



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P23-8TW-POE-LM-OF-WH_4000K.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.09

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 6 OCT 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-P23-8TW-PoE-LM-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	3093
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
Total Luminaire Watts	34.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.56
Spacing Criterion (90-270)	0.56
Spacing Criterion (Diagonal)	0.54
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	23469	23469	23469
55	18292	18292	18292
65	15288	15288	15288
75	12300	12300	12300
85	7349	7349	7349

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P23-8TW-POE-LM-OF-WH_4000K.IES

CANDELA TABULATION

	<u>0</u>
0.0	8002.808
0.5	7999.360
1.0	7987.292
1.5	7968.328
2.0	7944.192
2.5	7911.436
3.0	7873.508
3.5	7828.684
4.0	7776.964
4.5	7721.796
5.0	7659.732
5.5	7590.772
6.0	7514.916
6.5	7430.440
7.0	7339.068
7.5	7239.076
8.0	7130.464
8.5	7013.232
9.0	6889.104
9.5	6754.632
10.0	6609.816
10.5	6454.656
11.0	6292.600
11.5	6121.924
12.0	5940.904
12.5	5752.988
13.0	5556.452
13.5	5353.020
14.0	5140.968
14.5	4922.020
15.0	4701.348
15.5	4477.228
16.0	4253.108
16.5	4027.264
17.0	3803.144
17.5	3585.920
18.0	3370.420
18.5	3163.540
19.0	2965.280
19.5	2773.916
20.0	2592.896
20.5	2418.772
21.0	2256.716
21.5	2103.280
22.0	1958.464
22.5	1823.992
23.0	1697.106
23.5	1578.839
24.0	1469.020
24.5	1366.442
25.0	1271.278
25.5	1182.836
26.0	1099.912
26.5	1023.366

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P23-8TW-POE-LM-OF-WH_4000K.IES

CANDELA TABULATION - (Cont.)

27.0	951.993
27.5	886.653
28.0	825.796
28.5	769.594
29.0	718.046
29.5	669.946
30.0	625.295
30.5	584.091
31.0	545.991
31.5	510.994
32.0	478.582
32.5	448.757
33.0	421.346
33.5	396.003
34.0	372.901
34.5	351.524
35.0	332.215
35.5	314.285
36.0	297.907
36.5	282.908
37.0	269.116
37.5	256.531
38.0	245.153
38.5	234.636
39.0	224.982
39.5	216.190
40.0	208.087
40.5	200.501
41.0	193.433
41.5	187.054
42.0	181.020
42.5	175.331
43.0	170.159
43.5	165.159
44.0	160.504
44.5	156.194
45.0	151.884
45.5	147.919
46.0	144.299
46.5	140.678
47.0	137.230
47.5	134.127
48.0	130.852
48.5	127.921
49.0	124.990
49.5	122.059
50.0	119.473
50.5	116.887
51.0	114.474
51.5	111.888
52.0	109.474
52.5	107.233
53.0	104.819
53.5	102.578
54.0	100.337
54.5	98.096

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P23-8TW-POE-LM-OF-WH_4000K.IES

CANDELA TABULATION - (Cont.)

55.0	96.027
55.5	93.958
56.0	91.889
56.5	89.820
57.0	87.579
57.5	85.683
58.0	83.786
58.5	82.062
59.0	80.166
59.5	78.270
60.0	76.373
60.5	74.477
61.0	72.925
61.5	71.029
62.0	69.305
62.5	67.581
63.0	65.857
63.5	64.305
64.0	62.581
64.5	60.857
65.0	59.133
65.5	57.582
66.0	56.030
66.5	54.478
67.0	52.754
67.5	51.203
68.0	49.651
68.5	48.100
69.0	46.548
69.5	44.996
70.0	43.445
70.5	42.066
71.0	40.686
71.5	38.962
72.0	37.583
72.5	36.204
73.0	34.825
73.5	33.273
74.0	31.894
74.5	30.515
75.0	29.136
75.5	27.756
76.0	26.377
76.5	24.998
77.0	23.619
77.5	22.584
78.0	21.205
78.5	19.998
79.0	18.792
79.5	17.585
80.0	16.378
80.5	15.171
81.0	13.964
81.5	13.102
82.0	11.723
82.5	10.861

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P23-8TW-POE-LM-OF-WH_4000K.IES

CANDELA TABULATION - (Cont.)

