



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L30-840-XXX-DIM-UNV-RW-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.12

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 1-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L30-840-xxx-DIM-UNV-RW-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	2181
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	81
Total Luminaire Watts	26.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.04
Spacing Criterion (90-270)	1.04
Spacing Criterion (Diagonal)	0.94
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	29451	29451	29451
55	24560	24560	24560
65	17327	17327	17327
75	10614	10614	10614
85	8371	8371	8371

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CANDELA TABULATION

	<u>0</u>
0.0	1613.488
0.5	1611.978
1.0	1610.469
1.5	1608.960
2.0	1605.941
2.5	1601.413
3.0	1596.885
3.5	1590.848
4.0	1584.810
4.5	1580.282
5.0	1574.245
5.5	1568.207
6.0	1562.170
6.5	1556.133
7.0	1550.095
7.5	1544.058
8.0	1536.511
8.5	1530.474
9.0	1524.436
9.5	1516.890
10.0	1510.852
10.5	1503.457
11.0	1496.212
11.5	1488.967
12.0	1481.722
12.5	1474.628
13.0	1467.383
13.5	1459.837
14.0	1452.441
14.5	1445.196
15.0	1438.404
15.5	1431.461
16.0	1424.669
16.5	1418.028
17.0	1411.839
17.5	1405.651
18.0	1399.614
18.5	1393.878
19.0	1388.143
19.5	1382.256
20.0	1376.219
20.5	1369.729
21.0	1362.333
21.5	1353.881
22.0	1344.372
22.5	1333.806
23.0	1322.335
23.5	1309.355
24.0	1295.167
24.5	1279.621
25.0	1262.415
25.5	1243.850
26.0	1223.172
26.5	1200.531

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CANDELA TABULATION - (Cont.)

27.0	1176.382
27.5	1150.119
28.0	1122.197
28.5	1091.859
29.0	1059.861
29.5	1025.146
30.0	988.318
30.5	949.377
31.0	908.926
31.5	867.570
32.0	825.460
32.5	783.651
33.0	742.295
33.5	702.297
34.0	663.960
34.5	627.887
35.0	594.983
35.5	564.796
36.0	538.232
36.5	514.686
37.0	494.008
37.5	476.349
38.0	460.802
38.5	447.067
39.0	435.144
39.5	424.578
40.0	414.918
40.5	406.164
41.0	398.014
41.5	390.618
42.0	383.826
42.5	377.336
43.0	371.147
43.5	365.261
44.0	359.676
44.5	354.394
45.0	348.960
45.5	343.828
46.0	338.546
46.5	333.414
47.0	328.131
47.5	322.848
48.0	317.415
48.5	311.981
49.0	306.849
49.5	301.567
50.0	295.982
50.5	290.247
51.0	284.360
51.5	278.474
52.0	272.587
52.5	266.550
53.0	260.664
53.5	254.928
54.0	248.589
54.5	242.250

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CANDELA TABULATION - (Cont.)

55.0	236.061
55.5	229.722
56.0	223.534
56.5	217.345
57.0	211.157
57.5	204.969
58.0	199.082
58.5	193.045
59.0	187.159
59.5	181.423
60.0	175.688
60.5	169.952
61.0	164.367
61.5	158.934
62.0	153.500
62.5	148.217
63.0	142.935
63.5	137.652
64.0	132.671
64.5	127.539
65.0	122.710
65.5	117.729
66.0	113.050
66.5	108.371
67.0	103.843
67.5	99.315
68.0	94.938
68.5	90.561
69.0	86.485
69.5	82.259
70.0	78.335
70.5	74.411
71.0	70.637
71.5	67.015
72.0	63.392
72.5	60.072
73.0	56.902
73.5	54.034
74.0	51.167
74.5	48.601
75.0	46.035
75.5	43.771
76.0	41.507
76.5	39.545
77.0	37.734
77.5	35.922
78.0	34.111
78.5	32.300
79.0	30.640
79.5	28.979
80.0	27.319
80.5	25.659
81.0	23.999
81.5	22.489
82.0	20.829
82.5	19.320

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CANDELA TABULATION - (Cont.)

