



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L50-830-XXX-DIM-UNV-LW-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12316380.07

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 28-JAN-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 6CR-TL-L50-830-xxx-DIM-UNV-LW-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	3229
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	71
Total Luminaire Watts	45.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.00
Spacing Criterion (90-270)	1.00
Spacing Criterion (Diagonal)	0.90
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	89098	89098	89098
55	73212	73212	73212
65	53560	53560	53560
75	37078	37078	37078
85	20212	20212	20212

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CANDELA TABULATION

	<u>0</u>
0.0	2268.013
0.5	2267.296
1.0	2265.863
1.5	2263.952
2.0	2262.041
2.5	2259.891
3.0	2257.025
3.5	2255.353
4.0	2254.159
4.5	2253.442
5.0	2252.487
5.5	2251.531
6.0	2250.815
6.5	2249.859
7.0	2249.142
7.5	2248.665
8.0	2248.426
8.5	2247.709
9.0	2246.993
9.5	2245.559
10.0	2244.604
10.5	2242.932
11.0	2241.260
11.5	2239.110
12.0	2236.722
12.5	2233.855
13.0	2230.511
13.5	2226.689
14.0	2221.912
14.5	2216.179
15.0	2209.252
15.5	2200.892
16.0	2191.576
16.5	2180.589
17.0	2168.645
17.5	2155.269
18.0	2139.504
18.5	2123.261
19.0	2105.585
19.5	2085.760
20.0	2064.023
20.5	2040.375
21.0	2014.817
21.5	1987.348
22.0	1957.012
22.5	1924.765
23.0	1890.130
23.5	1852.867
24.0	1812.738
24.5	1769.981
25.0	1723.642
25.5	1675.153
26.0	1623.319
26.5	1568.380

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CANDELA TABULATION - (Cont.)

27.0	1511.531
27.5	1452.292
28.0	1392.099
28.5	1331.666
29.0	1272.428
29.5	1214.384
30.0	1158.490
30.5	1105.940
31.0	1056.734
31.5	1011.827
32.0	970.982
32.5	934.197
33.0	901.472
33.5	872.331
34.0	846.295
34.5	823.364
35.0	802.583
35.5	783.712
36.0	766.992
36.5	751.227
37.0	736.895
37.5	723.519
38.0	711.098
38.5	699.155
39.0	688.167
39.5	677.418
40.0	667.386
40.5	657.353
41.0	647.799
41.5	638.483
42.0	629.645
42.5	620.807
43.0	611.969
43.5	603.131
44.0	594.293
44.5	585.455
45.0	576.617
45.5	567.779
46.0	558.942
46.5	550.104
47.0	540.788
47.5	531.472
48.0	522.156
48.5	512.602
49.0	502.809
49.5	493.015
50.0	483.461
50.5	473.667
51.0	463.874
51.5	454.080
52.0	444.526
52.5	434.971
53.0	425.178
53.5	415.145
54.0	404.874
54.5	394.603

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 6CR-TL-L50-830-XXX-DIM-UNV-LW-CS-XX_.IES****CANDELA TABULATION - (Cont.)**

55.0	384.332
55.5	374.061
56.0	364.029
56.5	354.235
57.0	344.442
57.5	334.648
58.0	325.094
58.5	315.778
59.0	306.462
59.5	297.386
60.0	288.548
60.5	279.710
61.0	271.111
61.5	262.750
62.0	254.390
62.5	246.030
63.0	238.052
63.5	230.121
64.0	222.335
64.5	214.667
65.0	207.167
65.5	199.857
66.0	192.644
66.5	185.621
67.0	178.766
67.5	172.030
68.0	165.509
68.5	159.131
69.0	152.753
69.5	146.591
70.0	140.595
70.5	134.695
71.0	128.939
71.5	123.325
72.0	117.903
72.5	112.553
73.0	107.345
73.5	102.282
74.0	97.313
74.5	92.512
75.0	87.830
75.5	83.292
76.0	78.849
76.5	74.526
77.0	70.393
77.5	66.285
78.0	62.320
78.5	58.474
79.0	54.700
79.5	51.069
80.0	47.510
80.5	44.047
81.0	40.631
81.5	37.311
82.0	34.062
82.5	30.909

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CANDELA TABULATION - (Cont.)

