



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L9-8TW-DIM-UNV-RN-OF-WH_4000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.15

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 20 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-L9-8TW-DIM-UNV-RN-OF-WH 4000k

[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	1075
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	74
Total Luminaire Watts	14.6
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	5380	5380	5380
55	3580	3580	3580
65	2464	2464	2464
75	1600	1600	1600
85	1290	1290	1290

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CANDELA TABULATION

	<u>0</u>
0.0	4032.009
0.5	4027.148
1.0	4014.386
1.5	3991.902
2.0	3961.517
2.5	3923.233
3.0	3877.656
3.5	3825.395
4.0	3766.450
4.5	3701.427
5.0	3630.935
5.5	3554.974
6.0	3473.544
6.5	3386.037
7.0	3293.668
7.5	3197.654
8.0	3097.993
8.5	2994.078
9.0	2888.341
9.5	2779.564
10.0	2670.181
10.5	2558.974
11.0	2447.159
11.5	2335.345
12.0	2224.138
12.5	2114.754
13.0	2005.978
13.5	1899.632
14.0	1795.110
14.5	1693.626
15.0	1595.788
15.5	1501.597
16.0	1409.836
16.5	1322.937
17.0	1239.683
17.5	1160.076
18.0	1084.723
18.5	1013.016
19.0	945.562
19.5	882.363
20.0	822.809
20.5	766.294
21.0	713.426
21.5	664.811
22.0	618.019
22.5	574.144
23.0	532.335
23.5	493.625
24.0	457.528
24.5	423.741
25.0	392.202
25.5	362.911
26.0	335.930
26.5	310.954

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CANDELA TABULATION - (Cont.)

27.0	287.923
27.5	266.714
28.0	247.207
28.5	229.463
29.0	213.116
29.5	198.106
30.0	184.312
30.5	171.550
31.0	159.943
31.5	149.248
32.0	139.343
32.5	130.228
33.0	121.902
33.5	114.245
34.0	107.135
34.5	100.633
35.0	94.739
35.5	89.269
36.0	84.286
36.5	79.729
37.0	75.536
37.5	71.707
38.0	68.183
38.5	64.962
39.0	62.045
39.5	59.310
40.0	56.758
40.5	54.388
41.0	52.200
41.5	50.134
42.0	48.250
42.5	46.488
43.0	44.787
43.5	43.207
44.0	41.748
44.5	40.350
45.0	39.074
45.5	37.798
46.0	36.644
46.5	35.489
47.0	34.395
47.5	33.301
48.0	32.268
48.5	31.296
49.0	30.324
49.5	29.412
50.0	28.501
50.5	27.650
51.0	26.799
51.5	26.009
52.0	25.219
52.5	24.490
53.0	23.761
53.5	23.031
54.0	22.363
54.5	21.755

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CANDELA TABULATION - (Cont.)

55.0	21.087
55.5	20.479
56.0	19.871
56.5	19.264
57.0	18.717
57.5	18.170
58.0	17.562
58.5	17.015
59.0	16.529
59.5	15.982
60.0	15.435
60.5	14.949
61.0	14.463
61.5	13.977
62.0	13.491
62.5	13.005
63.0	12.518
63.5	12.032
64.0	11.607
64.5	11.181
65.0	10.695
65.5	10.270
66.0	9.845
66.5	9.419
67.0	9.055
67.5	8.629
68.0	8.265
68.5	7.839
69.0	7.475
69.5	7.110
70.0	6.745
70.5	6.441
71.0	6.138
71.5	5.834
72.0	5.591
72.5	5.287
73.0	5.044
73.5	4.862
74.0	4.618
74.5	4.436
75.0	4.254
75.5	4.072
76.0	3.889
76.5	3.707
77.0	3.525
77.5	3.342
78.0	3.221
78.5	3.038
79.0	2.856
79.5	2.735
80.0	2.552
80.5	2.370
81.0	2.248
81.5	2.066
82.0	1.945
82.5	1.823

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CANDELA TABULATION - (Cont.)

