



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-XX-L25-835-XXX-DIM-UNV-OW-CS-AD-XX_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 13131414.03
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 01/25/2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836
 [LUMCAT] 4CR-xx-L25-835-xxx-DIM-UNV-OW-CS-AD-xx
 [LUMINAIRE] Aluminum housing and reflector, frosted plastic lens enclo
 [MORE] sure
 [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	1632
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	54
Total Luminaire Watts	30.0602
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.22
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	195544	195544	195544
55	66543	66543	66543
65	9256	9256	9256
75	2653	2653	2653
85	835	835	835

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-XX-L25-835-XXX-DIM-UNV-OW-CS-AD-XX_.IES****CANDELA TABULATION**

	<u>0</u>
0.0	906.30
0.5	906.50
1.0	906.90
1.5	907.40
2.0	908.20
2.5	909.40
3.0	910.60
3.5	912.30
4.0	914.20
4.5	916.60
5.0	919.30
5.5	922.50
6.0	925.90
6.5	929.60
7.0	933.60
7.5	937.80
8.0	942.10
8.5	946.50
9.0	950.90
9.5	955.20
10.0	959.40
10.5	963.50
11.0	967.50
11.5	971.50
12.0	975.40
12.5	979.10
13.0	982.80
13.5	986.30
14.0	989.40
14.5	992.10
15.0	994.30
15.5	996.00
16.0	997.10
16.5	997.90
17.0	998.20
17.5	998.00
18.0	997.30
18.5	995.90
19.0	994.00
19.5	991.90
20.0	989.40
20.5	986.50
21.0	983.00
21.5	978.90
22.0	973.90
22.5	968.10
23.0	961.40
23.5	953.70
24.0	944.90
24.5	935.00
25.0	923.70
25.5	911.30
26.0	897.60
26.5	882.60

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

27.0	866.40
27.5	849.10
28.0	830.90
28.5	811.70
29.0	792.10
29.5	772.10
30.0	751.90
30.5	731.80
31.0	712.00
31.5	693.00
32.0	674.60
32.5	657.40
33.0	641.20
33.5	626.20
34.0	612.60
34.5	600.20
35.0	589.20
35.5	579.60
36.0	571.00
36.5	563.40
37.0	556.60
37.5	550.40
38.0	544.60
38.5	538.80
39.0	533.00
39.5	527.10
40.0	521.00
40.5	514.40
41.0	507.50
41.5	500.20
42.0	492.50
42.5	484.30
43.0	475.70
43.5	466.60
44.0	457.10
44.5	447.10
45.0	436.90
45.5	426.40
46.0	415.70
46.5	404.70
47.0	393.40
47.5	381.80
48.0	369.80
48.5	357.20
49.0	343.70
49.5	328.90
50.0	312.70
50.5	295.10
51.0	276.10
51.5	256.10
52.0	235.50
52.5	215.00
53.0	194.80
53.5	175.20
54.0	156.30
54.5	138.20

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55.0	120.60
55.5	103.70
56.0	88.02
56.5	73.79
57.0	61.69
57.5	51.96
58.0	44.49
58.5	38.86
59.0	34.56
59.5	31.20
60.0	28.44
60.5	26.05
61.0	23.92
61.5	22.01
62.0	20.27
62.5	18.67
63.0	17.20
63.5	15.84
64.0	14.59
64.5	13.43
65.0	12.36
65.5	11.37
66.0	10.44
66.5	9.59
67.0	8.81
67.5	8.09
68.0	7.43
68.5	6.82
69.0	6.26
69.5	5.74
70.0	5.27
70.5	4.83
71.0	4.43
71.5	4.06
72.0	3.72
72.5	3.41
73.0	3.12
73.5	2.85
74.0	2.61
74.5	2.38
75.0	2.17
75.5	1.98
76.0	1.80
76.5	1.64
77.0	1.49
77.5	1.35
78.0	1.22
78.5	1.11
79.0	1.00
79.5	0.90
80.0	0.81
80.5	0.72
81.0	0.65
81.5	0.58
82.0	0.52
82.5	0.46

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CANDELA TABULATION - (Cont.)

