



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L7-840-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] 04-26-2022
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
 [LUMCAT] 4CR-xx-L7-840-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	578
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	66
Total Luminaire Watts	8.7
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	2512	2512	2512
55	1304	1304	1304
65	1106	1106	1106
75	1444	1444	1444
85	3217	3217	3217

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CANDELA TABULATION

	<u>0</u>
0.0	3818.875
0.5	3810.015
1.0	3774.573
1.5	3724.363
2.0	3656.433
2.5	3567.828
3.0	3461.502
3.5	3337.455
4.0	3201.594
4.5	3059.826
5.0	2917.467
5.5	2763.590
6.0	2600.852
6.5	2435.456
7.0	2269.469
7.5	2103.778
8.0	1946.061
8.5	1798.091
9.0	1658.981
9.5	1528.732
10.0	1407.047
10.5	1295.110
11.0	1193.214
11.5	1102.541
12.0	1023.388
12.5	953.094
13.0	889.299
13.5	831.706
14.0	779.724
14.5	732.763
15.0	690.528
15.5	652.428
16.0	619.054
16.5	588.633
17.0	561.756
17.5	537.242
18.0	514.795
18.5	493.530
19.0	473.741
19.5	455.725
20.0	439.185
20.5	422.941
21.0	407.288
21.5	391.634
22.0	375.981
22.5	359.736
23.0	343.492
23.5	326.657
24.0	309.527
24.5	291.806
25.0	273.494
25.5	255.182
26.0	236.575
26.5	218.264

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CANDELA TABULATION - (Cont.)

27.0	199.657
27.5	181.345
28.0	163.329
28.5	146.198
29.0	129.363
29.5	113.414
30.0	98.647
30.5	84.470
31.0	72.065
31.5	61.137
32.0	51.391
32.5	43.121
33.0	36.328
33.5	30.421
34.0	25.400
34.5	21.265
35.0	18.016
35.5	15.358
36.0	13.881
36.5	12.700
37.0	12.109
37.5	11.519
38.0	10.928
38.5	10.337
39.0	10.042
39.5	9.747
40.0	9.156
40.5	8.860
41.0	8.565
41.5	7.974
42.0	7.679
42.5	7.384
43.0	7.088
43.5	6.498
44.0	6.202
44.5	5.907
45.0	5.612
45.5	5.316
46.0	5.316
46.5	4.726
47.0	4.726
47.5	4.430
48.0	4.135
48.5	3.840
49.0	3.840
49.5	3.544
50.0	3.544
50.5	3.249
51.0	3.249
51.5	2.953
52.0	2.953
52.5	2.953
53.0	2.658
53.5	2.658
54.0	2.658
54.5	2.363

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CANDELA TABULATION - (Cont.)

55.0	2.363
55.5	2.363
56.0	2.363
56.5	2.067
57.0	2.067
57.5	2.067
58.0	2.067
58.5	2.067
59.0	1.772
59.5	1.772
60.0	1.772
60.5	1.772
61.0	1.772
61.5	1.477
62.0	1.772
62.5	1.477
63.0	1.477
63.5	1.477
64.0	1.477
64.5	1.477
65.0	1.477
65.5	1.477
66.0	1.477
66.5	1.477
67.0	1.181
67.5	1.477
68.0	1.477
68.5	1.477
69.0	1.181
69.5	1.181
70.0	1.181
70.5	1.181
71.0	1.181
71.5	1.181
72.0	1.181
72.5	1.181
73.0	1.181
73.5	1.181
74.0	1.181
74.5	1.181
75.0	1.181
75.5	1.181
76.0	0.886
76.5	0.886
77.0	0.886
77.5	1.181
78.0	0.886
78.5	0.886
79.0	1.181
79.5	1.181
80.0	1.181
80.5	0.886
81.0	1.181
81.5	1.181
82.0	1.181
82.5	0.886

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CANDELA TABULATION - (Cont.)

83.0	0.886
83.5	1.181
84.0	0.886
84.5	1.181
85.0	0.886
85.5	0.886
86.0	0.886
86.5	0.886
87.0	0.886
87.5	1.181
88.0	1.181
88.5	0.886
89.0	1.181
89.5	0.886
90.0	0.886
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
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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
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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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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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	429.27	N.A.	74.30
0-30	549.56	N.A.	95.10
0-40	567.54	N.A.	98.20
0-60	574.24	N.A.	99.30
0-80	576.87	N.A.	99.80
0-90	577.97	N.A.	100.00
10-90	351.96	N.A.	60.90
20-40	138.27	N.A.	23.90
20-50	142.77	N.A.	24.70
40-70	8.16	N.A.	1.40
60-80	2.63	N.A.	0.50
70-80	1.17	N.A.	0.20
80-90	1.10	N.A.	0.20
90-110	0.02	N.A.	0.00
90-120	0.02	N.A.	0.00
90-130	0.02	N.A.	0.00
90-150	0.02	N.A.	0.00
90-180	0.02	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	578.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	226.01
10-20	203.26
20-30	120.29
30-40	17.98
40-50	4.50
50-60	2.20
60-70	1.46
70-80	1.17
80-90	1.10
90-100	0.02
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

