



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L7-830-XXX-DIM-UNV-OW-CS-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM 13131414.01
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 02-21-2024
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
 [LUMCAT] 4CR-xx-L7-830-xxx-DIM-UNV-OW-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	710
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	82
Total Luminaire Watts	8.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.04
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	19280	19280	19280
55	5487	5487	5487
65	2490	2490	2490
75	772	772	772
85	207	207	207

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CANDELA TABULATION

	<u>0</u>
0.0	576.368
0.5	576.368
1.0	576.368
1.5	576.654
2.0	576.941
2.5	577.228
3.0	577.514
3.5	578.374
4.0	579.520
4.5	580.953
5.0	582.673
5.5	584.679
6.0	586.399
6.5	588.692
7.0	590.985
7.5	593.278
8.0	595.857
8.5	597.863
9.0	599.583
9.5	600.729
10.0	601.876
10.5	602.736
11.0	603.309
11.5	603.595
12.0	603.309
12.5	603.022
13.0	602.162
13.5	601.303
14.0	600.156
14.5	599.296
15.0	598.150
15.5	597.003
16.0	595.570
16.5	594.711
17.0	593.564
17.5	592.704
18.0	592.131
18.5	591.271
19.0	589.838
19.5	587.259
20.0	584.679
20.5	581.240
21.0	577.228
21.5	572.928
22.0	568.629
22.5	563.470
23.0	558.025
23.5	552.006
24.0	545.987
24.5	539.682
25.0	532.803
25.5	525.352
26.0	517.327
26.5	508.442

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

27.0	498.984
27.5	488.093
28.0	477.775
28.5	466.884
29.0	456.279
29.5	445.675
30.0	434.497
30.5	423.033
31.0	411.282
31.5	399.244
32.0	387.780
32.5	375.742
33.0	363.418
33.5	351.094
34.0	338.197
34.5	325.300
35.0	312.116
35.5	298.358
36.0	284.114
36.5	269.182
37.0	253.218
37.5	236.279
38.0	218.768
38.5	200.912
39.0	183.142
39.5	165.917
40.0	149.523
40.5	134.104
41.0	119.716
41.5	106.274
42.0	93.721
42.5	82.199
43.0	71.795
43.5	62.624
44.0	54.885
44.5	48.437
45.0	43.077
45.5	38.635
46.0	34.937
46.5	31.785
47.0	29.119
47.5	26.826
48.0	24.820
48.5	23.043
49.0	21.467
49.5	20.063
50.0	18.744
50.5	17.569
51.0	16.480
51.5	15.477
52.0	14.560
52.5	13.671
53.0	12.840
53.5	12.038
54.0	11.292
54.5	10.576

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55.0	9.945
55.5	9.372
56.0	8.856
56.5	8.369
57.0	7.939
57.5	7.538
58.0	7.165
58.5	6.821
59.0	6.506
59.5	6.162
60.0	5.875
60.5	5.560
61.0	5.302
61.5	5.016
62.0	4.758
62.5	4.500
63.0	4.270
63.5	4.013
64.0	3.783
64.5	3.554
65.0	3.325
65.5	3.124
66.0	2.923
66.5	2.694
67.0	2.522
67.5	2.322
68.0	2.150
68.5	2.006
69.0	1.834
69.5	1.691
70.0	1.548
70.5	1.433
71.0	1.318
71.5	1.204
72.0	1.089
72.5	1.003
73.0	0.917
73.5	0.831
74.0	0.774
74.5	0.688
75.0	0.631
75.5	0.573
76.0	0.516
76.5	0.487
77.0	0.430
77.5	0.373
78.0	0.344
78.5	0.315
79.0	0.287
79.5	0.258
80.0	0.229
80.5	0.201
81.0	0.172
81.5	0.172
82.0	0.143
82.5	0.115

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83.0	0.115
83.5	0.086
84.0	0.086
84.5	0.086
85.0	0.057
85.5	0.057
86.0	0.057
86.5	0.029
87.0	0.029
87.5	0.029
88.0	0.029
88.5	0.029
89.0	0.029
89.5	0.029
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-L7-830-XXX-DIM-UNV-OW-CS-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

