



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L15-930-XXX-DIM1-UNV-OW-BL-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM 13131414.01
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 02-03-2025
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
 [LUMCAT] 4CR-xx-L15-930-xxx-DIM1-UNV-OW-BL-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	583
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	33
Total Luminaire Watts	17.7
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	15829	15829	15829
55	4505	4505	4505
65	2044	2044	2044
75	633	633	633
85	171	171	171

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CANDELA TABULATION

	<u>0</u>
0.0	473.191
0.5	473.191
1.0	473.191
1.5	473.426
2.0	473.662
2.5	473.897
3.0	474.132
3.5	474.838
4.0	475.779
4.5	476.956
5.0	478.368
5.5	480.015
6.0	481.427
6.5	483.309
7.0	485.191
7.5	487.074
8.0	489.192
8.5	490.839
9.0	492.251
9.5	493.192
10.0	494.133
10.5	494.839
11.0	495.309
11.5	495.545
12.0	495.309
12.5	495.074
13.0	494.368
13.5	493.662
14.0	492.721
14.5	492.015
15.0	491.074
15.5	490.133
16.0	488.956
16.5	488.250
17.0	487.309
17.5	486.603
18.0	486.133
18.5	485.427
19.0	484.250
19.5	482.133
20.0	480.015
20.5	477.191
21.0	473.897
21.5	470.368
22.0	466.838
22.5	462.603
23.0	458.132
23.5	453.191
24.0	448.249
24.5	443.073
25.0	437.425
25.5	431.307
26.0	424.719
26.5	417.425

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CANDELA TABULATION - (Cont.)

27.0	409.660
27.5	400.718
28.0	392.247
28.5	383.306
29.0	374.600
29.5	365.894
30.0	356.717
30.5	347.305
31.0	337.658
31.5	327.775
32.0	318.363
32.5	308.480
33.0	298.362
33.5	288.244
34.0	277.656
34.5	267.067
35.0	256.243
35.5	244.949
36.0	233.254
36.5	220.995
37.0	207.889
37.5	193.982
38.0	179.606
38.5	164.946
39.0	150.358
39.5	136.216
40.0	122.757
40.5	110.098
41.0	98.285
41.5	87.250
42.0	76.944
42.5	67.484
43.0	58.943
43.5	51.413
44.0	45.060
44.5	39.766
45.0	35.366
45.5	31.719
46.0	28.683
46.5	26.095
47.0	23.907
47.5	22.024
48.0	20.377
48.5	18.918
49.0	17.624
49.5	16.471
50.0	15.389
50.5	14.424
51.0	13.530
51.5	12.706
52.0	11.953
52.5	11.224
53.0	10.542
53.5	9.883
54.0	9.271
54.5	8.683

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L15-930-XXX-DIM1-UNV-OW-BL-XX_.IES****CANDELA TABULATION - (Cont.)**

55.0	8.165
55.5	7.694
56.0	7.271
56.5	6.871
57.0	6.518
57.5	6.188
58.0	5.883
58.5	5.600
59.0	5.341
59.5	5.059
60.0	4.824
60.5	4.565
61.0	4.353
61.5	4.118
62.0	3.906
62.5	3.694
63.0	3.506
63.5	3.294
64.0	3.106
64.5	2.918
65.0	2.729
65.5	2.565
66.0	2.400
66.5	2.212
67.0	2.071
67.5	1.906
68.0	1.765
68.5	1.647
69.0	1.506
69.5	1.388
70.0	1.271
70.5	1.177
71.0	1.082
71.5	0.988
72.0	0.894
72.5	0.824
73.0	0.753
73.5	0.682
74.0	0.635
74.5	0.565
75.0	0.518
75.5	0.471
76.0	0.424
76.5	0.400
77.0	0.353
77.5	0.306
78.0	0.282
78.5	0.259
79.0	0.235
79.5	0.212
80.0	0.188
80.5	0.165
81.0	0.141
81.5	0.141
82.0	0.118
82.5	0.094

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CANDELA TABULATION - (Cont.)

83.0	0.094
83.5	0.071
84.0	0.071
84.5	0.071
85.0	0.047
85.5	0.047
86.0	0.047
86.5	0.024
87.0	0.024
87.5	0.024
88.0	0.024
88.5	0.024
89.0	0.024
89.5	0.024
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-L15-930-XXX-DIM1-UNV-OW-BL-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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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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Zone	Lumens	%Lamp	%Fixt
0-20	185.02	N.A.	31.70
0-30	382.49	N.A.	65.60
0-40	536.49	N.A.	92.00
0-60	579.82	N.A.	99.40
0-80	583.23	N.A.	100.00
0-90	583.30	N.A.	100.00
10-90	537.04	N.A.	92.10
20-40	351.47	N.A.	60.30
20-50	386.95	N.A.	66.30
40-70	46.12	N.A.	7.90
60-80	3.41	N.A.	0.60
70-80	0.62	N.A.	0.10
80-90	0.07	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	583.30	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	46.26
10-20	138.76
20-30	197.47
30-40	154.00
40-50	35.49
50-60	7.84
60-70	2.79
70-80	0.62
80-90	0.07
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	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

