



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-L25-835-XXX-DIM-UNV-OM-OF-CS-AD-XX\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] 13131414.07  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 01/25/2021  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836  
 [LUMCAT] 4CR-L25-835-xxx-DIM-UNV-OM-OF-CS-AD-xx  
 [LUMINAIRE] Aluminum housing and reflector, frosted lens 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	1610
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	54
Total Luminaire Watts	30.0326
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.54
Spacing Criterion (90-270)	0.54
Spacing Criterion (Diagonal)	0.60
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	76490	76490	76490
55	6566	6566	6566
65	1573	1573	1573
75	611	611	611
85	363	363	363

CANDELA TABULATION

	<u>0</u>
0.0	3512.0
0.5	3509.0
1.0	3500.0
1.5	3485.0
2.0	3463.0
2.5	3436.0
3.0	3403.0
3.5	3365.0
4.0	3322.0
4.5	3275.0
5.0	3224.0
5.5	3169.0
6.0	3111.0
6.5	3050.0
7.0	2987.0
7.5	2921.0
8.0	2853.0
8.5	2784.0
9.0	2713.0
9.5	2642.0
10.0	2571.0
10.5	2500.0
11.0	2430.0
11.5	2361.0
12.0	2293.0
12.5	2228.0
13.0	2164.0
13.5	2102.0
14.0	2041.0
14.5	1982.0
15.0	1924.0
15.5	1867.0
16.0	1811.0
16.5	1755.0
17.0	1701.0
17.5	1647.0
18.0	1594.0
18.5	1541.0
19.0	1490.0
19.5	1437.0
20.0	1385.0
20.5	1333.0
21.0	1281.0
21.5	1231.0
22.0	1181.0
22.5	1132.0
23.0	1084.0
23.5	1036.0
24.0	990.2
24.5	945.4
25.0	902.0
25.5	859.8
26.0	819.2
26.5	780.2

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 4CR-L25-835-XXX-DIM-UNV-OM-OF-CS-AD-XX\_.IES****CANDELA TABULATION - (Cont.)**

27.0	742.9
27.5	706.9
28.0	672.6
28.5	639.9
29.0	608.6
29.5	578.9
30.0	550.7
30.5	524.3
31.0	499.3
31.5	475.8
32.0	453.8
32.5	433.1
33.0	413.7
33.5	395.5
34.0	378.7
34.5	363.1
35.0	348.6
35.5	335.1
36.0	322.6
36.5	311.1
37.0	300.4
37.5	290.4
38.0	280.9
38.5	271.9
39.0	263.2
39.5	255.0
40.0	247.0
40.5	239.2
41.0	231.6
41.5	224.1
42.0	216.7
42.5	209.3
43.0	201.9
43.5	194.4
44.0	186.7
44.5	178.9
45.0	170.9
45.5	162.5
46.0	153.6
46.5	144.2
47.0	134.4
47.5	124.3
48.0	113.8
48.5	103.4
49.0	93.3
49.5	83.6
50.0	74.3
50.5	65.4
51.0	57.0
51.5	48.9
52.0	41.3
52.5	34.1
53.0	27.7
53.5	22.1
54.0	17.6
54.5	14.3

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55.0	11.9
55.5	10.3
56.0	9.0
56.5	8.0
57.0	7.2
57.5	6.5
58.0	5.9
58.5	5.4
59.0	5.0
59.5	4.6
60.0	4.2
60.5	3.9
61.0	3.7
61.5	3.4
62.0	3.2
62.5	2.9
63.0	2.8
63.5	2.6
64.0	2.4
64.5	2.2
65.0	2.1
65.5	2.0
66.0	1.8
66.5	1.7
67.0	1.6
67.5	1.5
68.0	1.4
68.5	1.3
69.0	1.2
69.5	1.2
70.0	1.1
70.5	1.0
71.0	0.9
71.5	0.9
72.0	0.8
72.5	0.8
73.0	0.7
73.5	0.7
74.0	0.6
74.5	0.6
75.0	0.5
75.5	0.5
76.0	0.5
76.5	0.4
77.0	0.4
77.5	0.4
78.0	0.3
78.5	0.3
79.0	0.3
79.5	0.3
80.0	0.2
80.5	0.2
81.0	0.2
81.5	0.2
82.0	0.2
82.5	0.2

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CANDELA TABULATION - (Cont.)

