



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.14

[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-RM-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	1817
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	48
Total Luminaire Watts	37.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.52
Spacing Criterion (90-270)	0.52
Spacing Criterion (Diagonal)	0.52
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	10426	10426	10426
55	7251	7251	7251
65	5177	5177	5177
75	3466	3466	3466
85	2828	2828	2828

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-L18-9DW-DIM-UNV-RM-OF-WH_3000K.IES

CANDELA TABULATION

	<u>0</u>
0.0	5239.437
0.5	5235.388
1.0	5223.241
1.5	5204.008
2.0	5177.690
2.5	5144.285
3.0	5104.807
3.5	5058.243
4.0	5004.594
4.5	4946.895
5.0	4883.123
5.5	4812.265
6.0	4736.346
6.5	4655.365
7.0	4568.311
7.5	4475.184
8.0	4378.007
8.5	4274.757
9.0	4168.470
9.5	4058.134
10.0	3943.749
10.5	3826.328
11.0	3705.869
11.5	3583.386
12.0	3458.879
12.5	3335.384
13.0	3211.888
13.5	3087.381
14.0	2961.861
14.5	2836.341
15.0	2712.846
15.5	2590.363
16.0	2467.880
16.5	2348.434
17.0	2230.000
17.5	2113.591
18.0	1999.206
18.5	1887.857
19.0	1781.571
19.5	1677.308
20.0	1576.083
20.5	1479.918
21.0	1386.791
21.5	1297.712
22.0	1213.695
22.5	1133.727
23.0	1058.820
23.5	987.152
24.0	919.331
24.5	855.458
25.0	795.734
25.5	740.162
26.0	688.334
26.5	639.746

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-L18-9DW-DIM-UNV-RM-OF-WH_3000K.IES

CANDELA TABULATION - (Cont.)

27.0	594.599
27.5	552.793
28.0	513.922
28.5	477.684
29.0	444.482
29.5	413.507
30.0	384.860
30.5	358.541
31.0	334.247
31.5	311.775
32.0	291.024
32.5	271.993
33.0	254.380
33.5	237.981
34.0	223.000
34.5	209.031
35.0	196.175
35.5	184.332
36.0	173.298
36.5	163.176
37.0	153.762
37.5	145.259
38.0	137.363
38.5	130.277
39.0	123.698
39.5	117.725
40.0	112.360
40.5	107.299
41.0	102.744
41.5	98.493
42.0	94.545
42.5	90.901
43.0	87.459
43.5	84.220
44.0	81.183
44.5	78.349
45.0	75.717
45.5	73.287
46.0	70.959
46.5	68.732
47.0	66.606
47.5	64.683
48.0	62.861
48.5	61.039
49.0	59.318
49.5	57.699
50.0	56.180
50.5	54.662
51.0	53.245
51.5	51.726
52.0	50.410
52.5	48.993
53.0	47.778
53.5	46.463
54.0	45.147
54.5	43.932

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-L18-9DW-DIM-UNV-RM-OF-WH_3000K.IES

CANDELA TABULATION - (Cont.)

55.0	42.717
55.5	41.502
56.0	40.389
56.5	39.276
57.0	38.162
57.5	37.049
58.0	35.935
58.5	34.923
59.0	33.911
59.5	32.898
60.0	31.886
60.5	30.874
61.0	29.862
61.5	28.951
62.0	27.938
62.5	27.027
63.0	26.015
63.5	25.104
64.0	24.193
64.5	23.282
65.0	22.472
65.5	21.561
66.0	20.751
66.5	19.840
67.0	19.030
67.5	18.221
68.0	17.411
68.5	16.702
69.0	15.892
69.5	15.184
70.0	14.475
70.5	13.868
71.0	13.261
71.5	12.653
72.0	12.046
72.5	11.540
73.0	11.034
73.5	10.527
74.0	10.123
74.5	9.616
75.0	9.212
75.5	8.807
76.0	8.402
76.5	8.098
77.0	7.693
77.5	7.288
78.0	6.985
78.5	6.580
79.0	6.276
79.5	5.972
80.0	5.567
80.5	5.264
81.0	4.960
81.5	4.656
82.0	4.251
82.5	3.948

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-L18-9DW-DIM-UNV-RM-OF-WH_3000K.IES

CANDELA TABULATION - (Cont.)

