



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6CRDI-TL-L20-835U-L20-835D-XXX-DIM1-UNV-OW-CSU-OM-CSD-WM_IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] made from 13537338.06 and 12316380.04

[TESTLAB]

[ISSUE DATE] 02/10/2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 6CRDI-TL-L20-835U-L20-835D-xxx-DIM1-UNV-OW-CSU-OM-CSD-WM

[LUMINAIRE] White formed aluminum housing, wide distrib anodized aluminum reflector trim w/clear cover glass up,

[MORE] medium distrib anodized alum open reflector trim down

[LAMP] Two white LEDs (one up/one down)

[BALLAST] (2) Osram Optotronic OTi25W/120-277/2A0 DIM-1 Drivers

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] INDOOR, DIRECT, INDIRECT

[_SEARCH_MOUNTING] WALL

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3704
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	93
Total Luminaire Watts	39.6249
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	0.52 ft (Diameter)
Luminous Width (90-270)	0.52 ft (Diameter)
Luminous Height	1.92 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	453	453	453
55	97	97	97
65	24	24	24
75	6	6	6
85	1	1	1

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CANDELA TABULATION

	<u>0</u>
0.0	4051.000
0.5	4054.000
1.0	4066.000
1.5	4077.000
2.0	4102.000
2.5	4118.000
3.0	4121.000
3.5	4122.000
4.0	4099.000
4.5	4068.000
5.0	4009.000
5.5	3934.000
6.0	3850.000
6.5	3756.000
7.0	3654.000
7.5	3548.000
8.0	3439.000
8.5	3331.000
9.0	3225.000
9.5	3122.000
10.0	3024.000
10.5	2932.000
11.0	2846.000
11.5	2765.000
12.0	2688.000
12.5	2616.000
13.0	2548.000
13.5	2483.000
14.0	2421.000
14.5	2364.000
15.0	2312.000
15.5	2266.000
16.0	2228.000
16.5	2194.000
17.0	2162.000
17.5	2134.000
18.0	2109.000
18.5	2088.000
19.0	2073.000
19.5	2060.000
20.0	2049.000
20.5	2036.000
21.0	2023.000
21.5	2009.000
22.0	1994.000
22.5	1975.000
23.0	1952.000
23.5	1924.000
24.0	1889.000
24.5	1843.000
25.0	1790.000
25.5	1734.000
26.0	1679.000
26.5	1618.000

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27.0	1554.000
27.5	1481.000
28.0	1398.000
28.5	1307.000
29.0	1212.000
29.5	1115.000
30.0	1012.000
30.5	905.300
31.0	793.600
31.5	682.300
32.0	575.300
32.5	475.200
33.0	388.100
33.5	313.800
34.0	251.200
34.5	199.200
35.0	157.000
35.5	125.200
36.0	104.800
36.5	94.100
37.0	87.700
37.5	82.100
38.0	77.200
38.5	72.700
39.0	68.600
39.5	64.900
40.0	61.400
40.5	58.100
41.0	55.000
41.5	52.200
42.0	49.500
42.5	47.000
43.0	44.500
43.5	42.300
44.0	40.100
44.5	38.000
45.0	36.100
45.5	34.200
46.0	32.300
46.5	30.500
47.0	28.600
47.5	26.800
48.0	25.100
48.5	23.500
49.0	21.900
49.5	20.300
50.0	18.700
50.5	17.200
51.0	15.900
51.5	14.700
52.0	13.500
52.5	12.500
53.0	11.500
53.5	10.700
54.0	9.900
54.5	9.100

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55.0	8.500
55.5	7.900
56.0	7.300
56.5	6.800
57.0	6.300
57.5	5.900
58.0	5.500
58.5	5.100
59.0	4.800
59.5	4.500
60.0	4.200
60.5	3.900
61.0	3.700
61.5	3.400
62.0	3.200
62.5	3.000
63.0	2.800
63.5	2.700
64.0	2.500
64.5	2.300
65.0	2.200
65.5	2.100
66.0	1.900
66.5	1.800
67.0	1.700
67.5	1.600
68.0	1.500
68.5	1.400
69.0	1.300
69.5	1.200
70.0	1.100
70.5	1.100
71.0	1.000
71.5	0.900
72.0	0.800
72.5	0.800
73.0	0.700
73.5	0.700
74.0	0.600
74.5	0.600
75.0	0.600
75.5	0.500
76.0	0.500
76.5	0.400
77.0	0.400
77.5	0.400
78.0	0.300
78.5	0.300
79.0	0.300
79.5	0.300
80.0	0.200
80.5	0.200
81.0	0.200
81.5	0.200
82.0	0.200
82.5	0.200

