



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.07

[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-LW-OF-WH 4000k

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

[MORE] erved glass 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	1195
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	68
Total Luminaire Watts	17.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.00
Spacing Criterion (90-270)	1.00
Spacing Criterion (Diagonal)	0.90
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	32969	32969	32969
55	27091	27091	27091
65	19819	19819	19819
75	13720	13720	13720
85	7479	7479	7479

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CANDELA TABULATION

	<u>0</u>
0.0	839.240
0.5	838.975
1.0	838.445
1.5	837.737
2.0	837.030
2.5	836.235
3.0	835.174
3.5	834.555
4.0	834.114
4.5	833.848
5.0	833.495
5.5	833.141
6.0	832.876
6.5	832.523
7.0	832.257
7.5	832.081
8.0	831.992
8.5	831.727
9.0	831.462
9.5	830.932
10.0	830.578
10.5	829.959
11.0	829.341
11.5	828.545
12.0	827.661
12.5	826.601
13.0	825.363
13.5	823.949
14.0	822.181
14.5	820.060
15.0	817.497
15.5	814.403
16.0	810.956
16.5	806.890
17.0	802.471
17.5	797.521
18.0	791.687
18.5	785.677
19.0	779.136
19.5	771.800
20.0	763.757
20.5	755.007
21.0	745.549
21.5	735.385
22.0	724.159
22.5	712.227
23.0	699.411
23.5	685.622
24.0	670.773
24.5	654.952
25.0	637.805
25.5	619.862
26.0	600.682
26.5	580.353

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CANDELA TABULATION - (Cont.)

27.0	559.317
27.5	537.396
28.0	515.123
28.5	492.761
29.0	470.841
29.5	449.362
30.0	428.680
30.5	409.234
31.0	391.027
31.5	374.410
32.0	359.295
32.5	345.684
33.0	333.575
33.5	322.791
34.0	313.157
34.5	304.672
35.0	296.982
35.5	290.000
36.0	283.812
36.5	277.979
37.0	272.676
37.5	267.726
38.0	263.130
38.5	258.710
39.0	254.645
39.5	250.667
40.0	246.955
40.5	243.243
41.0	239.707
41.5	236.260
42.0	232.990
42.5	229.719
43.0	226.449
43.5	223.179
44.0	219.908
44.5	216.638
45.0	213.368
45.5	210.097
46.0	206.827
46.5	203.557
47.0	200.109
47.5	196.662
48.0	193.215
48.5	189.680
49.0	186.056
49.5	182.432
50.0	178.896
50.5	175.273
51.0	171.649
51.5	168.025
52.0	164.489
52.5	160.954
53.0	157.330
53.5	153.618
54.0	149.817
54.5	146.016

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CANDELA TABULATION - (Cont.)

55.0	142.216
55.5	138.415
56.0	134.703
56.5	131.079
57.0	127.455
57.5	123.831
58.0	120.295
58.5	116.848
59.0	113.401
59.5	110.043
60.0	106.772
60.5	103.502
61.0	100.320
61.5	97.226
62.0	94.133
62.5	91.039
63.0	88.087
63.5	85.153
64.0	82.271
64.5	79.434
65.0	76.659
65.5	73.954
66.0	71.285
66.5	68.686
67.0	66.149
67.5	63.657
68.0	61.244
68.5	58.884
69.0	56.524
69.5	54.243
70.0	52.025
70.5	49.842
71.0	47.712
71.5	45.635
72.0	43.628
72.5	41.648
73.0	39.721
73.5	37.848
74.0	36.009
74.5	34.233
75.0	32.500
75.5	30.821
76.0	29.177
76.5	27.577
77.0	26.048
77.5	24.528
78.0	23.060
78.5	21.637
79.0	20.241
79.5	18.897
80.0	17.580
80.5	16.299
81.0	15.035
81.5	13.806
82.0	12.604
82.5	11.437

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CANDELA TABULATION - (Cont.)

