



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L15-835-XXX-DIM-UNV-ON-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 13131414.09
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 02/19/2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
 [LUMCAT] 4CR-xx-L15-835-xxx-DIM-UNV-ON-CS-xx
 [LUMINAIRE] Aluminum cylinder housing and reflector, no lens enclosure
 [LAMP] One white LED
 [SEARCH_SOURCETYPE] LED
 [SEARCH_APPLICATION] Indoor, Downlight
 [SEARCH_MOUNTING] Surface, Suspended, Wall

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1240
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	70
Total Luminaire Watts	17.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.28
Spacing Criterion (90-270)	0.28
Spacing Criterion (Diagonal)	0.32
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.21 ft (Diameter)
Luminous Width (90-270)	0.21 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	5388	5388	5388
55	2797	2797	2797
65	2372	2372	2372
75	3099	3099	3099
85	6903	6903	6903

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CANDELA TABULATION

	<u>0</u>
0.0	8192.744
0.5	8173.735
1.0	8097.700
1.5	7989.985
2.0	7844.251
2.5	7654.164
3.0	7426.060
3.5	7159.939
4.0	6868.472
4.5	6564.333
5.0	6258.927
5.5	5928.809
6.0	5579.683
6.5	5224.854
7.0	4868.758
7.5	4513.296
8.0	4174.941
8.5	3857.496
9.0	3559.060
9.5	3279.632
10.0	3018.579
10.5	2778.436
11.0	2559.836
11.5	2365.314
12.0	2195.503
12.5	2044.701
13.0	1907.839
13.5	1784.282
14.0	1672.764
14.5	1572.018
15.0	1481.410
15.5	1399.673
16.0	1328.074
16.5	1262.810
17.0	1205.151
17.5	1152.560
18.0	1104.405
18.5	1058.784
19.0	1016.331
19.5	977.680
20.0	942.197
20.5	907.348
21.0	873.766
21.5	840.184
22.0	806.602
22.5	771.753
23.0	736.903
23.5	700.787
24.0	664.037
24.5	626.019
25.0	586.735
25.5	547.450
26.0	507.532
26.5	468.247

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CANDELA TABULATION - (Cont.)

27.0	428.329
27.5	389.044
28.0	350.393
28.5	313.643
29.0	277.527
29.5	243.311
30.0	211.630
30.5	181.216
31.0	154.604
31.5	131.160
32.0	110.250
32.5	92.509
33.0	77.936
33.5	65.263
34.0	54.492
34.5	45.621
35.0	38.651
35.5	32.948
36.0	29.780
36.5	27.246
37.0	25.979
37.5	24.711
38.0	23.444
38.5	22.177
39.0	21.543
39.5	20.910
40.0	19.642
40.5	19.009
41.0	18.375
41.5	17.108
42.0	16.474
42.5	15.841
43.0	15.207
43.5	13.940
44.0	13.306
44.5	12.672
45.0	12.039
45.5	11.405
46.0	11.405
46.5	10.138
47.0	10.138
47.5	9.504
48.0	8.871
48.5	8.237
49.0	8.237
49.5	7.603
50.0	7.603
50.5	6.970
51.0	6.970
51.5	6.336
52.0	6.336
52.5	6.336
53.0	5.703
53.5	5.703
54.0	5.703
54.5	5.069

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CANDELA TABULATION - (Cont.)

55.0	5.069
55.5	5.069
56.0	5.069
56.5	4.435
57.0	4.435
57.5	4.435
58.0	4.435
58.5	4.435
59.0	3.802
59.5	3.802
60.0	3.802
60.5	3.802
61.0	3.802
61.5	3.168
62.0	3.802
62.5	3.168
63.0	3.168
63.5	3.168
64.0	3.168
64.5	3.168
65.0	3.168
65.5	3.168
66.0	3.168
66.5	3.168
67.0	2.534
67.5	3.168
68.0	3.168
68.5	3.168
69.0	2.534
69.5	2.534
70.0	2.534
70.5	2.534
71.0	2.534
71.5	2.534
72.0	2.534
72.5	2.534
73.0	2.534
73.5	2.534
74.0	2.534
74.5	2.534
75.0	2.534
75.5	2.534
76.0	1.901
76.5	1.901
77.0	1.901
77.5	2.534
78.0	1.901
78.5	1.901
79.0	2.534
79.5	2.534
80.0	2.534
80.5	1.901
81.0	2.534
81.5	2.534
82.0	2.534
82.5	1.901

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CANDELA TABULATION - (Cont.)