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83.0	0.200
83.5	0.100
84.0	0.100
84.5	0.100
85.0	0.100
85.5	0.100
86.0	0.100
86.5	0.100
87.0	0.100
87.5	0.100
88.0	0.000
88.5	0.000
89.0	0.000
89.5	0.000
90.0	3.260
90.5	3.293
91.0	3.293
91.5	3.325
92.0	3.358
92.5	3.390
93.0	3.423
93.5	3.488
94.0	3.553
94.5	3.586
95.0	3.651
95.5	3.716
96.0	3.782
96.5	3.847
97.0	3.912
97.5	3.977
98.0	4.042
98.5	4.140
99.0	4.205
99.5	4.271
100.0	4.368
100.5	4.466
101.0	4.531
101.5	4.629
102.0	4.727
102.5	4.825
103.0	4.923
103.5	5.020
104.0	5.118
104.5	5.249
105.0	5.379
105.5	5.477
106.0	5.607
106.5	5.738
107.0	5.868
107.5	5.966
108.0	6.129
108.5	6.259
109.0	6.390
109.5	6.553
110.0	6.716
110.5	6.911

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111.0	7.074
111.5	7.237
112.0	7.433
112.5	7.661
113.0	7.857
113.5	8.085
114.0	8.313
114.5	8.541
115.0	8.802
115.5	9.063
116.0	9.324
116.5	9.617
117.0	9.910
117.5	10.236
118.0	10.562
118.5	10.888
119.0	11.280
119.5	11.638
120.0	12.095
120.5	12.518
121.0	12.975
121.5	13.496
122.0	14.018
122.5	14.572
123.0	15.192
123.5	15.844
124.0	16.561
124.5	17.311
125.0	18.158
125.5	19.038
126.0	20.049
126.5	21.125
127.0	22.298
127.5	23.472
128.0	24.711
128.5	25.982
129.0	27.351
129.5	28.818
130.0	30.448
130.5	32.176
131.0	33.969
131.5	35.860
132.0	37.946
132.5	40.261
133.0	42.934
133.5	45.999
134.0	49.454
134.5	53.399
135.0	58.061
135.5	63.994
136.0	71.753
136.5	81.761
137.0	94.214
137.5	108.917
138.0	126.064
138.5	145.461

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139.0	166.684
139.5	189.797
140.0	214.801
140.5	242.479
141.0	272.960
141.5	305.625
142.0	340.996
142.5	378.812
143.0	419.236
143.5	462.594
144.0	508.886
144.5	557.460
145.0	607.664
145.5	658.194
146.0	708.398
146.5	759.254
147.0	810.110
147.5	861.944
148.0	913.778
148.5	965.286
149.0	1015.816
149.5	1066.020
150.0	1114.594
150.5	1161.538
151.0	1206.852
151.5	1249.884
152.0	1290.960
152.5	1328.776
153.0	1363.658
153.5	1395.606
154.0	1423.968
154.5	1450.374
155.0	1473.520
155.5	1495.036
156.0	1512.966
156.5	1527.636
157.0	1540.024
157.5	1550.130
158.0	1557.302
158.5	1562.844
159.0	1566.104
159.5	1568.060
160.0	1568.060
160.5	1567.082
161.0	1565.126
161.5	1562.844
162.0	1559.258
162.5	1555.020
163.0	1550.130
163.5	1544.262
164.0	1539.372
164.5	1533.504
165.0	1528.288
165.5	1523.072
166.0	1517.856
166.5	1512.640

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167.0	1507.424
167.5	1501.230
168.0	1495.362
168.5	1489.168
169.0	1482.648
169.5	1476.454
170.0	1469.934
170.5	1463.740
171.0	1457.546
171.5	1451.678
172.0	1445.158
172.5	1437.334
173.0	1428.532
173.5	1418.426
174.0	1407.994
174.5	1398.540
175.0	1389.412
175.5	1381.262
176.0	1373.764
176.5	1366.918
177.0	1359.420
177.5	1352.574
178.0	1346.054
178.5	1339.534
179.0	1336.274
179.5	1333.992
180.0	1332.688

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Zone	Lumens	%Lamp	%Fixt
0-20	1009.84	N.A.	27.30
0-30	1783.62	N.A.	48.20
0-40	1962.24	N.A.	53.00
0-60	1999.02	N.A.	54.00
0-80	2001.94	N.A.	54.10
0-90	2002.15	N.A.	54.10
10-90	1655.27	N.A.	44.70
20-40	952.39	N.A.	25.70
20-50	980.82	N.A.	26.50
40-70	39.08	N.A.	1.10
60-80	2.93	N.A.	0.10
70-80	0.62	N.A.	0.00
80-90	0.21	N.A.	0.00
90-110	9.76	N.A.	0.30
90-120	18.65	N.A.	0.50
90-130	35.75	N.A.	1.00
90-150	477.01	N.A.	12.90
90-180	1701.53	N.A.	45.90
110-180	1691.77	N.A.	45.70
0-180	3703.68	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	346.88
10-20	662.96
20-30	773.78
30-40	178.62
40-50	28.42
50-60	8.35
60-70	2.31
70-80	0.62
80-90	0.21
90-100	4.04
100-110	5.72
110-120	8.89
120-130	17.09
130-140	60.18
140-150	381.08
150-160	654.68
160-170	434.29
170-180	135.54