83.0	0.41
83.5	0.35
84.0	0.31
84.5	0.27
85.0	0.23
85.5	0.20
86.0	0.17
86.5	0.15
87.0	0.12
87.5	0.10
88.0	0.09
88.5	0.07
89.0	0.06
89.5	0.05
90.0	0.04
90.5	0.00
91.0	0.00
91.5	0.00
92.0	0.00
92.5	0.00
93.0	0.00
93.5	0.00
94.0	0.00
94.5	0.00
95.0	0.00
95.5	0.00
96.0	0.00
96.5	0.00
97.0	0.00
97.5	0.00
98.0	0.00
98.5	0.00
99.0	0.00
99.5	0.00
100.0	0.00
100.5	0.00
101.0	0.00
101.5	0.00
102.0	0.00
102.5	0.00
103.0	0.00
103.5	0.00
104.0	0.00
104.5	0.00
105.0	0.00
105.5	0.00
106.0	0.00
106.5	0.00
107.0	0.00
107.5	0.00
108.0	0.00
108.5	0.00
109.0	0.00
109.5	0.00
110.0	0.00
110.5	0.00

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

111.0	0.00
111.5	0.00
112.0	0.00
112.5	0.00
113.0	0.00
113.5	0.00
114.0	0.00
114.5	0.00
115.0	0.00
115.5	0.00
116.0	0.00
116.5	0.00
117.0	0.00
117.5	0.00
118.0	0.00
118.5	0.00
119.0	0.00
119.5	0.00
120.0	0.00
120.5	0.00
121.0	0.00
121.5	0.00
122.0	0.00
122.5	0.00
123.0	0.00
123.5	0.00
124.0	0.00
124.5	0.00
125.0	0.00
125.5	0.00
126.0	0.00
126.5	0.00
127.0	0.00
127.5	0.00
128.0	0.00
128.5	0.00
129.0	0.00
129.5	0.00
130.0	0.00
130.5	0.00
131.0	0.00
131.5	0.00
132.0	0.00
132.5	0.00
133.0	0.00
133.5	0.00
134.0	0.00
134.5	0.00
135.0	0.00
135.5	0.00
136.0	0.00
136.5	0.00
137.0	0.00
137.5	0.00
138.0	0.00
138.5	0.00

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139.0	0.00
139.5	0.00
140.0	0.00
140.5	0.00
141.0	0.00
141.5	0.00
142.0	0.00
142.5	0.00
143.0	0.00
143.5	0.00
144.0	0.00
144.5	0.00
145.0	0.00
145.5	0.00
146.0	0.00
146.5	0.00
147.0	0.00
147.5	0.00
148.0	0.00
148.5	0.00
149.0	0.00
149.5	0.00
150.0	0.00
150.5	0.00
151.0	0.00
151.5	0.00
152.0	0.00
152.5	0.00
153.0	0.00
153.5	0.00
154.0	0.00
154.5	0.00
155.0	0.00
155.5	0.00
156.0	0.00
156.5	0.00
157.0	0.00
157.5	0.00
158.0	0.00
158.5	0.00
159.0	0.00
159.5	0.00
160.0	0.00
160.5	0.00
161.0	0.00
161.5	0.00
162.0	0.00
162.5	0.00
163.0	0.00
163.5	0.00
164.0	0.00
164.5	0.00
165.0	0.00
165.5	0.00
166.0	0.00
166.5	0.00

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CANDELA TABULATION - (Cont.)

