



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L15-835-XXX-DIM-UNV-RW-CS-AD_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 13257153.03
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 08-31-2023
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4CR-xx-L15-835-xxx-DIM-UNV-RW-CS-AD
 [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	1256
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	75
Total Luminaire Watts	16.83
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.88
Spacing Criterion (90-270)	0.88
Spacing Criterion (Diagonal)	0.80
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	45033	45033	45033
55	35635	35635	35635
65	26638	26638	26638
75	13870	13870	13870
85	8406	8406	8406

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CR-XX-L15-835-XXX-DIM-UNV-RW-CS-AD_.IES

CANDELA TABULATION

	<u>0</u>
0.0	1496.903
0.5	1496.903
1.0	1496.131
1.5	1495.360
2.0	1495.360
2.5	1493.817
3.0	1491.502
3.5	1488.415
4.0	1485.329
4.5	1482.243
5.0	1477.613
5.5	1473.755
6.0	1469.125
6.5	1463.724
7.0	1458.323
7.5	1452.922
8.0	1447.521
8.5	1441.348
9.0	1434.403
9.5	1428.231
10.0	1421.286
10.5	1413.570
11.0	1405.083
11.5	1396.595
12.0	1387.336
12.5	1378.077
13.0	1368.046
13.5	1357.243
14.0	1345.669
14.5	1334.095
15.0	1320.978
15.5	1307.861
16.0	1293.201
16.5	1278.540
17.0	1263.108
17.5	1246.905
18.0	1229.930
18.5	1211.411
19.0	1192.121
19.5	1171.288
20.0	1149.683
20.5	1127.307
21.0	1103.387
21.5	1078.696
22.0	1051.690
22.5	1024.684
23.0	996.135
23.5	966.814
24.0	935.950
24.5	905.086
25.0	873.451
25.5	840.272
26.0	806.321
26.5	772.371

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CR-XX-L15-835-XXX-DIM-UNV-RW-CS-AD_.IES

CANDELA TABULATION - (Cont.)

27.0	738.652
27.5	704.779
28.0	670.597
28.5	636.570
29.0	601.770
29.5	566.740
30.0	532.018
30.5	497.836
31.0	464.117
31.5	431.556
32.0	400.229
32.5	370.599
33.0	343.130
33.5	317.668
34.0	293.979
34.5	272.297
35.0	252.622
35.5	234.566
36.0	218.208
36.5	203.548
37.0	190.508
37.5	178.857
38.0	168.286
38.5	158.872
39.0	150.616
39.5	143.363
40.0	136.882
40.5	131.249
41.0	126.234
41.5	121.758
42.0	117.746
42.5	114.197
43.0	110.956
43.5	108.101
44.0	105.400
44.5	102.931
45.0	100.617
45.5	98.379
46.0	96.296
46.5	94.212
47.0	92.283
47.5	90.354
48.0	88.425
48.5	86.573
49.0	84.722
49.5	82.870
50.0	81.095
50.5	79.398
51.0	77.623
51.5	75.925
52.0	74.305
52.5	72.608
53.0	70.987
53.5	69.367
54.0	67.746
54.5	66.126

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L15-835-XXX-DIM-UNV-RW-CS-AD_.IES****CANDELA TABULATION - (Cont.)**

55.0	64.583
55.5	63.040
56.0	61.496
56.5	59.953
57.0	58.410
57.5	56.944
58.0	55.401
58.5	53.935
59.0	52.469
59.5	51.080
60.0	49.614
60.5	48.148
61.0	46.682
61.5	45.293
62.0	43.827
62.5	42.438
63.0	41.049
63.5	39.660
64.0	38.271
64.5	36.882
65.0	35.571
65.5	34.259
66.0	32.947
66.5	31.558
67.0	30.324
67.5	29.089
68.0	27.778
68.5	26.543
69.0	25.308
69.5	24.074
70.0	22.917
70.5	21.682
71.0	20.525
71.5	19.290
72.0	18.133
72.5	16.975
73.0	15.818
73.5	14.660
74.0	13.580
74.5	12.423
75.0	11.343
75.5	10.339
76.0	9.336
76.5	8.565
77.0	7.870
77.5	7.253
78.0	6.790
78.5	6.404
79.0	6.096
79.5	5.787
80.0	5.401
80.5	5.093
81.0	4.784
81.5	4.475
82.0	4.089
82.5	3.781

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4CR-XX-L15-835-XXX-DIM-UNV-RW-CS-AD_.IES

CANDELA TABULATION - (Cont.)

