



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L40-940-XXX-DIM-UNV-OM-CS-TD-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-L40-940-xxx-DIM-UNV-OM-CS-TD-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	2741
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	75
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	4948	4948	4948
55	1825	1825	1825
65	725	725	725
75	404	404	404
85	386	386	386

CANDELA TABULATION

	<u>0</u>
0.0	5101.154
0.5	5116.169
1.0	5156.438
1.5	5222.642
2.0	5281.339
2.5	5338.671
3.0	5393.272
3.5	5436.271
4.0	5466.985
4.5	5458.112
5.0	5411.700
5.5	5346.178
6.0	5256.768
6.5	5149.613
7.0	5030.172
7.5	4903.223
8.0	4763.306
8.5	4612.470
9.0	4455.490
9.5	4303.288
10.0	4162.689
10.5	4030.963
11.0	3905.379
11.5	3790.033
12.0	3687.655
12.5	3595.515
13.0	3509.517
13.5	3428.298
14.0	3352.538
14.5	3282.921
15.0	3213.986
15.5	3149.147
16.0	3087.038
16.5	3026.976
17.0	2968.279
17.5	2908.900
18.0	2849.521
18.5	2788.776
19.0	2728.032
19.5	2667.288
20.0	2607.226
20.5	2547.164
21.0	2485.055
21.5	2420.216
22.0	2354.694
22.5	2289.172
23.0	2222.967
23.5	2155.398
24.0	2087.828
24.5	2020.941
25.0	1956.102
25.5	1891.263
26.0	1827.106
26.5	1765.679

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CANDELA TABULATION - (Cont.)

27.0	1707.665
27.5	1653.746
28.0	1601.874
28.5	1553.415
29.0	1508.369
29.5	1461.275
30.0	1406.674
30.5	1344.564
31.0	1278.360
31.5	1207.378
32.0	1127.523
32.5	1034.018
33.0	932.322
33.5	827.897
34.0	724.154
34.5	623.345
35.0	530.181
35.5	448.211
36.0	381.802
36.5	326.176
37.0	278.263
37.5	239.496
38.0	211.854
38.5	194.996
39.0	182.028
39.5	169.197
40.0	155.956
40.5	143.193
41.0	130.634
41.5	118.485
42.0	107.224
42.5	96.645
43.0	86.885
43.5	79.104
44.0	72.961
44.5	67.911
45.0	63.884
45.5	60.267
46.0	57.195
46.5	54.329
47.0	51.667
47.5	49.210
48.0	46.684
48.5	44.364
49.0	41.907
49.5	39.381
50.0	36.924
50.5	34.672
51.0	32.624
51.5	30.440
52.0	28.461
52.5	26.618
53.0	24.775
53.5	23.274
54.0	21.841
54.5	20.271

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CANDELA TABULATION - (Cont.)

55.0	19.111
55.5	17.882
56.0	16.790
56.5	15.834
57.0	14.742
57.5	13.923
58.0	13.173
58.5	12.285
59.0	11.535
59.5	10.852
60.0	10.101
60.5	9.624
61.0	9.078
61.5	8.531
62.0	7.985
62.5	7.576
63.0	7.098
63.5	6.757
64.0	6.279
64.5	6.074
65.0	5.597
65.5	5.324
66.0	5.119
66.5	4.778
67.0	4.505
67.5	4.163
68.0	4.095
68.5	3.822
69.0	3.549
69.5	3.344
70.0	3.276
70.5	3.003
71.0	2.798
71.5	2.935
72.0	2.594
72.5	2.457
73.0	2.252
73.5	2.252
74.0	2.048
74.5	1.843
75.0	1.911
75.5	1.706
76.0	1.570
76.5	1.502
77.0	1.502
77.5	1.365
78.0	1.160
78.5	1.229
79.0	1.229
79.5	1.229
80.0	1.024
80.5	0.956
81.0	0.887
81.5	0.887
82.0	0.819
82.5	0.751

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CANDELA TABULATION - (Cont.)

83.0	0.683
83.5	0.683
84.0	0.819
84.5	0.614
85.0	0.614
85.5	0.614
86.0	0.546
86.5	0.546
87.0	0.546
87.5	0.478
88.0	0.410
88.5	0.478
89.0	0.478
89.5	0.341
90.0	0.410
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
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125.5	0.000
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126.5	0.000
127.0	0.000
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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
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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	1375.25	N.A.	50.20
0-30	2272.05	N.A.	82.90
0-40	2657.06	N.A.	96.90
0-60	2732.51	N.A.	99.70
0-80	2740.46	N.A.	100.00
0-90	2741.16	N.A.	100.00
10-90	2269.77	N.A.	82.80
20-40	1281.81	N.A.	46.80
20-50	1338.99	N.A.	48.80
40-70	81.37	N.A.	3.00
60-80	7.95	N.A.	0.30
70-80	2.04	N.A.	0.10
80-90	0.70	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	2741.18	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	471.40
10-20	903.86
20-30	896.80
30-40	385.00
40-50	57.19
50-60	18.27
60-70	5.91
70-80	2.04
80-90	0.70
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	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

