



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P17-8TW-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-P17-8TW-POE x-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	2119
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	94
Total Luminaire Watts	22.6
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	16079	16079	16079
55	12533	12533	12533
65	10474	10474	10474
75	8427	8427	8427
85	5035	5035	5035

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CANDELA TABULATION

	<u>0</u>
0.0	5482.940
0.5	5480.578
1.0	5472.310
1.5	5459.317
2.0	5442.781
2.5	5420.339
3.0	5394.353
3.5	5363.643
4.0	5328.208
4.5	5290.411
5.0	5247.890
5.5	5200.643
6.0	5148.672
6.5	5090.795
7.0	5028.194
7.5	4959.687
8.0	4885.274
8.5	4804.955
9.0	4719.911
9.5	4627.781
10.0	4528.564
10.5	4422.259
11.0	4311.230
11.5	4194.296
12.0	4070.274
12.5	3941.528
13.0	3806.876
13.5	3667.499
14.0	3522.216
14.5	3372.209
15.0	3221.021
15.5	3067.470
16.0	2913.919
16.5	2759.187
17.0	2605.637
17.5	2456.811
18.0	2309.166
18.5	2167.427
19.0	2031.594
19.5	1900.485
20.0	1776.463
20.5	1657.166
21.0	1546.137
21.5	1441.014
22.0	1341.797
22.5	1249.666
23.0	1162.733
23.5	1081.705
24.0	1006.466
24.5	936.187
25.0	870.987
25.5	810.393
26.0	753.579
26.5	701.136

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CANDELA TABULATION - (Cont.)

27.0	652.236
27.5	607.470
28.0	565.775
28.5	527.269
29.0	491.953
29.5	458.998
30.0	428.406
30.5	400.177
31.0	374.073
31.5	350.096
32.0	327.890
32.5	307.456
33.0	288.675
33.5	271.312
34.0	255.485
34.5	240.838
35.0	227.609
35.5	215.325
36.0	204.104
36.5	193.828
37.0	184.379
37.5	175.756
38.0	167.961
38.5	160.756
39.0	154.141
39.5	148.117
40.0	142.566
40.5	137.369
41.0	132.526
41.5	128.156
42.0	124.022
42.5	120.124
43.0	116.580
43.5	113.155
44.0	109.966
44.5	107.013
45.0	104.060
45.5	101.343
46.0	98.863
46.5	96.383
47.0	94.020
47.5	91.894
48.0	89.650
48.5	87.642
49.0	85.634
49.5	83.626
50.0	81.854
50.5	80.083
51.0	78.429
51.5	76.657
52.0	75.004
52.5	73.468
53.0	71.814
53.5	70.279
54.0	68.743
54.5	67.208

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CANDELA TABULATION - (Cont.)

55.0	65.791
55.5	64.373
56.0	62.956
56.5	61.538
57.0	60.003
57.5	58.704
58.0	57.404
58.5	56.223
59.0	54.924
59.5	53.625
60.0	52.325
60.5	51.026
61.0	49.963
61.5	48.664
62.0	47.483
62.5	46.301
63.0	45.120
63.5	44.057
64.0	42.876
64.5	41.695
65.0	40.514
65.5	39.451
66.0	38.388
66.5	37.325
67.0	36.143
67.5	35.080
68.0	34.017
68.5	32.954
69.0	31.891
69.5	30.828
70.0	29.765
70.5	28.820
71.0	27.875
71.5	26.694
72.0	25.749
72.5	24.804
73.0	23.859
73.5	22.796
74.0	21.851
74.5	20.907
75.0	19.962
75.5	19.017
76.0	18.072
76.5	17.127
77.0	16.182
77.5	15.473
78.0	14.528
78.5	13.701
79.0	12.875
79.5	12.048
80.0	11.221
80.5	10.394
81.0	9.567
81.5	8.977
82.0	8.032
82.5	7.441

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CANDELA TABULATION - (Cont.)

