



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CR-L12-9DW-XXX-DIM-UNV-ON-OF-CS-XX_3000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] 13131414.31
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 01/25/2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4CR-L12-9DW-xxx-DIM-UNV-ON-OF-CS-xx
 [LUMINAIRE] Aluminum housing and reflector, no 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	941
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	40
Total Luminaire Watts	23.3171
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.32
Spacing Criterion (90-270)	0.32
Spacing Criterion (Diagonal)	0.34
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	3581	3581	3581
55	1435	1435	1435
65	674	674	674
75	367	367	367
85	363	363	363

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CANDELA TABULATION

	<u>0</u>
0.0	5457.0
0.5	5440.0
1.0	5394.0
1.5	5320.0
2.0	5223.0
2.5	5102.0
3.0	4959.0
3.5	4799.0
4.0	4626.0
4.5	4438.0
5.0	4239.0
5.5	4038.0
6.0	3840.0
6.5	3646.0
7.0	3454.0
7.5	3267.0
8.0	3084.0
8.5	2905.0
9.0	2730.0
9.5	2560.0
10.0	2397.0
10.5	2240.0
11.0	2090.0
11.5	1949.0
12.0	1815.0
12.5	1692.0
13.0	1579.0
13.5	1478.0
14.0	1389.0
14.5	1310.0
15.0	1236.0
15.5	1170.0
16.0	1111.0
16.5	1058.0
17.0	1009.0
17.5	964.8
18.0	922.9
18.5	884.2
19.0	848.1
19.5	815.2
20.0	785.7
20.5	761.2
21.0	742.0
21.5	723.1
22.0	701.2
22.5	675.4
23.0	645.0
23.5	610.3
24.0	573.1
24.5	534.3
25.0	494.4
25.5	453.3
26.0	411.2
26.5	368.9

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-L12-9DW-XXX-DIM-UNV-ON-OFF-CS-XX_3000K.IES****CANDELA TABULATION - (Cont.)**

27.0	327.0
27.5	285.9
28.0	245.7
28.5	206.9
29.0	170.2
29.5	135.7
30.0	104.2
30.5	76.5
31.0	54.7
31.5	40.4
32.0	33.0
32.5	30.0
33.0	28.3
33.5	26.7
34.0	24.9
34.5	23.2
35.0	21.8
35.5	20.7
36.0	19.8
36.5	18.9
37.0	18.2
37.5	17.4
38.0	16.7
38.5	16.0
39.0	15.4
39.5	14.7
40.0	14.1
40.5	13.5
41.0	12.9
41.5	12.3
42.0	11.7
42.5	11.1
43.0	10.4
43.5	9.8
44.0	9.1
44.5	8.5
45.0	8.0
45.5	7.5
46.0	7.1
46.5	6.7
47.0	6.3
47.5	5.9
48.0	5.5
48.5	5.1
49.0	4.8
49.5	4.5
50.0	4.3
50.5	4.1
51.0	3.9
51.5	3.7
52.0	3.5
52.5	3.3
53.0	3.1
53.5	3.0
54.0	2.8
54.5	2.7

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55.0	2.6
55.5	2.4
56.0	2.3
56.5	2.2
57.0	2.1
57.5	2.0
58.0	1.9
58.5	1.8
59.0	1.7
59.5	1.6
60.0	1.5
60.5	1.5
61.0	1.4
61.5	1.3
62.0	1.3
62.5	1.2
63.0	1.1
63.5	1.1
64.0	1.0
64.5	1.0
65.0	0.9
65.5	0.9
66.0	0.8
66.5	0.8
67.0	0.7
67.5	0.7
68.0	0.7
68.5	0.6
69.0	0.6
69.5	0.6
70.0	0.5
70.5	0.5
71.0	0.5
71.5	0.4
72.0	0.4
72.5	0.4
73.0	0.4
73.5	0.3
74.0	0.3
74.5	0.3
75.0	0.3
75.5	0.3
76.0	0.2
76.5	0.2
77.0	0.2
77.5	0.2
78.0	0.2
78.5	0.2
79.0	0.2
79.5	0.1
80.0	0.1
80.5	0.1
81.0	0.1
81.5	0.1
82.0	0.1
82.5	0.1

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-L12-9DW-XXX-DIM-UNV-ON-OF-CS-XX_3000K.IES****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	0.0
86.0	0.0
86.5	0.0
87.0	0.0
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-L12-9DW-XXX-DIM-UNV-ON-OF-CS-XX_3000K.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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-L12-9DW-XXX-DIM-UNV-ON-OFF-CS-XX_3000K.IES****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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4CR-L12-9DW-XXX-DIM-UNV-ON-OF-CS-XX_3000K.IES****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	703.91	N.A.	74.80
0-30	913.55	N.A.	97.10
0-40	930.98	N.A.	98.90
0-60	939.82	N.A.	99.90
0-80	941.08	N.A.	100.00
0-90	941.14	N.A.	100.00
10-90	598.44	N.A.	63.60
20-40	227.07	N.A.	24.10
20-50	233.53	N.A.	24.80
40-70	9.79	N.A.	1.00
60-80	1.26	N.A.	0.10
70-80	0.31	N.A.	0.00
80-90	0.06	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	941.14	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	342.70
10-20	361.21
20-30	209.64
30-40	17.43
40-50	6.46
50-60	2.38
60-70	0.95
70-80	0.31
80-90	0.06
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