83.0	17.810
83.5	16.452
84.0	14.942
84.5	13.584
85.0	12.226
85.5	10.867
86.0	9.509
86.5	8.150
87.0	6.943
87.5	5.585
88.0	4.528
88.5	3.622
89.0	2.868
89.5	2.113
90.0	1.509
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
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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

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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

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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	554.43	N.A.	25.40
0-30	1120.84	N.A.	51.40
0-40	1512.72	N.A.	69.40
0-60	1993.62	N.A.	91.40
0-80	2167.23	N.A.	99.40
0-90	2181.16	N.A.	100.00
10-90	2032.94	N.A.	93.20
20-40	958.29	N.A.	43.90
20-50	1228.67	N.A.	56.30
40-70	603.43	N.A.	27.70
60-80	173.61	N.A.	8.00
70-80	51.08	N.A.	2.30
80-90	13.92	N.A.	0.60
90-110	0.04	N.A.	0.00
90-120	0.04	N.A.	0.00
90-130	0.04	N.A.	0.00
90-150	0.04	N.A.	0.00
90-180	0.04	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2181.2	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	148.22
10-20	406.21
20-30	566.41
30-40	391.88
40-50	270.37
50-60	210.53
60-70	122.53
70-80	51.08
80-90	13.92
90-100	0.04
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	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79
3	97	89	82	77	95	87	81	76	84	79	75	82	77	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	59	58
6	79	68	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38

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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

