



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P8-8TW-POE-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] 6 OCT 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-P8-8TW-PoE-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	981
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	85
Total Luminaire Watts	11.6
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	4910	4910	4910
55	3267	3267	3267
65	2249	2249	2249
75	1460	1460	1460
85	1177	1177	1177

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CANDELA TABULATION

	<u>0</u>
0.0	3679.443
0.5	3675.006
1.0	3663.361
1.5	3642.842
2.0	3615.115
2.5	3580.178
3.0	3538.587
3.5	3490.896
4.0	3437.104
4.5	3377.767
5.0	3313.439
5.5	3244.121
6.0	3169.811
6.5	3089.956
7.0	3005.664
7.5	2918.045
8.0	2827.099
8.5	2732.270
9.0	2635.779
9.5	2536.514
10.0	2436.695
10.5	2335.212
11.0	2233.175
11.5	2131.138
12.0	2029.655
12.5	1929.836
13.0	1830.571
13.5	1733.525
14.0	1638.142
14.5	1545.532
15.0	1456.250
15.5	1370.294
16.0	1286.557
16.5	1207.257
17.0	1131.283
17.5	1058.637
18.0	989.873
18.5	924.436
19.0	862.881
19.5	805.207
20.0	750.861
20.5	699.288
21.0	651.042
21.5	606.678
22.0	563.978
22.5	523.939
23.0	485.786
23.5	450.461
24.0	417.521
24.5	386.688
25.0	357.907
25.5	331.178
26.0	306.556
26.5	283.764

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CANDELA TABULATION - (Cont.)

27.0	262.746
27.5	243.392
28.0	225.591
28.5	209.398
29.0	194.481
29.5	180.783
30.0	168.195
30.5	156.550
31.0	145.958
31.5	136.198
32.0	127.158
32.5	118.840
33.0	111.243
33.5	104.255
34.0	97.767
34.5	91.834
35.0	86.454
35.5	81.463
36.0	76.916
36.5	72.757
37.0	68.931
37.5	65.437
38.0	62.221
38.5	59.281
39.0	56.620
39.5	54.124
40.0	51.795
40.5	49.632
41.0	47.636
41.5	45.750
42.0	44.031
42.5	42.423
43.0	40.870
43.5	39.429
44.0	38.098
44.5	36.822
45.0	35.658
45.5	34.493
46.0	33.439
46.5	32.386
47.0	31.388
47.5	30.389
48.0	29.447
48.5	28.559
49.0	27.672
49.5	26.840
50.0	26.008
50.5	25.232
51.0	24.456
51.5	23.735
52.0	23.014
52.5	22.348
53.0	21.683
53.5	21.017
54.0	20.407
54.5	19.853

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CANDELA TABULATION - (Cont.)

55.0	19.243
55.5	18.688
56.0	18.134
56.5	17.579
57.0	17.080
57.5	16.581
58.0	16.027
58.5	15.527
59.0	15.084
59.5	14.585
60.0	14.086
60.5	13.642
61.0	13.198
61.5	12.755
62.0	12.311
62.5	11.867
63.0	11.424
63.5	10.980
64.0	10.592
64.5	10.204
65.0	9.760
65.5	9.372
66.0	8.984
66.5	8.596
67.0	8.263
67.5	7.875
68.0	7.542
68.5	7.154
69.0	6.821
69.5	6.488
70.0	6.156
70.5	5.878
71.0	5.601
71.5	5.324
72.0	5.102
72.5	4.825
73.0	4.603
73.5	4.436
74.0	4.215
74.5	4.048
75.0	3.882
75.5	3.715
76.0	3.549
76.5	3.383
77.0	3.216
77.5	3.050
78.0	2.939
78.5	2.773
79.0	2.606
79.5	2.495
80.0	2.329
80.5	2.163
81.0	2.052
81.5	1.885
82.0	1.775
82.5	1.664

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CANDELA TABULATION - (Cont.)

