



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-P15-835-XXX-POE PR-OS-OF-CS-XX.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM 13255206.01  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 01/25/2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836  
 [LUMCAT] 4CR-P15-835-xxx-POE PR-OS-OF-CS-xx  
 [LUMINAIRE] Aluminum housing and reflector, LED cylinder  
 [LAMP] One white LED  
 [ \_SEARCH\_SOURCETYPE] LED  
 [ \_SEARCH\_APPLICATION] Indoor, Downlight  
 [ \_SEARCH\_MOUNTING] Pendant, Surface, Suspended, Wall

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1325
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	58
Total Luminaire Watts	22.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.14
Spacing Criterion (90-270)	0.14
Spacing Criterion (Diagonal)	0.16
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	5537	5537	5537
55	2048	2048	2048
65	926	926	926
75	0	0	0
85	0	0	0

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CANDELA TABULATION

	<u>0</u>
0.0	25831.900
0.5	25720.556
1.0	25015.375
1.5	23976.160
2.0	22355.481
2.5	20128.593
3.0	17864.590
3.5	15427.385
4.0	12965.436
4.5	10737.311
5.0	8793.733
5.5	7229.963
6.0	6016.309
6.5	5053.798
7.0	4283.048
7.5	3686.737
8.0	3210.430
8.5	2829.385
9.0	2527.518
9.5	2283.797
10.0	2082.140
10.5	1917.598
11.0	1779.036
11.5	1659.032
12.0	1557.584
12.5	1469.746
13.0	1390.568
13.5	1321.287
14.0	1260.666
14.5	1206.231
15.0	1157.982
15.5	1115.918
16.0	1077.566
16.5	1044.163
17.0	1013.234
17.5	987.254
18.0	964.985
18.5	943.953
19.0	926.633
19.5	911.787
20.0	898.178
20.5	887.044
21.0	877.146
21.5	867.249
22.0	858.589
22.5	848.692
23.0	840.032
23.5	832.609
24.0	820.237
24.5	797.968
25.0	764.565
25.5	720.027
26.0	665.592
26.5	602.497

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**CANDELA TABULATION - (Cont.)**

27.0	528.267
27.5	442.903
28.0	355.065
28.5	275.887
29.0	210.317
29.5	155.882
30.0	111.344
30.5	77.941
31.0	55.672
31.5	45.775
32.0	40.826
32.5	38.352
33.0	35.878
33.5	33.403
34.0	30.929
34.5	29.692
35.0	28.455
35.5	27.218
36.0	25.980
36.5	25.980
37.0	24.743
37.5	23.506
38.0	22.269
38.5	22.269
39.0	21.032
39.5	19.795
40.0	18.557
40.5	18.557
41.0	17.320
41.5	16.083
42.0	16.083
42.5	14.846
43.0	14.846
43.5	13.609
44.0	13.609
44.5	12.372
45.0	12.372
45.5	11.134
46.0	9.897
46.5	9.897
47.0	8.660
47.5	8.660
48.0	7.423
48.5	7.423
49.0	6.186
49.5	6.186
50.0	6.186
50.5	6.186
51.0	4.949
51.5	4.949
52.0	4.949
52.5	4.949
53.0	3.711
53.5	3.711
54.0	3.711
54.5	3.711

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CANDELA TABULATION - (Cont.)

55.0	3.711
55.5	3.711
56.0	3.711
56.5	2.474
57.0	2.474
57.5	2.474
58.0	2.474
58.5	2.474
59.0	2.474
59.5	2.474
60.0	2.474
60.5	2.474
61.0	2.474
61.5	1.237
62.0	1.237
62.5	1.237
63.0	1.237
63.5	1.237
64.0	1.237
64.5	1.237
65.0	1.237
65.5	1.237
66.0	1.237
66.5	1.237
67.0	1.237
67.5	1.237
68.0	1.237
68.5	1.237
69.0	1.237
69.5	1.237
70.0	1.237
70.5	0.000
71.0	0.000
71.5	0.000
72.0	0.000
72.5	0.000
73.0	0.000
73.5	0.000
74.0	0.000
74.5	0.000
75.0	0.000
75.5	0.000
76.0	0.000
76.5	0.000
77.0	0.000
77.5	0.000
78.0	0.000
78.5	0.000
79.0	0.000
79.5	0.000
80.0	0.000
80.5	0.000
81.0	0.000
81.5	0.000
82.0	0.000
82.5	0.000

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CANDELA TABULATION - (Cont.)

83.0	0.000
83.5	0.000
84.0	0.000
84.5	0.000
85.0	0.000
85.5	0.000
86.0	0.000
86.5	0.000
87.0	0.000
87.5	0.000
88.0	0.000
88.5	0.000
89.0	0.000
89.5	0.000
90.0	0.000
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

IES INDOOR REPORT  
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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
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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

