



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P17-8TW-POE-RW-OF-WH_4000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.12

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 6 OCT 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-P17-8TW-POE x-RW-OF-WH 4000k

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

[MORE] s 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	1564
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	67
Total Luminaire Watts	23.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.98
Spacing Criterion (90-270)	0.98
Spacing Criterion (Diagonal)	0.88
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	36186	36186	36186
55	29219	29219	29219
65	18902	18902	18902
75	10540	10540	10540
85	5415	5415	5415

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CANDELA TABULATION

	<u>0</u>
0.0	1256.638
0.5	1256.638
1.0	1255.456
1.5	1253.092
2.0	1250.727
2.5	1248.363
3.0	1244.817
3.5	1241.270
4.0	1237.724
4.5	1232.995
5.0	1229.449
5.5	1224.720
6.0	1219.991
6.5	1215.263
7.0	1210.534
7.5	1205.805
8.0	1201.077
8.5	1195.166
9.0	1190.437
9.5	1185.709
10.0	1181.216
10.5	1176.369
11.0	1171.404
11.5	1166.558
12.0	1161.947
12.5	1157.337
13.0	1152.726
13.5	1147.998
14.0	1143.269
14.5	1138.540
15.0	1133.693
15.5	1128.728
16.0	1123.527
16.5	1118.325
17.0	1113.006
17.5	1107.331
18.0	1101.302
18.5	1094.800
19.0	1088.535
19.5	1081.796
20.0	1074.467
20.5	1066.074
21.0	1056.380
21.5	1045.859
22.0	1033.801
22.5	1020.442
23.0	1005.311
23.5	988.287
24.0	969.609
24.5	948.449
25.0	924.805
25.5	898.680
26.0	870.426
26.5	840.399

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CANDELA TABULATION - (Cont.)

27.0	808.835
27.5	776.799
28.0	743.225
28.5	710.007
29.0	676.906
29.5	643.805
30.0	611.296
30.5	579.378
31.0	549.232
31.5	520.033
32.0	492.489
32.5	466.836
33.0	443.074
33.5	421.677
34.0	402.408
34.5	385.621
35.0	370.844
35.5	358.313
36.0	347.319
36.5	338.098
37.0	329.941
37.5	322.967
38.0	316.583
38.5	310.909
39.0	305.825
39.5	301.215
40.0	297.077
40.5	293.176
41.0	289.393
41.5	285.965
42.0	282.537
42.5	279.345
43.0	276.153
43.5	272.843
44.0	269.533
44.5	266.223
45.0	262.795
45.5	259.248
46.0	255.583
46.5	251.801
47.0	247.899
47.5	243.880
48.0	239.861
48.5	235.605
49.0	231.231
49.5	226.620
50.0	222.010
50.5	217.281
51.0	212.316
51.5	207.469
52.0	202.504
52.5	197.539
53.0	192.811
53.5	187.609
54.0	182.408
54.5	177.206

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CANDELA TABULATION - (Cont.)

55.0	172.123
55.5	166.921
56.0	161.838
56.5	156.873
57.0	151.908
57.5	146.943
58.0	142.096
58.5	137.367
59.0	132.639
59.5	128.028
60.0	123.418
60.5	118.926
61.0	114.552
61.5	110.178
62.0	106.040
62.5	101.784
63.0	97.765
63.5	93.627
64.0	89.726
64.5	85.825
65.0	82.042
65.5	78.259
66.0	74.594
66.5	71.048
67.0	67.620
67.5	64.191
68.0	60.881
68.5	57.571
69.0	54.379
69.5	51.306
70.0	48.469
70.5	45.750
71.0	43.267
71.5	40.903
72.0	38.657
72.5	36.529
73.0	34.519
73.5	32.746
74.0	30.973
74.5	29.436
75.0	28.017
75.5	26.717
76.0	25.298
76.5	23.998
77.0	22.698
77.5	21.397
78.0	20.215
78.5	18.915
79.0	17.732
79.5	16.550
80.0	15.368
80.5	14.186
81.0	13.122
81.5	12.058
82.0	10.876
82.5	9.930

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CANDELA TABULATION - (Cont.)

