



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L12-9DW-DIM-UNV-RN-OF-WH_3000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.15

[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-RN-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	1227
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)	0.44
Spacing Criterion (90-270)	0.44
Spacing Criterion (Diagonal)	0.46
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	6141	6141	6141
55	4086	4086	4086
65	2813	2813	2813
75	1826	1826	1826
85	1472	1472	1472

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CANDELA TABULATION

	<u>0</u>
0.0	4602.117
0.5	4596.568
1.0	4582.002
1.5	4556.339
2.0	4521.658
2.5	4477.960
3.0	4425.940
3.5	4366.289
4.0	4299.009
4.5	4224.792
5.0	4144.333
5.5	4057.631
6.0	3964.687
6.5	3864.807
7.0	3759.378
7.5	3649.787
8.0	3536.035
8.5	3417.427
9.0	3296.739
9.5	3172.582
10.0	3047.732
10.5	2920.801
11.0	2793.176
11.5	2665.552
12.0	2538.621
12.5	2413.771
13.0	2289.614
13.5	2168.232
14.0	2048.930
14.5	1933.097
15.0	1821.426
15.5	1713.916
16.0	1609.180
16.5	1509.994
17.0	1414.969
17.5	1324.106
18.0	1238.098
18.5	1156.252
19.0	1079.261
19.5	1007.125
20.0	939.151
20.5	874.645
21.0	814.301
21.5	758.812
22.0	705.404
22.5	655.325
23.0	607.604
23.5	563.421
24.0	522.221
24.5	483.656
25.0	447.657
25.5	414.225
26.0	383.429
26.5	354.921

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CANDELA TABULATION - (Cont.)

27.0	328.633
27.5	304.426
28.0	282.161
28.5	261.908
29.0	243.250
29.5	226.118
30.0	210.373
30.5	195.807
31.0	182.559
31.5	170.351
32.0	159.045
32.5	148.641
33.0	139.139
33.5	130.399
34.0	122.284
34.5	114.862
35.0	108.134
35.5	101.892
36.0	96.204
36.5	91.002
37.0	86.216
37.5	81.846
38.0	77.823
38.5	74.147
39.0	70.818
39.5	67.697
40.0	64.783
40.5	62.078
41.0	59.581
41.5	57.223
42.0	55.073
42.5	53.061
43.0	51.119
43.5	49.316
44.0	47.651
44.5	46.056
45.0	44.599
45.5	43.143
46.0	41.825
46.5	40.507
47.0	39.258
47.5	38.010
48.0	36.831
48.5	35.721
49.0	34.611
49.5	33.571
50.0	32.530
50.5	31.559
51.0	30.588
51.5	29.687
52.0	28.785
52.5	27.953
53.0	27.120
53.5	26.288
54.0	25.525
54.5	24.831

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CANDELA TABULATION - (Cont.)

55.0	24.068
55.5	23.375
56.0	22.681
56.5	21.988
57.0	21.363
57.5	20.739
58.0	20.045
58.5	19.421
59.0	18.866
59.5	18.242
60.0	17.618
60.5	17.063
61.0	16.508
61.5	15.953
62.0	15.398
62.5	14.843
63.0	14.288
63.5	13.734
64.0	13.248
64.5	12.762
65.0	12.208
65.5	11.722
66.0	11.237
66.5	10.751
67.0	10.335
67.5	9.849
68.0	9.433
68.5	8.948
69.0	8.531
69.5	8.115
70.0	7.699
70.5	7.352
71.0	7.005
71.5	6.659
72.0	6.381
72.5	6.034
73.0	5.757
73.5	5.549
74.0	5.271
74.5	5.063
75.0	4.855
75.5	4.647
76.0	4.439
76.5	4.231
77.0	4.023
77.5	3.815
78.0	3.676
78.5	3.468
79.0	3.260
79.5	3.121
80.0	2.913
80.5	2.705
81.0	2.566
81.5	2.358
82.0	2.220
82.5	2.081

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CANDELA TABULATION - (Cont.)

