



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L30-835-XXX-DIM-UNV-RW-WH-AD-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.16

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 1-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L30-835-xxx-DIM-UNV-RW-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	1900
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	71
Total Luminaire Watts	26.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.20
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.48 ft (Diameter)
Luminous Width (90-270)	0.48 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	36560	36560	36560
55	26599	26599	26599
65	20141	20141	20141
75	11906	11906	11906
85	8991	8991	8991

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CANDELA TABULATION

	<u>0</u>
0.0	957.559
0.5	957.559
1.0	957.114
1.5	956.373
2.0	955.484
2.5	954.447
3.0	953.113
3.5	951.631
4.0	950.149
4.5	948.815
5.0	947.333
5.5	945.999
6.0	944.517
6.5	943.035
7.0	941.404
7.5	939.626
8.0	937.996
8.5	936.217
9.0	934.291
9.5	932.364
10.0	930.289
10.5	928.214
11.0	925.843
11.5	923.472
12.0	920.952
12.5	918.284
13.0	915.468
13.5	912.653
14.0	909.540
14.5	906.280
15.0	902.871
15.5	899.462
16.0	895.905
16.5	892.348
17.0	888.940
17.5	885.234
18.0	881.677
18.5	877.972
19.0	874.119
19.5	870.266
20.0	866.412
20.5	862.262
21.0	858.113
21.5	853.518
22.0	848.776
22.5	843.440
23.0	837.957
23.5	832.177
24.0	825.952
24.5	819.579
25.0	812.910
25.5	806.092
26.0	798.979
26.5	791.865

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CR-TL-L30-835-XXX-DIM-UNV-RW-WH-AD-XX_.IES****CANDELA TABULATION - (Cont.)**

27.0	784.454
27.5	777.044
28.0	769.486
28.5	761.927
29.0	754.369
29.5	746.514
30.0	738.659
30.5	730.507
31.0	722.356
31.5	713.760
32.0	705.312
32.5	696.420
33.0	687.379
33.5	678.191
34.0	668.705
34.5	659.072
35.0	649.142
35.5	639.212
36.0	628.838
36.5	618.612
37.0	608.089
37.5	597.567
38.0	586.896
38.5	576.225
39.0	565.406
39.5	554.439
40.0	543.471
40.5	532.356
41.0	521.240
41.5	510.273
42.0	499.158
42.5	488.042
43.0	477.075
43.5	465.960
44.0	454.992
44.5	444.025
45.0	433.206
45.5	422.387
46.0	411.716
46.5	401.194
47.0	390.819
47.5	380.593
48.0	370.515
48.5	360.585
49.0	350.952
49.5	341.467
50.0	332.426
50.5	323.534
51.0	315.086
51.5	307.083
52.0	299.228
52.5	291.373
53.0	283.814
53.5	276.404
54.0	269.290
54.5	262.325

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CANDELA TABULATION - (Cont.)

55.0	255.655
55.5	249.431
56.0	243.206
56.5	236.981
57.0	230.757
57.5	224.828
58.0	219.048
58.5	213.268
59.0	207.637
59.5	202.005
60.0	196.521
60.5	191.038
61.0	185.554
61.5	180.218
62.0	174.883
62.5	169.399
63.0	164.064
63.5	158.729
64.0	153.393
64.5	148.043
65.0	142.633
65.5	137.283
66.0	131.918
66.5	126.642
67.0	121.366
67.5	116.134
68.0	110.977
68.5	105.878
69.0	100.854
69.5	95.919
70.0	91.058
70.5	86.330
71.0	81.721
71.5	77.215
72.0	72.858
72.5	68.738
73.0	64.914
73.5	61.298
74.0	57.919
74.5	54.703
75.0	51.635
75.5	48.789
76.0	46.122
76.5	43.780
77.0	41.661
77.5	39.571
78.0	37.526
78.5	35.525
79.0	33.598
79.5	31.686
80.0	29.834
80.5	28.011
81.0	26.232
81.5	24.484
82.0	22.764
82.5	21.060

