



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 13257153.09
 [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-RN-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	1567
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	91
Total Luminaire Watts	17.2871
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.38
Spacing Criterion (90-270)	0.38
Spacing Criterion (Diagonal)	0.38
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	72909	72909	72909
55	50100	50100	50100
65	35271	35271	35271
75	17608	17608	17608
85	10894	10894	10894

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CANDELA TABULATION

	<u>0</u>
0.0	5673.0
0.5	5664.0
1.0	5638.0
1.5	5596.0
2.0	5537.0
2.5	5462.0
3.0	5373.0
3.5	5270.0
4.0	5152.0
4.5	5021.0
5.0	4877.0
5.5	4722.0
6.0	4557.0
6.5	4384.0
7.0	4204.0
7.5	4020.0
8.0	3831.0
8.5	3641.0
9.0	3449.0
9.5	3258.0
10.0	3069.0
10.5	2884.0
11.0	2704.0
11.5	2529.0
12.0	2360.0
12.5	2199.0
13.0	2047.0
13.5	1905.0
14.0	1772.0
14.5	1647.0
15.0	1532.0
15.5	1426.0
16.0	1330.0
16.5	1242.0
17.0	1163.0
17.5	1093.0
18.0	1029.0
18.5	971.8
19.0	920.3
19.5	874.3
20.0	833.2
20.5	797.0
21.0	764.2
21.5	734.2
22.0	707.0
22.5	681.6
23.0	658.2
23.5	636.1
24.0	615.4
24.5	595.4
25.0	576.0
25.5	557.1
26.0	538.5
26.5	520.2

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CANDELA TABULATION - (Cont.)

27.0	502.3
27.5	484.5
28.0	467.2
28.5	450.0
29.0	432.9
29.5	415.6
30.0	398.4
30.5	381.6
31.0	365.7
31.5	351.0
32.0	337.5
32.5	325.0
33.0	313.7
33.5	303.4
34.0	294.2
34.5	285.6
35.0	277.7
35.5	270.4
36.0	263.6
36.5	257.2
37.0	251.1
37.5	245.2
38.0	239.5
38.5	233.7
39.0	228.0
39.5	222.3
40.0	216.7
40.5	211.0
41.0	205.4
41.5	199.7
42.0	194.2
42.5	188.8
43.0	183.4
43.5	178.1
44.0	172.9
44.5	167.8
45.0	162.9
45.5	158.1
46.0	153.4
46.5	148.8
47.0	144.3
47.5	139.9
48.0	135.7
48.5	131.6
49.0	127.7
49.5	123.9
50.0	120.3
50.5	116.8
51.0	113.5
51.5	110.2
52.0	107.2
52.5	104.2
53.0	101.4
53.5	98.6
54.0	95.9
54.5	93.3

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CANDELA TABULATION - (Cont.)

55.0	90.8
55.5	88.3
56.0	85.8
56.5	83.4
57.0	81.0
57.5	78.7
58.0	76.4
58.5	74.2
59.0	72.0
59.5	69.8
60.0	67.6
60.5	65.4
61.0	63.3
61.5	61.2
62.0	59.1
62.5	57.1
63.0	55.0
63.5	53.0
64.0	51.0
64.5	49.0
65.0	47.1
65.5	45.2
66.0	43.3
66.5	41.4
67.0	39.7
67.5	37.9
68.0	36.1
68.5	34.4
69.0	32.7
69.5	31.0
70.0	29.4
70.5	27.8
71.0	26.2
71.5	24.6
72.0	23.1
72.5	21.6
73.0	20.1
73.5	18.6
74.0	17.2
74.5	15.8
75.0	14.4
75.5	13.1
76.0	11.8
76.5	10.7
77.0	9.8
77.5	9.2
78.0	8.8
78.5	8.3
79.0	7.9
79.5	7.4
80.0	7.0
80.5	6.6
81.0	6.1
81.5	5.7
82.0	5.3
82.5	4.9

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CANDELA TABULATION - (Cont.)

