



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L60-835-XXX-DIM-UNV-LW-WH-AD-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.11

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 1-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L60-835-xxx-DIM-UNV-LW-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	3872
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	72
Total Luminaire Watts	54
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.94
Spacing Criterion (90-270)	0.94
Spacing Criterion (Diagonal)	1.02
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.46 ft (Diameter)
Luminous Width (90-270)	0.46 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	69212	69212	69212
55	63079	63079	63079
65	62505	62505	62505
75	65269	65269	65269
85	53308	53308	53308

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CANDELA TABULATION

	<u>0</u>
0.0	2179.177
0.5	2178.592
1.0	2177.132
1.5	2174.502
2.0	2170.703
2.5	2166.028
3.0	2160.477
3.5	2154.340
4.0	2147.328
4.5	2140.023
5.0	2132.718
5.5	2124.537
6.0	2115.771
6.5	2106.713
7.0	2096.778
7.5	2086.552
8.0	2075.740
8.5	2064.345
9.0	2052.657
9.5	2040.385
10.0	2027.821
10.5	2014.672
11.0	2000.939
11.5	1986.329
12.0	1971.428
12.5	1955.649
13.0	1939.578
13.5	1922.631
14.0	1905.100
14.5	1887.276
15.0	1868.576
15.5	1849.583
16.0	1830.298
16.5	1810.721
17.0	1791.144
17.5	1771.275
18.0	1751.406
18.5	1731.245
19.0	1711.376
19.5	1691.214
20.0	1670.761
20.5	1650.599
21.0	1629.854
21.5	1608.816
22.0	1587.486
22.5	1565.571
23.0	1543.364
23.5	1520.866
24.0	1498.075
24.5	1474.991
25.0	1451.908
25.5	1428.825
26.0	1405.741
26.5	1382.950

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CANDELA TABULATION - (Cont.)

27.0	1360.452
27.5	1337.953
28.0	1316.038
28.5	1294.124
29.0	1273.086
29.5	1252.048
30.0	1231.594
30.5	1211.433
31.0	1191.272
31.5	1171.695
32.0	1152.118
32.5	1132.833
33.0	1113.548
33.5	1094.848
34.0	1075.855
34.5	1057.739
35.0	1039.916
35.5	1022.092
36.0	1004.560
36.5	987.321
37.0	970.666
37.5	954.303
38.0	938.232
38.5	922.454
39.0	907.260
39.5	892.358
40.0	877.748
40.5	863.431
41.0	849.698
41.5	836.257
42.0	823.108
42.5	810.252
43.0	797.687
43.5	785.415
44.0	773.143
44.5	761.455
45.0	749.768
45.5	738.372
46.0	727.269
46.5	716.166
47.0	705.062
47.5	694.543
48.0	683.732
48.5	673.213
49.0	662.986
49.5	653.052
50.0	643.117
50.5	633.475
51.0	623.832
51.5	614.482
52.0	605.132
52.5	596.074
53.0	587.016
53.5	578.835
54.0	570.946
54.5	562.764

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 8CR-TL-L60-835-XXX-DIM-UNV-LW-WH-AD-XX_.IES****CANDELA TABULATION - (Cont.)**

55.0	554.290
55.5	545.817
56.0	537.635
56.5	529.746
57.0	523.026
57.5	515.429
58.0	507.540
58.5	499.943
59.0	492.346
59.5	484.749
60.0	477.151
60.5	469.847
61.0	462.542
61.5	455.237
62.0	447.932
62.5	440.627
63.0	433.323
63.5	426.310
64.0	419.005
64.5	411.700
65.0	404.688
65.5	397.383
66.0	390.078
66.5	382.773
67.0	375.468
67.5	368.456
68.0	361.151
68.5	354.138
69.0	346.833
69.5	339.821
70.0	332.516
70.5	325.503
71.0	318.491
71.5	311.186
72.0	304.173
72.5	296.868
73.0	289.534
73.5	282.054
74.0	274.428
74.5	266.656
75.0	258.796
75.5	250.819
76.0	242.666
76.5	234.368
77.0	225.895
77.5	217.275
78.0	208.451
78.5	199.480
79.0	190.422
79.5	181.160
80.0	171.780
80.5	162.284
81.0	152.642
81.5	142.853
82.0	132.919
82.5	122.838

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CANDELA TABULATION - (Cont.)

