



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L9-840-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-L9-840-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	807
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	75
Total Luminaire Watts	10.7
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	3507	3507	3507
55	1820	1820	1820
65	1544	1544	1544
75	2016	2016	2016
85	4492	4492	4492

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CANDELA TABULATION

	<u>0</u>
0.0	5331.891
0.5	5319.520
1.0	5270.036
1.5	5199.934
2.0	5105.090
2.5	4981.380
3.0	4832.929
3.5	4659.735
4.0	4470.047
4.5	4272.111
5.0	4073.350
5.5	3858.508
6.0	3631.294
6.5	3400.369
7.0	3168.620
7.5	2937.282
8.0	2717.079
8.5	2510.484
9.0	2316.259
9.5	2134.406
10.0	1964.511
10.5	1808.225
11.0	1665.958
11.5	1539.362
12.0	1428.848
12.5	1330.705
13.0	1241.634
13.5	1161.222
14.0	1088.646
14.5	1023.080
15.0	964.112
15.5	910.916
16.0	864.319
16.5	821.845
17.0	784.320
17.5	750.094
18.0	718.754
18.5	689.063
19.0	661.435
19.5	636.281
20.0	613.188
20.5	590.508
21.0	568.653
21.5	546.797
22.0	524.942
22.5	502.262
23.0	479.582
23.5	456.077
24.0	432.159
24.5	407.418
25.0	381.851
25.5	356.284
26.0	330.305
26.5	304.738

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CANDELA TABULATION - (Cont.)

27.0	278.759
27.5	253.193
28.0	228.038
28.5	204.121
29.0	180.616
29.5	158.349
30.0	137.730
30.5	117.937
31.0	100.617
31.5	85.360
32.0	71.752
32.5	60.205
33.0	50.721
33.5	42.474
34.0	35.463
34.5	29.690
35.0	25.154
35.5	21.443
36.0	19.381
36.5	17.732
37.0	16.907
37.5	16.082
38.0	15.258
38.5	14.433
39.0	14.020
39.5	13.608
40.0	12.783
40.5	12.371
41.0	11.959
41.5	11.134
42.0	10.722
42.5	10.309
43.0	9.897
43.5	9.072
44.0	8.660
44.5	8.247
45.0	7.835
45.5	7.423
46.0	7.423
46.5	6.598
47.0	6.598
47.5	6.185
48.0	5.773
48.5	5.361
49.0	5.361
49.5	4.948
50.0	4.948
50.5	4.536
51.0	4.536
51.5	4.124
52.0	4.124
52.5	4.124
53.0	3.711
53.5	3.711
54.0	3.711
54.5	3.299

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CANDELA TABULATION - (Cont.)

55.0	3.299
55.5	3.299
56.0	3.299
56.5	2.887
57.0	2.887
57.5	2.887
58.0	2.887
58.5	2.887
59.0	2.474
59.5	2.474
60.0	2.474
60.5	2.474
61.0	2.474
61.5	2.062
62.0	2.474
62.5	2.062
63.0	2.062
63.5	2.062
64.0	2.062
64.5	2.062
65.0	2.062
65.5	2.062
66.0	2.062
66.5	2.062
67.0	1.649
67.5	2.062
68.0	2.062
68.5	2.062
69.0	1.649
69.5	1.649
70.0	1.649
70.5	1.649
71.0	1.649
71.5	1.649
72.0	1.649
72.5	1.649
73.0	1.649
73.5	1.649
74.0	1.649
74.5	1.649
75.0	1.649
75.5	1.649
76.0	1.237
76.5	1.237
77.0	1.237
77.5	1.649
78.0	1.237
78.5	1.237
79.0	1.649
79.5	1.649
80.0	1.649
80.5	1.237
81.0	1.649
81.5	1.649
82.0	1.649
82.5	1.237

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CANDELA TABULATION - (Cont.)

83.0	1.237
83.5	1.649
84.0	1.237
84.5	1.649
85.0	1.237
85.5	1.237
86.0	1.237
86.5	1.237
87.0	1.237
87.5	1.649
88.0	1.649
88.5	1.237
89.0	1.649
89.5	1.237
90.0	1.237
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
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119.5	0.000
120.0	0.000
120.5	0.000
121.0	0.000
121.5	0.000
122.0	0.000
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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
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130.0	0.000
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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
147.5	0.000
148.0	0.000
148.5	0.000
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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	599.34	N.A.	74.30
0-30	767.29	N.A.	95.10
0-40	792.39	N.A.	98.20
0-60	801.75	N.A.	99.30
0-80	805.42	N.A.	99.80
0-90	806.96	N.A.	100.00
10-90	491.41	N.A.	60.90
20-40	193.05	N.A.	23.90
20-50	199.34	N.A.	24.70
40-70	11.40	N.A.	1.40
60-80	3.68	N.A.	0.50
70-80	1.63	N.A.	0.20
80-90	1.54	N.A.	0.20
90-110	0.03	N.A.	0.00
90-120	0.03	N.A.	0.00
90-130	0.03	N.A.	0.00
90-150	0.03	N.A.	0.00
90-180	0.03	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	807.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	315.55
10-20	283.78
20-30	167.95
30-40	25.10
40-50	6.29
50-60	3.07
60-70	2.04
70-80	1.63
80-90	1.54
90-100	0.03
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

