



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L70-835-XXX-DIM-UNV-OM-CS-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.27

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 4-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L70-835-xxx-DIM-UNV-OM-CS-xx

[LUMINAIRE] 8" DIA. SURFACE CYLINDER

[LAMP] One white LED

[\_SEARCH\_SOURCE TYPE] 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	6898
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
Total Luminaire Watts	67.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.56
Spacing Criterion (90-270)	0.56
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	12755	12755	12755
55	4762	4762	4762
65	1954	1954	1954
75	982	982	982
85	729	729	729

CANDELA TABULATION

	<u>0</u>
0.0	14345.712
0.5	14334.115
1.0	14334.115
1.5	14299.323
2.0	14241.337
2.5	14160.157
3.0	14078.977
3.5	13974.602
4.0	13847.033
4.5	13684.673
5.0	13475.924
5.5	13267.174
6.0	13035.231
6.5	12780.093
7.0	12501.760
7.5	12223.428
8.0	11910.304
8.5	11608.778
9.0	11303.772
9.5	11005.724
10.0	10709.996
10.5	10421.226
11.0	10137.095
11.5	9859.923
12.0	9589.708
12.5	9333.411
13.0	9085.231
13.5	8854.447
14.0	8630.622
14.5	8425.352
15.0	8228.199
15.5	8036.846
16.0	7847.812
16.5	7663.417
17.0	7482.501
17.5	7308.543
18.0	7138.065
18.5	6974.544
19.0	6811.024
19.5	6647.504
20.0	6483.984
20.5	6319.304
21.0	6155.783
21.5	5992.263
22.0	5829.903
22.5	5667.542
23.0	5506.341
23.5	5343.981
24.0	5182.780
24.5	5022.739
25.0	4868.496
25.5	4718.893
26.0	4576.247
26.5	4435.921

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**CANDELA TABULATION - (Cont.)**

27.0	4292.116
27.5	4144.832
28.0	3992.909
28.5	3840.986
29.0	3684.424
29.5	3520.904
30.0	3350.425
30.5	3171.829
31.0	2982.795
31.5	2787.962
32.0	2590.810
32.5	2392.498
33.0	2196.506
33.5	2000.514
34.0	1808.000
34.5	1625.925
35.0	1447.328
35.5	1278.009
36.0	1120.288
36.5	976.483
37.0	848.914
37.5	736.421
38.0	639.005
38.5	555.505
39.0	482.443
39.5	420.978
40.0	372.269
40.5	337.478
41.0	315.443
41.5	295.728
42.0	277.173
42.5	256.298
43.0	234.263
43.5	213.388
44.0	193.673
44.5	177.437
45.0	164.680
45.5	154.242
46.0	144.965
46.5	136.847
47.0	129.888
47.5	122.930
48.0	115.972
48.5	110.173
49.0	104.375
49.5	98.576
50.0	92.777
50.5	88.139
51.0	82.340
51.5	77.701
52.0	74.222
52.5	69.583
53.0	64.944
53.5	60.305
54.0	56.826
54.5	53.347

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 8CR-TL-L70-835-XXX-DIM-UNV-OM-CS-XX\_.IES****CANDELA TABULATION - (Cont.)**

55.0	49.868
55.5	46.389
56.0	44.069
56.5	40.590
57.0	39.430
57.5	37.111
58.0	33.632
58.5	31.312
59.0	30.153
59.5	27.833
60.0	26.674
60.5	25.514
61.0	23.194
61.5	23.194
62.0	20.875
62.5	19.715
63.0	18.555
63.5	17.396
64.0	16.236
64.5	16.236
65.0	15.076
65.5	13.917
66.0	13.917
66.5	12.757
67.0	12.757
67.5	11.597
68.0	10.437
68.5	10.437
69.0	9.278
69.5	9.278
70.0	8.118
70.5	8.118
71.0	6.958
71.5	6.958
72.0	6.958
72.5	5.799
73.0	5.799
73.5	5.799
74.0	4.639
74.5	5.799
75.0	4.639
75.5	4.639
76.0	4.639
76.5	3.479
77.0	3.479
77.5	3.479
78.0	3.479
78.5	3.479
79.0	2.319
79.5	3.479
80.0	2.319
80.5	2.319
81.0	2.319
81.5	2.319
82.0	2.319
82.5	2.319

CANDELA TABULATION - (Cont.)

83.0	2.319
83.5	2.319
84.0	2.319
84.5	2.319
85.0	1.160
85.5	1.160
86.0	2.319
86.5	1.160
87.0	1.160
87.5	1.160
88.0	1.160
88.5	1.160
89.0	1.160
89.5	1.160
90.0	1.160
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
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

