



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L7-835-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] 01/25/2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
 [LUMCAT] 4CR-xx-L7-835-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	725
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	83
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	19673	19673	19673
55	5599	5599	5599
65	2540	2540	2540
75	786	786	786
85	211	211	211

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CANDELA TABULATION

	<u>0</u>
0.0	588.130
0.5	588.130
1.0	588.130
1.5	588.423
2.0	588.715
2.5	589.008
3.0	589.300
3.5	590.177
4.0	591.347
4.5	592.810
5.0	594.564
5.5	596.611
6.0	598.366
6.5	600.706
7.0	603.046
7.5	605.385
8.0	608.017
8.5	610.064
9.0	611.819
9.5	612.989
10.0	614.159
10.5	615.036
11.0	615.621
11.5	615.914
12.0	615.621
12.5	615.329
13.0	614.451
13.5	613.574
14.0	612.404
14.5	611.527
15.0	610.357
15.5	609.187
16.0	607.725
16.5	606.847
17.0	605.678
17.5	604.800
18.0	604.215
18.5	603.338
19.0	601.876
19.5	599.244
20.0	596.611
20.5	593.102
21.0	589.008
21.5	584.621
22.0	580.234
22.5	574.970
23.0	569.413
23.5	563.271
24.0	557.130
24.5	550.696
25.0	543.677
25.5	536.073
26.0	527.884
26.5	518.818

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CANDELA TABULATION - (Cont.)

27.0	509.167
27.5	498.054
28.0	487.525
28.5	476.412
29.0	465.591
29.5	454.770
30.0	443.364
30.5	431.666
31.0	419.675
31.5	407.392
32.0	395.694
32.5	383.411
33.0	370.835
33.5	358.259
34.0	345.099
34.5	331.938
35.0	318.485
35.5	304.447
36.0	289.912
36.5	274.675
37.0	258.385
37.5	241.101
38.0	223.232
38.5	205.012
39.0	186.880
39.5	169.303
40.0	152.575
40.5	136.840
41.0	122.159
41.5	108.443
42.0	95.633
42.5	83.877
43.0	73.260
43.5	63.902
44.0	56.005
44.5	49.425
45.0	43.956
45.5	39.423
46.0	35.650
46.5	32.433
47.0	29.714
47.5	27.374
48.0	25.327
48.5	23.514
49.0	21.905
49.5	20.472
50.0	19.127
50.5	17.928
51.0	16.816
51.5	15.793
52.0	14.857
52.5	13.950
53.0	13.102
53.5	12.283
54.0	11.523
54.5	10.792

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L7-835-XXX-DIM-UNV-OW-CS-XX_.IES****CANDELA TABULATION - (Cont.)**

55.0	10.148
55.5	9.563
56.0	9.037
56.5	8.540
57.0	8.101
57.5	7.692
58.0	7.311
58.5	6.960
59.0	6.639
59.5	6.288
60.0	5.995
60.5	5.674
61.0	5.410
61.5	5.118
62.0	4.855
62.5	4.592
63.0	4.358
63.5	4.094
64.0	3.860
64.5	3.626
65.0	3.392
65.5	3.188
66.0	2.983
66.5	2.749
67.0	2.574
67.5	2.369
68.0	2.193
68.5	2.047
69.0	1.872
69.5	1.725
70.0	1.579
70.5	1.462
71.0	1.345
71.5	1.228
72.0	1.111
72.5	1.024
73.0	0.936
73.5	0.848
74.0	0.790
74.5	0.702
75.0	0.643
75.5	0.585
76.0	0.526
76.5	0.497
77.0	0.439
77.5	0.380
78.0	0.351
78.5	0.322
79.0	0.292
79.5	0.263
80.0	0.234
80.5	0.205
81.0	0.175
81.5	0.175
82.0	0.146
82.5	0.117

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CANDELA TABULATION - (Cont.)

83.0	0.117
83.5	0.088
84.0	0.088
84.5	0.088
85.0	0.058
85.5	0.058
86.0	0.058
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

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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	229.96	N.A.	31.70
0-30	475.40	N.A.	65.60
0-40	666.80	N.A.	92.00
0-60	720.66	N.A.	99.40
0-80	724.89	N.A.	100.00
0-90	724.98	N.A.	100.00
10-90	667.48	N.A.	92.10
20-40	436.84	N.A.	60.30
20-50	480.94	N.A.	66.30
40-70	57.32	N.A.	7.90
60-80	4.24	N.A.	0.60
70-80	0.77	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	724.98	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	57.50
10-20	172.46
20-30	245.43
30-40	191.40
40-50	44.11
50-60	9.75
60-70	3.47
70-80	0.77
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	110	108	106	111	108	106	104	104	102	101	100	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	88	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	79	74	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	81	72	65	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	64	60	56	63	59	56	54
9	73	63	57	53	72	63	57	53	62	56	52	61	56	52	60	55	52	51
10	70	59	53	49	68	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