83.0	3.549
83.5	3.241
84.0	2.932
84.5	2.623
85.0	2.315
85.5	2.083
86.0	1.775
86.5	1.543
87.0	1.235
87.5	1.003
88.0	0.772
88.5	0.540
89.0	0.309
89.5	0.231
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-L15-835-XXX-DIM-UNV-RW-CS-AD_.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-L15-835-XXX-DIM-UNV-RW-CS-AD_.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-L15-835-XXX-DIM-UNV-RW-CS-AD_.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-L15-835-XXX-DIM-UNV-RW-CS-AD_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	506.30	N.A.	40.30
0-30	896.28	N.A.	71.40
0-40	1067.87	N.A.	85.00
0-60	1205.03	N.A.	95.90
0-80	1253.37	N.A.	99.80
0-90	1256.04	N.A.	100.00
10-90	1116.81	N.A.	88.90
20-40	561.57	N.A.	44.70
20-50	640.85	N.A.	51.00
40-70	172.51	N.A.	13.70
60-80	48.34	N.A.	3.80
70-80	12.99	N.A.	1.00
80-90	2.67	N.A.	0.20
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	1256.04	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	139.24
10-20	367.06
20-30	389.98
30-40	171.59
40-50	79.28
50-60	57.88
60-70	35.35
70-80	12.99
80-90	2.67
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-L15-835-XXX-DIM-UNV-RW-CS-AD_.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	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92
2	107	102	97	94	105	100	96	93	97	93	91	94	91	89	91	89	87	85
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	86	83	80	79
4	96	88	82	78	94	87	81	77	85	80	76	82	78	75	81	77	74	73
5	91	82	76	72	89	81	75	71	79	74	71	78	73	70	76	72	69	68
6	86	77	71	66	85	76	70	66	75	70	66	73	69	65	72	68	65	63
7	82	72	66	62	81	72	66	62	71	65	61	69	65	61	68	64	61	59
8	78	68	62	58	77	68	62	58	67	61	58	66	61	57	65	60	57	56
9	75	65	59	55	73	64	58	55	63	58	54	62	58	54	61	57	54	53
10	71	61	55	52	70	61	55	51	60	55	51	59	55	51	59	54	51	50

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L15-835-XXX-DIM-UNV-RW-CS-AD_.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	19.7	20.8	20.1	21.1	21.4	19.7	20.8	20.1	21.1	21.4
	3H	20.7	21.7	21.1	22.0	22.4	20.7	21.7	21.1	22.0	22.4
	4H	20.9	21.8	21.3	22.2	22.6	20.9	21.8	21.3	22.2	22.6
	6H	20.9	21.8	21.4	22.2	22.5	20.9	21.8	21.4	22.2	22.5
	8H	20.9	21.7	21.4	22.1	22.5	20.9	21.7	21.4	22.1	22.5
	12H	20.9	21.7	21.4	22.1	22.5	20.9	21.7	21.4	22.1	22.5