83.0	8.866
83.5	7.802
84.0	6.857
84.5	5.793
85.0	4.847
85.5	4.019
86.0	3.192
86.5	2.601
87.0	2.010
87.5	1.537
88.0	1.064
88.5	0.709
89.0	0.355
89.5	0.118
90.0	0.000
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
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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
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151.0	0.000
151.5	0.000
152.0	0.000
152.5	0.000
153.0	0.000
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156.5	0.000
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158.0	0.000
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159.0	0.000
159.5	0.000
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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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	434.97	N.A.	27.80
0-30	841.71	N.A.	53.80
0-40	1089.58	N.A.	69.60
0-60	1444.95	N.A.	92.40
0-80	1558.02	N.A.	99.60
0-90	1564.41	N.A.	100.00
10-90	1448.67	N.A.	92.60
20-40	654.62	N.A.	41.80
20-50	856.29	N.A.	54.70
40-70	437.56	N.A.	28.00
60-80	113.07	N.A.	7.20
70-80	30.88	N.A.	2.00
80-90	6.39	N.A.	0.40
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	1564.41	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	115.74
10-20	319.23
20-30	406.75
30-40	247.87
40-50	201.67
50-60	153.70
60-70	82.19
70-80	30.88
80-90	6.39
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

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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	149	149	149	142	142	142	136	136	136	134
1	149	145	140	137	146	142	138	134	136	133	130	131	129	126	126	125	123	120
2	140	131	124	119	136	129	123	117	124	119	115	120	116	112	116	113	110	107
3	130	119	111	104	127	117	110	103	114	107	102	110	105	100	107	102	98	96
4	122	109	100	93	119	108	99	92	105	97	91	102	95	90	99	94	89	87
5	114	100	91	84	112	99	90	83	96	89	83	94	87	82	92	86	81	79
6	107	93	83	76	105	92	82	76	89	81	75	87	80	75	85	79	74	72
7	101	86	76	70	99	85	76	69	83	75	69	81	74	69	80	73	68	66
8	95	80	71	64	93	79	70	64	78	70	64	76	69	63	75	68	63	61
9	90	75	66	59	88	74	65	59	73	65	59	72	64	59	70	64	59	57
10	85	70	61	55	84	70	61	55	69	61	55	67	60	55	66	60	55	53

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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	20.2	21.5	20.5	21.8	22.1	20.2	21.5	20.5	21.8	22.1
	3H	20.9	22.1	21.3	22.4	22.8	20.9	22.1	21.3	22.4	22.8
	4H	21.1	22.2	21.5	22.5	22.9	21.1	22.2	21.5	22.5	22.9
	6H	21.2	22.2	21.6	22.6	23.0	21.2	22.2	21.6	22.6	23.0
	8H	21.2	22.2	21.6	22.5	23.0	21.2	22.2	21.6	22.5	23.0
	12H	21.2	22.1	21.6	22.5	22.9	21.2	22.1	21.6	22.5	22.9

