



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L20-835-XXX-DIM-UNV-OM-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 12316380.22
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 26-JAN-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 6CR-TL-L20-835-xxx-DIM-UNV-OM-WH-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	2002
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	101
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)	0.74
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	4907	4907	4907
55	1433	1433	1433
65	513	513	513
75	234	234	234
85	173	173	173

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CANDELA TABULATION

	<u>0</u>
0.0	4198.761
0.5	4206.013
1.0	4209.121
1.5	4207.049
2.0	4199.797
2.5	4189.438
3.0	4167.164
3.5	4141.265
4.0	4105.006
4.5	4057.352
5.0	3996.748
5.5	3923.195
6.0	3848.087
6.5	3759.513
7.0	3665.758
7.5	3566.823
8.0	3464.781
8.5	3362.738
9.0	3261.214
9.5	3161.243
10.0	3064.899
10.5	2973.734
11.0	2886.713
11.5	2805.908
12.0	2731.836
12.5	2661.909
13.0	2598.197
13.5	2539.665
14.0	2486.313
14.5	2435.551
15.0	2388.414
15.5	2343.868
16.0	2303.983
16.5	2268.761
17.0	2236.128
17.5	2205.567
18.0	2176.560
18.5	2147.553
19.0	2120.618
19.5	2094.719
20.0	2070.892
20.5	2047.582
21.0	2023.755
21.5	1999.410
22.0	1972.475
22.5	1943.468
23.0	1911.871
23.5	1877.684
24.0	1839.872
24.5	1797.397
25.0	1750.779
25.5	1698.981
26.0	1640.967
26.5	1575.701

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CANDELA TABULATION - (Cont.)

27.0	1504.219
27.5	1426.522
28.0	1343.645
28.5	1254.552
29.0	1158.207
29.5	1058.755
30.0	956.713
30.5	854.152
31.0	753.146
31.5	656.283
32.0	563.046
32.5	477.113
33.0	398.639
33.5	327.209
34.0	266.139
34.5	214.911
35.0	173.835
35.5	142.186
36.0	118.152
36.5	100.696
37.0	89.352
37.5	82.152
38.0	77.024
38.5	72.466
39.0	68.374
39.5	64.644
40.0	61.122
40.5	57.859
41.0	54.802
41.5	51.902
42.0	49.260
42.5	46.670
43.0	44.236
43.5	41.905
44.0	39.677
44.5	37.605
45.0	35.637
45.5	33.721
46.0	31.856
46.5	29.991
47.0	28.178
47.5	26.365
48.0	24.604
48.5	22.998
49.0	21.444
49.5	19.891
50.0	18.388
50.5	16.886
51.0	15.643
51.5	14.452
52.0	13.364
52.5	12.380
53.0	11.447
53.5	10.619
54.0	9.790
54.5	9.116

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CANDELA TABULATION - (Cont.)

55.0	8.443
55.5	7.822
56.0	7.355
56.5	6.786
57.0	6.319
57.5	5.905
58.0	5.542
58.5	5.180
59.0	4.817
59.5	4.558
60.0	4.247
60.5	3.988
61.0	3.729
61.5	3.470
62.0	3.315
62.5	3.056
63.0	2.901
63.5	2.694
64.0	2.538
64.5	2.383
65.0	2.227
65.5	2.124
66.0	1.968
66.5	1.917
67.0	1.761
67.5	1.658
68.0	1.554
68.5	1.450
69.0	1.347
69.5	1.295
70.0	1.243
70.5	1.140
71.0	1.036
71.5	1.036
72.0	0.932
72.5	0.881
73.0	0.777
73.5	0.725
74.0	0.673
74.5	0.673
75.0	0.622
75.5	0.570
76.0	0.570
76.5	0.518
77.0	0.466
77.5	0.466
78.0	0.414
78.5	0.363
79.0	0.363
79.5	0.363
80.0	0.311
80.5	0.259
81.0	0.311
81.5	0.259
82.0	0.259
82.5	0.259

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CANDELA TABULATION - (Cont.)

83.0	0.207
83.5	0.207
84.0	0.155
84.5	0.155
85.0	0.155
85.5	0.155
86.0	0.155
86.5	0.104
87.0	0.104
87.5	0.104
88.0	0.104
88.5	0.104
89.0	0.104
89.5	0.104
90.0	0.052
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 6CR-TL-L20-835-XXX-DIM-UNV-OM-WH-XX_.IES****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

