



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.07

[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-LW-OF-WH 4000k

[LUMINAIRE] Black formed aluminum housing, white reflector, clear patt

[MORE] erved glass 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	936
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	64
Total Luminaire Watts	14.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.00
Spacing Criterion (90-270)	1.00
Spacing Criterion (Diagonal)	0.90
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	25824	25824	25824
55	21219	21219	21219
65	15523	15523	15523
75	10746	10746	10746
85	5858	5858	5858

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CANDELA TABULATION

	<u>0</u>
0.0	657.346
0.5	657.138
1.0	656.723
1.5	656.169
2.0	655.615
2.5	654.992
3.0	654.161
3.5	653.677
4.0	653.331
4.5	653.123
5.0	652.846
5.5	652.569
6.0	652.361
6.5	652.085
7.0	651.877
7.5	651.738
8.0	651.669
8.5	651.461
9.0	651.254
9.5	650.838
10.0	650.561
10.5	650.077
11.0	649.592
11.5	648.969
12.0	648.277
12.5	647.446
13.0	646.477
13.5	645.369
14.0	643.985
14.5	642.323
15.0	640.315
15.5	637.892
16.0	635.192
16.5	632.008
17.0	628.546
17.5	624.669
18.0	620.100
18.5	615.392
19.0	610.269
19.5	604.523
20.0	598.223
20.5	591.369
21.0	583.961
21.5	576.000
22.0	567.208
22.5	557.861
23.0	547.823
23.5	537.023
24.0	525.392
24.5	513.000
25.0	499.569
25.5	485.515
26.0	470.492
26.5	454.569

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CANDELA TABULATION - (Cont.)

27.0	438.092
27.5	420.923
28.0	403.477
28.5	385.961
29.0	368.792
29.5	351.969
30.0	335.769
30.5	320.538
31.0	306.277
31.5	293.261
32.0	281.423
32.5	270.761
33.0	261.277
33.5	252.831
34.0	245.285
34.5	238.638
35.0	232.615
35.5	227.146
36.0	222.300
36.5	217.731
37.0	213.577
37.5	209.700
38.0	206.100
38.5	202.638
39.0	199.454
39.5	196.338
40.0	193.431
40.5	190.523
41.0	187.754
41.5	185.054
42.0	182.492
42.5	179.931
43.0	177.369
43.5	174.808
44.0	172.246
44.5	169.685
45.0	167.123
45.5	164.562
46.0	162.000
46.5	159.438
47.0	156.738
47.5	154.038
48.0	151.338
48.5	148.569
49.0	145.731
49.5	142.892
50.0	140.123
50.5	137.285
51.0	134.446
51.5	131.608
52.0	128.838
52.5	126.069
53.0	123.231
53.5	120.323
54.0	117.346
54.5	114.369

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CANDELA TABULATION - (Cont.)

55.0	111.392
55.5	108.415
56.0	105.508
56.5	102.669
57.0	99.831
57.5	96.992
58.0	94.223
58.5	91.523
59.0	88.823
59.5	86.192
60.0	83.631
60.5	81.069
61.0	78.577
61.5	76.154
62.0	73.731
62.5	71.308
63.0	68.995
63.5	66.697
64.0	64.440
64.5	62.218
65.0	60.044
65.5	57.925
66.0	55.835
66.5	53.799
67.0	51.812
67.5	49.860
68.0	47.970
68.5	46.122
69.0	44.273
69.5	42.487
70.0	40.749
70.5	39.039
71.0	37.371
71.5	35.744
72.0	34.172
72.5	32.622
73.0	31.112
73.5	29.645
74.0	28.205
74.5	26.813
75.0	25.456
75.5	24.141
76.0	22.853
76.5	21.600
77.0	20.402
77.5	19.212
78.0	18.062
78.5	16.948
79.0	15.854
79.5	14.802
80.0	13.770
80.5	12.766
81.0	11.776
81.5	10.814
82.0	9.872
82.5	8.958

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CANDELA TABULATION - (Cont.)

