



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L12-9DW-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.

[ISSUE DATE] 17 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-L12-9DW-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	1217
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	52
Total Luminaire Watts	23.4
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	6983	6983	6983
55	4857	4857	4857
65	3468	3468	3468
75	2321	2321	2321
85	1894	1894	1894

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CANDELA TABULATION

	<u>0</u>
0.0	3509.299
0.5	3506.587
1.0	3498.451
1.5	3485.569
2.0	3467.941
2.5	3445.567
3.0	3419.126
3.5	3387.938
4.0	3352.004
4.5	3313.358
5.0	3270.645
5.5	3223.185
6.0	3172.336
6.5	3118.096
7.0	3059.789
7.5	2997.413
8.0	2932.326
8.5	2863.170
9.0	2791.981
9.5	2718.079
10.0	2641.466
10.5	2562.819
11.0	2482.137
11.5	2400.100
12.0	2316.707
12.5	2233.991
13.0	2151.276
13.5	2067.883
14.0	1983.812
14.5	1899.740
15.0	1817.025
15.5	1734.988
16.0	1652.950
16.5	1572.947
17.0	1493.622
17.5	1415.652
18.0	1339.039
18.5	1264.460
19.0	1193.270
19.5	1123.437
20.0	1055.637
20.5	991.228
21.0	928.852
21.5	869.189
22.0	812.915
22.5	759.354
23.0	709.182
23.5	661.180
24.0	615.754
24.5	572.973
25.0	532.971
25.5	495.749
26.0	461.036
26.5	428.492

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**CANDELA TABULATION - (Cont.)**

27.0	398.254
27.5	370.253
28.0	344.218
28.5	319.946
29.0	297.707
29.5	276.961
30.0	257.773
30.5	240.146
31.0	223.874
31.5	208.822
32.0	194.923
32.5	182.177
33.0	170.380
33.5	159.396
34.0	149.362
34.5	140.006
35.0	131.395
35.5	123.463
36.0	116.073
36.5	109.293
37.0	102.987
37.5	97.292
38.0	92.004
38.5	87.258
39.0	82.851
39.5	78.851
40.0	75.257
40.5	71.867
41.0	68.816
41.5	65.969
42.0	63.325
42.5	60.884
43.0	58.579
43.5	56.409
44.0	54.375
44.5	52.477
45.0	50.714
45.5	49.087
46.0	47.527
46.5	46.036
47.0	44.612
47.5	43.324
48.0	42.103
48.5	40.883
49.0	39.730
49.5	38.646
50.0	37.629
50.5	36.612
51.0	35.663
51.5	34.646
52.0	33.764
52.5	32.815
53.0	32.001
53.5	31.120
54.0	30.239
54.5	29.425

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CANDELA TABULATION - (Cont.)

55.0	28.611
55.5	27.798
56.0	27.052
56.5	26.306
57.0	25.560
57.5	24.815
58.0	24.069
58.5	23.391
59.0	22.713
59.5	22.035
60.0	21.357
60.5	20.679
61.0	20.001
61.5	19.391
62.0	18.713
62.5	18.102
63.0	17.424
63.5	16.814
64.0	16.204
64.5	15.594
65.0	15.051
65.5	14.441
66.0	13.899
66.5	13.289
67.0	12.746
67.5	12.204
68.0	11.662
68.5	11.187
69.0	10.645
69.5	10.170
70.0	9.695
70.5	9.289
71.0	8.882
71.5	8.475
72.0	8.068
72.5	7.729
73.0	7.390
73.5	7.051
74.0	6.780
74.5	6.441
75.0	6.170
75.5	5.899
76.0	5.627
76.5	5.424
77.0	5.153
77.5	4.882
78.0	4.678
78.5	4.407
79.0	4.204
79.5	4.000
80.0	3.729
80.5	3.526
81.0	3.322
81.5	3.119
82.0	2.848
82.5	2.644

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CANDELA TABULATION - (Cont.)

