



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CR-TL-L20-835-XXX-DIM-UNV-LW-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #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-L20-835-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	1352
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	68
Total Luminaire Watts	19.7871
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	37301	37301	37301
55	30650	30650	30650
65	22423	22423	22423
75	15523	15523	15523
85	8462	8462	8462

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CANDELA TABULATION

	<u>0</u>
0.0	949.50
0.5	949.20
1.0	948.60
1.5	947.80
2.0	947.00
2.5	946.10
3.0	944.90
3.5	944.20
4.0	943.70
4.5	943.40
5.0	943.00
5.5	942.60
6.0	942.30
6.5	941.90
7.0	941.60
7.5	941.40
8.0	941.30
8.5	941.00
9.0	940.70
9.5	940.10
10.0	939.70
10.5	939.00
11.0	938.30
11.5	937.40
12.0	936.40
12.5	935.20
13.0	933.80
13.5	932.20
14.0	930.20
14.5	927.80
15.0	924.90
15.5	921.40
16.0	917.50
16.5	912.90
17.0	907.90
17.5	902.30
18.0	895.70
18.5	888.90
19.0	881.50
19.5	873.20
20.0	864.10
20.5	854.20
21.0	843.50
21.5	832.00
22.0	819.30
22.5	805.80
23.0	791.30
23.5	775.70
24.0	758.90
24.5	741.00
25.0	721.60
25.5	701.30
26.0	679.60
26.5	656.60

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CANDELA TABULATION - (Cont.)

27.0	632.80
27.5	608.00
28.0	582.80
28.5	557.50
29.0	532.70
29.5	508.40
30.0	485.00
30.5	463.00
31.0	442.40
31.5	423.60
32.0	406.50
32.5	391.10
33.0	377.40
33.5	365.20
34.0	354.30
34.5	344.70
35.0	336.00
35.5	328.10
36.0	321.10
36.5	314.50
37.0	308.50
37.5	302.90
38.0	297.70
38.5	292.70
39.0	288.10
39.5	283.60
40.0	279.40
40.5	275.20
41.0	271.20
41.5	267.30
42.0	263.60
42.5	259.90
43.0	256.20
43.5	252.50
44.0	248.80
44.5	245.10
45.0	241.40
45.5	237.70
46.0	234.00
46.5	230.30
47.0	226.40
47.5	222.50
48.0	218.60
48.5	214.60
49.0	210.50
49.5	206.40
50.0	202.40
50.5	198.30
51.0	194.20
51.5	190.10
52.0	186.10
52.5	182.10
53.0	178.00
53.5	173.80
54.0	169.50
54.5	165.20

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CANDELA TABULATION - (Cont.)

55.0	160.90
55.5	156.60
56.0	152.40
56.5	148.30
57.0	144.20
57.5	140.10
58.0	136.10
58.5	132.20
59.0	128.30
59.5	124.50
60.0	120.80
60.5	117.10
61.0	113.50
61.5	110.00
62.0	106.50
62.5	103.00
63.0	99.66
63.5	96.34
64.0	93.08
64.5	89.87
65.0	86.73
65.5	83.67
66.0	80.65
66.5	77.71
67.0	74.84
67.5	72.02
68.0	69.29
68.5	66.62
69.0	63.95
69.5	61.37
70.0	58.86
70.5	56.39
71.0	53.98
71.5	51.63
72.0	49.36
72.5	47.12
73.0	44.94
73.5	42.82
74.0	40.74
74.5	38.73
75.0	36.77
75.5	34.87
76.0	33.01
76.5	31.20
77.0	29.47
77.5	27.75
78.0	26.09
78.5	24.48
79.0	22.90
79.5	21.38
80.0	19.89
80.5	18.44
81.0	17.01
81.5	15.62
82.0	14.26
82.5	12.94

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CANDELA TABULATION - (Cont.)

83.0	11.63
83.5	10.36
84.0	9.12
84.5	7.91
85.0	6.75
85.5	5.63
86.0	4.56
86.5	3.55
87.0	2.66
87.5	1.92
88.0	1.34
88.5	0.85
89.0	0.53
89.5	0.36
90.0	0.25
90.5	0.00
91.0	0.00
91.5	0.00
92.0	0.00
92.5	0.00
93.0	0.00
93.5	0.00
94.0	0.00
94.5	0.00
95.0	0.00
95.5	0.00
96.0	0.00
96.5	0.00
97.0	0.00
97.5	0.00
98.0	0.00
98.5	0.00
99.0	0.00
99.5	0.00
100.0	0.00
100.5	0.00
101.0	0.00
101.5	0.00
102.0	0.00
102.5	0.00
103.0	0.00
103.5	0.00
104.0	0.00
104.5	0.00
105.0	0.00
105.5	0.00
106.0	0.00
106.5	0.00
107.0	0.00
107.5	0.00
108.0	0.00
108.5	0.00
109.0	0.00
109.5	0.00
110.0	0.00
110.5	0.00

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CANDELA TABULATION - (Cont.)

