



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-L12-835-XXX-DIM-UNV-RS-OF-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 13257153.11
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 01/25/2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4CR-L12-835-xxx-DIM-UNV-RS-OF-WH-xx
 [LUMINAIRE] Aluminum housing, optics, and trim enclosure
 [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	1427
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	70
Total Luminaire Watts	20.4735
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.24
Spacing Criterion (90-270)	0.24
Spacing Criterion (Diagonal)	0.26
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	40281	40281	40281
55	28692	28692	28692
65	20968	20968	20968
75	11005	11005	11005
85	7262	7262	7262

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CANDELA TABULATION

	<u>0</u>
0.0	13950
0.5	13890
1.0	13740
1.5	13480
2.0	13140
2.5	12700
3.0	12180
3.5	11600
4.0	10970
4.5	10290
5.0	9578
5.5	8860
6.0	8136
6.5	7427
7.0	6735
7.5	6065
8.0	5439
8.5	4843
9.0	4292
9.5	3789
10.0	3332
10.5	2924
11.0	2563
11.5	2246
12.0	1968
12.5	1729
13.0	1524
13.5	1349
14.0	1201
14.5	1075
15.0	969
15.5	879
16.0	803
16.5	739
17.0	685
17.5	638
18.0	599
18.5	565
19.0	535
19.5	508
20.0	484
20.5	462
21.0	442
21.5	424
22.0	407
22.5	391
23.0	377
23.5	363
24.0	351
24.5	339
25.0	327
25.5	315
26.0	304
26.5	293

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CANDELA TABULATION - (Cont.)

27.0	282
27.5	272
28.0	262
28.5	252
29.0	241
29.5	232
30.0	223
30.5	214
31.0	205
31.5	197
32.0	190
32.5	183
33.0	177
33.5	171
34.0	166
34.5	161
35.0	157
35.5	152
36.0	148
36.5	145
37.0	141
37.5	137
38.0	134
38.5	130
39.0	127
39.5	123
40.0	120
40.5	117
41.0	113
41.5	110
42.0	107
42.5	104
43.0	101
43.5	98
44.0	95
44.5	93
45.0	90
45.5	87
46.0	85
46.5	83
47.0	80
47.5	78
48.0	76
48.5	74
49.0	72
49.5	70
50.0	68
50.5	66
51.0	65
51.5	63
52.0	61
52.5	60
53.0	58
53.5	57
54.0	55
54.5	54

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CANDELA TABULATION - (Cont.)

55.0	52
55.5	51
56.0	50
56.5	48
57.0	47
57.5	46
58.0	44
58.5	43
59.0	42
59.5	41
60.0	39
60.5	38
61.0	37
61.5	36
62.0	35
62.5	33
63.0	32
63.5	31
64.0	30
64.5	29
65.0	28
65.5	27
66.0	26
66.5	25
67.0	23
67.5	22
68.0	21
68.5	20
69.0	19
69.5	18
70.0	17
70.5	17
71.0	16
71.5	15
72.0	14
72.5	13
73.0	12
73.5	11
74.0	10
74.5	9
75.0	9
75.5	8
76.0	7
76.5	7
77.0	6
77.5	6
78.0	5
78.5	5
79.0	5
79.5	4
80.0	4
80.5	4
81.0	4
81.5	3
82.0	3
82.5	3

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CANDELA TABULATION - (Cont.)

83.0	3
83.5	2
84.0	2
84.5	2
85.0	2
85.5	2
86.0	1
86.5	1
87.0	1
87.5	1
88.0	1
88.5	0
89.0	0
89.5	0
90.0	0
90.5	0
91.0	0
91.5	0
92.0	0
92.5	0
93.0	0
93.5	0
94.0	0
94.5	0
95.0	0
95.5	0
96.0	0
96.5	0
97.0	0
97.5	0
98.0	0
98.5	0
99.0	0
99.5	0
100.0	0
100.5	0
101.0	0
101.5	0
102.0	0
102.5	0
103.0	0
103.5	0
104.0	0
104.5	0
105.0	0
105.5	0
106.0	0
106.5	0
107.0	0
107.5	0
108.0	0
108.5	0
109.0	0
109.5	0
110.0	0
110.5	0

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CANDELA TABULATION - (Cont.)

111.0	0
111.5	0
112.0	0
112.5	0
113.0	0
113.5	0
114.0	0
114.5	0
115.0	0
115.5	0
116.0	0
116.5	0
117.0	0
117.5	0
118.0	0
118.5	0
119.0	0
119.5	0
120.0	0
120.5	0
121.0	0
121.5	0
122.0	0
122.5	0
123.0	0
123.5	0
124.0	0
124.5	0
125.0	0
125.5	0
126.0	0
126.5	0
127.0	0
127.5	0
128.0	0
128.5	0
129.0	0
129.5	0
130.0	0
130.5	0
131.0	0
131.5	0
132.0	0
132.5	0
133.0	0
133.5	0
134.0	0
134.5	0
135.0	0
135.5	0
136.0	0
136.5	0
137.0	0
137.5	0
138.0	0
138.5	0

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CANDELA TABULATION - (Cont.)

