



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L18-9DW-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] 17 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-L18-9DW-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	1770
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	47
Total Luminaire Watts	37.7
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	40952	40952	40952
55	33067	33067	33067
65	21391	21391	21391
75	11928	11928	11928
85	6128	6128	6128

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CANDELA TABULATION

	<u>0</u>
0.0	1422.154
0.5	1422.154
1.0	1420.816
1.5	1418.140
2.0	1415.464
2.5	1412.789
3.0	1408.775
3.5	1404.761
4.0	1400.748
4.5	1395.396
5.0	1391.383
5.5	1386.031
6.0	1380.680
6.5	1375.328
7.0	1369.977
7.5	1364.625
8.0	1359.274
8.5	1352.585
9.0	1347.233
9.5	1341.882
10.0	1336.798
10.5	1331.312
11.0	1325.693
11.5	1320.208
12.0	1314.990
12.5	1309.773
13.0	1304.555
13.5	1299.204
14.0	1293.852
14.5	1288.501
15.0	1283.015
15.5	1277.396
16.0	1271.510
16.5	1265.623
17.0	1259.603
17.5	1253.181
18.0	1246.358
18.5	1239.000
19.0	1231.909
19.5	1224.283
20.0	1215.988
20.5	1206.489
21.0	1195.519
21.5	1183.612
22.0	1169.966
22.5	1154.848
23.0	1137.723
23.5	1118.458
24.0	1097.319
24.5	1073.371
25.0	1046.614
25.5	1017.047
26.0	985.072
26.5	951.090

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CANDELA TABULATION - (Cont.)

27.0	915.369
27.5	879.113
28.0	841.118
28.5	803.524
29.0	766.063
29.5	728.603
30.0	691.812
30.5	655.689
31.0	621.573
31.5	588.528
32.0	557.356
32.5	528.324
33.0	501.433
33.5	477.218
34.0	455.410
34.5	436.413
35.0	419.689
35.5	405.508
36.0	393.066
36.5	382.630
37.0	373.399
37.5	365.506
38.0	358.281
38.5	351.859
39.0	346.106
39.5	340.889
40.0	336.206
40.5	331.791
41.0	327.510
41.5	323.630
42.0	319.750
42.5	316.138
43.0	312.526
43.5	308.780
44.0	305.034
44.5	301.288
45.0	297.408
45.5	293.394
46.0	289.247
46.5	284.966
47.0	280.551
47.5	276.002
48.0	271.453
48.5	266.637
49.0	261.687
49.5	256.469
50.0	251.252
50.5	245.900
51.0	240.281
51.5	234.796
52.0	229.177
52.5	223.558
53.0	218.206
53.5	212.320
54.0	206.433
54.5	200.546

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55.0	194.794
55.5	188.907
56.0	183.154
56.5	177.535
57.0	171.916
57.5	166.297
58.0	160.812
58.5	155.460
59.0	150.109
59.5	144.891
60.0	139.673
60.5	134.590
61.0	129.639
61.5	124.689
62.0	120.007
62.5	115.190
63.0	110.642
63.5	105.959
64.0	101.544
64.5	97.129
65.0	92.848
65.5	88.567
66.0	84.419
66.5	80.406
67.0	76.526
67.5	72.646
68.0	68.900
68.5	65.154
69.0	61.542
69.5	58.063
70.0	54.853
70.5	51.775
71.0	48.966
71.5	46.290
72.0	43.748
72.5	41.340
73.0	39.066
73.5	37.059
74.0	35.052
74.5	33.313
75.0	31.707
75.5	30.236
76.0	28.630
76.5	27.159
77.0	25.687
77.5	24.215
78.0	22.878
78.5	21.406
79.0	20.068
79.5	18.730
80.0	17.392
80.5	16.054
81.0	14.850
81.5	13.646
82.0	12.308
82.5	11.238

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CANDELA TABULATION - (Cont.)

