



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CR-TL-L20-940-XXX-DIM-UNV-OM-CS-TD-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL#12326812.04

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 2-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CR-TL-L20-940-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	1353
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	71
Total Luminaire Watts	19
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.58
Spacing Criterion (90-270)	0.58
Spacing Criterion (Diagonal)	0.68
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	2442	2442	2442
55	899	899	899
65	354	354	354
75	159	159	159
85	129	129	129

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CANDELA TABULATION

	<u>0</u>
0.0	2738.068
0.5	2742.162
1.0	2750.350
1.5	2755.126
2.0	2766.725
2.5	2771.501
3.0	2779.689
3.5	2781.736
4.0	2775.595
4.5	2742.844
5.0	2710.094
5.5	2675.297
6.0	2619.348
6.5	2563.400
7.0	2504.040
7.5	2437.174
8.0	2359.392
8.5	2279.563
9.0	2197.005
9.5	2116.493
10.0	2042.123
10.5	1976.622
11.0	1919.991
11.5	1871.548
12.0	1823.787
12.5	1776.708
13.0	1731.676
13.5	1689.374
14.0	1651.165
14.5	1617.050
15.0	1586.347
15.5	1557.008
16.0	1528.351
16.5	1498.330
17.0	1467.626
17.5	1436.923
18.0	1408.949
18.5	1384.386
19.0	1359.141
19.5	1333.213
20.0	1304.557
20.5	1273.853
21.0	1242.468
21.5	1210.400
22.0	1176.285
22.5	1143.534
23.0	1108.737
23.5	1073.257
24.0	1036.413
24.5	999.569
25.0	963.407
25.5	927.245
26.0	893.812
26.5	861.744

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CANDELA TABULATION - (Cont.)

27.0	831.723
27.5	803.067
28.0	777.139
28.5	753.941
29.0	732.107
29.5	710.956
30.0	684.347
30.5	651.050
31.0	612.842
31.5	570.812
32.0	528.168
32.5	485.251
33.0	442.335
33.5	397.303
34.0	351.589
34.5	309.900
35.0	269.849
35.5	232.050
36.0	195.684
36.5	163.138
37.0	136.460
37.5	117.697
38.0	107.599
38.5	100.776
39.0	93.953
39.5	86.720
40.0	79.010
40.5	70.823
41.0	62.976
41.5	55.676
42.0	49.467
42.5	44.554
43.0	40.733
43.5	37.799
44.0	35.343
44.5	33.364
45.0	31.522
45.5	29.953
46.0	28.452
46.5	27.087
47.0	25.723
47.5	24.426
48.0	23.130
48.5	21.834
49.0	20.537
49.5	19.377
50.0	18.286
50.5	17.194
51.0	16.171
51.5	15.147
52.0	14.124
52.5	13.237
53.0	12.350
53.5	11.531
54.0	10.780
54.5	10.098

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CANDELA TABULATION - (Cont.)

55.0	9.416
55.5	8.870
56.0	8.256
56.5	7.778
57.0	7.301
57.5	6.823
58.0	6.414
58.5	6.004
59.0	5.663
59.5	5.322
60.0	4.981
60.5	4.640
61.0	4.367
61.5	4.094
62.0	3.889
62.5	3.684
63.0	3.411
63.5	3.275
64.0	3.070
64.5	2.866
65.0	2.729
65.5	2.525
66.0	2.388
66.5	2.252
67.0	2.115
67.5	1.979
68.0	1.910
68.5	1.774
69.0	1.638
69.5	1.569
70.0	1.501
70.5	1.365
71.0	1.296
71.5	1.228
72.0	1.160
72.5	1.092
73.0	1.023
73.5	0.955
74.0	0.887
74.5	0.819
75.0	0.751
75.5	0.751
76.0	0.682
76.5	0.614
77.0	0.614
77.5	0.546
78.0	0.546
78.5	0.478
79.0	0.478
79.5	0.409
80.0	0.409
80.5	0.341
81.0	0.341
81.5	0.341
82.0	0.273
82.5	0.273

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CANDELA TABULATION - (Cont.)

83.0	0.273
83.5	0.205
84.0	0.205
84.5	0.205
85.0	0.205
85.5	0.136
86.0	0.136
86.5	0.136
87.0	0.136
87.5	0.136
88.0	0.068
88.5	0.068
89.0	0.068
89.5	0.068
90.0	0.068
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
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

