



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L7-830-XXX-DIM-UNV-RW-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 13257153.03
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 01/25/2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4CR-xx-L7-830-xxx-DIM-UNV-RW-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	735
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	84
Total Luminaire Watts	8.7
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	26349	26349	26349
55	20850	20850	20850
65	15586	15586	15586
75	8116	8116	8116
85	4917	4917	4917

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CANDELA TABULATION

	<u>0</u>
0.0	875.860
0.5	875.860
1.0	875.408
1.5	874.957
2.0	874.957
2.5	874.054
3.0	872.700
3.5	870.894
4.0	869.088
4.5	867.282
5.0	864.573
5.5	862.316
6.0	859.607
6.5	856.447
7.0	853.286
7.5	850.126
8.0	846.966
8.5	843.354
9.0	839.291
9.5	835.679
10.0	831.615
10.5	827.101
11.0	822.134
11.5	817.168
12.0	811.751
12.5	806.333
13.0	800.464
13.5	794.143
14.0	787.371
14.5	780.599
15.0	772.924
15.5	765.249
16.0	756.671
16.5	748.093
17.0	739.063
17.5	729.582
18.0	719.650
18.5	708.814
19.0	697.528
19.5	685.338
20.0	672.697
20.5	659.604
21.0	645.608
21.5	631.161
22.0	615.359
22.5	599.558
23.0	582.853
23.5	565.697
24.0	547.638
24.5	529.579
25.0	511.069
25.5	491.655
26.0	471.791
26.5	451.926

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L7-830-XXX-DIM-UNV-RW-WH-XX_.IES****CANDELA TABULATION - (Cont.)**

27.0	432.196
27.5	412.377
28.0	392.376
28.5	372.466
29.0	352.105
29.5	331.608
30.0	311.291
30.5	291.291
31.0	271.562
31.5	252.510
32.0	234.180
32.5	216.843
33.0	200.771
33.5	185.872
34.0	172.012
34.5	159.325
35.0	147.813
35.5	137.248
36.0	127.677
36.5	119.099
37.0	111.469
37.5	104.652
38.0	98.467
38.5	92.959
39.0	88.128
39.5	83.884
40.0	80.092
40.5	76.796
41.0	73.861
41.5	71.243
42.0	68.895
42.5	66.818
43.0	64.922
43.5	63.252
44.0	61.671
44.5	60.227
45.0	58.872
45.5	57.563
46.0	56.344
46.5	55.125
47.0	53.996
47.5	52.868
48.0	51.739
48.5	50.655
49.0	49.572
49.5	48.488
50.0	47.450
50.5	46.457
51.0	45.418
51.5	44.425
52.0	43.477
52.5	42.484
53.0	41.536
53.5	40.588
54.0	39.639
54.5	38.691

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CANDELA TABULATION - (Cont.)

55.0	37.788
55.5	36.885
56.0	35.982
56.5	35.080
57.0	34.177
57.5	33.319
58.0	32.416
58.5	31.558
59.0	30.700
59.5	29.888
60.0	29.030
60.5	28.172
61.0	27.314
61.5	26.502
62.0	25.644
62.5	24.831
63.0	24.018
63.5	23.206
64.0	22.393
64.5	21.580
65.0	20.813
65.5	20.045
66.0	19.278
66.5	18.465
67.0	17.743
67.5	17.021
68.0	16.253
68.5	15.531
69.0	14.808
69.5	14.086
70.0	13.409
70.5	12.686
71.0	12.009
71.5	11.287
72.0	10.610
72.5	9.932
73.0	9.255
73.5	8.578
74.0	7.946
74.5	7.269
75.0	6.637
75.5	6.050
76.0	5.463
76.5	5.011
77.0	4.605
77.5	4.244
78.0	3.973
78.5	3.747
79.0	3.567
79.5	3.386
80.0	3.160
80.5	2.980
81.0	2.799
81.5	2.619
82.0	2.393
82.5	2.212

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CANDELA TABULATION - (Cont.)

83.0	2.077
83.5	1.896
84.0	1.716
84.5	1.535
85.0	1.354
85.5	1.219
86.0	1.038
86.5	0.903
87.0	0.722
87.5	0.587
88.0	0.451
88.5	0.316
89.0	0.181
89.5	0.135
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

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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
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

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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
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

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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	296.24	N.A.	40.30
0-30	524.43	N.A.	71.40
0-40	624.83	N.A.	85.00
0-60	705.08	N.A.	95.90
0-80	733.37	N.A.	99.80
0-90	734.93	N.A.	100.00
10-90	653.46	N.A.	88.90
20-40	328.58	N.A.	44.70
20-50	374.97	N.A.	51.00
40-70	100.94	N.A.	13.70
60-80	28.29	N.A.	3.80
70-80	7.60	N.A.	1.00
80-90	1.56	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	734.93	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	81.47
10-20	214.77
20-30	228.18
30-40	100.40
40-50	46.39
50-60	33.87
60-70	20.69
70-80	7.60
80-90	1.56
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	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	85	83	80	79
4	96	88	82	78	94	87	81	77	84	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

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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

