



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L7-835-XXX-DIM-UNV-LW-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM 13257153.01
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 01-21-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4CR-xx-L7-835-xxx-DIM-UNV-LW-WH-xx
 [LUMINAIRE] Aluminum housing, optics, and trim 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	759
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	87
Total Luminaire Watts	8.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.86
Spacing Criterion (90-270)	0.86
Spacing Criterion (Diagonal)	0.78
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	31307	31307	31307
55	27342	27342	27342
65	23358	23358	23358
75	18844	18844	18844
85	10556	10556	10556

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CR-XX-L7-835-XXX-DIM-UNV-LW-WH-XX_.IES

CANDELA TABULATION

	<u>0</u>
0.0	895.574
0.5	895.113
1.0	895.113
1.5	894.651
2.0	894.190
2.5	892.806
3.0	891.421
3.5	890.037
4.0	888.192
4.5	885.885
5.0	883.578
5.5	881.271
6.0	878.964
6.5	876.195
7.0	873.427
7.5	870.658
8.0	867.429
8.5	864.199
9.0	860.508
9.5	856.816
10.0	852.664
10.5	848.050
11.0	843.436
11.5	838.361
12.0	833.285
12.5	827.287
13.0	821.289
13.5	814.829
14.0	807.908
14.5	800.526
15.0	792.682
15.5	783.916
16.0	775.149
16.5	765.460
17.0	754.847
17.5	744.235
18.0	732.239
18.5	719.781
19.0	705.939
19.5	691.175
20.0	675.948
20.5	659.338
21.0	642.266
21.5	623.810
22.0	604.432
22.5	584.592
23.0	563.829
23.5	542.604
24.0	520.919
24.5	498.771
25.0	476.163
25.5	453.785
26.0	431.130
26.5	408.707

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CR-XX-L7-835-XXX-DIM-UNV-LW-WH-XX_.IES

CANDELA TABULATION - (Cont.)

27.0	386.606
27.5	364.966
28.0	343.788
28.5	323.117
29.0	303.092
29.5	283.575
30.0	265.258
30.5	247.955
31.0	231.622
31.5	216.396
32.0	202.139
32.5	188.896
33.0	176.762
33.5	165.642
34.0	155.537
34.5	146.309
35.0	137.912
35.5	130.299
36.0	123.424
36.5	117.287
37.0	111.751
37.5	106.814
38.0	102.384
38.5	98.370
39.0	94.771
39.5	91.541
40.0	88.588
40.5	85.958
41.0	83.559
41.5	81.345
42.0	79.314
42.5	77.423
43.0	75.715
43.5	74.147
44.0	72.670
44.5	71.286
45.0	69.948
45.5	68.702
46.0	67.503
46.5	66.349
47.0	65.242
47.5	64.134
48.0	63.073
48.5	62.012
49.0	60.951
49.5	59.936
50.0	58.967
50.5	57.998
51.0	56.983
51.5	56.060
52.0	55.091
52.5	54.168
53.0	53.245
53.5	52.323
54.0	51.400
54.5	50.477

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CR-XX-L7-835-XXX-DIM-UNV-LW-WH-XX_.IES

CANDELA TABULATION - (Cont.)

55.0	49.554
55.5	48.631
56.0	47.755
56.5	46.786
57.0	45.909
57.5	44.986
58.0	44.064
58.5	43.141
59.0	42.218
59.5	41.295
60.0	40.372
60.5	39.450
61.0	38.527
61.5	37.558
62.0	36.681
62.5	35.758
63.0	34.789
63.5	33.867
64.0	32.944
64.5	32.067
65.0	31.191
65.5	30.314
66.0	29.437
66.5	28.607
67.0	27.730
67.5	26.946
68.0	26.115
68.5	25.331
69.0	24.546
69.5	23.716
70.0	22.931
70.5	22.147
71.0	21.409
71.5	20.625
72.0	19.840
72.5	19.102
73.0	18.318
73.5	17.579
74.0	16.887
74.5	16.149
75.0	15.411
75.5	14.719
76.0	14.027
76.5	13.334
77.0	12.688
77.5	11.996
78.0	11.350
78.5	10.704
79.0	10.058
79.5	9.413
80.0	8.813
80.5	8.167
81.0	7.567
81.5	6.967
82.0	6.367
82.5	5.767

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CR-XX-L7-835-XXX-DIM-UNV-LW-WH-XX_.IES

CANDELA TABULATION - (Cont.)