83.0	1.873
83.5	1.734
84.0	1.595
84.5	1.457
85.0	1.318
85.5	1.179
86.0	0.971
86.5	0.902
87.0	0.763
87.5	0.624
88.0	0.486
88.5	0.347
89.0	0.277
89.5	0.208
90.0	0.139
90.5	0.139
91.0	0.069
91.5	0.000
92.0	0.069
92.5	0.069
93.0	0.069
93.5	0.069
94.0	0.000
94.5	0.069
95.0	0.069
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	0.069
103.0	0.000
103.5	0.069
104.0	0.069
104.5	0.069
105.0	0.069
105.5	0.069
106.0	0.069
106.5	0.069
107.0	0.069
107.5	0.000
108.0	0.069
108.5	0.069
109.0	0.069
109.5	0.069
110.0	0.069
110.5	0.069

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CANDELA TABULATION - (Cont.)

111.0	0.069
111.5	0.069
112.0	0.069
112.5	0.069
113.0	0.069
113.5	0.069
114.0	0.069
114.5	0.069
115.0	0.069
115.5	0.069
116.0	0.069
116.5	0.069
117.0	0.069
117.5	0.069
118.0	0.069
118.5	0.069
119.0	0.069
119.5	0.069
120.0	0.069
120.5	0.069
121.0	0.069
121.5	0.069
122.0	0.069
122.5	0.069
123.0	0.069
123.5	0.069
124.0	0.069
124.5	0.069
125.0	0.069
125.5	0.069
126.0	0.069
126.5	0.069
127.0	0.069
127.5	0.069
128.0	0.069
128.5	0.069
129.0	0.069
129.5	0.069
130.0	0.069
130.5	0.069
131.0	0.139
131.5	0.139
132.0	0.139
132.5	0.139
133.0	0.139
133.5	0.139
134.0	0.139
134.5	0.139
135.0	0.208
135.5	0.208
136.0	0.208
136.5	0.208
137.0	0.208
137.5	0.277
138.0	0.277
138.5	0.277

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CANDELA TABULATION - (Cont.)

139.0	0.277
139.5	0.347
140.0	0.347
140.5	0.347
141.0	0.416
141.5	0.416
142.0	0.416
142.5	0.486
143.0	0.486
143.5	0.486
144.0	0.555
144.5	0.555
145.0	0.624
145.5	0.624
146.0	0.694
146.5	0.694
147.0	0.763
147.5	0.763
148.0	0.832
148.5	0.832
149.0	0.902
149.5	0.902
150.0	0.971
150.5	0.971
151.0	1.040
151.5	1.040
152.0	1.110
152.5	1.110
153.0	1.179
153.5	1.179
154.0	1.249
154.5	1.249
155.0	1.318
155.5	1.318
156.0	1.387
156.5	1.387
157.0	1.387
157.5	1.457
158.0	1.457
158.5	1.526
159.0	1.526
159.5	1.526
160.0	1.595
160.5	1.595
161.0	1.595
161.5	1.595
162.0	1.665
162.5	1.665
163.0	1.665
163.5	1.665
164.0	1.665
164.5	1.665
165.0	1.665
165.5	1.665
166.0	1.734
166.5	1.665

CANDELA TABULATION - (Cont.)

167.0	1.734
167.5	1.734
168.0	1.734
168.5	1.665
169.0	1.665
169.5	1.665
170.0	1.665
170.5	1.665
171.0	1.665
171.5	1.665
172.0	1.665
172.5	1.665
173.0	1.665
173.5	1.665
174.0	1.665
174.5	1.665
175.0	1.665
175.5	1.665
176.0	1.665
176.5	1.665
177.0	1.665
177.5	1.595
178.0	1.595
178.5	1.595
179.0	1.595
179.5	1.595
180.0	1.595

