



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P12-8TW-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] 21 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-P12-8TW-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	1170
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	67
Total Luminaire Watts	17.5
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	27070	27070	27070
55	21858	21858	21858
65	14140	14140	14140
75	7885	7885	7885
85	4051	4051	4051

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CANDELA TABULATION

	<u>0</u>
0.0	940.068
0.5	940.068
1.0	939.184
1.5	937.415
2.0	935.646
2.5	933.878
3.0	931.224
3.5	928.571
4.0	925.918
4.5	922.381
5.0	919.728
5.5	916.190
6.0	912.653
6.5	909.116
7.0	905.578
7.5	902.041
8.0	898.503
8.5	894.082
9.0	890.544
9.5	887.007
10.0	883.646
10.5	880.020
11.0	876.306
11.5	872.680
12.0	869.231
12.5	865.782
13.0	862.333
13.5	858.796
14.0	855.258
14.5	851.721
15.0	848.095
15.5	844.381
16.0	840.490
16.5	836.599
17.0	832.619
17.5	828.374
18.0	823.864
18.5	819.000
19.0	814.313
19.5	809.272
20.0	803.789
20.5	797.510
21.0	790.258
21.5	782.388
22.0	773.367
22.5	763.374
23.0	752.054
23.5	739.320
24.0	725.347
24.5	709.517
25.0	691.830
25.5	672.286
26.0	651.150
26.5	628.687

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CANDELA TABULATION - (Cont.)

27.0	605.075
27.5	581.109
28.0	555.993
28.5	531.143
29.0	506.381
29.5	481.619
30.0	457.299
30.5	433.422
31.0	410.871
31.5	389.027
32.0	368.422
32.5	349.231
33.0	331.456
33.5	315.449
34.0	301.034
34.5	288.476
35.0	277.422
35.5	268.048
36.0	259.823
36.5	252.925
37.0	246.823
37.5	241.605
38.0	236.830
38.5	232.585
39.0	228.782
39.5	225.333
40.0	222.238
40.5	219.320
41.0	216.490
41.5	213.925
42.0	211.361
42.5	208.973
43.0	206.585
43.5	204.109
44.0	201.633
44.5	199.156
45.0	196.592
45.5	193.939
46.0	191.197
46.5	188.367
47.0	185.449
47.5	182.442
48.0	179.435
48.5	176.252
49.0	172.980
49.5	169.531
50.0	166.082
50.5	162.544
51.0	158.830
51.5	155.204
52.0	151.490
52.5	147.776
53.0	144.238
53.5	140.347
54.0	136.456
54.5	132.565

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CANDELA TABULATION - (Cont.)

55.0	128.762
55.5	124.871
56.0	121.068
56.5	117.354
57.0	113.639
57.5	109.925
58.0	106.299
58.5	102.762
59.0	99.224
59.5	95.776
60.0	92.327
60.5	88.966
61.0	85.694
61.5	82.422
62.0	79.327
62.5	76.143
63.0	73.136
63.5	70.041
64.0	67.122
64.5	64.204
65.0	61.374
65.5	58.544
66.0	55.803
66.5	53.150
67.0	50.585
67.5	48.020
68.0	45.544
68.5	43.068
69.0	40.680
69.5	38.381
70.0	36.259
70.5	34.224
71.0	32.367
71.5	30.599
72.0	28.918
72.5	27.327
73.0	25.823
73.5	24.497
74.0	23.170
74.5	22.020
75.0	20.959
75.5	19.986
76.0	18.925
76.5	17.952
77.0	16.980
77.5	16.007
78.0	15.122
78.5	14.150
79.0	13.265
79.5	12.381
80.0	11.497
80.5	10.612
81.0	9.816
81.5	9.020
82.0	8.136
82.5	7.429

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CANDELA TABULATION - (Cont.)