83.0	8.052
83.5	7.172
84.0	6.314
84.5	5.476
85.0	4.673
85.5	3.898
86.0	3.157
86.5	2.458
87.0	1.842
87.5	1.329
88.0	0.928
88.5	0.588
89.0	0.367
89.5	0.249
90.0	0.173
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
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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
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148.5	0.000
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149.5	0.000
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150.5	0.000
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151.5	0.000
152.0	0.000
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153.0	0.000
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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	241.46	N.A.	25.80
0-30	463.14	N.A.	49.50
0-40	614.14	N.A.	65.60
0-60	842.40	N.A.	90.00
0-80	929.91	N.A.	99.40
0-90	935.76	N.A.	100.00
10-90	873.49	N.A.	93.30
20-40	372.69	N.A.	39.80
20-50	501.39	N.A.	53.60
40-70	288.30	N.A.	30.80
60-80	87.50	N.A.	9.40
70-80	27.46	N.A.	2.90
80-90	5.85	N.A.	0.60
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	935.76	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	62.26
10-20	179.19
20-30	221.68
30-40	151.00
40-50	128.71
50-60	99.55
60-70	60.04
70-80	27.46
80-90	5.85
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

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	64	62	60	58	63	61	59	57	58	57	56	56	55	54	54	53	52	51
2	60	56	53	50	58	55	52	50	53	51	48	51	49	47	49	48	46	45
3	56	51	47	44	54	50	46	43	48	45	43	47	44	42	45	43	41	40
4	52	46	42	39	51	45	41	39	44	41	38	43	40	38	42	39	37	36
5	48	42	38	35	47	42	38	35	40	37	34	39	36	34	38	36	34	32
6	45	39	35	31	44	38	34	31	37	34	31	36	33	31	36	33	31	30
7	43	36	32	29	42	36	31	29	35	31	28	34	31	28	33	30	28	27
8	40	33	29	26	39	33	29	26	32	29	26	32	28	26	31	28	26	25
9	38	31	27	24	37	31	27	24	30	27	24	30	26	24	29	26	24	23
10	36	29	25	23	35	29	25	22	28	25	22	28	25	22	27	24	22	21

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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	22.3	23.7	22.7	24.0	24.3	22.3	23.7	22.7	24.0	24.3
	3H	23.4	24.6	23.8	25.0	25.3	23.4	24.6	23.8	25.0	25.3
	4H	23.8	24.9	24.2	25.2	25.6	23.8	24.9	24.2	25.2	25.6
	6H	24.0	25.0	24.4	25.4	25.8	24.0	25.0	24.4	25.4	25.8
	8H	24.0	25.0	24.5	25.4	25.8	24.0	25.0	24.5	25.4	25.8
	12H	24.0	25.0	24.5	25.4	25.8	24.0	25.0	24.5	25.4	25.8