139.0	0
139.5	0
140.0	0
140.5	0
141.0	0
141.5	0
142.0	0
142.5	0
143.0	0
143.5	0
144.0	0
144.5	0
145.0	0
145.5	0
146.0	0
146.5	0
147.0	0
147.5	0
148.0	0
148.5	0
149.0	0
149.5	0
150.0	0
150.5	0
151.0	0
151.5	0
152.0	0
152.5	0
153.0	0
153.5	0
154.0	0
154.5	0
155.0	0
155.5	0
156.0	0
156.5	0
157.0	0
157.5	0
158.0	0
158.5	0
159.0	0
159.5	0
160.0	0
160.5	0
161.0	0
161.5	0
162.0	0
162.5	0
163.0	0
163.5	0
164.0	0
164.5	0
165.0	0
165.5	0
166.0	0
166.5	0

CANDELA TABULATION - (Cont.)

167.0	0
167.5	0
168.0	0
168.5	0
169.0	0
169.5	0
170.0	0
170.5	0
171.0	0
171.5	0
172.0	0
172.5	0
173.0	0
173.5	0
174.0	0
174.5	0
175.0	0
175.5	0
176.0	0
176.5	0
177.0	0
177.5	0
178.0	0
178.5	0
179.0	0
179.5	0
180.0	0

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-L12-835-XXX-DIM-UNV-RS-OF-WH-XX_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1018.77	N.A.	71.40
0-30	1169.98	N.A.	82.00
0-40	1270.15	N.A.	89.00
0-60	1387.45	N.A.	97.20
0-80	1424.96	N.A.	99.90
0-90	1426.97	N.A.	100.00
10-90	729.84	N.A.	51.10
20-40	251.39	N.A.	17.60
20-50	321.55	N.A.	22.50
40-70	144.84	N.A.	10.20
60-80	37.51	N.A.	2.60
70-80	9.96	N.A.	0.70
80-90	2.01	N.A.	0.10
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	1426.97	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	697.13
10-20	321.63
20-30	151.22
30-40	100.17
40-50	70.16
50-60	47.13
60-70	27.54
70-80	9.96
80-90	2.01
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	114	112	110	108	112	110	108	106	106	105	103	102	101	100	99	98	97	96
2	110	106	103	100	108	104	101	99	101	99	97	98	96	95	96	94	93	91
3	106	101	97	94	104	100	96	93	97	94	92	95	92	90	93	91	89	88
4	103	97	92	89	101	96	92	88	94	90	87	92	89	86	90	88	86	84
5	99	93	88	85	98	92	88	85	90	87	84	89	86	83	87	85	83	81
6	96	90	85	82	95	89	85	82	88	84	81	86	83	81	85	82	80	79
7	94	87	82	79	93	86	82	79	85	81	79	84	81	78	83	80	78	77
8	91	84	80	77	90	84	80	77	83	79	76	82	79	76	81	78	76	75
9	89	82	78	75	88	82	78	75	81	77	75	80	77	74	79	76	74	73
10	87	80	76	73	86	80	76	73	79	75	73	78	75	73	78	75	73	72