83.0	2.441
83.5	2.237
84.0	2.034
84.5	1.831
85.0	1.695
85.5	1.492
86.0	1.288
86.5	1.085
87.0	0.949
87.5	0.814
88.0	0.678
88.5	0.542
89.0	0.475
89.5	0.339
90.0	0.271
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	785.26	N.A.	64.50
0-30	1040.11	N.A.	85.40
0-40	1127.55	N.A.	92.60
0-60	1193.66	N.A.	98.10
0-80	1215.36	N.A.	99.80
0-90	1217.28	N.A.	100.00
10-90	925.34	N.A.	76.00
20-40	342.29	N.A.	28.10
20-50	382.61	N.A.	31.40
40-70	81.10	N.A.	6.70
60-80	21.70	N.A.	1.80
70-80	6.71	N.A.	0.60
80-90	1.92	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	1217.29	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	291.94
10-20	493.32
20-30	254.84
30-40	87.44
40-50	40.32
50-60	25.79
60-70	15.00
70-80	6.71
80-90	1.92
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	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	90	90	89	88	86
2	100	96	92	90	98	94	91	89	91	89	87	89	87	85	86	85	83	82
3	96	90	86	83	94	89	86	83	87	84	81	85	82	80	83	81	79	78
4	92	86	81	78	90	85	81	78	83	80	77	81	78	76	80	77	75	74
5	88	82	77	74	87	81	77	74	79	76	73	78	75	72	77	74	72	71
6	85	78	73	70	84	77	73	70	76	72	70	75	72	69	74	71	69	67
7	82	75	70	67	81	74	70	67	73	69	66	72	69	66	71	68	66	65
8	79	72	67	64	78	71	67	64	70	66	64	69	66	63	69	66	63	62
9	76	69	65	62	75	69	64	61	68	64	61	67	64	61	66	63	61	60
10	74	66	62	59	73	66	62	59	65	62	59	65	61	59	64	61	59	58

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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	10.4	11.4	10.8	11.7	12.0	UGR Viewed Endwise	10.4	11.4	10.8	11.7	12.0
	3H	11.4	12.2	11.7	12.6	12.9		11.4	12.2	11.7	12.6	12.9
	4H	11.7	12.5	12.1	12.8	13.2		11.7	12.5	12.1	12.8	13.2
	6H	11.9	12.6	12.3	13.0	13.4		11.9	12.6	12.3	13.0	13.4
	8H	11.9	12.6	12.4	13.0	13.4		11.9	12.6	12.4	13.0	13.4
	12H	12.0	12.6	12.4	13.0	13.4		12.0	12.6	12.4	13.0	13.4

