



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L20-940-XXX-DIM-UNV-OM-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from 12316380.04
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 26-JAN-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.64836
 [LUMCAT] 6CR-TL-L20-940-xxx-DIM-UNV-OM-CS-xx
 [LUMINAIRE] 6" DIA. SURFACE CYLINDER
 [LAMP] One white LED
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight
 [_SEARCH_MOUNTING] Surface

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1682
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
Total Luminaire Watts	19.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.56
Spacing Criterion (90-270)	0.56
Spacing Criterion (Diagonal)	0.76
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.38 ft (Diameter)
Luminous Width (90-270)	0.38 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	4176	4176	4176
55	1212	1212	1212
65	426	426	426
75	190	190	190
85	94	94	94

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CANDELA TABULATION

	<u>0</u>
0.0	3403.487
0.5	3406.008
1.0	3416.090
1.5	3425.331
2.0	3446.335
2.5	3459.778
3.0	3462.298
3.5	3463.139
4.0	3443.815
4.5	3417.770
5.0	3368.201
5.5	3305.189
6.0	3234.615
6.5	3155.640
7.0	3069.944
7.5	2980.887
8.0	2889.309
8.5	2798.572
9.0	2709.515
9.5	2622.979
10.0	2540.643
10.5	2463.348
11.0	2391.095
11.5	2323.042
12.0	2258.349
12.5	2197.858
13.0	2140.727
13.5	2086.117
14.0	2034.027
14.5	1986.138
15.0	1942.449
15.5	1903.802
16.0	1871.876
16.5	1843.311
17.0	1816.425
17.5	1792.901
18.0	1771.897
18.5	1754.254
19.0	1741.651
19.5	1730.729
20.0	1721.487
20.5	1710.565
21.0	1699.643
21.5	1687.881
22.0	1675.279
22.5	1659.316
23.0	1639.992
23.5	1616.467
24.0	1587.062
24.5	1548.414
25.0	1503.886
25.5	1456.837
26.0	1410.628
26.5	1359.379

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CANDELA TABULATION - (Cont.)

27.0	1305.608
27.5	1244.277
28.0	1174.543
28.5	1098.089
29.0	1018.274
29.5	936.778
30.0	850.242
30.5	760.597
31.0	666.751
31.5	573.241
32.0	483.344
32.5	399.244
33.0	326.066
33.5	263.642
34.0	211.048
34.5	167.360
35.0	131.905
35.5	105.188
36.0	88.049
36.5	79.059
37.0	73.682
37.5	68.977
38.0	64.860
38.5	61.080
39.0	57.635
39.5	54.526
40.0	51.586
40.5	48.813
41.0	46.209
41.5	43.856
42.0	41.588
42.5	39.488
43.0	37.387
43.5	35.539
44.0	33.690
44.5	31.926
45.0	30.330
45.5	28.733
46.0	27.137
46.5	25.625
47.0	24.029
47.5	22.516
48.0	21.088
48.5	19.744
49.0	18.399
49.5	17.055
50.0	15.711
50.5	14.451
51.0	13.359
51.5	12.350
52.0	11.342
52.5	10.502
53.0	9.662
53.5	8.990
54.0	8.318
54.5	7.645

CANDELA TABULATION - (Cont.)

55.0	7.141
55.5	6.637
56.0	6.133
56.5	5.713
57.0	5.293
57.5	4.957
58.0	4.621
58.5	4.285
59.0	4.033
59.5	3.781
60.0	3.529
60.5	3.277
61.0	3.109
61.5	2.857
62.0	2.689
62.5	2.520
63.0	2.352
63.5	2.268
64.0	2.100
64.5	1.932
65.0	1.848
65.5	1.764
66.0	1.596
66.5	1.512
67.0	1.428
67.5	1.344
68.0	1.260
68.5	1.176
69.0	1.092
69.5	1.008
70.0	0.924
70.5	0.924
71.0	0.840
71.5	0.756
72.0	0.672
72.5	0.672
73.0	0.588
73.5	0.588
74.0	0.504
74.5	0.504
75.0	0.504
75.5	0.420
76.0	0.420
76.5	0.336
77.0	0.336
77.5	0.336
78.0	0.252
78.5	0.252
79.0	0.252
79.5	0.252
80.0	0.168
80.5	0.168
81.0	0.168
81.5	0.168
82.0	0.168
82.5	0.168

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CANDELA TABULATION - (Cont.)

83.0	0.168
83.5	0.084
84.0	0.084
84.5	0.084
85.0	0.084
85.5	0.084
86.0	0.084
86.5	0.084
87.0	0.084
87.5	0.084
88.0	0.000
88.5	0.000
89.0	0.000
89.5	0.000
90.0	0.000
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
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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	848.43	N.A.	50.40
0-30	1498.53	N.A.	89.10
0-40	1648.59	N.A.	98.00
0-60	1679.49	N.A.	99.80
0-80	1681.95	N.A.	100.00
0-90	1682.05	N.A.	100.00
10-90	1390.62	N.A.	82.70
20-40	800.16	N.A.	47.60
20-50	824.04	N.A.	49.00
40-70	32.83	N.A.	2.00
60-80	2.46	N.A.	0.10
70-80	0.52	N.A.	0.00
80-90	0.10	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	1682.05	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	291.44
10-20	557.00
20-30	650.10
30-40	150.07
40-50	23.88
50-60	7.02
60-70	1.94
70-80	0.52
80-90	0.10
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

