



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L15-830-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] 4-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L15-830-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	1435
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	104
Total Luminaire Watts	13.8
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	2590	2590	2590
55	955	955	955
65	380	380	380
75	212	212	212
85	202	202	202

CANDELA TABULATION

	<u>0</u>
0.0	2670.615
0.5	2678.476
1.0	2699.558
1.5	2734.218
2.0	2764.948
2.5	2794.962
3.0	2823.548
3.5	2846.059
4.0	2862.139
4.5	2857.494
5.0	2833.196
5.5	2798.893
6.0	2752.084
6.5	2695.985
7.0	2633.454
7.5	2566.992
8.0	2493.741
8.5	2414.773
9.0	2332.590
9.5	2252.907
10.0	2179.299
10.5	2110.336
11.0	2044.589
11.5	1984.202
12.0	1930.604
12.5	1882.365
13.0	1837.343
13.5	1794.822
14.0	1755.159
14.5	1718.713
15.0	1682.623
15.5	1648.678
16.0	1616.162
16.5	1584.717
17.0	1553.988
17.5	1522.901
18.0	1491.814
18.5	1460.012
19.0	1428.211
19.5	1396.409
20.0	1364.965
20.5	1333.521
21.0	1301.005
21.5	1267.059
22.0	1232.756
22.5	1198.454
23.0	1163.794
23.5	1128.419
24.0	1093.044
24.5	1058.027
25.0	1024.081
25.5	990.136
26.0	956.548
26.5	924.389

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CANDELA TABULATION - (Cont.)

27.0	894.016
27.5	865.788
28.0	838.632
28.5	813.262
29.0	789.679
29.5	765.024
30.0	736.438
30.5	703.922
31.0	669.262
31.5	632.100
32.0	590.294
32.5	541.341
33.0	488.100
33.5	433.430
34.0	379.117
34.5	326.341
35.0	277.567
35.5	234.653
36.0	199.885
36.5	170.764
37.0	145.680
37.5	125.384
38.0	110.912
38.5	102.087
39.0	95.297
39.5	88.580
40.0	81.648
40.5	74.966
41.0	68.391
41.5	62.031
42.0	56.135
42.5	50.597
43.0	45.487
43.5	41.413
44.0	38.198
44.5	35.553
45.0	33.445
45.5	31.551
46.0	29.943
46.5	28.443
47.0	27.049
47.5	25.763
48.0	24.441
48.5	23.226
49.0	21.939
49.5	20.617
50.0	19.331
50.5	18.152
51.0	17.080
51.5	15.937
52.0	14.900
52.5	13.936
53.0	12.971
53.5	12.185
54.0	11.434
54.5	10.612

CANDELA TABULATION - (Cont.)

55.0	10.005
55.5	9.362
56.0	8.790
56.5	8.290
57.0	7.718
57.5	7.289
58.0	6.896
58.5	6.432
59.0	6.039
59.5	5.681
60.0	5.288
60.5	5.038
61.0	4.752
61.5	4.467
62.0	4.181
62.5	3.966
63.0	3.716
63.5	3.537
64.0	3.287
64.5	3.180
65.0	2.930
65.5	2.787
66.0	2.680
66.5	2.501
67.0	2.358
67.5	2.180
68.0	2.144
68.5	2.001
69.0	1.858
69.5	1.751
70.0	1.715
70.5	1.572
71.0	1.465
71.5	1.536
72.0	1.358
72.5	1.286
73.0	1.179
73.5	1.179
74.0	1.072
74.5	0.965
75.0	1.000
75.5	0.893
76.0	0.822
76.5	0.786
77.0	0.786
77.5	0.715
78.0	0.607
78.5	0.643
79.0	0.643
79.5	0.643
80.0	0.536
80.5	0.500
81.0	0.465
81.5	0.465
82.0	0.429
82.5	0.393

CANDELA TABULATION - (Cont.)

83.0	0.357
83.5	0.357
84.0	0.429
84.5	0.322
85.0	0.322
85.5	0.322
86.0	0.286
86.5	0.286
87.0	0.286
87.5	0.250
88.0	0.214
88.5	0.250
89.0	0.250
89.5	0.179
90.0	0.214
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
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154.5	0.000
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155.5	0.000
156.0	0.000
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157.0	0.000
157.5	0.000
158.0	0.000
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159.0	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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	719.99	N.A.	50.20
0-30	1189.49	N.A.	82.90
0-40	1391.05	N.A.	96.90
0-60	1430.56	N.A.	99.70
0-80	1434.72	N.A.	100.00
0-90	1435.09	N.A.	100.00
10-90	1188.3	N.A.	82.80
20-40	671.07	N.A.	46.80
20-50	701.01	N.A.	48.80
40-70	42.60	N.A.	3.00
60-80	4.16	N.A.	0.30
70-80	1.07	N.A.	0.10
80-90	0.37	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	1435.09	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	246.79
10-20	473.20
20-30	469.50
30-40	201.56
40-50	29.94
50-60	9.56
60-70	3.09
70-80	1.07
80-90	0.37
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