83.0	1.901
83.5	2.534
84.0	1.901
84.5	2.534
85.0	1.901
85.5	1.901
86.0	1.901
86.5	1.901
87.0	1.901
87.5	2.534
88.0	2.534
88.5	1.901
89.0	2.534
89.5	1.901
90.0	1.901
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
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121.0	0.000
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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
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132.0	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
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147.5	0.000
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149.5	0.000
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150.5	0.000
151.0	0.000
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152.0	0.000
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154.0	0.000
154.5	0.000
155.0	0.000
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156.5	0.000
157.0	0.000
157.5	0.000
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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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Zone	Lumens	%Lamp	%Fixt
0-20	920.92	N.A.	74.30
0-30	1178.98	N.A.	95.10
0-40	1217.55	N.A.	98.20
0-60	1231.93	N.A.	99.30
0-80	1237.58	N.A.	99.80
0-90	1239.94	N.A.	100.00
10-90	755.08	N.A.	60.90
20-40	296.63	N.A.	23.90
20-50	306.30	N.A.	24.70
40-70	17.51	N.A.	1.40
60-80	5.65	N.A.	0.50
70-80	2.51	N.A.	0.20
80-90	2.37	N.A.	0.20
90-110	0.05	N.A.	0.00
90-120	0.05	N.A.	0.00
90-130	0.05	N.A.	0.00
90-150	0.05	N.A.	0.00
90-180	0.05	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1239.99	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	484.87
10-20	436.05
20-30	258.07
30-40	38.57
40-50	9.66
50-60	4.71
60-70	3.14
70-80	2.51
80-90	2.37
90-100	0.05
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	115	113	111	109	113	111	109	107	107	105	104	103	102	101	100	99	98	96
2	111	107	104	102	109	106	103	101	103	100	99	100	98	96	97	96	94	93
3	108	103	99	96	106	101	98	95	99	96	94	97	94	93	95	93	91	90
4	104	99	95	92	103	98	94	91	96	93	90	94	91	89	92	90	88	87
5	101	95	91	88	100	94	90	88	93	89	87	91	88	86	90	87	85	84
6	98	92	88	85	97	91	87	84	90	86	84	89	86	83	87	85	83	82
7	95	89	85	82	94	88	84	82	87	84	81	86	83	81	85	83	80	79
8	93	86	82	79	92	86	82	79	85	81	79	84	81	79	83	80	78	77
9	90	84	80	77	90	83	79	77	83	79	77	82	79	76	81	78	76	75
10	88	81	77	75	87	81	77	75	80	77	75	80	77	74	79	76	74	73