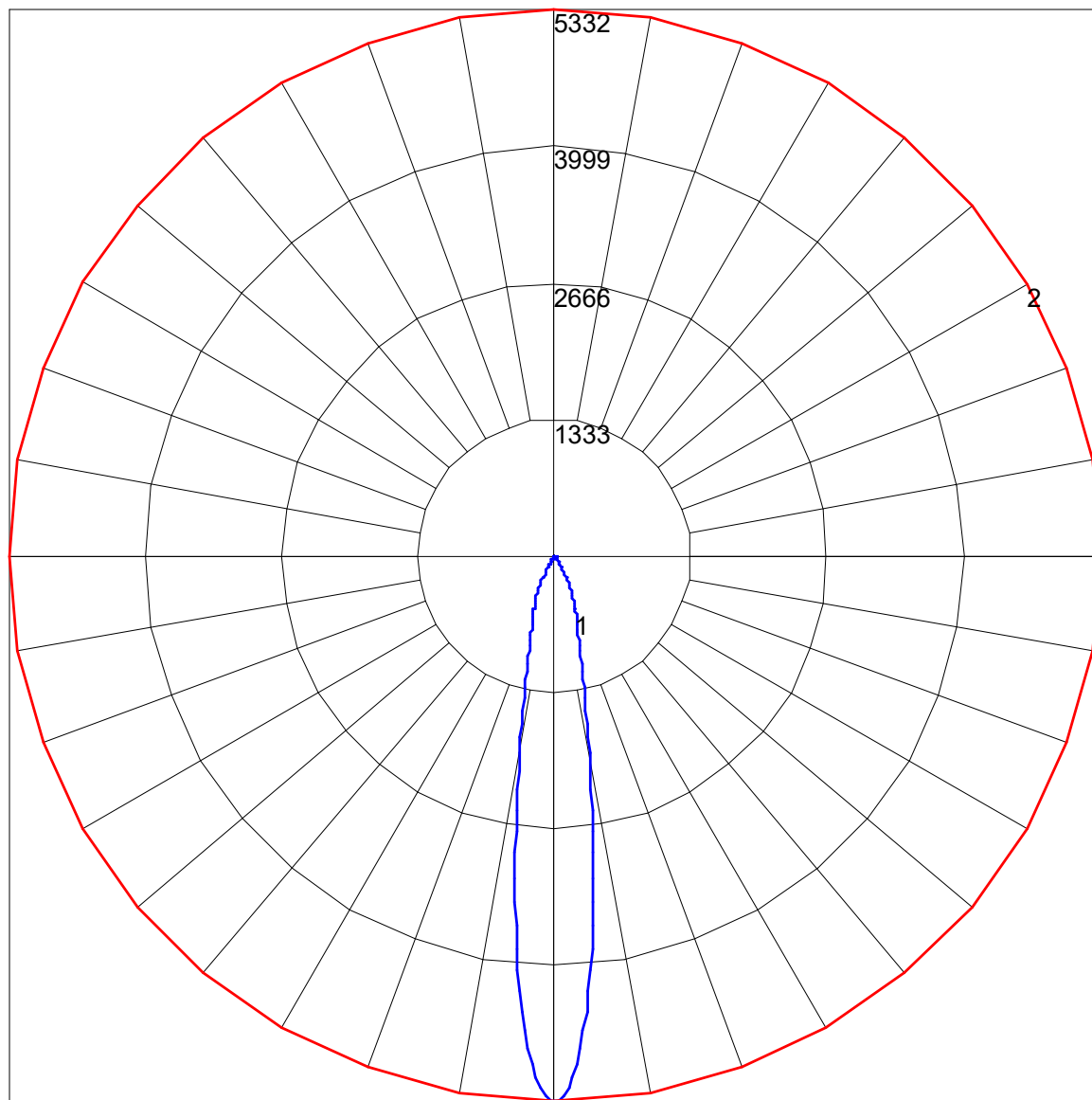
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size UGR Viewed Crosswise

X=2H	Y=2H	0.8	1.7	1.2	2.0	2.3	0.8	1.7	1.2	2.0	2.3
	3H	3.0	3.8	3.3	4.1	4.5	3.0	3.8	3.3	4.1	4.5
	4H	4.0	4.7	4.4	5.0	5.4	4.0	4.7	4.4	5.0	5.4
	6H	5.4	6.0	5.8	6.4	6.8	5.4	6.0	5.8	6.4	6.8
	8H	6.1	6.7	6.5	7.1	7.5	6.1	6.7	6.5	7.1	7.5
	12H	6.9	7.5	7.4	7.9	8.4	6.9	7.5	7.4	7.9	8.4
4H	2H	1.3	2.0	1.7	2.3	2.7	1.3	2.0	1.7	2.3	2.7
	3H	3.6	4.2	4.0	4.6	5.0	3.6	4.2	4.0	4.6	5.0
	4H	4.9	5.4	5.3	5.8	6.3	4.9	5.4	5.3	5.8	6.3
	6H	6.4	6.9	6.9	7.3	7.8	6.4	6.9	6.9	7.3	7.8
	8H	7.3	7.7	7.8	8.2	8.6	7.3	7.7	7.8	8.2	8.6
	12H	8.3	8.7	8.8	9.2	9.7	8.3	8.7	8.8	9.2	9.7
8H	4H	5.2	5.6	5.7	6.0	6.5	5.2	5.6	5.7	6.0	6.5
	6H	7.1	7.4	7.6	7.9	8.4	7.1	7.4	7.6	7.9	8.4
	8H	8.2	8.5	8.7	9.0	9.5	8.2	8.5	8.7	9.0	9.5
	12H	9.5	9.8	10.0	10.3	10.8	9.5	9.8	10.0	10.3	10.8
12H	4H	5.3	5.7	5.8	6.2	6.6	5.3	5.7	5.8	6.2	6.6
	6H	7.4	7.7	7.9	8.1	8.7	7.4	7.7	7.9	8.1	8.7
	8H	8.6	8.8	9.1	9.3	9.9	8.6	8.8	9.1	9.3	9.9

Maximum UGR = 10.8

POLAR GRAPH



Maximum Candela = 5331.891 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.)