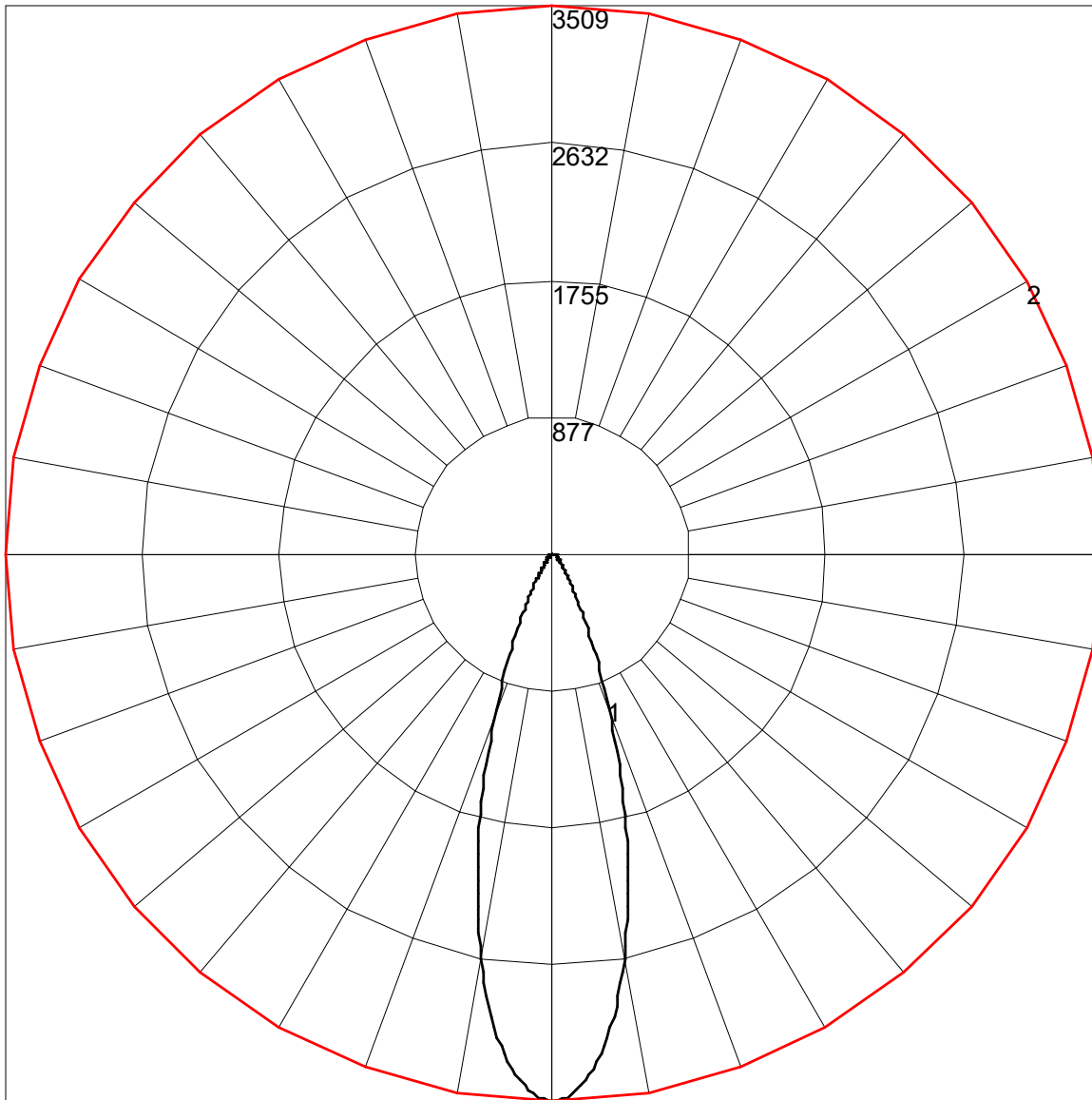
4H	2H	10.7	11.5	11.1	11.9	12.2	10.7	11.5	11.1	11.9	12.2
	3H	11.8	12.5	12.2	12.9	13.3	11.8	12.5	12.2	12.9	13.3
	4H	12.2	12.8	12.6	13.2	13.6	12.2	12.8	12.6	13.2	13.6
	6H	12.5	13.0	13.0	13.4	13.9	12.5	13.0	13.0	13.4	13.9
	8H	12.6	13.1	13.1	13.5	14.0	12.6	13.1	13.1	13.5	14.0
	12H	12.6	13.0	13.1	13.5	14.0	12.6	13.0	13.1	13.5	14.0

8H	4H	12.3	12.7	12.7	13.2	13.6	12.3	12.7	12.7	13.2	13.6
	6H	12.7	13.0	13.2	13.5	14.0	12.7	13.0	13.2	13.5	14.0
	8H	12.8	13.1	13.4	13.7	14.2	12.8	13.1	13.4	13.7	14.2
	12H	13.0	13.2	13.5	13.7	14.3	13.0	13.2	13.5	13.7	14.3

12H	4H	12.2	12.6	12.7	13.1	13.6	12.2	12.6	12.7	13.1	13.6
	6H	12.7	13.0	13.2	13.5	14.0	12.7	13.0	13.2	13.5	14.0
	8H	12.9	13.1	13.4	13.6	14.2	12.9	13.1	13.4	13.6	14.2

Maximum UGR = 14.3

POLAR GRAPH



Maximum Candela = 3509.299 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.)