IES INDOOR REPORT  
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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
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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
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154.0	0.000
154.5	0.000
155.0	0.000
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157.5	0.000
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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	1004.46	N.A.	75.80
0-30	1290.24	N.A.	97.40
0-40	1311.4	N.A.	99.00
0-60	1323.72	N.A.	99.90
0-80	1325.12	N.A.	100.00
0-90	1325.12	N.A.	100.00
10-90	661.45	N.A.	49.90
20-40	306.95	N.A.	23.20
20-50	315.99	N.A.	23.80
40-70	13.69	N.A.	1.00
60-80	1.41	N.A.	0.10
70-80	0.03	N.A.	0.00
80-90	0.00	N.A.	0.00
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1325.12	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	663.67
10-20	340.79
20-30	285.79
30-40	21.16
40-50	9.05
50-60	3.27
60-70	1.38
70-80	0.03
80-90	0.00
90-100	0.00
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	112	110	113	111	110	108	107	106	105	104	103	102	100	100	99	97
2	112	108	106	103	110	107	104	102	104	102	100	101	99	98	98	97	96	94
3	109	104	101	98	107	103	100	97	101	98	96	98	96	95	96	95	93	92
4	106	101	97	94	104	100	96	94	98	95	93	96	93	92	94	92	91	89
5	103	97	94	91	102	97	93	90	95	92	90	94	91	89	92	90	88	87
6	100	94	91	88	99	94	90	88	93	89	87	91	89	87	90	88	86	85
7	98	92	88	85	97	91	88	85	90	87	85	89	86	84	88	86	84	83
8	96	90	86	83	95	89	85	83	88	85	83	87	84	82	87	84	82	81
9	93	87	84	81	93	87	83	81	86	83	81	85	83	81	85	82	80	79
10	91	85	82	79	91	85	82	79	84	81	79	84	81	79	83	81	79	78

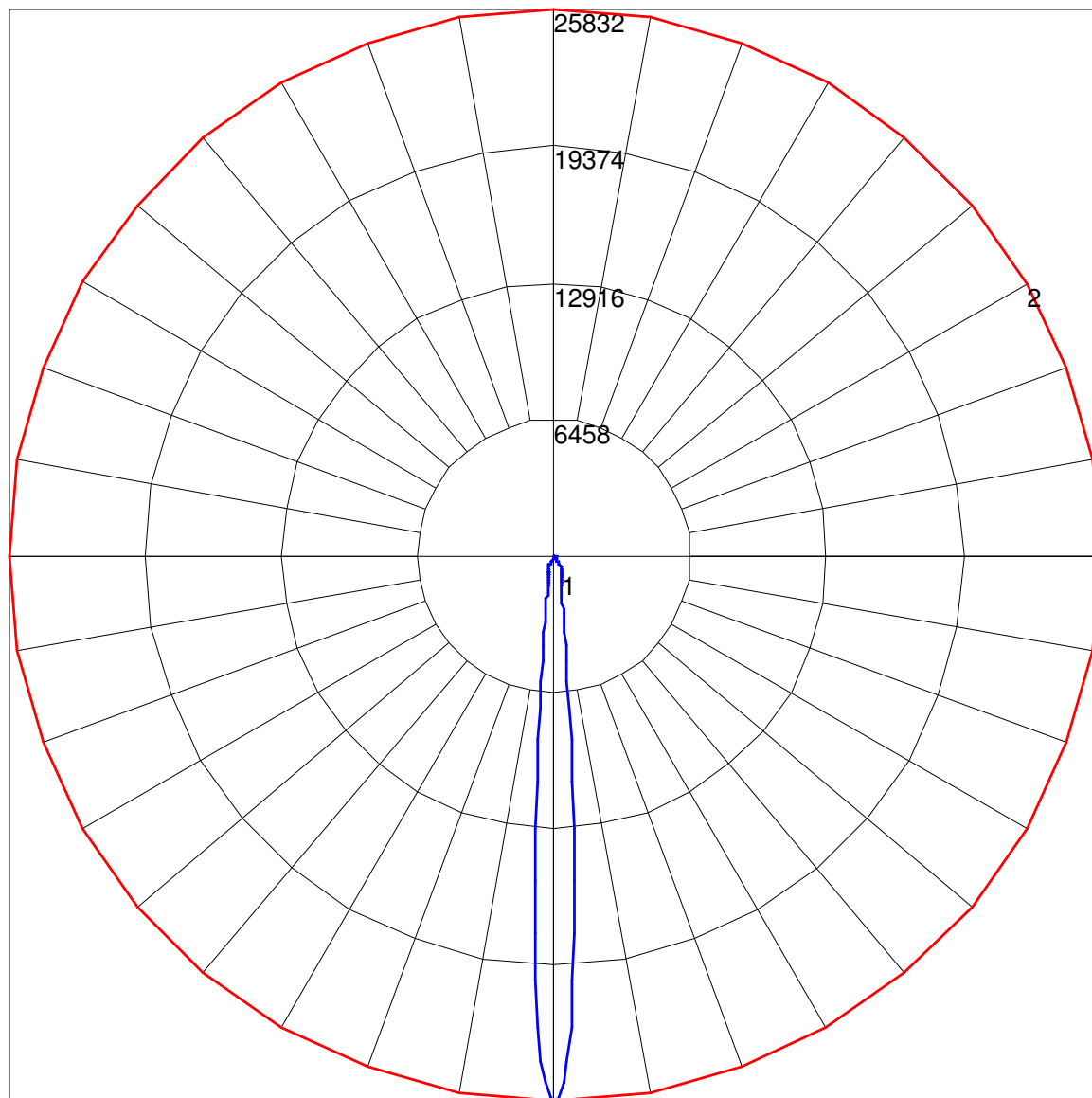
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**UGR TABLE - CORRECTED**

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	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	3H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	4H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	6H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	8H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	12H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
4H	2H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	3H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	4H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	6H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	8H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	12H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
8H	4H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	6H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	8H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	12H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
12H	4H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	6H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	8H	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4

Maximum UGR = 1.4

POLAR GRAPH



Maximum Candela = 25831.9 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.)