



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-L15-835-XXX-DIM-UNV-LN-OF-WH-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 13257153.08
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 01/25/2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4CR-L15-835-xxx-DIM-UNV-LN-OF-WH-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	1607
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	93
Total Luminaire Watts	17.2882
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.38
Spacing Criterion (90-270)	0.38
Spacing Criterion (Diagonal)	0.40
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	76266	76266	76266
55	58818	58818	58818
65	46130	46130	46130
75	34605	34605	34605
85	18882	18882	18882

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CANDELA TABULATION

	<u>0</u>
0.0	5574.0
0.5	5564.0
1.0	5538.0
1.5	5497.0
2.0	5441.0
2.5	5369.0
3.0	5284.0
3.5	5186.0
4.0	5074.0
4.5	4951.0
5.0	4815.0
5.5	4668.0
6.0	4512.0
6.5	4347.0
7.0	4176.0
7.5	4000.0
8.0	3820.0
8.5	3636.0
9.0	3451.0
9.5	3266.0
10.0	3084.0
10.5	2904.0
11.0	2728.0
11.5	2558.0
12.0	2393.0
12.5	2235.0
13.0	2085.0
13.5	1943.0
14.0	1809.0
14.5	1685.0
15.0	1568.0
15.5	1461.0
16.0	1362.0
16.5	1272.0
17.0	1191.0
17.5	1117.0
18.0	1051.0
18.5	990.6
19.0	936.2
19.5	887.1
20.0	842.2
20.5	802.5
21.0	766.2
21.5	732.6
22.0	701.7
22.5	672.2
23.0	644.4
23.5	618.2
24.0	593.5
24.5	569.8
25.0	547.0
25.5	524.8
26.0	503.4
26.5	482.8

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CANDELA TABULATION - (Cont.)

27.0	463.1
27.5	444.4
28.0	426.7
28.5	410.1
29.0	394.6
29.5	380.2
30.0	366.9
30.5	354.6
31.0	343.2
31.5	332.5
32.0	322.6
32.5	313.3
33.0	304.7
33.5	296.6
34.0	289.1
34.5	281.9
35.0	275.1
35.5	268.6
36.0	262.5
36.5	256.5
37.0	250.8
37.5	245.2
38.0	239.7
38.5	234.3
39.0	228.9
39.5	223.6
40.0	218.3
40.5	213.1
41.0	208.0
41.5	202.9
42.0	197.9
42.5	193.0
43.0	188.2
43.5	183.6
44.0	179.0
44.5	174.6
45.0	170.4
45.5	166.2
46.0	162.2
46.5	158.3
47.0	154.5
47.5	150.8
48.0	147.2
48.5	143.6
49.0	140.3
49.5	137.0
50.0	133.8
50.5	130.8
51.0	127.8
51.5	124.9
52.0	122.1
52.5	119.4
53.0	116.8
53.5	114.2
54.0	111.6
54.5	109.1

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CANDELA TABULATION - (Cont.)

55.0	106.6
55.5	104.2
56.0	101.7
56.5	99.3
57.0	96.9
57.5	94.5
58.0	92.2
58.5	89.9
59.0	87.5
59.5	85.2
60.0	83.0
60.5	80.7
61.0	78.5
61.5	76.2
62.0	74.1
62.5	72.0
63.0	69.8
63.5	67.7
64.0	65.6
64.5	63.6
65.0	61.6
65.5	59.6
66.0	57.7
66.5	55.8
67.0	53.9
67.5	52.1
68.0	50.3
68.5	48.6
69.0	46.9
69.5	45.1
70.0	43.4
70.5	41.8
71.0	40.2
71.5	38.6
72.0	37.1
72.5	35.5
73.0	34.0
73.5	32.5
74.0	31.1
74.5	29.7
75.0	28.3
75.5	26.9
76.0	25.6
76.5	24.2
77.0	23.0
77.5	21.7
78.0	20.4
78.5	19.2
79.0	18.0
79.5	16.8
80.0	15.7
80.5	14.6
81.0	13.5
81.5	12.4
82.0	11.3
82.5	10.2

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CANDELA TABULATION - (Cont.)

