



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L18-9DW-DIM-UNV-RN-OF-WH_3000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.15

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 17 SEP 2021

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.

[LUMCAT] V4DR-L18-9DW-DIM-UNV-RN-OF-WH 3000k

[LUMINAIRE] Black formed aluminum housing, white reflector, clear plas

[MORE] tic optic, clear glass patterned lens enclosure

[LAMP] One white LED

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight

[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2009
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	53
Total Luminaire Watts	37.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.44
Spacing Criterion (90-270)	0.44
Spacing Criterion (Diagonal)	0.46
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.38 ft (Diameter)
Luminous Width (90-270)	0.38 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	10055	10055	10055
55	6690	6690	6690
65	4605	4605	4605
75	2991	2991	2991
85	2411	2411	2411

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CANDELA TABULATION

	<u>0</u>
0.0	7535.170
0.5	7526.085
1.0	7502.236
1.5	7460.216
2.0	7403.432
2.5	7331.885
3.0	7246.710
3.5	7149.042
4.0	7038.882
4.5	6917.366
5.0	6785.628
5.5	6643.669
6.0	6491.489
6.5	6327.953
7.0	6155.331
7.5	5975.895
8.0	5789.645
8.5	5595.446
9.0	5397.839
9.5	5194.554
10.0	4990.134
10.5	4782.306
11.0	4573.343
11.5	4364.380
12.0	4156.552
12.5	3952.131
13.0	3748.846
13.5	3550.104
14.0	3354.769
14.5	3165.112
15.0	2982.269
15.5	2806.240
16.0	2634.754
16.5	2472.353
17.0	2316.767
17.5	2167.994
18.0	2027.171
18.5	1893.162
19.0	1767.102
19.5	1648.993
20.0	1537.697
20.5	1432.080
21.0	1333.277
21.5	1242.423
22.0	1154.976
22.5	1072.981
23.0	994.847
23.5	922.505
24.0	855.046
24.5	791.903
25.0	732.961
25.5	678.222
26.0	627.798
26.5	581.122

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CANDELA TABULATION - (Cont.)

27.0	538.080
27.5	498.446
28.0	461.991
28.5	428.829
29.0	398.279
29.5	370.228
30.0	344.449
30.5	320.600
31.0	298.908
31.5	278.921
32.0	260.409
32.5	243.374
33.0	227.815
33.5	213.506
34.0	200.219
34.5	188.067
35.0	177.051
35.5	166.830
36.0	157.517
36.5	149.000
37.0	141.164
37.5	134.009
38.0	127.422
38.5	121.403
39.0	115.952
39.5	110.841
40.0	106.072
40.5	101.642
41.0	97.554
41.5	93.693
42.0	90.172
42.5	86.879
43.0	83.699
43.5	80.746
44.0	78.021
44.5	75.408
45.0	73.024
45.5	70.639
46.0	68.481
46.5	66.323
47.0	64.279
47.5	62.235
48.0	60.304
48.5	58.487
49.0	56.670
49.5	54.966
50.0	53.263
50.5	51.673
51.0	50.083
51.5	48.607
52.0	47.130
52.5	45.767
53.0	44.405
53.5	43.042
54.0	41.793
54.5	40.657

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CANDELA TABULATION - (Cont.)

55.0	39.408
55.5	38.272
56.0	37.136
56.5	36.001
57.0	34.979
57.5	33.957
58.0	32.821
58.5	31.799
59.0	30.890
59.5	29.868
60.0	28.846
60.5	27.937
61.0	27.029
61.5	26.120
62.0	25.212
62.5	24.303
63.0	23.395
63.5	22.486
64.0	21.691
64.5	20.896
65.0	19.988
65.5	19.193
66.0	18.398
66.5	17.603
67.0	16.921
67.5	16.127
68.0	15.445
68.5	14.650
69.0	13.969
69.5	13.287
70.0	12.606
70.5	12.038
71.0	11.470
71.5	10.902
72.0	10.448
72.5	9.880
73.0	9.426
73.5	9.085
74.0	8.631
74.5	8.290
75.0	7.950
75.5	7.609
76.0	7.268
76.5	6.928
77.0	6.587
77.5	6.246
78.0	6.019
78.5	5.678
79.0	5.338
79.5	5.111
80.0	4.770
80.5	4.429
81.0	4.202
81.5	3.861
82.0	3.634
82.5	3.407

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CANDELA TABULATION - (Cont.)

