



IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CR-XX-L5-830-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] 02-21-2024
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
[LUMCAT] 4CR-xx-L5-830-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	399
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	60
Total Luminaire Watts	6.7
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	1733	1733	1733
55	899	899	899
65	763	763	763
75	997	997	997
85	2219	2219	2219

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CANDELA TABULATION

	<u>0</u>
0.0	2635.289
0.5	2629.175
1.0	2604.717
1.5	2570.069
2.0	2523.193
2.5	2462.049
3.0	2388.677
3.5	2303.076
4.0	2209.322
4.5	2111.492
5.0	2013.255
5.5	1907.069
6.0	1794.768
6.5	1680.634
7.0	1566.091
7.5	1451.753
8.0	1342.917
8.5	1240.807
9.0	1144.812
9.5	1054.931
10.0	970.960
10.5	893.716
11.0	823.400
11.5	760.830
12.0	706.209
12.5	657.701
13.0	613.678
13.5	573.935
14.0	538.064
14.5	505.658
15.0	476.512
15.5	450.221
16.0	427.190
16.5	406.197
17.0	387.650
17.5	370.734
18.0	355.244
18.5	340.570
19.0	326.914
19.5	314.482
20.0	303.068
20.5	291.859
21.0	281.057
21.5	270.255
22.0	259.453
22.5	248.243
23.0	237.033
23.5	225.416
24.0	213.595
24.5	201.366
25.0	188.730
25.5	176.094
26.0	163.253
26.5	150.617

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CANDELA TABULATION - (Cont.)

27.0	137.777
27.5	125.141
28.0	112.708
28.5	100.887
29.0	89.270
29.5	78.264
30.0	68.073
30.5	58.290
31.0	49.730
31.5	42.189
32.0	35.463
32.5	29.757
33.0	25.069
33.5	20.993
34.0	17.528
34.5	14.674
35.0	12.433
35.5	10.598
36.0	9.579
36.5	8.764
37.0	8.356
37.5	7.949
38.0	7.541
38.5	7.133
39.0	6.930
39.5	6.726
40.0	6.318
40.5	6.114
41.0	5.911
41.5	5.503
42.0	5.299
42.5	5.095
43.0	4.891
43.5	4.484
44.0	4.280
44.5	4.076
45.0	3.872
45.5	3.669
46.0	3.669
46.5	3.261
47.0	3.261
47.5	3.057
48.0	2.853
48.5	2.650
49.0	2.650
49.5	2.446
50.0	2.446
50.5	2.242
51.0	2.242
51.5	2.038
52.0	2.038
52.5	2.038
53.0	1.834
53.5	1.834
54.0	1.834
54.5	1.630

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CANDELA TABULATION - (Cont.)

55.0	1.630
55.5	1.630
56.0	1.630
56.5	1.427
57.0	1.427
57.5	1.427
58.0	1.427
58.5	1.427
59.0	1.223
59.5	1.223
60.0	1.223
60.5	1.223
61.0	1.223
61.5	1.019
62.0	1.223
62.5	1.019
63.0	1.019
63.5	1.019
64.0	1.019
64.5	1.019
65.0	1.019
65.5	1.019
66.0	1.019
66.5	1.019
67.0	0.815
67.5	1.019
68.0	1.019
68.5	1.019
69.0	0.815
69.5	0.815
70.0	0.815
70.5	0.815
71.0	0.815
71.5	0.815
72.0	0.815
72.5	0.815
73.0	0.815
73.5	0.815
74.0	0.815
74.5	0.815
75.0	0.815
75.5	0.815
76.0	0.611
76.5	0.611
77.0	0.611
77.5	0.815
78.0	0.611
78.5	0.611
79.0	0.815
79.5	0.815
80.0	0.815
80.5	0.611
81.0	0.815
81.5	0.815
82.0	0.815
82.5	0.611

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CANDELA TABULATION - (Cont.)

83.0	0.611
83.5	0.815
84.0	0.611
84.5	0.815
85.0	0.611
85.5	0.611
86.0	0.611
86.5	0.611
87.0	0.611
87.5	0.815
88.0	0.815
88.5	0.611
89.0	0.815
89.5	0.611
90.0	0.611
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
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126.5	0.000
127.0	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
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	296.22	N.A.	74.30
0-30	379.23	N.A.	95.10
0-40	391.64	N.A.	98.20
0-60	396.26	N.A.	99.30
0-80	398.08	N.A.	99.80
0-90	398.84	N.A.	100.00
10-90	242.88	N.A.	60.90
20-40	95.42	N.A.	23.90
20-50	98.52	N.A.	24.70
40-70	5.63	N.A.	1.40
60-80	1.82	N.A.	0.50
70-80	0.81	N.A.	0.20
80-90	0.76	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	398.86	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	155.96
10-20	140.26
20-30	83.01
30-40	12.41
40-50	3.11
50-60	1.52
60-70	1.01
70-80	0.81
80-90	0.76
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	112	111	109	107	107	105	104	103	102	101	100	99	98	96
2	111	107	104	102	109	106	103	101	103	100	98	100	98	96	97	96	94	93
3	107	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

