



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L10-835-XXX-DIM-UNV-LM-WH-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12316380.09

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 27-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 6CR-TL-L10-835-xxx-DIM-UNV-LM-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	895
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	99
Total Luminaire Watts	9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.56
Spacing Criterion (90-270)	0.56
Spacing Criterion (Diagonal)	0.54
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.35 ft (Diameter)
Luminous Width (90-270)	0.35 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	6791	6791	6791
55	5293	5293	5293
65	4424	4424	4424
75	3559	3559	3559
85	2126	2126	2126

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CANDELA TABULATION

	<u>0</u>
0.0	2315.825
0.5	2314.827
1.0	2311.335
1.5	2305.847
2.0	2298.863
2.5	2289.384
3.0	2278.409
3.5	2265.438
4.0	2250.471
4.5	2234.507
5.0	2216.547
5.5	2196.592
6.0	2174.641
6.5	2150.195
7.0	2123.754
7.5	2094.819
8.0	2063.389
8.5	2029.465
9.0	1993.545
9.5	1954.632
10.0	1912.726
10.5	1867.826
11.0	1820.931
11.5	1771.541
12.0	1719.158
12.5	1664.780
13.0	1607.907
13.5	1549.039
14.0	1487.676
14.5	1424.317
15.0	1360.460
15.5	1295.605
16.0	1230.750
16.5	1165.396
17.0	1100.541
17.5	1037.681
18.0	975.321
18.5	915.454
19.0	858.083
19.5	802.706
20.0	750.323
20.5	699.936
21.0	653.041
21.5	608.640
22.0	566.734
22.5	527.821
23.0	491.103
23.5	456.879
24.0	425.100
24.5	395.416
25.0	367.878
25.5	342.285
26.0	318.289
26.5	296.138

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	275.484
<b>27.5</b>	256.577
<b>28.0</b>	238.966
<b>28.5</b>	222.702
<b>29.0</b>	207.786
<b>29.5</b>	193.867
<b>30.0</b>	180.946
<b>30.5</b>	169.022
<b>31.0</b>	157.997
<b>31.5</b>	147.870
<b>32.0</b>	138.491
<b>32.5</b>	129.860
<b>33.0</b>	121.928
<b>33.5</b>	114.594
<b>34.0</b>	107.909
<b>34.5</b>	101.723
<b>35.0</b>	96.135
<b>35.5</b>	90.947
<b>36.0</b>	86.207
<b>36.5</b>	81.867
<b>37.0</b>	77.876
<b>37.5</b>	74.234
<b>38.0</b>	70.941
<b>38.5</b>	67.898
<b>39.0</b>	65.105
<b>39.5</b>	62.560
<b>40.0</b>	60.215
<b>40.5</b>	58.020
<b>41.0</b>	55.975
<b>41.5</b>	54.129
<b>42.0</b>	52.383
<b>42.5</b>	50.737
<b>43.0</b>	49.240
<b>43.5</b>	47.793
<b>44.0</b>	46.446
<b>44.5</b>	45.199
<b>45.0</b>	43.952
<b>45.5</b>	42.804
<b>46.0</b>	41.757
<b>46.5</b>	40.709
<b>47.0</b>	39.711
<b>47.5</b>	38.813
<b>48.0</b>	37.865
<b>48.5</b>	37.017
<b>49.0</b>	36.169
<b>49.5</b>	35.321
<b>50.0</b>	34.573
<b>50.5</b>	33.824
<b>51.0</b>	33.126
<b>51.5</b>	32.378
<b>52.0</b>	31.679
<b>52.5</b>	31.031
<b>53.0</b>	30.332
<b>53.5</b>	29.684
<b>54.0</b>	29.035
<b>54.5</b>	28.387

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CANDELA TABULATION - (Cont.)

55.0	27.788
55.5	27.189
56.0	26.591
56.5	25.992
57.0	25.343
57.5	24.795
58.0	24.246
58.5	23.747
59.0	23.198
59.5	22.649
60.0	22.101
60.5	21.552
61.0	21.103
61.5	20.554
62.0	20.055
62.5	19.556
63.0	19.057
63.5	18.608
64.0	18.110
64.5	17.611
65.0	17.112
65.5	16.663
66.0	16.214
66.5	15.765
67.0	15.266
67.5	14.817
68.0	14.368
68.5	13.919
69.0	13.470
69.5	13.021
70.0	12.572
70.5	12.173
71.0	11.774
71.5	11.275
72.0	10.876
72.5	10.477
73.0	10.077
73.5	9.628
74.0	9.229
74.5	8.830
75.0	8.431
75.5	8.032
76.0	7.633
76.5	7.234
77.0	6.835
77.5	6.535
78.0	6.136
78.5	5.787
79.0	5.438
79.5	5.089
80.0	4.739
80.5	4.390
81.0	4.041
81.5	3.792
82.0	3.392
82.5	3.143

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CANDELA TABULATION - (Cont.)

