



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L30-835-XXX-DIM-UNV-OM-CS-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.22

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 2-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L30-835-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	3003
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
Total Luminaire Watts	26.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.64
Spacing Criterion (90-270)	0.64
Spacing Criterion (Diagonal)	0.72
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	5421	5421	5421
55	1999	1999	1999
65	795	795	795
75	443	443	443
85	423	423	423

CANDELA TABULATION

	<u>0</u>
0.0	5588.751
0.5	5605.201
1.0	5649.319
1.5	5721.852
2.0	5786.159
2.5	5848.971
3.0	5908.791
3.5	5955.900
4.0	5989.549
4.5	5979.829
5.0	5928.981
5.5	5857.196
6.0	5759.240
6.5	5641.842
7.0	5510.984
7.5	5371.901
8.0	5218.610
8.5	5053.355
9.0	4881.371
9.5	4714.620
10.0	4560.582
10.5	4416.265
11.0	4278.677
11.5	4152.306
12.0	4040.142
12.5	3939.194
13.0	3844.977
13.5	3755.993
14.0	3672.992
14.5	3596.721
15.0	3521.197
15.5	3450.160
16.0	3382.114
16.5	3316.311
17.0	3252.004
17.5	3186.949
18.0	3121.894
18.5	3055.343
19.0	2988.793
19.5	2922.242
20.0	2856.439
20.5	2790.637
21.0	2722.590
21.5	2651.553
22.0	2579.768
22.5	2507.984
23.0	2435.451
23.5	2361.423
24.0	2287.395
24.5	2214.114
25.0	2143.077
25.5	2072.040
26.0	2001.751
26.5	1934.452

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	1870.893
<b>27.5</b>	1811.820
<b>28.0</b>	1754.990
<b>28.5</b>	1701.899
<b>29.0</b>	1652.547
<b>29.5</b>	1600.952
<b>30.0</b>	1541.131
<b>30.5</b>	1473.085
<b>31.0</b>	1400.553
<b>31.5</b>	1322.786
<b>32.0</b>	1235.298
<b>32.5</b>	1132.855
<b>33.0</b>	1021.439
<b>33.5</b>	907.032
<b>34.0</b>	793.372
<b>34.5</b>	682.928
<b>35.0</b>	580.859
<b>35.5</b>	491.053
<b>36.0</b>	418.296
<b>36.5</b>	357.354
<b>37.0</b>	304.861
<b>37.5</b>	262.389
<b>38.0</b>	232.104
<b>38.5</b>	213.635
<b>39.0</b>	199.427
<b>39.5</b>	185.369
<b>40.0</b>	170.863
<b>40.5</b>	156.880
<b>41.0</b>	143.121
<b>41.5</b>	129.811
<b>42.0</b>	117.473
<b>42.5</b>	105.883
<b>43.0</b>	95.190
<b>43.5</b>	86.665
<b>44.0</b>	79.935
<b>44.5</b>	74.402
<b>45.0</b>	69.990
<b>45.5</b>	66.027
<b>46.0</b>	62.662
<b>46.5</b>	59.522
<b>47.0</b>	56.605
<b>47.5</b>	53.913
<b>48.0</b>	51.147
<b>48.5</b>	48.604
<b>49.0</b>	45.912
<b>49.5</b>	43.146
<b>50.0</b>	40.454
<b>50.5</b>	37.986
<b>51.0</b>	35.743
<b>51.5</b>	33.350
<b>52.0</b>	31.182
<b>52.5</b>	29.163
<b>53.0</b>	27.144
<b>53.5</b>	25.499
<b>54.0</b>	23.928
<b>54.5</b>	22.208

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CANDELA TABULATION - (Cont.)

55.0	20.937
55.5	19.591
56.0	18.395
56.5	17.348
57.0	16.152
57.5	15.254
58.0	14.432
58.5	13.460
59.0	12.637
59.5	11.889
60.0	11.067
60.5	10.543
61.0	9.945
61.5	9.347
62.0	8.749
62.5	8.300
63.0	7.777
63.5	7.403
64.0	6.879
64.5	6.655
65.0	6.132
65.5	5.833
66.0	5.608
66.5	5.234
67.0	4.935
67.5	4.561
68.0	4.487
68.5	4.187
69.0	3.888
69.5	3.664
70.0	3.589
70.5	3.290
71.0	3.066
71.5	3.215
72.0	2.841
72.5	2.692
73.0	2.468
73.5	2.468
74.0	2.243
74.5	2.019
75.0	2.094
75.5	1.869
76.0	1.720
76.5	1.645
77.0	1.645
77.5	1.496
78.0	1.271
78.5	1.346
79.0	1.346
79.5	1.346
80.0	1.122
80.5	1.047
81.0	0.972
81.5	0.972
82.0	0.897
82.5	0.823

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CANDELA TABULATION - (Cont.)