167.0	0.00
167.5	0.00
168.0	0.00
168.5	0.00
169.0	0.00
169.5	0.00
170.0	0.00
170.5	0.00
171.0	0.00
171.5	0.00
172.0	0.00
172.5	0.00
173.0	0.00
173.5	0.00
174.0	0.00
174.5	0.00
175.0	0.00
175.5	0.00
176.0	0.00
176.5	0.00
177.0	0.00
177.5	0.00
178.0	0.00
178.5	0.00
179.0	0.00
179.5	0.00
180.0	0.00

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Zone	Lumens	%Lamp	%Fixt
0-20	369.45	N.A.	22.60
0-30	784.77	N.A.	48.10
0-40	1163.16	N.A.	71.30
0-60	1615.75	N.A.	99.00
0-80	1631.87	N.A.	100.00
0-90	1632.19	N.A.	100.00
10-90	1543.08	N.A.	94.50
20-40	793.70	N.A.	48.60
20-50	1125.21	N.A.	68.90
40-70	466.13	N.A.	28.60
60-80	16.12	N.A.	1.00
70-80	2.58	N.A.	0.20
80-90	0.32	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	1632.19	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	89.11
10-20	280.34
20-30	415.32
30-40	378.38
40-50	331.51
50-60	121.09
60-70	13.54
70-80	2.58
80-90	0.32
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	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93	91
2	105	100	95	91	103	98	93	90	94	91	88	91	88	86	89	86	84	82
3	99	91	85	80	96	89	84	79	87	82	78	84	80	77	82	78	76	74
4	92	83	76	71	90	82	76	71	79	74	70	77	73	69	75	71	68	66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60
6	81	70	63	57	79	69	62	57	67	61	57	66	60	56	64	60	56	54
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49
8	71	59	52	47	69	59	52	47	58	51	47	57	51	47	55	50	47	45
9	67	55	48	43	65	55	48	43	54	47	43	53	47	43	52	47	43	41
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	39	38

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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

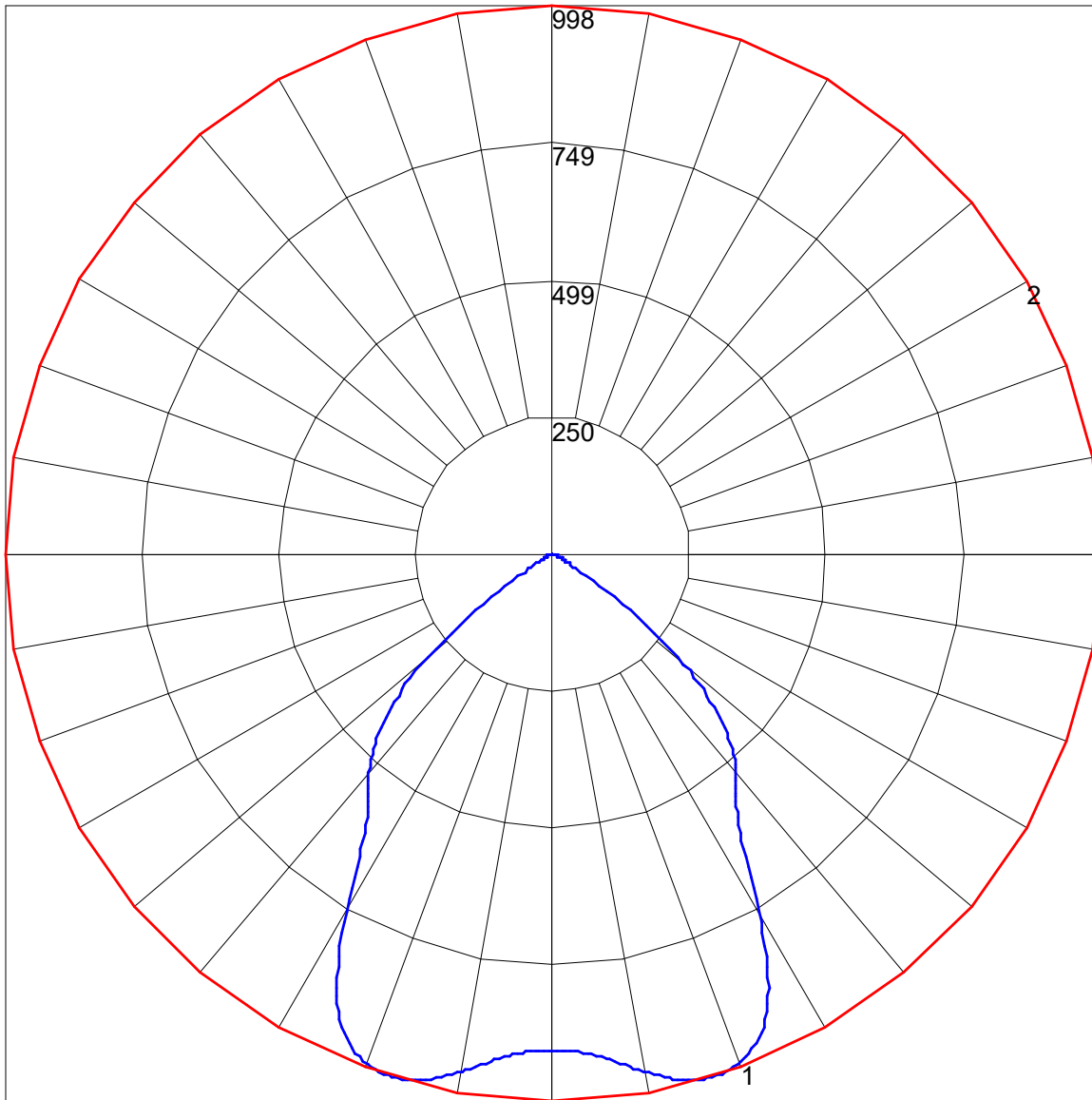
X=2H	Y=2H	17.6	18.9	18.0	19.2	19.5	17.6	18.9	18.0	19.2	19.5
	3H	17.6	18.7	18.0	19.0	19.4	17.6	18.7	18.0	19.0	19.4
	4H	17.5	18.5	17.9	18.9	19.3	17.5	18.5	17.9	18.9	19.3
	6H	17.4	18.4	17.9	18.8	19.2	17.4	18.4	17.9	18.8	19.2
	8H	17.4	18.3	17.8	18.7	19.1	17.4	18.3	17.8	18.7	19.1
	12H	17.4	18.2	17.8	18.6	19.0	17.4	18.2	17.8	18.6	19.0

