



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L40-835-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-L40-835-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	3577
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	94
Total Luminaire Watts	38
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	27143	27143	27143
55	21156	21156	21156
65	17681	17681	17681
75	14225	14225	14225
85	8498	8498	8498

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CANDELA TABULATION

	<u>0</u>
0.0	9255.535
0.5	9251.547
1.0	9237.590
1.5	9215.658
2.0	9187.744
2.5	9149.860
3.0	9105.995
3.5	9054.155
4.0	8994.339
4.5	8930.535
5.0	8858.755
5.5	8779.001
6.0	8691.271
6.5	8593.571
7.0	8487.896
7.5	8372.252
8.0	8246.638
8.5	8111.055
9.0	7967.497
9.5	7811.975
10.0	7644.490
10.5	7465.042
11.0	7277.618
11.5	7080.225
12.0	6870.869
12.5	6653.537
13.0	6426.237
13.5	6190.960
14.0	5945.714
14.5	5692.493
15.0	5437.278
15.5	5178.075
16.0	4918.872
16.5	4657.676
17.0	4398.473
17.5	4147.245
18.0	3898.012
18.5	3658.748
19.0	3429.453
19.5	3208.134
20.0	2998.777
20.5	2797.397
21.0	2609.973
21.5	2432.519
22.0	2265.034
22.5	2109.512
23.0	1962.764
23.5	1825.984
24.0	1698.975
24.5	1580.340
25.0	1470.278
25.5	1367.993
26.0	1272.088
26.5	1183.560

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	1101.014
<b>27.5</b>	1025.446
<b>28.0</b>	955.063
<b>28.5</b>	890.063
<b>29.0</b>	830.446
<b>29.5</b>	774.817
<b>30.0</b>	723.176
<b>30.5</b>	675.522
<b>31.0</b>	631.458
<b>31.5</b>	590.982
<b>32.0</b>	553.498
<b>32.5</b>	519.004
<b>33.0</b>	487.301
<b>33.5</b>	457.991
<b>34.0</b>	431.274
<b>34.5</b>	406.550
<b>35.0</b>	384.218
<b>35.5</b>	363.482
<b>36.0</b>	344.540
<b>36.5</b>	327.194
<b>37.0</b>	311.243
<b>37.5</b>	296.688
<b>38.0</b>	283.528
<b>38.5</b>	271.365
<b>39.0</b>	260.200
<b>39.5</b>	250.031
<b>40.0</b>	240.660
<b>40.5</b>	231.887
<b>41.0</b>	223.712
<b>41.5</b>	216.335
<b>42.0</b>	209.356
<b>42.5</b>	202.776
<b>43.0</b>	196.795
<b>43.5</b>	191.013
<b>44.0</b>	185.629
<b>44.5</b>	180.644
<b>45.0</b>	175.660
<b>45.5</b>	171.074
<b>46.0</b>	166.887
<b>46.5</b>	162.700
<b>47.0</b>	158.712
<b>47.5</b>	155.123
<b>48.0</b>	151.335
<b>48.5</b>	147.945
<b>49.0</b>	144.555
<b>49.5</b>	141.166
<b>50.0</b>	138.175
<b>50.5</b>	135.184
<b>51.0</b>	132.393
<b>51.5</b>	129.402
<b>52.0</b>	126.611
<b>52.5</b>	124.019
<b>53.0</b>	121.227
<b>53.5</b>	118.635
<b>54.0</b>	116.043
<b>54.5</b>	113.451

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CANDELA TABULATION - (Cont.)

55.0	111.058
55.5	108.666
56.0	106.273
56.5	103.881
57.0	101.288
57.5	99.095
58.0	96.902
58.5	94.908
59.0	92.715
59.5	90.522
60.0	88.328
60.5	86.135
61.0	84.341
61.5	82.147
62.0	80.153
62.5	78.160
63.0	76.166
63.5	74.371
64.0	72.377
64.5	70.384
65.0	68.390
65.5	66.595
66.0	64.801
66.5	63.006
67.0	61.012
67.5	59.218
68.0	57.423
68.5	55.629
69.0	53.834
69.5	52.040
70.0	50.245
70.5	48.650
71.0	47.055
71.5	45.061
72.0	43.466
72.5	41.871
73.0	40.276
73.5	38.482
74.0	36.887
74.5	35.291
75.0	33.696
75.5	32.101
76.0	30.506
76.5	28.911
77.0	27.316
77.5	26.120
78.0	24.525
78.5	23.129
79.0	21.733
79.5	20.337
80.0	18.942
80.5	17.546
81.0	16.150
81.5	15.153
82.0	13.558
82.5	12.561

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CANDELA TABULATION - (Cont.)

