



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L30-830-XXX-DIM-UNV-LM-CS-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-L30-830-xxx-DIM-UNV-LM-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	2575
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	93
Total Luminaire Watts	27.8
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	19539	19539	19539
55	15229	15229	15229
65	12728	12728	12728
75	10240	10240	10240
85	6118	6118	6118

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CANDELA TABULATION

	<u>0</u>
0.0	6662.848
0.5	6659.978
1.0	6649.930
1.5	6634.142
2.0	6614.047
2.5	6586.775
3.0	6555.198
3.5	6517.879
4.0	6474.819
4.5	6428.888
5.0	6377.216
5.5	6319.802
6.0	6256.647
6.5	6186.316
7.0	6110.243
7.5	6026.993
8.0	5936.566
8.5	5838.963
9.0	5735.619
9.5	5623.662
10.0	5503.094
10.5	5373.913
11.0	5238.991
11.5	5096.893
12.0	4946.182
12.5	4789.730
13.0	4626.101
13.5	4456.731
14.0	4280.184
14.5	4097.896
15.0	3914.172
15.5	3727.578
16.0	3540.984
16.5	3352.954
17.0	3166.360
17.5	2985.507
18.0	2806.090
18.5	2633.849
19.0	2468.785
19.5	2309.462
20.0	2158.751
20.5	2013.782
21.0	1878.860
21.5	1751.115
22.0	1630.546
22.5	1518.590
23.0	1412.949
23.5	1314.484
24.0	1223.053
24.5	1137.651
25.0	1058.420
25.5	984.787
26.0	915.747
26.5	852.018

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CANDELA TABULATION - (Cont.)

27.0	792.595
27.5	738.195
28.0	687.528
28.5	640.736
29.0	597.819
29.5	557.773
30.0	520.598
30.5	486.293
31.0	454.572
31.5	425.435
32.0	398.450
32.5	373.619
33.0	350.797
33.5	329.698
34.0	310.464
34.5	292.666
35.0	276.590
35.5	261.662
36.0	248.027
36.5	235.539
37.0	224.057
37.5	213.579
38.0	204.105
38.5	195.350
39.0	187.312
39.5	179.992
40.0	173.246
40.5	166.930
41.0	161.045
41.5	155.734
42.0	150.711
42.5	145.974
43.0	141.668
43.5	137.506
44.0	133.630
44.5	130.042
45.0	126.453
45.5	123.152
46.0	120.138
46.5	117.124
47.0	114.253
47.5	111.669
48.0	108.942
48.5	106.502
49.0	104.062
49.5	101.622
50.0	99.469
50.5	97.316
51.0	95.307
51.5	93.154
52.0	91.144
52.5	89.278
53.0	87.269
53.5	85.403
54.0	83.537
54.5	81.671

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CANDELA TABULATION - (Cont.)

55.0	79.948
55.5	78.226
56.0	76.504
56.5	74.781
57.0	72.915
57.5	71.336
58.0	69.758
58.5	68.322
59.0	66.743
59.5	65.164
60.0	63.586
60.5	62.007
61.0	60.715
61.5	59.136
62.0	57.701
62.5	56.265
63.0	54.830
63.5	53.538
64.0	52.103
64.5	50.668
65.0	49.232
65.5	47.940
66.0	46.649
66.5	45.357
67.0	43.921
67.5	42.630
68.0	41.338
68.5	40.046
69.0	38.754
69.5	37.462
70.0	36.171
70.5	35.022
71.0	33.874
71.5	32.439
72.0	31.290
72.5	30.142
73.0	28.994
73.5	27.702
74.0	26.554
74.5	25.406
75.0	24.257
75.5	23.109
76.0	21.961
76.5	20.812
77.0	19.664
77.5	18.803
78.0	17.655
78.5	16.650
79.0	15.645
79.5	14.640
80.0	13.636
80.5	12.631
81.0	11.626
81.5	10.909
82.0	9.760
82.5	9.043

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CANDELA TABULATION - (Cont.)