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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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1028.71	N.A.	51.40
0-30	1784.86	N.A.	89.10
0-40	1962.5	N.A.	98.00
0-60	1998.92	N.A.	99.80
0-80	2002.00	N.A.	100.00
0-90	2002.18	N.A.	100.00
10-90	1652.94	N.A.	82.60
20-40	933.79	N.A.	46.60
20-50	961.91	N.A.	48.00
40-70	38.79	N.A.	1.90
60-80	3.07	N.A.	0.20
70-80	0.70	N.A.	0.00
80-90	0.19	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	2002.18	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	349.24
10-20	679.47
20-30	756.15
30-40	177.65
40-50	28.12
50-60	8.30
60-70	2.37
70-80	0.70
80-90	0.19
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	98	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	89	87	85
4	101	94	89	86	99	93	88	85	91	87	84	89	86	83	87	84	82	81
5	96	89	84	80	95	88	84	80	87	82	79	85	81	79	83	80	78	77
6	92	85	80	76	91	84	79	76	83	78	75	81	77	75	80	77	74	73
7	89	81	75	72	87	80	75	72	79	74	71	78	74	71	77	73	71	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	68	65	71	67	64	71	67	64	63
10	79	70	65	62	78	70	65	62	69	65	62	68	64	61	68	64	61	60

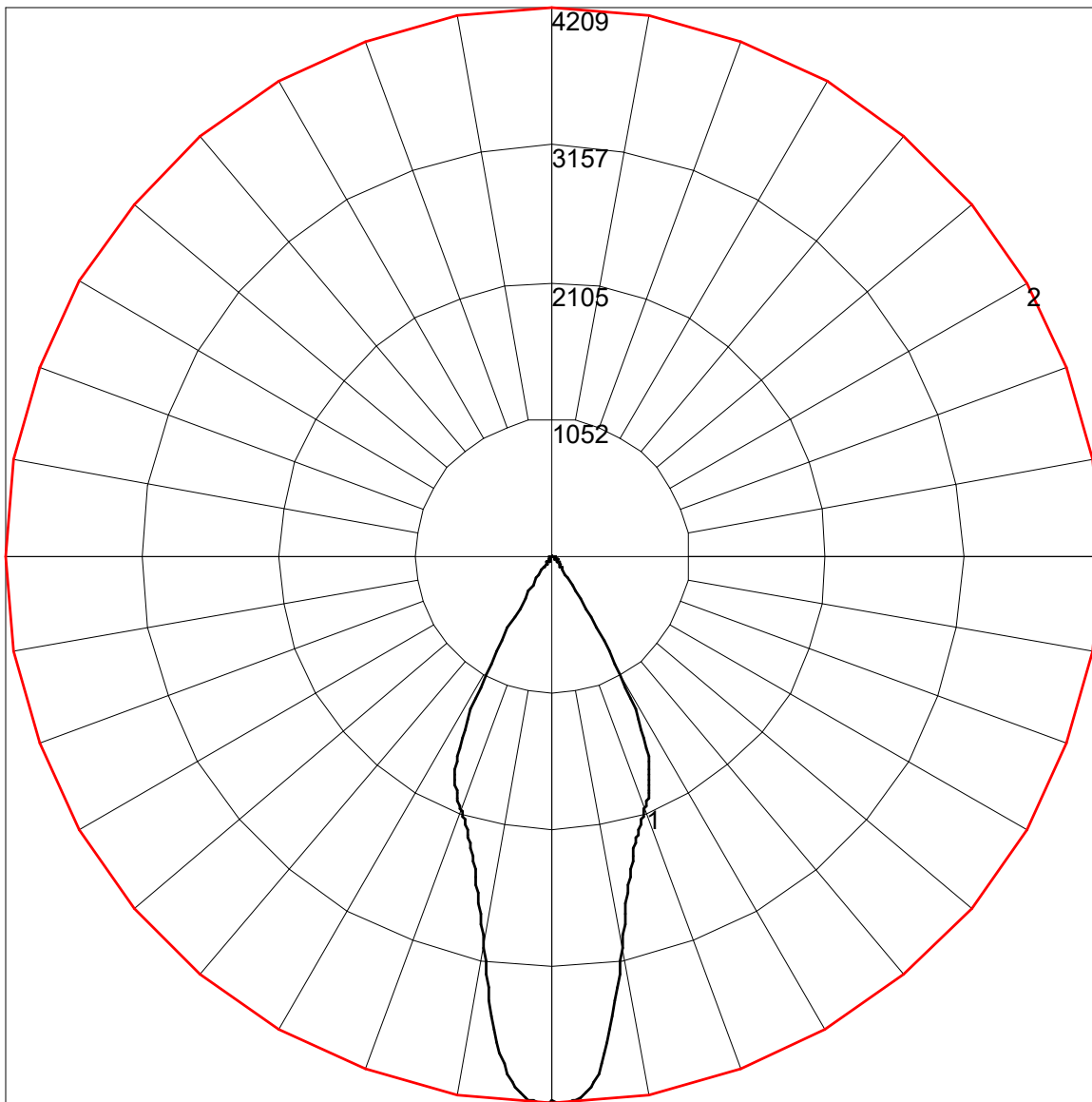
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UGR TABLE - CORRECTED

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	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	3H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	4H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	6H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	8H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	12H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
4H	2H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	3H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	4H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	6H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	8H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	12H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
8H	4H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	6H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	8H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	12H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
12H	4H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	6H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	8H	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

Maximum UGR = 2.5

POLAR GRAPH



Maximum Candela = 4209.121 Located At Horizontal Angle = 0, Vertical Angle = 1
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.)