83.0	9.2
83.5	8.2
84.0	7.2
84.5	6.2
85.0	5.2
85.5	4.1
86.0	3.1
86.5	2.3
87.0	1.6
87.5	1.0
88.0	0.7
88.5	0.5
89.0	0.4
89.5	0.2
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

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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

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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-L15-835-XXX-DIM-UNV-LN-OF-WH-XX_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	851.45	N.A.	53.00
0-30	1105.87	N.A.	68.80
0-40	1280.42	N.A.	79.70
0-60	1508.62	N.A.	93.90
0-80	1600.3	N.A.	99.60
0-90	1606.8	N.A.	100.00
10-90	1204.8	N.A.	75.00
20-40	428.98	N.A.	26.70
20-50	561.49	N.A.	34.90
40-70	289.62	N.A.	18.00
60-80	91.68	N.A.	5.70
70-80	30.26	N.A.	1.90
80-90	6.51	N.A.	0.40
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	1606.8	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	402.01
10-20	449.44
20-30	254.42
30-40	174.55
40-50	132.52
50-60	95.68
60-70	61.42
70-80	30.26
80-90	6.51
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	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85
3	102	95	90	86	100	94	89	85	91	87	84	88	85	82	86	83	81	79
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74
5	92	84	78	74	91	83	77	73	81	76	73	79	75	72	78	74	71	70
6	88	79	74	69	87	79	73	69	77	72	69	76	71	68	74	71	68	66
7	84	75	70	66	83	75	69	65	74	69	65	72	68	65	71	67	64	63
8	81	72	66	62	80	71	66	62	70	65	62	69	65	62	68	64	61	60
9	78	69	63	60	77	68	63	60	68	63	59	67	62	59	66	62	59	58
10	75	66	61	57	74	66	61	57	65	60	57	64	60	57	64	60	57	55

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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