83.0	1.497
83.5	1.386
84.0	1.275
84.5	1.165
85.0	1.054
85.5	0.943
86.0	0.776
86.5	0.721
87.0	0.610
87.5	0.499
88.0	0.388
88.5	0.277
89.0	0.222
89.5	0.166
90.0	0.111
90.5	0.111
91.0	0.055
91.5	0.000
92.0	0.055
92.5	0.055
93.0	0.055
93.5	0.055
94.0	0.000
94.5	0.055
95.0	0.055
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	0.055
103.0	0.000
103.5	0.055
104.0	0.055
104.5	0.055
105.0	0.055
105.5	0.055
106.0	0.055
106.5	0.055
107.0	0.055
107.5	0.000
108.0	0.055
108.5	0.055
109.0	0.055
109.5	0.055
110.0	0.055
110.5	0.055

IES INDOOR REPORT**PHOTOMETRIC FILENAME : V4DR-P8-8TW-POE-RN-OF-WH_4000K.IES****CANDELA TABULATION - (Cont.)**

111.0	0.055
111.5	0.055
112.0	0.055
112.5	0.055
113.0	0.055
113.5	0.055
114.0	0.055
114.5	0.055
115.0	0.055
115.5	0.055
116.0	0.055
116.5	0.055
117.0	0.055
117.5	0.055
118.0	0.055
118.5	0.055
119.0	0.055
119.5	0.055
120.0	0.055
120.5	0.055
121.0	0.055
121.5	0.055
122.0	0.055
122.5	0.055
123.0	0.055
123.5	0.055
124.0	0.055
124.5	0.055
125.0	0.055
125.5	0.055
126.0	0.055
126.5	0.055
127.0	0.055
127.5	0.055
128.0	0.055
128.5	0.055
129.0	0.055
129.5	0.055
130.0	0.055
130.5	0.055
131.0	0.111
131.5	0.111
132.0	0.111
132.5	0.111
133.0	0.111
133.5	0.111
134.0	0.111
134.5	0.111
135.0	0.166
135.5	0.166
136.0	0.166
136.5	0.166
137.0	0.166
137.5	0.222
138.0	0.222
138.5	0.222

IES INDOOR REPORT**PHOTOMETRIC FILENAME : V4DR-P8-8TW-POE-RN-OF-WH_4000K.IES****CANDELA TABULATION - (Cont.)**

139.0	0.222
139.5	0.277
140.0	0.277
140.5	0.277
141.0	0.333
141.5	0.333
142.0	0.333
142.5	0.388
143.0	0.388
143.5	0.388
144.0	0.444
144.5	0.444
145.0	0.499
145.5	0.499
146.0	0.555
146.5	0.555
147.0	0.610
147.5	0.610
148.0	0.665
148.5	0.665
149.0	0.721
149.5	0.721
150.0	0.776
150.5	0.776
151.0	0.832
151.5	0.832
152.0	0.887
152.5	0.887
153.0	0.943
153.5	0.943
154.0	0.998
154.5	0.998
155.0	1.054
155.5	1.054
156.0	1.109
156.5	1.109
157.0	1.109
157.5	1.165
158.0	1.165
158.5	1.220
159.0	1.220
159.5	1.220
160.0	1.275
160.5	1.275
161.0	1.275
161.5	1.275
162.0	1.331
162.5	1.331
163.0	1.331
163.5	1.331
164.0	1.331
164.5	1.331
165.0	1.331
165.5	1.331
166.0	1.386
166.5	1.331

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CANDELA TABULATION - (Cont.)

167.0	1.386
167.5	1.386
168.0	1.386
168.5	1.331
169.0	1.331
169.5	1.331
170.0	1.331
170.5	1.331
171.0	1.331
171.5	1.331
172.0	1.331
172.5	1.331
173.0	1.331
173.5	1.331
174.0	1.331
174.5	1.331
175.0	1.331
175.5	1.331
176.0	1.331
176.5	1.331
177.0	1.331
177.5	1.275
178.0	1.275
178.5	1.275
179.0	1.275
179.5	1.275
180.0	1.275