83.0	3.066
83.5	2.839
84.0	2.612
84.5	2.385
85.0	2.158
85.5	1.931
86.0	1.590
86.5	1.476
87.0	1.249
87.5	1.022
88.0	0.795
88.5	0.568
89.0	0.454
89.5	0.341
90.0	0.227
90.5	0.227
91.0	0.114
91.5	0.000
92.0	0.114
92.5	0.114
93.0	0.114
93.5	0.114
94.0	0.000
94.5	0.114
95.0	0.114
95.5	0.000
96.0	0.000
96.5	0.000
97.0	0.000
97.5	0.000
98.0	0.000
98.5	0.000
99.0	0.000
99.5	0.000
100.0	0.000
100.5	0.000
101.0	0.000
101.5	0.000
102.0	0.000
102.5	0.114
103.0	0.000
103.5	0.114
104.0	0.114
104.5	0.114
105.0	0.114
105.5	0.114
106.0	0.114
106.5	0.114
107.0	0.114
107.5	0.000
108.0	0.114
108.5	0.114
109.0	0.114
109.5	0.114
110.0	0.114
110.5	0.114

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CANDELA TABULATION - (Cont.)

111.0	0.114
111.5	0.114
112.0	0.114
112.5	0.114
113.0	0.114
113.5	0.114
114.0	0.114
114.5	0.114
115.0	0.114
115.5	0.114
116.0	0.114
116.5	0.114
117.0	0.114
117.5	0.114
118.0	0.114
118.5	0.114
119.0	0.114
119.5	0.114
120.0	0.114
120.5	0.114
121.0	0.114
121.5	0.114
122.0	0.114
122.5	0.114
123.0	0.114
123.5	0.114
124.0	0.114
124.5	0.114
125.0	0.114
125.5	0.114
126.0	0.114
126.5	0.114
127.0	0.114
127.5	0.114
128.0	0.114
128.5	0.114
129.0	0.114
129.5	0.114
130.0	0.114
130.5	0.114
131.0	0.227
131.5	0.227
132.0	0.227
132.5	0.227
133.0	0.227
133.5	0.227
134.0	0.227
134.5	0.227
135.0	0.341
135.5	0.341
136.0	0.341
136.5	0.341
137.0	0.341
137.5	0.454
138.0	0.454
138.5	0.454

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CANDELA TABULATION - (Cont.)

139.0	0.454
139.5	0.568
140.0	0.568
140.5	0.568
141.0	0.681
141.5	0.681
142.0	0.681
142.5	0.795
143.0	0.795
143.5	0.795
144.0	0.909
144.5	0.909
145.0	1.022
145.5	1.022
146.0	1.136
146.5	1.136
147.0	1.249
147.5	1.249
148.0	1.363
148.5	1.363
149.0	1.476
149.5	1.476
150.0	1.590
150.5	1.590
151.0	1.704
151.5	1.704
152.0	1.817
152.5	1.817
153.0	1.931
153.5	1.931
154.0	2.044
154.5	2.044
155.0	2.158
155.5	2.158
156.0	2.271
156.5	2.271
157.0	2.271
157.5	2.385
158.0	2.385
158.5	2.498
159.0	2.498
159.5	2.498
160.0	2.612
160.5	2.612
161.0	2.612
161.5	2.612
162.0	2.726
162.5	2.726
163.0	2.726
163.5	2.726
164.0	2.726
164.5	2.726
165.0	2.726
165.5	2.726
166.0	2.839
166.5	2.726

CANDELA TABULATION - (Cont.)