IES INDOOR REPORT

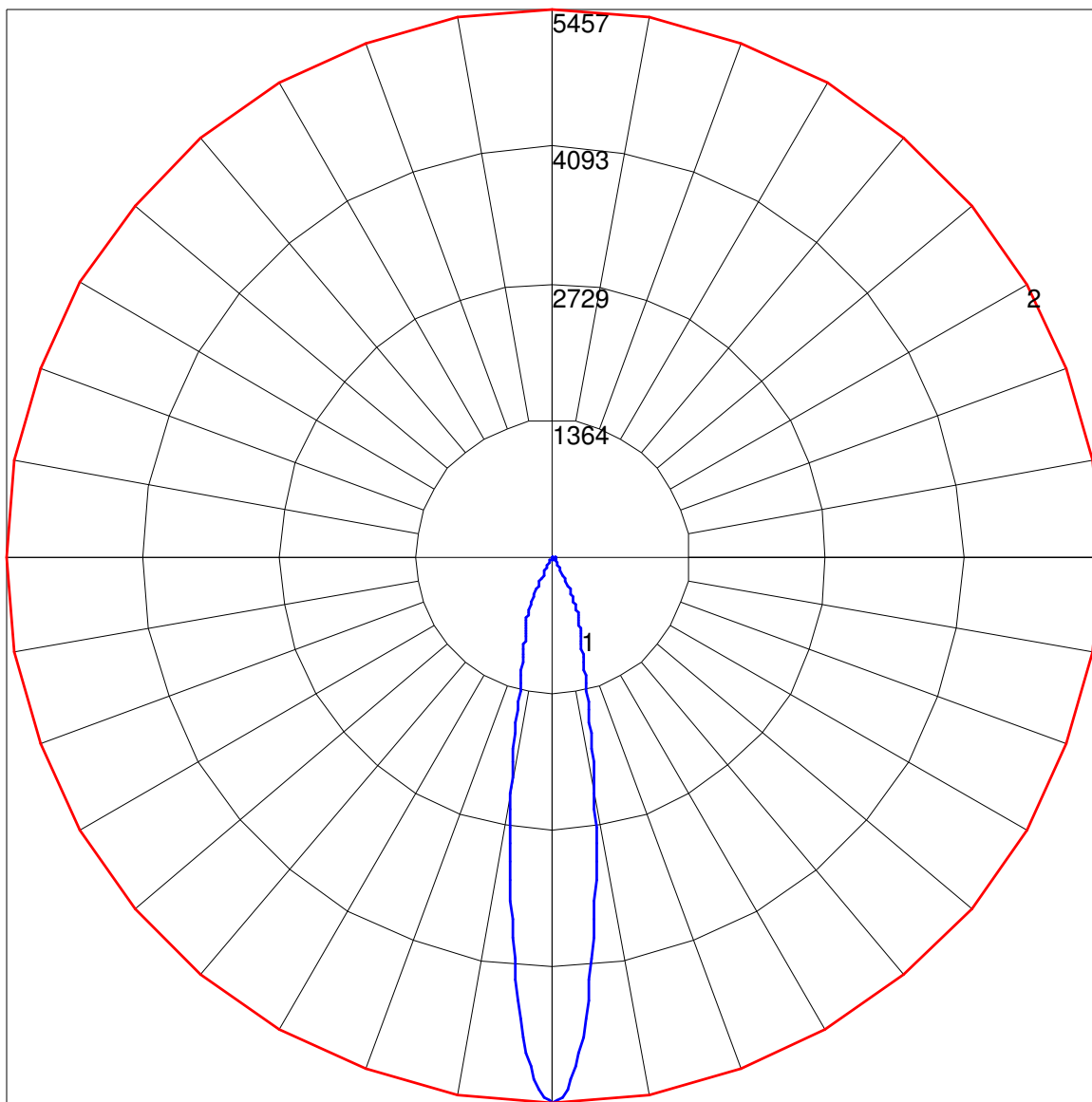
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	115	113	111	109	113	111	109	108	107	105	104	103	102	101	100	99	98	97
2	111	108	105	102	109	106	103	101	103	101	99	100	98	97	97	96	95	93
3	108	103	99	97	106	102	98	96	99	97	94	97	95	93	95	93	91	90
4	104	99	95	92	103	98	94	91	96	93	90	94	92	89	92	90	88	87
5	101	95	91	88	100	94	91	88	93	90	87	91	89	86	90	88	86	85
6	98	92	88	85	97	91	87	85	90	87	84	89	86	84	88	85	83	82
7	95	89	85	82	94	88	84	82	87	84	81	86	83	81	85	83	81	80
8	93	86	82	79	92	86	82	79	85	81	79	84	81	79	83	80	78	77
9	90	84	80	77	89	83	79	77	82	79	76	82	79	76	81	78	76	75
10	88	81	77	75	87	81	77	75	80	77	74	80	76	74	79	76	74	73

POLAR GRAPH



Maximum Candela = 5457 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.)