



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-L25-840-XXX-DIM-UNV-RW-CS-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST]GEN FROM 13257153.03  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 05-30-2023  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 4CR-L25-840-xxx-DIM-UNV-RW-CS-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	2543
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	84
Total Luminaire Watts	30.1
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	91166	91166	91166
55	72140	72140	72140
65	53925	53925	53925
75	28078	28078	28078
85	17016	17016	17016

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CANDELA TABULATION

	<u>0</u>
0.0	3030.356
0.5	3030.356
1.0	3028.794
1.5	3027.232
2.0	3027.232
2.5	3024.108
3.0	3019.421
3.5	3013.173
4.0	3006.925
4.5	3000.677
5.0	2991.305
5.5	2983.495
6.0	2974.122
6.5	2963.188
7.0	2952.254
7.5	2941.319
8.0	2930.385
8.5	2917.889
9.0	2903.831
9.5	2891.334
10.0	2877.276
10.5	2861.655
11.0	2844.473
11.5	2827.291
12.0	2808.546
12.5	2789.802
13.0	2769.495
13.5	2747.627
14.0	2724.196
14.5	2700.765
15.0	2674.211
15.5	2647.656
16.0	2617.977
16.5	2588.299
17.0	2557.058
17.5	2524.255
18.0	2489.890
18.5	2452.401
19.0	2413.350
19.5	2371.175
20.0	2327.438
20.5	2282.139
21.0	2233.716
21.5	2183.731
22.0	2129.059
22.5	2074.388
23.0	2016.592
23.5	1957.235
24.0	1894.753
24.5	1832.272
25.0	1768.228
25.5	1701.060
26.0	1632.331
26.5	1563.601

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**CANDELA TABULATION - (Cont.)**

27.0	1495.340
27.5	1426.766
28.0	1357.568
28.5	1288.682
29.0	1218.234
29.5	1147.318
30.0	1077.026
30.5	1007.828
31.0	939.566
31.5	873.648
32.0	810.230
32.5	750.247
33.0	694.639
33.5	643.091
34.0	595.137
34.5	551.244
35.0	511.412
35.5	474.860
36.0	441.745
36.5	412.066
37.0	385.667
37.5	362.081
38.0	340.681
38.5	321.624
39.0	304.910
39.5	290.227
40.0	277.106
40.5	265.703
41.0	255.550
41.5	246.490
42.0	238.367
42.5	231.182
43.0	224.621
43.5	218.842
44.0	213.375
44.5	208.376
45.0	203.690
45.5	199.160
46.0	194.942
46.5	190.725
47.0	186.820
47.5	182.915
48.0	179.010
48.5	175.261
49.0	171.512
49.5	167.763
50.0	164.170
50.5	160.734
51.0	157.141
51.5	153.705
52.0	150.424
52.5	146.988
53.0	143.708
53.5	140.427
54.0	137.147
54.5	133.867

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CANDELA TABULATION - (Cont.)

55.0	130.743
55.5	127.619
56.0	124.495
56.5	121.370
57.0	118.246
57.5	115.278
58.0	112.154
58.5	109.187
59.0	106.219
59.5	103.407
60.0	100.439
60.5	97.471
61.0	94.503
61.5	91.692
62.0	88.724
62.5	85.912
63.0	83.100
63.5	80.289
64.0	77.477
64.5	74.665
65.0	72.010
65.5	69.355
66.0	66.699
66.5	63.887
67.0	61.388
67.5	58.889
68.0	56.233
68.5	53.734
69.0	51.235
69.5	48.736
70.0	46.393
70.5	43.893
71.0	41.550
71.5	39.051
72.0	36.708
72.5	34.365
73.0	32.022
73.5	29.679
74.0	27.492
74.5	25.149
75.0	22.962
75.5	20.931
76.0	18.901
76.5	17.339
77.0	15.933
77.5	14.683
78.0	13.746
78.5	12.965
79.0	12.340
79.5	11.715
80.0	10.934
80.5	10.309
81.0	9.685
81.5	9.060
82.0	8.279
82.5	7.654

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CANDELA TABULATION - (Cont.)

83.0	7.185
83.5	6.561
84.0	5.936
84.5	5.311
85.0	4.686
85.5	4.218
86.0	3.593
86.5	3.124
87.0	2.499
87.5	2.031
88.0	1.562
88.5	1.093
89.0	0.625
89.5	0.469
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  
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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	1024.96	N.A.	40.30
0-30	1814.45	N.A.	71.40
0-40	2161.82	N.A.	85.00
0-60	2439.48	N.A.	95.90
0-80	2537.35	N.A.	99.80
0-90	2542.76	N.A.	100.00
10-90	2260.89	N.A.	88.90
20-40	1136.86	N.A.	44.70
20-50	1297.34	N.A.	51.00
40-70	349.24	N.A.	13.70
60-80	97.87	N.A.	3.80
70-80	26.30	N.A.	1.00
80-90	5.40	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	2542.76	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	281.87
10-20	743.09
20-30	789.49
30-40	347.37
40-50	160.49
50-60	117.18
60-70	71.57
70-80	26.30
80-90	5.40
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	22.2	23.3	22.6	23.6	23.9	22.2	23.3	22.6	23.6	23.9
	3H	23.2	24.2	23.6	24.5	24.9	23.2	24.2	23.6	24.5	24.9
	4H	23.4	24.3	23.8	24.7	25.1	23.4	24.3	23.8	24.7	25.1
	6H	23.4	24.3	23.9	24.7	25.1	23.4	24.3	23.9	24.7	25.1
	8H	23.4	24.2	23.9	24.6	25.0	23.4	24.2	23.9	24.6	25.0
	12H	23.4	24.2	23.9	24.6	25.0	23.4	24.2	23.9	24.6	25.0

