



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 13257153.04
 [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-RW-OF-WH-AD-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	1387
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	80
Total Luminaire Watts	17.2896
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.82
Spacing Criterion (90-270)	0.82
Spacing Criterion (Diagonal)	0.90
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	110908	110908	110908
55	96504	96504	96504
65	79379	79379	79379
75	36928	36928	36928
85	22150	22150	22150

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CANDELA TABULATION

	<u>0</u>
0.0	1123.0
0.5	1123.0
1.0	1122.0
1.5	1121.0
2.0	1119.0
2.5	1116.0
3.0	1113.0
3.5	1109.0
4.0	1105.0
4.5	1100.0
5.0	1094.0
5.5	1089.0
6.0	1082.0
6.5	1076.0
7.0	1069.0
7.5	1061.0
8.0	1054.0
8.5	1045.0
9.0	1037.0
9.5	1028.0
10.0	1019.0
10.5	1009.0
11.0	998.9
11.5	988.7
12.0	977.9
12.5	966.7
13.0	955.3
13.5	943.8
14.0	931.6
14.5	919.2
15.0	906.5
15.5	893.5
16.0	880.3
16.5	866.9
17.0	853.4
17.5	839.8
18.0	826.1
18.5	812.1
19.0	797.9
19.5	783.8
20.0	771.5
20.5	757.6
21.0	744.0
21.5	730.7
22.0	717.0
22.5	702.9
23.0	688.9
23.5	675.1
24.0	661.5
24.5	648.0
25.0	634.7
25.5	621.4
26.0	608.2
26.5	595.1

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-L15-835-XXX-DIM-UNV-RW-OF-WH-AD-XX_.IES****CANDELA TABULATION - (Cont.)**

27.0	582.3
27.5	569.6
28.0	556.9
28.5	544.3
29.0	531.6
29.5	519.0
30.0	506.4
30.5	493.9
31.0	481.4
31.5	469.0
32.0	456.7
32.5	444.7
33.0	433.0
33.5	421.7
34.0	410.8
34.5	400.1
35.0	389.7
35.5	379.7
36.0	370.0
36.5	360.6
37.0	351.6
37.5	343.0
38.0	334.6
38.5	326.5
39.0	318.7
39.5	311.2
40.0	304.0
40.5	297.2
41.0	290.6
41.5	284.3
42.0	278.4
42.5	272.7
43.0	267.2
43.5	262.1
44.0	257.1
44.5	252.4
45.0	247.8
45.5	243.4
46.0	239.1
46.5	235.0
47.0	230.9
47.5	227.0
48.0	223.1
48.5	219.2
49.0	215.5
49.5	211.9
50.0	208.4
50.5	204.9
51.0	201.4
51.5	198.1
52.0	194.7
52.5	191.4
53.0	188.1
53.5	184.8
54.0	181.5
54.5	178.2

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55.0	174.9
55.5	171.6
56.0	168.3
56.5	165.0
57.0	161.6
57.5	158.2
58.0	154.8
58.5	151.5
59.0	148.1
59.5	144.7
60.0	141.2
60.5	137.8
61.0	134.4
61.5	130.9
62.0	127.5
62.5	124.0
63.0	120.5
63.5	116.9
64.0	113.3
64.5	109.7
65.0	106.0
65.5	102.2
66.0	98.5
66.5	94.7
67.0	90.9
67.5	87.0
68.0	83.1
68.5	79.2
69.0	75.3
69.5	71.3
70.0	67.3
70.5	63.3
71.0	59.3
71.5	55.3
72.0	51.4
72.5	47.5
73.0	43.7
73.5	40.1
74.0	36.6
74.5	33.3
75.0	30.2
75.5	27.4
76.0	25.0
76.5	23.0
77.0	21.2
77.5	19.7
78.0	18.5
78.5	17.5
79.0	16.5
79.5	15.5
80.0	14.6
80.5	13.6
81.0	12.7
81.5	11.8
82.0	10.9
82.5	10.1