83.0	9.654
83.5	8.792
84.0	7.758
84.5	6.724
85.0	5.862
85.5	4.827
86.0	4.138
86.5	3.276
87.0	2.758
87.5	2.241
88.0	1.724
88.5	1.379
89.0	1.034
89.5	0.690
90.0	0.517
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-P23-8TW-POE-LM-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-P23-8TW-POE-LM-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-P23-8TW-POE-LM-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-P23-8TW-POE-LM-OF-WH_4000K.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1956.03	N.A.	63.20
0-30	2568.97	N.A.	83.10
0-40	2789.93	N.A.	90.20
0-60	2995.9	N.A.	96.90
0-80	3085.7	N.A.	99.80
0-90	3092.99	N.A.	100.00
10-90	2394.55	N.A.	77.40
20-40	833.89	N.A.	27.00
20-50	953.55	N.A.	30.80
40-70	264.78	N.A.	8.60
60-80	89.79	N.A.	2.90
70-80	30.99	N.A.	1.00
80-90	7.29	N.A.	0.20
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	3093.00	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	698.44
10-20	1257.59
20-30	612.94
30-40	220.95
40-50	119.66
50-60	86.32
60-70	58.81
70-80	30.99
80-90	7.29
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P23-8TW-POE-LM-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	174	174	174	174	170	170	170	170	162	162	162	155	155	155	149	149	149	146
1	166	162	159	156	163	159	156	153	153	151	149	148	146	144	143	141	140	137
2	159	152	147	142	156	150	145	141	145	141	138	141	138	135	137	134	132	130
3	152	144	137	132	149	142	135	131	138	133	129	134	130	127	131	128	125	122
4	146	136	129	123	143	134	128	122	131	126	121	128	124	120	126	122	118	116
5	140	129	122	116	138	128	121	116	125	119	115	123	118	114	121	116	113	111
6	135	123	116	110	133	122	115	110	120	114	109	118	113	108	116	111	108	106
7	129	118	110	105	128	117	110	105	115	109	104	113	108	104	112	107	103	101
8	125	113	105	100	123	112	105	100	111	104	100	109	103	99	108	103	99	97
9	120	108	101	96	119	108	101	96	107	100	96	105	100	95	104	99	95	93
10	116	104	97	92	115	104	97	92	103	96	92	102	96	92	101	95	92	90