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	687.89	N.A.	70.10
0-30	861.11	N.A.	87.80
0-40	918.83	N.A.	93.70
0-60	964.37	N.A.	98.30
0-80	978.35	N.A.	99.70
0-90	979.53	N.A.	99.80
10-90	691.81	N.A.	70.50
20-40	230.95	N.A.	23.50
20-50	259.08	N.A.	26.40
40-70	55.31	N.A.	5.60
60-80	13.98	N.A.	1.40
70-80	4.21	N.A.	0.40
80-90	1.18	N.A.	0.10
90-110	0.07	N.A.	0.00
90-120	0.12	N.A.	0.00
90-130	0.17	N.A.	0.00
90-150	0.60	N.A.	0.10
90-180	1.57	N.A.	0.20
110-180	1.50	N.A.	0.20
0-180	981.10	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	287.72
10-20	400.17
20-30	173.22
30-40	57.72
40-50	28.14
50-60	17.40
60-70	9.77
70-80	4.21
80-90	1.18
90-100	0.03
100-110	0.04
110-120	0.05
120-130	0.05
130-140	0.12
140-150	0.31
150-160	0.47
160-170	0.38
170-180	0.13

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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	75	75	75	75	73	73	73	73	70	70	70	67	67	67	64	64	64	63
1	72	70	69	68	70	69	68	67	66	65	65	64	63	63	62	61	61	60
2	69	66	64	62	68	65	63	62	63	62	60	61	60	59	60	59	58	57
3	66	63	60	58	65	62	60	58	61	59	57	59	57	56	58	56	55	54
4	64	60	57	55	63	59	57	55	58	56	54	57	55	54	56	54	53	52
5	62	57	55	52	61	57	54	52	56	53	52	55	53	51	54	52	51	50
6	60	55	52	50	59	55	52	50	54	51	50	53	51	49	52	50	49	48
7	58	53	50	48	57	53	50	48	52	49	48	51	49	47	51	49	47	46
8	56	51	48	46	55	51	48	46	50	48	46	50	47	46	49	47	45	45
9	54	49	46	44	53	49	46	44	49	46	44	48	46	44	48	46	44	43
10	52	48	45	43	52	47	45	43	47	45	43	47	44	43	46	44	43	42

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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	9.7	10.7	10.1	11.0	11.3
	3H	10.6	11.5	11.0	11.8	12.2
	4H	10.8	11.6	11.3	12.0	12.4
	6H	11.0	11.7	11.4	12.1	12.5
	8H	11.1	11.7	11.5	12.1	12.5
	12H	11.1	11.7	11.5	12.1	12.5

UGR Viewed Endwise

9.7	10.7	10.1	11.0	11.3
10.6	11.5	11.0	11.8	12.2
10.8	11.6	11.3	12.0	12.4
11.0	11.7	11.4	12.1	12.5
11.1	11.7	11.5	12.1	12.5
11.1	11.7	11.5	12.1	12.5

