



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P17-8TW-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-P17-8TW-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	2091
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	93
Total Luminaire Watts	22.6
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	10466	10466	10466
55	6963	6963	6963
65	4793	4793	4793
75	3113	3113	3113
85	2509	2509	2509

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CANDELA TABULATION

	<u>0</u>
0.0	7842.729
0.5	7833.273
1.0	7808.451
1.5	7764.716
2.0	7705.614
2.5	7631.147
3.0	7542.495
3.5	7440.841
4.0	7326.185
4.5	7199.708
5.0	7062.593
5.5	6914.840
6.0	6756.449
6.5	6586.238
7.0	6406.570
7.5	6219.810
8.0	6025.958
8.5	5823.832
9.0	5618.160
9.5	5406.578
10.0	5193.813
10.5	4977.503
11.0	4760.011
11.5	4542.518
12.0	4326.208
12.5	4113.444
13.0	3901.861
13.5	3695.007
14.0	3491.699
14.5	3294.301
15.0	3103.995
15.5	2920.781
16.0	2742.296
16.5	2573.266
17.0	2411.329
17.5	2256.484
18.0	2109.913
18.5	1970.434
19.0	1839.229
19.5	1716.299
20.0	1600.460
20.5	1490.532
21.0	1387.696
21.5	1293.134
22.0	1202.118
22.5	1116.776
23.0	1035.453
23.5	960.158
24.0	889.946
24.5	824.225
25.0	762.878
25.5	705.905
26.0	653.423
26.5	604.842

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**CANDELA TABULATION - (Cont.)**

27.0	560.043
27.5	518.790
28.0	480.847
28.5	446.332
29.0	414.536
29.5	385.340
30.0	358.508
30.5	333.685
31.0	311.109
31.5	290.305
32.0	271.038
32.5	253.308
33.0	237.114
33.5	222.221
34.0	208.391
34.5	195.743
35.0	184.278
35.5	173.639
36.0	163.947
36.5	155.082
37.0	146.926
37.5	139.479
38.0	132.623
38.5	126.358
39.0	120.685
39.5	115.366
40.0	110.401
40.5	105.791
41.0	101.536
41.5	97.517
42.0	93.853
42.5	90.425
43.0	87.115
43.5	84.042
44.0	81.205
44.5	78.486
45.0	76.004
45.5	73.522
46.0	71.276
46.5	69.030
47.0	66.903
47.5	64.775
48.0	62.765
48.5	60.874
49.0	58.983
49.5	57.210
50.0	55.437
50.5	53.782
51.0	52.127
51.5	50.591
52.0	49.054
52.5	47.636
53.0	46.217
53.5	44.799
54.0	43.498
54.5	42.316

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CANDELA TABULATION - (Cont.)

55.0	41.016
55.5	39.834
56.0	38.652
56.5	37.470
57.0	36.406
57.5	35.343
58.0	34.160
58.5	33.097
59.0	32.151
59.5	31.087
60.0	30.023
60.5	29.078
61.0	28.132
61.5	27.187
62.0	26.241
62.5	25.295
63.0	24.350
63.5	23.404
64.0	22.577
64.5	21.749
65.0	20.804
65.5	19.976
66.0	19.149
66.5	18.321
67.0	17.612
67.5	16.785
68.0	16.076
68.5	15.248
69.0	14.539
69.5	13.830
70.0	13.120
70.5	12.529
71.0	11.938
71.5	11.347
72.0	10.875
72.5	10.284
73.0	9.811
73.5	9.456
74.0	8.983
74.5	8.629
75.0	8.274
75.5	7.920
76.0	7.565
76.5	7.210
77.0	6.856
77.5	6.501
78.0	6.265
78.5	5.910
79.0	5.556
79.5	5.319
80.0	4.965
80.5	4.610
81.0	4.373
81.5	4.019
82.0	3.782
82.5	3.546

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CANDELA TABULATION - (Cont.)

83.0	3.191
83.5	2.955
84.0	2.719
84.5	2.482
85.0	2.246
85.5	2.009
86.0	1.655
86.5	1.537
87.0	1.300
87.5	1.064
88.0	0.827
88.5	0.591
89.0	0.473
89.5	0.355
90.0	0.236
90.5	0.236
91.0	0.118
91.5	0.000
92.0	0.118
92.5	0.118
93.0	0.118
93.5	0.118
94.0	0.000
94.5	0.118
95.0	0.118
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	0.118
103.0	0.000
103.5	0.118
104.0	0.118
104.5	0.118
105.0	0.118
105.5	0.118
106.0	0.118
106.5	0.118
107.0	0.118
107.5	0.000
108.0	0.118
108.5	0.118
109.0	0.118
109.5	0.118
110.0	0.118
110.5	0.118

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CANDELA TABULATION - (Cont.)

