



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L15-830-XXX-DIM-UNV-RM-CS-AD-XX.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.14

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 1-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L15-830-xxx-DIM-UNV-RM-CS-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	1097
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	79
Total Luminaire Watts	13.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.58
Spacing Criterion (90-270)	0.58
Spacing Criterion (Diagonal)	0.56
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	3943	3943	3943
55	2652	2652	2652
65	1973	1973	1973
75	1363	1363	1363
85	1138	1138	1138

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CANDELA TABULATION

	<u>0</u>
0.0	2655.085
0.5	2653.854
1.0	2650.160
1.5	2644.004
2.0	2635.386
2.5	2624.921
3.0	2611.993
3.5	2597.219
4.0	2581.213
4.5	2562.745
5.0	2543.046
5.5	2521.500
6.0	2497.491
6.5	2471.021
7.0	2442.703
7.5	2411.923
8.0	2378.680
8.5	2342.976
9.0	2304.808
9.5	2263.563
10.0	2220.471
10.5	2174.301
11.0	2125.053
11.5	2073.343
12.0	2019.170
12.5	1961.303
13.0	1902.206
13.5	1840.030
14.0	1776.008
14.5	1710.754
15.0	1643.038
15.5	1575.322
16.0	1506.374
16.5	1437.427
17.0	1369.711
17.5	1305.073
18.0	1238.588
18.5	1172.719
19.0	1108.081
19.5	1046.521
20.0	988.039
20.5	931.404
21.0	876.000
21.5	823.058
22.0	771.963
22.5	723.946
23.0	678.392
23.5	635.300
24.0	594.793
24.5	556.811
25.0	521.044
25.5	487.494
26.0	456.160
26.5	426.734

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	399.340
<b>27.5</b>	373.731
<b>28.0</b>	349.723
<b>28.5</b>	327.438
<b>29.0</b>	306.508
<b>29.5</b>	286.931
<b>30.0</b>	268.525
<b>30.5</b>	251.350
<b>31.0</b>	235.283
<b>31.5</b>	220.200
<b>32.0</b>	206.103
<b>32.5</b>	192.868
<b>33.0</b>	180.433
<b>33.5</b>	168.798
<b>34.0</b>	157.840
<b>34.5</b>	147.683
<b>35.0</b>	138.202
<b>35.5</b>	129.338
<b>36.0</b>	121.089
<b>36.5</b>	113.455
<b>37.0</b>	106.376
<b>37.5</b>	99.850
<b>38.0</b>	93.818
<b>38.5</b>	88.277
<b>39.0</b>	83.168
<b>39.5</b>	78.489
<b>40.0</b>	74.241
<b>40.5</b>	70.363
<b>41.0</b>	66.793
<b>41.5</b>	63.530
<b>42.0</b>	60.514
<b>42.5</b>	57.743
<b>43.0</b>	55.158
<b>43.5</b>	52.819
<b>44.0</b>	50.602
<b>44.5</b>	48.632
<b>45.0</b>	46.724
<b>45.5</b>	45.000
<b>46.0</b>	43.338
<b>46.5</b>	41.799
<b>47.0</b>	40.383
<b>47.5</b>	39.091
<b>48.0</b>	37.859
<b>48.5</b>	36.690
<b>49.0</b>	35.582
<b>49.5</b>	34.474
<b>50.0</b>	33.489
<b>50.5</b>	32.565
<b>51.0</b>	31.642
<b>51.5</b>	30.780
<b>52.0</b>	29.980
<b>52.5</b>	29.118
<b>53.0</b>	28.379
<b>53.5</b>	27.640
<b>54.0</b>	26.902
<b>54.5</b>	26.163

CANDELA TABULATION - (Cont.)

55.0	25.486
55.5	24.809
56.0	24.193
56.5	23.516
57.0	22.900
57.5	22.285
58.0	21.669
58.5	21.054
59.0	20.499
59.5	19.884
60.0	19.330
60.5	18.776
61.0	18.222
61.5	17.668
62.0	17.114
62.5	16.560
63.0	16.067
63.5	15.513
64.0	15.021
64.5	14.467
65.0	13.974
65.5	13.482
66.0	12.989
66.5	12.497
67.0	12.004
67.5	11.573
68.0	11.081
68.5	10.650
69.0	10.219
69.5	9.726
70.0	9.357
70.5	8.926
71.0	8.557
71.5	8.126
72.0	7.757
72.5	7.387
73.0	7.079
73.5	6.772
74.0	6.464
74.5	6.156
75.0	5.910
75.5	5.602
76.0	5.356
76.5	5.171
77.0	4.925
77.5	4.679
78.0	4.494
78.5	4.248
79.0	4.063
79.5	3.878
80.0	3.632
80.5	3.447
81.0	3.201
81.5	3.016
82.0	2.832
82.5	2.647

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CANDELA TABULATION - (Cont.)

