



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L12-835-XXX-DIM-UNV-OS-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 13255206.01
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 01/25/2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4CR-xx-L12-835-xxx-DIM-UNV-OS-CS-xx
 [LUMINAIRE] Aluminum housing and reflector, no 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	1071
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	52
Total Luminaire Watts	20.42
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	4476	4476	4476
55	1655	1655	1655
65	749	749	749
75	0	0	0
85	0	0	0

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CANDELA TABULATION

	<u>0</u>
0.0	20880
0.5	20790
1.0	20220
1.5	19380
2.0	18070
2.5	16270
3.0	14440
3.5	12470
4.0	10480
4.5	8679
5.0	7108
5.5	5844
6.0	4863
6.5	4085
7.0	3462
7.5	2980
8.0	2595
8.5	2287
9.0	2043
9.5	1846
10.0	1683
10.5	1550
11.0	1438
11.5	1341
12.0	1259
12.5	1188
13.0	1124
13.5	1068
14.0	1019
14.5	975
15.0	936
15.5	902
16.0	871
16.5	844
17.0	819
17.5	798
18.0	780
18.5	763
19.0	749
19.5	737
20.0	726
20.5	717
21.0	709
21.5	701
22.0	694
22.5	686
23.0	679
23.5	673
24.0	663
24.5	645
25.0	618
25.5	582
26.0	538
26.5	487

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CANDELA TABULATION - (Cont.)

27.0	427
27.5	358
28.0	287
28.5	223
29.0	170
29.5	126
30.0	90
30.5	63
31.0	45
31.5	37
32.0	33
32.5	31
33.0	29
33.5	27
34.0	25
34.5	24
35.0	23
35.5	22
36.0	21
36.5	21
37.0	20
37.5	19
38.0	18
38.5	18
39.0	17
39.5	16
40.0	15
40.5	15
41.0	14
41.5	13
42.0	13
42.5	12
43.0	12
43.5	11
44.0	11
44.5	10
45.0	10
45.5	9
46.0	8
46.5	8
47.0	7
47.5	7
48.0	6
48.5	6
49.0	5
49.5	5
50.0	5
50.5	5
51.0	4
51.5	4
52.0	4
52.5	4
53.0	3
53.5	3
54.0	3
54.5	3

CANDELA TABULATION - (Cont.)

55.0	3
55.5	3
56.0	3
56.5	2
57.0	2
57.5	2
58.0	2
58.5	2
59.0	2
59.5	2
60.0	2
60.5	2
61.0	2
61.5	1
62.0	1
62.5	1
63.0	1
63.5	1
64.0	1
64.5	1
65.0	1
65.5	1
66.0	1
66.5	1
67.0	1
67.5	1
68.0	1
68.5	1
69.0	1
69.5	1
70.0	1
70.5	0
71.0	0
71.5	0
72.0	0
72.5	0
73.0	0
73.5	0
74.0	0
74.5	0
75.0	0
75.5	0
76.0	0
76.5	0
77.0	0
77.5	0
78.0	0
78.5	0
79.0	0
79.5	0
80.0	0
80.5	0
81.0	0
81.5	0
82.0	0
82.5	0

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CANDELA TABULATION - (Cont.)

83.0	0
83.5	0
84.0	0
84.5	0
85.0	0
85.5	0
86.0	0
86.5	0
87.0	0
87.5	0
88.0	0
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
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102.5	0
103.0	0
103.5	0
104.0	0
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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

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
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125.5	0
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126.5	0
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129.5	0
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130.5	0
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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

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
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147.5	0
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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

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	811.90	N.A.	75.80
0-30	1042.91	N.A.	97.40
0-40	1060.01	N.A.	99.00
0-60	1069.96	N.A.	99.90
0-80	1071.1	N.A.	100.00
0-90	1071.1	N.A.	100.00
10-90	534.65	N.A.	49.90
20-40	248.11	N.A.	23.20
20-50	255.42	N.A.	23.80
40-70	11.07	N.A.	1.00
60-80	1.14	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	1071.1	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	536.45
10-20	275.46
20-30	231.00
30-40	17.10
40-50	7.31
50-60	2.64
60-70	1.11
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

X=2H	Y=2H	0.7	0.7	0.7	0.7	0.7	UGR Viewed Endwise			
	3H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	4H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	6H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	8H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	12H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7