83.0	112.640
83.5	102.384
84.0	92.012
84.5	81.610
85.0	71.178
85.5	60.776
86.0	50.462
86.5	40.615
87.0	31.878
87.5	24.778
88.0	18.613
88.5	13.149
89.0	8.298
89.5	4.646
90.0	2.367
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
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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

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

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Zone	Lumens	%Lamp	%Fixt
0-20	722.47	N.A.	18.70
0-30	1387.97	N.A.	35.90
0-40	2039.65	N.A.	52.70
0-60	3117.85	N.A.	80.50
0-80	3789.21	N.A.	97.90
0-90	3871.53	N.A.	100.00
10-90	3671.3	N.A.	94.80
20-40	1317.18	N.A.	34.00
20-50	1897.91	N.A.	49.00
40-70	1478.85	N.A.	38.20
60-80	671.37	N.A.	17.30
70-80	270.72	N.A.	7.00
80-90	82.32	N.A.	2.10
90-110	0.06	N.A.	0.00
90-120	0.06	N.A.	0.00
90-130	0.06	N.A.	0.00
90-150	0.06	N.A.	0.00
90-180	0.06	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	3871.59	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	200.23
10-20	522.24
20-30	665.49
30-40	651.68
40-50	580.73
50-60	497.47
60-70	400.65
70-80	270.72
80-90	82.32
90-100	0.06
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	109	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	77	83	79	76	80	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	52	46	71	59	51	46	58	50	45	56	50	45	54	49	44	42
7	68	55	47	41	66	54	47	41	53	46	41	52	45	40	50	44	40	38
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35
9	60	47	39	34	59	47	39	34	45	39	34	44	38	34	43	38	33	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

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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

