



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L12-9DW-DIM-UNV-RW-OF-WH\_3000K.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.12

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 16 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-L12-9DW-DIM-UNV-RW-OF-WH 3000k

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

[MORE] s 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	1081
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	46
Total Luminaire Watts	23.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.98
Spacing Criterion (90-270)	0.98
Spacing Criterion (Diagonal)	0.88
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	25011	25011	25011
55	20195	20195	20195
65	13064	13064	13064
75	7285	7285	7285
85	3742	3742	3742

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : V4DR-L12-9DW-DIM-UNV-RW-OF-WH\_3000K.IES

CANDELA TABULATION

	<u>0</u>
0.0	868.558
0.5	868.558
1.0	867.741
1.5	866.107
2.0	864.473
2.5	862.839
3.0	860.388
3.5	857.936
4.0	855.485
4.5	852.217
5.0	849.766
5.5	846.497
6.0	843.229
6.5	839.961
7.0	836.692
7.5	833.424
8.0	830.156
8.5	826.070
9.0	822.802
9.5	819.534
10.0	816.429
10.5	813.079
11.0	809.647
11.5	806.297
12.0	803.110
12.5	799.924
13.0	796.737
13.5	793.469
14.0	790.200
14.5	786.932
15.0	783.582
15.5	780.150
16.0	776.555
16.5	772.960
17.0	769.283
17.5	765.361
18.0	761.194
18.5	756.700
19.0	752.369
19.5	747.712
20.0	742.646
20.5	736.845
21.0	730.145
21.5	722.873
22.0	714.538
22.5	705.305
23.0	694.847
23.5	683.081
24.0	670.171
24.5	655.545
25.0	639.203
25.5	621.146
26.0	601.618
26.5	580.864

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : V4DR-L12-9DW-DIM-UNV-RW-OF-WH\_3000K.IES**

**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	559.048
<b>27.5</b>	536.905
<b>28.0</b>	513.700
<b>28.5</b>	490.740
<b>29.0</b>	467.861
<b>29.5</b>	444.983
<b>30.0</b>	422.513
<b>30.5</b>	400.452
<b>31.0</b>	379.616
<b>31.5</b>	359.434
<b>32.0</b>	340.396
<b>32.5</b>	322.666
<b>33.0</b>	306.242
<b>33.5</b>	291.453
<b>34.0</b>	278.135
<b>34.5</b>	266.532
<b>35.0</b>	256.319
<b>35.5</b>	247.658
<b>36.0</b>	240.059
<b>36.5</b>	233.686
<b>37.0</b>	228.048
<b>37.5</b>	223.227
<b>38.0</b>	218.815
<b>38.5</b>	214.893
<b>39.0</b>	211.379
<b>39.5</b>	208.193
<b>40.0</b>	205.333
<b>40.5</b>	202.636
<b>41.0</b>	200.022
<b>41.5</b>	197.652
<b>42.0</b>	195.283
<b>42.5</b>	193.077
<b>43.0</b>	190.870
<b>43.5</b>	188.583
<b>44.0</b>	186.295
<b>44.5</b>	184.007
<b>45.0</b>	181.637
<b>45.5</b>	179.186
<b>46.0</b>	176.653
<b>46.5</b>	174.039
<b>47.0</b>	171.342
<b>47.5</b>	168.564
<b>48.0</b>	165.786
<b>48.5</b>	162.844
<b>49.0</b>	159.821
<b>49.5</b>	156.635
<b>50.0</b>	153.448
<b>50.5</b>	150.180
<b>51.0</b>	146.748
<b>51.5</b>	143.398
<b>52.0</b>	139.966
<b>52.5</b>	136.534
<b>53.0</b>	133.266
<b>53.5</b>	129.671
<b>54.0</b>	126.076
<b>54.5</b>	122.481

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : V4DR-L12-9DW-DIM-UNV-RW-OF-WH\_3000K.IES****CANDELA TABULATION - (Cont.)**

55.0	118.967
55.5	115.372
56.0	111.859
56.5	108.427
57.0	104.995
57.5	101.563
58.0	98.213
58.5	94.945
59.0	91.677
59.5	88.490
60.0	85.303
60.5	82.198
61.0	79.175
61.5	76.152
62.0	73.292
62.5	70.351
63.0	67.573
63.5	64.713
64.0	62.017
64.5	59.320
65.0	56.706
65.5	54.091
66.0	51.558
66.5	49.107
67.0	46.737
67.5	44.368
68.0	42.080
68.5	39.792
69.0	37.586
69.5	35.461
70.0	33.500
70.5	31.621
71.0	29.905
71.5	28.271
72.0	26.719
72.5	25.248
73.0	23.859
73.5	22.633
74.0	21.408
74.5	20.345
75.0	19.365
75.5	18.466
76.0	17.486
76.5	16.587
77.0	15.688
77.5	14.789
78.0	13.972
78.5	13.073
79.0	12.256
79.5	11.439
80.0	10.622
80.5	9.805
81.0	9.070
81.5	8.334
82.0	7.517
82.5	6.863

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : V4DR-L12-9DW-DIM-UNV-RW-OF-WH\_3000K.IES

CANDELA TABULATION - (Cont.)

