



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.10

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 17 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

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

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

[MORE] tic optic, clear glass patterned 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	1999
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)	0.44
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.35 ft (Diameter)
Luminous Width (90-270)	0.35 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	13127	13127	13127
55	9847	9847	9847
65	8148	8148	8148
75	6630	6630	6630
85	3692	3692	3692

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CANDELA TABULATION

	<u>0</u>
0.0	7508.519
0.5	7499.795
1.0	7474.712
1.5	7435.452
2.0	7379.833
2.5	7311.128
3.0	7228.245
3.5	7132.275
4.0	7023.219
4.5	6903.257
5.0	6773.480
5.5	6632.798
6.0	6482.300
6.5	6319.807
7.0	6148.588
7.5	5969.736
8.0	5779.979
8.5	5584.768
9.0	5383.014
9.5	5176.898
10.0	4967.510
10.5	4754.850
11.0	4537.828
11.5	4320.807
12.0	4105.966
12.5	3892.216
13.0	3681.737
13.5	3474.530
14.0	3272.777
14.5	3077.566
15.0	2889.989
15.5	2708.956
16.0	2535.557
16.5	2369.791
17.0	2213.841
17.5	2064.434
18.0	1923.751
18.5	1791.793
19.0	1668.560
19.5	1554.051
20.0	1446.085
20.5	1343.572
21.0	1247.603
21.5	1160.358
22.0	1076.276
22.5	998.082
23.0	925.015
23.5	857.400
24.0	794.474
24.5	735.584
25.0	681.383
25.5	631.435
26.0	585.087
26.5	542.555

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27.0	503.294
27.5	467.306
28.0	434.371
28.5	404.162
29.0	376.462
29.5	350.943
30.0	327.714
30.5	306.339
31.0	286.709
31.5	268.824
32.0	252.574
32.5	237.415
33.0	223.565
33.5	210.806
34.0	199.246
34.5	188.558
35.0	178.852
35.5	170.019
36.0	161.730
36.5	154.205
37.0	147.335
37.5	140.901
38.0	135.121
38.5	129.777
39.0	124.760
39.5	120.071
40.0	115.709
40.5	111.674
41.0	107.966
41.5	104.476
42.0	101.204
42.5	98.151
43.0	95.206
43.5	92.480
44.0	89.862
44.5	87.354
45.0	84.955
45.5	82.774
46.0	80.593
46.5	78.520
47.0	76.557
47.5	74.594
48.0	72.740
48.5	70.887
49.0	69.142
49.5	67.397
50.0	65.761
50.5	64.234
51.0	62.598
51.5	61.181
52.0	59.654
52.5	58.236
53.0	56.927
53.5	55.510
54.0	54.201
54.5	53.001

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CANDELA TABULATION - (Cont.)

55.0	51.693
55.5	50.493
56.0	49.293
56.5	48.094
57.0	47.003
57.5	45.913
58.0	44.822
58.5	43.732
59.0	42.750
59.5	41.769
60.0	40.787
60.5	39.806
61.0	38.824
61.5	37.843
62.0	36.861
62.5	35.989
63.0	35.007
63.5	34.135
64.0	33.262
64.5	32.390
65.0	31.517
65.5	30.645
66.0	29.772
66.5	28.900
67.0	28.136
67.5	27.264
68.0	26.501
68.5	25.628
69.0	24.865
69.5	23.992
70.0	23.229
70.5	22.466
71.0	21.702
71.5	20.939
72.0	20.175
72.5	19.412
73.0	18.649
73.5	17.885
74.0	17.122
74.5	16.467
75.0	15.704
75.5	14.941
76.0	14.286
76.5	13.523
77.0	12.869
77.5	12.105
78.0	11.451
78.5	10.797
79.0	10.142
79.5	9.488
80.0	8.834
80.5	8.179
81.0	7.525
81.5	6.980
82.0	6.325
82.5	5.780

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CANDELA TABULATION - (Cont.)