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	860.38	N.A.	70.10
0-30	1077.05	N.A.	87.80
0-40	1149.24	N.A.	93.70
0-60	1206.2	N.A.	98.30
0-80	1223.69	N.A.	99.70
0-90	1225.17	N.A.	99.80
10-90	865.30	N.A.	70.50
20-40	288.86	N.A.	23.50
20-50	324.05	N.A.	26.40
40-70	69.18	N.A.	5.60
60-80	17.49	N.A.	1.40
70-80	5.27	N.A.	0.40
80-90	1.48	N.A.	0.10
90-110	0.09	N.A.	0.00
90-120	0.16	N.A.	0.00
90-130	0.22	N.A.	0.00
90-150	0.75	N.A.	0.10
90-180	1.96	N.A.	0.20
110-180	1.88	N.A.	0.20
0-180	1227.13	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	359.87
10-20	500.51
20-30	216.66
30-40	72.20
40-50	35.19
50-60	21.77
60-70	12.22
70-80	5.27
80-90	1.48
90-100	0.04
100-110	0.05
110-120	0.07
120-130	0.06
130-140	0.15
140-150	0.38
150-160	0.59
160-170	0.47
170-180	0.16

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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	50	30	10	0
0	108	108	108	108	106	106	106	106	101	101	101	97	97	97	93	93	93	91	91	91	91
1	104	102	100	98	102	100	98	97	96	95	94	93	92	91	90	89	88	87	87	87	87
2	100	96	93	91	98	95	92	90	92	90	88	89	87	86	87	85	84	83	83	83	83
3	96	91	88	85	95	90	87	84	88	85	83	86	83	81	84	82	80	79	79	79	79
4	93	87	83	80	91	86	82	80	84	81	79	83	80	78	81	79	77	76	76	76	76
5	89	83	79	76	88	83	79	76	81	78	75	80	77	74	78	76	74	73	73	73	73
6	86	80	76	73	85	79	75	72	78	75	72	77	74	71	76	73	71	70	70	70	70
7	84	77	73	70	83	76	72	69	75	72	69	74	71	69	73	71	68	67	67	67	67
8	81	74	70	67	80	74	70	67	73	69	67	72	69	66	71	68	66	65	65	65	65
9	78	72	67	65	78	71	67	65	70	67	64	70	66	64	69	66	64	63	63	63	63
10	76	69	65	62	75	69	65	62	68	65	62	68	64	62	67	64	62	61	61	61	61

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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	9.1	10.1	9.5	10.4	10.7	9.1	10.1	9.5	10.4	10.7
	3H	10.0	10.9	10.4	11.2	11.6	10.0	10.9	10.4	11.2	11.6
	4H	10.2	11.0	10.7	11.4	11.8	10.2	11.0	10.7	11.4	11.8
	6H	10.4	11.1	10.8	11.5	11.9	10.4	11.1	10.8	11.5	11.9
	8H	10.5	11.1	10.9	11.5	11.9	10.5	11.1	10.9	11.5	11.9
	12H	10.5	11.1	10.9	11.5	11.9	10.5	11.1	10.9	11.5	11.9

