



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L12-9DW-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.

[ISSUEDATE] 17 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-L12-9DW-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	1130
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	48
Total Luminaire Watts	23.4
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	7420	7420	7420
55	5566	5566	5566
65	4606	4606	4606
75	3747	3747	3747
85	2086	2086	2086

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CANDELA TABULATION

	<u>0</u>
0.0	4244.435
0.5	4239.503
1.0	4225.324
1.5	4203.131
2.0	4171.691
2.5	4132.853
3.0	4086.001
3.5	4031.751
4.0	3970.104
4.5	3902.291
5.0	3828.931
5.5	3749.405
6.0	3664.332
6.5	3572.477
7.0	3475.690
7.5	3374.588
8.0	3267.321
8.5	3156.972
9.0	3042.924
9.5	2926.410
10.0	2808.047
10.5	2687.834
11.0	2565.155
11.5	2442.477
12.0	2321.031
12.5	2200.202
13.0	2081.222
13.5	1964.092
14.0	1850.044
14.5	1739.694
15.0	1633.661
15.5	1531.326
16.0	1433.306
16.5	1339.602
17.0	1251.446
17.5	1166.989
18.0	1087.463
18.5	1012.870
19.0	943.208
19.5	878.478
20.0	817.447
20.5	759.498
21.0	705.248
21.5	655.930
22.0	608.400
22.5	564.199
23.0	522.895
23.5	484.673
24.0	449.103
24.5	415.813
25.0	385.174
25.5	356.939
26.0	330.739
26.5	306.697

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

27.0	284.504
27.5	264.160
28.0	245.542
28.5	228.466
29.0	212.807
29.5	198.382
30.0	185.251
30.5	173.168
31.0	162.071
31.5	151.961
32.0	142.776
32.5	134.207
33.0	126.378
33.5	119.165
34.0	112.630
34.5	106.589
35.0	101.102
35.5	96.109
36.0	91.423
36.5	87.170
37.0	83.286
37.5	79.649
38.0	76.381
38.5	73.361
39.0	70.525
39.5	67.874
40.0	65.408
40.5	63.127
41.0	61.031
41.5	59.058
42.0	57.209
42.5	55.483
43.0	53.818
43.5	52.277
44.0	50.798
44.5	49.380
45.0	48.023
45.5	46.791
46.0	45.558
46.5	44.386
47.0	43.277
47.5	42.167
48.0	41.119
48.5	40.071
49.0	39.085
49.5	38.098
50.0	37.173
50.5	36.310
51.0	35.386
51.5	34.584
52.0	33.721
52.5	32.920
53.0	32.180
53.5	31.379
54.0	30.639
54.5	29.961

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55.0	29.221
55.5	28.543
56.0	27.865
56.5	27.187
57.0	26.570
57.5	25.954
58.0	25.337
58.5	24.721
59.0	24.166
59.5	23.611
60.0	23.056
60.5	22.501
61.0	21.947
61.5	21.392
62.0	20.837
62.5	20.344
63.0	19.789
63.5	19.296
64.0	18.803
64.5	18.309
65.0	17.816
65.5	17.323
66.0	16.830
66.5	16.337
67.0	15.905
67.5	15.412
68.0	14.980
68.5	14.487
69.0	14.056
69.5	13.562
70.0	13.131
70.5	12.699
71.0	12.268
71.5	11.836
72.0	11.405
72.5	10.973
73.0	10.542
73.5	10.110
74.0	9.679
74.5	9.309
75.0	8.877
75.5	8.446
76.0	8.076
76.5	7.644
77.0	7.274
77.5	6.843
78.0	6.473
78.5	6.103
79.0	5.733
79.5	5.363
80.0	4.993
80.5	4.624
81.0	4.254
81.5	3.945
82.0	3.576
82.5	3.267

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CANDELA TABULATION - (Cont.)