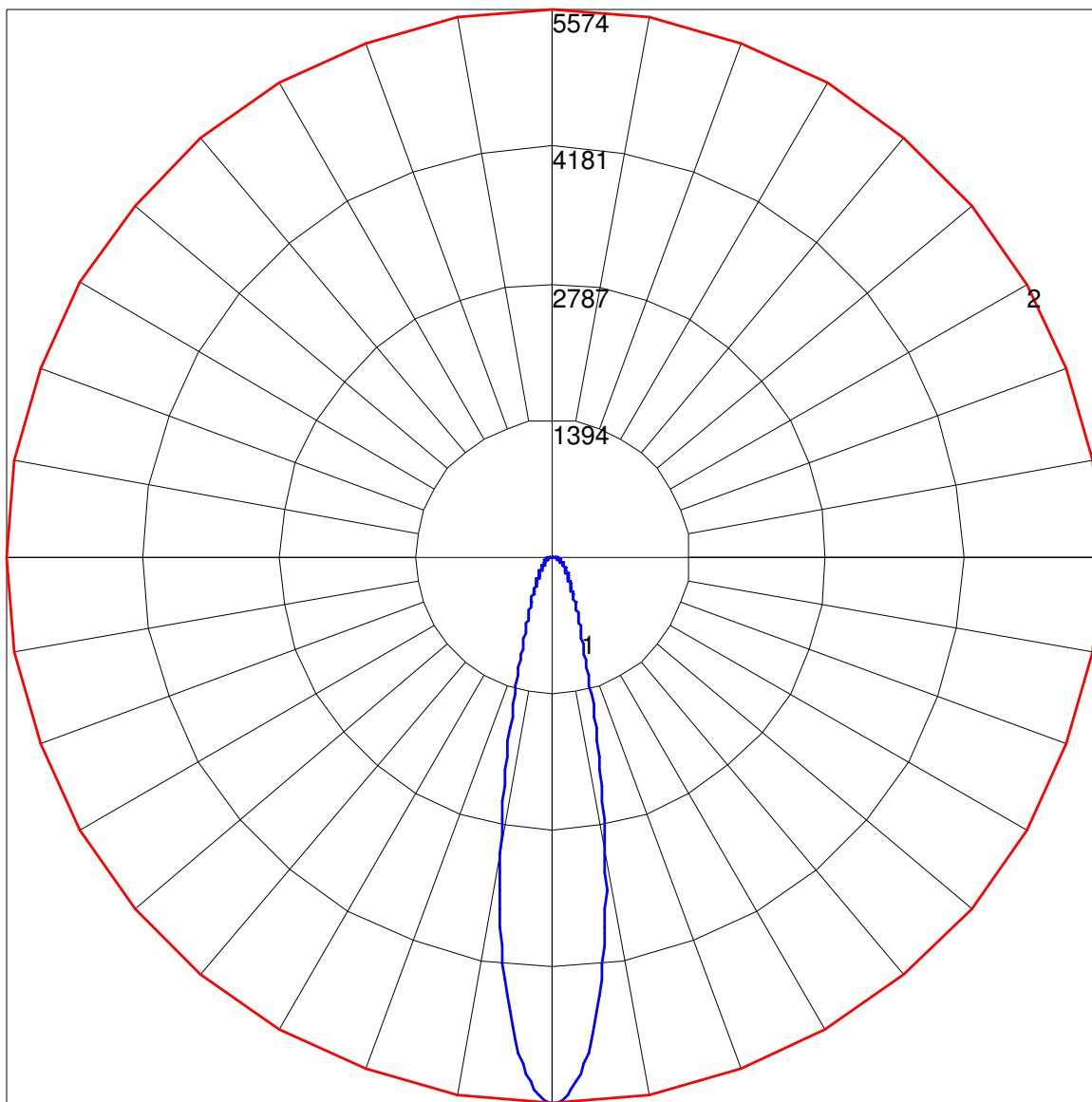
X=2H	Y=2H	22.2	23.4	22.6	23.7	24.0	22.2	23.4	22.6	23.7	24.0
	3H	23.5	24.5	23.9	24.9	25.2	23.5	24.5	23.9	24.9	25.2
	4H	23.9	24.9	24.3	25.2	25.6	23.9	24.9	24.3	25.2	25.6
	6H	24.2	25.1	24.6	25.4	25.8	24.2	25.1	24.6	25.4	25.8
	8H	24.2	25.1	24.7	25.5	25.9	24.2	25.1	24.7	25.5	25.9
	12H	24.2	25.1	24.7	25.4	25.9	24.2	25.1	24.7	25.4	25.9

UGR Viewed Endwise

4H	2H	22.6	23.6	23.0	23.9	24.3	22.6	23.6	23.0	23.9	24.3
	3H	24.1	24.9	24.5	25.3	25.7	24.1	24.9	24.5	25.3	25.7
	4H	24.6	25.3	25.0	25.7	26.2	24.6	25.3	25.0	25.7	26.2
	6H	25.0	25.6	25.4	26.0	26.5	25.0	25.6	25.4	26.0	26.5
	8H	25.1	25.6	25.5	26.1	26.6	25.1	25.6	25.5	26.1	26.6
	12H	25.1	25.6	25.6	26.1	26.6	25.1	25.6	25.6	26.1	26.6
8H	4H	24.7	25.3	25.2	25.8	26.2	24.7	25.3	25.2	25.8	26.2
	6H	25.2	25.7	25.7	26.2	26.6	25.2	25.7	25.7	26.2	26.6
	8H	25.3	25.8	25.9	26.3	26.8	25.3	25.8	25.9	26.3	26.8
	12H	25.4	25.8	25.9	26.3	26.9	25.4	25.8	25.9	26.3	26.9
12H	4H	24.7	25.2	25.2	25.7	26.2	24.7	25.2	25.2	25.7	26.2
	6H	25.2	25.6	25.7	26.1	26.6	25.2	25.6	25.7	26.1	26.6
	8H	25.4	25.7	25.9	26.2	26.8	25.4	25.7	25.9	26.2	26.8

Maximum UGR = 26.9

POLAR GRAPH



Maximum Candela = 5574 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.)