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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	110	108	112	110	108	106	106	104	103	102	101	100	98	98	97	95
2	109	105	102	99	107	103	100	97	100	98	95	97	95	93	95	93	91	90
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	88	87	85
4	100	94	89	85	99	93	88	85	91	87	84	89	86	83	87	84	82	81
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76
6	92	85	79	76	91	84	79	75	82	78	75	81	77	74	80	77	74	73
7	89	80	75	72	87	80	75	71	79	74	71	78	74	71	76	73	70	69
8	85	77	72	68	84	76	71	68	75	71	68	74	70	67	73	70	67	66
9	82	73	68	65	81	73	68	65	72	67	64	71	67	64	70	67	64	63
10	79	70	65	62	78	70	65	62	69	64	61	68	64	61	67	64	61	60

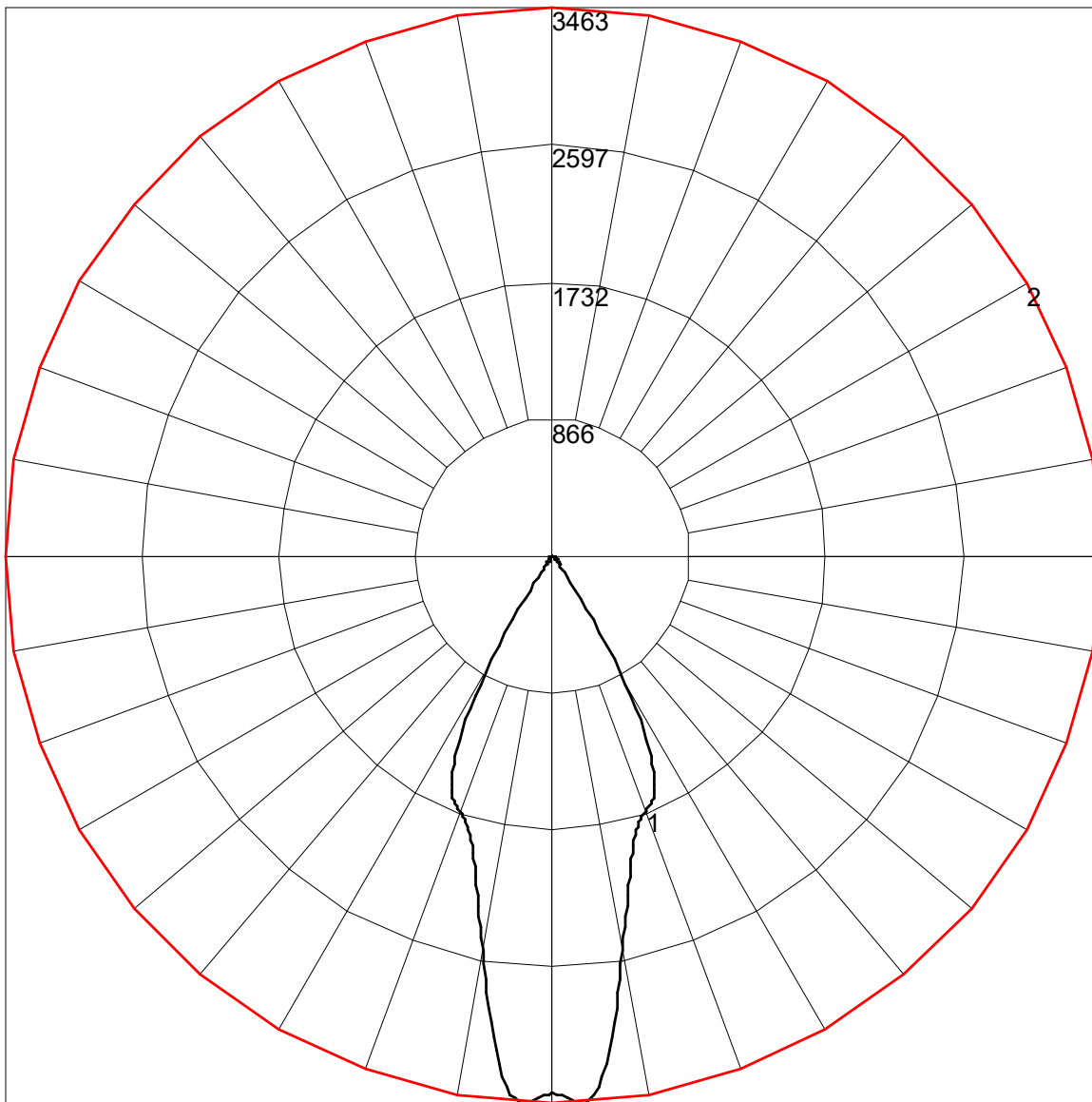
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UGR TABLE - CORRECTED

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	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	3H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	4H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	6H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	8H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	12H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
4H	2H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	3H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	4H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	6H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	8H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	12H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
8H	4H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	6H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	8H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	12H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
12H	4H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	6H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
	8H	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9

Maximum UGR = 1.9

POLAR GRAPH



Maximum Candela = 3463.139 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.)