



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P23-8TW-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.

[ISSUEDATE] 6 OCT 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-P23-8TW-PoE-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	2330
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	67
Total Luminaire Watts	34.6
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	64311	64311	64311
55	52844	52844	52844
65	38659	38659	38659
75	26763	26763	26763
85	14590	14590	14590

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CANDELA TABULATION

	<u>0</u>
0.0	1637.044
0.5	1636.527
1.0	1635.493
1.5	1634.113
2.0	1632.734
2.5	1631.182
3.0	1629.113
3.5	1627.907
4.0	1627.045
4.5	1626.527
5.0	1625.838
5.5	1625.148
6.0	1624.631
6.5	1623.941
7.0	1623.424
7.5	1623.079
8.0	1622.907
8.5	1622.389
9.0	1621.872
9.5	1620.838
10.0	1620.148
10.5	1618.941
11.0	1617.734
11.5	1616.183
12.0	1614.459
12.5	1612.390
13.0	1609.976
13.5	1607.217
14.0	1603.769
14.5	1599.631
15.0	1594.631
15.5	1588.597
16.0	1581.873
16.5	1573.942
17.0	1565.321
17.5	1555.666
18.0	1544.287
18.5	1532.563
19.0	1519.805
19.5	1505.495
20.0	1489.805
20.5	1472.736
21.0	1454.289
21.5	1434.461
22.0	1412.565
22.5	1389.289
23.0	1364.290
23.5	1337.394
24.0	1308.429
24.5	1277.567
25.0	1244.119
25.5	1209.120
26.0	1171.707
26.5	1132.052

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CANDELA TABULATION - (Cont.)

27.0	1091.018
27.5	1048.260
28.0	1004.812
28.5	961.192
29.0	918.434
29.5	876.539
30.0	836.194
30.5	798.264
31.0	762.747
31.5	730.334
32.0	700.852
32.5	674.300
33.0	650.680
33.5	629.646
34.0	610.853
34.5	594.301
35.0	579.302
35.5	565.681
36.0	553.612
36.5	542.233
37.0	531.889
37.5	522.234
38.0	513.268
38.5	504.648
39.0	496.717
39.5	488.958
40.0	481.717
40.5	474.476
41.0	467.579
41.5	460.855
42.0	454.476
42.5	448.097
43.0	441.718
43.5	435.338
44.0	428.959
44.5	422.580
45.0	416.201
45.5	409.821
46.0	403.442
46.5	397.063
47.0	390.339
47.5	383.615
48.0	376.891
48.5	369.994
49.0	362.926
49.5	355.857
50.0	348.960
50.5	341.891
51.0	334.823
51.5	327.754
52.0	320.857
52.5	313.961
53.0	306.892
53.5	299.651
54.0	292.237
54.5	284.823

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CANDELA TABULATION - (Cont.)

55.0	277.410
55.5	269.996
56.0	262.755
56.5	255.686
57.0	248.617
57.5	241.548
58.0	234.652
58.5	227.928
59.0	221.204
59.5	214.652
60.0	208.273
60.5	201.894
61.0	195.687
61.5	189.652
62.0	183.618
62.5	177.584
63.0	171.825
63.5	166.101
64.0	160.480
64.5	154.946
65.0	149.532
65.5	144.256
66.0	139.050
66.5	133.981
67.0	129.033
67.5	124.171
68.0	119.464
68.5	114.860
69.0	110.257
69.5	105.809
70.0	101.481
70.5	97.223
71.0	93.068
71.5	89.016
72.0	85.102
72.5	81.240
73.0	77.482
73.5	73.826
74.0	70.240
74.5	66.775
75.0	63.396
75.5	60.120
76.0	56.913
76.5	53.792
77.0	50.810
77.5	47.844
78.0	44.982
78.5	42.206
79.0	39.482
79.5	36.862
80.0	34.293
80.5	31.793
81.0	29.327
81.5	26.931
82.0	24.586
82.5	22.310

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CANDELA TABULATION - (Cont.)

