



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L30-835-XXX-DIM-UNV-SW-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12316380.11

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 27-JAN-2019

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 6CR-TL-L30-835-xxx-DIM-UNV-SW-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	1717
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	62
Total Luminaire Watts	27.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.28
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	62015	62015	62015
55	52932	52932	52932
65	45149	45149	45149
75	37335	37335	37335
85	23104	23104	23104

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CANDELA TABULATION

	<u>0</u>
0.0	723.029
0.5	722.900
1.0	722.514
1.5	722.127
2.0	721.354
2.5	720.580
3.0	719.549
3.5	718.518
4.0	717.487
4.5	716.456
5.0	715.554
5.5	714.523
6.0	713.492
6.5	712.461
7.0	711.301
7.5	710.012
8.0	708.723
8.5	707.434
9.0	706.017
9.5	704.599
10.0	703.052
10.5	701.506
11.0	699.830
11.5	698.026
12.0	696.222
12.5	694.288
13.0	692.226
13.5	690.035
14.0	687.715
14.5	685.267
15.0	682.689
15.5	680.111
16.0	677.405
16.5	674.827
17.0	671.992
17.5	669.156
18.0	666.321
18.5	663.486
19.0	660.650
19.5	657.815
20.0	654.979
20.5	652.144
21.0	649.180
21.5	646.086
22.0	642.864
22.5	639.256
23.0	635.647
23.5	631.652
24.0	627.656
24.5	623.403
25.0	619.021
25.5	614.639
26.0	609.999
26.5	605.360

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CANDELA TABULATION - (Cont.)

27.0	600.591
27.5	595.694
28.0	590.796
28.5	586.027
29.0	581.259
29.5	576.361
30.0	571.593
30.5	566.566
31.0	561.411
31.5	556.384
32.0	551.229
32.5	546.074
33.0	540.790
33.5	535.377
34.0	530.093
34.5	524.679
35.0	519.266
35.5	513.724
36.0	508.183
36.5	502.512
37.0	496.841
37.5	491.170
38.0	485.370
38.5	479.442
39.0	473.771
39.5	467.842
40.0	461.914
40.5	456.114
41.0	450.057
41.5	444.257
42.0	438.199
42.5	432.271
43.0	426.213
43.5	420.027
44.0	413.841
44.5	407.654
45.0	401.339
45.5	395.153
46.0	388.838
46.5	382.522
47.0	376.207
47.5	369.763
48.0	363.448
48.5	357.004
49.0	350.688
49.5	344.373
50.0	338.058
50.5	331.872
51.0	325.685
51.5	319.499
52.0	313.442
52.5	307.384
53.0	301.455
53.5	295.527
54.0	289.598
54.5	283.799

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CANDELA TABULATION - (Cont.)

55.0	277.870
55.5	272.070
56.0	266.786
56.5	261.115
57.0	255.702
57.5	250.289
58.0	244.876
58.5	239.463
59.0	234.308
59.5	229.153
60.0	223.997
60.5	219.100
61.0	214.073
61.5	208.918
62.0	203.892
62.5	198.865
63.0	193.968
63.5	189.070
64.0	184.173
64.5	179.404
65.0	174.635
65.5	169.867
66.0	165.098
66.5	160.458
67.0	155.947
67.5	151.437
68.0	146.926
68.5	142.544
69.0	138.162
69.5	133.780
70.0	129.398
70.5	125.145
71.0	120.917
71.5	116.716
72.0	112.566
72.5	108.480
73.0	104.407
73.5	100.373
74.0	96.378
74.5	92.383
75.0	88.439
75.5	84.547
76.0	80.654
76.5	76.801
77.0	72.999
77.5	69.210
78.0	65.472
78.5	61.799
79.0	58.152
79.5	54.543
80.0	51.024
80.5	47.558
81.0	44.129
81.5	40.727
82.0	37.389
82.5	34.102

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CANDELA TABULATION - (Cont.)

83.0	30.854
83.5	27.645
84.0	24.513
84.5	21.433
85.0	18.430
85.5	15.556
86.0	12.875
86.5	10.530
87.0	8.390
87.5	6.470
88.0	4.820
88.5	3.518
89.0	2.449
89.5	1.585
90.0	0.980
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
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128.0	0.000
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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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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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Zone	Lumens	%Lamp	%Fixt
0-20	260.33	N.A.	15.20
0-30	544.71	N.A.	31.70
0-40	868.92	N.A.	50.60
0-60	1427.3	N.A.	83.10
0-80	1694.56	N.A.	98.70
0-90	1717.34	N.A.	100.00
10-90	1649.42	N.A.	96.00
20-40	608.59	N.A.	35.40
20-50	917.67	N.A.	53.40
40-70	731.80	N.A.	42.60
60-80	267.26	N.A.	15.60
70-80	93.84	N.A.	5.50
80-90	22.78	N.A.	1.30
90-110	0.03	N.A.	0.00
90-120	0.03	N.A.	0.00
90-130	0.03	N.A.	0.00
90-150	0.03	N.A.	0.00
90-180	0.03	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1717.37	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	67.92
10-20	192.41
20-30	284.38
30-40	324.21
40-50	309.08
50-60	249.31
60-70	173.42
70-80	93.84
80-90	22.78
90-100	0.03
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	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	53
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30
10	55	42	34	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27

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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