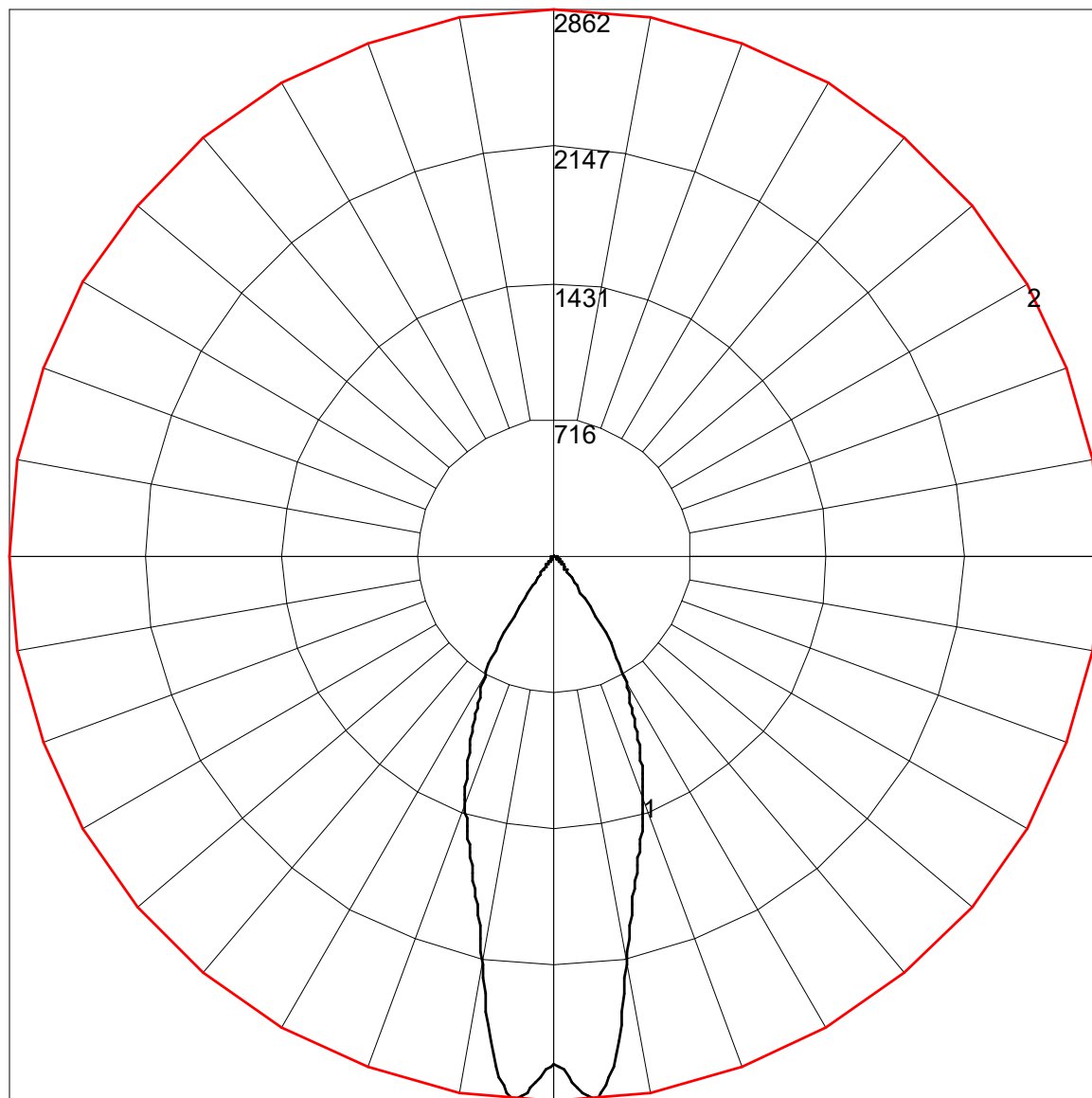
X=2H	Y=2H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	3H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	4H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	6H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	8H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	12H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3

UGR Viewed Endwise

4H	2H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	3H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	4H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	6H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	8H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	12H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
8H	4H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	6H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	8H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	12H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
12H	4H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	6H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	8H	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3

Maximum UGR = 1.3

POLAR GRAPH



Maximum Candela = 2862.139 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.)