



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P12-8TW-POE-LN-OF-WH_4000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.10

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 21 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-P12-8TW-POE x-LN-OF-WH 4000k

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

[MORE] tic optic, clear glass patterned 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	1620
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	93
Total Luminaire Watts	17.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.44
Spacing Criterion (90-270)	0.44
Spacing Criterion (Diagonal)	0.44
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	10638	10638	10638
55	7980	7980	7980
65	6603	6603	6603
75	5373	5373	5373
85	2991	2991	2991

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P12-8TW-POE-LN-OF-WH_4000K.IES

CANDELA TABULATION

	<u>0</u>
0.0	6084.942
0.5	6077.872
1.0	6057.545
1.5	6025.728
2.0	5980.654
2.5	5924.975
3.0	5857.806
3.5	5780.032
4.0	5691.653
4.5	5594.435
5.0	5489.263
5.5	5375.253
6.0	5253.289
6.5	5121.604
7.0	4982.847
7.5	4837.905
8.0	4684.124
8.5	4525.924
9.0	4362.422
9.5	4195.384
10.0	4025.695
10.5	3853.355
11.0	3677.479
11.5	3501.604
12.0	3327.496
12.5	3154.271
13.0	2983.699
13.5	2815.777
14.0	2652.275
14.5	2494.075
15.0	2342.062
15.5	2195.352
16.0	2054.828
16.5	1920.491
17.0	1794.108
17.5	1673.028
18.0	1559.018
18.5	1452.078
19.0	1352.209
19.5	1259.411
20.0	1171.915
20.5	1088.838
21.0	1011.064
21.5	940.360
22.0	872.219
22.5	808.851
23.0	749.637
23.5	694.841
24.0	643.846
24.5	596.121
25.0	552.196
25.5	511.718
26.0	474.157
26.5	439.689

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P12-8TW-POE-LN-OF-WH_4000K.IES

CANDELA TABULATION - (Cont.)

27.0	407.872
27.5	378.707
28.0	352.016
28.5	327.535
29.0	305.087
29.5	284.406
30.0	265.581
30.5	248.259
31.0	232.350
31.5	217.856
32.0	204.687
32.5	192.403
33.0	181.178
33.5	170.838
34.0	161.470
34.5	152.808
35.0	144.943
35.5	137.784
36.0	131.067
36.5	124.969
37.0	119.401
37.5	114.187
38.0	109.502
38.5	105.172
39.0	101.106
39.5	97.306
40.0	93.771
40.5	90.501
41.0	87.496
41.5	84.668
42.0	82.016
42.5	79.542
43.0	77.155
43.5	74.946
44.0	72.825
44.5	70.792
45.0	68.848
45.5	67.080
46.0	65.313
46.5	63.633
47.0	62.043
47.5	60.452
48.0	58.949
48.5	57.447
49.0	56.033
49.5	54.619
50.0	53.293
50.5	52.056
51.0	50.730
51.5	49.581
52.0	48.344
52.5	47.195
53.0	46.134
53.5	44.985
54.0	43.925
54.5	42.953

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P12-8TW-POE-LN-OF-WH_4000K.IES

CANDELA TABULATION - (Cont.)

55.0	41.892
55.5	40.920
56.0	39.948
56.5	38.975
57.0	38.092
57.5	37.208
58.0	36.324
58.5	35.440
59.0	34.645
59.5	33.849
60.0	33.054
60.5	32.259
61.0	31.463
61.5	30.668
62.0	29.872
62.5	29.165
63.0	28.370
63.5	27.663
64.0	26.956
64.5	26.249
65.0	25.542
65.5	24.835
66.0	24.128
66.5	23.421
67.0	22.802
67.5	22.095
68.0	21.476
68.5	20.769
69.0	20.151
69.5	19.444
70.0	18.825
70.5	18.206
71.0	17.588
71.5	16.969
72.0	16.350
72.5	15.732
73.0	15.113
73.5	14.494
74.0	13.876
74.5	13.345
75.0	12.727
75.5	12.108
76.0	11.578
76.5	10.959
77.0	10.429
77.5	9.810
78.0	9.280
78.5	8.750
79.0	8.219
79.5	7.689
80.0	7.159
80.5	6.628
81.0	6.098
81.5	5.656
82.0	5.126
82.5	4.684

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P12-8TW-POE-LN-OF-WH_4000K.IES

CANDELA TABULATION - (Cont.)