111.0	0.118
111.5	0.118
112.0	0.118
112.5	0.118
113.0	0.118
113.5	0.118
114.0	0.118
114.5	0.118
115.0	0.118
115.5	0.118
116.0	0.118
116.5	0.118
117.0	0.118
117.5	0.118
118.0	0.118
118.5	0.118
119.0	0.118
119.5	0.118
120.0	0.118
120.5	0.118
121.0	0.118
121.5	0.118
122.0	0.118
122.5	0.118
123.0	0.118
123.5	0.118
124.0	0.118
124.5	0.118
125.0	0.118
125.5	0.118
126.0	0.118
126.5	0.118
127.0	0.118
127.5	0.118
128.0	0.118
128.5	0.118
129.0	0.118
129.5	0.118
130.0	0.118
130.5	0.118
131.0	0.236
131.5	0.236
132.0	0.236
132.5	0.236
133.0	0.236
133.5	0.236
134.0	0.236
134.5	0.236
135.0	0.355
135.5	0.355
136.0	0.355
136.5	0.355
137.0	0.355
137.5	0.473
138.0	0.473
138.5	0.473

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CANDELA TABULATION - (Cont.)

139.0	0.473
139.5	0.591
140.0	0.591
140.5	0.591
141.0	0.709
141.5	0.709
142.0	0.709
142.5	0.827
143.0	0.827
143.5	0.827
144.0	0.946
144.5	0.946
145.0	1.064
145.5	1.064
146.0	1.182
146.5	1.182
147.0	1.300
147.5	1.300
148.0	1.418
148.5	1.418
149.0	1.537
149.5	1.537
150.0	1.655
150.5	1.655
151.0	1.773
151.5	1.773
152.0	1.891
152.5	1.891
153.0	2.009
153.5	2.009
154.0	2.128
154.5	2.128
155.0	2.246
155.5	2.246
156.0	2.364
156.5	2.364
157.0	2.364
157.5	2.482
158.0	2.482
158.5	2.600
159.0	2.600
159.5	2.600
160.0	2.719
160.5	2.719
161.0	2.719
161.5	2.719
162.0	2.837
162.5	2.837
163.0	2.837
163.5	2.837
164.0	2.837
164.5	2.837
165.0	2.837
165.5	2.837
166.0	2.955
166.5	2.837

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**CANDELA TABULATION - (Cont.)**

167.0	2.955
167.5	2.955
168.0	2.955
168.5	2.837
169.0	2.837
169.5	2.837
170.0	2.837
170.5	2.837
171.0	2.837
171.5	2.837
172.0	2.837
172.5	2.837
173.0	2.837
173.5	2.837
174.0	2.837
174.5	2.837
175.0	2.837
175.5	2.837
176.0	2.837
176.5	2.837
177.0	2.837
177.5	2.719
178.0	2.719
178.5	2.719
179.0	2.719
179.5	2.719
180.0	2.719



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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1466.23	N.A.	70.10
0-30	1835.46	N.A.	87.80
0-40	1958.49	N.A.	93.70
0-60	2055.56	N.A.	98.30
0-80	2085.36	N.A.	99.70
0-90	2087.88	N.A.	99.80
10-90	1474.6	N.A.	70.50
20-40	492.26	N.A.	23.50
20-50	552.23	N.A.	26.40
40-70	117.89	N.A.	5.60
60-80	29.80	N.A.	1.40
70-80	8.97	N.A.	0.40
80-90	2.52	N.A.	0.10
90-110	0.15	N.A.	0.00
90-120	0.27	N.A.	0.00
90-130	0.37	N.A.	0.00
90-150	1.28	N.A.	0.10
90-180	3.35	N.A.	0.20
110-180	3.20	N.A.	0.20
0-180	2091.22	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	613.27
10-20	852.96
20-30	369.23
30-40	123.03
40-50	59.97
50-60	37.09
60-70	20.83
70-80	8.97
80-90	2.52
90-100	0.06
100-110	0.08
110-120	0.12
120-130	0.11
130-140	0.25
140-150	0.65
150-160	1.00
160-170	0.80
170-180	0.27

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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	159	159	159	159	155	155	155	155	148	148	148	142	142	142	136	136	136	133
1	153	150	147	144	150	147	144	142	141	139	138	136	135	133	132	131	130	127
2	147	141	137	133	144	139	135	132	135	132	129	131	128	126	127	125	123	121
3	141	134	129	124	139	132	127	123	129	125	121	126	122	120	123	120	118	116
4	136	128	122	117	134	127	121	117	124	119	115	121	117	114	119	116	113	111
5	131	122	116	112	129	121	115	111	119	114	110	117	113	109	115	111	108	107
6	127	117	111	107	125	116	111	106	115	109	106	113	108	105	111	107	104	103
7	123	113	107	102	121	112	106	102	111	105	101	109	104	101	108	104	100	99
8	119	109	103	98	117	108	102	98	107	102	98	106	101	97	104	100	97	96
9	115	105	99	95	114	105	99	95	103	98	94	102	98	94	101	97	94	92
10	112	102	96	92	111	101	95	92	100	95	91	99	94	91	98	94	91	90