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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	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54
1	102	98	95	93	94	92	89	87	79	78	76	68	67	66	57	57	56	51
2	95	90	85	82	89	84	80	77	74	71	69	64	62	60	55	54	53	49
3	90	83	77	73	84	78	73	69	69	65	63	60	58	56	52	51	50	46
4	84	76	70	66	79	72	67	63	64	60	57	57	54	52	50	48	47	44
5	80	71	65	60	75	67	62	58	60	56	53	54	51	49	48	46	44	41
6	75	66	60	55	71	63	57	53	56	52	49	51	48	45	45	43	42	39
7	71	62	55	51	67	59	53	49	53	49	46	48	45	43	43	41	40	37
8	67	58	52	47	64	55	50	46	50	46	43	46	43	40	41	39	38	36
9	64	54	48	44	60	52	47	43	48	43	41	44	40	38	40	37	36	34
10	61	51	45	42	58	49	44	40	45	41	38	41	38	36	38	36	34	32

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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

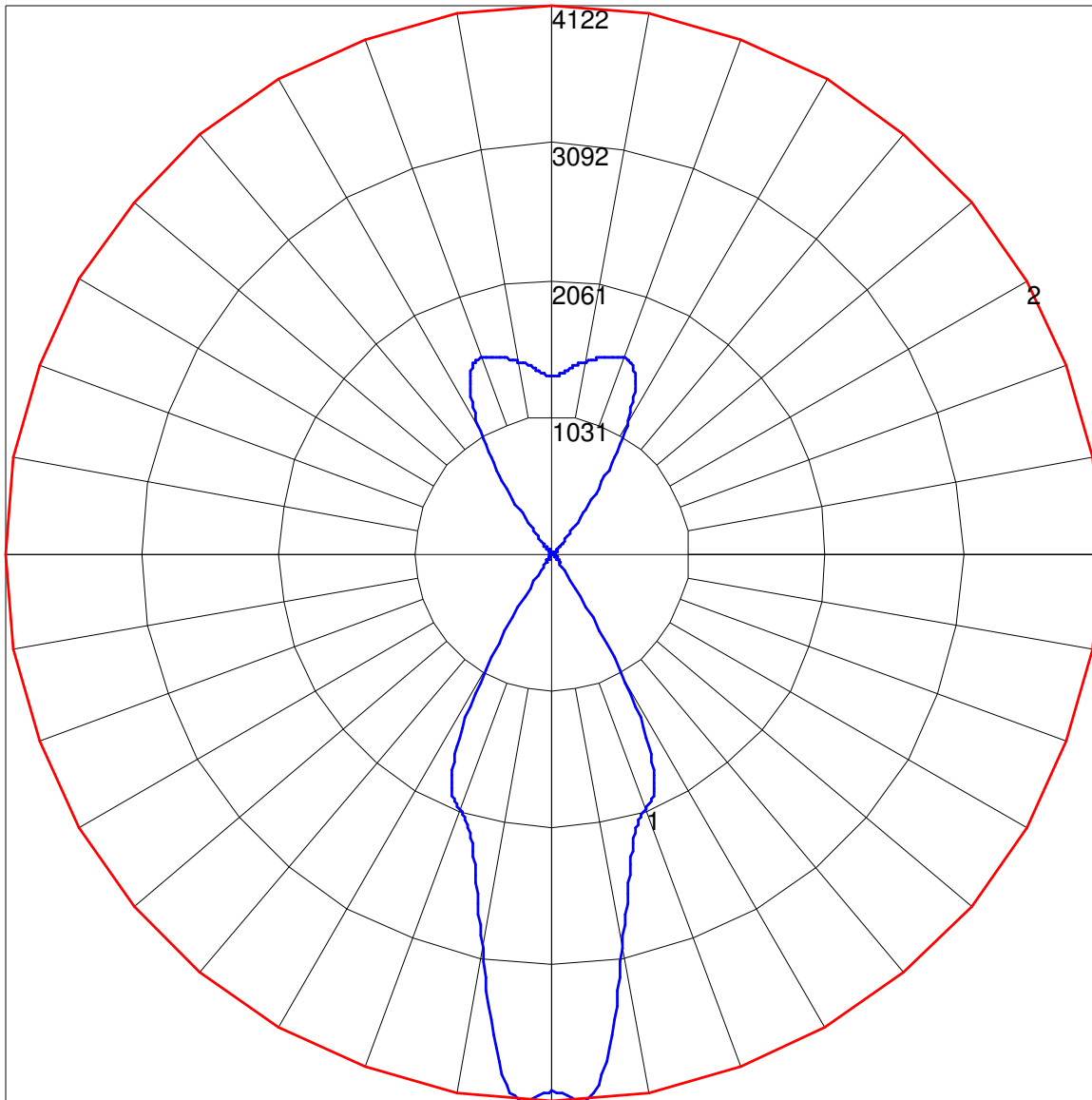
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	3H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	4H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	6H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	8H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	12H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
4H	2H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	3H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	4H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	6H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	8H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	12H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
8H	4H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	6H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	8H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	12H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
12H	4H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	6H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
	8H	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6

Maximum UGR = 4.6

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POLAR GRAPH



Maximum Candela = 4122 Located At Horizontal Angle = 0, Vertical Angle = 3.5

1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

2 - Horizontal Cone Through Vertical Angle (3.5) (Through Max. Cd.)