83.0	5.214
83.5	4.614
84.0	4.060
84.5	3.460
85.0	2.907
85.5	2.307
86.0	1.707
86.5	1.292
87.0	0.923
87.5	0.554
88.0	0.369
88.5	0.277
89.0	0.185
89.5	0.138
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
PHOTOMETRIC FILENAME : 4CR-XX-L7-835-XXX-DIM-UNV-LW-WH-XX_.IES

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
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
129.5	0.000
130.0	0.000
130.5	0.000
131.0	0.000
131.5	0.000
132.0	0.000
132.5	0.000
133.0	0.000
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L7-835-XXX-DIM-UNV-LW-WH-XX_.IES****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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L7-835-XXX-DIM-UNV-LW-WH-XX_.IES****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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L7-835-XXX-DIM-UNV-LW-WH-XX_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	302.77	N.A.	39.90
0-30	516.18	N.A.	68.00
0-40	608.90	N.A.	80.20
0-60	708.01	N.A.	93.30
0-80	755.44	N.A.	99.50
0-90	759.10	N.A.	100.00
10-90	675.72	N.A.	89.00
20-40	306.13	N.A.	40.30
20-50	360.91	N.A.	47.50
40-70	130.12	N.A.	17.10
60-80	47.44	N.A.	6.20
70-80	16.43	N.A.	2.20
80-90	3.65	N.A.	0.50
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	759.10	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	83.38
10-20	219.39
20-30	213.41
30-40	92.72
40-50	54.79
50-60	44.32
60-70	31.01
70-80	16.43
80-90	3.65
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CR-XX-L7-835-XXX-DIM-UNV-LW-WH-XX_IES

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	112	109	106	104	110	107	104	102	103	101	99	99	98	96	96	94	93	91
2	106	100	96	92	104	99	94	91	95	92	89	92	89	87	89	87	85	83
3	100	93	87	83	98	91	86	82	89	84	81	86	82	79	84	81	78	76
4	94	86	80	75	93	85	79	75	83	78	74	81	76	73	79	75	72	70
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65
6	85	75	69	64	83	74	68	64	73	67	63	71	67	63	70	66	63	61
7	81	71	64	60	79	70	64	60	69	63	59	67	63	59	66	62	59	57
8	77	67	60	56	75	66	60	56	65	59	56	64	59	55	63	58	55	54
9	73	63	57	53	72	63	57	53	62	56	52	61	56	52	60	55	52	51
10	70	60	54	50	69	59	54	50	58	53	49	58	53	49	57	52	49	48

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L7-835-XXX-DIM-UNV-LW-WH-XX_IES

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	19.8	21.0	20.1	21.3	21.6	19.8	21.0	20.1	21.3	21.6
	3H	21.3	22.3	21.7	22.6	23.0	21.3	22.3	21.7	22.6	23.0
	4H	21.8	22.8	22.2	23.1	23.5	21.8	22.8	22.2	23.1	23.5
	6H	22.1	23.0	22.5	23.4	23.8	22.1	23.0	22.5	23.4	23.8
	8H	22.2	23.1	22.6	23.5	23.9	22.2	23.1	22.6	23.5	23.9
	12H	22.2	23.1	22.7	23.4	23.9	22.2	23.1	22.7	23.4	23.9