83.0	6.128
83.5	5.393
84.0	4.739
84.5	4.004
85.0	3.350
85.5	2.778
86.0	2.206
86.5	1.798
87.0	1.389
87.5	1.062
88.0	0.735
88.5	0.490
89.0	0.245
89.5	0.082
90.0	0.000
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-L12-9DW-DIM-UNV-RW-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-L12-9DW-DIM-UNV-RW-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-L12-9DW-DIM-UNV-RW-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-L12-9DW-DIM-UNV-RW-OF-WH\_3000K.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	300.64	N.A.	27.80
0-30	581.77	N.A.	53.80
0-40	753.09	N.A.	69.60
0-60	998.72	N.A.	92.40
0-80	1076.87	N.A.	99.60
0-90	1081.28	N.A.	100.00
10-90	1001.29	N.A.	92.60
20-40	452.46	N.A.	41.80
20-50	591.85	N.A.	54.70
40-70	302.43	N.A.	28.00
60-80	78.15	N.A.	7.20
70-80	21.34	N.A.	2.00
80-90	4.42	N.A.	0.40
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	1081.28	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	80.00
10-20	220.64
20-30	281.13
30-40	171.32
40-50	139.39
50-60	106.23
60-70	56.81
70-80	21.34
80-90	4.42
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**  
**PHOTOMETRIC FILENAME : V4DR-L12-9DW-DIM-UNV-RW-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	108	108	108	108	106	106	106	106	101	101	101	97	97	97	93	93	93	91
1	102	98	96	93	99	96	94	92	93	91	89	89	88	86	86	85	84	82
2	95	89	85	81	93	88	83	80	85	81	78	82	79	76	79	77	75	73
3	89	81	76	71	87	80	75	70	77	73	69	75	71	68	73	70	67	65
4	83	74	68	63	81	73	67	63	71	66	62	69	65	61	67	64	61	59
5	78	68	62	57	76	67	61	57	66	60	56	64	59	56	62	58	55	54
6	73	63	57	52	71	62	56	52	61	55	51	59	55	51	58	54	50	49
7	69	59	52	47	67	58	52	47	57	51	47	55	50	47	54	50	46	45
8	65	55	48	44	64	54	48	44	53	47	43	52	47	43	51	46	43	42
9	61	51	45	40	60	51	45	40	50	44	40	49	44	40	48	43	40	39
10	58	48	42	38	57	47	42	38	47	41	38	46	41	37	45	41	37	36

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L12-9DW-DIM-UNV-RW-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	20.2	21.5	20.5	21.8	22.1	20.2	21.5	20.5	21.8	22.1
	3H	20.9	22.1	21.3	22.4	22.8	20.9	22.1	21.3	22.4	22.8
	4H	21.1	22.2	21.5	22.5	22.9	21.1	22.2	21.5	22.5	22.9
	6H	21.2	22.2	21.6	22.6	23.0	21.2	22.2	21.6	22.6	23.0
	8H	21.2	22.2	21.6	22.6	23.0	21.2	22.2	21.6	22.6	23.0
	12H	21.2	22.1	21.6	22.5	22.9	21.2	22.1	21.6	22.5	22.9