UGR Viewed Endwise

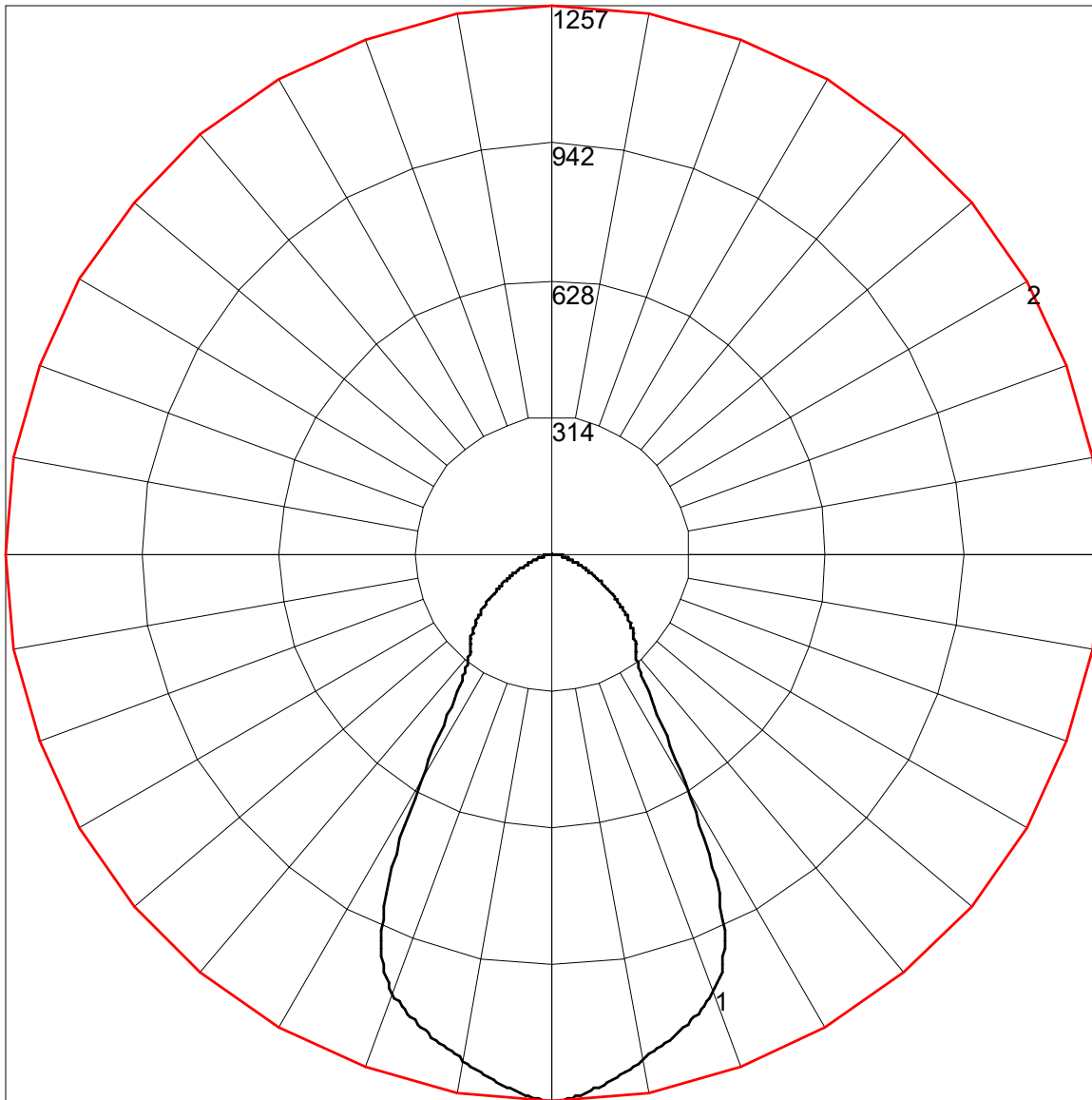
4H	2H	20.4	21.5	20.8	21.9	22.3	20.4	21.5	20.8	21.9	22.3
	3H	21.3	22.2	21.7	22.6	23.0	21.3	22.2	21.7	22.6	23.0
	4H	21.6	22.4	22.0	22.8	23.2	21.6	22.4	22.0	22.8	23.2
	6H	21.7	22.4	22.2	22.9	23.3	21.7	22.4	22.2	22.9	23.3
	8H	21.8	22.4	22.2	22.9	23.3	21.8	22.4	22.2	22.9	23.3
	12H	21.8	22.3	22.3	22.8	23.3	21.8	22.3	22.3	22.8	23.3

8H	4H	21.6	22.2	22.1	22.7	23.2	21.6	22.2	22.1	22.7	23.2
	6H	21.8	22.4	22.3	22.9	23.3	21.8	22.4	22.3	22.9	23.3
	8H	21.9	22.4	22.4	22.9	23.4	21.9	22.4	22.4	22.9	23.4
	12H	21.9	22.3	22.4	22.8	23.4	21.9	22.3	22.4	22.8	23.4

12H	4H	21.6	22.1	22.1	22.6	23.1	21.6	22.1	22.1	22.6	23.1
	6H	21.8	22.3	22.3	22.8	23.3	21.8	22.3	22.3	22.8	23.3
	8H	21.9	22.3	22.4	22.8	23.4	21.9	22.3	22.4	22.8	23.4

Maximum UGR = 23.4

POLAR GRAPH



Maximum Candela = 1256.638 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.)