83.0	11.166
83.5	10.169
84.0	8.972
84.5	7.776
85.0	6.779
85.5	5.583
86.0	4.785
86.5	3.788
87.0	3.190
87.5	2.592
88.0	1.994
88.5	1.595
89.0	1.196
89.5	0.798
90.0	0.598
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  
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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
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134.0	0.000
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
143.5	0.000
144.0	0.000
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150.5	0.000
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153.5	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
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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	2262.22	N.A.	63.20
0-30	2971.11	N.A.	83.10
0-40	3226.65	N.A.	90.20
0-60	3464.87	N.A.	96.90
0-80	3568.72	N.A.	99.80
0-90	3577.15	N.A.	100.00
10-90	2769.38	N.A.	77.40
20-40	964.43	N.A.	27.00
20-50	1102.82	N.A.	30.80
40-70	306.23	N.A.	8.60
60-80	103.85	N.A.	2.90
70-80	35.84	N.A.	1.00
80-90	8.43	N.A.	0.20
90-110	0.02	N.A.	0.00
90-120	0.02	N.A.	0.00
90-130	0.02	N.A.	0.00
90-150	0.02	N.A.	0.00
90-180	0.02	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	3577.17	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	807.77
10-20	1454.45
20-30	708.89
30-40	255.54
40-50	138.39
50-60	99.83
60-70	68.01
70-80	35.84
80-90	8.43
90-100	0.02
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

X=2H	Y=2H	16.3	17.4	16.7	17.7	18.0	UGR Viewed Endwise	16.3	17.4	16.7	17.7	18.0
	3H	17.8	18.7	18.2	19.0	19.4		17.8	18.7	18.2	19.0	19.4
	4H	18.3	19.1	18.7	19.5	19.9		18.3	19.1	18.7	19.5	19.9
	6H	18.6	19.4	19.0	19.8	20.2		18.6	19.4	19.0	19.8	20.2
	8H	18.7	19.4	19.1	19.8	20.2		18.7	19.4	19.1	19.8	20.2
	12H	18.7	19.4	19.2	19.8	20.2		18.7	19.4	19.2	19.8	20.2

