



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.14

[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-RM-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	1046
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	72
Total Luminaire Watts	14.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.52
Spacing Criterion (90-270)	0.52
Spacing Criterion (Diagonal)	0.52
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	6002	6002	6002
55	4174	4174	4174
65	2981	2981	2981
75	1995	1995	1995
85	1628	1628	1628

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CANDELA TABULATION

	<u>0</u>
0.0	3016.210
0.5	3013.879
1.0	3006.886
1.5	2995.814
2.0	2980.663
2.5	2961.433
3.0	2938.706
3.5	2911.901
4.0	2881.016
4.5	2847.801
5.0	2811.089
5.5	2770.298
6.0	2726.593
6.5	2679.974
7.0	2629.860
7.5	2576.249
8.0	2520.306
8.5	2460.868
9.0	2399.681
9.5	2336.164
10.0	2270.315
10.5	2202.719
11.0	2133.374
11.5	2062.864
12.0	1991.188
12.5	1920.095
13.0	1849.002
13.5	1777.326
14.0	1705.067
14.5	1632.809
15.0	1561.716
15.5	1491.206
16.0	1420.695
16.5	1351.933
17.0	1283.754
17.5	1216.740
18.0	1150.891
18.5	1086.791
19.0	1025.604
19.5	965.583
20.0	907.310
20.5	851.951
21.0	798.340
21.5	747.060
22.0	698.693
22.5	652.657
23.0	609.535
23.5	568.278
24.0	529.235
24.5	492.465
25.0	458.084
25.5	426.092
26.0	396.256
26.5	368.285

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CANDELA TABULATION - (Cont.)

27.0	342.295
27.5	318.229
28.0	295.852
28.5	274.990
29.0	255.877
29.5	238.045
30.0	221.554
30.5	206.403
31.0	192.417
31.5	179.481
32.0	167.535
32.5	156.580
33.0	146.440
33.5	137.000
34.0	128.375
34.5	120.334
35.0	112.933
35.5	106.115
36.0	99.763
36.5	93.936
37.0	88.517
37.5	83.622
38.0	79.076
38.5	74.997
39.0	71.210
39.5	67.771
40.0	64.683
40.5	61.769
41.0	59.147
41.5	56.700
42.0	54.427
42.5	52.329
43.0	50.348
43.5	48.483
44.0	46.735
44.5	45.103
45.0	43.588
45.5	42.190
46.0	40.849
46.5	39.567
47.0	38.344
47.5	37.236
48.0	36.188
48.5	35.139
49.0	34.148
49.5	33.216
50.0	32.342
50.5	31.467
51.0	30.652
51.5	29.777
52.0	29.020
52.5	28.204
53.0	27.505
53.5	26.747
54.0	25.990
54.5	25.290

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CANDELA TABULATION - (Cont.)

55.0	24.591
55.5	23.892
56.0	23.251
56.5	22.610
57.0	21.969
57.5	21.328
58.0	20.687
58.5	20.104
59.0	19.521
59.5	18.939
60.0	18.356
60.5	17.773
61.0	17.191
61.5	16.666
62.0	16.083
62.5	15.559
63.0	14.976
63.5	14.452
64.0	13.927
64.5	13.403
65.0	12.937
65.5	12.412
66.0	11.946
66.5	11.422
67.0	10.955
67.5	10.489
68.0	10.023
68.5	9.615
69.0	9.149
69.5	8.741
70.0	8.333
70.5	7.983
71.0	7.634
71.5	7.284
72.0	6.934
72.5	6.643
73.0	6.352
73.5	6.060
74.0	5.827
74.5	5.536
75.0	5.303
75.5	5.070
76.0	4.837
76.5	4.662
77.0	4.429
77.5	4.196
78.0	4.021
78.5	3.788
79.0	3.613
79.5	3.438
80.0	3.205
80.5	3.030
81.0	2.855
81.5	2.681
82.0	2.447
82.5	2.273

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CANDELA TABULATION - (Cont.)