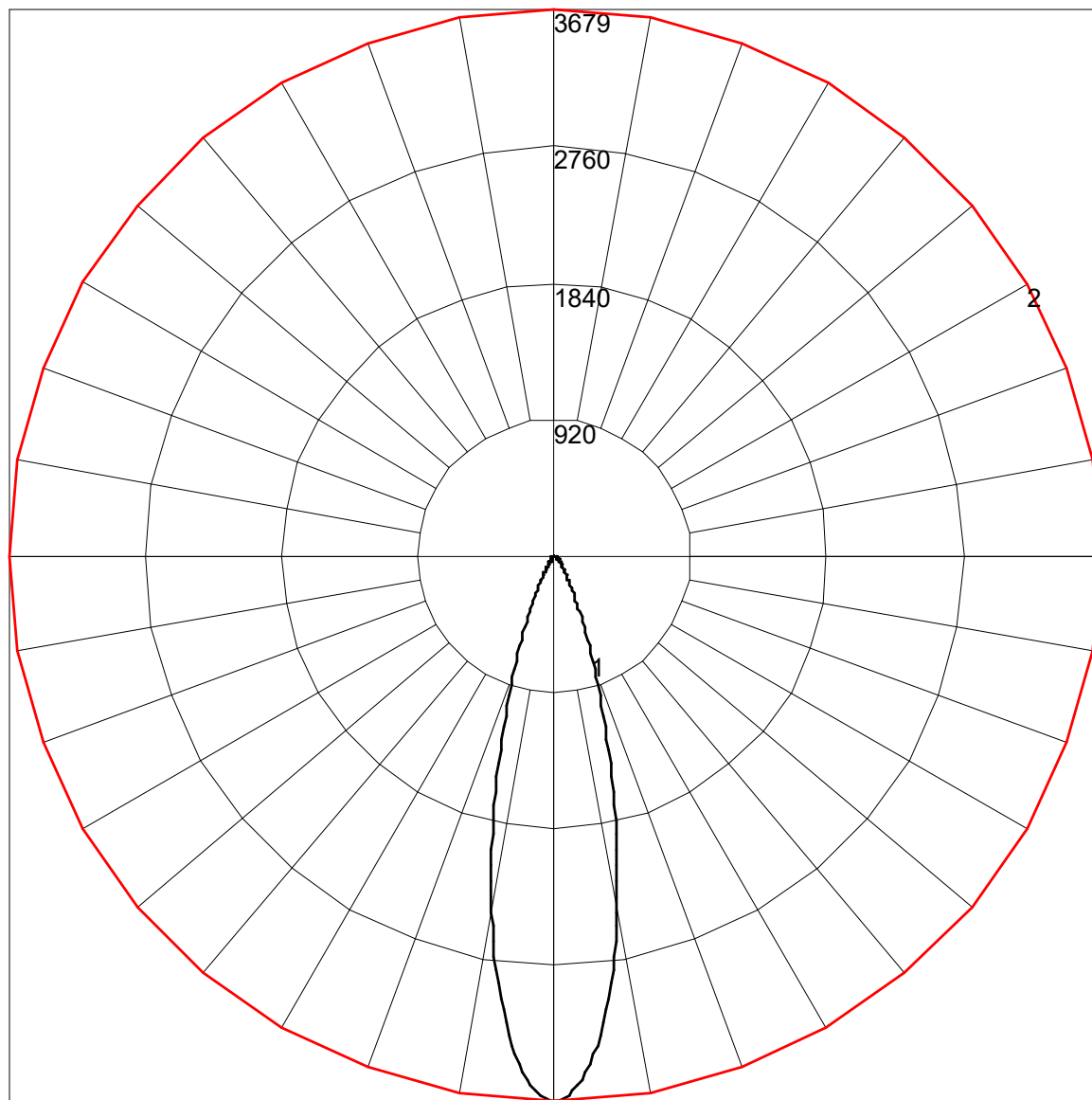
4H	2H	10.0	10.8	10.4	11.1	11.5	10.0	10.8	10.4	11.1	11.5
	3H	11.0	11.6	11.4	12.0	12.5	11.0	11.6	11.4	12.0	12.5
	4H	11.3	11.9	11.8	12.3	12.8	11.3	11.9	11.8	12.3	12.8
	6H	11.6	12.1	12.1	12.5	13.0	11.6	12.1	12.1	12.5	13.0
	8H	11.7	12.1	12.1	12.6	13.1	11.7	12.1	12.1	12.6	13.1
	12H	11.7	12.1	12.2	12.6	13.1	11.7	12.1	12.2	12.6	13.1

8H	4H	11.4	11.8	11.8	12.3	12.8	11.4	11.8	11.8	12.3	12.8
	6H	11.7	12.1	12.2	12.6	13.1	11.7	12.1	12.2	12.6	13.1
	8H	11.9	12.2	12.4	12.7	13.2	11.9	12.2	12.4	12.7	13.2
	12H	12.0	12.3	12.5	12.8	13.3	12.0	12.3	12.5	12.8	13.3

12H	4H	11.3	11.7	11.8	12.2	12.7	11.3	11.7	11.8	12.2	12.7
	6H	11.7	12.0	12.3	12.5	13.1	11.7	12.0	12.3	12.5	13.1
	8H	11.9	12.2	12.4	12.7	13.3	11.9	12.2	12.4	12.7	13.3

Maximum UGR = 13.3

POLAR GRAPH



Maximum Candela = 3679.443 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.)