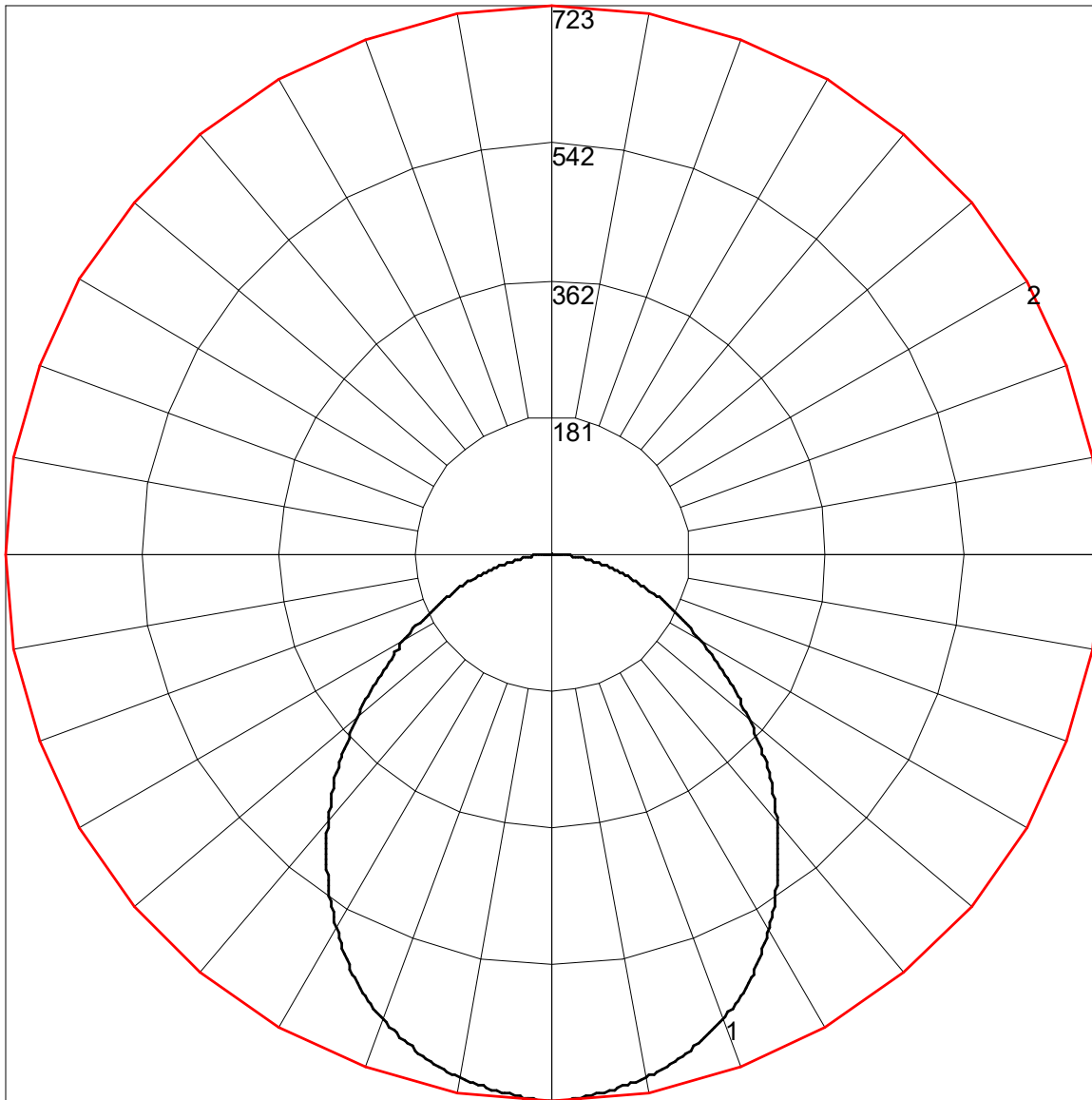
X=2H	Y=2H	24.6	26.2	25.0	26.5	26.8	24.6	26.2	25.0	26.5	26.8
	3H	26.2	27.6	26.6	28.0	28.3	26.2	27.6	26.6	28.0	28.3
	4H	26.8	28.1	27.2	28.5	28.8	26.8	28.1	27.2	28.5	28.8
	6H	27.2	28.4	27.6	28.8	29.2	27.2	28.4	27.6	28.8	29.2
	8H	27.3	28.5	27.7	28.9	29.3	27.3	28.5	27.7	28.9	29.3
	12H	27.4	28.5	27.8	28.9	29.3	27.4	28.5	27.8	28.9	29.3

UGR Viewed Endwise

4H	2H	25.2	26.5	25.6	26.9	27.2	25.2	26.5	25.6	26.9	27.2
	3H	27.0	28.1	27.4	28.5	28.9	27.0	28.1	27.4	28.5	28.9
	4H	27.7	28.7	28.1	29.1	29.5	27.7	28.7	28.1	29.1	29.5
	6H	28.2	29.1	28.6	29.5	30.0	28.2	29.1	28.6	29.5	30.0
	8H	28.3	29.2	28.8	29.6	30.1	28.3	29.2	28.8	29.6	30.1
	12H	28.4	29.2	28.9	29.6	30.1	28.4	29.2	28.9	29.6	30.1
8H	4H	27.9	28.7	28.4	29.2	29.7	27.9	28.7	28.4	29.2	29.7
	6H	28.5	29.2	29.0	29.7	30.2	28.5	29.2	29.0	29.7	30.2
	8H	28.8	29.4	29.3	29.9	30.4	28.8	29.4	29.3	29.9	30.4
	12H	28.9	29.4	29.4	29.9	30.5	28.9	29.4	29.4	29.9	30.5
12H	4H	28.0	28.7	28.4	29.2	29.6	28.0	28.7	28.4	29.2	29.6
	6H	28.6	29.2	29.1	29.7	30.2	28.6	29.2	29.1	29.7	30.2
	8H	28.8	29.4	29.4	29.9	30.4	28.8	29.4	29.4	29.9	30.4

Maximum UGR = 30.5

POLAR GRAPH



Maximum Candela = 723.029 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.)