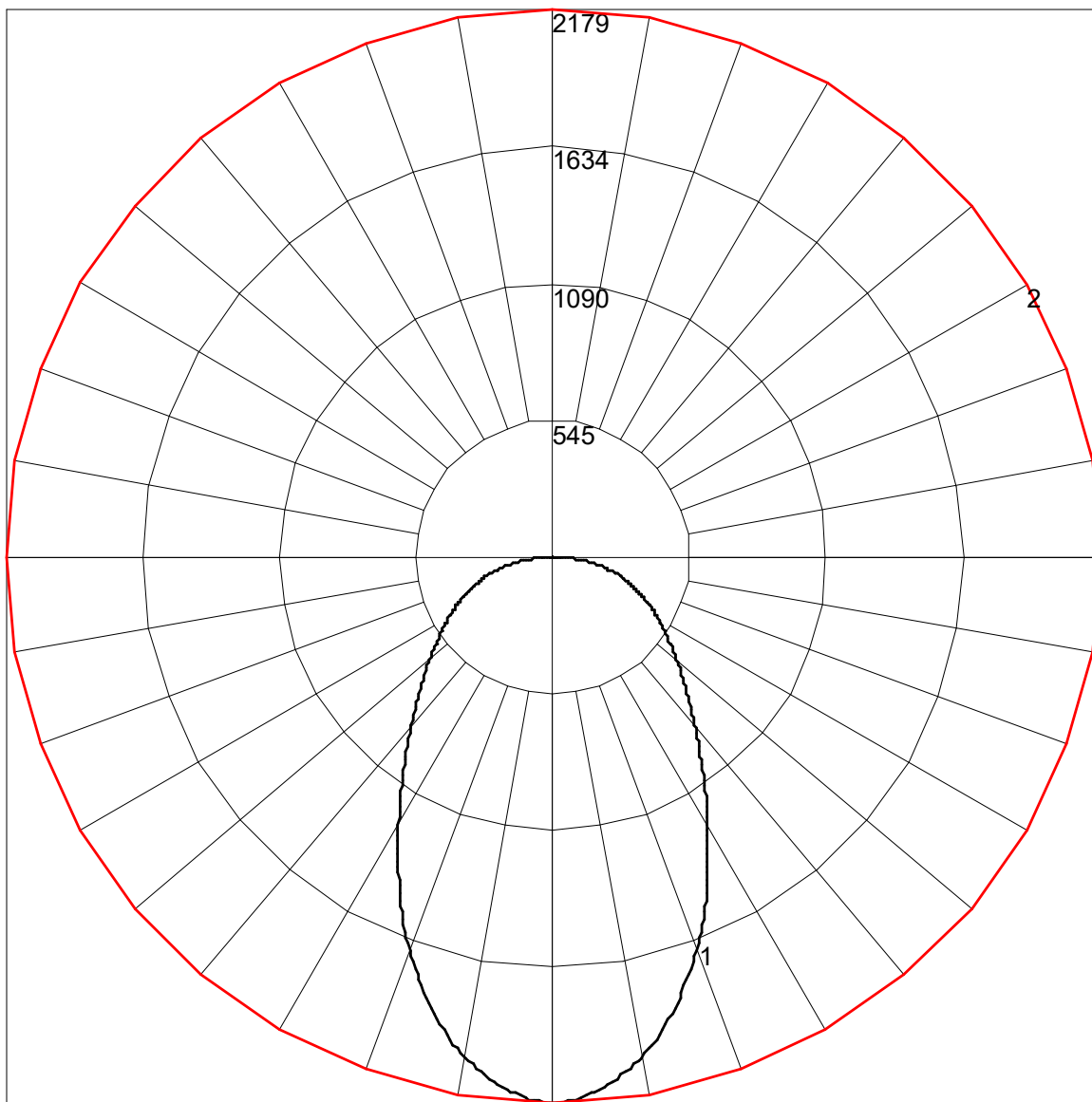
X=2H	Y=2H	25.1	26.6	25.4	26.9	27.2	25.1	26.6	25.4	26.9	27.2
	3H	27.2	28.6	27.5	28.9	29.3	27.2	28.6	27.5	28.9	29.3
	4H	28.1	29.4	28.5	29.8	30.1	28.1	29.4	28.5	29.8	30.1
	6H	28.8	30.1	29.2	30.4	30.8	28.8	30.1	29.2	30.4	30.8
	8H	29.1	30.3	29.5	30.7	31.1	29.1	30.3	29.5	30.7	31.1
	12H	29.2	30.4	29.7	30.8	31.2	29.2	30.4	29.7	30.8	31.2

UGR Viewed Endwise

4H	2H	25.7	27.1	26.1	27.4	27.8	25.7	27.1	26.1	27.4	27.8
	3H	28.1	29.2	28.5	29.6	30.0	28.1	29.2	28.5	29.6	30.0
	4H	29.2	30.2	29.6	30.6	31.0	29.2	30.2	29.6	30.6	31.0
	6H	30.1	31.0	30.5	31.4	31.9	30.1	31.0	30.5	31.4	31.9
	8H	30.4	31.2	30.9	31.7	32.1	30.4	31.2	30.9	31.7	32.1
	12H	30.6	31.4	31.1	31.8	32.3	30.6	31.4	31.1	31.8	32.3
8H	4H	29.6	30.4	30.1	30.9	31.3	29.6	30.4	30.1	30.9	31.3
	6H	30.7	31.3	31.2	31.8	32.3	30.7	31.3	31.2	31.8	32.3
	8H	31.1	31.7	31.6	32.2	32.7	31.1	31.7	31.6	32.2	32.7
	12H	31.4	31.9	31.9	32.4	33.0	31.4	31.9	31.9	32.4	33.0
12H	4H	29.6	30.4	30.1	30.9	31.3	29.6	30.4	30.1	30.9	31.3
	6H	30.8	31.4	31.3	31.8	32.4	30.8	31.4	31.3	31.8	32.4
	8H	31.2	31.8	31.7	32.3	32.8	31.2	31.8	31.7	32.3	32.8

Maximum UGR = 33.0

POLAR GRAPH



Maximum Candela = 2179.177 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.)