83.0	0.748
83.5	0.748
84.0	0.897
84.5	0.673
85.0	0.673
85.5	0.673
86.0	0.598
86.5	0.598
87.0	0.598
87.5	0.523
88.0	0.449
88.5	0.523
89.0	0.523
89.5	0.374
90.0	0.449
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  
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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
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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



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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1506.7	N.A.	50.20
0-30	2489.23	N.A.	82.90
0-40	2911.03	N.A.	96.90
0-60	2993.7	N.A.	99.70
0-80	3002.41	N.A.	100.00
0-90	3003.18	N.A.	100.00
10-90	2486.73	N.A.	82.80
20-40	1404.33	N.A.	46.80
20-50	1466.98	N.A.	48.80
40-70	89.14	N.A.	3.00
60-80	8.71	N.A.	0.30
70-80	2.23	N.A.	0.10
80-90	0.77	N.A.	0.00
90-110	0.01	N.A.	0.00
90-120	0.01	N.A.	0.00
90-130	0.01	N.A.	0.00
90-150	0.01	N.A.	0.00
90-180	0.01	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	3003.19	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	516.45
10-20	990.25
20-30	982.52
30-40	421.81
40-50	62.65
50-60	20.02
60-70	6.47
70-80	2.23
80-90	0.77
90-100	0.01
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	89	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	85	81	78	84	80	77	82	79	77	75
6	91	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	66	74	69	66	73	69	66	72	68	66	64
9	81	72	67	63	80	72	67	63	71	66	63	70	66	63	69	65	63	61
10	77	69	64	60	77	68	63	60	68	63	60	67	63	60	66	62	60	58

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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

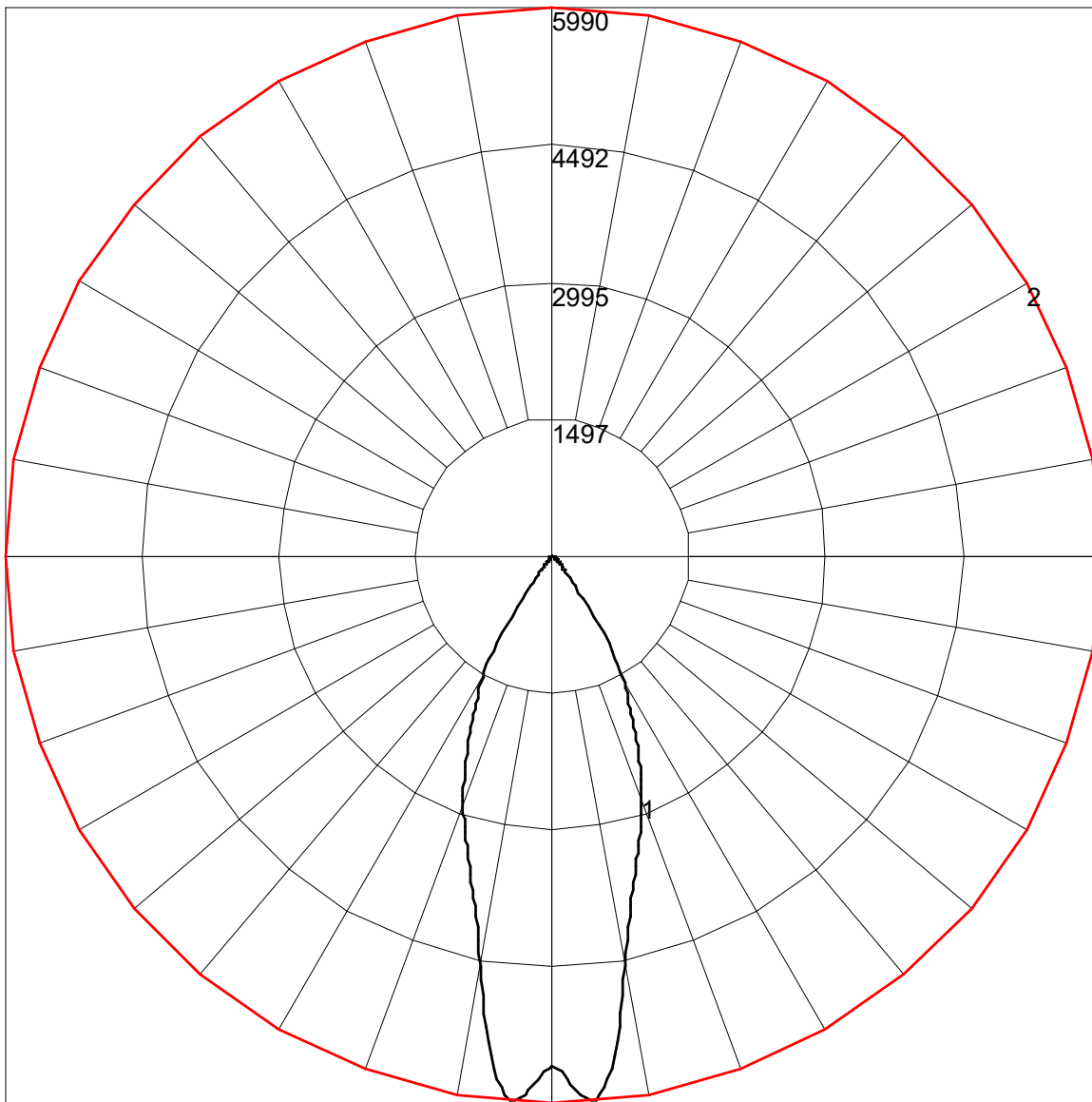
X=2H	Y=2H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	3H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	4H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	6H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	8H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	12H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9

### UGR Viewed Endwise

4H	2H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	3H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	4H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	6H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	8H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	12H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
8H	4H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	6H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	8H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	12H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
12H	4H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	6H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
	8H	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9

Maximum UGR = 3.9

POLAR GRAPH



Maximum Candela = 5989.549 Located At Horizontal Angle = 0, Vertical Angle = 4  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (4) (Through Max. Cd.)