UGR Viewed Endwise

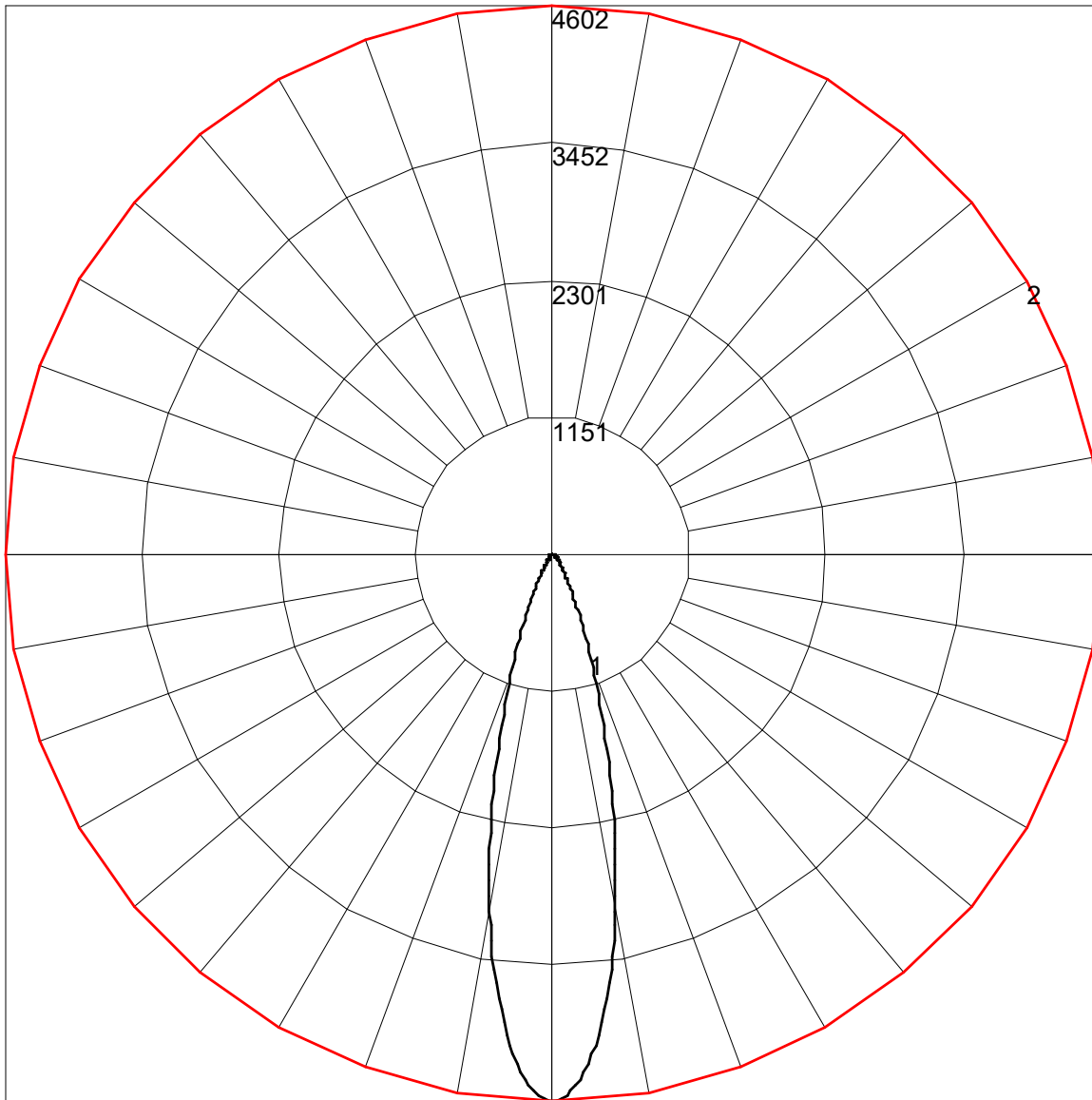
4H	2H	9.4	10.2	9.8	10.5	10.9	9.4	10.2	9.8	10.5	10.9
	3H	10.4	11.0	10.8	11.4	11.9	10.4	11.0	10.8	11.4	11.9
	4H	10.7	11.3	11.2	11.7	12.2	10.7	11.3	11.2	11.7	12.2
	6H	11.0	11.5	11.5	11.9	12.4	11.0	11.5	11.5	11.9	12.4
	8H	11.1	11.5	11.5	12.0	12.5	11.1	11.5	11.5	12.0	12.5
	12H	11.1	11.5	11.6	12.0	12.5	11.1	11.5	11.6	12.0	12.5

8H	4H	10.8	11.2	11.2	11.7	12.1	10.8	11.2	11.2	11.7	12.1
	6H	11.1	11.5	11.6	12.0	12.5	11.1	11.5	11.6	12.0	12.5
	8H	11.3	11.6	11.8	12.1	12.6	11.3	11.6	11.8	12.1	12.6
	12H	11.4	11.7	11.9	12.2	12.7	11.4	11.7	11.9	12.2	12.7

12H	4H	10.7	11.1	11.2	11.6	12.1	10.7	11.1	11.2	11.6	12.1
	6H	11.1	11.4	11.7	11.9	12.5	11.1	11.4	11.7	11.9	12.5
	8H	11.3	11.6	11.8	12.1	12.7	11.3	11.6	11.8	12.1	12.7

Maximum UGR = 12.7

POLAR GRAPH



Maximum Candela = 4602.117 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.)