83.0	6.633
83.5	5.837
84.0	5.129
84.5	4.333
85.0	3.626
85.5	3.007
86.0	2.388
86.5	1.946
87.0	1.503
87.5	1.150
88.0	0.796
88.5	0.531
89.0	0.265
89.5	0.088
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
145.0	0.000
145.5	0.000
146.0	0.000
146.5	0.000
147.0	0.000
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153.0	0.000
153.5	0.000
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154.5	0.000
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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

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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	325.39	N.A.	27.80
0-30	629.67	N.A.	53.80
0-40	815.10	N.A.	69.60
0-60	1080.94	N.A.	92.40
0-80	1165.53	N.A.	99.60
0-90	1170.31	N.A.	100.00
10-90	1083.73	N.A.	92.60
20-40	489.71	N.A.	41.80
20-50	640.57	N.A.	54.70
40-70	327.33	N.A.	28.00
60-80	84.58	N.A.	7.20
70-80	23.10	N.A.	2.00
80-90	4.78	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	1170.31	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	86.58
10-20	238.81
20-30	304.28
30-40	185.43
40-50	150.87
50-60	114.98
60-70	61.49
70-80	23.10
80-90	4.78
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	135	135	135	135	132	132	132	132	126	126	126	121	121	121	116	116	116	114
1	127	123	119	116	124	120	117	114	116	113	111	111	109	107	107	106	104	102
2	118	111	106	101	116	109	104	99	106	101	97	102	98	95	99	96	93	91
3	111	101	94	89	108	100	93	88	97	91	86	94	89	85	91	87	84	82
4	103	93	85	79	101	91	84	78	89	82	77	86	81	76	84	79	76	74
5	97	85	77	71	95	84	76	71	82	75	70	80	74	69	78	73	69	67
6	91	79	71	65	89	78	70	64	76	69	64	74	68	63	73	67	63	61
7	86	73	65	59	84	72	64	59	71	64	59	69	63	58	68	62	58	56
8	81	68	60	55	79	67	60	54	66	59	54	65	58	54	64	58	54	52
9	76	64	56	51	75	63	56	50	62	55	50	61	54	50	60	54	50	48
10	72	60	52	47	71	59	52	47	58	51	47	57	51	47	56	51	46	45

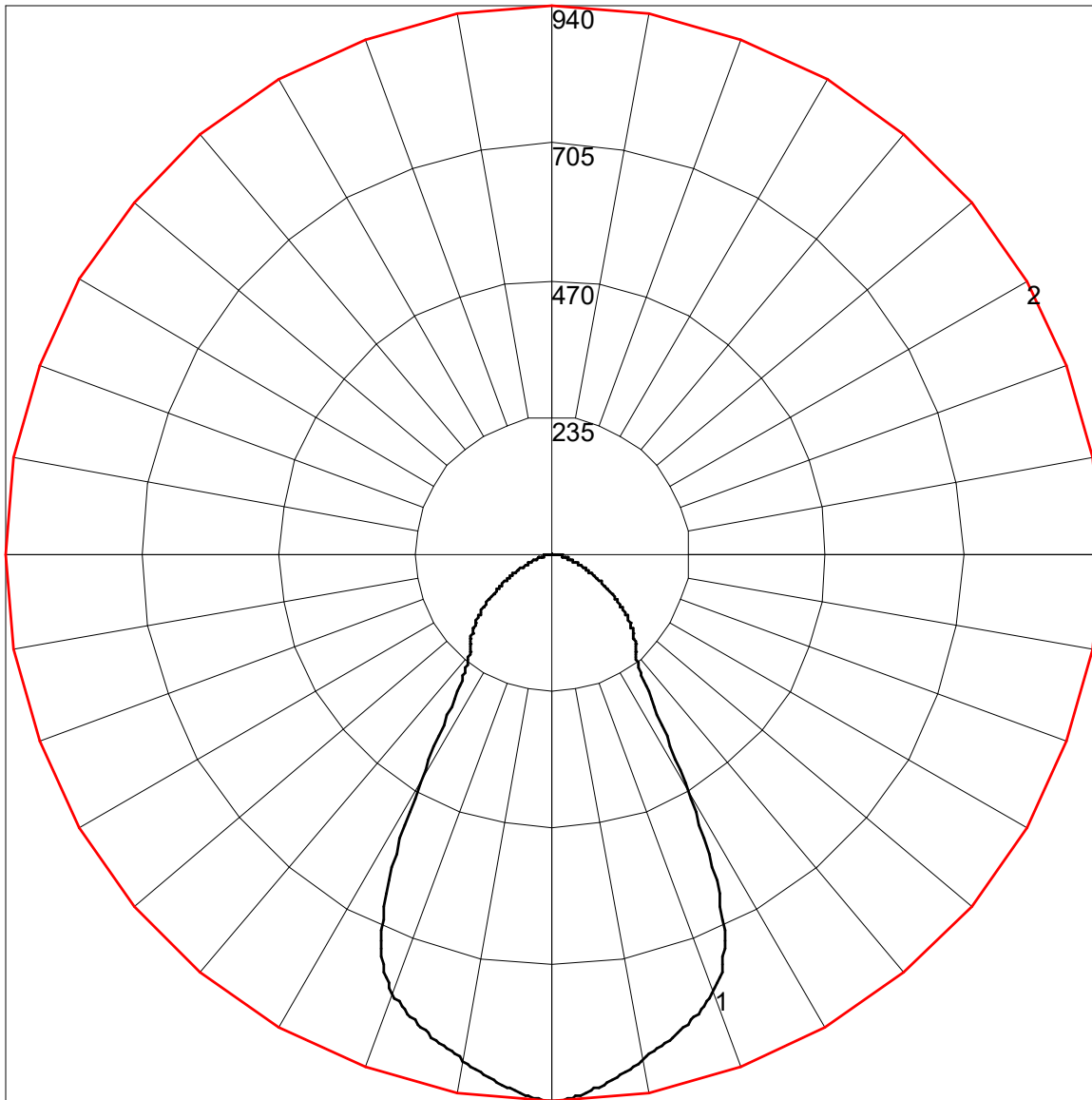
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UGR TABLE - CORRECTED