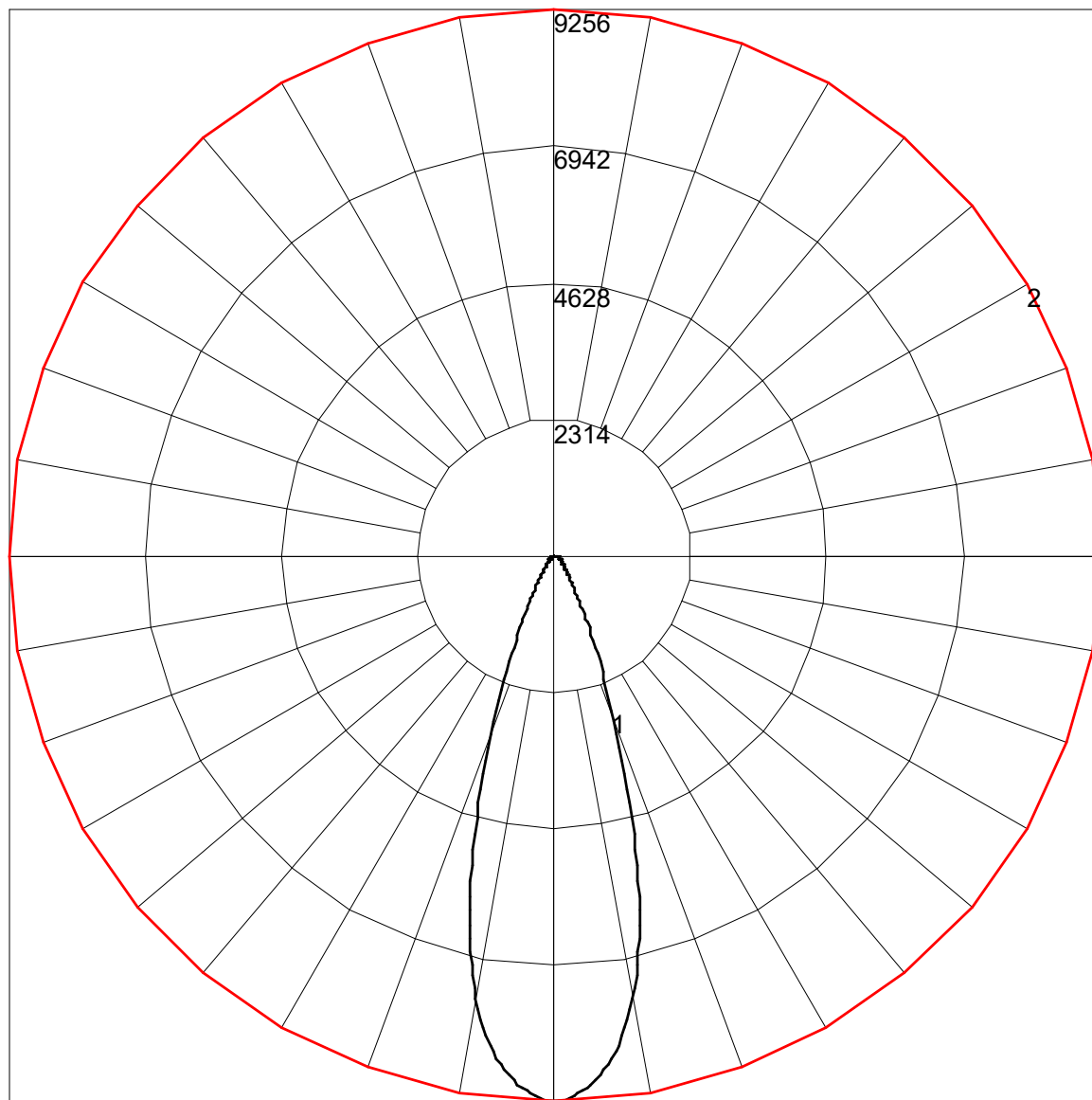
4H	2H	16.8	17.6	17.2	18.0	18.4	16.8	17.6	17.2	18.0	18.4
	3H	18.4	19.1	18.8	19.5	19.9	18.4	19.1	18.8	19.5	19.9
	4H	19.0	19.7	19.5	20.1	20.5	19.0	19.7	19.5	20.1	20.5
	6H	19.5	20.0	20.0	20.5	20.9	19.5	20.0	20.0	20.5	20.9
	8H	19.6	20.1	20.1	20.5	21.0	19.6	20.1	20.1	20.5	21.0
	12H	19.6	20.1	20.1	20.5	21.0	19.6	20.1	20.1	20.5	21.0

8H	4H	19.2	19.7	19.7	20.1	20.6	19.2	19.7	19.7	20.1	20.6
	6H	19.7	20.1	20.3	20.6	21.1	19.7	20.1	20.3	20.6	21.1
	8H	19.9	20.2	20.4	20.8	21.3	19.9	20.2	20.4	20.8	21.3
	12H	20.0	20.3	20.5	20.8	21.4	20.0	20.3	20.5	20.8	21.4

12H	4H	19.2	19.6	19.7	20.1	20.6	19.2	19.6	19.7	20.1	20.6
	6H	19.8	20.1	20.3	20.6	21.1	19.8	20.1	20.3	20.6	21.1
	8H	19.9	20.2	20.5	20.7	21.3	19.9	20.2	20.5	20.7	21.3

Maximum UGR = 21.4

POLAR GRAPH



Maximum Candela = 9255.535 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.)