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	682.82	N.A.	50.50
0-30	1125.13	N.A.	83.20
0-40	1312.29	N.A.	97.00
0-60	1349.07	N.A.	99.70
0-80	1352.78	N.A.	100.00
0-90	1352.98	N.A.	100.00
10-90	1117.07	N.A.	82.60
20-40	629.47	N.A.	46.50
20-50	657.21	N.A.	48.60
40-70	39.61	N.A.	2.90
60-80	3.70	N.A.	0.30
70-80	0.88	N.A.	0.10
80-90	0.21	N.A.	0.00
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1352.99	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	235.92
10-20	446.90
20-30	442.30
30-40	187.17
40-50	27.74
50-60	9.04
60-70	2.83
70-80	0.88
80-90	0.21
90-100	0.00
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	103	97	93	90	95	91	89	92	90	87	90	88	86	84
4	100	93	88	84	98	92	88	84	90	86	83	88	85	82	86	83	81	80
5	96	88	83	79	94	87	82	79	86	81	78	84	80	77	82	79	77	75
6	92	84	78	75	90	83	78	74	81	77	74	80	76	73	79	75	73	72
7	88	80	74	70	87	79	74	70	78	73	70	77	73	70	75	72	69	68
8	84	76	70	67	83	75	70	67	74	70	66	73	69	66	72	69	66	65
9	81	72	67	63	80	72	67	63	71	66	63	70	66	63	69	65	63	62
10	78	69	64	60	77	69	64	60	68	63	60	67	63	60	66	63	60	59

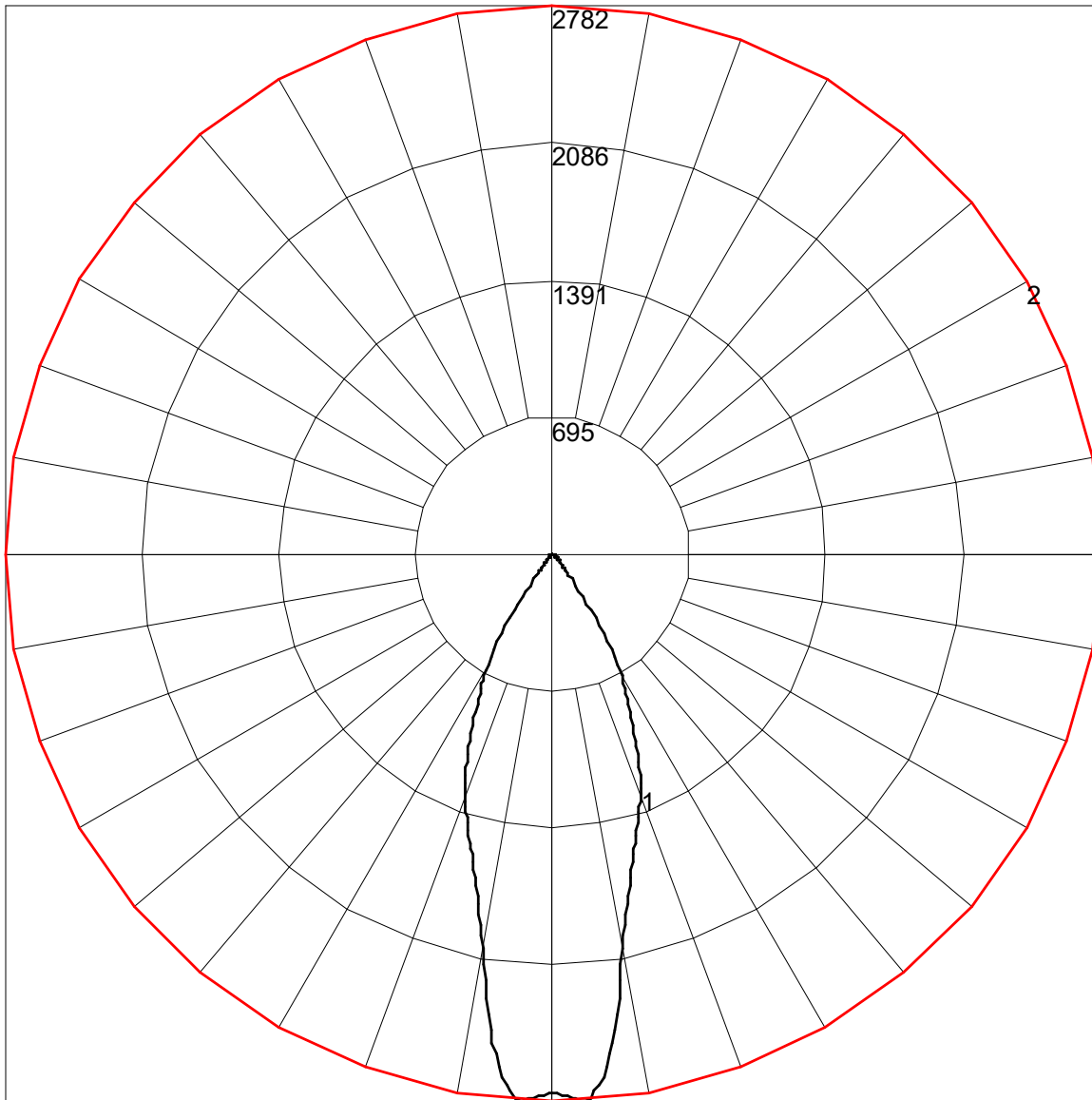
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UGR TABLE - CORRECTED

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	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	3H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	12H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
4H	2H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	3H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	12H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
8H	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	12H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
12H	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Maximum UGR = 1.1

POLAR GRAPH



Maximum Candela = 2781.736 Located At Horizontal Angle = 0, Vertical Angle = 3.5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (3.5) (Through Max. Cd.)