### UGR Viewed Endwise

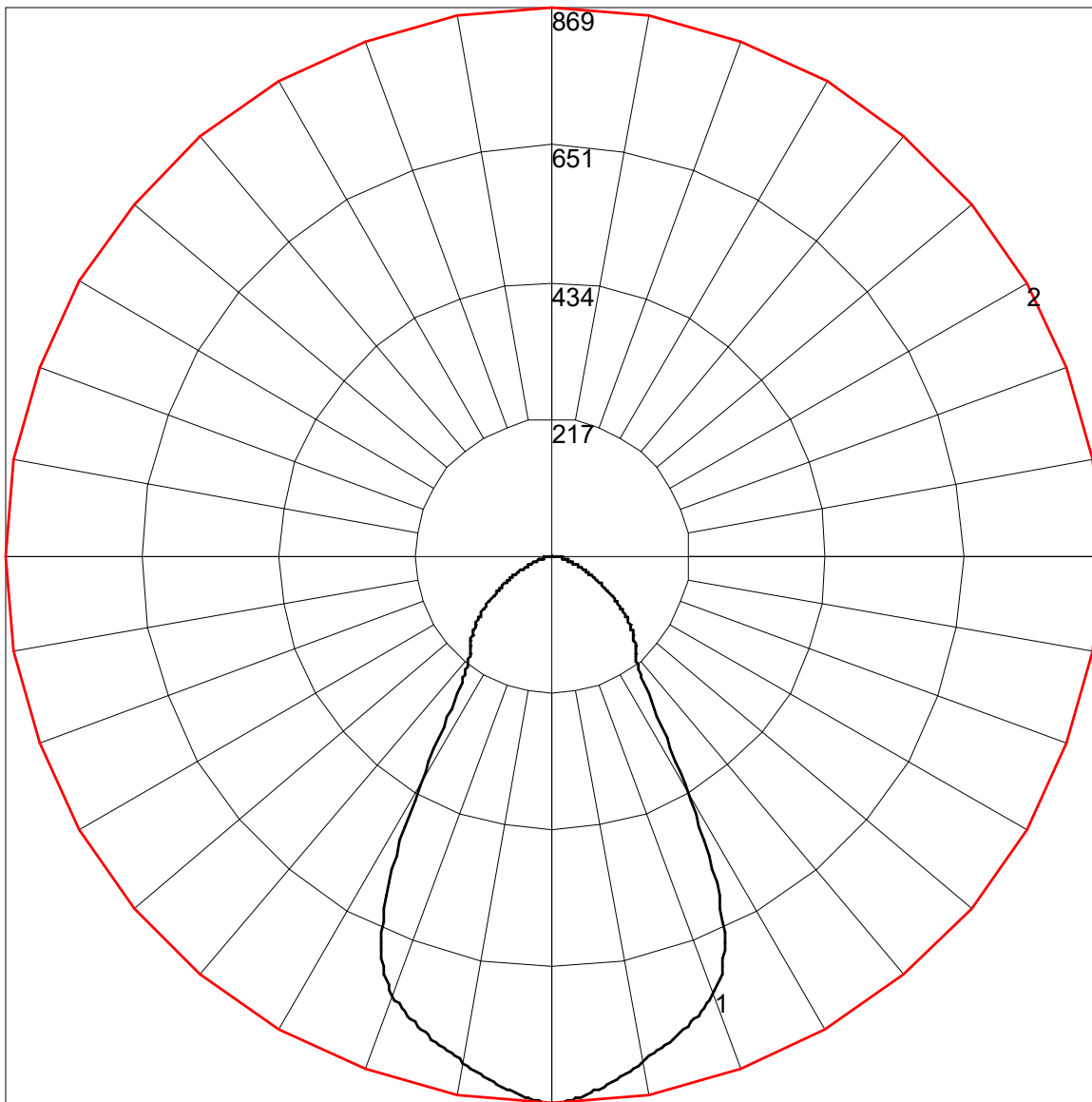
4H	2H	20.4	21.5	20.8	21.9	22.3	20.4	21.5	20.8	21.9	22.3
	3H	21.3	22.2	21.7	22.6	23.0	21.3	22.2	21.7	22.6	23.0
	4H	21.6	22.4	22.0	22.8	23.2	21.6	22.4	22.0	22.8	23.2
	6H	21.7	22.4	22.2	22.9	23.3	21.7	22.4	22.2	22.9	23.3
	8H	21.8	22.4	22.2	22.9	23.3	21.8	22.4	22.2	22.9	23.3
	12H	21.8	22.3	22.3	22.8	23.3	21.8	22.3	22.3	22.8	23.3

8H	4H	21.6	22.2	22.1	22.7	23.2	21.6	22.2	22.1	22.7	23.2
	6H	21.8	22.4	22.3	22.9	23.3	21.8	22.4	22.3	22.9	23.3
	8H	21.9	22.4	22.4	22.9	23.4	21.9	22.4	22.4	22.9	23.4
	12H	21.9	22.3	22.4	22.8	23.4	21.9	22.3	22.4	22.8	23.4

12H	4H	21.6	22.1	22.1	22.6	23.1	21.6	22.1	22.1	22.6	23.1
	6H	21.8	22.3	22.3	22.8	23.3	21.8	22.3	22.3	22.8	23.3
	8H	21.9	22.3	22.4	22.8	23.4	21.9	22.3	22.4	22.8	23.4

Maximum UGR = 23.4

POLAR GRAPH



Maximum Candela = 868.558 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.)