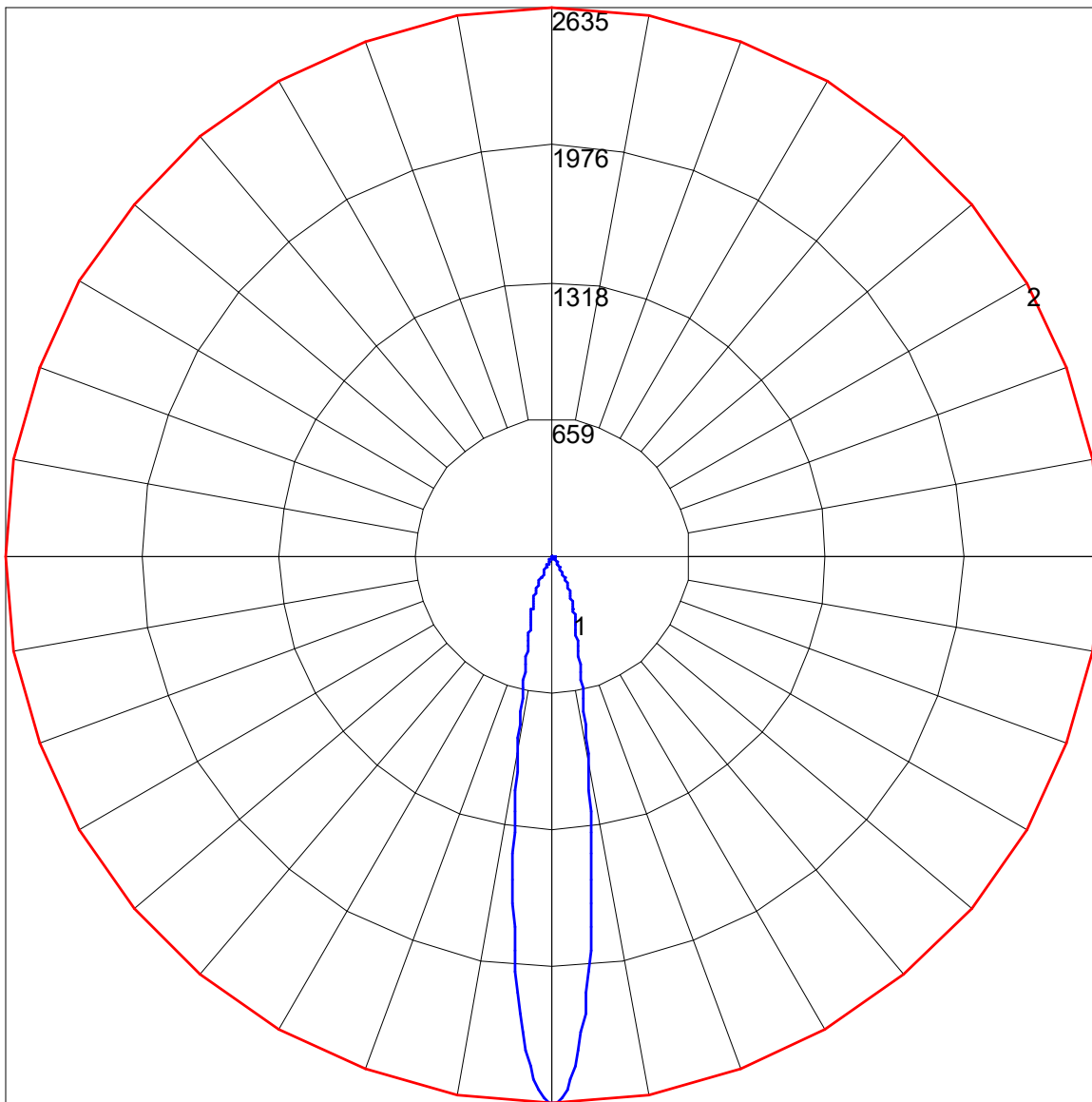
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UGR TABLE - CORRECTED

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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	3H	0.6	1.4	1.0	1.7	2.1	0.6	1.4	1.0	1.7	2.1
	4H	1.6	2.3	2.0	2.7	3.0	1.6	2.3	2.0	2.7	3.0
	6H	3.0	3.6	3.4	4.0	4.4	3.0	3.6	3.4	4.0	4.4
	8H	3.7	4.3	4.1	4.7	5.1	3.7	4.3	4.1	4.7	5.1
	12H	4.5	5.1	5.0	5.5	6.0	4.5	5.1	5.0	5.5	6.0
4H	2H	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3
	3H	1.2	1.8	1.6	2.2	2.6	1.2	1.8	1.6	2.2	2.6
	4H	2.5	3.0	2.9	3.4	3.9	2.5	3.0	2.9	3.4	3.9
	6H	4.0	4.5	4.5	4.9	5.4	4.0	4.5	4.5	4.9	5.4
	8H	4.9	5.3	5.4	5.8	6.2	4.9	5.3	5.4	5.8	6.2
	12H	5.9	6.3	6.4	6.8	7.3	5.9	6.3	6.4	6.8	7.3
8H	4H	2.8	3.2	3.3	3.6	4.1	2.8	3.2	3.3	3.6	4.1
	6H	4.7	5.0	5.2	5.5	6.0	4.7	5.0	5.2	5.5	6.0
	8H	5.8	6.1	6.3	6.6	7.1	5.8	6.1	6.3	6.6	7.1
	12H	7.1	7.4	7.6	7.9	8.4	7.1	7.4	7.6	7.9	8.4
12H	4H	2.9	3.3	3.4	3.8	4.2	2.9	3.3	3.4	3.8	4.2
	6H	5.0	5.3	5.5	5.8	6.3	5.0	5.3	5.5	5.8	6.3
	8H	6.2	6.4	6.7	6.9	7.5	6.2	6.4	6.7	6.9	7.5

Maximum UGR = 8.4

POLAR GRAPH



Maximum Candela = 2635.289 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.)