



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L6-9DW-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-L6-9DW-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	700
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	50
Total Luminaire Watts	14
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	3504	3504	3504
55	2331	2331	2331
65	1604	1604	1604
75	1042	1042	1042
85	840	840	840

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CANDELA TABULATION

	<u>0</u>
0.0	2625.494
0.5	2622.328
1.0	2614.019
1.5	2599.378
2.0	2579.592
2.5	2554.663
3.0	2524.985
3.5	2490.955
4.0	2452.572
4.5	2410.231
5.0	2364.330
5.5	2314.867
6.0	2261.842
6.5	2204.861
7.0	2144.714
7.5	2082.193
8.0	2017.297
8.5	1949.632
9.0	1880.780
9.5	1809.949
10.0	1738.722
10.5	1666.308
11.0	1593.499
11.5	1520.689
12.0	1448.276
12.5	1377.049
13.0	1306.218
13.5	1236.970
14.0	1168.909
14.5	1102.826
15.0	1039.118
15.5	977.784
16.0	918.033
16.5	861.447
17.0	807.236
17.5	755.398
18.0	706.331
18.5	659.638
19.0	615.715
19.5	574.562
20.0	535.783
20.5	498.982
21.0	464.556
21.5	432.900
22.0	402.431
22.5	373.861
23.0	346.636
23.5	321.430
24.0	297.925
24.5	275.924
25.0	255.387
25.5	236.314
26.0	218.745
26.5	202.482

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27.0	187.484
27.5	173.674
28.0	160.972
28.5	149.418
29.0	138.773
29.5	128.999
30.0	120.017
30.5	111.707
31.0	104.149
31.5	97.185
32.0	90.735
32.5	84.799
33.0	79.378
33.5	74.392
34.0	69.763
34.5	65.529
35.0	61.690
35.5	58.129
36.0	54.884
36.5	51.916
37.0	49.186
37.5	46.693
38.0	44.398
38.5	42.301
39.0	40.401
39.5	38.621
40.0	36.959
40.5	35.415
41.0	33.991
41.5	32.646
42.0	31.419
42.5	30.271
43.0	29.163
43.5	28.135
44.0	27.185
44.5	26.275
45.0	25.444
45.5	24.613
46.0	23.861
46.5	23.109
47.0	22.397
47.5	21.685
48.0	21.012
48.5	20.379
49.0	19.746
49.5	19.152
50.0	18.559
50.5	18.005
51.0	17.451
51.5	16.936
52.0	16.422
52.5	15.947
53.0	15.472
53.5	14.997
54.0	14.562
54.5	14.166

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CANDELA TABULATION - (Cont.)

55.0	13.731
55.5	13.335
56.0	12.940
56.5	12.544
57.0	12.188
57.5	11.832
58.0	11.436
58.5	11.080
59.0	10.763
59.5	10.407
60.0	10.051
60.5	9.734
61.0	9.418
61.5	9.101
62.0	8.785
62.5	8.468
63.0	8.151
63.5	7.835
64.0	7.558
64.5	7.281
65.0	6.964
65.5	6.687
66.0	6.410
66.5	6.133
67.0	5.896
67.5	5.619
68.0	5.382
68.5	5.105
69.0	4.867
69.5	4.630
70.0	4.392
70.5	4.194
71.0	3.997
71.5	3.799
72.0	3.640
72.5	3.443
73.0	3.284
73.5	3.166
74.0	3.007
74.5	2.889
75.0	2.770
75.5	2.651
76.0	2.533
76.5	2.414
77.0	2.295
77.5	2.176
78.0	2.097
78.5	1.979
79.0	1.860
79.5	1.781
80.0	1.662
80.5	1.543
81.0	1.464
81.5	1.345
82.0	1.266
82.5	1.187

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CANDELA TABULATION - (Cont.)

83.0	1.068
83.5	0.989
84.0	0.910
84.5	0.831
85.0	0.752
85.5	0.673
86.0	0.554
86.5	0.514
87.0	0.435
87.5	0.356
88.0	0.277
88.5	0.198
89.0	0.158
89.5	0.119
90.0	0.079
90.5	0.079
91.0	0.040
91.5	0.000
92.0	0.040
92.5	0.040
93.0	0.040
93.5	0.040
94.0	0.000
94.5	0.040
95.0	0.040
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	0.040
103.0	0.000
103.5	0.040
104.0	0.040
104.5	0.040
105.0	0.040
105.5	0.040
106.0	0.040
106.5	0.040
107.0	0.040
107.5	0.000
108.0	0.040
108.5	0.040
109.0	0.040
109.5	0.040
110.0	0.040
110.5	0.040