83.0	2.794
83.5	2.544
84.0	2.245
84.5	1.946
85.0	1.696
85.5	1.397
86.0	1.197
86.5	0.948
87.0	0.798
87.5	0.649
88.0	0.499
88.5	0.399
89.0	0.299
89.5	0.200
90.0	0.150
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
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99.0	0.000
99.5	0.000
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101.5	0.000
102.0	0.000
102.5	0.000
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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  
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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
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134.5	0.000
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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

IES INDOOR REPORT  
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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
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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
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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	566.03	N.A.	63.20
0-30	743.40	N.A.	83.10
0-40	807.34	N.A.	90.20
0-60	866.94	N.A.	96.90
0-80	892.93	N.A.	99.80
0-90	895.04	N.A.	100.00
10-90	692.93	N.A.	77.40
20-40	241.31	N.A.	27.00
20-50	275.94	N.A.	30.80
40-70	76.62	N.A.	8.60
60-80	25.98	N.A.	2.90
70-80	8.97	N.A.	1.00
80-90	2.11	N.A.	0.20
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	895.04	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	202.11
10-20	363.92
20-30	177.37
30-40	63.94
40-50	34.63
50-60	24.98
60-70	17.02
70-80	8.97
80-90	2.11
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	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	109	104	101	97	107	103	99	96	99	97	94	96	94	92	94	92	90	89
3	104	98	94	90	102	97	93	89	94	91	88	92	89	87	90	87	85	84
4	100	93	88	84	98	92	87	84	90	86	83	88	85	82	86	83	81	80
5	96	88	83	80	94	88	83	79	86	82	79	84	81	78	83	80	77	76
6	92	84	79	75	91	84	79	75	82	78	75	81	77	74	80	76	74	72
7	89	81	76	72	88	80	75	72	79	74	71	78	74	71	77	73	71	69
8	86	77	72	69	84	77	72	69	76	71	68	75	71	68	74	70	68	67
9	83	74	69	66	82	74	69	66	73	69	66	72	68	65	71	68	65	64
10	80	72	67	63	79	71	66	63	70	66	63	70	66	63	69	65	63	62

