



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L10-830-XXX-DIM-UNV-LW-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12316380.07

[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-LW-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	647
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	72
Total Luminaire Watts	9
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	17850	17850	17850
55	14668	14668	14668
65	10730	10730	10730
75	7428	7428	7428
85	4049	4049	4049

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CANDELA TABULATION

	<u>0</u>
0.0	454.383
0.5	454.240
1.0	453.953
1.5	453.570
2.0	453.187
2.5	452.756
3.0	452.182
3.5	451.847
4.0	451.608
4.5	451.464
5.0	451.273
5.5	451.081
6.0	450.938
6.5	450.747
7.0	450.603
7.5	450.507
8.0	450.459
8.5	450.316
9.0	450.172
9.5	449.885
10.0	449.694
10.5	449.359
11.0	449.024
11.5	448.593
12.0	448.114
12.5	447.540
13.0	446.870
13.5	446.105
14.0	445.147
14.5	443.999
15.0	442.611
15.5	440.936
16.0	439.070
16.5	436.869
17.0	434.476
17.5	431.796
18.0	428.637
18.5	425.383
19.0	421.842
19.5	417.870
20.0	413.515
20.5	408.778
21.0	403.657
21.5	398.154
22.0	392.076
22.5	385.616
23.0	378.677
23.5	371.211
24.0	363.172
24.5	354.606
25.0	345.322
25.5	335.607
26.0	325.223
26.5	314.216

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CANDELA TABULATION - (Cont.)

27.0	302.827
27.5	290.959
28.0	278.899
28.5	266.792
29.0	254.924
29.5	243.295
30.0	232.097
30.5	221.569
31.0	211.711
31.5	202.714
32.0	194.531
32.5	187.161
33.0	180.605
33.5	174.767
34.0	169.550
34.5	164.956
35.0	160.793
35.5	157.012
36.0	153.662
36.5	150.504
37.0	147.633
37.5	144.953
38.0	142.464
38.5	140.072
39.0	137.870
39.5	135.717
40.0	133.707
40.5	131.697
41.0	129.783
41.5	127.916
42.0	126.146
42.5	124.375
43.0	122.605
43.5	120.834
44.0	119.063
44.5	117.293
45.0	115.522
45.5	113.751
46.0	111.981
46.5	110.210
47.0	108.344
47.5	106.477
48.0	104.611
48.5	102.697
49.0	100.735
49.5	98.773
50.0	96.859
50.5	94.897
51.0	92.934
51.5	90.972
52.0	89.058
52.5	87.144
53.0	85.182
53.5	83.172
54.0	81.114
54.5	79.057

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CANDELA TABULATION - (Cont.)

55.0	76.999
55.5	74.941
56.0	72.931
56.5	70.969
57.0	69.007
57.5	67.045
58.0	65.131
58.5	63.264
59.0	61.398
59.5	59.580
60.0	57.809
60.5	56.038
61.0	54.315
61.5	52.641
62.0	50.966
62.5	49.291
63.0	47.692
63.5	46.104
64.0	44.543
64.5	43.007
65.0	41.505
65.5	40.040
66.0	38.595
66.5	37.188
67.0	35.815
67.5	34.465
68.0	33.159
68.5	31.881
69.0	30.603
69.5	29.369
70.0	28.167
70.5	26.985
71.0	25.832
71.5	24.708
72.0	23.621
72.5	22.549
73.0	21.506
73.5	20.492
74.0	19.496
74.5	18.534
75.0	17.596
75.5	16.687
76.0	15.797
76.5	14.931
77.0	14.103
77.5	13.280
78.0	12.485
78.5	11.715
79.0	10.959
79.5	10.231
80.0	9.518
80.5	8.824
81.0	8.140
81.5	7.475
82.0	6.824
82.5	6.192

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CANDELA TABULATION - (Cont.)

83.0	5.566
83.5	4.958
84.0	4.364
84.5	3.785
85.0	3.230
85.5	2.694
86.0	2.182
86.5	1.699
87.0	1.273
87.5	0.919
88.0	0.641
88.5	0.407
89.0	0.254
89.5	0.172
90.0	0.120
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
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
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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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Zone	Lumens	%Lamp	%Fixt
0-20	166.90	N.A.	25.80
0-30	320.14	N.A.	49.50
0-40	424.52	N.A.	65.60
0-60	582.30	N.A.	90.00
0-80	642.79	N.A.	99.40
0-90	646.83	N.A.	100.00
10-90	603.79	N.A.	93.30
20-40	257.62	N.A.	39.80
20-50	346.58	N.A.	53.60
40-70	199.28	N.A.	30.80
60-80	60.48	N.A.	9.40
70-80	18.98	N.A.	2.90
80-90	4.05	N.A.	0.60
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	646.84	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	43.04
10-20	123.87
20-30	153.24
30-40	104.38
40-50	88.97
50-60	68.82
60-70	41.50
70-80	18.98
80-90	4.05
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	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89
2	103	97	91	87	101	95	90	86	92	87	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	19.1	20.5	19.4	20.8	21.1	19.1	20.5	19.4	20.8	21.1
	3H	20.2	21.4	20.6	21.8	22.1	20.2	21.4	20.6	21.8	22.1
	4H	20.6	21.7	21.0	22.0	22.4	20.6	21.7	21.0	22.0	22.4
	6H	20.8	21.8	21.2	22.2	22.6	20.8	21.8	21.2	22.2	22.6
	8H	20.8	21.8	21.2	22.2	22.6	20.8	21.8	21.2	22.2	22.6
	12H	20.8	21.8	21.3	22.2	22.6	20.8	21.8	21.3	22.2	22.6