167.0	2.839
167.5	2.839
168.0	2.839
168.5	2.726
169.0	2.726
169.5	2.726
170.0	2.726
170.5	2.726
171.0	2.726
171.5	2.726
172.0	2.726
172.5	2.726
173.0	2.726
173.5	2.726
174.0	2.726
174.5	2.726
175.0	2.726
175.5	2.726
176.0	2.726
176.5	2.726
177.0	2.726
177.5	2.612
178.0	2.612
178.5	2.612
179.0	2.612
179.5	2.612
180.0	2.612

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Zone	Lumens	%Lamp	%Fixt
0-20	1408.73	N.A.	70.10
0-30	1763.48	N.A.	87.80
0-40	1881.69	N.A.	93.70
0-60	1974.95	N.A.	98.30
0-80	2003.58	N.A.	99.70
0-90	2006.00	N.A.	99.80
10-90	1416.77	N.A.	70.50
20-40	472.96	N.A.	23.50
20-50	530.58	N.A.	26.40
40-70	113.27	N.A.	5.60
60-80	28.63	N.A.	1.40
70-80	8.62	N.A.	0.40
80-90	2.42	N.A.	0.10
90-110	0.14	N.A.	0.00
90-120	0.26	N.A.	0.00
90-130	0.36	N.A.	0.00
90-150	1.23	N.A.	0.10
90-180	3.22	N.A.	0.20
110-180	3.07	N.A.	0.20
0-180	2009.22	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	589.22
10-20	819.51
20-30	354.75
30-40	118.21
40-50	57.62
50-60	35.64
60-70	20.01
70-80	8.62
80-90	2.42
90-100	0.06
100-110	0.08
110-120	0.11
120-130	0.10
130-140	0.24
140-150	0.63
150-160	0.96
160-170	0.77
170-180	0.26

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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	195	195	195	195	190	190	190	190	182	182	182	174	174	174	167	167	167	163
1	187	183	180	177	183	180	177	174	173	171	169	167	165	163	162	160	159	156
2	180	173	168	163	177	171	166	161	165	161	158	161	157	154	156	153	151	149
3	173	165	158	152	170	162	156	151	158	153	149	154	150	147	151	147	144	142
4	167	157	150	144	164	155	148	143	152	146	141	149	144	140	146	142	138	136
5	161	150	142	137	159	149	141	136	146	140	135	143	138	134	141	136	133	131
6	155	144	136	131	153	143	135	130	140	134	129	138	133	128	136	131	128	126
7	150	138	131	125	148	137	130	125	135	129	124	134	128	124	132	127	123	121
8	146	133	126	120	144	133	125	120	131	124	120	129	124	119	128	123	119	117
9	141	129	121	116	140	128	121	116	127	120	116	125	120	115	124	119	115	113
10	137	125	117	112	136	124	117	112	123	116	112	122	116	112	121	115	111	110

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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