83.0	0.1
83.5	0.1
84.0	0.1
84.5	0.1
85.0	0.1
85.5	0.1
86.0	0.1
86.5	0.1
87.0	0.1
87.5	0.0
88.0	0.0
88.5	0.0
89.0	0.0
89.5	0.0
90.0	0.0
90.5	0.0
91.0	0.0
91.5	0.0
92.0	0.0
92.5	0.0
93.0	0.0
93.5	0.0
94.0	0.0
94.5	0.0
95.0	0.0
95.5	0.0
96.0	0.0
96.5	0.0
97.0	0.0
97.5	0.0
98.0	0.0
98.5	0.0
99.0	0.0
99.5	0.0
100.0	0.0
100.5	0.0
101.0	0.0
101.5	0.0
102.0	0.0
102.5	0.0
103.0	0.0
103.5	0.0
104.0	0.0
104.5	0.0
105.0	0.0
105.5	0.0
106.0	0.0
106.5	0.0
107.0	0.0
107.5	0.0
108.0	0.0
108.5	0.0
109.0	0.0
109.5	0.0
110.0	0.0
110.5	0.0

CANDELA TABULATION - (Cont.)

111.0	0.0
111.5	0.0
112.0	0.0
112.5	0.0
113.0	0.0
113.5	0.0
114.0	0.0
114.5	0.0
115.0	0.0
115.5	0.0
116.0	0.0
116.5	0.0
117.0	0.0
117.5	0.0
118.0	0.0
118.5	0.0
119.0	0.0
119.5	0.0
120.0	0.0
120.5	0.0
121.0	0.0
121.5	0.0
122.0	0.0
122.5	0.0
123.0	0.0
123.5	0.0
124.0	0.0
124.5	0.0
125.0	0.0
125.5	0.0
126.0	0.0
126.5	0.0
127.0	0.0
127.5	0.0
128.0	0.0
128.5	0.0
129.0	0.0
129.5	0.0
130.0	0.0
130.5	0.0
131.0	0.0
131.5	0.0
132.0	0.0
132.5	0.0
133.0	0.0
133.5	0.0
134.0	0.0
134.5	0.0
135.0	0.0
135.5	0.0
136.0	0.0
136.5	0.0
137.0	0.0
137.5	0.0
138.0	0.0
138.5	0.0

CANDELA TABULATION - (Cont.)

139.0	0.0
139.5	0.0
140.0	0.0
140.5	0.0
141.0	0.0
141.5	0.0
142.0	0.0
142.5	0.0
143.0	0.0
143.5	0.0
144.0	0.0
144.5	0.0
145.0	0.0
145.5	0.0
146.0	0.0
146.5	0.0
147.0	0.0
147.5	0.0
148.0	0.0
148.5	0.0
149.0	0.0
149.5	0.0
150.0	0.0
150.5	0.0
151.0	0.0
151.5	0.0
152.0	0.0
152.5	0.0
153.0	0.0
153.5	0.0
154.0	0.0
154.5	0.0
155.0	0.0
155.5	0.0
156.0	0.0
156.5	0.0
157.0	0.0
157.5	0.0
158.0	0.0
158.5	0.0
159.0	0.0
159.5	0.0
160.0	0.0
160.5	0.0
161.0	0.0
161.5	0.0
162.0	0.0
162.5	0.0
163.0	0.0
163.5	0.0
164.0	0.0
164.5	0.0
165.0	0.0
165.5	0.0
166.0	0.0
166.5	0.0

CANDELA TABULATION - (Cont.)