83.0	4.5
83.5	4.2
84.0	3.8
84.5	3.4
85.0	3.0
85.5	2.7
86.0	2.3
86.5	2.0
87.0	1.6
87.5	1.3
88.0	1.0
88.5	0.7
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

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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	846.92	N.A.	54.10
0-30	1112.88	N.A.	71.00
0-40	1291.38	N.A.	82.40
0-60	1499.78	N.A.	95.70
0-80	1563.29	N.A.	99.80
0-90	1566.72	N.A.	100.00
10-90	1161.51	N.A.	74.10
20-40	444.46	N.A.	28.40
20-50	571.00	N.A.	36.40
40-70	255.36	N.A.	16.30
60-80	63.50	N.A.	4.10
70-80	16.54	N.A.	1.10
80-90	3.44	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	1566.72	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	405.21
10-20	441.71
20-30	265.96
30-40	178.50
40-50	126.54
50-60	81.86
60-70	46.96
70-80	16.54
80-90	3.44
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	111	108	106	111	108	106	104	104	102	101	101	99	98	97	96	95	93
2	108	103	99	95	106	101	97	94	98	95	92	95	92	90	92	90	88	87
3	102	96	91	87	101	95	90	86	92	88	85	90	86	84	87	85	82	81
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	77	76
5	93	85	80	75	92	84	79	75	83	78	74	81	77	74	79	76	73	72
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	69	68
7	86	77	71	67	84	76	71	67	75	70	67	74	70	66	73	69	66	65
8	82	73	68	64	81	73	68	64	72	67	64	71	67	63	70	66	63	62
9	79	70	65	61	78	70	65	61	69	64	61	68	64	61	67	63	61	59
10	76	68	62	59	75	67	62	59	66	62	59	66	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

