



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.09

[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-LM-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	1815
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)	0.56
Spacing Criterion (90-270)	0.56
Spacing Criterion (Diagonal)	0.54
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	13772	13772	13772
55	10735	10735	10735
65	8972	8972	8972
75	7218	7218	7218
85	4313	4313	4313

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CANDELA TABULATION

	<u>0</u>
0.0	4696.339
0.5	4694.316
1.0	4687.234
1.5	4676.105
2.0	4661.941
2.5	4642.719
3.0	4620.461
3.5	4594.157
4.0	4563.806
4.5	4531.431
5.0	4495.010
5.5	4454.541
6.0	4410.026
6.5	4360.453
7.0	4306.832
7.5	4248.153
8.0	4184.416
8.5	4115.620
9.0	4042.777
9.5	3963.864
10.0	3878.881
10.5	3787.827
11.0	3692.727
11.5	3592.568
12.0	3486.339
12.5	3376.063
13.0	3260.728
13.5	3141.347
14.0	3016.907
14.5	2888.421
15.0	2758.922
15.5	2627.400
16.0	2495.879
16.5	2363.345
17.0	2231.823
17.5	2104.348
18.0	1977.885
18.5	1856.481
19.0	1740.134
19.5	1627.835
20.0	1521.606
20.5	1419.424
21.0	1324.323
21.5	1234.281
22.0	1149.298
22.5	1070.385
23.0	995.923
23.5	926.520
24.0	862.075
24.5	801.878
25.0	746.032
25.5	694.131
26.0	645.468
26.5	600.549

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CANDELA TABULATION - (Cont.)

27.0	558.664
27.5	520.320
28.0	484.607
28.5	451.626
29.0	421.376
29.5	393.149
30.0	366.946
30.5	342.766
31.0	320.407
31.5	299.870
32.0	280.850
32.5	263.347
33.0	247.261
33.5	232.389
34.0	218.832
34.5	206.287
35.0	194.956
35.5	184.434
36.0	174.823
36.5	166.021
37.0	157.927
37.5	150.542
38.0	143.865
38.5	137.693
39.0	132.028
39.5	126.868
40.0	122.113
40.5	117.661
41.0	113.513
41.5	109.770
42.0	106.229
42.5	102.890
43.0	99.855
43.5	96.921
44.0	94.190
44.5	91.661
45.0	89.131
45.5	86.804
46.0	84.680
46.5	82.555
47.0	80.532
47.5	78.711
48.0	76.788
48.5	75.069
49.0	73.349
49.5	71.629
50.0	70.111
50.5	68.594
51.0	67.177
51.5	65.660
52.0	64.243
52.5	62.928
53.0	61.512
53.5	60.197
54.0	58.881
54.5	57.566

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CANDELA TABULATION - (Cont.)

55.0	56.352
55.5	55.138
56.0	53.924
56.5	52.710
57.0	51.395
57.5	50.282
58.0	49.169
58.5	48.157
59.0	47.044
59.5	45.931
60.0	44.819
60.5	43.706
61.0	42.795
61.5	41.682
62.0	40.671
62.5	39.659
63.0	38.647
63.5	37.737
64.0	36.725
64.5	35.713
65.0	34.702
65.5	33.791
66.0	32.880
66.5	31.970
67.0	30.958
67.5	30.048
68.0	29.137
68.5	28.227
69.0	27.316
69.5	26.406
70.0	25.495
70.5	24.686
71.0	23.876
71.5	22.865
72.0	22.055
72.5	21.246
73.0	20.436
73.5	19.526
74.0	18.717
74.5	17.907
75.0	17.098
75.5	16.288
76.0	15.479
76.5	14.670
77.0	13.860
77.5	13.253
78.0	12.444
78.5	11.736
79.0	11.028
79.5	10.319
80.0	9.611
80.5	8.903
81.0	8.195
81.5	7.689
82.0	6.880
82.5	6.374

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CANDELA TABULATION - (Cont.)