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111.0	0.040
111.5	0.040
112.0	0.040
112.5	0.040
113.0	0.040
113.5	0.040
114.0	0.040
114.5	0.040
115.0	0.040
115.5	0.040
116.0	0.040
116.5	0.040
117.0	0.040
117.5	0.040
118.0	0.040
118.5	0.040
119.0	0.040
119.5	0.040
120.0	0.040
120.5	0.040
121.0	0.040
121.5	0.040
122.0	0.040
122.5	0.040
123.0	0.040
123.5	0.040
124.0	0.040
124.5	0.040
125.0	0.040
125.5	0.040
126.0	0.040
126.5	0.040
127.0	0.040
127.5	0.040
128.0	0.040
128.5	0.040
129.0	0.040
129.5	0.040
130.0	0.040
130.5	0.040
131.0	0.079
131.5	0.079
132.0	0.079
132.5	0.079
133.0	0.079
133.5	0.079
134.0	0.079
134.5	0.079
135.0	0.119
135.5	0.119
136.0	0.119
136.5	0.119
137.0	0.119
137.5	0.158
138.0	0.158
138.5	0.158

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139.0	0.158
139.5	0.198
140.0	0.198
140.5	0.198
141.0	0.237
141.5	0.237
142.0	0.237
142.5	0.277
143.0	0.277
143.5	0.277
144.0	0.317
144.5	0.317
145.0	0.356
145.5	0.356
146.0	0.396
146.5	0.396
147.0	0.435
147.5	0.435
148.0	0.475
148.5	0.475
149.0	0.514
149.5	0.514
150.0	0.554
150.5	0.554
151.0	0.594
151.5	0.594
152.0	0.633
152.5	0.633
153.0	0.673
153.5	0.673
154.0	0.712
154.5	0.712
155.0	0.752
155.5	0.752
156.0	0.791
156.5	0.791
157.0	0.791
157.5	0.831
158.0	0.831
158.5	0.871
159.0	0.871
159.5	0.871
160.0	0.910
160.5	0.910
161.0	0.910
161.5	0.910
162.0	0.950
162.5	0.950
163.0	0.950
163.5	0.950
164.0	0.950
164.5	0.950
165.0	0.950
165.5	0.950
166.0	0.989
166.5	0.950

CANDELA TABULATION - (Cont.)

167.0	0.989
167.5	0.989
168.0	0.989
168.5	0.950
169.0	0.950
169.5	0.950
170.0	0.950
170.5	0.950
171.0	0.950
171.5	0.950
172.0	0.950
172.5	0.950
173.0	0.950
173.5	0.950
174.0	0.950
174.5	0.950
175.0	0.950
175.5	0.950
176.0	0.950
176.5	0.950
177.0	0.950
177.5	0.910
178.0	0.910
178.5	0.910
179.0	0.910
179.5	0.910
180.0	0.910

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	490.85	N.A.	70.10
0-30	614.45	N.A.	87.80
0-40	655.64	N.A.	93.70
0-60	688.13	N.A.	98.30
0-80	698.11	N.A.	99.70
0-90	698.95	N.A.	99.80
10-90	493.65	N.A.	70.50
20-40	164.79	N.A.	23.50
20-50	184.87	N.A.	26.40
40-70	39.47	N.A.	5.60
60-80	9.98	N.A.	1.40
70-80	3.00	N.A.	0.40
80-90	0.84	N.A.	0.10
90-110	0.05	N.A.	0.00
90-120	0.09	N.A.	0.00
90-130	0.13	N.A.	0.00
90-150	0.43	N.A.	0.10
90-180	1.12	N.A.	0.20
110-180	1.07	N.A.	0.20
0-180	700.08	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	205.30
10-20	285.54
20-30	123.60
30-40	41.19
40-50	20.08
50-60	12.42
60-70	6.97
70-80	3.00
80-90	0.84
90-100	0.02
100-110	0.03
110-120	0.04
120-130	0.04
130-140	0.08
140-150	0.22
150-160	0.33
160-170	0.27
170-180	0.09

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	68	68	68	68	66	66	66	66	63	63	63	61	61	61	58	58	58	57
1	65	64	63	62	64	63	62	61	60	60	59	58	58	57	56	56	55	54
2	63	60	58	57	62	59	58	56	58	56	55	56	55	54	54	53	53	52
3	60	57	55	53	59	57	54	53	55	53	52	54	52	51	53	51	50	49
4	58	55	52	50	57	54	52	50	53	51	49	52	50	49	51	49	48	47
5	56	52	50	48	55	52	49	47	51	49	47	50	48	47	49	47	46	46
6	54	50	47	46	53	50	47	45	49	47	45	48	46	45	47	46	44	44
7	52	48	46	44	52	48	45	44	47	45	43	47	45	43	46	44	43	42
8	51	46	44	42	50	46	44	42	46	43	42	45	43	42	45	43	41	41
9	49	45	42	40	49	45	42	40	44	42	40	44	42	40	43	41	40	39
10	48	43	41	39	47	43	41	39	43	41	39	42	40	39	42	40	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	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