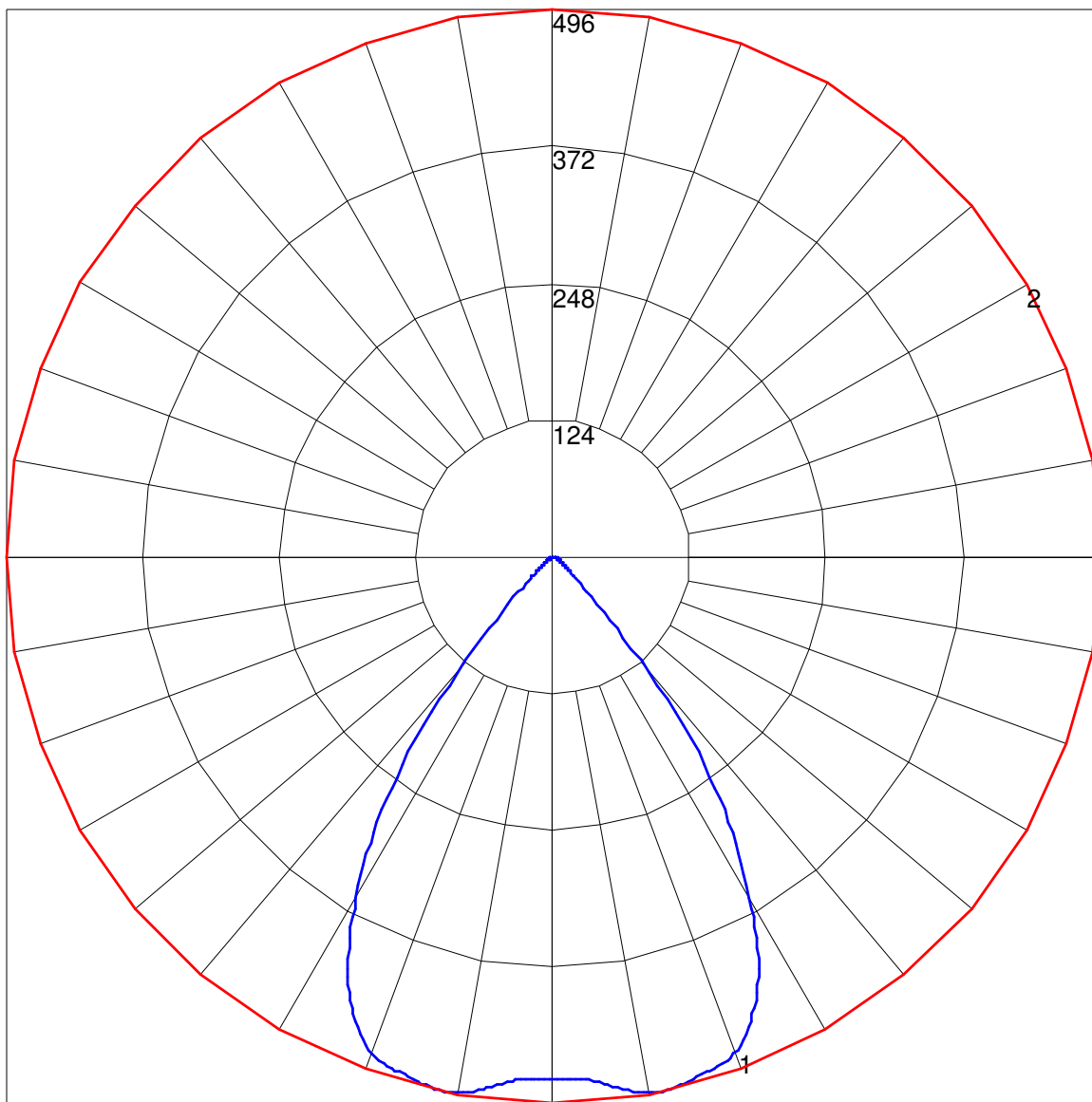
X=2H	Y=2H	6.9	7.9	7.3	8.3	8.6	6.9	7.9	7.3	8.3	8.6
	3H	7.2	8.1	7.6	8.4	8.8	7.2	8.1	7.6	8.4	8.8
	4H	7.2	8.0	7.6	8.3	8.7	7.2	8.0	7.6	8.3	8.7
	6H	7.1	7.8	7.5	8.2	8.6	7.1	7.8	7.5	8.2	8.6
	8H	7.1	7.7	7.5	8.1	8.5	7.1	7.7	7.5	8.1	8.5
	12H	7.0	7.7	7.4	8.0	8.5	7.0	7.7	7.4	8.0	8.5

UGR Viewed Endwise

4H	2H	7.0	7.8	7.4	8.2	8.5	7.0	7.8	7.4	8.2	8.5
	3H	7.3	8.0	7.7	8.4	8.8	7.3	8.0	7.7	8.4	8.8
	4H	7.3	7.9	7.7	8.3	8.7	7.3	7.9	7.7	8.3	8.7
	6H	7.2	7.7	7.7	8.1	8.6	7.2	7.7	7.7	8.1	8.6
	8H	7.1	7.6	7.6	8.0	8.5	7.1	7.6	7.6	8.0	8.5
	12H	7.1	7.5	7.6	8.0	8.4	7.1	7.5	7.6	8.0	8.4
8H	4H	7.1	7.6	7.6	8.1	8.5	7.1	7.6	7.6	8.1	8.5
	6H	7.0	7.4	7.6	7.9	8.4	7.0	7.4	7.6	7.9	8.4
	8H	7.0	7.3	7.5	7.8	8.3	7.0	7.3	7.5	7.8	8.3
	12H	6.9	7.2	7.4	7.7	8.3	6.9	7.2	7.4	7.7	8.3
12H	4H	7.1	7.5	7.6	8.0	8.4	7.1	7.5	7.6	8.0	8.4
	6H	7.0	7.3	7.5	7.8	8.3	7.0	7.3	7.5	7.8	8.3
	8H	6.9	7.2	7.4	7.7	8.3	6.9	7.2	7.4	7.7	8.3

Maximum UGR = 8.8

POLAR GRAPH



Maximum Candela = 495.545 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.)