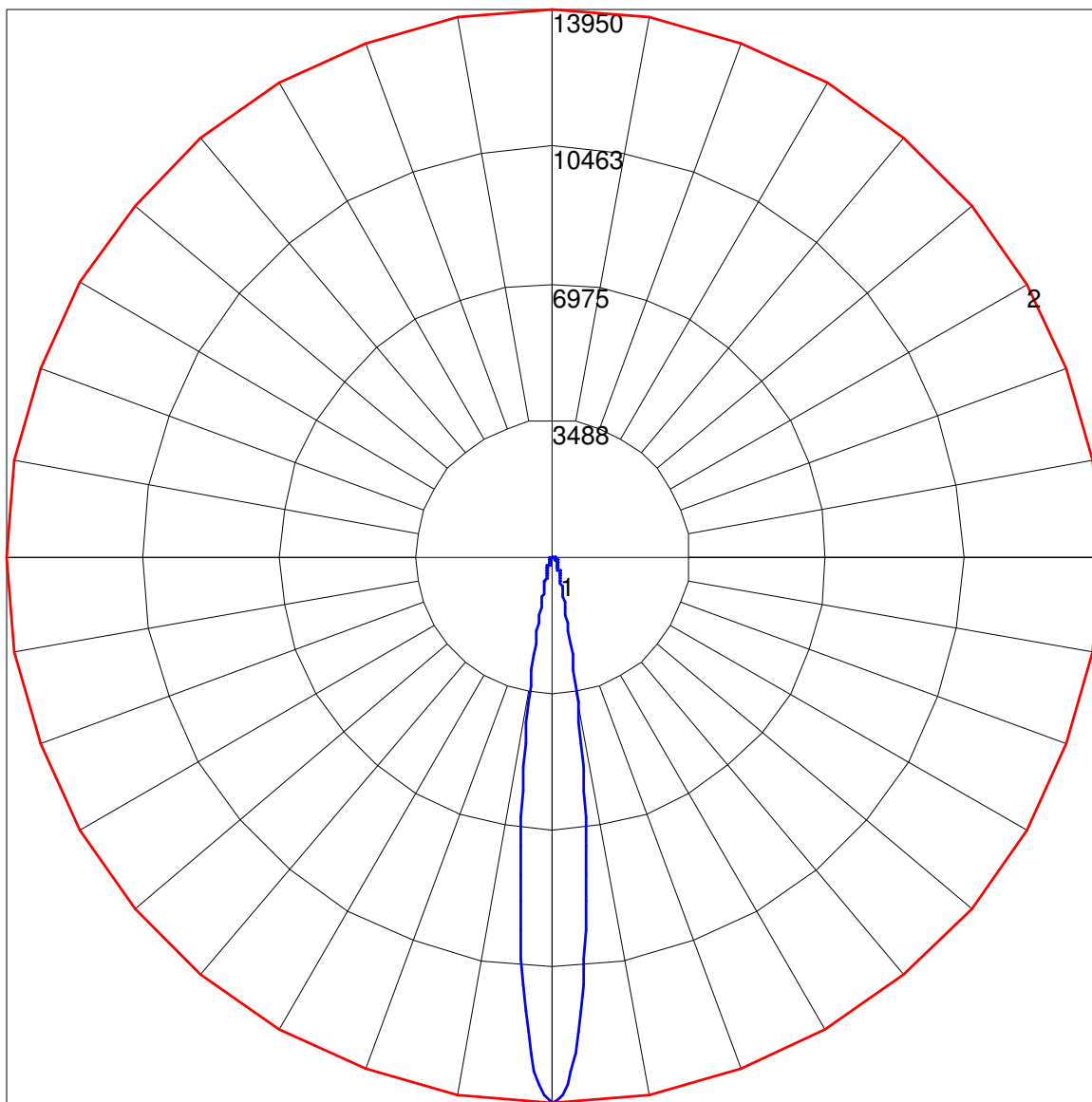
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UGR TABLE - CORRECTED

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	17.8	18.9	18.2	19.2	19.5	17.8	18.9	18.2	19.2	19.5
	3H	18.7	19.7	19.1	20.0	20.4	18.7	19.7	19.1	20.0	20.4
	4H	18.9	19.7	19.3	20.1	20.5	18.9	19.7	19.3	20.1	20.5
	6H	18.9	19.7	19.3	20.1	20.5	18.9	19.7	19.3	20.1	20.5
	8H	18.9	19.6	19.3	20.0	20.4	18.9	19.6	19.3	20.0	20.4
	12H	18.9	19.6	19.3	20.0	20.4	18.9	19.6	19.3	20.0	20.4
4H	2H	18.1	19.0	18.5	19.3	19.7	18.1	19.0	18.5	19.3	19.7
	3H	19.2	19.9	19.6	20.3	20.7	19.2	19.9	19.6	20.3	20.7
	4H	19.4	20.0	19.8	20.4	20.9	19.4	20.0	19.8	20.4	20.9
	6H	19.4	20.0	19.9	20.4	20.9	19.4	20.0	19.9	20.4	20.9
	8H	19.4	19.9	19.9	20.4	20.9	19.4	19.9	19.9	20.4	20.9
	12H	19.4	19.9	19.9	20.3	20.8	19.4	19.9	19.9	20.3	20.8
8H	4H	19.4	19.9	19.8	20.3	20.8	19.4	19.9	19.8	20.3	20.8
	6H	19.5	19.9	20.0	20.4	20.9	19.5	19.9	20.0	20.4	20.9
	8H	19.5	19.8	20.0	20.4	20.9	19.5	19.8	20.0	20.4	20.9
	12H	19.5	19.8	20.0	20.3	20.9	19.5	19.8	20.0	20.3	20.9
12H	4H	19.3	19.7	19.8	20.2	20.7	19.3	19.7	19.8	20.2	20.7
	6H	19.4	19.8	20.0	20.3	20.8	19.4	19.8	20.0	20.3	20.8
	8H	19.5	19.8	20.0	20.3	20.9	19.5	19.8	20.0	20.3	20.9

Maximum UGR = 20.9

POLAR GRAPH



Maximum Candela = 13950 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.)