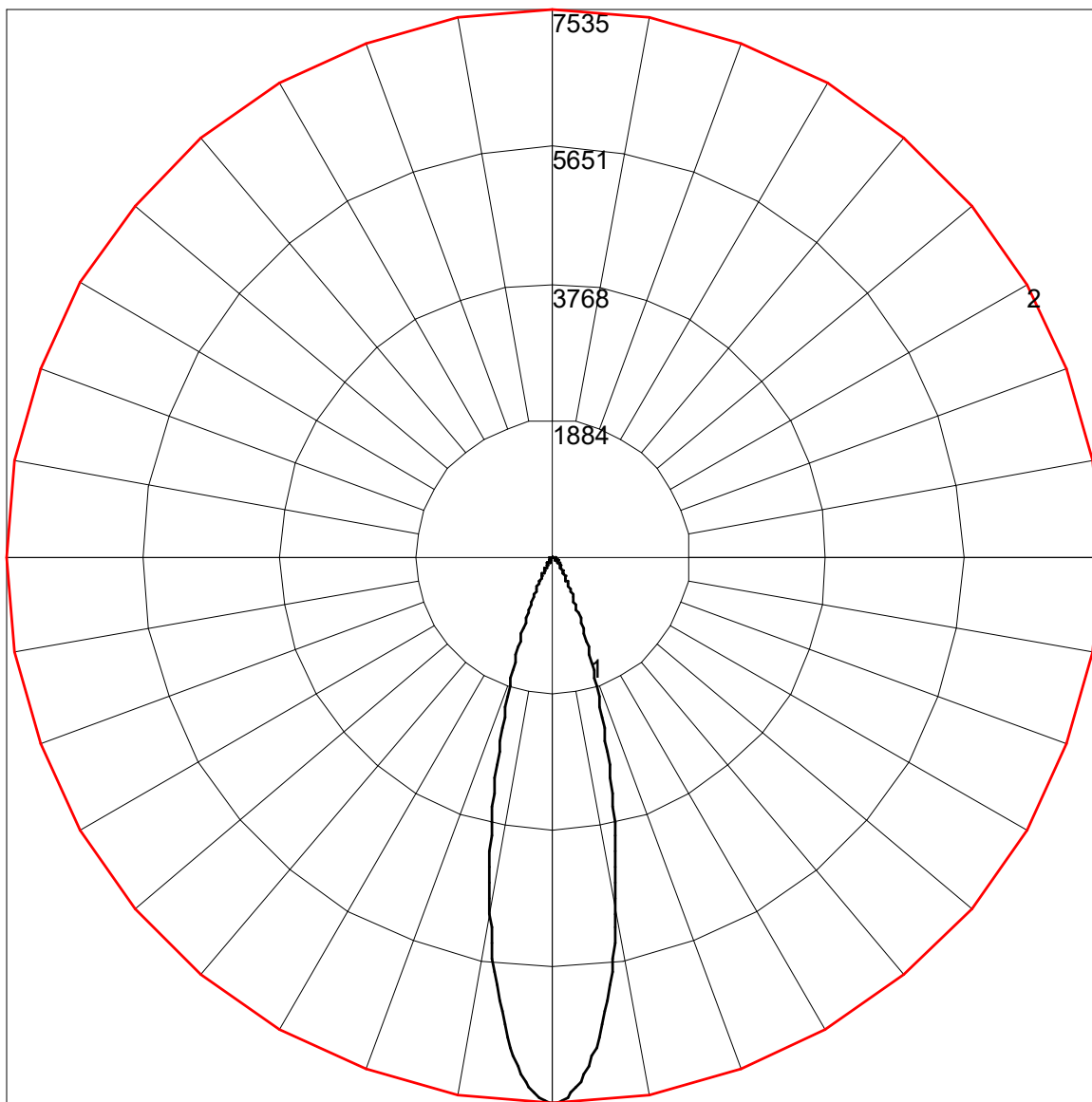
X=2H	Y=2H	8.8	9.8	9.2	10.1	10.4	8.8	9.8	9.2	10.1	10.4
	3H	9.7	10.6	10.1	10.9	11.3	9.7	10.6	10.1	10.9	11.3
	4H	9.9	10.7	10.4	11.1	11.5	9.9	10.7	10.4	11.1	11.5
	6H	10.1	10.8	10.5	11.2	11.6	10.1	10.8	10.5	11.2	11.6
	8H	10.2	10.8	10.6	11.2	11.6	10.2	10.8	10.6	11.2	11.6
	12H	10.2	10.8	10.6	11.2	11.6	10.2	10.8	10.6	11.2	11.6

UGR Viewed Endwise

4H	2H	9.1	9.9	9.5	10.2	10.6	9.1	9.9	9.5	10.2	10.6
	3H	10.1	10.7	10.5	11.1	11.5	10.1	10.7	10.5	11.1	11.5
	4H	10.4	11.0	10.9	11.4	11.9	10.4	11.0	10.9	11.4	11.9
	6H	10.7	11.2	11.2	11.6	12.1	10.7	11.2	11.2	11.6	12.1
	8H	10.8	11.2	11.2	11.7	12.2	10.8	11.2	11.2	11.7	12.2
	12H	10.8	11.2	11.3	11.7	12.2	10.8	11.2	11.3	11.7	12.2
8H	4H	10.5	10.9	10.9	11.4	11.8	10.5	10.9	10.9	11.4	11.8
	6H	10.8	11.2	11.3	11.7	12.2	10.8	11.2	11.3	11.7	12.2
	8H	11.0	11.3	11.5	11.8	12.3	11.0	11.3	11.5	11.8	12.3
	12H	11.1	11.4	11.6	11.9	12.4	11.1	11.4	11.6	11.9	12.4
12H	4H	10.4	10.8	10.9	11.3	11.8	10.4	10.8	10.9	11.3	11.8
	6H	10.8	11.1	11.4	11.6	12.2	10.8	11.1	11.4	11.6	12.2
	8H	11.0	11.3	11.5	11.8	12.4	11.0	11.3	11.5	11.8	12.4

Maximum UGR = 12.4

POLAR GRAPH



Maximum Candela = 7535.17 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)