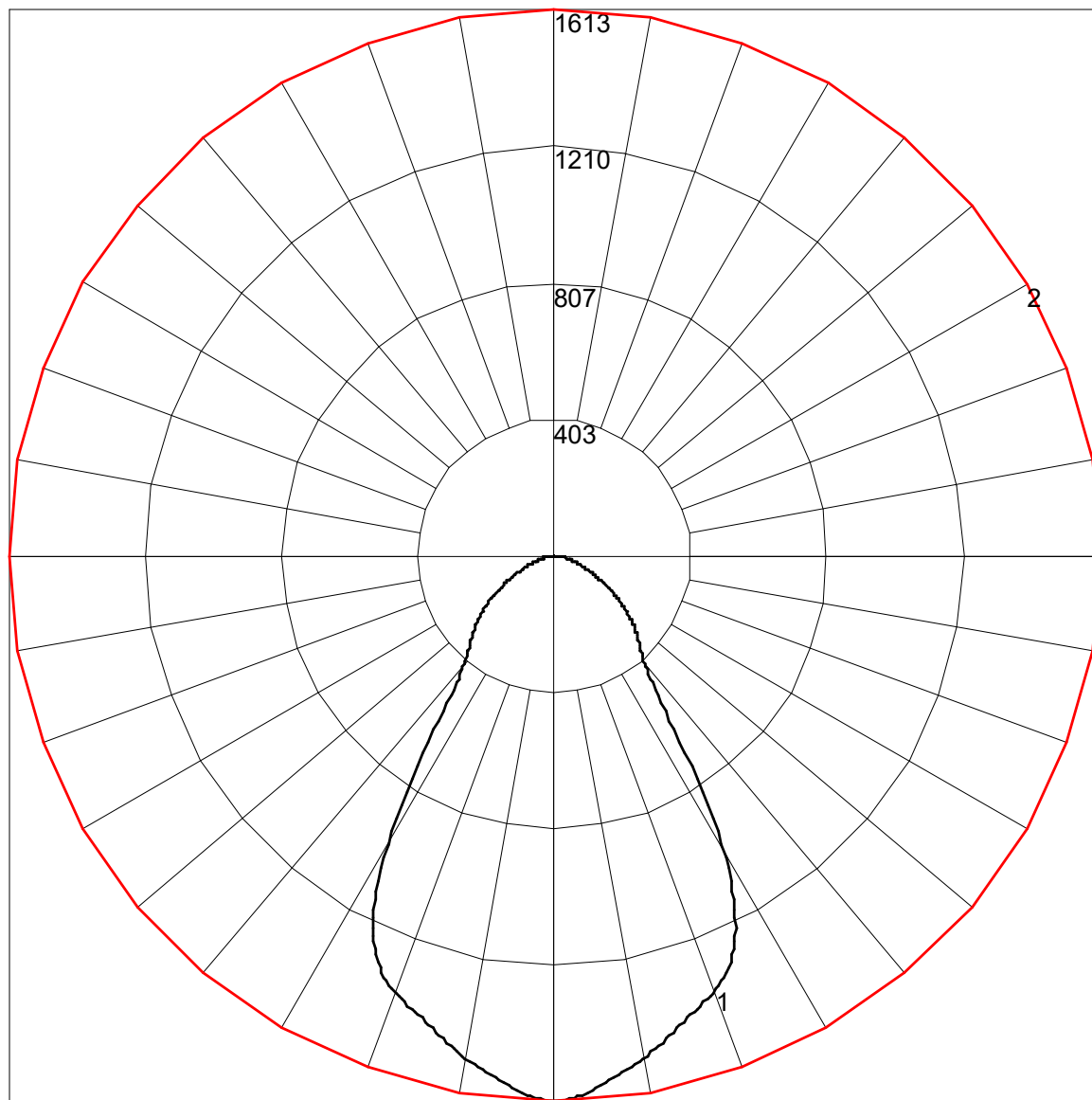
X=2H	Y=2H	20.5	21.9	20.9	22.2	22.5	20.5	21.9	20.9	22.2	22.5
	3H	21.5	22.7	21.9	23.0	23.4	21.5	22.7	21.9	23.0	23.4
	4H	21.8	22.9	22.2	23.2	23.6	21.8	22.9	22.2	23.2	23.6
	6H	21.9	23.0	22.4	23.3	23.7	21.9	23.0	22.4	23.3	23.7
	8H	22.0	23.0	22.4	23.4	23.8	22.0	23.0	22.4	23.4	23.8
	12H	22.0	22.9	22.5	23.3	23.8	22.0	22.9	22.5	23.3	23.8

UGR Viewed Endwise

4H	2H	20.9	22.0	21.3	22.3	22.7	20.9	22.0	21.3	22.3	22.7
	3H	22.0	22.9	22.4	23.3	23.7	22.0	22.9	22.4	23.3	23.7
	4H	22.4	23.2	22.8	23.6	24.0	22.4	23.2	22.8	23.6	24.0
	6H	22.6	23.3	23.1	23.8	24.2	22.6	23.3	23.1	23.8	24.2
	8H	22.7	23.3	23.2	23.8	24.3	22.7	23.3	23.2	23.8	24.3
	12H	22.8	23.3	23.2	23.8	24.3	22.8	23.3	23.2	23.8	24.3
8H	4H	22.4	23.1	22.9	23.5	24.0	22.4	23.1	22.9	23.5	24.0
	6H	22.8	23.3	23.3	23.8	24.3	22.8	23.3	23.3	23.8	24.3
	8H	22.9	23.4	23.4	23.9	24.4	22.9	23.4	23.4	23.9	24.4
	12H	23.0	23.4	23.5	23.9	24.5	23.0	23.4	23.5	23.9	24.5
12H	4H	22.4	23.0	22.9	23.5	24.0	22.4	23.0	22.9	23.5	24.0
	6H	22.8	23.3	23.3	23.7	24.3	22.8	23.3	23.3	23.7	24.3
	8H	22.9	23.4	23.5	23.9	24.4	22.9	23.4	23.5	23.9	24.4

Maximum UGR = 24.5

POLAR GRAPH



Maximum Candela = 1613.488 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.)