UGR Viewed Endwise

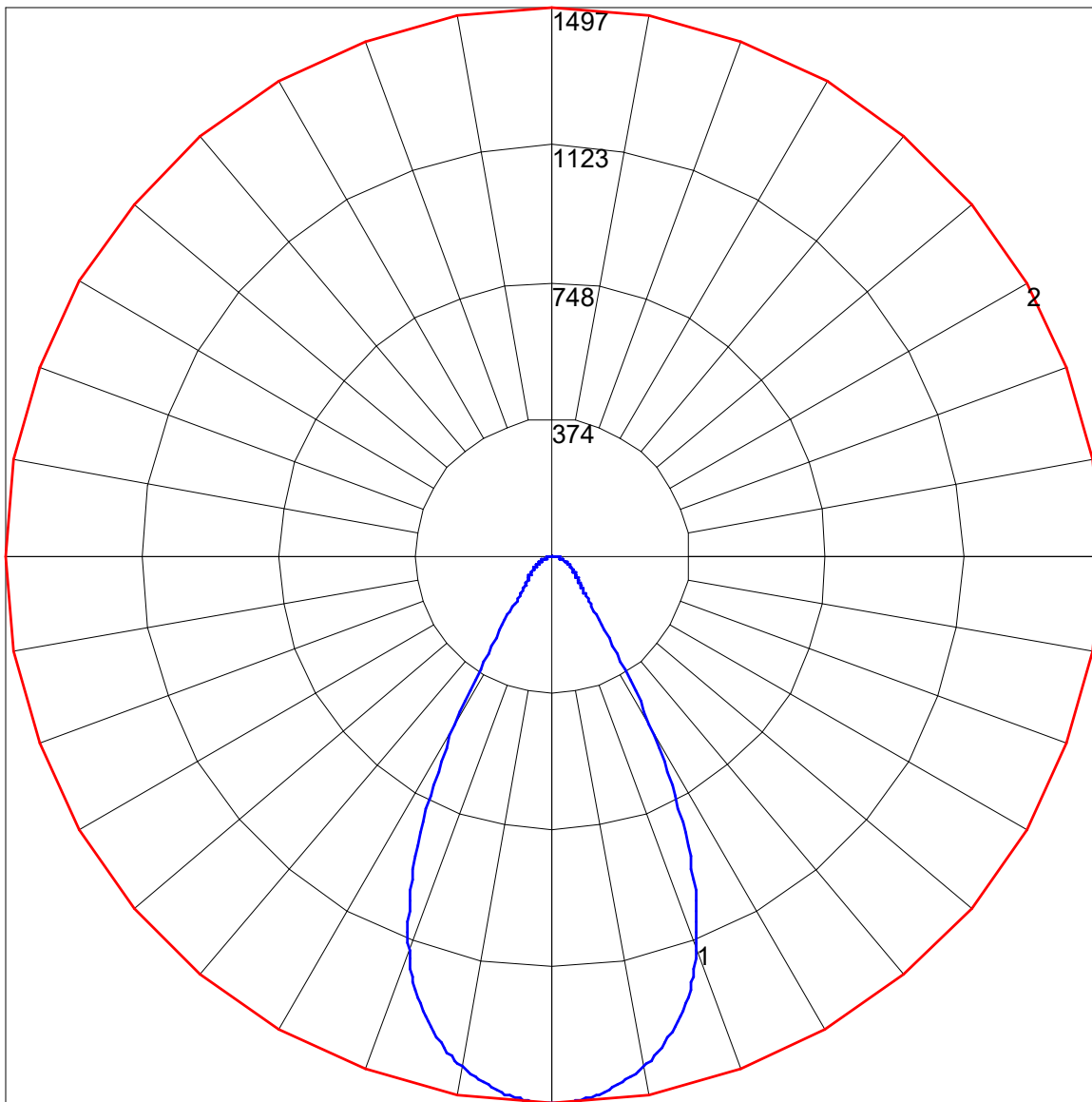
4H	2H	20.0	20.9	20.4	21.3	21.7	20.0	20.9	20.4	21.3	21.7
	3H	21.2	21.9	21.6	22.4	22.8	21.2	21.9	21.6	22.4	22.8
	4H	21.4	22.1	21.9	22.5	23.0	21.4	22.1	21.9	22.5	23.0
	6H	21.5	22.1	22.0	22.5	23.0	21.5	22.1	22.0	22.5	23.0
	8H	21.5	22.0	22.0	22.5	23.0	21.5	22.0	22.0	22.5	23.0
	12H	21.5	22.0	22.0	22.5	22.9	21.5	22.0	22.0	22.5	22.9

8H	4H	21.4	22.0	21.9	22.4	22.9	21.4	22.0	21.9	22.4	22.9
	6H	21.6	22.0	22.1	22.5	23.0	21.6	22.0	22.1	22.5	23.0
	8H	21.6	22.0	22.1	22.5	23.0	21.6	22.0	22.1	22.5	23.0
	12H	21.6	21.9	22.1	22.4	23.0	21.6	21.9	22.1	22.4	23.0

12H	4H	21.4	21.8	21.9	22.3	22.8	21.4	21.8	21.9	22.3	22.8
	6H	21.5	21.9	22.1	22.4	22.9	21.5	21.9	22.1	22.4	22.9
	8H	21.6	21.9	22.1	22.4	23.0	21.6	21.9	22.1	22.4	23.0

Maximum UGR = 23.0

POLAR GRAPH



Maximum Candela = 1496.903 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.)