UGR Viewed Endwise

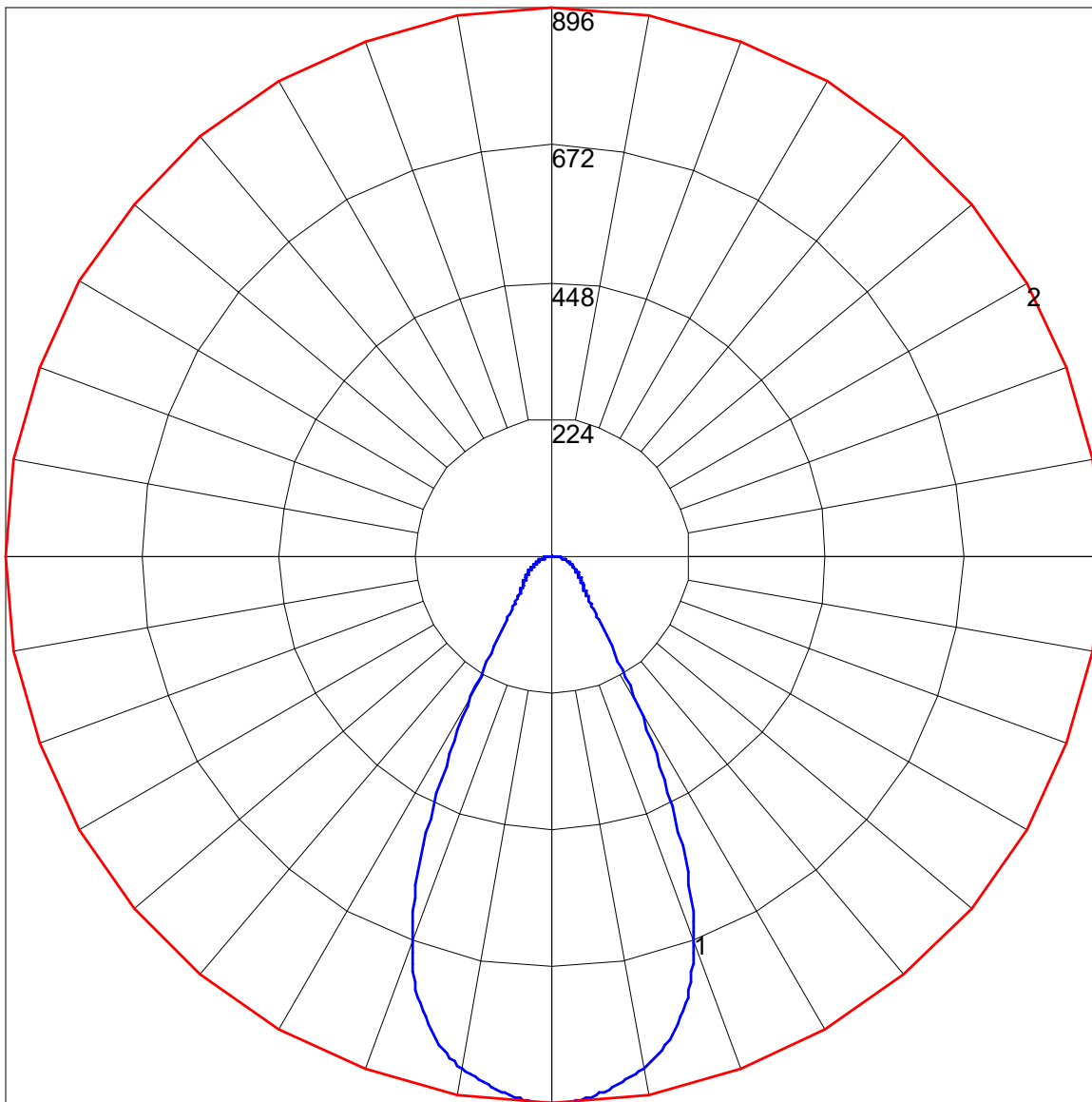
4H	2H	20.3	21.2	20.7	21.6	22.0	20.3	21.2	20.7	21.6	22.0
	3H	21.9	22.7	22.4	23.1	23.6	21.9	22.7	22.4	23.1	23.6
	4H	22.6	23.3	23.0	23.7	24.2	22.6	23.3	23.0	23.7	24.2
	6H	23.0	23.6	23.5	24.1	24.6	23.0	23.6	23.5	24.1	24.6
	8H	23.1	23.7	23.6	24.2	24.6	23.1	23.7	23.6	24.2	24.6
	12H	23.2	23.7	23.7	24.2	24.7	23.2	23.7	23.7	24.2	24.7

8H	4H	22.8	23.3	23.2	23.8	24.3	22.8	23.3	23.2	23.8	24.3
	6H	23.3	23.8	23.8	24.3	24.8	23.3	23.8	23.8	24.3	24.8
	8H	23.5	23.9	24.0	24.4	24.9	23.5	23.9	24.0	24.4	24.9
	12H	23.6	24.0	24.1	24.5	25.0	23.6	24.0	24.1	24.5	25.0

12H	4H	22.7	23.3	23.2	23.7	24.2	22.7	23.3	23.2	23.7	24.2
	6H	23.3	23.8	23.9	24.2	24.8	23.3	23.8	23.9	24.2	24.8
	8H	23.6	23.9	24.1	24.4	25.0	23.6	23.9	24.1	24.4	25.0

Maximum UGR = 25.0

POLAR GRAPH



Maximum Candela = 895.574 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.)