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					UGR Viewed Endwise				
X=2H	Y=2H	19.7	21.0	20.1	21.3	21.6	19.7	21.0	20.1	21.3	21.6
	3H	20.5	21.6	20.8	22.0	22.3	20.5	21.6	20.8	22.0	22.3
	4H	20.6	21.7	21.0	22.1	22.4	20.6	21.7	21.0	22.1	22.4
	6H	20.7	21.7	21.2	22.1	22.5	20.7	21.7	21.2	22.1	22.5
	8H	20.8	21.7	21.2	22.1	22.5	20.8	21.7	21.2	22.1	22.5
	12H	20.7	21.6	21.2	22.0	22.5	20.7	21.6	21.2	22.0	22.5
4H	2H	20.0	21.0	20.4	21.4	21.8	20.0	21.0	20.4	21.4	21.8
	3H	20.9	21.8	21.3	22.2	22.6	20.9	21.8	21.3	22.2	22.6
	4H	21.1	21.9	21.5	22.3	22.8	21.1	21.9	21.5	22.3	22.8
	6H	21.3	22.0	21.7	22.4	22.9	21.3	22.0	21.7	22.4	22.9
	8H	21.3	21.9	21.8	22.4	22.9	21.3	21.9	21.8	22.4	22.9
	12H	21.3	21.9	21.8	22.4	22.8	21.3	21.9	21.8	22.4	22.8
8H	4H	21.2	21.8	21.6	22.2	22.7	21.2	21.8	21.6	22.2	22.7
	6H	21.4	21.9	21.9	22.4	22.9	21.4	21.9	21.9	22.4	22.9
	8H	21.4	21.9	22.0	22.4	22.9	21.4	21.9	22.0	22.4	22.9
	12H	21.5	21.9	22.0	22.4	22.9	21.5	21.9	22.0	22.4	22.9
12H	4H	21.1	21.7	21.6	22.2	22.6	21.1	21.7	21.6	22.2	22.6
	6H	21.4	21.8	21.9	22.3	22.8	21.4	21.8	21.9	22.3	22.8
	8H	21.4	21.8	22.0	22.3	22.9	21.4	21.8	22.0	22.3	22.9

Maximum UGR = 22.9

POLAR GRAPH



Maximum Candela = 940.068 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.)