



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L10-830-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-L10-830-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	859
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	95
Total Luminaire Watts	9
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	6518	6518	6518
55	5080	5080	5080
65	4246	4246	4246
75	3416	3416	3416
85	2041	2041	2041

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CANDELA TABULATION

	<u>0</u>
0.0	2222.675
0.5	2221.717
1.0	2218.365
1.5	2213.098
2.0	2206.395
2.5	2197.297
3.0	2186.763
3.5	2174.314
4.0	2159.949
4.5	2144.627
5.0	2127.390
5.5	2108.237
6.0	2087.169
6.5	2063.707
7.0	2038.329
7.5	2010.558
8.0	1980.392
8.5	1947.833
9.0	1913.358
9.5	1876.010
10.0	1835.789
10.5	1792.696
11.0	1747.687
11.5	1700.284
12.0	1650.008
12.5	1597.817
13.0	1543.231
13.5	1486.731
14.0	1427.836
14.5	1367.026
15.0	1305.737
15.5	1243.491
16.0	1181.245
16.5	1118.520
17.0	1056.273
17.5	995.942
18.0	936.090
18.5	878.632
19.0	823.567
19.5	770.419
20.0	720.143
20.5	671.782
21.0	626.773
21.5	584.158
22.0	543.938
22.5	506.590
23.0	471.349
23.5	438.502
24.0	408.001
24.5	379.511
25.0	353.081
25.5	328.517
26.0	305.486
26.5	284.227

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CANDELA TABULATION - (Cont.)

27.0	264.403
27.5	246.256
28.0	229.354
28.5	213.744
29.0	199.428
29.5	186.069
30.0	173.667
30.5	162.224
31.0	151.642
31.5	141.922
32.0	132.920
32.5	124.636
33.0	117.023
33.5	109.985
34.0	103.568
34.5	97.631
35.0	92.268
35.5	87.289
36.0	82.740
36.5	78.574
37.0	74.744
37.5	71.248
38.0	68.088
38.5	65.167
39.0	62.486
39.5	60.044
40.0	57.793
40.5	55.687
41.0	53.723
41.5	51.952
42.0	50.276
42.5	48.696
43.0	47.259
43.5	45.871
44.0	44.578
44.5	43.381
45.0	42.184
45.5	41.083
46.0	40.077
46.5	39.072
47.0	38.114
47.5	37.252
48.0	36.342
48.5	35.528
49.0	34.714
49.5	33.900
50.0	33.182
50.5	32.464
51.0	31.794
51.5	31.075
52.0	30.405
52.5	29.782
53.0	29.112
53.5	28.490
54.0	27.867
54.5	27.245

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CANDELA TABULATION - (Cont.)

55.0	26.670
55.5	26.096
56.0	25.521
56.5	24.946
57.0	24.324
57.5	23.797
58.0	23.271
58.5	22.792
59.0	22.265
59.5	21.738
60.0	21.212
60.5	20.685
61.0	20.254
61.5	19.727
62.0	19.248
62.5	18.770
63.0	18.291
63.5	17.860
64.0	17.381
64.5	16.902
65.0	16.423
65.5	15.993
66.0	15.562
66.5	15.131
67.0	14.652
67.5	14.221
68.0	13.790
68.5	13.359
69.0	12.928
69.5	12.497
70.0	12.066
70.5	11.683
71.0	11.300
71.5	10.821
72.0	10.438
72.5	10.055
73.0	9.672
73.5	9.241
74.0	8.858
74.5	8.475
75.0	8.092
75.5	7.709
76.0	7.326
76.5	6.943
77.0	6.560
77.5	6.273
78.0	5.889
78.5	5.554
79.0	5.219
79.5	4.884
80.0	4.549
80.5	4.214
81.0	3.878
81.5	3.639
82.0	3.256
82.5	3.017

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CANDELA TABULATION - (Cont.)

83.0	2.681
83.5	2.442
84.0	2.155
84.5	1.867
85.0	1.628
85.5	1.341
86.0	1.149
86.5	0.910
87.0	0.766
87.5	0.622
88.0	0.479
88.5	0.383
89.0	0.287
89.5	0.192
90.0	0.144
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
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118.5	0.000
119.0	0.000
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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
129.5	0.000
130.0	0.000
130.5	0.000
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	543.26	N.A.	63.20
0-30	713.50	N.A.	83.10
0-40	774.87	N.A.	90.20
0-60	832.07	N.A.	96.90
0-80	857.01	N.A.	99.80
0-90	859.04	N.A.	100.00
10-90	665.05	N.A.	77.40
20-40	231.60	N.A.	27.00
20-50	264.84	N.A.	30.80
40-70	73.54	N.A.	8.60
60-80	24.94	N.A.	2.90
70-80	8.61	N.A.	1.00
80-90	2.03	N.A.	0.20
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	859.04	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	193.98
10-20	349.28
20-30	170.24
30-40	61.37
40-50	33.23
50-60	23.97
60-70	16.33
70-80	8.61
80-90	2.03
90-100	0.00
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