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

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-L70-835-XXX-DIM-UNV-OM-CS-XX\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	3497.75	N.A.	50.70
0-30	5721.62	N.A.	82.90
0-40	6683.23	N.A.	96.90
0-60	6875.27	N.A.	99.70
0-80	6896.14	N.A.	100.00
0-90	6898.07	N.A.	100.00
10-90	5704.7	N.A.	82.70
20-40	3185.48	N.A.	46.20
20-50	3330.24	N.A.	48.30
40-70	207.68	N.A.	3.00
60-80	20.87	N.A.	0.30
70-80	5.22	N.A.	0.10
80-90	1.93	N.A.	0.00
90-110	0.03	N.A.	0.00
90-120	0.03	N.A.	0.00
90-130	0.03	N.A.	0.00
90-150	0.03	N.A.	0.00
90-180	0.03	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	6898.1	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	1193.37
10-20	2304.38
20-30	2223.87
30-40	961.62
40-50	144.75
50-60	47.28
60-70	15.65
70-80	5.22
80-90	1.93
90-100	0.03
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	102	97	93	90	95	91	88	92	90	87	90	88	86	84
4	100	93	88	84	98	92	87	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	74	90	83	78	74	81	77	74	80	76	73	79	75	73	71
7	88	79	74	70	86	79	74	70	78	73	70	76	72	69	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	61
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

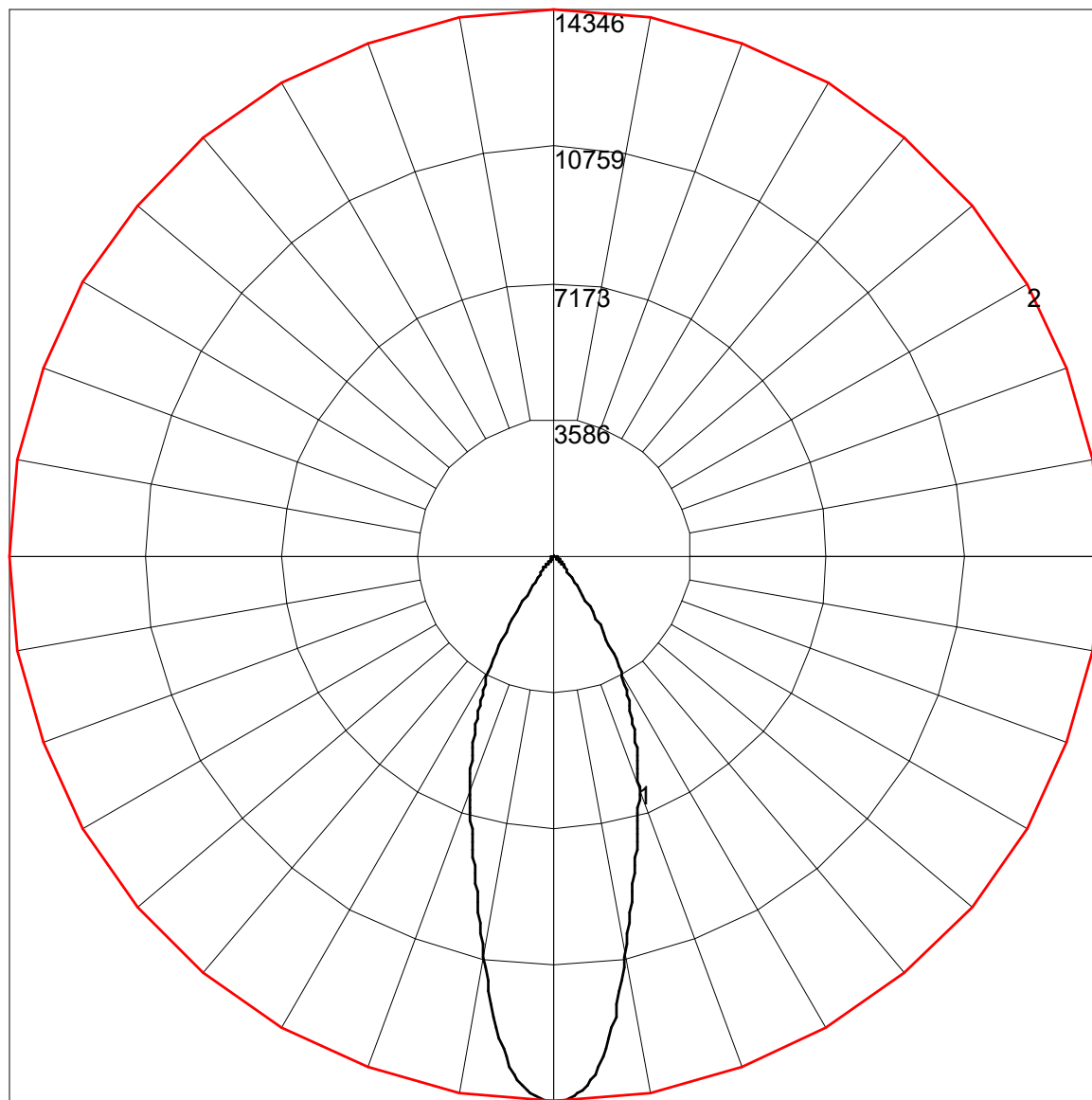
X=2H	Y=2H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	3H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	4H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	6H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	8H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	12H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8

### UGR Viewed Endwise

4H	2H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	3H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	4H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	6H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	8H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	12H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
8H	4H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	6H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	8H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	12H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
12H	4H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	6H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
	8H	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8

Maximum UGR = 6.8

POLAR GRAPH



Maximum Candela = 14345.712 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.)