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83.0	9.3
83.5	8.4
84.0	7.6
84.5	6.9
85.0	6.1
85.5	5.4
86.0	4.7
86.5	4.0
87.0	3.3
87.5	2.6
88.0	2.0
88.5	1.4
89.0	1.0
89.5	0.7
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-L15-835-XXX-DIM-UNV-RW-OF-WH-AD-XX_.IES****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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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

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Zone	Lumens	%Lamp	%Fixt
0-20	353.96	N.A.	25.50
0-30	644.69	N.A.	46.50
0-40	890.25	N.A.	64.20
0-60	1239.48	N.A.	89.40
0-80	1379.63	N.A.	99.50
0-90	1386.69	N.A.	100.00
10-90	1284.65	N.A.	92.60
20-40	536.29	N.A.	38.70
20-50	729.27	N.A.	52.60
40-70	453.33	N.A.	32.70
60-80	140.16	N.A.	10.10
70-80	36.06	N.A.	2.60
80-90	7.06	N.A.	0.50
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	1386.69	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	102.04
10-20	251.92
20-30	290.73
30-40	245.55
40-50	192.99
50-60	156.24
60-70	104.10
70-80	36.06
80-90	7.06
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	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78
3	96	87	81	75	94	86	80	75	83	78	73	80	76	72	78	74	71	69
4	89	79	72	66	87	78	71	66	76	70	65	74	68	64	71	67	64	62
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55
6	78	67	59	54	76	66	59	53	64	58	53	63	57	53	61	56	52	50
7	73	62	54	49	72	61	54	49	59	53	48	58	52	48	57	52	48	46
8	69	57	50	45	67	57	49	45	55	49	44	54	48	44	53	48	44	42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	49	42	38	48	42	38	47	42	38	36

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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