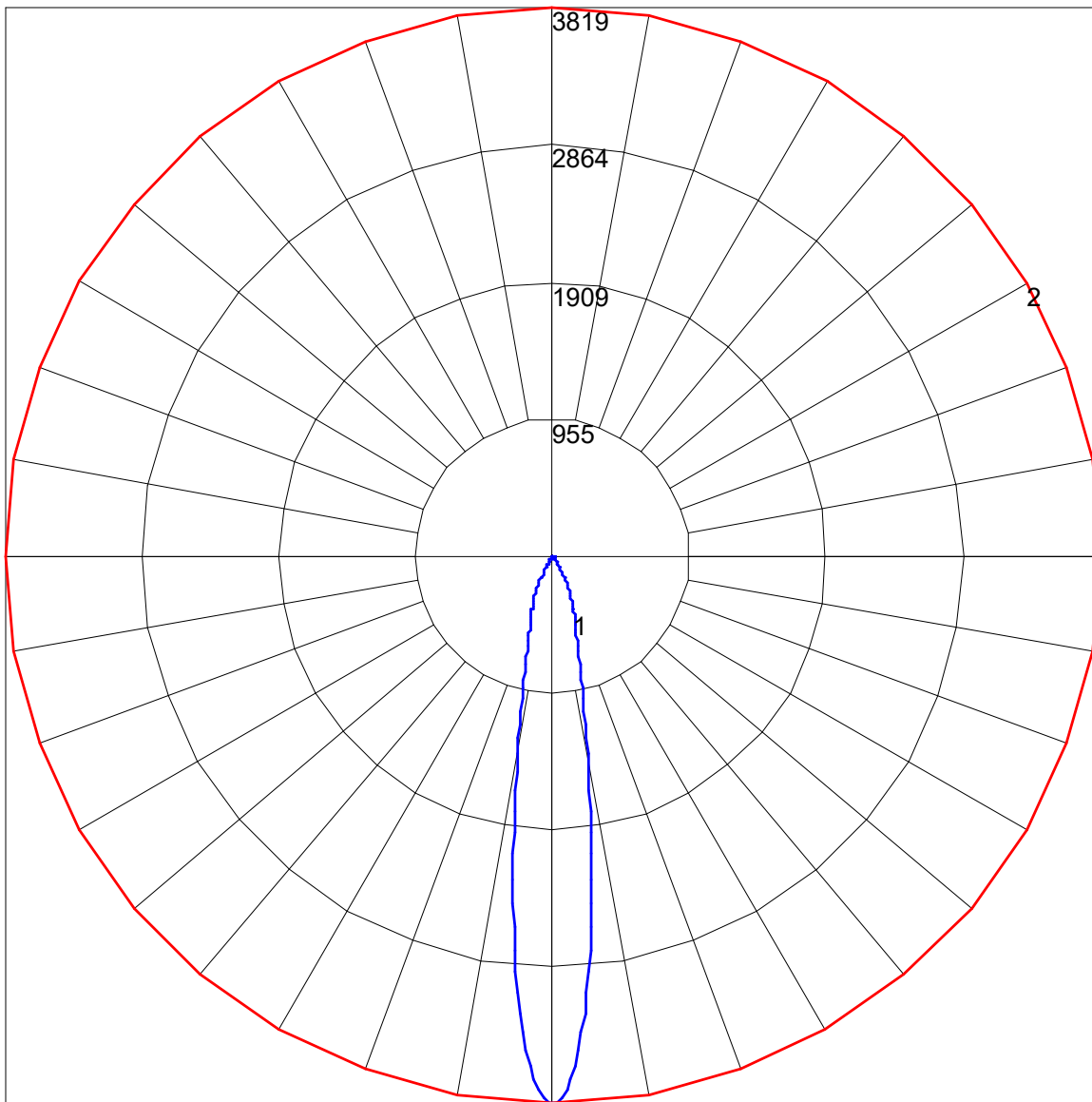
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UGR TABLE - CORRECTED

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					UGR Viewed Endwise				
X=2H	Y=2H	0.0	0.6	0.1	0.9	1.2	0.0	0.6	0.1	0.9	1.2
	3H	1.9	2.7	2.3	3.0	3.4	1.9	2.7	2.3	3.0	3.4
	4H	2.9	3.6	3.3	4.0	4.3	2.9	3.6	3.3	4.0	4.3
	6H	4.3	4.9	4.7	5.3	5.7	4.3	4.9	4.7	5.3	5.7
	8H	5.0	5.6	5.4	6.0	6.4	5.0	5.6	5.4	6.0	6.4
	12H	5.8	6.4	6.3	6.8	7.3	5.8	6.4	6.3	6.8	7.3
4H	2H	0.2	0.9	0.6	1.2	1.6	0.2	0.9	0.6	1.2	1.6
	3H	2.5	3.1	2.9	3.5	3.9	2.5	3.1	2.9	3.5	3.9
	4H	3.8	4.3	4.2	4.7	5.2	3.8	4.3	4.2	4.7	5.2
	6H	5.3	5.8	5.8	6.2	6.7	5.3	5.8	5.8	6.2	6.7
	8H	6.2	6.6	6.7	7.1	7.6	6.2	6.6	6.7	7.1	7.6
	12H	7.2	7.6	7.7	8.1	8.6	7.2	7.6	7.7	8.1	8.6
8H	4H	4.1	4.5	4.6	4.9	5.4	4.1	4.5	4.6	4.9	5.4
	6H	6.0	6.3	6.5	6.8	7.3	6.0	6.3	6.5	6.8	7.3
	8H	7.1	7.4	7.6	7.9	8.4	7.1	7.4	7.6	7.9	8.4
	12H	8.4	8.7	8.9	9.2	9.7	8.4	8.7	8.9	9.2	9.7
12H	4H	4.2	4.6	4.7	5.1	5.5	4.2	4.6	4.7	5.1	5.5
	6H	6.3	6.6	6.8	7.1	7.6	6.3	6.6	6.8	7.1	7.6
	8H	7.5	7.7	8.0	8.2	8.8	7.5	7.7	8.0	8.2	8.8

Maximum UGR = 9.7

POLAR GRAPH



Maximum Candela = 3818.875 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.)