



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L40-835-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.

[ISSUE DATE] 2-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L40-835-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	4016
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	110
Total Luminaire Watts	36.3881
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	7250	7250	7250
55	2674	2674	2674
65	1063	1063	1063
75	593	593	593
85	566	566	566

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CANDELA TABULATION

	<u>0</u>
0.0	7474.0
0.5	7496.0
1.0	7555.0
1.5	7652.0
2.0	7738.0
2.5	7822.0
3.0	7902.0
3.5	7965.0
4.0	8010.0
4.5	7997.0
5.0	7929.0
5.5	7833.0
6.0	7702.0
6.5	7545.0
7.0	7370.0
7.5	7184.0
8.0	6979.0
8.5	6758.0
9.0	6528.0
9.5	6305.0
10.0	6099.0
10.5	5906.0
11.0	5722.0
11.5	5553.0
12.0	5403.0
12.5	5268.0
13.0	5142.0
13.5	5023.0
14.0	4912.0
14.5	4810.0
15.0	4709.0
15.5	4614.0
16.0	4523.0
16.5	4435.0
17.0	4349.0
17.5	4262.0
18.0	4175.0
18.5	4086.0
19.0	3997.0
19.5	3908.0
20.0	3820.0
20.5	3732.0
21.0	3641.0
21.5	3546.0
22.0	3450.0
22.5	3354.0
23.0	3257.0
23.5	3158.0
24.0	3059.0
24.5	2961.0
25.0	2866.0
25.5	2771.0
26.0	2677.0
26.5	2587.0

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CANDELA TABULATION - (Cont.)

27.0	2502.0
27.5	2423.0
28.0	2347.0
28.5	2276.0
29.0	2210.0
29.5	2141.0
30.0	2061.0
30.5	1970.0
31.0	1873.0
31.5	1769.0
32.0	1652.0
32.5	1515.0
33.0	1366.0
33.5	1213.0
34.0	1061.0
34.5	913.3
35.0	776.8
35.5	656.7
36.0	559.4
36.5	477.9
37.0	407.7
37.5	350.9
38.0	310.4
38.5	285.7
39.0	266.7
39.5	247.9
40.0	228.5
40.5	209.8
41.0	191.4
41.5	173.6
42.0	157.1
42.5	141.6
43.0	127.3
43.5	115.9
44.0	106.9
44.5	99.5
45.0	93.6
45.5	88.3
46.0	83.8
46.5	79.6
47.0	75.7
47.5	72.1
48.0	68.4
48.5	65.0
49.0	61.4
49.5	57.7
50.0	54.1
50.5	50.8
51.0	47.8
51.5	44.6
52.0	41.7
52.5	39.0
53.0	36.3
53.5	34.1
54.0	32.0
54.5	29.7

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CANDELA TABULATION - (Cont.)

55.0	28.0
55.5	26.2
56.0	24.6
56.5	23.2
57.0	21.6
57.5	20.4
58.0	19.3
58.5	18.0
59.0	16.9
59.5	15.9
60.0	14.8
60.5	14.1
61.0	13.3
61.5	12.5
62.0	11.7
62.5	11.1
63.0	10.4
63.5	9.9
64.0	9.2
64.5	8.9
65.0	8.2
65.5	7.8
66.0	7.5
66.5	7.0
67.0	6.6
67.5	6.1
68.0	6.0
68.5	5.6
69.0	5.2
69.5	4.9
70.0	4.8
70.5	4.4
71.0	4.1
71.5	4.3
72.0	3.8
72.5	3.6
73.0	3.3
73.5	3.3
74.0	3.0
74.5	2.7
75.0	2.8
75.5	2.5
76.0	2.3
76.5	2.2
77.0	2.2
77.5	2.0
78.0	1.7
78.5	1.8
79.0	1.8
79.5	1.8
80.0	1.5
80.5	1.4
81.0	1.3
81.5	1.3
82.0	1.2
82.5	1.1

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CANDELA TABULATION - (Cont.)

