



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L20-830-XXX-DIM-UNV-RM-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12316380.14

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 27-JAN-2021

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.64836

[LUMCAT] 6CR-TL-L20-830-xxx-DIM-UNV-RM-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	1724
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	87
Total Luminaire Watts	19.7717
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.52
Spacing Criterion (90-270)	0.52
Spacing Criterion (Diagonal)	0.52
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	9892	9892	9892
55	6880	6880	6880
65	4912	4912	4912
75	3288	3288	3288
85	2682	2682	2682

CANDELA TABULATION

	<u>0</u>
0.0	4971.030
0.5	4967.189
1.0	4955.664
1.5	4937.416
2.0	4912.446
2.5	4880.753
3.0	4843.297
3.5	4799.119
4.0	4748.218
4.5	4693.475
5.0	4632.970
5.5	4565.742
6.0	4493.712
6.5	4416.880
7.0	4334.285
7.5	4245.928
8.0	4153.730
8.5	4055.769
9.0	3954.927
9.5	3850.244
10.0	3741.718
10.5	3630.312
11.0	3516.024
11.5	3399.816
12.0	3281.687
12.5	3164.518
13.0	3047.349
13.5	2929.220
14.0	2810.130
14.5	2691.041
15.0	2573.872
15.5	2457.664
16.0	2341.455
16.5	2228.128
17.0	2115.761
17.5	2005.315
18.0	1896.790
18.5	1791.146
19.0	1690.304
19.5	1591.383
20.0	1495.343
20.5	1404.105
21.0	1315.748
21.5	1231.233
22.0	1151.520
22.5	1075.648
23.0	1004.578
23.5	936.582
24.0	872.235
24.5	811.634
25.0	754.970
25.5	702.244
26.0	653.072
26.5	606.973

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CANDELA TABULATION - (Cont.)

27.0	564.139
27.5	524.474
28.0	487.595
28.5	453.213
29.0	421.712
29.5	392.323
30.0	365.144
30.5	340.174
31.0	317.124
31.5	295.803
32.0	276.115
32.5	258.059
33.0	241.349
33.5	225.790
34.0	211.576
34.5	198.323
35.0	186.126
35.5	174.889
36.0	164.420
36.5	154.816
37.0	145.885
37.5	137.817
38.0	130.326
38.5	123.603
39.0	117.361
39.5	111.695
40.0	106.604
40.5	101.802
41.0	97.481
41.5	93.447
42.0	89.701
42.5	86.244
43.0	82.979
43.5	79.905
44.0	77.024
44.5	74.335
45.0	71.838
45.5	69.533
46.0	67.324
46.5	65.211
47.0	63.194
47.5	61.370
48.0	59.641
48.5	57.912
49.0	56.279
49.5	54.743
50.0	53.302
50.5	51.862
51.0	50.517
51.5	49.076
52.0	47.828
52.5	46.483
53.0	45.331
53.5	44.082
54.0	42.834
54.5	41.681

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CANDELA TABULATION - (Cont.)

55.0	40.529
55.5	39.376
56.0	38.320
56.5	37.264
57.0	36.207
57.5	35.151
58.0	34.094
58.5	33.134
59.0	32.173
59.5	31.213
60.0	30.253
60.5	29.292
61.0	28.332
61.5	27.467
62.0	26.507
62.5	25.643
63.0	24.682
63.5	23.818
64.0	22.954
64.5	22.089
65.0	21.321
65.5	20.457
66.0	19.688
66.5	18.824
67.0	18.056
67.5	17.287
68.0	16.519
68.5	15.847
69.0	15.078
69.5	14.406
70.0	13.734
70.5	13.157
71.0	12.581
71.5	12.005
72.0	11.429
72.5	10.949
73.0	10.468
73.5	9.988
74.0	9.604
74.5	9.124
75.0	8.740
75.5	8.355
76.0	7.971
76.5	7.683
77.0	7.299
77.5	6.915
78.0	6.627
78.5	6.243
79.0	5.954
79.5	5.666
80.0	5.282
80.5	4.994
81.0	4.706
81.5	4.418
82.0	4.034
82.5	3.746

CANDELA TABULATION - (Cont.)