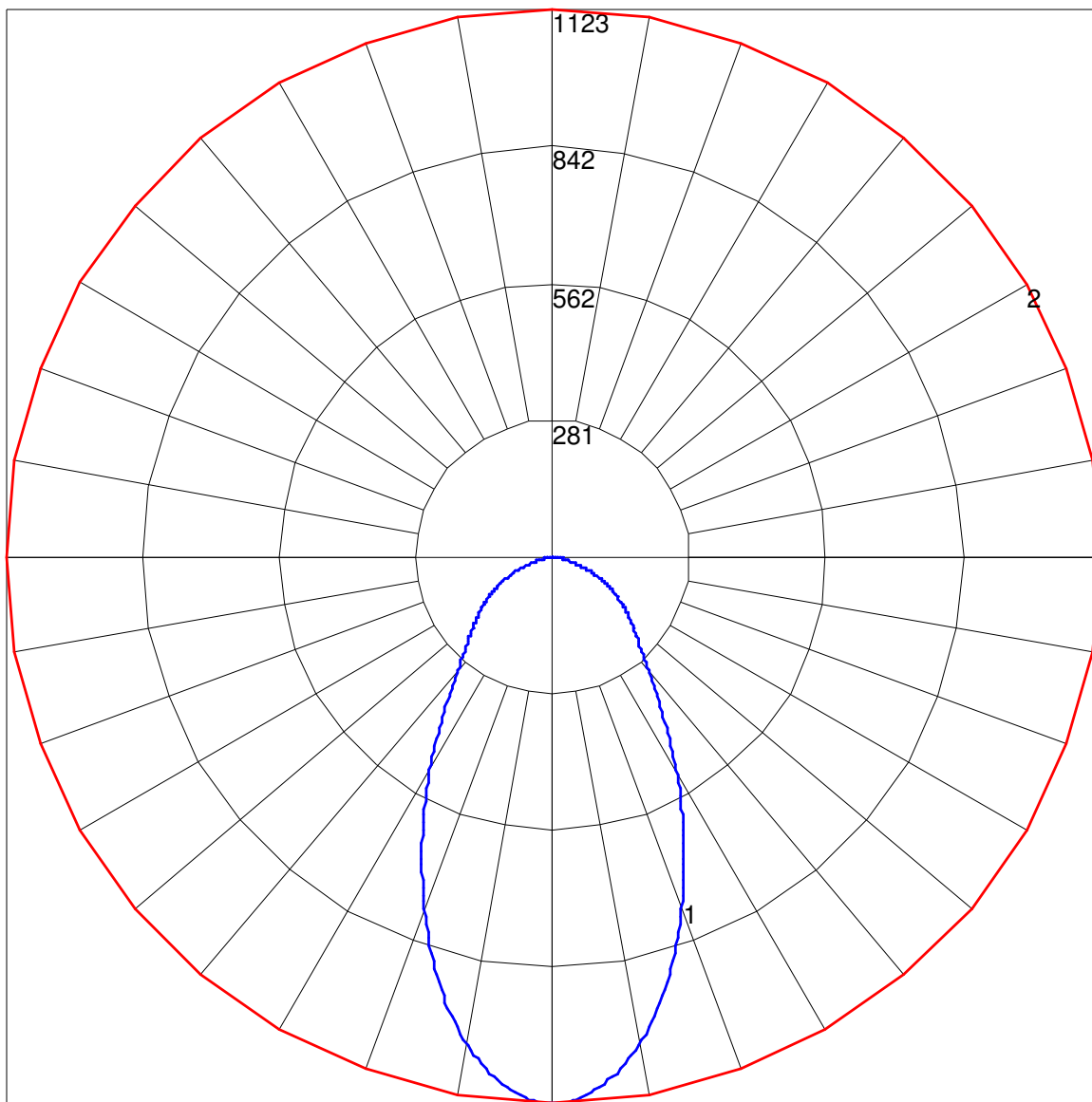
X=2H	Y=2H	26.2	27.6	26.6	27.9	28.2	26.2	27.6	26.6	27.9	28.2
	3H	27.4	28.6	27.8	29.0	29.3	27.4	28.6	27.8	29.0	29.3
	4H	27.6	28.7	28.0	29.1	29.5	27.6	28.7	28.0	29.1	29.5
	6H	27.6	28.7	28.0	29.1	29.5	27.6	28.7	28.0	29.1	29.5
	8H	27.7	28.6	28.1	29.0	29.4	27.7	28.6	28.1	29.0	29.4
	12H	27.6	28.6	28.1	29.0	29.4	27.6	28.6	28.1	29.0	29.4

UGR Viewed Endwise

4H	2H	26.7	27.8	27.1	28.2	28.5	26.7	27.8	27.1	28.2	28.5
	3H	28.0	29.0	28.4	29.4	29.8	28.0	29.0	28.4	29.4	29.8
	4H	28.2	29.1	28.7	29.5	29.9	28.2	29.1	28.7	29.5	29.9
	6H	28.3	29.0	28.8	29.5	30.0	28.3	29.0	28.8	29.5	30.0
	8H	28.3	29.0	28.8	29.4	29.9	28.3	29.0	28.8	29.4	29.9
	12H	28.3	28.9	28.8	29.4	29.9	28.3	28.9	28.8	29.4	29.9
8H	4H	28.2	28.9	28.7	29.4	29.8	28.2	28.9	28.7	29.4	29.8
	6H	28.4	28.9	28.9	29.4	29.9	28.4	28.9	28.9	29.4	29.9
	8H	28.4	28.9	28.9	29.4	29.9	28.4	28.9	28.9	29.4	29.9
	12H	28.5	28.9	29.0	29.4	29.9	28.5	28.9	29.0	29.4	29.9
12H	4H	28.2	28.8	28.7	29.3	29.8	28.2	28.8	28.7	29.3	29.8
	6H	28.4	28.8	28.9	29.3	29.9	28.4	28.8	28.9	29.3	29.9
	8H	28.4	28.8	28.9	29.3	29.9	28.4	28.8	28.9	29.3	29.9

Maximum UGR = 30.0

POLAR GRAPH



Maximum Candela = 1123 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.)