83.0	20.051
83.5	17.862
84.0	15.724
84.5	13.638
85.0	11.638
85.5	9.707
86.0	7.862
86.5	6.121
87.0	4.586
87.5	3.310
88.0	2.310
88.5	1.465
89.0	0.914
89.5	0.621
90.0	0.431
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
118.0	0.000
118.5	0.000
119.0	0.000
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122.0	0.000
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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
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128.0	0.000
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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

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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
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150.0	0.000
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153.5	0.000
154.0	0.000
154.5	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	601.32	N.A.	25.80
0-30	1153.4	N.A.	49.50
0-40	1529.45	N.A.	65.60
0-60	2097.91	N.A.	90.00
0-80	2315.82	N.A.	99.40
0-90	2330.4	N.A.	100.00
10-90	2175.34	N.A.	93.30
20-40	928.13	N.A.	39.80
20-50	1248.66	N.A.	53.60
40-70	717.98	N.A.	30.80
60-80	217.91	N.A.	9.40
70-80	68.40	N.A.	2.90
80-90	14.57	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	2330.41	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	155.06
10-20	446.26
20-30	552.08
30-40	376.06
40-50	320.53
50-60	247.93
60-70	149.52
70-80	68.40
80-90	14.57
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	174	174	174	174	170	170	170	170	162	162	162	155	155	155	149	149	149	146
1	162	157	152	148	159	154	149	145	148	144	141	142	139	136	137	135	132	130
2	151	141	133	127	147	139	131	125	134	128	122	129	124	120	125	121	117	114
3	140	128	118	111	137	126	117	110	122	114	108	118	111	106	114	109	104	102
4	131	117	106	98	128	115	105	97	111	103	96	108	101	95	105	99	94	91
5	122	107	96	88	120	105	95	87	102	93	86	100	92	86	97	90	85	82
6	115	98	87	79	112	97	87	79	95	85	78	92	84	78	90	83	77	75
7	108	91	80	72	105	90	79	72	88	78	72	86	77	71	84	76	71	68
8	101	84	74	66	99	83	73	66	82	73	66	80	72	66	78	71	65	63
9	96	79	68	61	94	78	68	61	76	67	61	75	67	61	74	66	60	58
10	91	74	64	57	89	73	63	57	72	63	57	70	62	56	69	62	56	54

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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	22.2	23.6	22.6	23.9	24.2	22.2	23.6	22.6	23.9	24.2
	3H	23.3	24.5	23.7	24.9	25.2	23.3	24.5	23.7	24.9	25.2
	4H	23.7	24.8	24.1	25.1	25.5	23.7	24.8	24.1	25.1	25.5
	6H	23.9	24.9	24.3	25.3	25.7	23.9	24.9	24.3	25.3	25.7
	8H	23.9	24.9	24.4	25.3	25.7	23.9	24.9	24.4	25.3	25.7
	12H	23.9	24.9	24.4	25.3	25.7	23.9	24.9	24.4	25.3	25.7