83.0	2.098
83.5	1.923
84.0	1.748
84.5	1.573
85.0	1.457
85.5	1.282
86.0	1.107
86.5	0.932
87.0	0.816
87.5	0.699
88.0	0.583
88.5	0.466
89.0	0.408
89.5	0.291
90.0	0.233
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
121.0	0.000
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122.5	0.000
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124.0	0.000
124.5	0.000
125.0	0.000
125.5	0.000
126.0	0.000
126.5	0.000
127.0	0.000
127.5	0.000
128.0	0.000
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	674.93	N.A.	64.50
0-30	893.96	N.A.	85.40
0-40	969.12	N.A.	92.60
0-60	1025.94	N.A.	98.10
0-80	1044.59	N.A.	99.80
0-90	1046.24	N.A.	100.00
10-90	795.32	N.A.	76.00
20-40	294.19	N.A.	28.10
20-50	328.85	N.A.	31.40
40-70	69.71	N.A.	6.70
60-80	18.65	N.A.	1.80
70-80	5.76	N.A.	0.60
80-90	1.65	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	1046.25	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	250.92
10-20	424.00
20-30	219.04
30-40	75.16
40-50	34.65
50-60	22.16
60-70	12.89
70-80	5.76
80-90	1.65
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 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	68	68	68	68	66	66	66	66	63	63	63	60	60	60	58	58	58	57
1	65	63	62	61	63	62	61	60	60	59	58	58	57	56	56	55	55	54
2	62	60	58	56	61	59	57	55	57	55	54	55	54	53	54	53	52	51
3	60	56	54	52	58	56	53	52	54	52	51	53	51	50	52	50	49	48
4	57	53	51	49	56	53	50	48	52	50	48	51	49	47	50	48	47	46
5	55	51	48	46	54	50	48	46	49	47	45	49	47	45	48	46	45	44
6	53	49	46	44	52	48	46	44	47	45	43	47	45	43	46	44	43	42
7	51	47	44	42	50	46	44	42	46	43	41	45	43	41	44	42	41	40
8	49	45	42	40	49	44	42	40	44	41	40	43	41	40	43	41	39	39
9	48	43	40	38	47	43	40	38	42	40	38	42	40	38	41	39	38	37
10	46	41	39	37	45	41	39	37	41	38	37	40	38	37	40	38	37	36

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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