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## UGR TABLE - CORRECTED

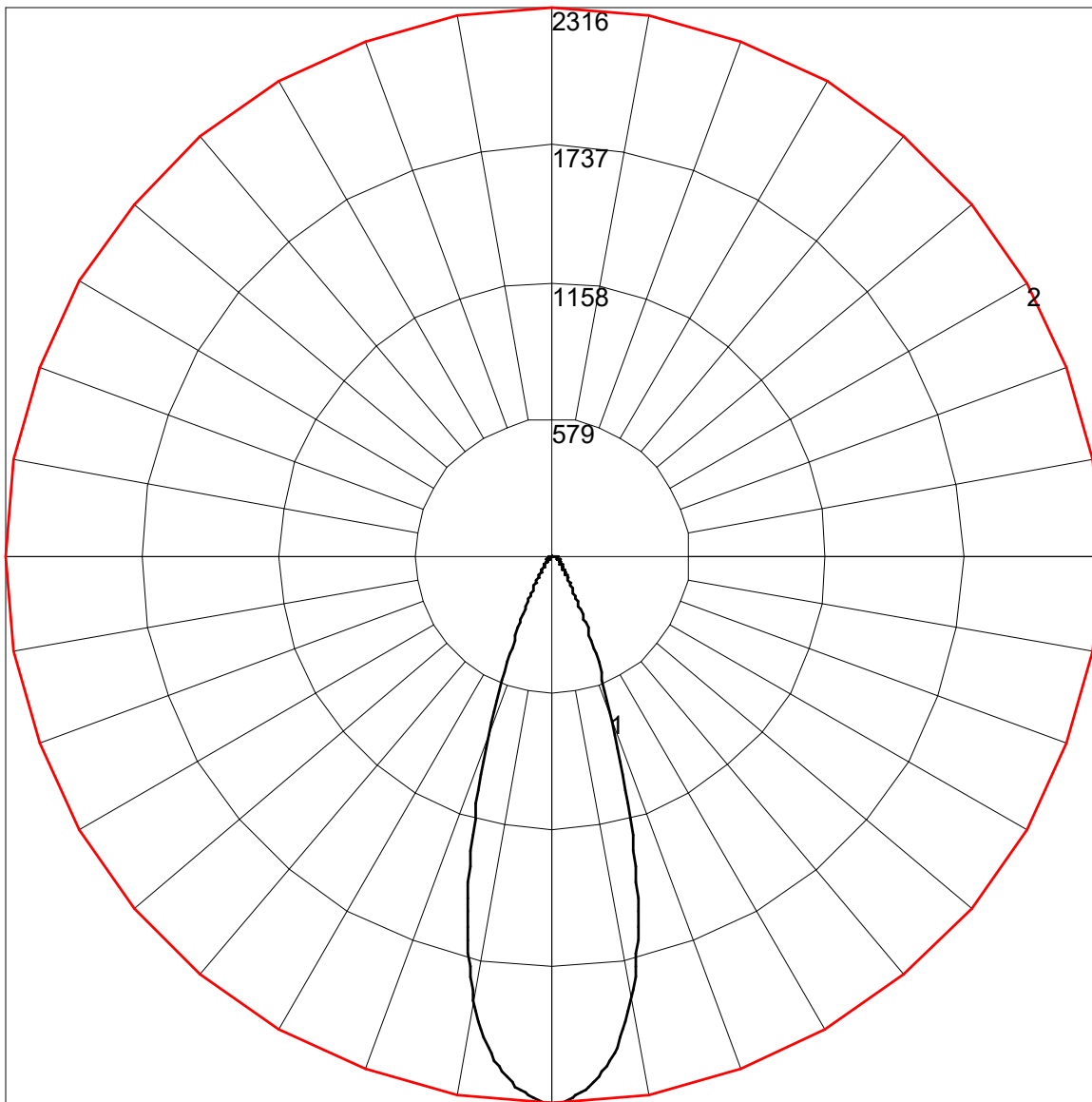
### Reflectances

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	11.5	12.6	11.9	12.9	13.2	11.5	12.6	11.9	12.9	13.2
	3H	13.0	13.9	13.4	14.2	14.6	13.0	13.9	13.4	14.2	14.6
	4H	13.5	14.3	13.9	14.7	15.1	13.5	14.3	13.9	14.7	15.1
	6H	13.8	14.6	14.3	15.0	15.4	13.8	14.6	14.3	15.0	15.4
	8H	13.9	14.6	14.4	15.0	15.4	13.9	14.6	14.4	15.0	15.4
	12H	13.9	14.6	14.4	15.0	15.4	13.9	14.6	14.4	15.0	15.4
4H	2H	12.0	12.8	12.4	13.2	13.6	12.0	12.8	12.4	13.2	13.6
	3H	13.6	14.3	14.0	14.7	15.1	13.6	14.3	14.0	14.7	15.1
	4H	14.3	14.9	14.7	15.3	15.7	14.3	14.9	14.7	15.3	15.7
	6H	14.7	15.2	15.2	15.7	16.1	14.7	15.2	15.2	15.7	16.1
	8H	14.8	15.3	15.3	15.7	16.2	14.8	15.3	15.3	15.7	16.2
	12H	14.8	15.3	15.3	15.7	16.2	14.8	15.3	15.3	15.7	16.2
8H	4H	14.4	14.9	14.9	15.4	15.8	14.4	14.9	14.9	15.4	15.8
	6H	14.9	15.3	15.5	15.8	16.3	14.9	15.3	15.5	15.8	16.3
	8H	15.1	15.5	15.6	16.0	16.5	15.1	15.5	15.6	16.0	16.5
	12H	15.2	15.5	15.7	16.0	16.6	15.2	15.5	15.7	16.0	16.6
12H	4H	14.4	14.8	14.9	15.3	15.8	14.4	14.8	14.9	15.3	15.8
	6H	15.0	15.3	15.5	15.8	16.3	15.0	15.3	15.5	15.8	16.3
	8H	15.1	15.5	15.7	15.9	16.5	15.1	15.5	15.7	15.9	16.5

Maximum UGR = 16.6

POLAR GRAPH



Maximum Candela = 2315.825 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)