83.0	1.641
83.5	1.519
84.0	1.398
84.5	1.276
85.0	1.155
85.5	1.033
86.0	0.851
86.5	0.790
87.0	0.668
87.5	0.547
88.0	0.425
88.5	0.304
89.0	0.243
89.5	0.182
90.0	0.122
90.5	0.122
91.0	0.061
91.5	0.000
92.0	0.061
92.5	0.061
93.0	0.061
93.5	0.061
94.0	0.000
94.5	0.061
95.0	0.061
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	0.061
103.0	0.000
103.5	0.061
104.0	0.061
104.5	0.061
105.0	0.061
105.5	0.061
106.0	0.061
106.5	0.061
107.0	0.061
107.5	0.000
108.0	0.061
108.5	0.061
109.0	0.061
109.5	0.061
110.0	0.061
110.5	0.061

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CANDELA TABULATION - (Cont.)

111.0	0.061
111.5	0.061
112.0	0.061
112.5	0.061
113.0	0.061
113.5	0.061
114.0	0.061
114.5	0.061
115.0	0.061
115.5	0.061
116.0	0.061
116.5	0.061
117.0	0.061
117.5	0.061
118.0	0.061
118.5	0.061
119.0	0.061
119.5	0.061
120.0	0.061
120.5	0.061
121.0	0.061
121.5	0.061
122.0	0.061
122.5	0.061
123.0	0.061
123.5	0.061
124.0	0.061
124.5	0.061
125.0	0.061
125.5	0.061
126.0	0.061
126.5	0.061
127.0	0.061
127.5	0.061
128.0	0.061
128.5	0.061
129.0	0.061
129.5	0.061
130.0	0.061
130.5	0.061
131.0	0.122
131.5	0.122
132.0	0.122
132.5	0.122
133.0	0.122
133.5	0.122
134.0	0.122
134.5	0.122
135.0	0.182
135.5	0.182
136.0	0.182
136.5	0.182
137.0	0.182
137.5	0.243
138.0	0.243
138.5	0.243

IES INDOOR REPORT**PHOTOMETRIC FILENAME : V4DR-L9-8TW-DIM-UNV-RN-OF-WH_4000K.IES****CANDELA TABULATION - (Cont.)**

139.0	0.243
139.5	0.304
140.0	0.304
140.5	0.304
141.0	0.365
141.5	0.365
142.0	0.365
142.5	0.425
143.0	0.425
143.5	0.425
144.0	0.486
144.5	0.486
145.0	0.547
145.5	0.547
146.0	0.608
146.5	0.608
147.0	0.668
147.5	0.668
148.0	0.729
148.5	0.729
149.0	0.790
149.5	0.790
150.0	0.851
150.5	0.851
151.0	0.912
151.5	0.912
152.0	0.972
152.5	0.972
153.0	1.033
153.5	1.033
154.0	1.094
154.5	1.094
155.0	1.155
155.5	1.155
156.0	1.215
156.5	1.215
157.0	1.215
157.5	1.276
158.0	1.276
158.5	1.337
159.0	1.337
159.5	1.337
160.0	1.398
160.5	1.398
161.0	1.398
161.5	1.398
162.0	1.458
162.5	1.458
163.0	1.458
163.5	1.458
164.0	1.458
164.5	1.458
165.0	1.458
165.5	1.458
166.0	1.519
166.5	1.458

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167.0	1.519
167.5	1.519
168.0	1.519
168.5	1.458
169.0	1.458
169.5	1.458
170.0	1.458
170.5	1.458
171.0	1.458
171.5	1.458
172.0	1.458
172.5	1.458
173.0	1.458
173.5	1.458
174.0	1.458
174.5	1.458
175.0	1.458
175.5	1.458
176.0	1.458
176.5	1.458
177.0	1.458
177.5	1.398
178.0	1.398
178.5	1.398
179.0	1.398
179.5	1.398
180.0	1.398