UGR Viewed Endwise

4H	2H	17.5	18.5	17.9	18.9	19.3	17.5	18.5	17.9	18.9	19.3
	3H	17.5	18.3	17.9	18.7	19.1	17.5	18.3	17.9	18.7	19.1
	4H	17.4	18.2	17.8	18.6	19.0	17.4	18.2	17.8	18.6	19.0
	6H	17.3	18.0	17.8	18.4	18.9	17.3	18.0	17.8	18.4	18.9
	8H	17.3	17.9	17.8	18.3	18.8	17.3	17.9	17.8	18.3	18.8
	12H	17.2	17.8	17.7	18.2	18.7	17.2	17.8	17.7	18.2	18.7
8H	4H	17.3	17.9	17.8	18.3	18.8	17.3	17.9	17.8	18.3	18.8
	6H	17.2	17.7	17.7	18.2	18.7	17.2	17.7	17.7	18.2	18.7
	8H	17.1	17.6	17.6	18.1	18.6	17.1	17.6	17.6	18.1	18.6
	12H	17.1	17.5	17.6	18.0	18.5	17.1	17.5	17.6	18.0	18.5
12H	4H	17.2	17.8	17.7	18.2	18.7	17.2	17.8	17.7	18.2	18.7
	6H	17.1	17.6	17.7	18.0	18.6	17.1	17.6	17.7	18.0	18.6
	8H	17.1	17.5	17.6	18.0	18.5	17.1	17.5	17.6	18.0	18.5

Maximum UGR = 19.5

POLAR GRAPH



Maximum Candela = 998.2 Located At Horizontal Angle = 0, Vertical Angle = 17
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (17) (Through Max. Cd.)