UGR Viewed Endwise

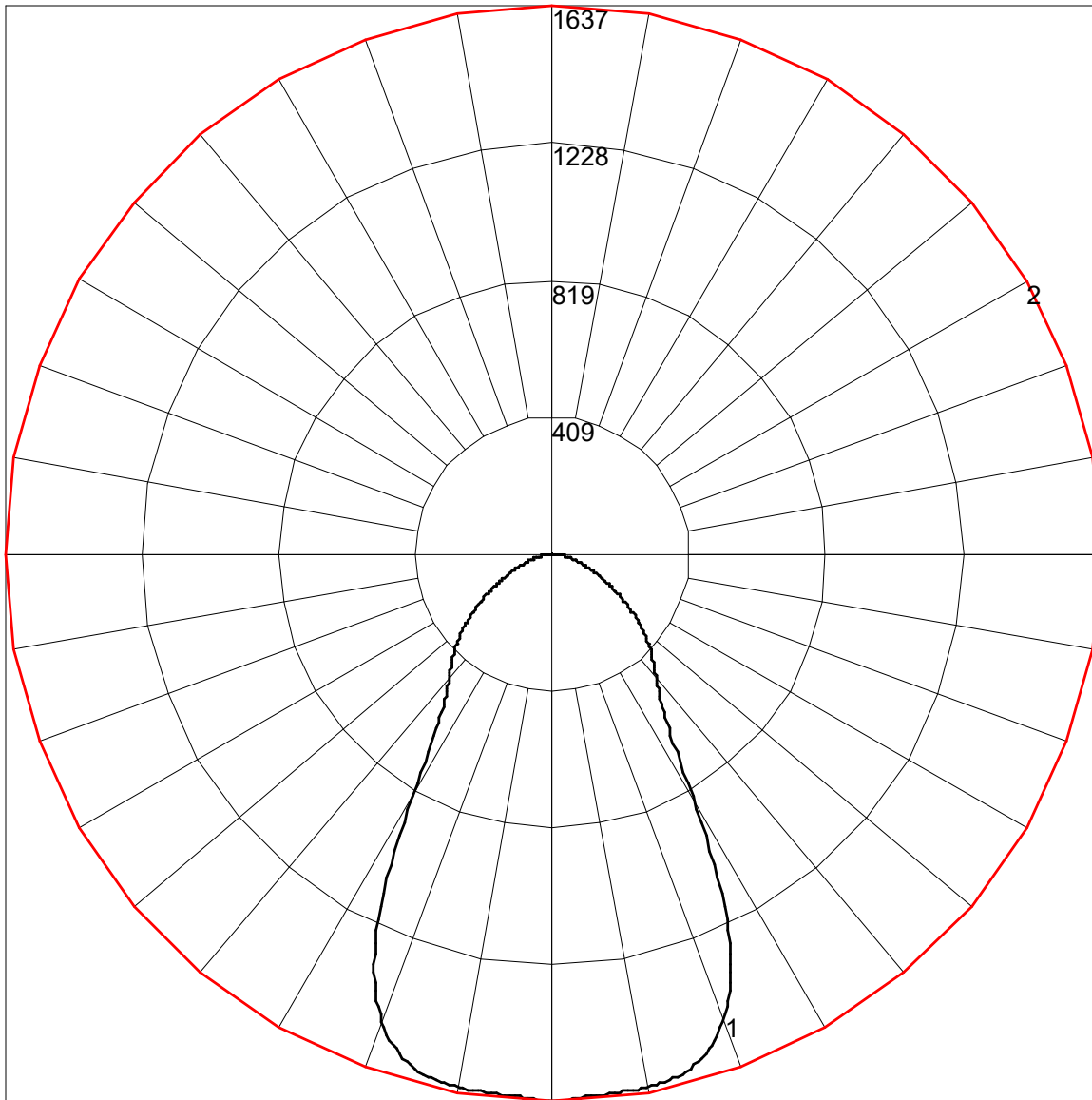
4H	2H	22.6	23.7	23.0	24.1	24.4	22.6	23.7	23.0	24.1	24.4
	3H	23.9	24.8	24.3	25.2	25.6	23.9	24.8	24.3	25.2	25.6
	4H	24.3	25.2	24.7	25.6	26.0	24.3	25.2	24.7	25.6	26.0
	6H	24.6	25.4	25.1	25.8	26.3	24.6	25.4	25.1	25.8	26.3
	8H	24.7	25.4	25.2	25.8	26.3	24.7	25.4	25.2	25.8	26.3
	12H	24.7	25.3	25.2	25.8	26.3	24.7	25.3	25.2	25.8	26.3

8H	4H	24.4	25.1	24.9	25.6	26.0	24.4	25.1	24.9	25.6	26.0
	6H	24.8	25.4	25.3	25.9	26.4	24.8	25.4	25.3	25.9	26.4
	8H	24.9	25.4	25.4	26.0	26.4	24.9	25.4	25.4	26.0	26.4
	12H	25.0	25.4	25.5	25.9	26.5	25.0	25.4	25.5	25.9	26.5

12H	4H	24.4	25.0	24.9	25.5	26.0	24.4	25.0	24.9	25.5	26.0
	6H	24.8	25.3	25.4	25.8	26.3	24.8	25.3	25.4	25.8	26.3
	8H	25.0	25.4	25.5	25.9	26.5	25.0	25.4	25.5	25.9	26.5

Maximum UGR = 26.5

POLAR GRAPH



Maximum Candela = 1637.044 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.)