83.0	27.780
83.5	24.746
84.0	21.784
84.5	18.894
85.0	16.123
85.5	13.448
86.0	10.892
86.5	8.480
87.0	6.354
87.5	4.586
88.0	3.201
88.5	2.030
89.0	1.266
89.5	0.860
90.0	0.597
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
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123.5	0.000
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127.0	0.000
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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
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145.5	0.000
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146.5	0.000
147.0	0.000
147.5	0.000
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150.0	0.000
150.5	0.000
151.0	0.000
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152.0	0.000
152.5	0.000
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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

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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	833.09	N.A.	25.80
0-30	1597.95	N.A.	49.50
0-40	2118.95	N.A.	65.60
0-60	2906.51	N.A.	90.00
0-80	3208.41	N.A.	99.40
0-90	3228.61	N.A.	100.00
10-90	3013.78	N.A.	93.30
20-40	1285.86	N.A.	39.80
20-50	1729.94	N.A.	53.60
40-70	994.71	N.A.	30.80
60-80	301.90	N.A.	9.40
70-80	94.76	N.A.	2.90
80-90	20.19	N.A.	0.60
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	3228.62	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	214.82
10-20	618.26
20-30	764.87
30-40	521.00
40-50	444.07
50-60	343.49
60-70	207.15
70-80	94.76
80-90	20.19
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	111	107	104	101	109	105	102	100	101	99	96	97	95	93	94	92	91	89
2	103	97	91	87	101	95	90	86	92	88	84	89	85	82	86	83	80	78
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70
4	90	80	73	67	88	79	72	67	76	70	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	79	67	60	54	77	66	59	54	65	58	54	63	58	53	62	57	53	51
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	49	47
8	69	58	51	46	68	57	50	45	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	51	44	39	61	50	43	39	49	43	39	48	43	39	47	42	39	37

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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