111.0	0.00
111.5	0.00
112.0	0.00
112.5	0.00
113.0	0.00
113.5	0.00
114.0	0.00
114.5	0.00
115.0	0.00
115.5	0.00
116.0	0.00
116.5	0.00
117.0	0.00
117.5	0.00
118.0	0.00
118.5	0.00
119.0	0.00
119.5	0.00
120.0	0.00
120.5	0.00
121.0	0.00
121.5	0.00
122.0	0.00
122.5	0.00
123.0	0.00
123.5	0.00
124.0	0.00
124.5	0.00
125.0	0.00
125.5	0.00
126.0	0.00
126.5	0.00
127.0	0.00
127.5	0.00
128.0	0.00
128.5	0.00
129.0	0.00
129.5	0.00
130.0	0.00
130.5	0.00
131.0	0.00
131.5	0.00
132.0	0.00
132.5	0.00
133.0	0.00
133.5	0.00
134.0	0.00
134.5	0.00
135.0	0.00
135.5	0.00
136.0	0.00
136.5	0.00
137.0	0.00
137.5	0.00
138.0	0.00
138.5	0.00

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CANDELA TABULATION - (Cont.)

139.0	0.00
139.5	0.00
140.0	0.00
140.5	0.00
141.0	0.00
141.5	0.00
142.0	0.00
142.5	0.00
143.0	0.00
143.5	0.00
144.0	0.00
144.5	0.00
145.0	0.00
145.5	0.00
146.0	0.00
146.5	0.00
147.0	0.00
147.5	0.00
148.0	0.00
148.5	0.00
149.0	0.00
149.5	0.00
150.0	0.00
150.5	0.00
151.0	0.00
151.5	0.00
152.0	0.00
152.5	0.00
153.0	0.00
153.5	0.00
154.0	0.00
154.5	0.00
155.0	0.00
155.5	0.00
156.0	0.00
156.5	0.00
157.0	0.00
157.5	0.00
158.0	0.00
158.5	0.00
159.0	0.00
159.5	0.00
160.0	0.00
160.5	0.00
161.0	0.00
161.5	0.00
162.0	0.00
162.5	0.00
163.0	0.00
163.5	0.00
164.0	0.00
164.5	0.00
165.0	0.00
165.5	0.00
166.0	0.00
166.5	0.00

CANDELA TABULATION - (Cont.)

167.0	0.00
167.5	0.00
168.0	0.00
168.5	0.00
169.0	0.00
169.5	0.00
170.0	0.00
170.5	0.00
171.0	0.00
171.5	0.00
172.0	0.00
172.5	0.00
173.0	0.00
173.5	0.00
174.0	0.00
174.5	0.00
175.0	0.00
175.5	0.00
176.0	0.00
176.5	0.00
177.0	0.00
177.5	0.00
178.0	0.00
178.5	0.00
179.0	0.00
179.5	0.00
180.0	0.00

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Zone	Lumens	%Lamp	%Fixt
0-20	348.77	N.A.	25.80
0-30	668.98	N.A.	49.50
0-40	887.10	N.A.	65.60
0-60	1216.81	N.A.	90.00
0-80	1343.2	N.A.	99.40
0-90	1351.65	N.A.	100.00
10-90	1261.72	N.A.	93.30
20-40	538.33	N.A.	39.80
20-50	724.24	N.A.	53.60
40-70	416.43	N.A.	30.80
60-80	126.39	N.A.	9.40
70-80	39.67	N.A.	2.90
80-90	8.45	N.A.	0.60
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	1351.66	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	89.94
10-20	258.83
20-30	320.21
30-40	218.12
40-50	185.91
50-60	143.80
60-70	86.72
70-80	39.67
80-90	8.45
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	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