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CR-TL-L30-835-XXX-DIM-UNV-RW-WH-AD-XX_.IES****CANDELA TABULATION - (Cont.)**

83.0	19.400
83.5	17.785
84.0	16.214
84.5	14.643
85.0	13.131
85.5	11.634
86.0	10.182
86.5	8.774
87.0	7.395
87.5	6.032
88.0	4.846
88.5	3.868
89.0	3.023
89.5	2.327
90.0	1.690
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-L30-835-XXX-DIM-UNV-RW-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-L30-835-XXX-DIM-UNV-RW-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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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	344.42	N.A.	18.10
0-30	717.19	N.A.	37.70
0-40	1120.68	N.A.	59.00
0-60	1685.88	N.A.	88.70
0-80	1884.78	N.A.	99.20
0-90	1899.88	N.A.	100.00
10-90	1809.97	N.A.	95.30
20-40	776.25	N.A.	40.90
20-50	1110.53	N.A.	58.50
40-70	706.37	N.A.	37.20
60-80	198.89	N.A.	10.50
70-80	57.73	N.A.	3.00
80-90	15.10	N.A.	0.80
90-110	0.05	N.A.	0.00
90-120	0.05	N.A.	0.00
90-130	0.05	N.A.	0.00
90-150	0.05	N.A.	0.00
90-180	0.05	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1899.92	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	89.91
10-20	254.52
20-30	372.77
30-40	403.49
40-50	334.27
50-60	230.93
60-70	141.17
70-80	57.73
80-90	15.10
90-100	0.05
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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	88
2	102	95	89	84	100	93	88	83	90	85	82	87	83	80	84	81	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	87	77	69	63	85	75	68	63	73	67	62	71	65	61	69	64	60	58
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42
8	66	53	45	40	64	53	45	40	51	45	40	50	44	40	49	43	39	38
9	62	49	42	36	60	49	41	36	48	41	36	47	40	36	46	40	36	34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31

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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