83.0	6.614
83.5	6.024
84.0	5.315
84.5	4.607
85.0	4.016
85.5	3.307
86.0	2.835
86.5	2.244
87.0	1.890
87.5	1.536
88.0	1.181
88.5	0.945
89.0	0.709
89.5	0.472
90.0	0.354
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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PHOTOMETRIC FILENAME : V4DR-P17-8TW-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
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133.5	0.000
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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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PHOTOMETRIC FILENAME : V4DR-P17-8TW-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

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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	1340.13	N.A.	63.20
0-30	1760.07	N.A.	83.10
0-40	1911.45	N.A.	90.20
0-60	2052.57	N.A.	96.90
0-80	2114.09	N.A.	99.80
0-90	2119.09	N.A.	100.00
10-90	1640.57	N.A.	77.40
20-40	571.32	N.A.	27.00
20-50	653.31	N.A.	30.80
40-70	181.41	N.A.	8.60
60-80	61.52	N.A.	2.90
70-80	21.23	N.A.	1.00
80-90	5.00	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	2119.1	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	478.52
10-20	861.61
20-30	419.94
30-40	151.38
40-50	81.98
50-60	59.14
60-70	40.29
70-80	21.23
80-90	5.00
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	159	159	159	159	155	155	155	155	148	148	148	142	142	142	136	136	136	134
1	152	149	145	143	149	146	143	140	140	138	136	135	134	132	131	129	128	126
2	145	139	134	130	143	137	133	129	133	129	126	129	126	123	125	123	121	119
3	139	131	125	121	137	130	124	120	126	121	118	123	119	116	120	117	114	112
4	133	124	118	113	131	123	117	112	120	115	111	118	113	110	115	111	108	106
5	128	118	111	106	126	117	111	106	115	109	105	113	108	104	111	106	103	101
6	123	113	106	101	121	112	105	100	110	104	100	108	103	99	106	102	98	97
7	119	108	101	96	117	107	100	96	105	100	95	104	99	95	102	98	94	93
8	114	103	97	92	113	103	96	92	101	95	91	100	95	91	99	94	91	89
9	110	99	93	88	109	99	92	88	98	92	88	96	91	87	95	91	87	86
10	107	96	89	85	105	95	89	85	94	88	84	93	88	84	92	87	84	82

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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