83.0	5.126
83.5	4.580
84.0	4.035
84.5	3.490
85.0	2.945
85.5	2.508
86.0	2.181
86.5	1.745
87.0	1.418
87.5	1.200
88.0	0.872
88.5	0.654
89.0	0.436
89.5	0.327
90.0	0.218
90.5	0.000
91.0	0.000
91.5	0.000
92.0	0.000
92.5	0.000
93.0	0.000
93.5	0.000
94.0	0.000
94.5	0.000
95.0	0.000
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	0.000
103.0	0.000
103.5	0.000
104.0	0.000
104.5	0.000
105.0	0.000
105.5	0.000
106.0	0.000
106.5	0.000
107.0	0.000
107.5	0.000
108.0	0.000
108.5	0.000
109.0	0.000
109.5	0.000
110.0	0.000
110.5	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : V4DR-L18-9DW-DIM-UNV-LN-OF-WH_3000K.IES****CANDELA TABULATION - (Cont.)**

111.0	0.000
111.5	0.000
112.0	0.000
112.5	0.000
113.0	0.000
113.5	0.000
114.0	0.000
114.5	0.000
115.0	0.000
115.5	0.000
116.0	0.000
116.5	0.000
117.0	0.000
117.5	0.000
118.0	0.000
118.5	0.000
119.0	0.000
119.5	0.000
120.0	0.000
120.5	0.000
121.0	0.000
121.5	0.000
122.0	0.000
122.5	0.000
123.0	0.000
123.5	0.000
124.0	0.000
124.5	0.000
125.0	0.000
125.5	0.000
126.0	0.000
126.5	0.000
127.0	0.000
127.5	0.000
128.0	0.000
128.5	0.000
129.0	0.000
129.5	0.000
130.0	0.000
130.5	0.000
131.0	0.000
131.5	0.000
132.0	0.000
132.5	0.000
133.0	0.000
133.5	0.000
134.0	0.000
134.5	0.000
135.0	0.000
135.5	0.000
136.0	0.000
136.5	0.000
137.0	0.000
137.5	0.000
138.0	0.000
138.5	0.000

IES INDOOR REPORT**PHOTOMETRIC FILENAME : V4DR-L18-9DW-DIM-UNV-LN-OF-WH_3000K.IES****CANDELA TABULATION - (Cont.)**

139.0	0.000
139.5	0.000
140.0	0.000
140.5	0.000
141.0	0.000
141.5	0.000
142.0	0.000
142.5	0.000
143.0	0.000
143.5	0.000
144.0	0.000
144.5	0.000
145.0	0.000
145.5	0.000
146.0	0.000
146.5	0.000
147.0	0.000
147.5	0.000
148.0	0.000
148.5	0.000
149.0	0.000
149.5	0.000
150.0	0.000
150.5	0.000
151.0	0.000
151.5	0.000
152.0	0.000
152.5	0.000
153.0	0.000
153.5	0.000
154.0	0.000
154.5	0.000
155.0	0.000
155.5	0.000
156.0	0.000
156.5	0.000
157.0	0.000
157.5	0.000
158.0	0.000
158.5	0.000
159.0	0.000
159.5	0.000
160.0	0.000
160.5	0.000
161.0	0.000
161.5	0.000
162.0	0.000
162.5	0.000
163.0	0.000
163.5	0.000
164.0	0.000
164.5	0.000
165.0	0.000
165.5	0.000
166.0	0.000
166.5	0.000

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CANDELA TABULATION - (Cont.)