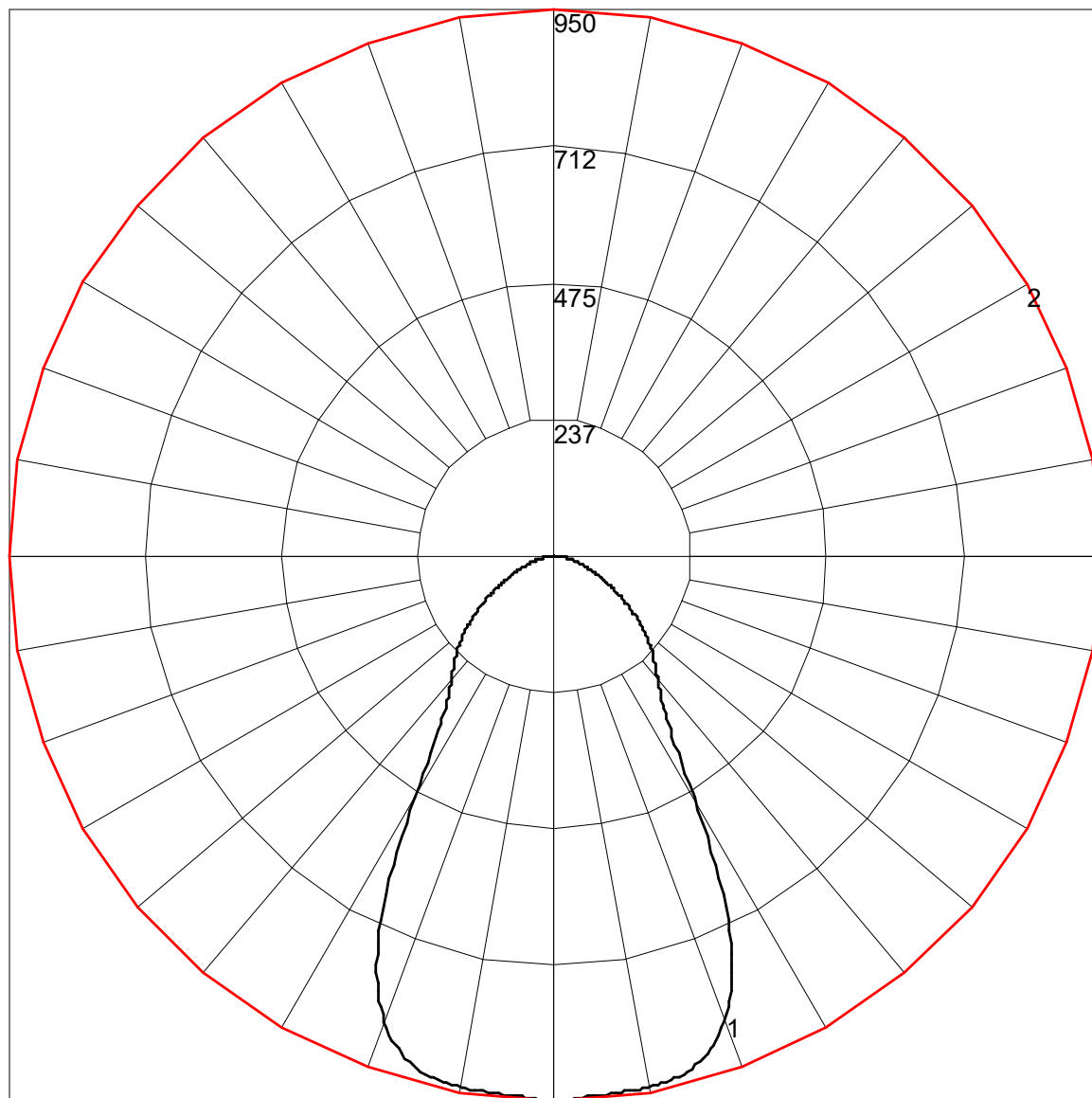
X=2H	Y=2H	21.7	23.1	22.1	23.4	23.7	21.7	23.1	22.1	23.4	23.7
	3H	22.8	24.0	23.2	24.4	24.7	22.8	24.0	23.2	24.4	24.7
	4H	23.2	24.3	23.6	24.6	25.0	23.2	24.3	23.6	24.6	25.0
	6H	23.4	24.4	23.8	24.8	25.2	23.4	24.4	23.8	24.8	25.2
	8H	23.4	24.4	23.9	24.8	25.2	23.4	24.4	23.9	24.8	25.2
	12H	23.4	24.4	23.9	24.8	25.2	23.4	24.4	23.9	24.8	25.2

UGR Viewed Endwise

4H	2H	22.1	23.2	22.5	23.6	23.9	22.1	23.2	22.5	23.6	23.9
	3H	23.4	24.3	23.8	24.7	25.1	23.4	24.3	23.8	24.7	25.1
	4H	23.8	24.7	24.2	25.1	25.5	23.8	24.7	24.2	25.1	25.5
	6H	24.1	24.9	24.6	25.3	25.8	24.1	24.9	24.6	25.3	25.8
	8H	24.2	24.9	24.7	25.3	25.8	24.2	24.9	24.7	25.3	25.8
	12H	24.2	24.8	24.7	25.3	25.8	24.2	24.8	24.7	25.3	25.8
8H	4H	23.9	24.6	24.4	25.1	25.5	23.9	24.6	24.4	25.1	25.5
	6H	24.3	24.9	24.8	25.4	25.9	24.3	24.9	24.8	25.4	25.9
	8H	24.4	24.9	24.9	25.4	25.9	24.4	24.9	24.9	25.4	25.9
	12H	24.5	24.9	25.0	25.4	26.0	24.5	24.9	25.0	25.4	26.0
12H	4H	23.9	24.5	24.4	25.0	25.5	23.9	24.5	24.4	25.0	25.5
	6H	24.3	24.8	24.9	25.3	25.8	24.3	24.8	24.9	25.3	25.8
	8H	24.5	24.9	25.0	25.4	26.0	24.5	24.9	25.0	25.4	26.0

Maximum UGR = 26.0

POLAR GRAPH



Maximum Candela = 949.5 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.)