83.0	5.666
83.5	5.160
84.0	4.553
84.5	3.946
85.0	3.440
85.5	2.833
86.0	2.428
86.5	1.922
87.0	1.619
87.5	1.315
88.0	1.012
88.5	0.809
89.0	0.607
89.5	0.405
90.0	0.304
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
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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

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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
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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	1147.87	N.A.	63.20
0-30	1507.57	N.A.	83.10
0-40	1637.23	N.A.	90.20
0-60	1758.11	N.A.	96.90
0-80	1810.8	N.A.	99.80
0-90	1815.08	N.A.	100.00
10-90	1405.21	N.A.	77.40
20-40	489.36	N.A.	27.00
20-50	559.58	N.A.	30.80
40-70	155.38	N.A.	8.60
60-80	52.69	N.A.	2.90
70-80	18.19	N.A.	1.00
80-90	4.28	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	1815.09	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	409.87
10-20	738.00
20-30	359.70
30-40	129.66
40-50	70.22
50-60	50.65
60-70	34.51
70-80	18.19
80-90	4.28
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	178	178	178	178	174	174	174	174	166	166	166	159	159	159	153	153	153	150
1	170	166	163	160	167	163	160	157	157	155	152	152	150	148	147	145	144	141
2	163	156	150	146	160	154	148	144	149	145	141	144	141	138	140	138	135	133
3	156	147	140	135	153	145	139	134	141	136	132	138	133	130	134	131	128	126
4	149	139	132	126	147	138	131	126	135	129	124	132	127	123	129	125	121	119
5	143	132	125	119	141	131	124	119	128	122	117	126	121	116	124	119	115	113
6	138	126	118	113	136	125	118	112	123	117	112	121	115	111	119	114	110	108
7	133	121	113	108	131	120	112	107	118	111	107	116	111	106	115	110	106	104
8	128	116	108	103	126	115	108	103	113	107	102	112	106	102	111	105	101	100
9	124	111	104	99	122	111	103	98	109	103	98	108	102	98	107	101	97	96
10	119	107	100	95	118	106	99	95	105	99	94	104	98	94	103	98	94	92

