49.5	28.4
50.0	26.8
50.5	25.2
51.0	23.7
51.5	22.2
52.0	20.7
52.5	19.4
53.0	18.1
53.5	16.9
54.0	15.8
54.5	14.8

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CANDELA TABULATION - (Cont.)

55.0	13.8
55.5	13.0
56.0	12.1
56.5	11.4
57.0	10.7
57.5	10.0
58.0	9.4
58.5	8.8
59.0	8.3
59.5	7.8
60.0	7.3
60.5	6.8
61.0	6.4
61.5	6.0
62.0	5.7
62.5	5.4
63.0	5.0
63.5	4.8
64.0	4.5
64.5	4.2
65.0	4.0
65.5	3.7
66.0	3.5
66.5	3.3
67.0	3.1
67.5	2.9
68.0	2.8
68.5	2.6
69.0	2.4
69.5	2.3
70.0	2.2
70.5	2.0
71.0	1.9
71.5	1.8
72.0	1.7
72.5	1.6
73.0	1.5
73.5	1.4
74.0	1.3
74.5	1.2
75.0	1.1
75.5	1.1
76.0	1.0
76.5	0.9
77.0	0.9
77.5	0.8
78.0	0.8
78.5	0.7
79.0	0.7
79.5	0.6
80.0	0.6
80.5	0.5
81.0	0.5
81.5	0.5
82.0	0.4
82.5	0.4

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CANDELA TABULATION - (Cont.)

83.0	0.4
83.5	0.3
84.0	0.3
84.5	0.3
85.0	0.3
85.5	0.2
86.0	0.2
86.5	0.2
87.0	0.2
87.5	0.2
88.0	0.1
88.5	0.1
89.0	0.1
89.5	0.1
90.0	0.1
90.5	0.0
91.0	0.0
91.5	0.0
92.0	0.0
92.5	0.0
93.0	0.0
93.5	0.0
94.0	0.0
94.5	0.0
95.0	0.0
95.5	0.0
96.0	0.0
96.5	0.0
97.0	0.0
97.5	0.0
98.0	0.0
98.5	0.0
99.0	0.0
99.5	0.0
100.0	0.0
100.5	0.0
101.0	0.0
101.5	0.0
102.0	0.0
102.5	0.0
103.0	0.0
103.5	0.0
104.0	0.0
104.5	0.0
105.0	0.0
105.5	0.0
106.0	0.0
106.5	0.0
107.0	0.0
107.5	0.0
108.0	0.0
108.5	0.0
109.0	0.0
109.5	0.0
110.0	0.0
110.5	0.0

CANDELA TABULATION - (Cont.)

111.0	0.0
111.5	0.0
112.0	0.0
112.5	0.0
113.0	0.0
113.5	0.0
114.0	0.0
114.5	0.0
115.0	0.0
115.5	0.0
116.0	0.0
116.5	0.0
117.0	0.0
117.5	0.0
118.0	0.0
118.5	0.0
119.0	0.0
119.5	0.0
120.0	0.0
120.5	0.0
121.0	0.0
121.5	0.0
122.0	0.0
122.5	0.0
123.0	0.0
123.5	0.0
124.0	0.0
124.5	0.0
125.0	0.0
125.5	0.0
126.0	0.0
126.5	0.0
127.0	0.0
127.5	0.0
128.0	0.0
128.5	0.0
129.0	0.0
129.5	0.0
130.0	0.0
130.5	0.0
131.0	0.0
131.5	0.0
132.0	0.0
132.5	0.0
133.0	0.0
133.5	0.0
134.0	0.0
134.5	0.0
135.0	0.0
135.5	0.0
136.0	0.0
136.5	0.0
137.0	0.0
137.5	0.0
138.0	0.0
138.5	0.0

CANDELA TABULATION - (Cont.)

139.0	0.0
139.5	0.0
140.0	0.0
140.5	0.0
141.0	0.0
141.5	0.0
142.0	0.0
142.5	0.0
143.0	0.0
143.5	0.0
144.0	0.0
144.5	0.0
145.0	0.0
145.5	0.0
146.0	0.0
146.5	0.0
147.0	0.0
147.5	0.0
148.0	0.0
148.5	0.0
149.0	0.0
149.5	0.0
150.0	0.0
150.5	0.0
151.0	0.0
151.5	0.0
152.0	0.0
152.5	0.0
153.0	0.0
153.5	0.0
154.0	0.0
154.5	0.0
155.0	0.0
155.5	0.0
156.0	0.0
156.5	0.0
157.0	0.0
157.5	0.0
158.0	0.0
158.5	0.0
159.0	0.0
159.5	0.0
160.0	0.0
160.5	0.0
161.0	0.0
161.5	0.0
162.0	0.0
162.5	0.0
163.0	0.0
163.5	0.0
164.0	0.0
164.5	0.0
165.0	0.0
165.5	0.0
166.0	0.0
166.5	0.0

CANDELA TABULATION - (Cont.)