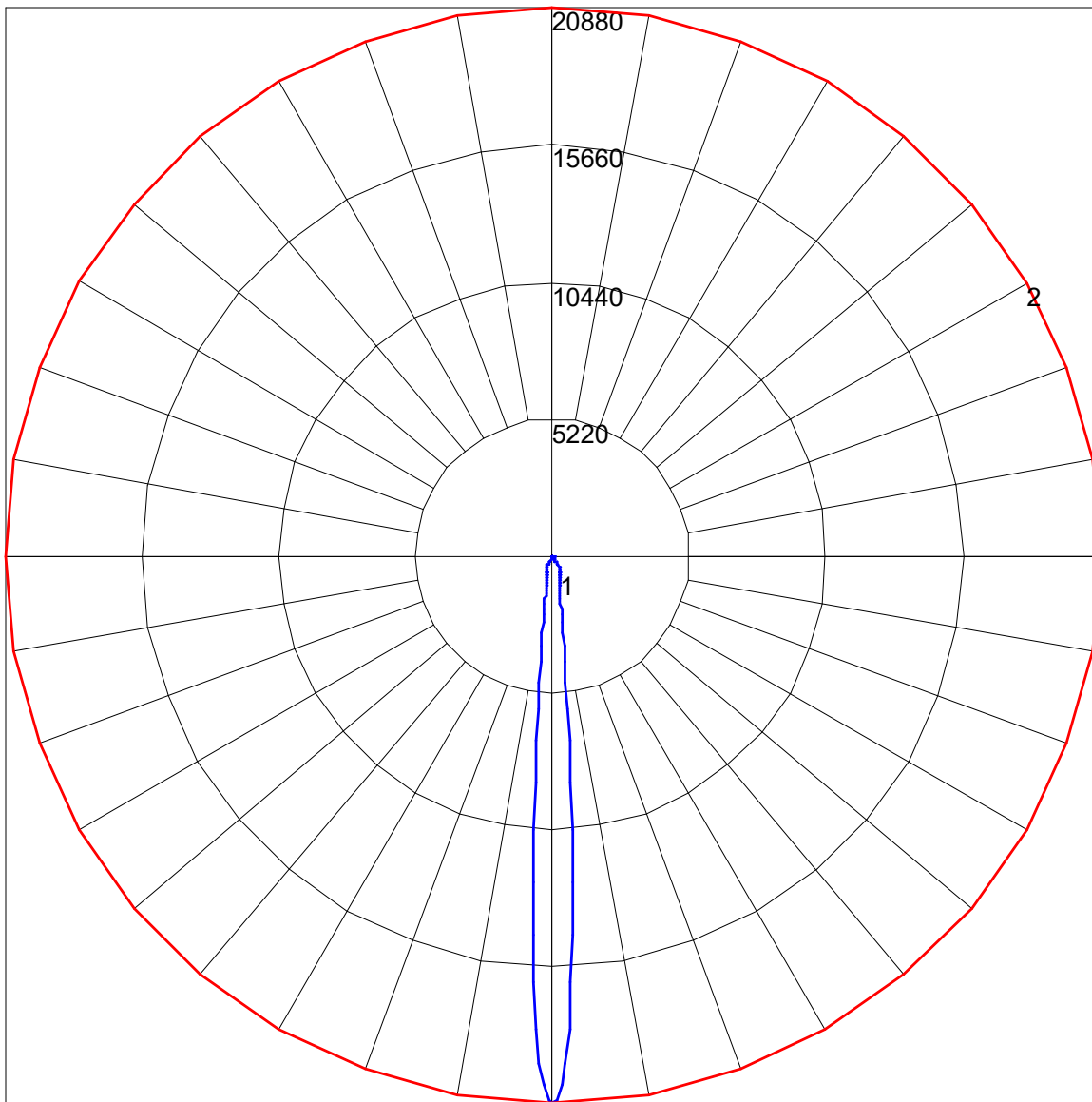
4H	2H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	3H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	4H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	6H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	8H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	12H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7

8H	4H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	6H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	8H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	12H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7

12H	4H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	6H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	8H	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7

Maximum UGR = 0.7

POLAR GRAPH



Maximum Candela = 20880 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.)