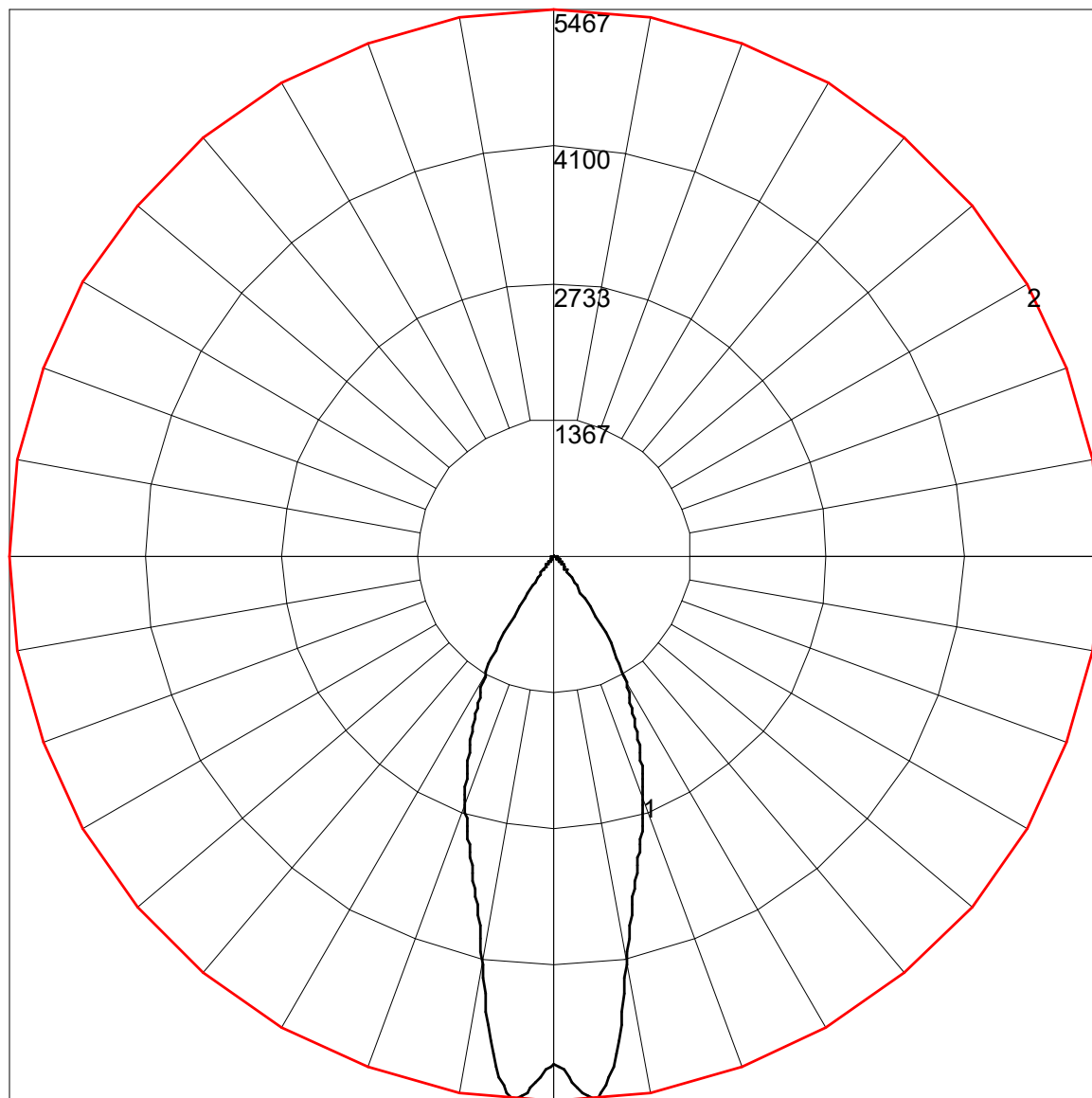
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UGR TABLE - CORRECTED

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					UGR Viewed Endwise				
X=2H	Y=2H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	3H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	4H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	6H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	8H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	12H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
4H	2H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	3H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	4H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	6H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	8H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	12H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
8H	4H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	6H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	8H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	12H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
12H	4H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	6H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	8H	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5

Maximum UGR = 3.5

POLAR GRAPH



Maximum Candela = 5466.985 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.)