83.0	2.897
83.5	2.589
84.0	2.281
84.5	1.973
85.0	1.664
85.5	1.418
86.0	1.233
86.5	0.986
87.0	0.801
87.5	0.678
88.0	0.493
88.5	0.370
89.0	0.247
89.5	0.185
90.0	0.123
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

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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  
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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

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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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	782.25	N.A.	69.20
0-30	969.64	N.A.	85.80
0-40	1036.65	N.A.	91.70
0-60	1100.73	N.A.	97.40
0-80	1127.85	N.A.	99.80
0-90	1130.03	N.A.	100.00
10-90	797.66	N.A.	70.60
20-40	254.41	N.A.	22.50
20-50	292.13	N.A.	25.90
40-70	81.78	N.A.	7.20
60-80	27.12	N.A.	2.40
70-80	9.42	N.A.	0.80
80-90	2.18	N.A.	0.20
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	1130.03	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	332.37
10-20	449.88
20-30	187.39
30-40	67.02
40-50	37.72
50-60	26.35
60-70	17.70
70-80	9.42
80-90	2.18
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

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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	108	108	108	108	106	106	106	106	101	101	101	97	97	97	93	93	93	91
1	104	102	100	98	102	100	98	96	96	95	93	93	92	91	90	89	88	86
2	100	96	93	90	98	94	91	89	91	89	87	89	87	85	86	85	83	82
3	96	91	87	84	94	90	86	83	87	84	82	85	83	81	83	81	79	78
4	92	86	82	79	91	85	82	79	84	80	78	82	79	77	80	78	76	75
5	89	83	78	75	87	82	78	75	80	77	74	79	76	73	77	75	73	72
6	86	79	75	72	85	78	74	71	77	74	71	76	73	70	75	72	70	69
7	83	76	72	69	82	76	71	68	74	71	68	73	70	68	73	70	67	66
8	80	73	69	66	79	73	69	66	72	68	66	71	68	65	70	67	65	64
9	78	71	67	64	77	70	66	64	70	66	63	69	66	63	68	65	63	62
10	75	68	64	62	75	68	64	61	67	64	61	67	64	61	66	63	61	60

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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