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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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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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Zone	Lumens	%Lamp	%Fixt
0-20	225.37	N.A.	31.70
0-30	465.89	N.A.	65.60
0-40	653.47	N.A.	92.00
0-60	706.24	N.A.	99.40
0-80	710.40	N.A.	100.00
0-90	710.49	N.A.	100.00
10-90	654.14	N.A.	92.10
20-40	428.10	N.A.	60.30
20-50	471.33	N.A.	66.30
40-70	56.17	N.A.	7.90
60-80	4.15	N.A.	0.60
70-80	0.75	N.A.	0.10
80-90	0.09	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	710.49	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	56.35
10-20	169.02
20-30	240.52
30-40	187.58
40-50	43.23
50-60	9.55
60-70	3.40
70-80	0.75
80-90	0.09
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	111	108	106	111	108	106	104	104	102	101	101	99	98	97	96	95	93
2	107	102	98	95	105	101	97	94	97	94	92	94	92	90	92	90	88	86
3	102	95	90	86	100	94	89	85	91	87	84	89	85	82	86	83	81	79
4	96	88	83	78	94	87	82	78	85	80	77	83	79	76	81	78	75	73
5	91	82	76	72	89	81	76	71	80	75	71	78	73	70	76	72	69	68
6	86	77	71	66	85	76	70	66	74	69	65	73	68	65	72	68	64	63
7	82	72	66	61	80	71	65	61	70	64	61	69	64	60	67	63	60	58
8	77	67	61	57	76	67	61	57	66	60	56	65	60	56	64	59	56	54
9	73	63	57	53	72	63	57	53	62	56	53	61	56	52	60	55	52	51
10	70	59	53	49	69	59	53	49	58	53	49	57	52	49	57	52	49	47

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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