83.0	1.0
83.5	1.0
84.0	1.2
84.5	0.9
85.0	0.9
85.5	0.9
86.0	0.8
86.5	0.8
87.0	0.8
87.5	0.7
88.0	0.6
88.5	0.7
89.0	0.7
89.5	0.5
90.0	0.6
90.5	0.0
91.0	0.0
91.5	0.0
92.0	0.0
92.5	0.0
93.0	0.0
93.5	0.0
94.0	0.0
94.5	0.0
95.0	0.0
95.5	0.0
96.0	0.0
96.5	0.0
97.0	0.0
97.5	0.0
98.0	0.0
98.5	0.0
99.0	0.0
99.5	0.0
100.0	0.0
100.5	0.0
101.0	0.0
101.5	0.0
102.0	0.0
102.5	0.0
103.0	0.0
103.5	0.0
104.0	0.0
104.5	0.0
105.0	0.0
105.5	0.0
106.0	0.0
106.5	0.0
107.0	0.0
107.5	0.0
108.0	0.0
108.5	0.0
109.0	0.0
109.5	0.0
110.0	0.0
110.5	0.0

CANDELA TABULATION - (Cont.)

111.0	0.0
111.5	0.0
112.0	0.0
112.5	0.0
113.0	0.0
113.5	0.0
114.0	0.0
114.5	0.0
115.0	0.0
115.5	0.0
116.0	0.0
116.5	0.0
117.0	0.0
117.5	0.0
118.0	0.0
118.5	0.0
119.0	0.0
119.5	0.0
120.0	0.0
120.5	0.0
121.0	0.0
121.5	0.0
122.0	0.0
122.5	0.0
123.0	0.0
123.5	0.0
124.0	0.0
124.5	0.0
125.0	0.0
125.5	0.0
126.0	0.0
126.5	0.0
127.0	0.0
127.5	0.0
128.0	0.0
128.5	0.0
129.0	0.0
129.5	0.0
130.0	0.0
130.5	0.0
131.0	0.0
131.5	0.0
132.0	0.0
132.5	0.0
133.0	0.0
133.5	0.0
134.0	0.0
134.5	0.0
135.0	0.0
135.5	0.0
136.0	0.0
136.5	0.0
137.0	0.0
137.5	0.0
138.0	0.0
138.5	0.0

CANDELA TABULATION - (Cont.)

139.0	0.0
139.5	0.0
140.0	0.0
140.5	0.0
141.0	0.0
141.5	0.0
142.0	0.0
142.5	0.0
143.0	0.0
143.5	0.0
144.0	0.0
144.5	0.0
145.0	0.0
145.5	0.0
146.0	0.0
146.5	0.0
147.0	0.0
147.5	0.0
148.0	0.0
148.5	0.0
149.0	0.0
149.5	0.0
150.0	0.0
150.5	0.0
151.0	0.0
151.5	0.0
152.0	0.0
152.5	0.0
153.0	0.0
153.5	0.0
154.0	0.0
154.5	0.0
155.0	0.0
155.5	0.0
156.0	0.0
156.5	0.0
157.0	0.0
157.5	0.0
158.0	0.0
158.5	0.0
159.0	0.0
159.5	0.0
160.0	0.0
160.5	0.0
161.0	0.0
161.5	0.0
162.0	0.0
162.5	0.0
163.0	0.0
163.5	0.0
164.0	0.0
164.5	0.0
165.0	0.0
165.5	0.0
166.0	0.0
166.5	0.0

CANDELA TABULATION - (Cont.)

167.0	0.0
167.5	0.0
168.0	0.0
168.5	0.0
169.0	0.0
169.5	0.0
170.0	0.0
170.5	0.0
171.0	0.0
171.5	0.0
172.0	0.0
172.5	0.0
173.0	0.0
173.5	0.0
174.0	0.0
174.5	0.0
175.0	0.0
175.5	0.0
176.0	0.0
176.5	0.0
177.0	0.0
177.5	0.0
178.0	0.0
178.5	0.0
179.0	0.0
179.5	0.0
180.0	0.0

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Zone	Lumens	%Lamp	%Fixt
0-20	2014.96	N.A.	50.20
0-30	3328.92	N.A.	82.90
0-40	3893.01	N.A.	96.90
0-60	4003.57	N.A.	99.70
0-80	4015.21	N.A.	100.00
0-90	4016.24	N.A.	100.00
10-90	3325.57	N.A.	82.80
20-40	1878.05	N.A.	46.80
20-50	1961.84	N.A.	48.80
40-70	119.21	N.A.	3.00
60-80	11.65	N.A.	0.30
70-80	2.99	N.A.	0.10
80-90	1.03	N.A.	0.00
90-110	0.02	N.A.	0.00
90-120	0.02	N.A.	0.00
90-130	0.02	N.A.	0.00
90-150	0.02	N.A.	0.00
90-180	0.02	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	4016.26	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	690.67
10-20	1324.29
20-30	1313.96
30-40	564.09
40-50	83.79
50-60	26.77
60-70	8.66
70-80	2.99
80-90	1.03
90-100	0.02
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