167.0	0.0
167.5	0.0
168.0	0.0
168.5	0.0
169.0	0.0
169.5	0.0
170.0	0.0
170.5	0.0
171.0	0.0
171.5	0.0
172.0	0.0
172.5	0.0
173.0	0.0
173.5	0.0
174.0	0.0
174.5	0.0
175.0	0.0
175.5	0.0
176.0	0.0
176.5	0.0
177.0	0.0
177.5	0.0
178.0	0.0
178.5	0.0
179.0	0.0
179.5	0.0
180.0	0.0

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 4CR-L25-835-XXX-DIM-UNV-OM-OF-CS-AD-XX\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	818.80	N.A.	50.90
0-30	1234.63	N.A.	76.70
0-40	1460.57	N.A.	90.70
0-60	1606.7	N.A.	99.80
0-80	1609.55	N.A.	100.00
0-90	1609.66	N.A.	100.00
10-90	1323.4	N.A.	82.20
20-40	641.76	N.A.	39.90
20-50	768.68	N.A.	47.80
40-70	148.38	N.A.	9.20
60-80	2.85	N.A.	0.20
70-80	0.61	N.A.	0.00
80-90	0.11	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	1609.66	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	286.26
10-20	532.55
20-30	415.83
30-40	225.93
40-50	126.92
50-60	19.22
60-70	2.24
70-80	0.61
80-90	0.11
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	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	109	104	100	97	107	102	99	96	99	96	94	96	94	92	94	92	90	89
3	104	98	93	90	102	96	92	89	94	90	87	91	89	86	89	87	85	83
4	99	92	87	83	97	91	86	83	89	85	82	87	83	81	85	82	80	78
5	95	87	81	78	93	86	81	77	84	80	76	83	79	76	81	78	75	74
6	90	82	77	73	89	81	76	72	80	75	72	79	75	72	77	74	71	70
7	86	78	72	69	85	77	72	68	76	71	68	75	71	68	74	70	67	66
8	83	74	69	65	82	74	68	65	73	68	64	72	67	64	71	67	64	63
9	79	71	65	62	78	70	65	61	69	65	61	68	64	61	68	64	61	60
10	76	67	62	59	75	67	62	58	66	62	58	65	61	58	65	61	58	57

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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