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UGR TABLE - CORRECTED

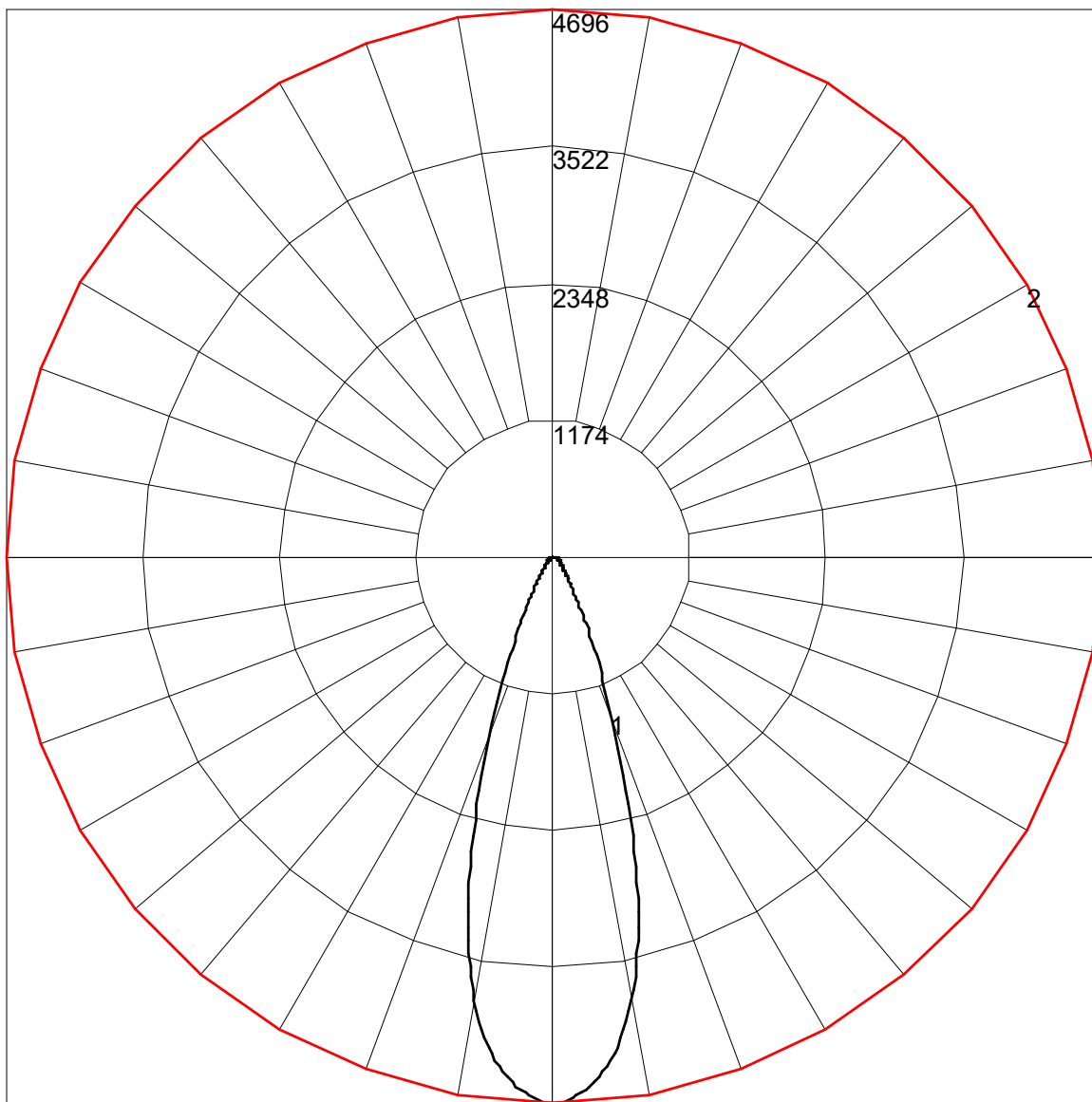
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	12.6	13.6	12.9	13.9	14.2	12.6	13.6	12.9	13.9	14.2
	3H	14.0	14.9	14.4	15.2	15.6	14.0	14.9	14.4	15.2	15.6
	4H	14.5	15.3	14.9	15.7	16.1	14.5	15.3	14.9	15.7	16.1
	6H	14.8	15.6	15.3	16.0	16.4	14.8	15.6	15.3	16.0	16.4
	8H	14.9	15.6	15.4	16.0	16.4	14.9	15.6	15.4	16.0	16.4
	12H	14.9	15.6	15.4	16.0	16.4	14.9	15.6	15.4	16.0	16.4
4H	2H	13.0	13.8	13.4	14.2	14.6	13.0	13.8	13.4	14.2	14.6
	3H	14.6	15.3	15.0	15.7	16.1	14.6	15.3	15.0	15.7	16.1
	4H	15.3	15.9	15.7	16.3	16.7	15.3	15.9	15.7	16.3	16.7
	6H	15.7	16.2	16.2	16.7	17.1	15.7	16.2	16.2	16.7	17.1
	8H	15.8	16.3	16.3	16.7	17.2	15.8	16.3	16.3	16.7	17.2
	12H	15.8	16.3	16.3	16.7	17.2	15.8	16.3	16.3	16.7	17.2
8H	4H	15.4	15.9	15.9	16.4	16.8	15.4	15.9	15.9	16.4	16.8
	6H	15.9	16.3	16.5	16.8	17.3	15.9	16.3	16.5	16.8	17.3
	8H	16.1	16.5	16.6	17.0	17.5	16.1	16.5	16.6	17.0	17.5
	12H	16.2	16.5	16.7	17.0	17.6	16.2	16.5	16.7	17.0	17.6
12H	4H	15.4	15.8	15.9	16.3	16.8	15.4	15.8	15.9	16.3	16.8
	6H	16.0	16.3	16.5	16.8	17.3	16.0	16.3	16.5	16.8	17.3
	8H	16.1	16.5	16.7	16.9	17.5	16.1	16.5	16.7	16.9	17.5

Maximum UGR = 17.6

POLAR GRAPH



Maximum Candela = 4696.339 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.)