167.0	0.000
167.5	0.000
168.0	0.000
168.5	0.000
169.0	0.000
169.5	0.000
170.0	0.000
170.5	0.000
171.0	0.000
171.5	0.000
172.0	0.000
172.5	0.000
173.0	0.000
173.5	0.000
174.0	0.000
174.5	0.000
175.0	0.000
175.5	0.000
176.0	0.000
176.5	0.000
177.0	0.000
177.5	0.000
178.0	0.000
178.5	0.000
179.0	0.000
179.5	0.000
180.0	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	1383.81	N.A.	69.20
0-30	1715.31	N.A.	85.80
0-40	1833.87	N.A.	91.70
0-60	1947.22	N.A.	97.40
0-80	1995.2	N.A.	99.80
0-90	1999.05	N.A.	100.00
10-90	1411.08	N.A.	70.60
20-40	450.06	N.A.	22.50
20-50	516.78	N.A.	25.90
40-70	144.66	N.A.	7.20
60-80	47.98	N.A.	2.40
70-80	16.66	N.A.	0.80
80-90	3.85	N.A.	0.20
90-110	0.01	N.A.	0.00
90-120	0.01	N.A.	0.00
90-130	0.01	N.A.	0.00
90-150	0.01	N.A.	0.00
90-180	0.01	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1999.05	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	587.96
10-20	795.85
20-30	331.50
30-40	118.56
40-50	66.73
50-60	46.62
60-70	31.32
70-80	16.66
80-90	3.85
90-100	0.01
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	211	211	211	211	206	206	206	206	197	197	197	188	188	188	181	181	181	177
1	202	198	194	190	198	194	190	187	187	184	181	180	178	176	174	173	171	168
2	194	186	180	175	190	183	178	173	178	173	169	173	169	166	168	165	162	159
3	186	177	169	163	183	174	167	162	170	164	159	166	161	157	162	158	154	152
4	179	168	160	154	176	166	159	153	162	156	151	159	154	149	156	151	148	145
5	173	161	152	146	170	159	151	145	156	149	144	153	147	143	151	146	142	139
6	167	154	145	139	164	153	145	139	150	143	138	148	142	137	146	140	136	134
7	161	148	139	133	159	147	139	133	145	138	132	143	137	132	141	135	131	129
8	156	143	134	128	154	142	134	128	140	133	128	138	132	127	137	131	127	125
9	151	138	129	124	149	137	129	124	135	128	123	134	127	123	133	127	122	121
10	147	133	125	120	145	132	125	119	131	124	119	130	123	119	129	123	119	117

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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	11.0	12.0	11.4	12.3	12.7	UGR Viewed Endwise	11.0	12.0	11.4	12.3	12.7
	3H	12.5	13.4	12.9	13.7	14.1		12.5	13.4	12.9	13.7	14.1
	4H	13.0	13.8	13.4	14.2	14.6		13.0	13.8	13.4	14.2	14.6
	6H	13.3	14.1	13.7	14.4	14.8		13.3	14.1	13.7	14.4	14.8
	8H	13.4	14.1	13.8	14.5	14.9		13.4	14.1	13.8	14.5	14.9
	12H	13.4	14.1	13.9	14.5	14.9		13.4	14.1	13.9	14.5	14.9