83.0	2.462
83.5	2.216
84.0	2.031
84.5	1.847
85.0	1.662
85.5	1.477
86.0	1.354
86.5	1.170
87.0	0.985
87.5	0.800
88.0	0.616
88.5	0.492
89.0	0.431
89.5	0.308
90.0	0.246
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
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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
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152.5	0.000
153.0	0.000
153.5	0.000
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154.5	0.000
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156.5	0.000
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157.5	0.000
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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	674.98	N.A.	61.50
0-30	922.89	N.A.	84.10
0-40	1014.14	N.A.	92.40
0-60	1074.7	N.A.	98.00
0-80	1095.06	N.A.	99.80
0-90	1096.96	N.A.	100.00
10-90	864.29	N.A.	78.80
20-40	339.16	N.A.	30.90
20-50	376.71	N.A.	34.30
40-70	74.49	N.A.	6.80
60-80	20.36	N.A.	1.90
70-80	6.43	N.A.	0.60
80-90	1.90	N.A.	0.20
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	1096.97	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	232.67
10-20	442.31
20-30	247.91
30-40	91.25
40-50	37.55
50-60	23.01
60-70	13.93
70-80	6.43
80-90	1.90
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

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	111	109	107	112	109	107	105	105	104	102	102	100	99	98	97	96	94
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	94	89	85	98	92	88	84	90	86	83	88	85	83	87	84	82	80
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76
6	92	85	80	76	91	84	79	76	83	78	75	81	77	75	80	77	74	73
7	89	81	76	72	88	80	75	72	79	75	72	78	74	71	77	73	71	70
8	86	77	72	69	85	77	72	69	76	72	68	75	71	68	74	71	68	67
9	83	74	69	66	82	74	69	66	73	69	66	72	68	65	71	68	65	64
10	80	71	67	63	79	71	66	63	70	66	63	70	66	63	69	65	63	62

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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	8.0	9.0	8.4	9.3	9.6	8.0	9.0	8.4	9.3	9.6
	3H	9.1	10.0	9.5	10.3	10.7	9.1	10.0	9.5	10.3	10.7
	4H	9.4	10.2	9.8	10.6	11.0	9.4	10.2	9.8	10.6	11.0
	6H	9.7	10.4	10.1	10.8	11.2	9.7	10.4	10.1	10.8	11.2
	8H	9.7	10.4	10.2	10.8	11.2	9.7	10.4	10.2	10.8	11.2
	12H	9.8	10.4	10.2	10.8	11.2	9.8	10.4	10.2	10.8	11.2