83.0	8.038
83.5	7.320
84.0	6.459
84.5	5.598
85.0	4.880
85.5	4.019
86.0	3.445
86.5	2.727
87.0	2.297
87.5	1.866
88.0	1.435
88.5	1.148
89.0	0.861
89.5	0.574
90.0	0.431
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
119.5	0.000
120.0	0.000
120.5	0.000
121.0	0.000
121.5	0.000
122.0	0.000
122.5	0.000
123.0	0.000
123.5	0.000
124.0	0.000
124.5	0.000
125.0	0.000
125.5	0.000
126.0	0.000
126.5	0.000
127.0	0.000
127.5	0.000
128.0	0.000
128.5	0.000
129.0	0.000
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132.0	0.000
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133.5	0.000
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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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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
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	1628.52	N.A.	63.20
0-30	2138.83	N.A.	83.10
0-40	2322.79	N.A.	90.20
0-60	2494.28	N.A.	96.90
0-80	2569.04	N.A.	99.80
0-90	2575.11	N.A.	100.00
10-90	1993.61	N.A.	77.40
20-40	694.27	N.A.	27.00
20-50	793.89	N.A.	30.80
40-70	220.45	N.A.	8.60
60-80	74.76	N.A.	2.90
70-80	25.80	N.A.	1.00
80-90	6.07	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	2575.12	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	581.50
10-20	1047.02
20-30	510.31
30-40	183.96
40-50	99.62
50-60	71.86
60-70	48.96
70-80	25.80
80-90	6.07
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	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