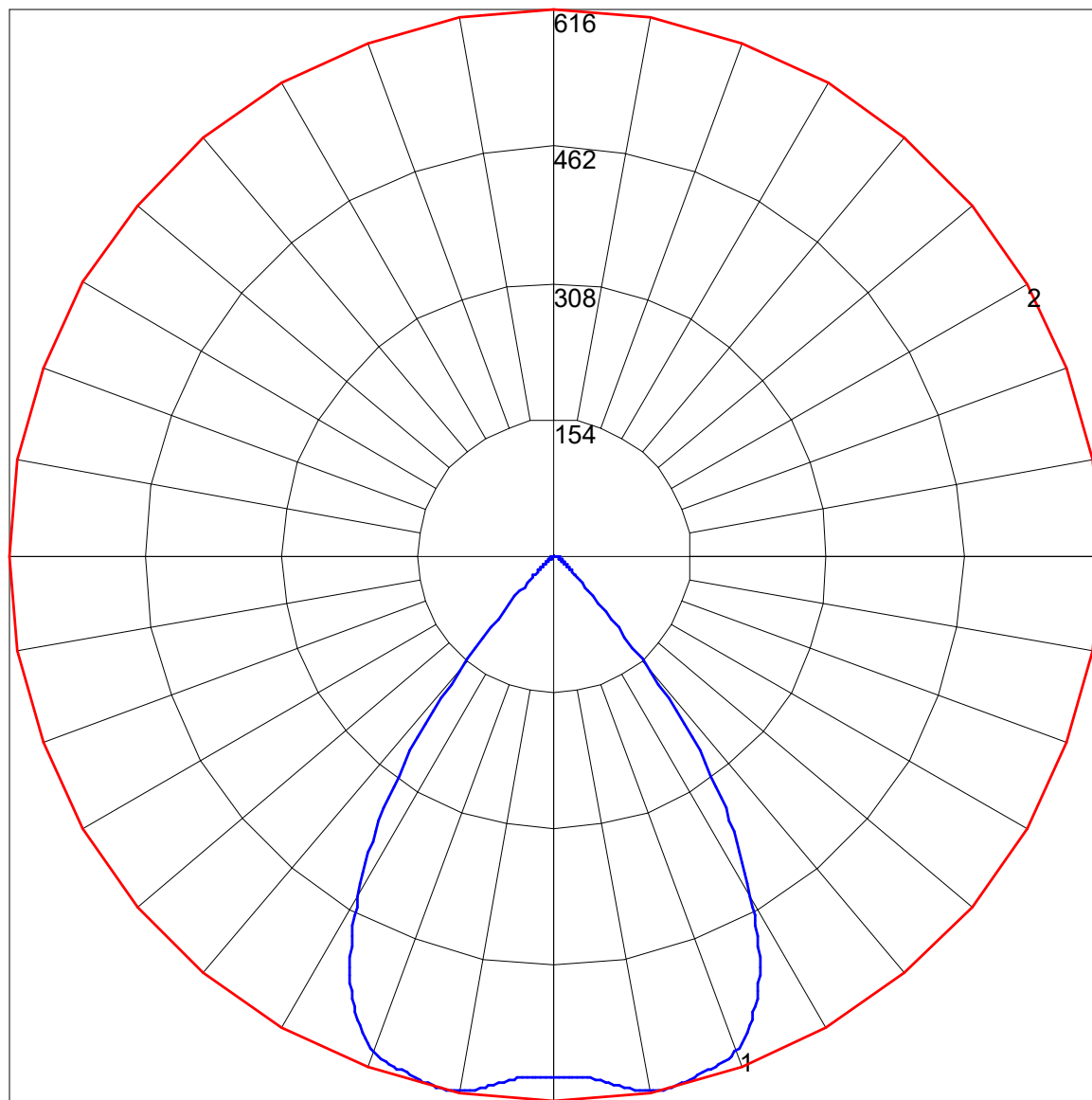
X=2H	Y=2H	7.7	8.8	8.1	9.1	9.4	7.7	8.8	8.1	9.1	9.4
	3H	8.0	8.9	8.4	9.2	9.6	8.0	8.9	8.4	9.2	9.6
	4H	8.0	8.8	8.4	9.1	9.5	8.0	8.8	8.4	9.1	9.5
	6H	7.9	8.6	8.3	9.0	9.4	7.9	8.6	8.3	9.0	9.4
	8H	7.9	8.5	8.3	8.9	9.3	7.9	8.5	8.3	8.9	9.3
	12H	7.8	8.5	8.2	8.8	9.3	7.8	8.5	8.2	8.8	9.3

UGR Viewed Endwise

4H	2H	7.8	8.6	8.2	9.0	9.3	7.8	8.6	8.2	9.0	9.3
	3H	8.1	8.8	8.5	9.2	9.6	8.1	8.8	8.5	9.2	9.6
	4H	8.1	8.7	8.5	9.1	9.5	8.1	8.7	8.5	9.1	9.5
	6H	8.0	8.5	8.5	9.0	9.4	8.0	8.5	8.5	9.0	9.4
	8H	7.9	8.4	8.4	8.9	9.3	7.9	8.4	8.4	8.9	9.3
	12H	7.9	8.3	8.4	8.8	9.2	7.9	8.3	8.4	8.8	9.2
8H	4H	7.9	8.4	8.4	8.9	9.3	7.9	8.4	8.4	8.9	9.3
	6H	7.8	8.2	8.4	8.7	9.2	7.8	8.2	8.4	8.7	9.2
	8H	7.8	8.1	8.3	8.6	9.1	7.8	8.1	8.3	8.6	9.1
	12H	7.8	8.0	8.3	8.5	9.1	7.8	8.0	8.3	8.5	9.1
12H	4H	7.9	8.3	8.4	8.8	9.2	7.9	8.3	8.4	8.8	9.2
	6H	7.8	8.1	8.3	8.6	9.1	7.8	8.1	8.3	8.6	9.1
	8H	7.8	8.0	8.3	8.5	9.1	7.8	8.0	8.3	8.5	9.1

Maximum UGR = 9.6

POLAR GRAPH



Maximum Candela = 615.914 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.)