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	753.80	N.A.	70.10
0-30	943.62	N.A.	87.80
0-40	1006.88	N.A.	93.70
0-60	1056.78	N.A.	98.30
0-80	1072.1	N.A.	99.70
0-90	1073.39	N.A.	99.80
10-90	758.10	N.A.	70.50
20-40	253.07	N.A.	23.50
20-50	283.91	N.A.	26.40
40-70	60.61	N.A.	5.60
60-80	15.32	N.A.	1.40
70-80	4.61	N.A.	0.40
80-90	1.30	N.A.	0.10
90-110	0.08	N.A.	0.00
90-120	0.14	N.A.	0.00
90-130	0.19	N.A.	0.00
90-150	0.66	N.A.	0.10
90-180	1.72	N.A.	0.20
110-180	1.64	N.A.	0.20
0-180	1075.12	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	315.29
10-20	438.51
20-30	189.82
30-40	63.25
40-50	30.83
50-60	19.07
60-70	10.71
70-80	4.61
80-90	1.30
90-100	0.03
100-110	0.04
110-120	0.06
120-130	0.05
130-140	0.13
140-150	0.34
150-160	0.51
160-170	0.41
170-180	0.14

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	69	69	69	69	67	67	67	67	64	64	64	61	61	61	59	59	59	58
1	66	65	64	62	65	64	62	61	61	60	60	59	58	58	57	57	56	55
2	64	61	59	58	62	60	58	57	58	57	56	57	56	55	55	54	53	52
3	61	58	56	54	60	57	55	53	56	54	53	54	53	52	53	52	51	50
4	59	55	53	51	58	55	52	51	54	52	50	52	51	49	51	50	49	48
5	57	53	50	48	56	52	50	48	51	49	48	51	49	47	50	48	47	46
6	55	51	48	46	54	50	48	46	50	47	46	49	47	45	48	46	45	44
7	53	49	46	44	52	49	46	44	48	46	44	47	45	44	47	45	43	43
8	51	47	44	43	51	47	44	42	46	44	42	46	44	42	45	43	42	41
9	50	45	43	41	49	45	43	41	45	42	41	44	42	41	44	42	41	40
10	48	44	41	40	48	44	41	40	43	41	40	43	41	39	43	41	39	39

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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