### UGR Viewed Endwise

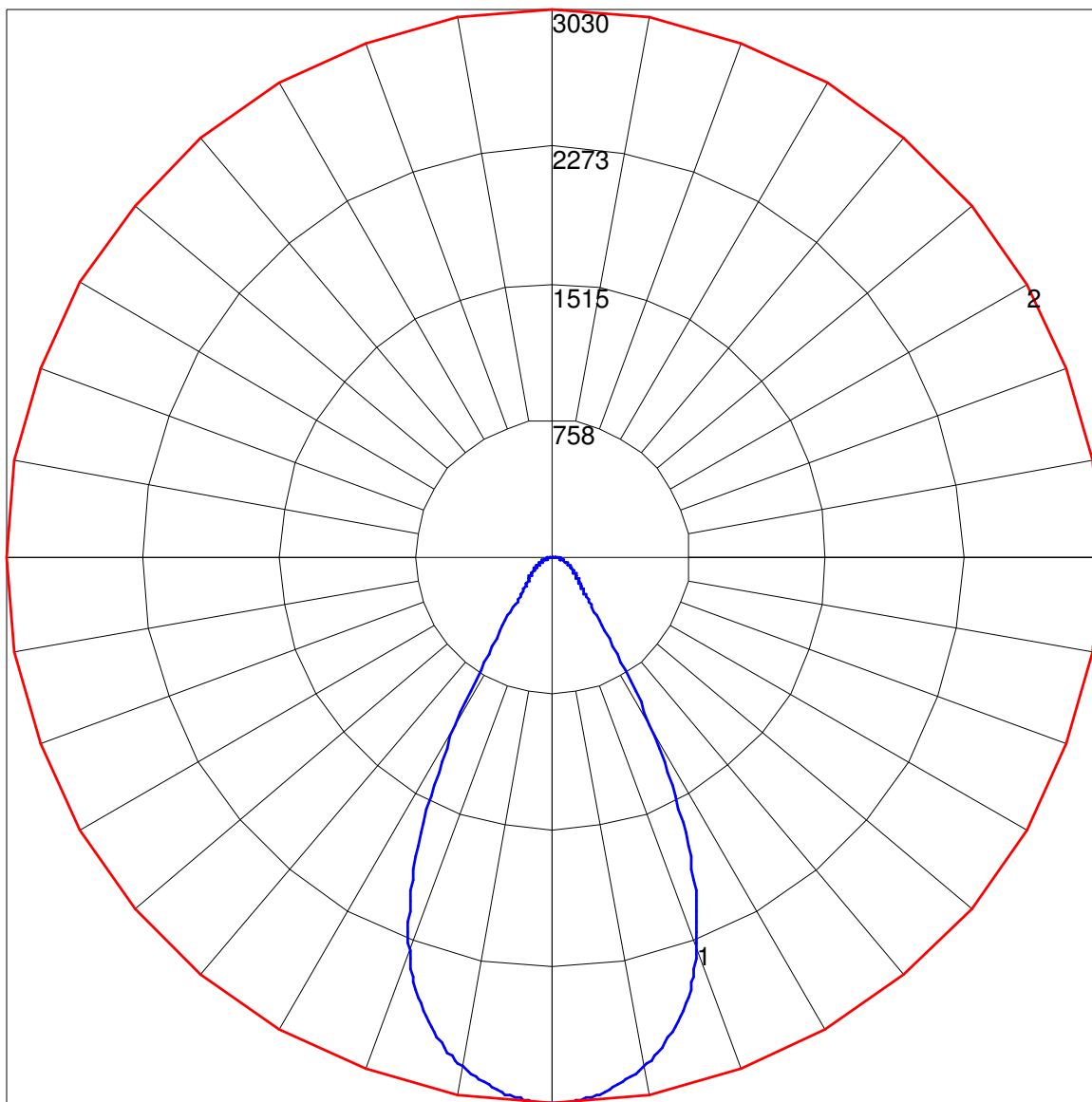
4H	2H	22.5	23.4	22.9	23.8	24.2	22.5	23.4	22.9	23.8	24.2
	3H	23.7	24.4	24.1	24.9	25.3	23.7	24.4	24.1	24.9	25.3
	4H	23.9	24.6	24.4	25.0	25.5	23.9	24.6	24.4	25.0	25.5
	6H	24.0	24.6	24.5	25.0	25.5	24.0	24.6	24.5	25.0	25.5
	8H	24.0	24.5	24.5	25.0	25.5	24.0	24.5	24.5	25.0	25.5
	12H	24.0	24.5	24.5	25.0	25.4	24.0	24.5	24.5	25.0	25.4

8H	4H	23.9	24.5	24.4	24.9	25.4	23.9	24.5	24.4	24.9	25.4
	6H	24.1	24.5	24.6	25.0	25.5	24.1	24.5	24.6	25.0	25.5
	8H	24.1	24.5	24.6	25.0	25.5	24.1	24.5	24.6	25.0	25.5
	12H	24.1	24.4	24.6	24.9	25.5	24.1	24.4	24.6	24.9	25.5

12H	4H	23.9	24.3	24.4	24.8	25.3	23.9	24.3	24.4	24.8	25.3
	6H	24.0	24.4	24.6	24.9	25.4	24.0	24.4	24.6	24.9	25.4
	8H	24.1	24.4	24.6	24.9	25.5	24.1	24.4	24.6	24.9	25.5

Maximum UGR = 25.5

POLAR GRAPH



Maximum Candela = 3030.356 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.)