83.0	4.154
83.5	3.712
84.0	3.270
84.5	2.828
85.0	2.386
85.5	2.033
86.0	1.768
86.5	1.414
87.0	1.149
87.5	0.972
88.0	0.707
88.5	0.530
89.0	0.354
89.5	0.265
90.0	0.177
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P12-8TW-POE-LN-OF-WH_4000K.IES

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
121.5	0.000
122.0	0.000
122.5	0.000
123.0	0.000
123.5	0.000
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P12-8TW-POE-LN-OF-WH_4000K.IES

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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P12-8TW-POE-LN-OF-WH_4000K.IES

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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P12-8TW-POE-LN-OF-WH_4000K.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1121.45	N.A.	69.20
0-30	1390.1	N.A.	85.80
0-40	1486.18	N.A.	91.70
0-60	1578.03	N.A.	97.40
0-80	1616.92	N.A.	99.80
0-90	1620.04	N.A.	100.00
10-90	1143.55	N.A.	70.60
20-40	364.73	N.A.	22.50
20-50	418.80	N.A.	25.90
40-70	117.24	N.A.	7.20
60-80	38.88	N.A.	2.40
70-80	13.50	N.A.	0.80
80-90	3.12	N.A.	0.20
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	1620.04	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	476.49
10-20	644.96
20-30	268.65
30-40	96.08
40-50	54.07
50-60	37.78
60-70	25.38
70-80	13.50
80-90	3.12
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P12-8TW-POE-LN-OF-WH_4000K.IES

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	166	166	166	166	162	162	162	162	155	155	155	148	148	148	142	142	142	139
1	159	155	152	150	156	152	150	147	147	145	143	142	140	138	137	136	134	132
2	152	147	142	138	150	144	140	136	140	136	133	136	133	130	132	130	128	125
3	147	139	133	128	144	137	132	127	133	129	125	130	126	123	127	124	122	120
4	141	132	126	121	139	131	125	120	128	123	119	125	121	117	123	119	116	114
5	136	126	120	115	134	125	119	114	123	117	113	121	116	112	119	115	111	110
6	131	121	114	109	129	120	114	109	118	113	108	116	111	108	115	110	107	105
7	127	116	110	105	125	116	109	105	114	108	104	112	107	104	111	107	103	102
8	123	112	106	101	121	111	105	101	110	104	100	109	104	100	108	103	100	98
9	119	108	102	97	118	108	101	97	106	101	97	105	100	97	104	100	96	95
10	115	105	98	94	114	104	98	94	103	98	94	102	97	94	101	97	93	92