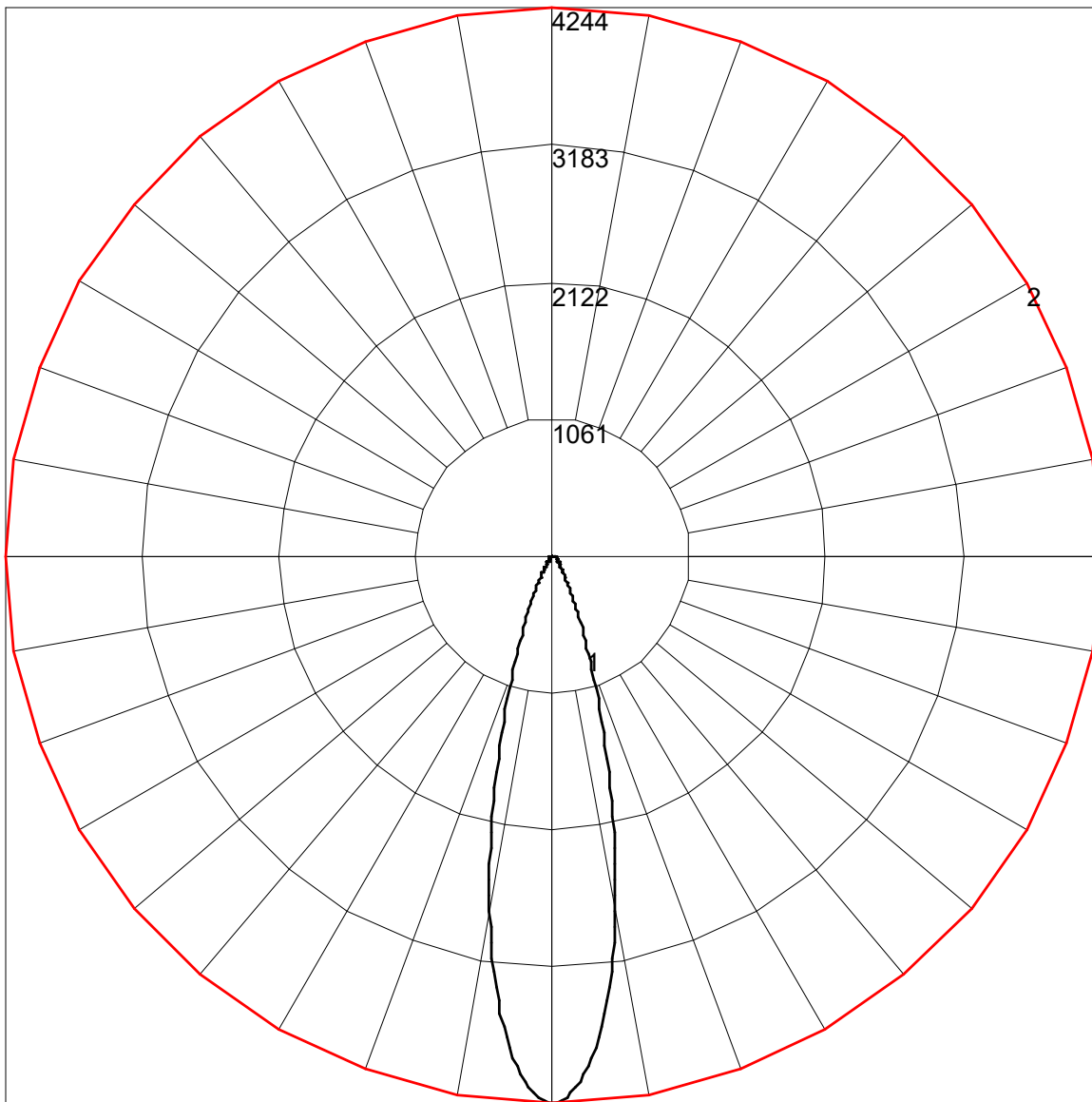
X=2H	Y=2H	11.3	12.3	11.7	12.6	13.0	11.3	12.3	11.7	12.6	13.0
	3H	12.8	13.7	13.2	14.0	14.4	12.8	13.7	13.2	14.0	14.4
	4H	13.3	14.1	13.7	14.5	14.9	13.3	14.1	13.7	14.5	14.9
	6H	13.6	14.4	14.0	14.7	15.1	13.6	14.4	14.0	14.7	15.1
	8H	13.7	14.4	14.1	14.8	15.2	13.7	14.4	14.1	14.8	15.2
	12H	13.7	14.4	14.2	14.8	15.2	13.7	14.4	14.2	14.8	15.2

### UGR Viewed Endwise

4H	2H	11.8	12.6	12.2	12.9	13.3	11.8	12.6	12.2	12.9	13.3
	3H	13.4	14.1	13.8	14.5	14.9	13.4	14.1	13.8	14.5	14.9
	4H	14.0	14.6	14.5	15.0	15.5	14.0	14.6	14.5	15.0	15.5
	6H	14.5	15.0	14.9	15.4	15.9	14.5	15.0	14.9	15.4	15.9
	8H	14.6	15.0	15.1	15.5	16.0	14.6	15.0	15.1	15.5	16.0
	12H	14.6	15.0	15.1	15.5	16.0	14.6	15.0	15.1	15.5	16.0
8H	4H	14.2	14.7	14.7	15.1	15.6	14.2	14.7	14.7	15.1	15.6
	6H	14.7	15.1	15.3	15.6	16.1	14.7	15.1	15.3	15.6	16.1
	8H	14.9	15.2	15.4	15.7	16.2	14.9	15.2	15.4	15.7	16.2
	12H	15.0	15.3	15.5	15.8	16.3	15.0	15.3	15.5	15.8	16.3
12H	4H	14.2	14.6	14.7	15.1	15.5	14.2	14.6	14.7	15.1	15.5
	6H	14.8	15.1	15.3	15.5	16.1	14.8	15.1	15.3	15.5	16.1
	8H	14.9	15.2	15.5	15.7	16.3	14.9	15.2	15.5	15.7	16.3

Maximum UGR = 16.3

POLAR GRAPH



Maximum Candela = 4244.435 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.)