UGR Viewed Endwise

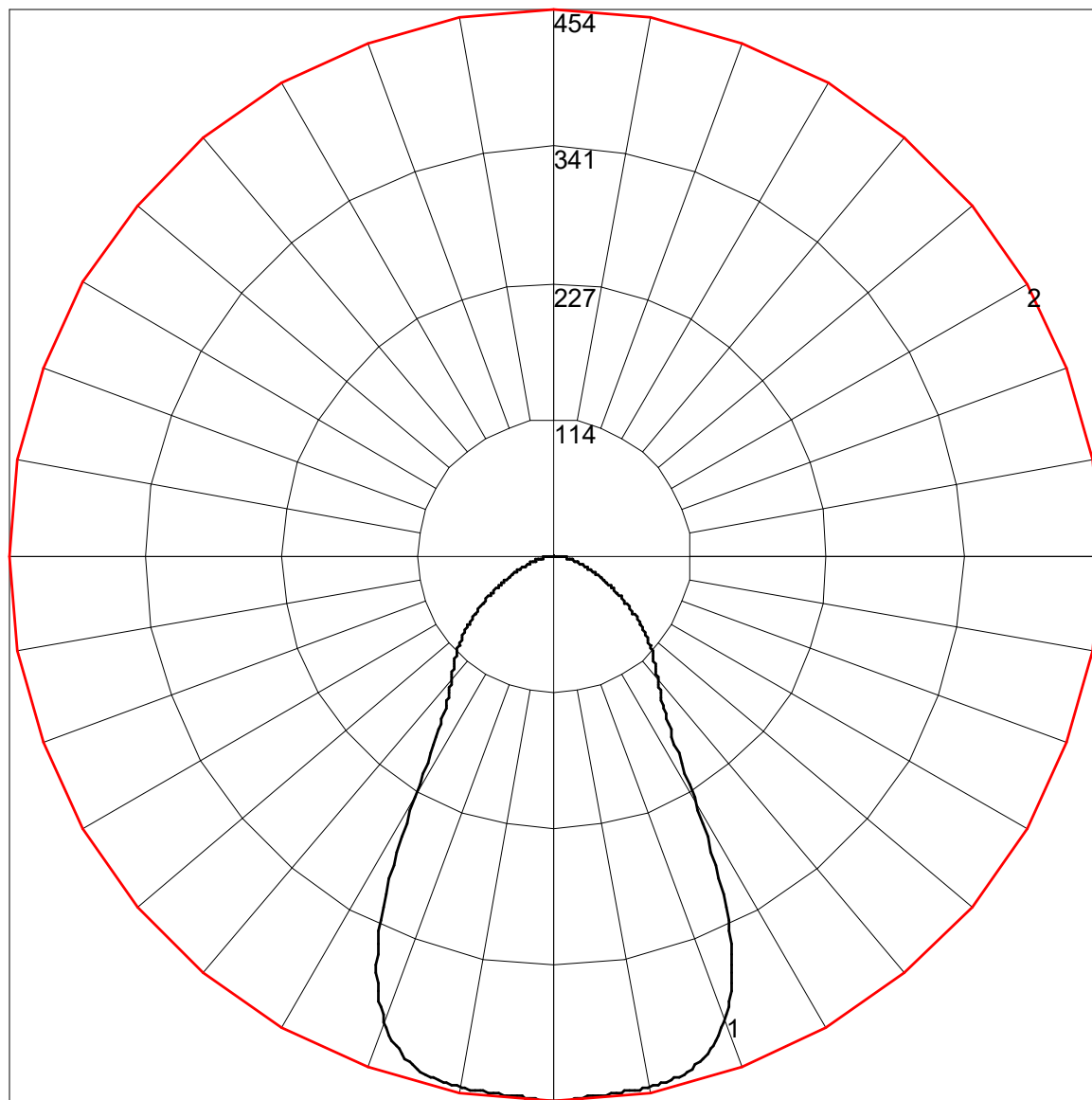
4H	2H	19.5	20.6	19.9	21.0	21.3	19.5	20.6	19.9	21.0	21.3
	3H	20.8	21.7	21.2	22.1	22.5	20.8	21.7	21.2	22.1	22.5
	4H	21.2	22.1	21.6	22.5	22.9	21.2	22.1	21.6	22.5	22.9
	6H	21.5	22.2	22.0	22.7	23.2	21.5	22.2	22.0	22.7	23.2
	8H	21.6	22.3	22.1	22.7	23.2	21.6	22.3	22.1	22.7	23.2
	12H	21.6	22.2	22.1	22.7	23.2	21.6	22.2	22.1	22.7	23.2

8H	4H	21.3	22.0	21.8	22.5	22.9	21.3	22.0	21.8	22.5	22.9
	6H	21.7	22.3	22.2	22.8	23.3	21.7	22.3	22.2	22.8	23.3
	8H	21.8	22.3	22.3	22.8	23.3	21.8	22.3	22.3	22.8	23.3
	12H	21.9	22.3	22.4	22.8	23.4	21.9	22.3	22.4	22.8	23.4

12H	4H	21.3	21.9	21.8	22.4	22.9	21.3	21.9	21.8	22.4	22.9
	6H	21.7	22.2	22.2	22.7	23.2	21.7	22.2	22.2	22.7	23.2
	8H	21.9	22.3	22.4	22.8	23.4	21.9	22.3	22.4	22.8	23.4

Maximum UGR = 23.4

POLAR GRAPH



Maximum Candela = 454.383 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.)