83.0	10.279
83.5	9.157
84.0	8.061
84.5	6.991
85.0	5.966
85.5	4.976
86.0	4.030
86.5	3.138
87.0	2.351
87.5	1.697
88.0	1.184
88.5	0.751
89.0	0.468
89.5	0.318
90.0	0.221
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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118.5	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
145.0	0.000
145.5	0.000
146.0	0.000
146.5	0.000
147.0	0.000
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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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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	308.27	N.A.	25.80
0-30	591.29	N.A.	49.50
0-40	784.08	N.A.	65.60
0-60	1075.51	N.A.	90.00
0-80	1187.22	N.A.	99.40
0-90	1194.69	N.A.	100.00
10-90	1115.2	N.A.	93.30
20-40	475.81	N.A.	39.80
20-50	640.13	N.A.	53.60
40-70	368.07	N.A.	30.80
60-80	111.71	N.A.	9.40
70-80	35.06	N.A.	2.90
80-90	7.47	N.A.	0.60
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	1194.7	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	79.49
10-20	228.78
20-30	283.03
30-40	192.79
40-50	164.32
50-60	127.10
60-70	76.65
70-80	35.06
80-90	7.47
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	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	139	139	139	139	136	136	136	136	130	130	130	125	125	125	120	120	120	117
1	130	126	122	118	127	123	120	117	118	116	113	114	112	110	110	108	106	104
2	121	113	107	102	118	111	106	101	107	102	98	104	100	96	100	97	94	92
3	113	103	95	89	110	101	94	88	98	92	87	95	89	85	92	87	84	82
4	105	94	85	79	103	92	84	78	89	83	77	87	81	76	84	79	75	73
5	98	86	77	70	96	84	76	70	82	75	69	80	74	69	78	72	68	66
6	92	79	70	64	90	78	69	63	76	68	63	74	67	62	72	67	62	60
7	86	73	64	58	85	72	64	58	70	63	58	69	62	57	67	61	57	55
8	81	68	59	53	80	67	59	53	66	58	53	64	58	53	63	57	52	50
9	77	63	55	49	75	63	55	49	61	54	49	60	54	49	59	53	49	47
10	73	59	51	46	71	59	51	46	58	50	45	57	50	45	56	50	45	43

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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	20.7	22.1	21.1	22.4	22.7	20.7	22.1	21.1	22.4	22.7
	3H	21.8	23.0	22.2	23.4	23.7	21.8	23.0	22.2	23.4	23.7
	4H	22.2	23.3	22.6	23.7	24.0	22.2	23.3	22.6	23.7	24.0
	6H	22.4	23.4	22.8	23.8	24.2	22.4	23.4	22.8	23.8	24.2
	8H	22.4	23.4	22.9	23.8	24.2	22.4	23.4	22.9	23.8	24.2
	12H	22.4	23.4	22.9	23.8	24.2	22.4	23.4	22.9	23.8	24.2