83.0	3.644
83.5	3.340
84.0	3.037
84.5	2.733
85.0	2.531
85.5	2.227
86.0	1.923
86.5	1.620
87.0	1.417
87.5	1.215
88.0	1.012
88.5	0.810
89.0	0.709
89.5	0.506
90.0	0.405
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-RM-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-RM-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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-L18-9DW-DIM-UNV-RM-OF-WH_3000K.IES

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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-L18-9DW-DIM-UNV-RM-OF-WH_3000K.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1172.41	N.A.	64.50
0-30	1552.89	N.A.	85.40
0-40	1683.45	N.A.	92.60
0-60	1782.15	N.A.	98.10
0-80	1814.55	N.A.	99.80
0-90	1817.42	N.A.	100.00
10-90	1381.55	N.A.	76.00
20-40	511.04	N.A.	28.10
20-50	571.24	N.A.	31.40
40-70	121.09	N.A.	6.70
60-80	32.40	N.A.	1.80
70-80	10.01	N.A.	0.60
80-90	2.87	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	1817.43	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	435.88
10-20	736.53
20-30	380.48
30-40	130.56
40-50	60.20
50-60	38.50
60-70	22.39
70-80	10.01
80-90	2.87
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-L18-9DW-DIM-UNV-RM-OF-WH_3000K.IES

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	178	178	178	178	174	174	174	174	166	166	166	159	159	159	152	152	152	149
1	170	167	163	160	167	163	160	158	157	155	153	152	150	148	147	145	144	142
2	163	157	152	147	160	154	150	145	150	146	142	145	142	139	141	139	136	134
3	157	148	142	137	154	146	140	136	142	138	133	139	135	131	136	132	129	127
4	150	141	134	128	148	139	133	128	136	130	126	133	128	125	131	127	123	121
5	145	134	127	121	142	133	126	121	130	124	120	128	123	119	126	121	118	116
6	139	128	121	115	137	127	120	115	125	119	114	123	117	113	121	116	113	111
7	134	123	115	110	132	122	115	110	120	114	109	118	113	108	117	112	108	106
8	129	118	110	105	128	117	110	105	115	109	105	114	108	104	113	108	104	102
9	125	113	106	101	124	112	106	101	111	105	100	110	104	100	109	104	100	98
10	121	109	102	97	120	108	102	97	107	101	97	106	101	97	105	100	96	95