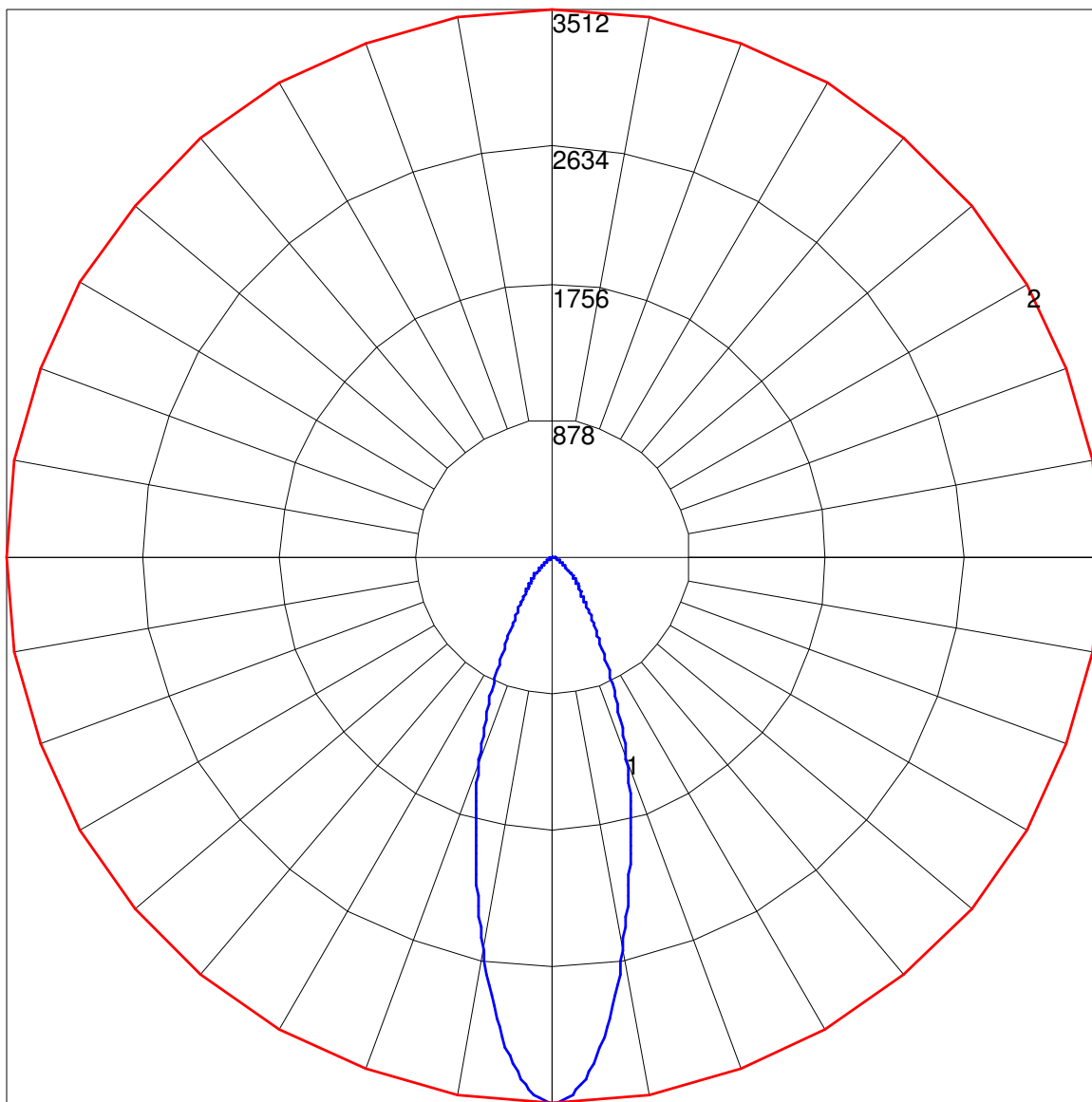
X=2H	Y=2H	3.7	4.7	4.1	5.0	5.3	3.7	4.7	4.1	5.0	5.3
	3H	3.8	4.7	4.2	5.0	5.4	3.8	4.7	4.2	5.0	5.4
	4H	3.8	4.6	4.2	4.9	5.3	3.8	4.6	4.2	4.9	5.3
	6H	3.7	4.4	4.1	4.8	5.2	3.7	4.4	4.1	4.8	5.2
	8H	3.6	4.3	4.1	4.7	5.1	3.6	4.3	4.1	4.7	5.1
	12H	3.6	4.3	4.0	4.6	5.1	3.6	4.3	4.0	4.6	5.1

### UGR Viewed Endwise

4H	2H	3.6	4.4	4.0	4.8	5.2	3.6	4.4	4.0	4.8	5.2
	3H	3.7	4.4	4.2	4.8	5.2	3.7	4.4	4.2	4.8	5.2
	4H	3.7	4.3	4.2	4.7	5.2	3.7	4.3	4.2	4.7	5.2
	6H	3.7	4.1	4.1	4.6	5.1	3.7	4.1	4.1	4.6	5.1
	8H	3.6	4.1	4.1	4.5	5.0	3.6	4.1	4.1	4.5	5.0
	12H	3.6	3.9	4.0	4.4	4.9	3.6	3.9	4.0	4.4	4.9
8H	4H	3.6	4.0	4.1	4.5	5.0	3.6	4.0	4.1	4.5	5.0
	6H	3.5	3.9	4.0	4.4	4.9	3.5	3.9	4.0	4.4	4.9
	8H	3.5	3.8	4.0	4.3	4.8	3.5	3.8	4.0	4.3	4.8
	12H	3.4	3.7	4.0	4.2	4.8	3.4	3.7	4.0	4.2	4.8
12H	4H	3.5	3.9	4.0	4.4	4.9	3.5	3.9	4.0	4.4	4.9
	6H	3.5	3.8	4.0	4.3	4.8	3.5	3.8	4.0	4.3	4.8
	8H	3.4	3.7	4.0	4.2	4.8	3.4	3.7	4.0	4.2	4.8

Maximum UGR = 5.4

POLAR GRAPH



Maximum Candela = 3512 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.)