### UGR Viewed Endwise

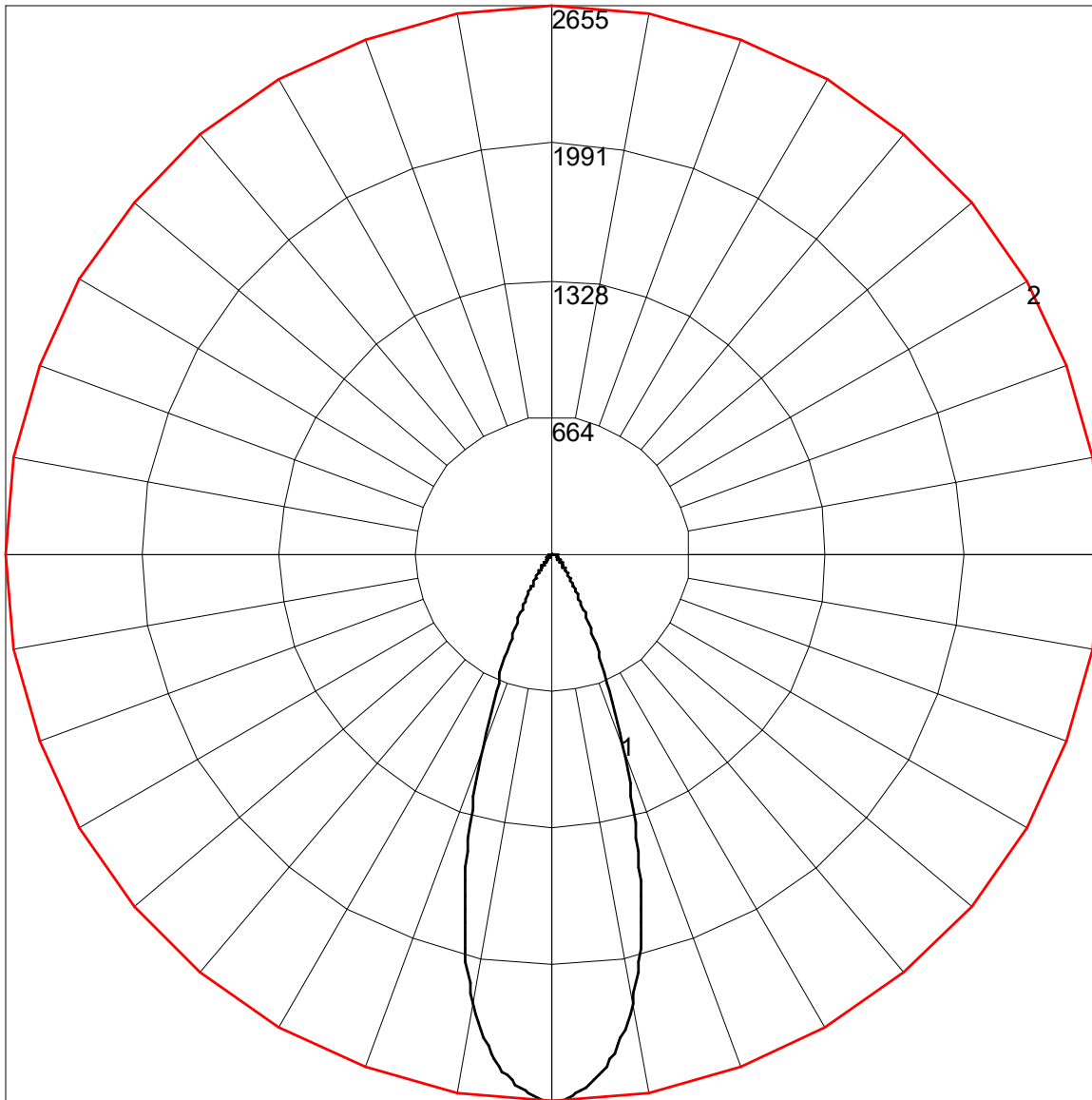
4H	2H	8.3	9.1	8.7	9.5	9.9	8.3	9.1	8.7	9.5	9.9
	3H	9.6	10.2	10.0	10.7	11.1	9.6	10.2	10.0	10.7	11.1
	4H	10.0	10.6	10.4	11.0	11.5	10.0	10.6	10.4	11.0	11.5
	6H	10.3	10.8	10.8	11.3	11.8	10.3	10.8	10.8	11.3	11.8
	8H	10.5	10.9	10.9	11.4	11.8	10.5	10.9	10.9	11.4	11.8
	12H	10.5	10.9	11.0	11.4	11.9	10.5	10.9	11.0	11.4	11.9

8H	4H	10.1	10.5	10.6	11.0	11.5	10.1	10.5	10.6	11.0	11.5
	6H	10.5	10.9	11.1	11.4	11.9	10.5	10.9	11.1	11.4	11.9
	8H	10.7	11.0	11.3	11.6	12.1	10.7	11.0	11.3	11.6	12.1
	12H	10.9	11.1	11.4	11.6	12.2	10.9	11.1	11.4	11.6	12.2

12H	4H	10.1	10.5	10.6	10.9	11.4	10.1	10.5	10.6	10.9	11.4
	6H	10.5	10.9	11.1	11.3	11.9	10.5	10.9	11.1	11.3	11.9
	8H	10.8	11.0	11.3	11.5	12.1	10.8	11.0	11.3	11.5	12.1

Maximum UGR = 12.2

POLAR GRAPH



Maximum Candela = 2655.085 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.)