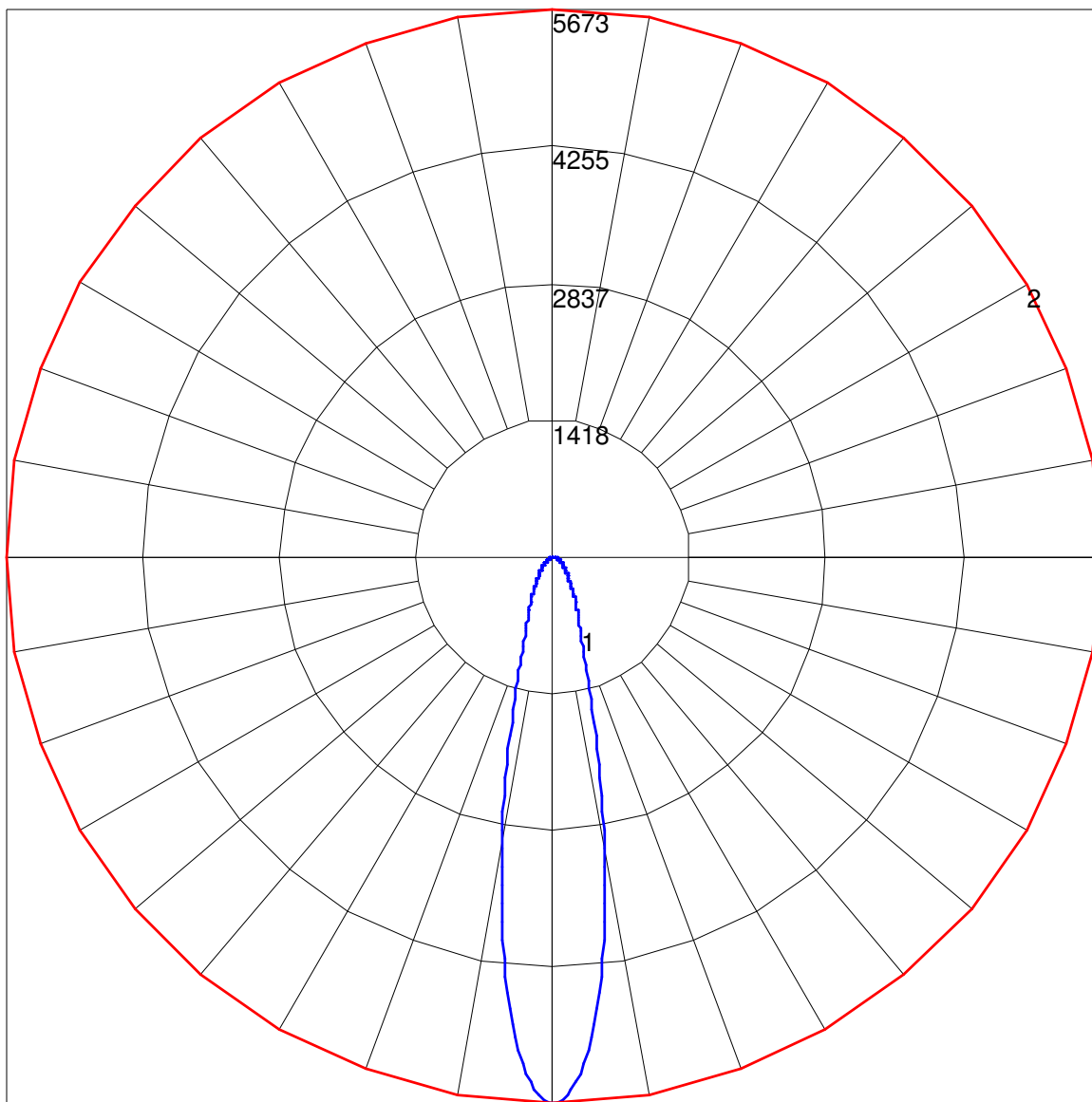
X=2H	Y=2H	21.2	22.3	21.6	22.6	23.0	21.2	22.3	21.6	22.6	23.0
	3H	22.1	23.1	22.5	23.5	23.8	22.1	23.1	22.5	23.5	23.8
	4H	22.3	23.2	22.7	23.6	24.0	22.3	23.2	22.7	23.6	24.0
	6H	22.3	23.2	22.7	23.5	23.9	22.3	23.2	22.7	23.5	23.9
	8H	22.3	23.1	22.7	23.5	23.9	22.3	23.1	22.7	23.5	23.9
	12H	22.3	23.0	22.7	23.4	23.9	22.3	23.0	22.7	23.4	23.9

UGR Viewed Endwise

4H	2H	21.5	22.4	21.9	22.8	23.2	21.5	22.4	21.9	22.8	23.2
	3H	22.6	23.3	23.0	23.7	24.1	22.6	23.3	23.0	23.7	24.1
	4H	22.8	23.4	23.2	23.9	24.3	22.8	23.4	23.2	23.9	24.3
	6H	22.8	23.4	23.3	23.9	24.3	22.8	23.4	23.3	23.9	24.3
	8H	22.8	23.4	23.3	23.8	24.3	22.8	23.4	23.3	23.8	24.3
	12H	22.8	23.3	23.3	23.8	24.2	22.8	23.3	23.3	23.8	24.2
8H	4H	22.7	23.3	23.2	23.7	24.2	22.7	23.3	23.2	23.7	24.2
	6H	22.8	23.3	23.3	23.8	24.3	22.8	23.3	23.3	23.8	24.3
	8H	22.9	23.3	23.4	23.8	24.3	22.9	23.3	23.4	23.8	24.3
	12H	22.9	23.2	23.4	23.7	24.3	22.9	23.2	23.4	23.7	24.3
12H	4H	22.7	23.2	23.2	23.7	24.1	22.7	23.2	23.2	23.7	24.1
	6H	22.8	23.2	23.4	23.7	24.2	22.8	23.2	23.4	23.7	24.2
	8H	22.9	23.2	23.4	23.7	24.3	22.9	23.2	23.4	23.7	24.3

Maximum UGR = 24.3

POLAR GRAPH



Maximum Candela = 5673 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.)