83.0	3.457
83.5	3.169
84.0	2.881
84.5	2.593
85.0	2.401
85.5	2.113
86.0	1.825
86.5	1.537
87.0	1.345
87.5	1.152
88.0	0.960
88.5	0.768
89.0	0.672
89.5	0.480
90.0	0.384
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
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107.0	0.000
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108.0	0.000
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109.0	0.000
109.5	0.000
110.0	0.000
110.5	0.000

CANDELA TABULATION - (Cont.)

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111.5	0.000
112.0	0.000
112.5	0.000
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138.5	0.000

CANDELA TABULATION - (Cont.)

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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
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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	1112.35	N.A.	64.50
0-30	1473.34	N.A.	85.40
0-40	1597.21	N.A.	92.60
0-60	1690.85	N.A.	98.10
0-80	1721.59	N.A.	99.80
0-90	1724.32	N.A.	100.00
10-90	1310.77	N.A.	76.00
20-40	484.86	N.A.	28.10
20-50	541.97	N.A.	31.40
40-70	114.88	N.A.	6.70
60-80	30.74	N.A.	1.80
70-80	9.50	N.A.	0.60
80-90	2.73	N.A.	0.20
90-110	0.01	N.A.	0.00
90-120	0.01	N.A.	0.00
90-130	0.01	N.A.	0.00
90-150	0.01	N.A.	0.00
90-180	0.01	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1724.33	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	413.55
10-20	698.80
20-30	360.99
30-40	123.87
40-50	57.11
50-60	36.53
60-70	21.24
70-80	9.50
80-90	2.73
90-100	0.01
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	109	107	112	109	107	106	105	104	102	102	101	99	98	97	97	95
2	109	105	101	98	107	103	100	97	100	98	95	97	95	93	95	93	91	90
3	105	99	95	92	103	98	94	91	95	92	89	93	90	88	91	89	87	85
4	101	94	90	86	99	93	89	85	91	87	84	89	86	83	87	85	83	81
5	97	90	85	81	95	89	84	81	87	83	80	86	82	79	84	81	79	77
6	93	86	81	77	92	85	80	77	84	79	76	82	79	76	81	78	75	74
7	90	82	77	74	89	81	77	73	80	76	73	79	75	73	78	75	72	71
8	87	79	74	70	86	78	74	70	77	73	70	76	73	70	75	72	69	68
9	84	76	71	68	83	75	71	67	74	70	67	74	70	67	73	69	67	66
10	81	73	68	65	80	73	68	65	72	68	65	71	67	65	71	67	64	63