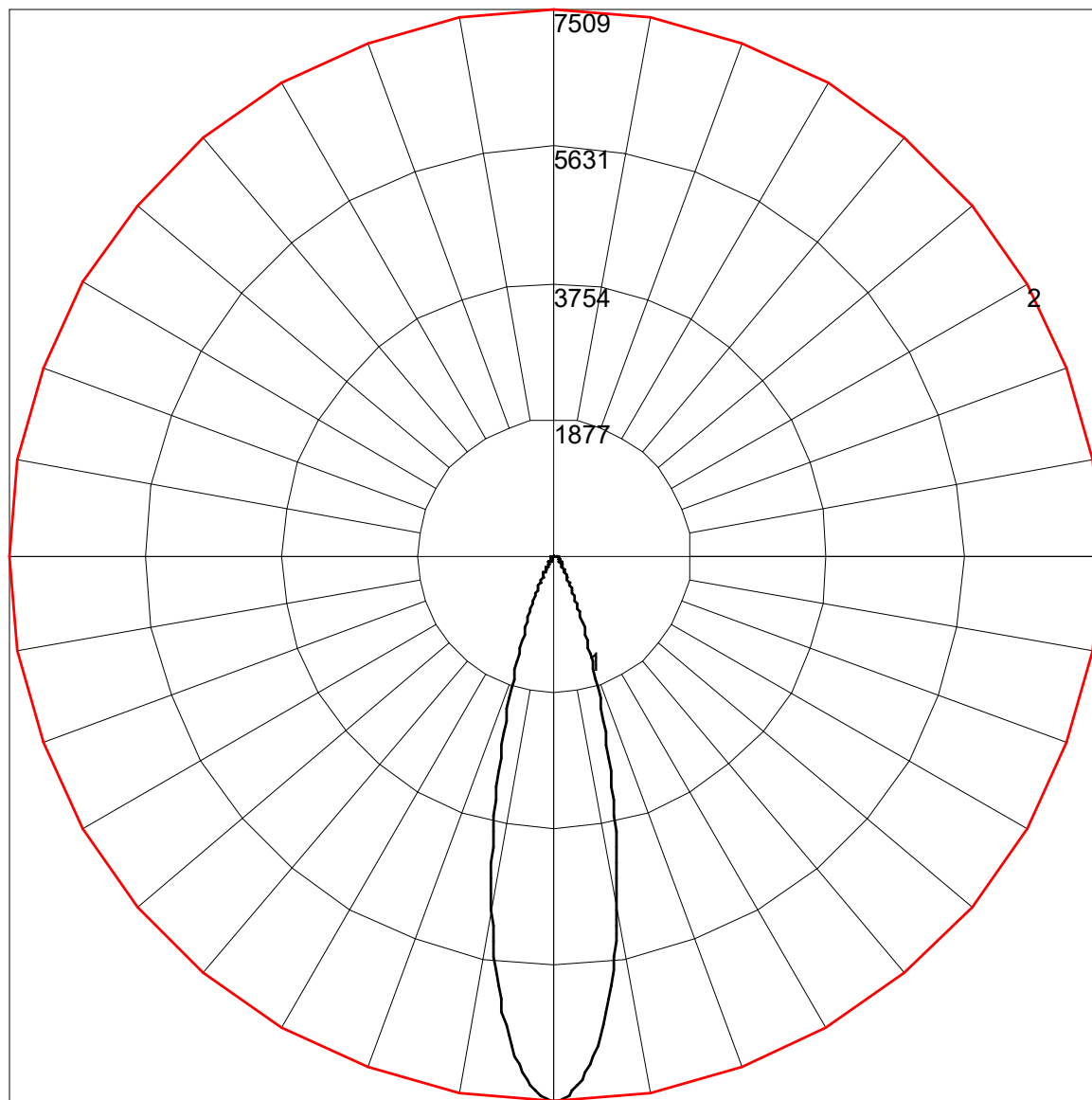
4H	2H	11.5	12.3	11.9	12.6	13.0	11.5	12.3	11.9	12.6	13.0
	3H	13.1	13.8	13.5	14.2	14.6	13.1	13.8	13.5	14.2	14.6
	4H	13.7	14.3	14.2	14.7	15.2	13.7	14.3	14.2	14.7	15.2
	6H	14.2	14.7	14.6	15.1	15.6	14.2	14.7	14.6	15.1	15.6
	8H	14.3	14.7	14.8	15.2	15.7	14.3	14.7	14.8	15.2	15.7
	12H	14.3	14.7	14.8	15.2	15.7	14.3	14.7	14.8	15.2	15.7

8H	4H	13.9	14.4	14.4	14.8	15.3	13.9	14.4	14.4	14.8	15.3
	6H	14.4	14.8	15.0	15.3	15.8	14.4	14.8	15.0	15.3	15.8
	8H	14.6	14.9	15.1	15.4	15.9	14.6	14.9	15.1	15.4	15.9
	12H	14.7	15.0	15.2	15.5	16.0	14.7	15.0	15.2	15.5	16.0

12H	4H	13.9	14.3	14.4	14.8	15.2	13.9	14.3	14.4	14.8	15.2
	6H	14.5	14.8	15.0	15.2	15.8	14.5	14.8	15.0	15.2	15.8
	8H	14.6	14.9	15.2	15.4	16.0	14.6	14.9	15.2	15.4	16.0

Maximum UGR = 16.0

POLAR GRAPH



Maximum Candela = 7508.519 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.)