UGR Viewed Endwise

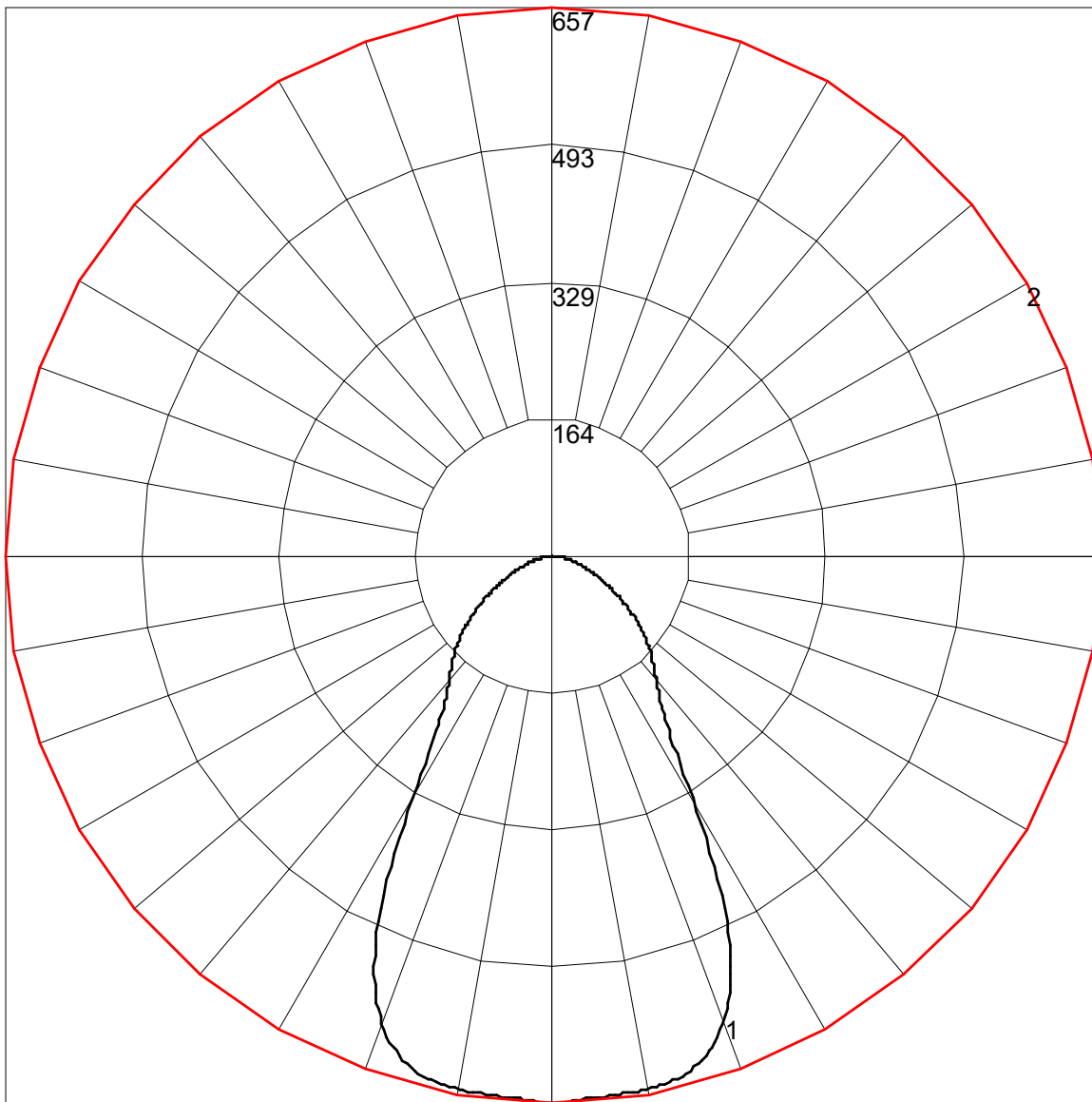
4H	2H	22.7	23.8	23.1	24.2	24.5	22.7	23.8	23.1	24.2	24.5
	3H	24.0	24.9	24.4	25.3	25.7	24.0	24.9	24.4	25.3	25.7
	4H	24.4	25.3	24.8	25.7	26.1	24.4	25.3	24.8	25.7	26.1
	6H	24.7	25.5	25.2	25.9	26.4	24.7	25.5	25.2	25.9	26.4
	8H	24.8	25.5	25.3	25.9	26.4	24.8	25.5	25.3	25.9	26.4
	12H	24.8	25.4	25.3	25.9	26.4	24.8	25.4	25.3	25.9	26.4

8H	4H	24.5	25.2	25.0	25.7	26.1	24.5	25.2	25.0	25.7	26.1
	6H	24.9	25.5	25.4	26.0	26.5	24.9	25.5	25.4	26.0	26.5
	8H	25.0	25.5	25.5	26.1	26.5	25.0	25.5	25.5	26.1	26.5
	12H	25.1	25.5	25.6	26.0	26.6	25.1	25.5	25.6	26.0	26.6

12H	4H	24.5	25.1	25.0	25.6	26.1	24.5	25.1	25.0	25.6	26.1
	6H	24.9	25.4	25.5	25.9	26.4	24.9	25.4	25.5	25.9	26.4
	8H	25.1	25.5	25.6	26.0	26.6	25.1	25.5	25.6	26.0	26.6

Maximum UGR = 26.6

POLAR GRAPH



Maximum Candela = 657.346 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.)