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UGR TABLE - CORRECTED

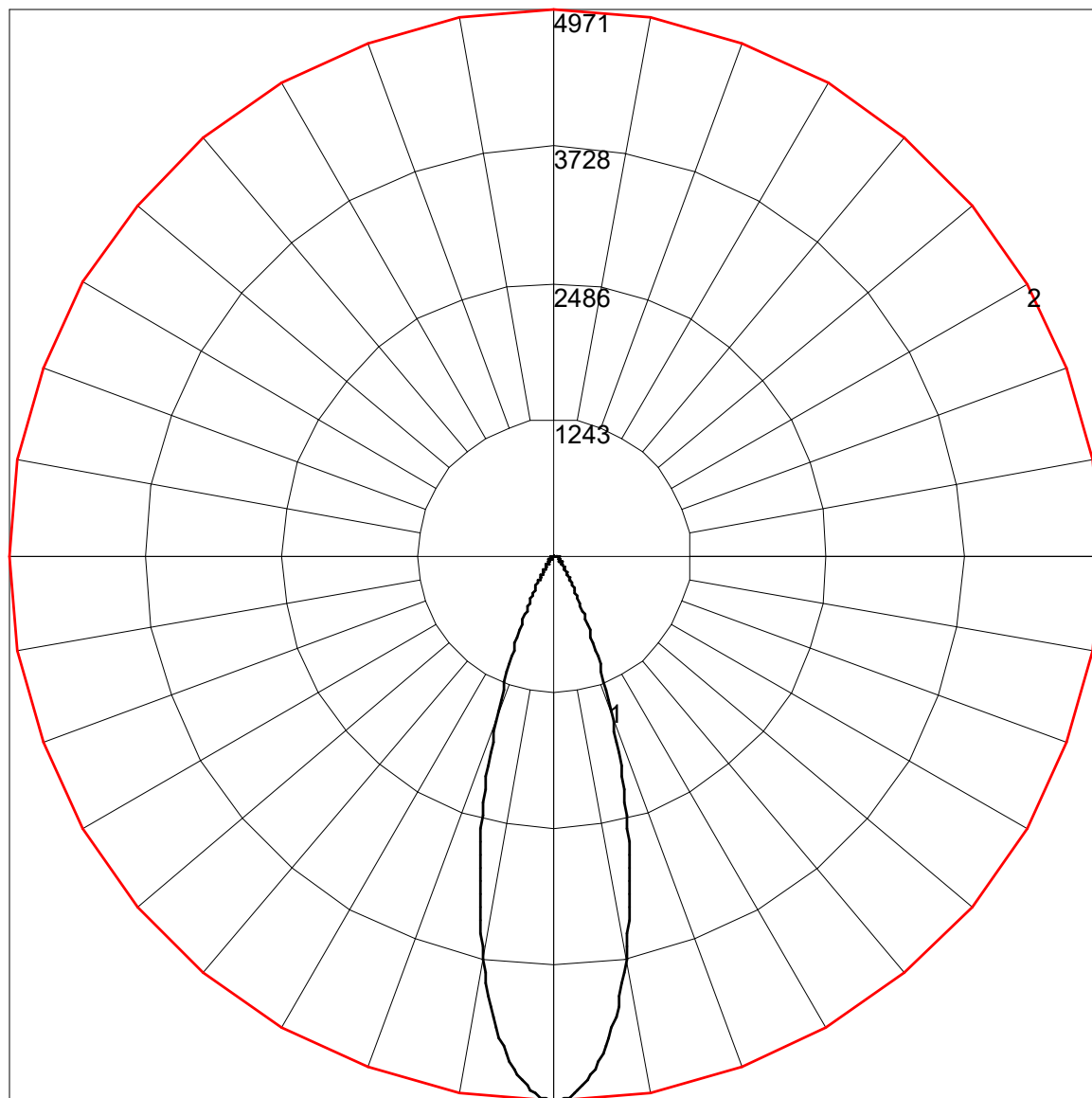
Reflectances

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	11.3	12.3	11.7	12.6	12.9	11.3	12.3	11.7	12.6	12.9
	3H	12.3	13.1	12.6	13.5	13.9	12.3	13.1	12.6	13.5	13.9
	4H	12.6	13.4	13.0	13.7	14.1	12.6	13.4	13.0	13.7	14.1
	6H	12.8	13.5	13.2	13.9	14.3	12.8	13.5	13.2	13.9	14.3
	8H	12.8	13.5	13.3	13.9	14.3	12.8	13.5	13.3	13.9	14.3
	12H	12.9	13.5	13.3	13.9	14.3	12.9	13.5	13.3	13.9	14.3
4H	2H	11.6	12.4	12.0	12.8	13.1	11.6	12.4	12.0	12.8	13.1
	3H	12.7	13.4	13.1	13.8	14.2	12.7	13.4	13.1	13.8	14.2
	4H	13.1	13.7	13.5	14.1	14.5	13.1	13.7	13.5	14.1	14.5
	6H	13.4	13.9	13.9	14.3	14.8	13.4	13.9	13.9	14.3	14.8
	8H	13.5	14.0	14.0	14.4	14.9	13.5	14.0	14.0	14.4	14.9
	12H	13.5	13.9	14.0	14.4	14.9	13.5	13.9	14.0	14.4	14.9
8H	4H	13.2	13.6	13.6	14.1	14.6	13.2	13.6	13.6	14.1	14.6
	6H	13.6	13.9	14.1	14.4	14.9	13.6	13.9	14.1	14.4	14.9
	8H	13.7	14.0	14.3	14.6	15.1	13.7	14.0	14.3	14.6	15.1
	12H	13.9	14.1	14.4	14.6	15.2	13.9	14.1	14.4	14.6	15.2
12H	4H	13.1	13.5	13.6	14.0	14.5	13.1	13.5	13.6	14.0	14.5
	6H	13.6	13.9	14.1	14.4	14.9	13.6	13.9	14.1	14.4	14.9
	8H	13.8	14.0	14.3	14.5	15.1	13.8	14.0	14.3	14.5	15.1

Maximum UGR = 15.2

POLAR GRAPH



Maximum Candela = 4971.03 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.)