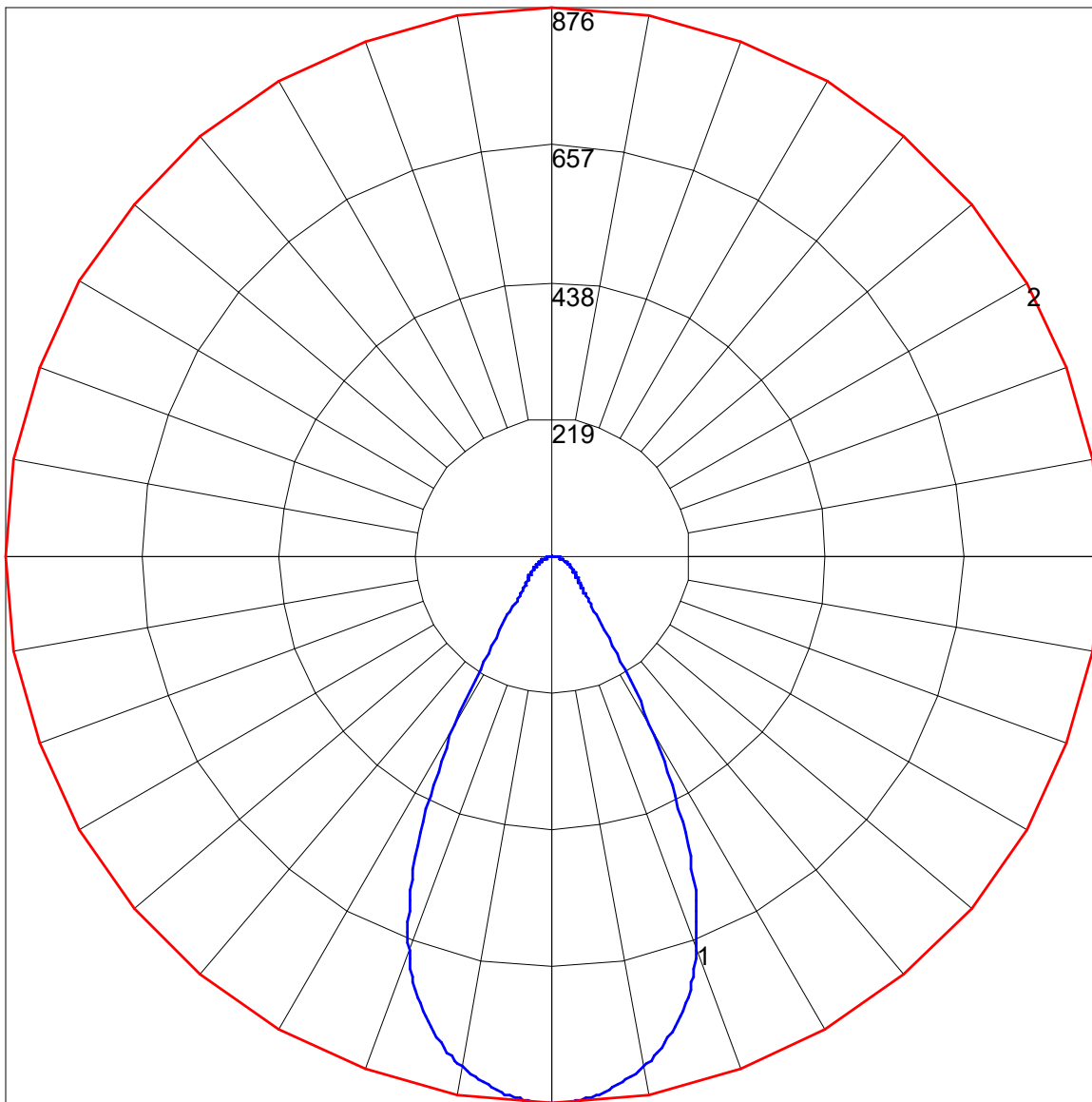
X=2H	Y=2H	17.9	19.0	18.3	19.3	19.6	17.9	19.0	18.3	19.3	19.6
	3H	18.9	19.9	19.3	20.2	20.6	18.9	19.9	19.3	20.2	20.6
	4H	19.1	20.0	19.5	20.4	20.8	19.1	20.0	19.5	20.4	20.8
	6H	19.1	20.0	19.6	20.4	20.8	19.1	20.0	19.6	20.4	20.8
	8H	19.1	19.9	19.6	20.3	20.7	19.1	19.9	19.6	20.3	20.7
	12H	19.1	19.9	19.6	20.3	20.7	19.1	19.9	19.6	20.3	20.7

UGR Viewed Endwise

4H	2H	18.2	19.1	18.6	19.5	19.9	18.2	19.1	18.6	19.5	19.9
	3H	19.4	20.1	19.8	20.6	21.0	19.4	20.1	19.8	20.6	21.0
	4H	19.6	20.3	20.1	20.7	21.2	19.6	20.3	20.1	20.7	21.2
	6H	19.7	20.3	20.2	20.7	21.2	19.7	20.3	20.2	20.7	21.2
	8H	19.7	20.2	20.2	20.7	21.2	19.7	20.2	20.2	20.7	21.2
	12H	19.7	20.2	20.2	20.7	21.1	19.7	20.2	20.2	20.7	21.1
8H	4H	19.6	20.2	20.1	20.6	21.1	19.6	20.2	20.1	20.6	21.1
	6H	19.8	20.2	20.3	20.7	21.2	19.8	20.2	20.3	20.7	21.2
	8H	19.8	20.2	20.3	20.7	21.2	19.8	20.2	20.3	20.7	21.2
	12H	19.8	20.1	20.3	20.6	21.2	19.8	20.1	20.3	20.6	21.2
12H	4H	19.6	20.1	20.1	20.5	21.0	19.6	20.1	20.1	20.5	21.0
	6H	19.7	20.1	20.3	20.6	21.1	19.7	20.1	20.3	20.6	21.1
	8H	19.8	20.1	20.3	20.6	21.2	19.8	20.1	20.3	20.6	21.2

Maximum UGR = 21.2

POLAR GRAPH



Maximum Candela = 875.86 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.)