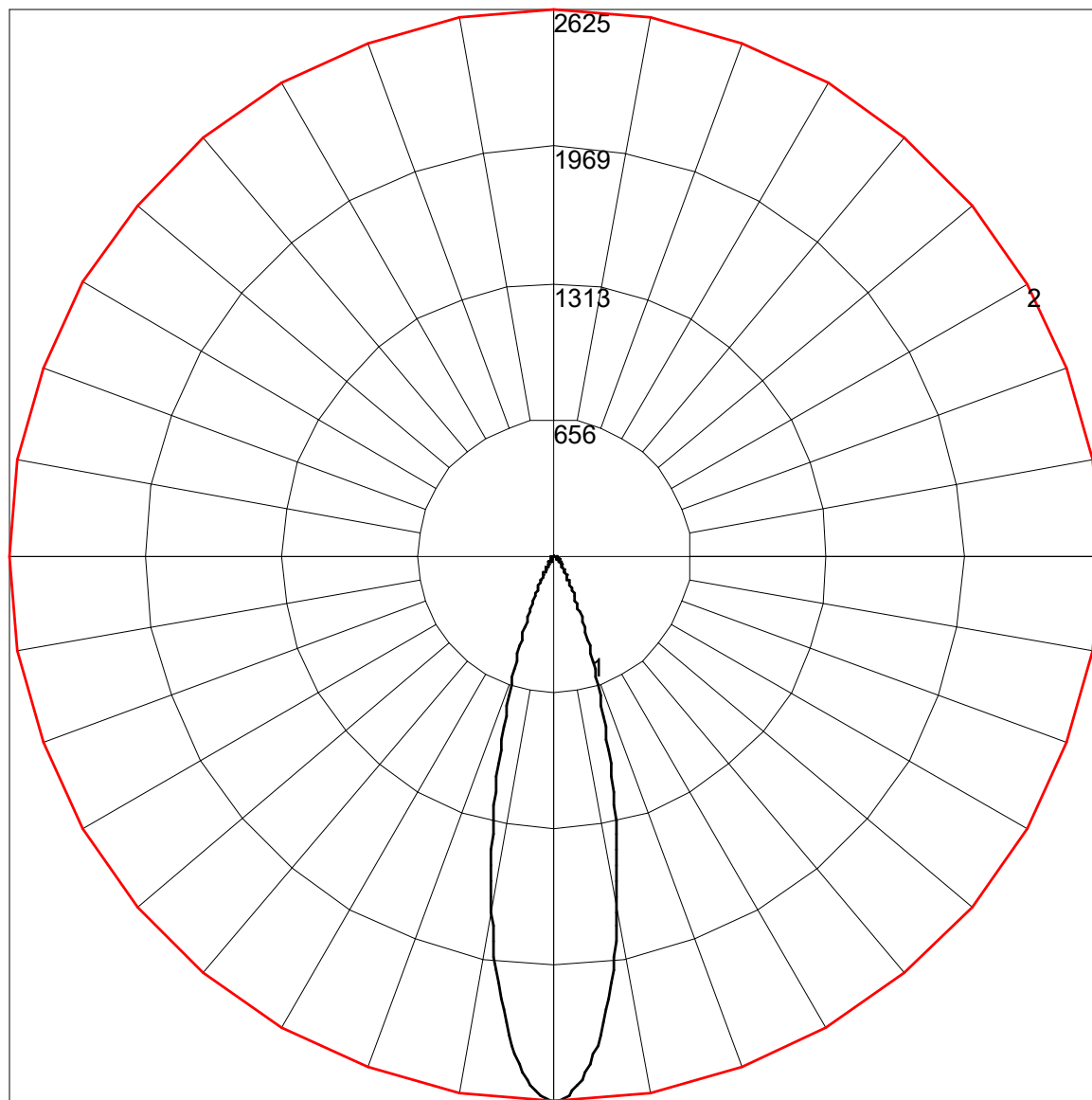
4H	2H	9.1	9.9	9.5	10.2	10.6	9.1	9.9	9.5	10.2	10.6
	3H	10.1	10.7	10.5	11.1	11.5	10.1	10.7	10.5	11.1	11.5
	4H	10.4	11.0	10.9	11.4	11.9	10.4	11.0	10.9	11.4	11.9
	6H	10.7	11.2	11.2	11.6	12.1	10.7	11.2	11.2	11.6	12.1
	8H	10.8	11.2	11.2	11.7	12.2	10.8	11.2	11.2	11.7	12.2
	12H	10.8	11.2	11.3	11.7	12.2	10.8	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 = 2625.494 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.)