83.0	10.034
83.5	8.830
84.0	7.760
84.5	6.556
85.0	5.485
85.5	4.549
86.0	3.612
86.5	2.943
87.0	2.274
87.5	1.739
88.0	1.204
88.5	0.803
89.0	0.401
89.5	0.134
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

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
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127.0	0.000
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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

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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

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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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Zone	Lumens	%Lamp	%Fixt
0-20	492.26	N.A.	27.80
0-30	952.58	N.A.	53.80
0-40	1233.09	N.A.	69.60
0-60	1635.27	N.A.	92.40
0-80	1763.23	N.A.	99.60
0-90	1770.47	N.A.	100.00
10-90	1639.48	N.A.	92.60
20-40	740.84	N.A.	41.80
20-50	969.07	N.A.	54.70
40-70	495.19	N.A.	28.00
60-80	127.96	N.A.	7.20
70-80	34.94	N.A.	2.00
80-90	7.24	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	1770.47	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	130.98
10-20	361.27
20-30	460.32
30-40	280.52
40-50	228.23
50-60	173.94
60-70	93.02
70-80	34.94
80-90	7.24
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	195	195	195	195	190	190	190	190	182	182	182	174	174	174	167	167	167	164
1	183	177	172	167	179	174	169	165	167	163	160	161	158	155	155	153	150	147
2	171	161	152	145	167	158	150	144	152	146	140	147	142	137	142	138	134	131
3	160	146	136	128	156	144	134	127	139	131	125	135	128	123	131	126	121	118
4	149	134	123	114	146	132	121	113	128	119	112	125	117	110	121	115	109	106
5	140	123	111	103	137	121	110	102	118	108	101	115	107	100	112	105	99	96
6	131	114	102	93	129	112	101	93	110	100	92	107	98	91	105	97	91	88
7	124	105	94	85	121	104	93	85	102	92	85	100	91	84	98	90	84	81
8	117	98	87	79	114	97	86	78	95	85	78	93	84	78	92	83	77	75
9	110	92	81	73	108	91	80	73	89	79	72	88	79	72	86	78	72	69
10	105	86	75	68	103	85	75	68	84	74	67	83	74	67	81	73	67	65

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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