IES INDOOR REPORT

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

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

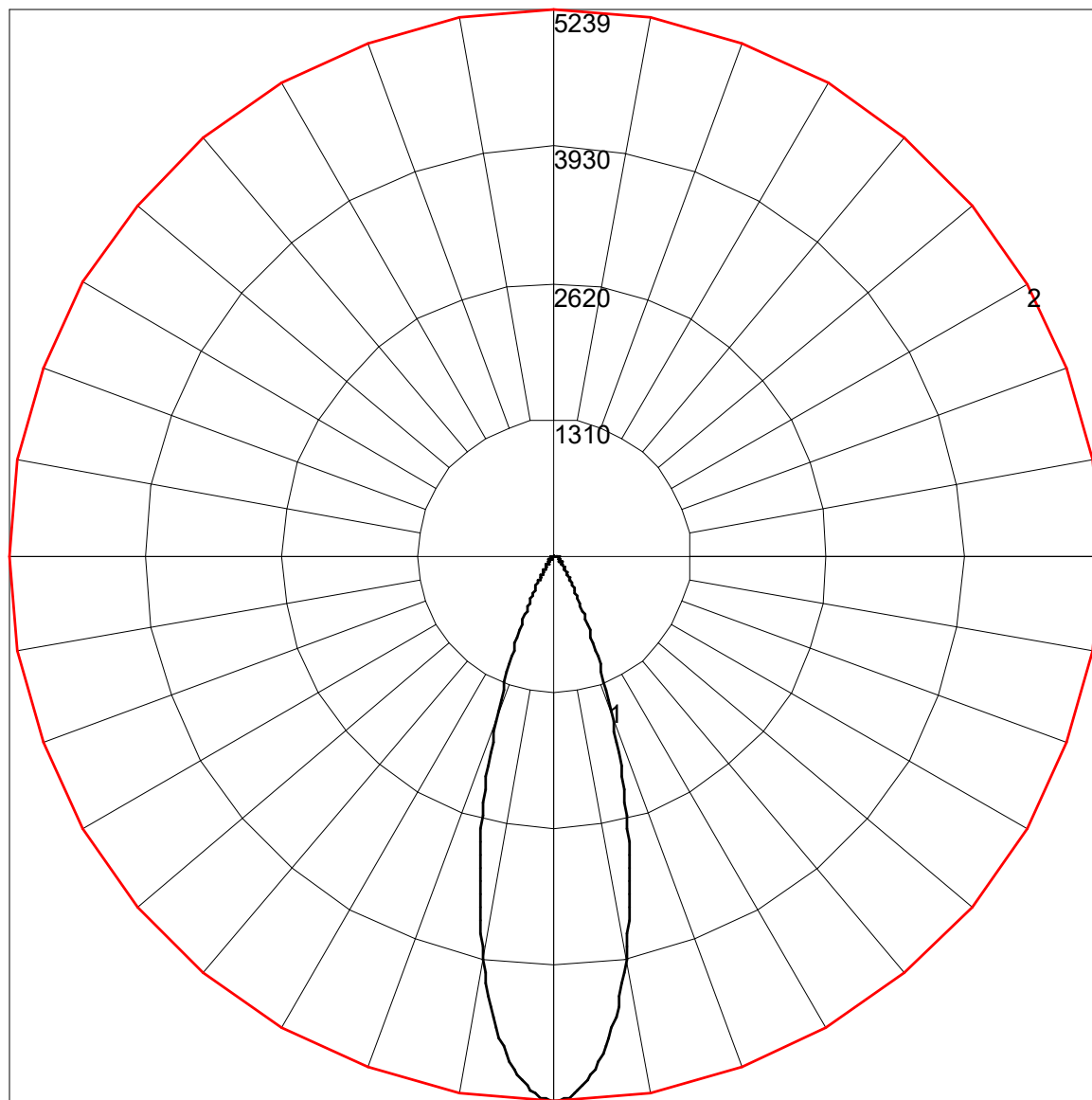
X=2H	Y=2H	10.1	11.1	10.5	11.4	11.7	10.1	11.1	10.5	11.4	11.7
	3H	11.1	12.0	11.5	12.3	12.7	11.1	12.0	11.5	12.3	12.7
	4H	11.4	12.2	11.8	12.5	12.9	11.4	12.2	11.8	12.5	12.9
	6H	11.6	12.3	12.0	12.7	13.1	11.6	12.3	12.0	12.7	13.1
	8H	11.6	12.3	12.1	12.7	13.1	11.6	12.3	12.1	12.7	13.1
	12H	11.7	12.3	12.1	12.7	13.1	11.7	12.3	12.1	12.7	13.1

UGR Viewed Endwise

4H	2H	10.4	11.2	10.8	11.6	11.9	10.4	11.2	10.8	11.6	11.9
	3H	11.5	12.2	11.9	12.6	13.0	11.5	12.2	11.9	12.6	13.0
	4H	11.9	12.5	12.3	12.9	13.3	11.9	12.5	12.3	12.9	13.3
	6H	12.2	12.7	12.7	13.2	13.6	12.2	12.7	12.7	13.2	13.6
	8H	12.3	12.8	12.8	13.2	13.7	12.3	12.8	12.8	13.2	13.7
	12H	12.3	12.7	12.8	13.2	13.7	12.3	12.7	12.8	13.2	13.7
8H	4H	12.0	12.4	12.4	12.9	13.4	12.0	12.4	12.4	12.9	13.4
	6H	12.4	12.7	12.9	13.2	13.7	12.4	12.7	12.9	13.2	13.7
	8H	12.5	12.9	13.1	13.4	13.9	12.5	12.9	13.1	13.4	13.9
	12H	12.7	12.9	13.2	13.4	14.0	12.7	12.9	13.2	13.4	14.0
12H	4H	11.9	12.3	12.4	12.8	13.3	11.9	12.3	12.4	12.8	13.3
	6H	12.4	12.7	12.9	13.2	13.7	12.4	12.7	12.9	13.2	13.7
	8H	12.6	12.8	13.1	13.3	13.9	12.6	12.8	13.1	13.3	13.9

Maximum UGR = 14.0

POLAR GRAPH



Maximum Candela = 5239.437 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.)