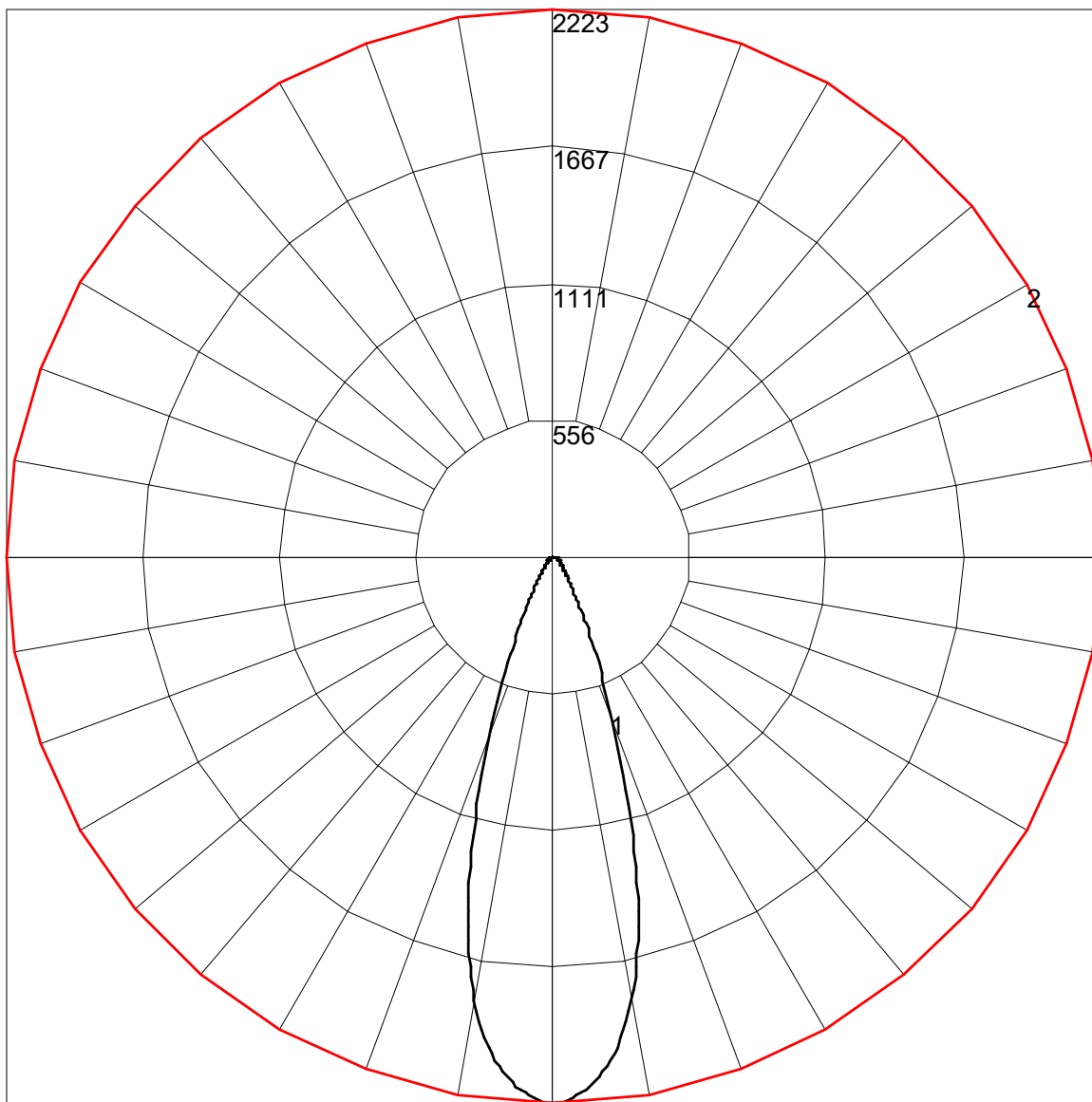
X=2H	Y=2H	11.3	12.4	11.7	12.7	13.0	11.3	12.4	11.7	12.7	13.0
	3H	12.8	13.7	13.2	14.0	14.4	12.8	13.7	13.2	14.0	14.4
	4H	13.3	14.1	13.7	14.5	14.9	13.3	14.1	13.7	14.5	14.9
	6H	13.6	14.4	14.0	14.8	15.2	13.6	14.4	14.0	14.8	15.2
	8H	13.7	14.4	14.1	14.8	15.2	13.7	14.4	14.1	14.8	15.2
	12H	13.7	14.4	14.2	14.8	15.2	13.7	14.4	14.2	14.8	15.2

UGR Viewed Endwise

4H	2H	11.8	12.6	12.2	13.0	13.3	11.8	12.6	12.2	13.0	13.3
	3H	13.4	14.1	13.8	14.5	14.9	13.4	14.1	13.8	14.5	14.9
	4H	14.0	14.7	14.5	15.1	15.5	14.0	14.7	14.5	15.1	15.5
	6H	14.5	15.0	15.0	15.4	15.9	14.5	15.0	15.0	15.4	15.9
	8H	14.6	15.1	15.1	15.5	16.0	14.6	15.1	15.1	15.5	16.0
	12H	14.6	15.0	15.1	15.5	16.0	14.6	15.0	15.1	15.5	16.0
8H	4H	14.2	14.7	14.7	15.1	15.6	14.2	14.7	14.7	15.1	15.6
	6H	14.7	15.1	15.3	15.6	16.1	14.7	15.1	15.3	15.6	16.1
	8H	14.9	15.2	15.4	15.8	16.3	14.9	15.2	15.4	15.8	16.3
	12H	15.0	15.3	15.5	15.8	16.4	15.0	15.3	15.5	15.8	16.4
12H	4H	14.2	14.6	14.7	15.1	15.6	14.2	14.6	14.7	15.1	15.6
	6H	14.7	15.1	15.3	15.6	16.1	14.7	15.1	15.3	15.6	16.1
	8H	14.9	15.2	15.5	15.7	16.3	14.9	15.2	15.5	15.7	16.3

Maximum UGR = 16.4

POLAR GRAPH



Maximum Candela = 2222.675 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.)