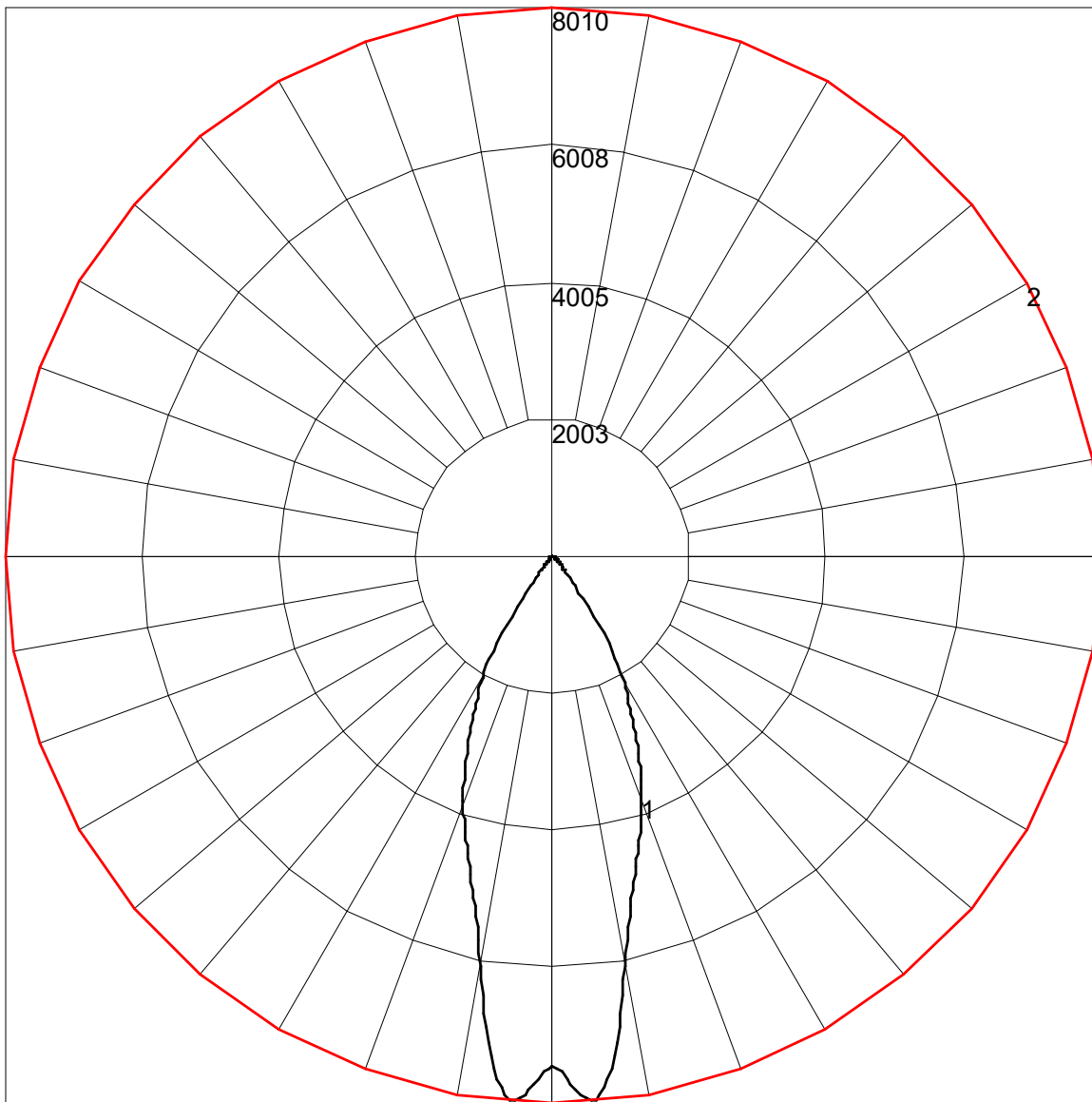
X=2H	Y=2H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	3H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	4H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	6H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	8H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	12H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9

UGR Viewed Endwise

4H	2H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	3H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	4H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	6H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	8H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	12H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
8H	4H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	6H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	8H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	12H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
12H	4H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	6H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
	8H	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9

Maximum UGR = 4.9

POLAR GRAPH



Maximum Candela = 8010 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.)