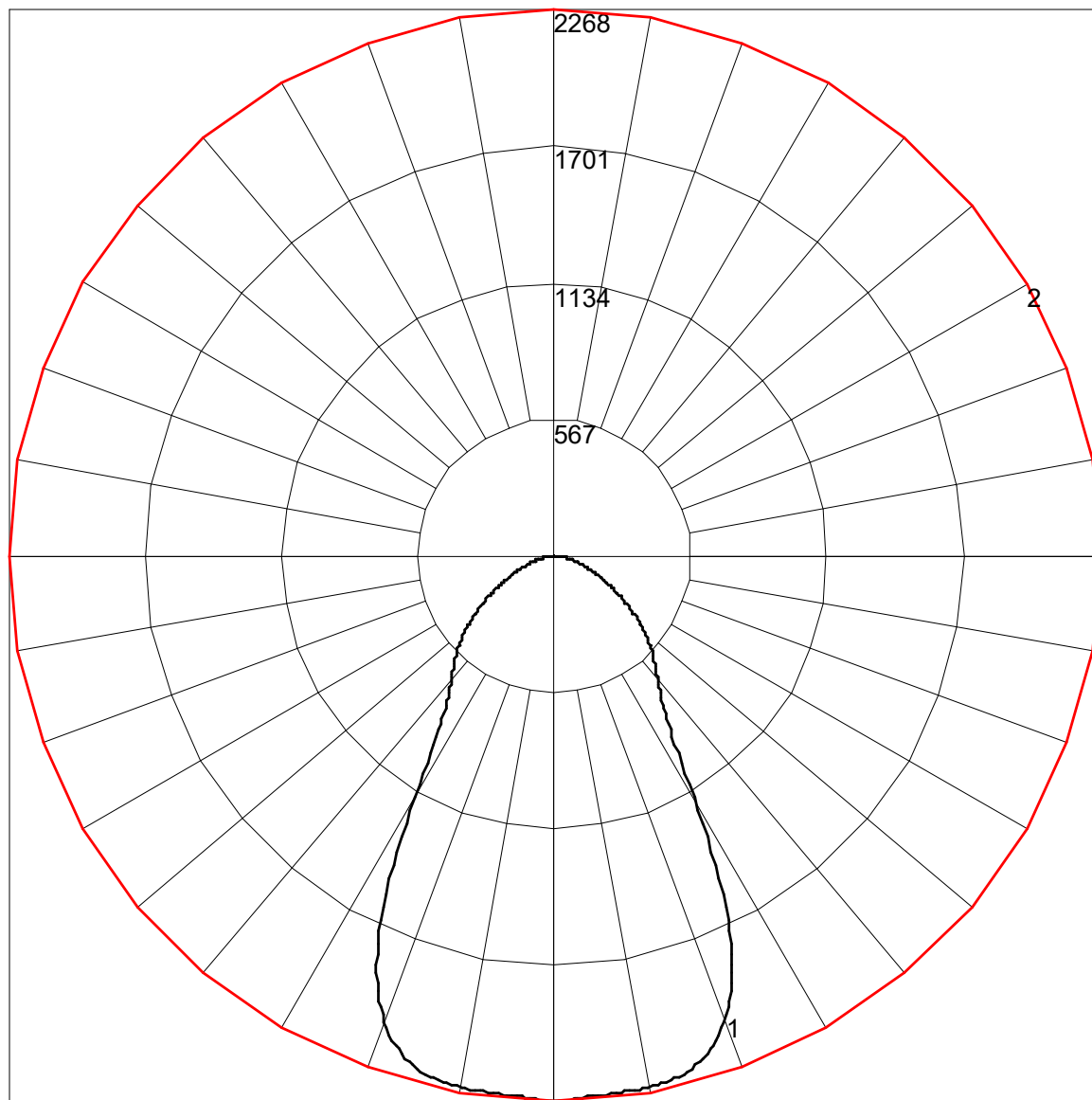
X=2H	Y=2H	24.7	26.1	25.1	26.4	26.7	24.7	26.1	25.1	26.4	26.7
	3H	25.8	27.0	26.2	27.4	27.7	25.8	27.0	26.2	27.4	27.7
	4H	26.2	27.3	26.6	27.6	28.0	26.2	27.3	26.6	27.6	28.0
	6H	26.4	27.4	26.8	27.8	28.2	26.4	27.4	26.8	27.8	28.2
	8H	26.4	27.4	26.9	27.8	28.2	26.4	27.4	26.9	27.8	28.2
	12H	26.4	27.4	26.9	27.8	28.2	26.4	27.4	26.9	27.8	28.2

UGR Viewed Endwise

4H	2H	25.1	26.2	25.5	26.6	26.9	25.1	26.2	25.5	26.6	26.9
	3H	26.4	27.3	26.8	27.7	28.1	26.4	27.3	26.8	27.7	28.1
	4H	26.8	27.7	27.2	28.1	28.5	26.8	27.7	27.2	28.1	28.5
	6H	27.1	27.9	27.6	28.3	28.8	27.1	27.9	27.6	28.3	28.8
	8H	27.2	27.9	27.7	28.3	28.8	27.2	27.9	27.7	28.3	28.8
	12H	27.2	27.8	27.7	28.3	28.8	27.2	27.8	27.7	28.3	28.8
8H	4H	26.9	27.6	27.4	28.1	28.5	26.9	27.6	27.4	28.1	28.5
	6H	27.3	27.9	27.8	28.4	28.9	27.3	27.9	27.8	28.4	28.9
	8H	27.4	27.9	28.0	28.5	28.9	27.4	27.9	28.0	28.5	28.9
	12H	27.5	27.9	28.0	28.4	29.0	27.5	27.9	28.0	28.4	29.0
12H	4H	26.9	27.5	27.4	28.0	28.5	26.9	27.5	27.4	28.0	28.5
	6H	27.3	27.8	27.9	28.3	28.8	27.3	27.8	27.9	28.3	28.8
	8H	27.5	27.9	28.0	28.4	29.0	27.5	27.9	28.0	28.4	29.0

Maximum UGR = 29.0

POLAR GRAPH



Maximum Candela = 2268.013 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.)