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

UGR Viewed Endwise

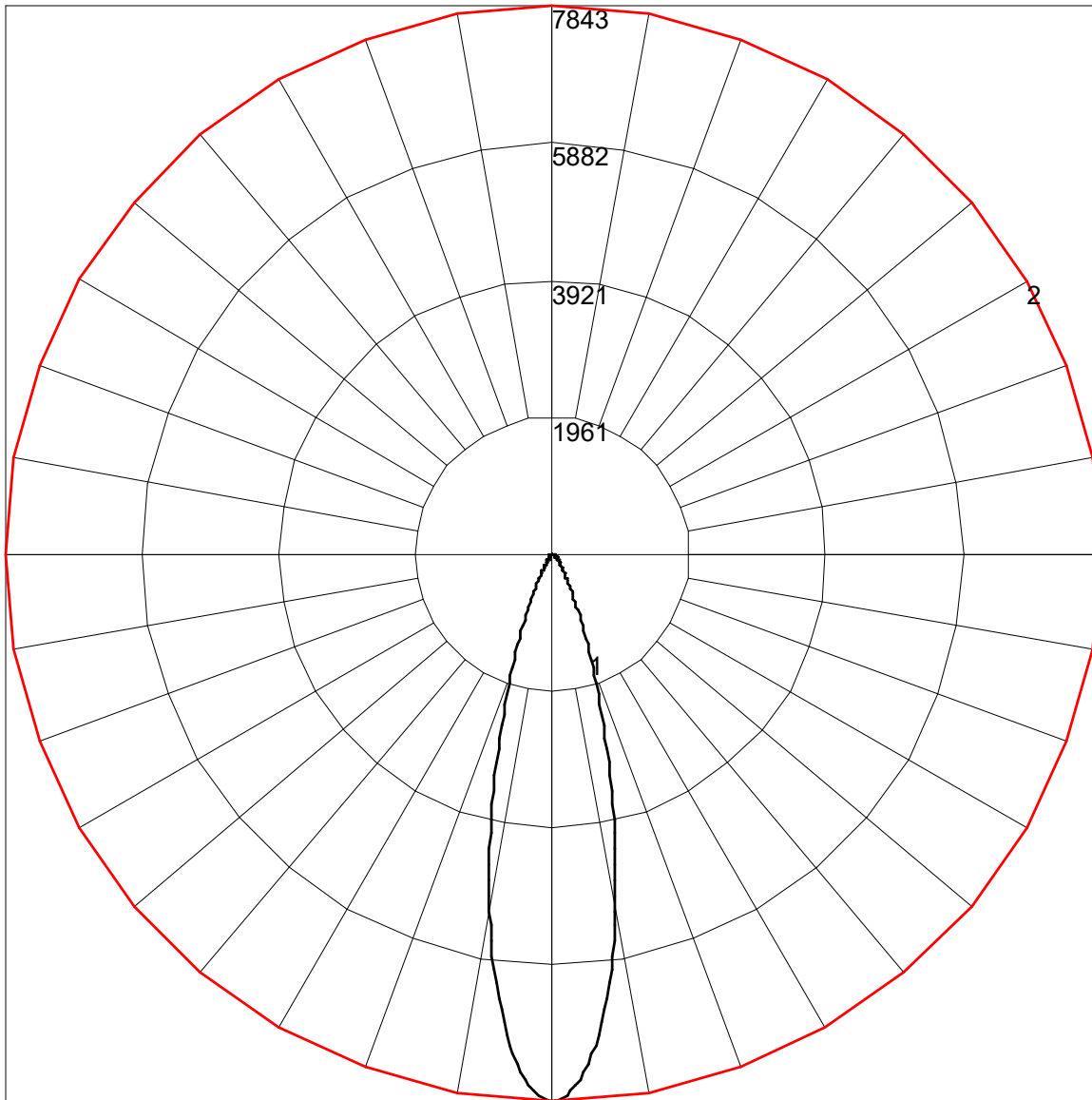
4H	2H	10.0	10.8	10.4	11.1	11.5	10.0	10.8	10.4	11.1	11.5
	3H	11.0	11.6	11.4	12.0	12.5	11.0	11.6	11.4	12.0	12.5
	4H	11.3	11.9	11.8	12.3	12.8	11.3	11.9	11.8	12.3	12.8
	6H	11.6	12.1	12.1	12.5	13.0	11.6	12.1	12.1	12.5	13.0
	8H	11.7	12.1	12.1	12.6	13.1	11.7	12.1	12.1	12.6	13.1
	12H	11.7	12.1	12.2	12.6	13.1	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 = 7842.729 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.)