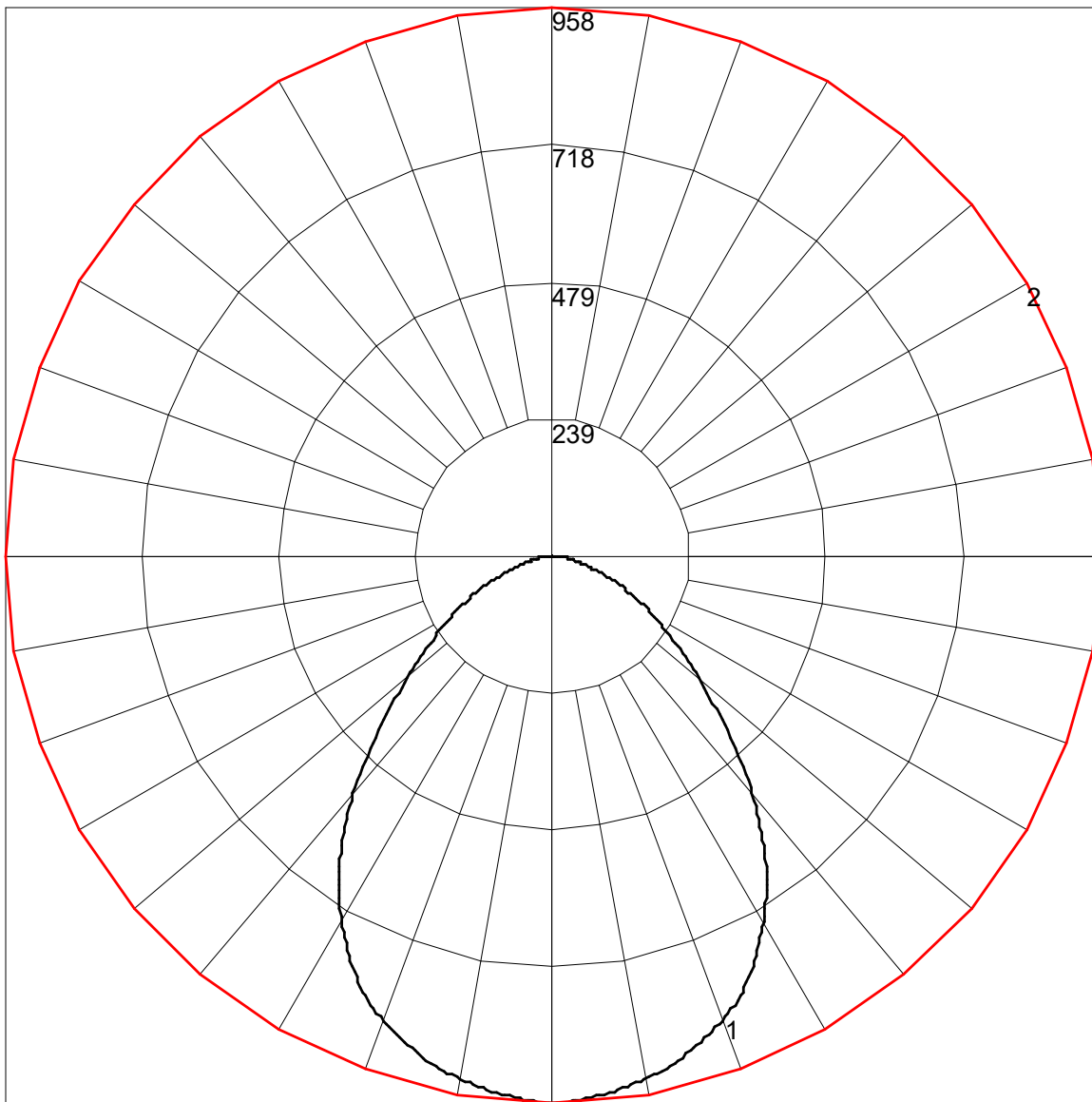
X=2H	Y=2H	21.5	23.0	21.9	23.3	23.6	21.5	23.0	21.9	23.3	23.6
	3H	22.6	23.9	23.0	24.3	24.6	22.6	23.9	23.0	24.3	24.6
	4H	22.9	24.1	23.3	24.5	24.8	22.9	24.1	23.3	24.5	24.8
	6H	23.1	24.2	23.5	24.6	25.0	23.1	24.2	23.5	24.6	25.0
	8H	23.1	24.2	23.5	24.6	25.0	23.1	24.2	23.5	24.6	25.0
	12H	23.2	24.2	23.6	24.6	25.0	23.2	24.2	23.6	24.6	25.0

UGR Viewed Endwise

4H	2H	21.9	23.2	22.3	23.5	23.9	21.9	23.2	22.3	23.5	23.9
	3H	23.2	24.2	23.6	24.6	25.0	23.2	24.2	23.6	24.6	25.0
	4H	23.5	24.4	24.0	24.9	25.3	23.5	24.4	24.0	24.9	25.3
	6H	23.8	24.6	24.3	25.0	25.5	23.8	24.6	24.3	25.0	25.5
	8H	23.9	24.6	24.3	25.1	25.5	23.9	24.6	24.3	25.1	25.5
	12H	24.0	24.6	24.4	25.1	25.5	24.0	24.6	24.4	25.1	25.5
8H	4H	23.6	24.4	24.1	24.8	25.3	23.6	24.4	24.1	24.8	25.3
	6H	24.0	24.6	24.5	25.1	25.5	24.0	24.6	24.5	25.1	25.5
	8H	24.1	24.6	24.6	25.2	25.6	24.1	24.6	24.6	25.2	25.6
	12H	24.2	24.7	24.7	25.2	25.7	24.2	24.7	24.7	25.2	25.7
12H	4H	23.6	24.3	24.1	24.8	25.2	23.6	24.3	24.1	24.8	25.2
	6H	24.0	24.5	24.5	25.0	25.5	24.0	24.5	24.5	25.0	25.5
	8H	24.2	24.6	24.7	25.1	25.7	24.2	24.6	24.7	25.1	25.7

Maximum UGR = 25.7

POLAR GRAPH



Maximum Candela = 957.559 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.)