IES INDOOR REPORT
PHOTOMETRIC FILENAME : V4DR-P23-8TW-POE-LM-OF-WH_4000K.IES

UGR TABLE - CORRECTED

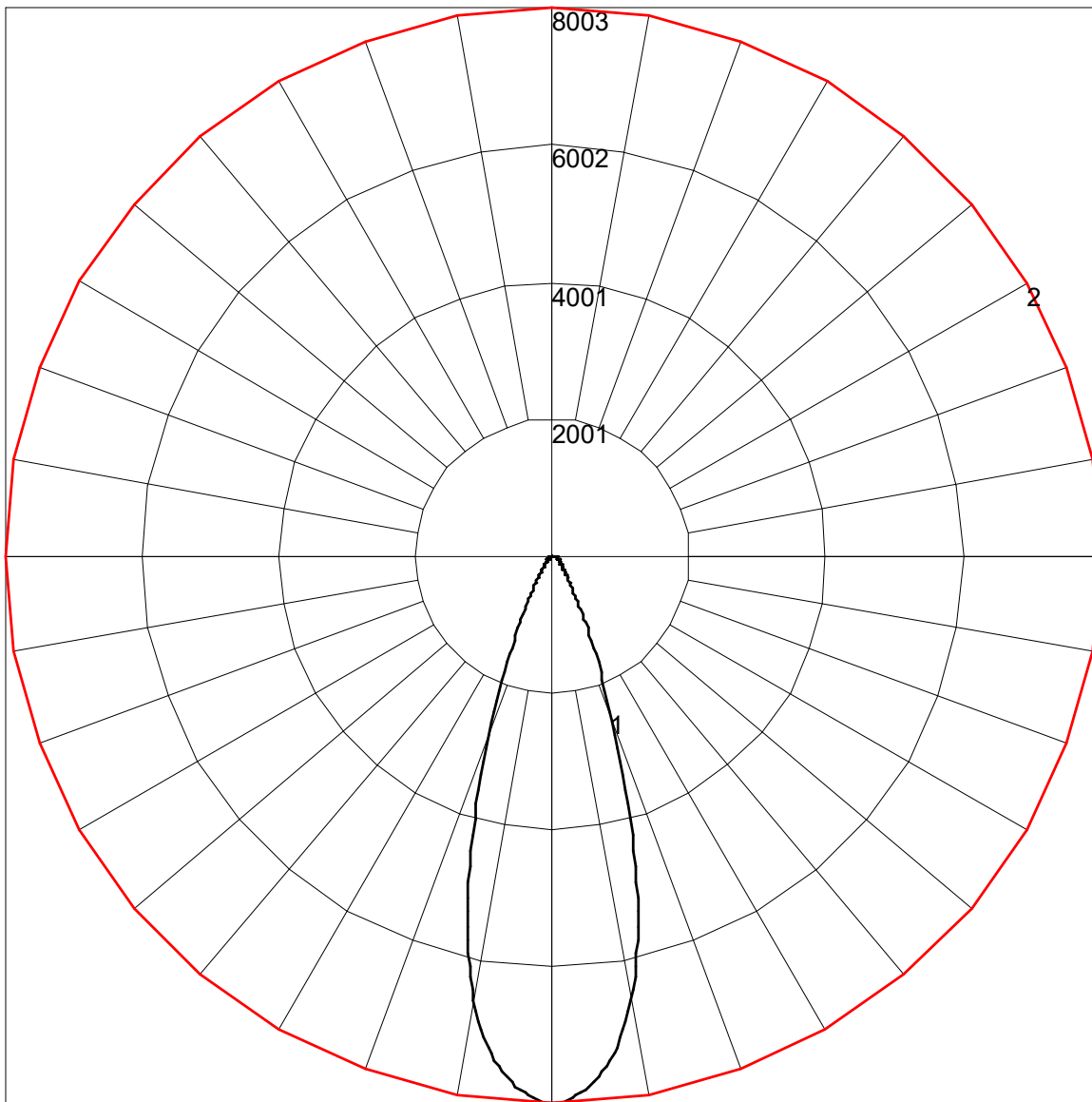
Reflectances

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	14.5	15.6	14.9	15.9	16.2	14.5	15.6	14.9	15.9	16.2
	3H	16.0	16.9	16.4	17.2	17.6	16.0	16.9	16.4	17.2	17.6
	4H	16.5	17.3	16.9	17.7	18.1	16.5	17.3	16.9	17.7	18.1
	6H	16.8	17.6	17.2	18.0	18.4	16.8	17.6	17.2	18.0	18.4
	8H	16.9	17.6	17.3	18.0	18.4	16.9	17.6	17.3	18.0	18.4
	12H	16.9	17.6	17.4	18.0	18.4	16.9	17.6	17.4	18.0	18.4
4H	2H	15.0	15.8	15.4	16.2	16.6	15.0	15.8	15.4	16.2	16.6
	3H	16.6	17.3	17.0	17.7	18.1	16.6	17.3	17.0	17.7	18.1
	4H	17.2	17.9	17.7	18.3	18.7	17.2	17.9	17.7	18.3	18.7
	6H	17.7	18.2	18.2	18.7	19.1	17.7	18.2	18.2	18.7	19.1
	8H	17.8	18.3	18.3	18.7	19.2	17.8	18.3	18.3	18.7	19.2
	12H	17.8	18.3	18.3	18.7	19.2	17.8	18.3	18.3	18.7	19.2
8H	4H	17.4	17.9	17.9	18.3	18.8	17.4	17.9	17.9	18.3	18.8
	6H	17.9	18.3	18.5	18.8	19.3	17.9	18.3	18.5	18.8	19.3
	8H	18.1	18.4	18.6	19.0	19.5	18.1	18.4	18.6	19.0	19.5
	12H	18.2	18.5	18.7	19.0	19.6	18.2	18.5	18.7	19.0	19.6
12H	4H	17.4	17.8	17.9	18.3	18.8	17.4	17.8	17.9	18.3	18.8
	6H	18.0	18.3	18.5	18.8	19.3	18.0	18.3	18.5	18.8	19.3
	8H	18.1	18.4	18.7	18.9	19.5	18.1	18.4	18.7	18.9	19.5

Maximum UGR = 19.6

POLAR GRAPH



Maximum Candela = 8002.808 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.)