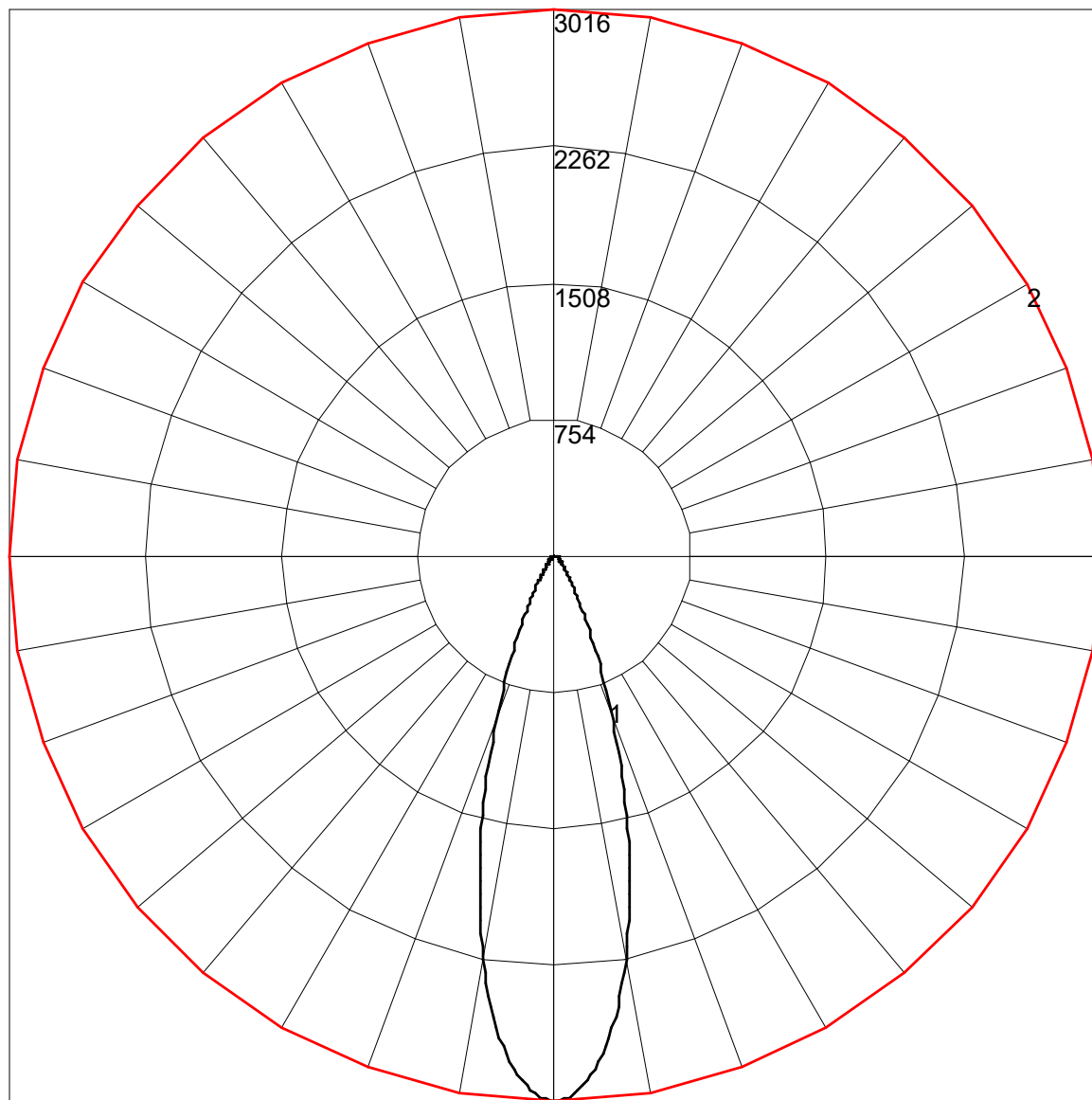
X=2H	Y=2H	11.5	12.5	11.9	12.8	13.1	11.5	12.5	11.9	12.8	13.1
	3H	12.5	13.3	12.8	13.7	14.0	12.5	13.3	12.8	13.7	14.0
	4H	12.8	13.6	13.2	13.9	14.3	12.8	13.6	13.2	13.9	14.3
	6H	13.0	13.7	13.4	14.1	14.5	13.0	13.7	13.4	14.1	14.5
	8H	13.0	13.7	13.5	14.1	14.5	13.0	13.7	13.5	14.1	14.5
	12H	13.1	13.7	13.5	14.1	14.5	13.1	13.7	13.5	14.1	14.5

UGR Viewed Endwise

4H	2H	11.8	12.6	12.2	13.0	13.3	11.8	12.6	12.2	13.0	13.3
	3H	12.9	13.6	13.3	14.0	14.4	12.9	13.6	13.3	14.0	14.4
	4H	13.3	13.9	13.7	14.3	14.7	13.3	13.9	13.7	14.3	14.7
	6H	13.6	14.1	14.1	14.5	15.0	13.6	14.1	14.1	14.5	15.0
	8H	13.7	14.2	14.2	14.6	15.1	13.7	14.2	14.2	14.6	15.1
	12H	13.7	14.1	14.2	14.6	15.1	13.7	14.1	14.2	14.6	15.1
8H	4H	13.4	13.8	13.8	14.3	14.7	13.4	13.8	13.8	14.3	14.7
	6H	13.8	14.1	14.3	14.6	15.1	13.8	14.1	14.3	14.6	15.1
	8H	13.9	14.2	14.5	14.8	15.3	13.9	14.2	14.5	14.8	15.3
	12H	14.1	14.3	14.6	14.8	15.4	14.1	14.3	14.6	14.8	15.4
12H	4H	13.3	13.7	13.8	14.2	14.7	13.3	13.7	13.8	14.2	14.7
	6H	13.8	14.1	14.3	14.6	15.1	13.8	14.1	14.3	14.6	15.1
	8H	14.0	14.2	14.5	14.7	15.3	14.0	14.2	14.5	14.7	15.3

Maximum UGR = 15.4

POLAR GRAPH



Maximum Candela = 3016.21 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.)