167.0	0.0
167.5	0.0
168.0	0.0
168.5	0.0
169.0	0.0
169.5	0.0
170.0	0.0
170.5	0.0
171.0	0.0
171.5	0.0
172.0	0.0
172.5	0.0
173.0	0.0
173.5	0.0
174.0	0.0
174.5	0.0
175.0	0.0
175.5	0.0
176.0	0.0
176.5	0.0
177.0	0.0
177.5	0.0
178.0	0.0
178.5	0.0
179.0	0.0
179.5	0.0
180.0	0.0

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1000.77	N.A.	50.50
0-30	1649.02	N.A.	83.20
0-40	1923.34	N.A.	97.00
0-60	1977.24	N.A.	99.70
0-80	1982.67	N.A.	100.00
0-90	1982.98	N.A.	100.00
10-90	1637.21	N.A.	82.60
20-40	922.57	N.A.	46.50
20-50	963.23	N.A.	48.60
40-70	58.05	N.A.	2.90
60-80	5.43	N.A.	0.30
70-80	1.28	N.A.	0.10
80-90	0.31	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	1982.98	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	345.77
10-20	655.00
20-30	648.25
30-40	274.32
40-50	40.66
50-60	13.24
60-70	4.14
70-80	1.28
80-90	0.31
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

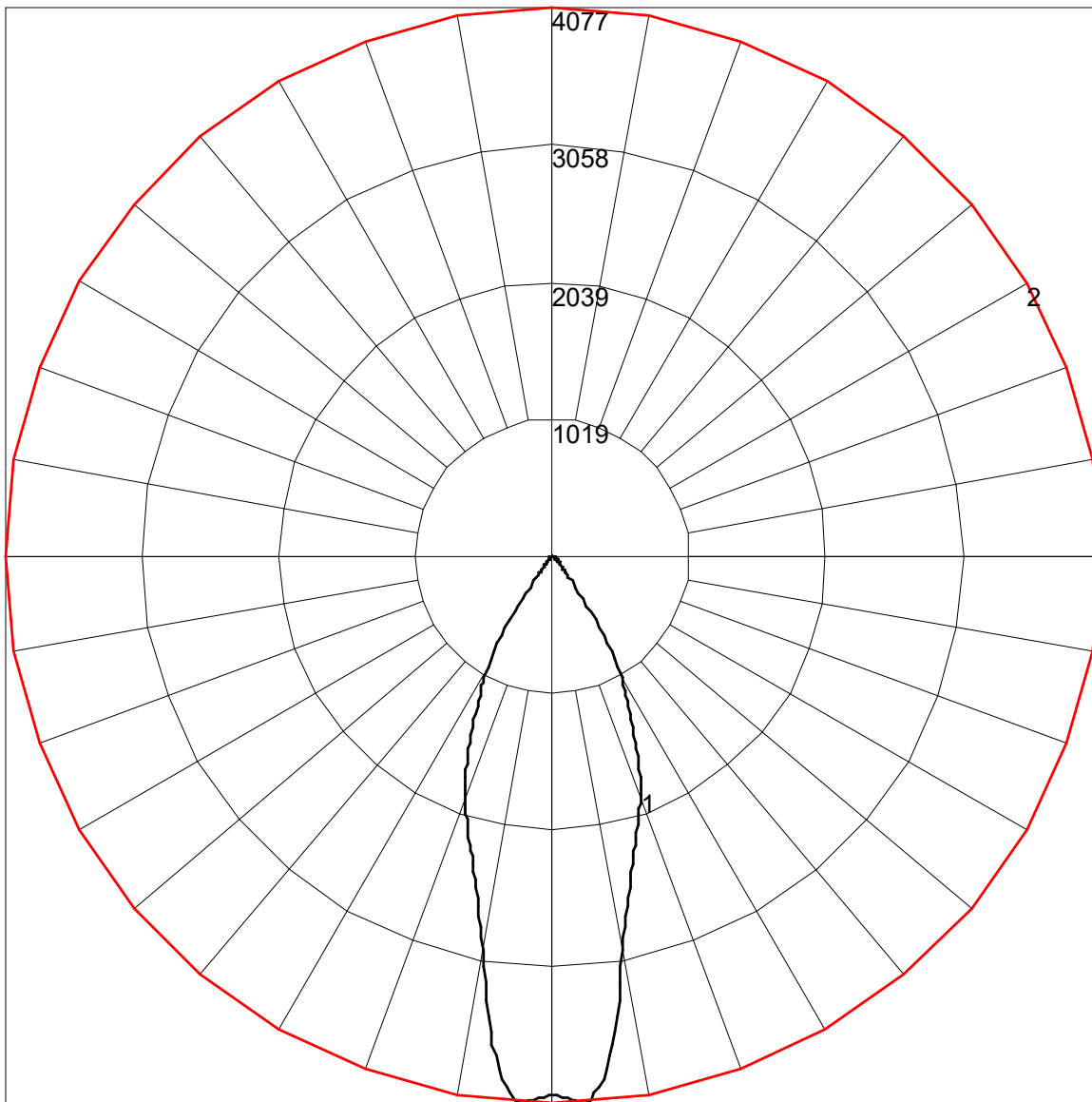
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UGR TABLE - CORRECTED

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	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	3H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	4H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	6H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	8H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	12H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
4H	2H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	3H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	4H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	6H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	8H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	12H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
8H	4H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	6H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	8H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	12H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
12H	4H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	6H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	8H	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4

Maximum UGR = 2.4

POLAR GRAPH



Maximum Candela = 4077 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.)