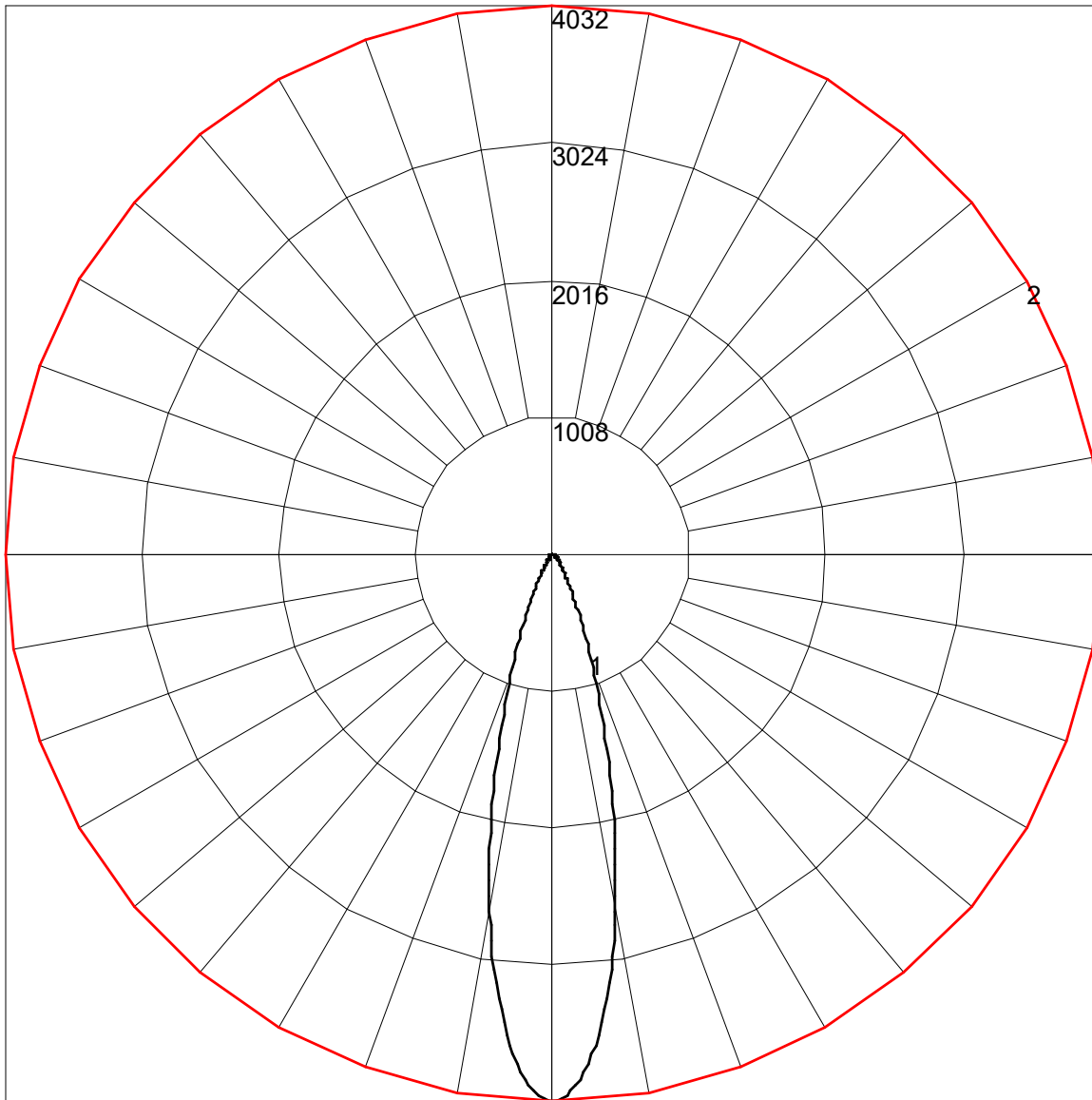
X=2H	Y=2H	10.3	11.3	10.7	11.6	11.9	10.3	11.3	10.7	11.6	11.9
	3H	11.2	12.1	11.6	12.4	12.8	11.2	12.1	11.6	12.4	12.8
	4H	11.4	12.2	11.9	12.6	13.0	11.4	12.2	11.9	12.6	13.0
	6H	11.6	12.3	12.0	12.7	13.1	11.6	12.3	12.0	12.7	13.1
	8H	11.7	12.3	12.1	12.7	13.1	11.7	12.3	12.1	12.7	13.1
	12H	11.7	12.3	12.1	12.7	13.1	11.7	12.3	12.1	12.7	13.1

UGR Viewed Endwise

4H	2H	10.6	11.4	11.0	11.7	12.1	10.6	11.4	11.0	11.7	12.1
	3H	11.6	12.2	12.0	12.6	13.0	11.6	12.2	12.0	12.6	13.0
	4H	11.9	12.5	12.4	12.9	13.4	11.9	12.5	12.4	12.9	13.4
	6H	12.2	12.7	12.7	13.1	13.6	12.2	12.7	12.7	13.1	13.6
	8H	12.3	12.7	12.7	13.2	13.7	12.3	12.7	12.7	13.2	13.7
	12H	12.3	12.7	12.8	13.2	13.7	12.3	12.7	12.8	13.2	13.7
8H	4H	12.0	12.4	12.4	12.9	13.3	12.0	12.4	12.4	12.9	13.3
	6H	12.3	12.7	12.8	13.2	13.7	12.3	12.7	12.8	13.2	13.7
	8H	12.5	12.8	13.0	13.3	13.8	12.5	12.8	13.0	13.3	13.8
	12H	12.6	12.9	13.1	13.4	13.9	12.6	12.9	13.1	13.4	13.9
12H	4H	11.9	12.3	12.4	12.8	13.3	11.9	12.3	12.4	12.8	13.3
	6H	12.3	12.6	12.9	13.1	13.7	12.3	12.6	12.9	13.1	13.7
	8H	12.5	12.8	13.0	13.3	13.9	12.5	12.8	13.0	13.3	13.9

Maximum UGR = 13.9

POLAR GRAPH



Maximum Candela = 4032.009 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.)