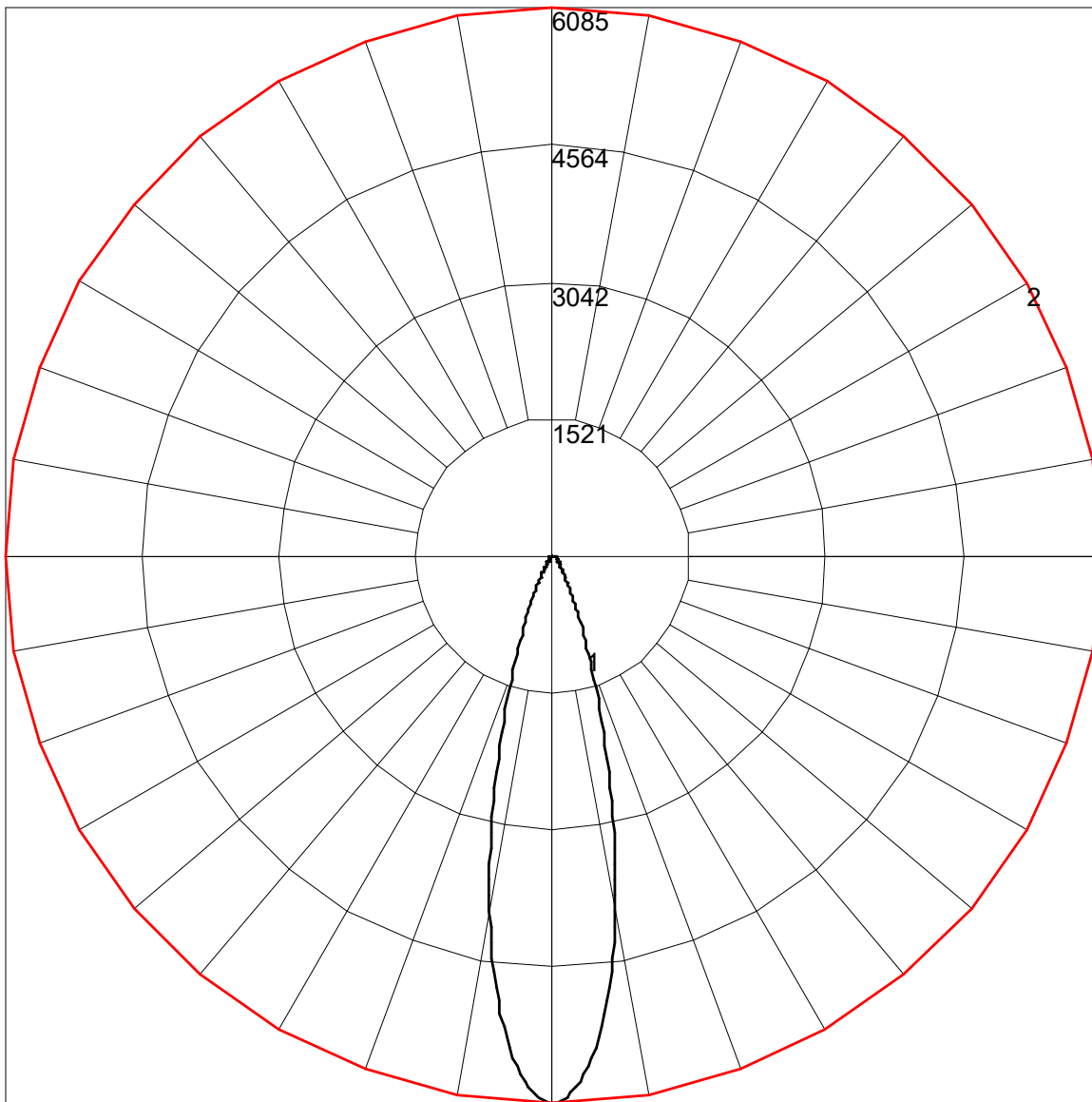
IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P12-8TW-POE-LN-OF-WH_4000K.IES

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					UGR Viewed Endwise				
X=2H	Y=2H	11.1	12.1	11.5	12.4	12.8	11.1	12.1	11.5	12.4	12.8
	3H	12.6	13.5	13.0	13.8	14.2	12.6	13.5	13.0	13.8	14.2
	4H	13.1	13.9	13.5	14.3	14.7	13.1	13.9	13.5	14.3	14.7
	6H	13.4	14.2	13.8	14.5	14.9	13.4	14.2	13.8	14.5	14.9
	8H	13.5	14.2	13.9	14.6	15.0	13.5	14.2	13.9	14.6	15.0
	12H	13.5	14.2	14.0	14.6	15.0	13.5	14.2	14.0	14.6	15.0
4H	2H	11.6	12.4	12.0	12.7	13.1	11.6	12.4	12.0	12.7	13.1
	3H	13.2	13.9	13.6	14.3	14.7	13.2	13.9	13.6	14.3	14.7
	4H	13.8	14.4	14.3	14.8	15.3	13.8	14.4	14.3	14.8	15.3
	6H	14.3	14.8	14.7	15.2	15.7	14.3	14.8	14.7	15.2	15.7
	8H	14.4	14.8	14.9	15.3	15.8	14.4	14.8	14.9	15.3	15.8
	12H	14.4	14.8	14.9	15.3	15.8	14.4	14.8	14.9	15.3	15.8
8H	4H	14.0	14.5	14.5	14.9	15.4	14.0	14.5	14.5	14.9	15.4
	6H	14.5	14.9	15.1	15.4	15.9	14.5	14.9	15.1	15.4	15.9
	8H	14.7	15.0	15.2	15.5	16.0	14.7	15.0	15.2	15.5	16.0
	12H	14.8	15.1	15.3	15.6	16.1	14.8	15.1	15.3	15.6	16.1
12H	4H	14.0	14.4	14.5	14.9	15.3	14.0	14.4	14.5	14.9	15.3
	6H	14.6	14.9	15.1	15.3	15.9	14.6	14.9	15.1	15.3	15.9
	8H	14.7	15.0	15.3	15.5	16.1	14.7	15.0	15.3	15.5	16.1

Maximum UGR = 16.1

POLAR GRAPH



Maximum Candela = 6084.942 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.)