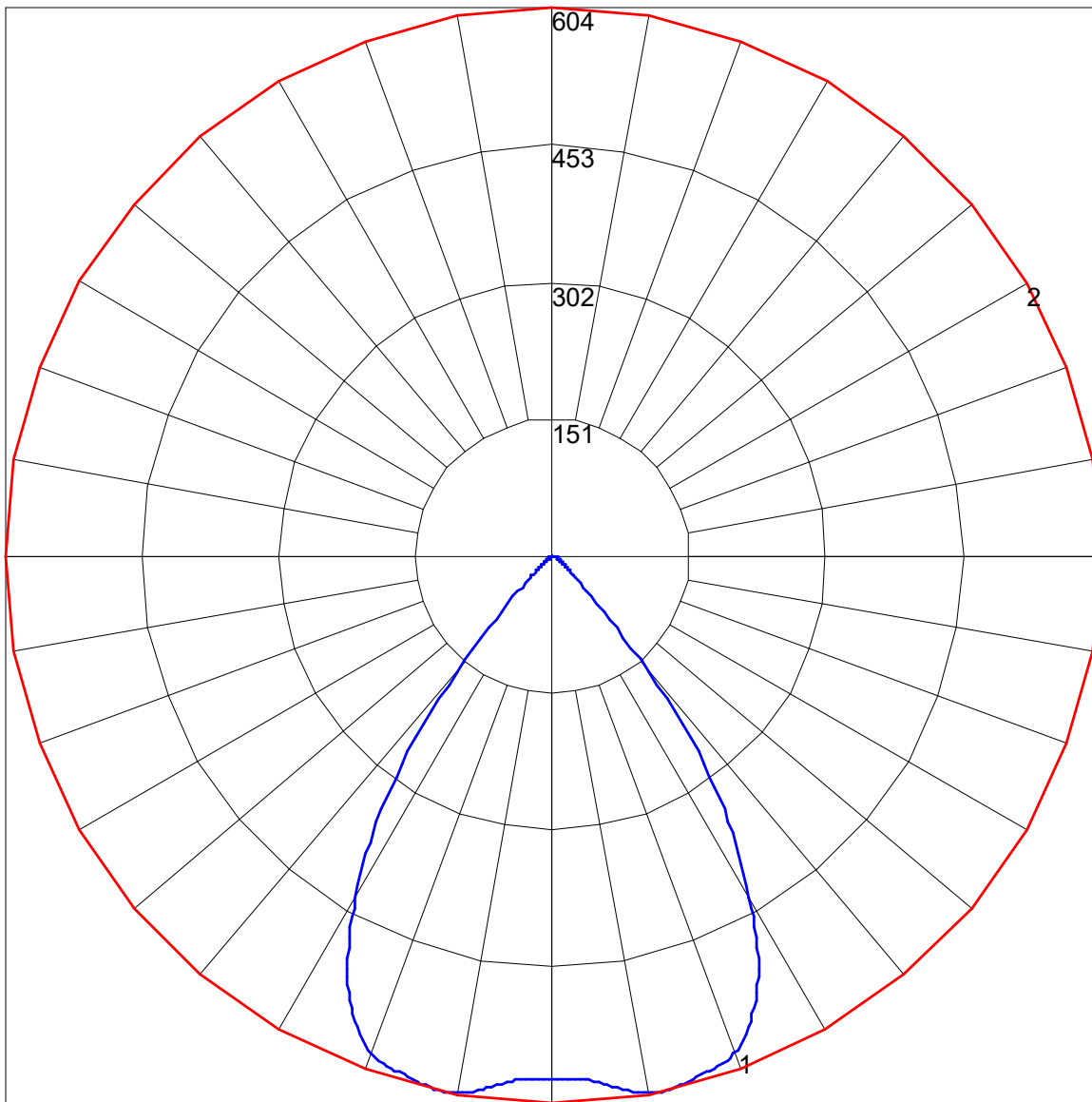
X=2H	Y=2H	7.6	8.6	8.0	9.0	9.3	7.6	8.6	8.0	9.0	9.3
	3H	7.9	8.8	8.3	9.1	9.5	7.9	8.8	8.3	9.1	9.5
	4H	7.9	8.7	8.3	9.0	9.4	7.9	8.7	8.3	9.0	9.4
	6H	7.8	8.5	8.2	8.9	9.3	7.8	8.5	8.2	8.9	9.3
	8H	7.7	8.4	8.2	8.8	9.2	7.7	8.4	8.2	8.8	9.2
	12H	7.7	8.3	8.1	8.7	9.2	7.7	8.3	8.1	8.7	9.2

UGR Viewed Endwise

4H	2H	7.7	8.5	8.1	8.9	9.2	7.7	8.5	8.1	8.9	9.2
	3H	8.0	8.7	8.4	9.1	9.5	8.0	8.7	8.4	9.1	9.5
	4H	8.0	8.6	8.4	9.0	9.4	8.0	8.6	8.4	9.0	9.4
	6H	7.9	8.4	8.3	8.8	9.3	7.9	8.4	8.3	8.8	9.3
	8H	7.8	8.3	8.3	8.7	9.2	7.8	8.3	8.3	8.7	9.2
	12H	7.8	8.2	8.3	8.7	9.1	7.8	8.2	8.3	8.7	9.1
8H	4H	7.8	8.3	8.3	8.7	9.2	7.8	8.3	8.3	8.7	9.2
	6H	7.7	8.1	8.3	8.6	9.1	7.7	8.1	8.3	8.6	9.1
	8H	7.7	8.0	8.2	8.5	9.0	7.7	8.0	8.2	8.5	9.0
	12H	7.6	7.9	8.1	8.4	9.0	7.6	7.9	8.1	8.4	9.0
12H	4H	7.8	8.2	8.3	8.7	9.1	7.8	8.2	8.3	8.7	9.1
	6H	7.7	8.0	8.2	8.5	9.0	7.7	8.0	8.2	8.5	9.0
	8H	7.6	7.9	8.1	8.4	9.0	7.6	7.9	8.1	8.4	9.0

Maximum UGR = 9.5

POLAR GRAPH



Maximum Candela = 603.595 Located At Horizontal Angle = 0, Vertical Angle = 11.5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (11.5) (Through Max. Cd.)