UGR Viewed Endwise

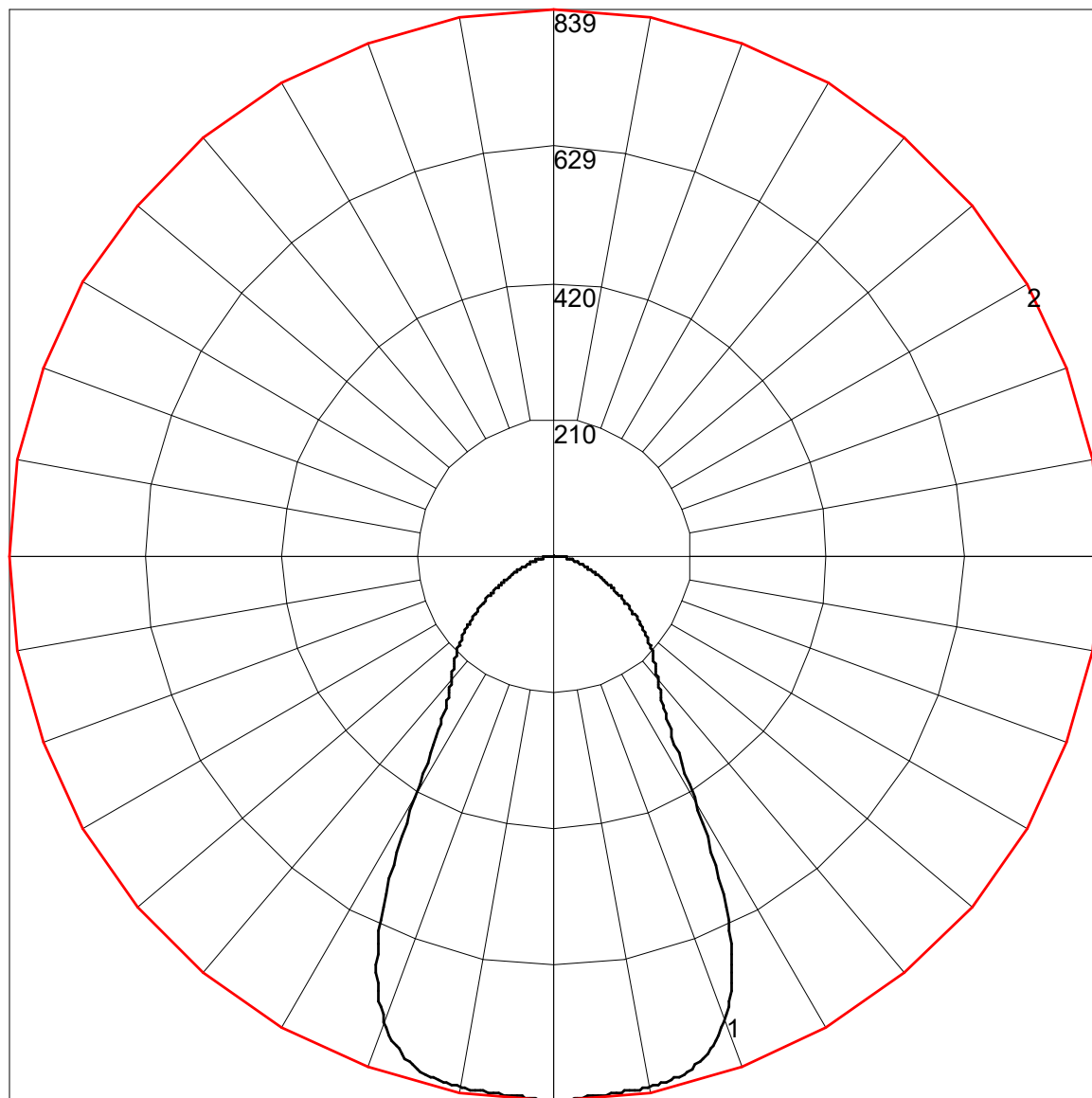
4H	2H	21.1	22.2	21.5	22.6	22.9	21.1	22.2	21.5	22.6	22.9
	3H	22.4	23.3	22.8	23.7	24.1	22.4	23.3	22.8	23.7	24.1
	4H	22.8	23.7	23.2	24.1	24.5	22.8	23.7	23.2	24.1	24.5
	6H	23.1	23.9	23.6	24.3	24.8	23.1	23.9	23.6	24.3	24.8
	8H	23.2	23.9	23.7	24.3	24.8	23.2	23.9	23.7	24.3	24.8
	12H	23.2	23.8	23.7	24.3	24.8	23.2	23.8	23.7	24.3	24.8

8H	4H	22.9	23.6	23.4	24.1	24.5	22.9	23.6	23.4	24.1	24.5
	6H	23.3	23.9	23.8	24.4	24.9	23.3	23.9	23.8	24.4	24.9
	8H	23.4	23.9	24.0	24.5	24.9	23.4	23.9	24.0	24.5	24.9
	12H	23.5	24.0	24.0	24.4	25.0	23.5	24.0	24.0	24.4	25.0

12H	4H	22.9	23.5	23.4	24.0	24.5	22.9	23.5	23.4	24.0	24.5
	6H	23.3	23.8	23.9	24.3	24.8	23.3	23.8	23.9	24.3	24.8
	8H	23.5	23.9	24.0	24.4	25.0	23.5	23.9	24.0	24.4	25.0

Maximum UGR = 25.0

POLAR GRAPH



Maximum Candela = 839.24 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.)