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UGR TABLE - CORRECTED

Reflectances

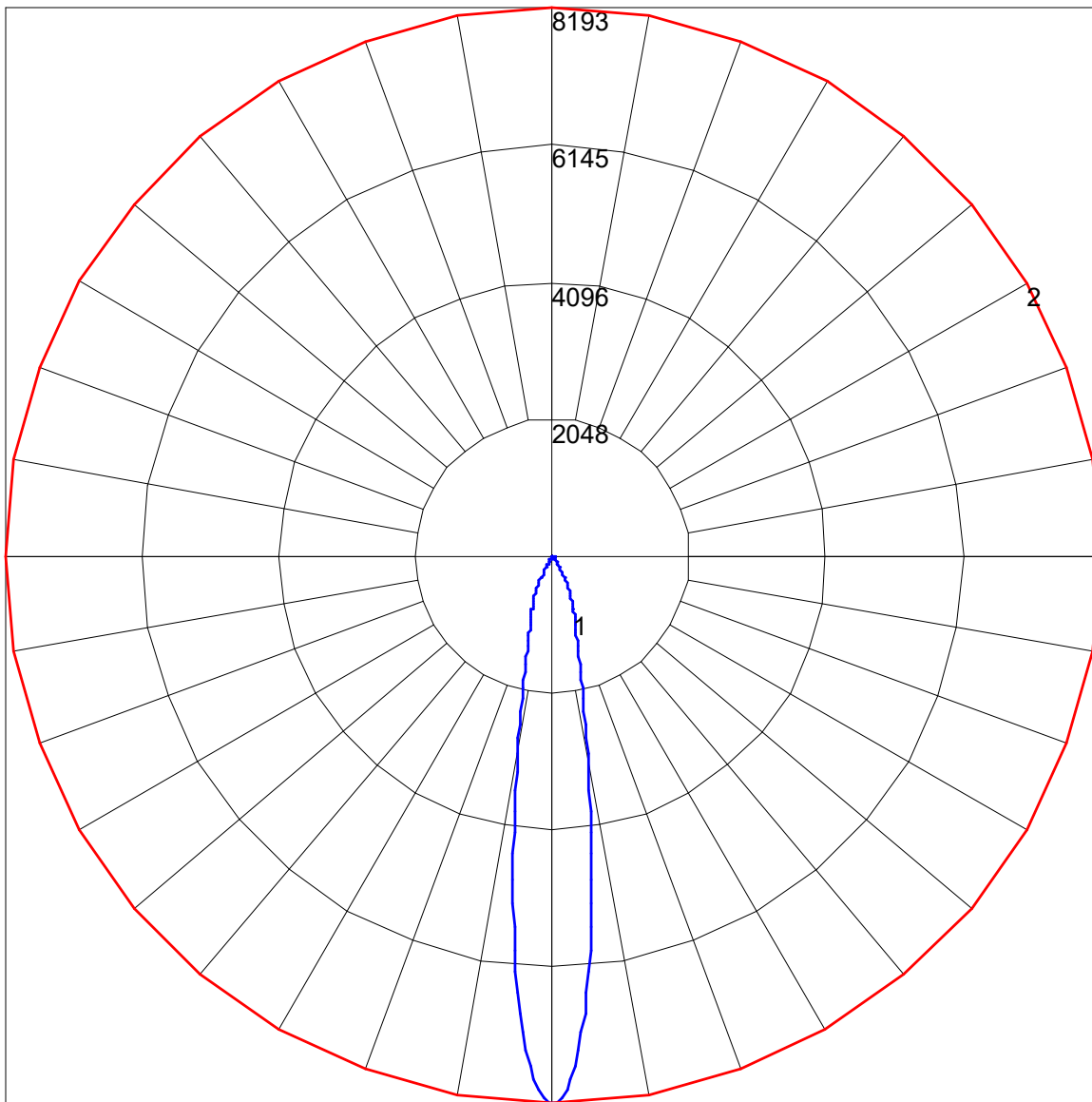
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size UGR Viewed Crosswise

X=2H	Y=2H	2.3	3.2	2.7	3.5	3.8	2.3	3.2	2.7	3.5	3.8
	3H	4.5	5.3	4.8	5.6	6.0	4.5	5.3	4.8	5.6	6.0
	4H	5.5	6.2	5.9	6.5	6.9	5.5	6.2	5.9	6.5	6.9
	6H	6.9	7.5	7.3	7.9	8.3	6.9	7.5	7.3	7.9	8.3
	8H	7.6	8.2	8.0	8.6	9.0	7.6	8.2	8.0	8.6	9.0
	12H	8.4	9.0	8.9	9.4	9.9	8.4	9.0	8.9	9.4	9.9
4H	2H	2.8	3.5	3.2	3.8	4.2	2.8	3.5	3.2	3.8	4.2
	3H	5.1	5.7	5.5	6.1	6.5	5.1	5.7	5.5	6.1	6.5
	4H	6.4	6.9	6.8	7.3	7.8	6.4	6.9	6.8	7.3	7.8
	6H	7.9	8.4	8.4	8.8	9.3	7.9	8.4	8.4	8.8	9.3
	8H	8.8	9.2	9.3	9.7	10.1	8.8	9.2	9.3	9.7	10.1
	12H	9.8	10.2	10.3	10.7	11.2	9.8	10.2	10.3	10.7	11.2
8H	4H	6.7	7.1	7.2	7.5	8.0	6.7	7.1	7.2	7.5	8.0
	6H	8.6	8.9	9.1	9.4	9.9	8.6	8.9	9.1	9.4	9.9
	8H	9.7	10.0	10.2	10.5	11.0	9.7	10.0	10.2	10.5	11.0
	12H	11.0	11.3	11.5	11.8	12.3	11.0	11.3	11.5	11.8	12.3
12H	4H	6.8	7.2	7.3	7.7	8.1	6.8	7.2	7.3	7.7	8.1
	6H	8.9	9.2	9.4	9.6	10.2	8.9	9.2	9.4	9.6	10.2
	8H	10.1	10.3	10.6	10.8	11.4	10.1	10.3	10.6	10.8	11.4

Maximum UGR = 12.3

POLAR GRAPH



Maximum Candela = 8192.744 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)