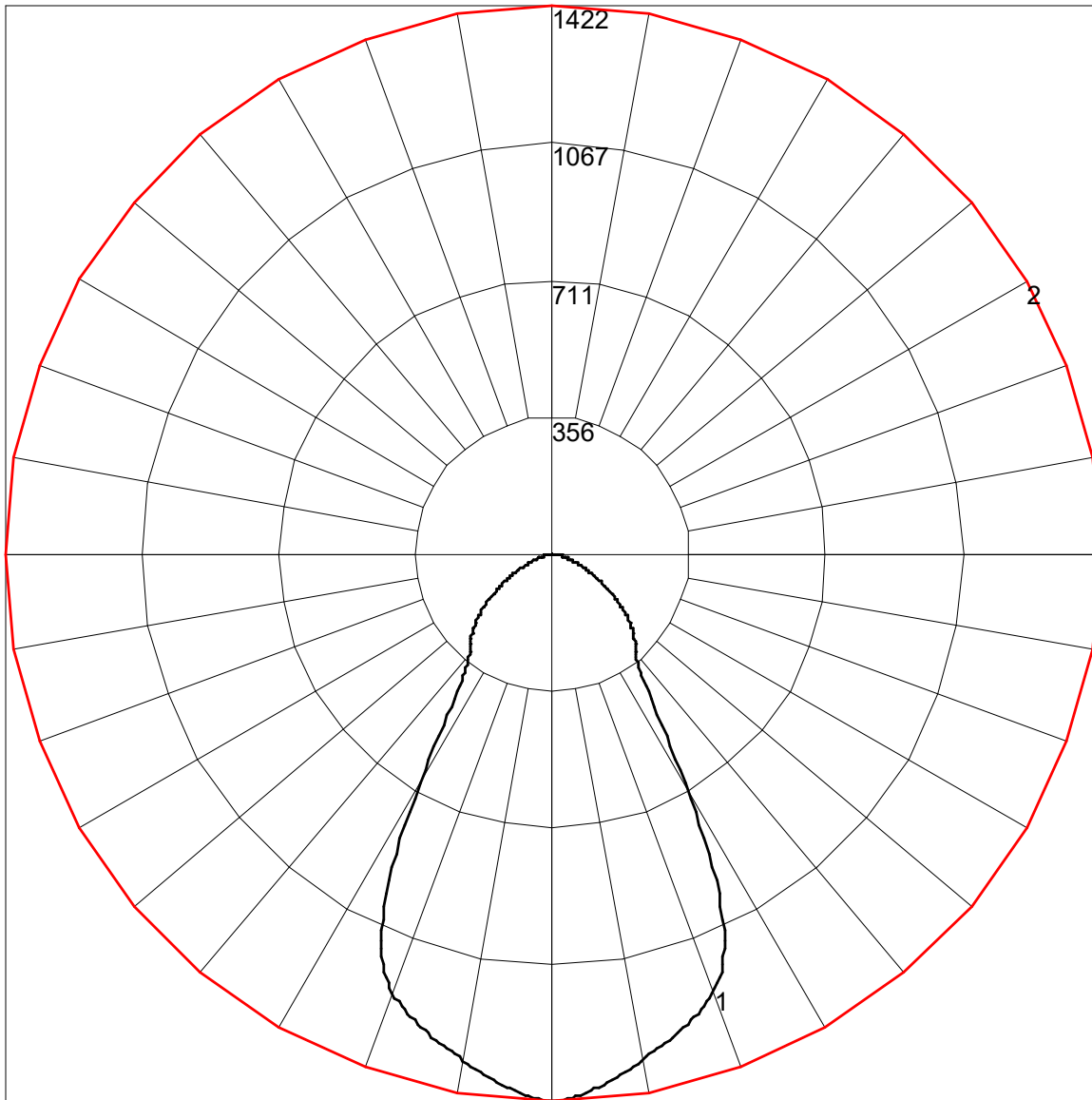
X=2H	Y=2H	19.9	21.2	20.3	21.5	21.8	19.9	21.2	20.3	21.5	21.8
	3H	20.7	21.8	21.0	22.2	22.5	20.7	21.8	21.0	22.2	22.5
	4H	20.8	21.9	21.2	22.3	22.6	20.8	21.9	21.2	22.3	22.6
	6H	20.9	21.9	21.4	22.3	22.7	20.9	21.9	21.4	22.3	22.7
	8H	21.0	21.9	21.4	22.3	22.7	21.0	21.9	21.4	22.3	22.7
	12H	20.9	21.8	21.4	22.2	22.7	20.9	21.8	21.4	22.2	22.7

UGR Viewed Endwise

4H	2H	20.2	21.3	20.6	21.6	22.0	20.2	21.3	20.6	21.6	22.0
	3H	21.1	22.0	21.5	22.4	22.8	21.1	22.0	21.5	22.4	22.8
	4H	21.3	22.1	21.7	22.5	23.0	21.3	22.1	21.7	22.5	23.0
	6H	21.5	22.2	21.9	22.6	23.1	21.5	22.2	21.9	22.6	23.1
	8H	21.5	22.1	22.0	22.6	23.1	21.5	22.1	22.0	22.6	23.1
	12H	21.5	22.1	22.0	22.6	23.0	21.5	22.1	22.0	22.6	23.0
8H	4H	21.4	22.0	21.8	22.4	22.9	21.4	22.0	21.8	22.4	22.9
	6H	21.6	22.1	22.1	22.6	23.1	21.6	22.1	22.1	22.6	23.1
	8H	21.6	22.1	22.2	22.6	23.1	21.6	22.1	22.2	22.6	23.1
	12H	21.7	22.1	22.2	22.6	23.1	21.7	22.1	22.2	22.6	23.1
12H	4H	21.3	21.9	21.8	22.4	22.8	21.3	21.9	21.8	22.4	22.8
	6H	21.6	22.0	22.1	22.5	23.0	21.6	22.0	22.1	22.5	23.0
	8H	21.6	22.1	22.2	22.5	23.1	21.6	22.1	22.2	22.5	23.1

Maximum UGR = 23.1

POLAR GRAPH



Maximum Candela = 1422.154 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.)