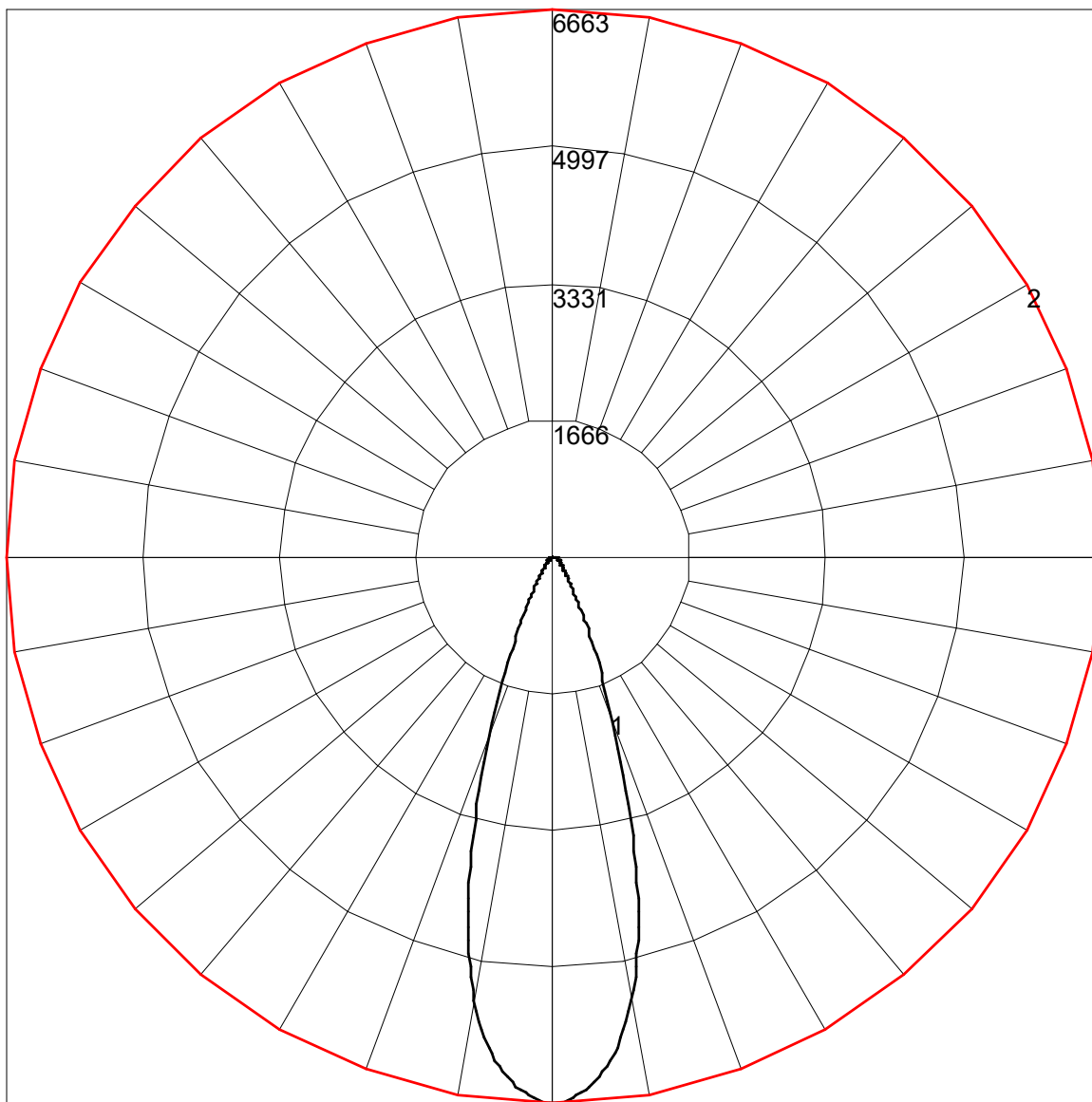
X=2H	Y=2H	15.2	16.3	15.6	16.6	16.9	15.2	16.3	15.6	16.6	16.9
	3H	16.7	17.6	17.1	17.9	18.3	16.7	17.6	17.1	17.9	18.3
	4H	17.2	18.0	17.6	18.4	18.8	17.2	18.0	17.6	18.4	18.8
	6H	17.5	18.3	17.9	18.7	19.1	17.5	18.3	17.9	18.7	19.1
	8H	17.6	18.3	18.0	18.7	19.1	17.6	18.3	18.0	18.7	19.1
	12H	17.6	18.3	18.1	18.7	19.1	17.6	18.3	18.1	18.7	19.1

UGR Viewed Endwise

4H	2H	15.7	16.5	16.1	16.9	17.3	15.7	16.5	16.1	16.9	17.3
	3H	17.3	18.0	17.7	18.4	18.8	17.3	18.0	17.7	18.4	18.8
	4H	17.9	18.6	18.4	19.0	19.4	17.9	18.6	18.4	19.0	19.4
	6H	18.4	18.9	18.9	19.4	19.8	18.4	18.9	18.9	19.4	19.8
	8H	18.5	19.0	19.0	19.4	19.9	18.5	19.0	19.0	19.4	19.9
	12H	18.5	19.0	19.0	19.4	19.9	18.5	19.0	19.0	19.4	19.9
8H	4H	18.1	18.6	18.6	19.0	19.5	18.1	18.6	18.6	19.0	19.5
	6H	18.6	19.0	19.2	19.5	20.0	18.6	19.0	19.2	19.5	20.0
	8H	18.8	19.1	19.3	19.7	20.2	18.8	19.1	19.3	19.7	20.2
	12H	18.9	19.2	19.4	19.7	20.3	18.9	19.2	19.4	19.7	20.3
12H	4H	18.1	18.5	18.6	19.0	19.5	18.1	18.5	18.6	19.0	19.5
	6H	18.7	19.0	19.2	19.5	20.0	18.7	19.0	19.2	19.5	20.0
	8H	18.8	19.1	19.4	19.6	20.2	18.8	19.1	19.4	19.6	20.2

Maximum UGR = 20.3

POLAR GRAPH



Maximum Candela = 6662.848 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.)