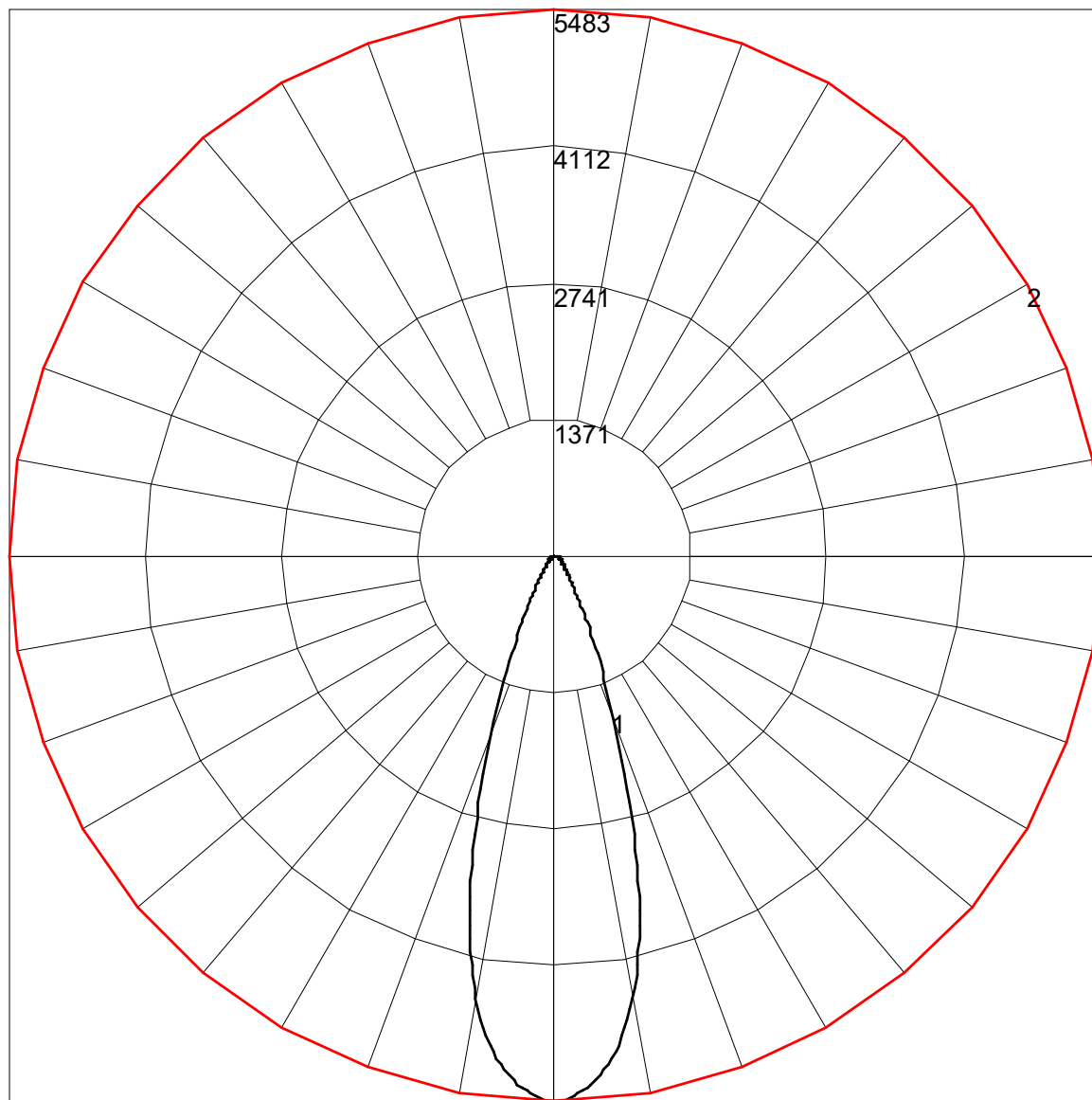
X=2H	Y=2H	13.5	14.6	13.9	14.9	15.2	13.5	14.6	13.9	14.9	15.2
	3H	15.0	15.9	15.4	16.2	16.6	15.0	15.9	15.4	16.2	16.6
	4H	15.5	16.3	15.9	16.7	17.1	15.5	16.3	15.9	16.7	17.1
	6H	15.8	16.6	16.2	17.0	17.4	15.8	16.6	16.2	17.0	17.4
	8H	15.9	16.6	16.3	17.0	17.4	15.9	16.6	16.3	17.0	17.4
	12H	15.9	16.6	16.4	17.0	17.4	15.9	16.6	16.4	17.0	17.4

UGR Viewed Endwise

4H	2H	14.0	14.8	14.4	15.2	15.6	14.0	14.8	14.4	15.2	15.6
	3H	15.6	16.3	16.0	16.7	17.1	15.6	16.3	16.0	16.7	17.1
	4H	16.2	16.9	16.7	17.3	17.7	16.2	16.9	16.7	17.3	17.7
	6H	16.7	17.2	17.2	17.7	18.1	16.7	17.2	17.2	17.7	18.1
	8H	16.8	17.3	17.3	17.7	18.2	16.8	17.3	17.3	17.7	18.2
	12H	16.8	17.2	17.3	17.7	18.2	16.8	17.2	17.3	17.7	18.2
8H	4H	16.4	16.9	16.9	17.3	17.8	16.4	16.9	16.9	17.3	17.8
	6H	16.9	17.3	17.5	17.8	18.3	16.9	17.3	17.5	17.8	18.3
	8H	17.1	17.4	17.6	18.0	18.5	17.1	17.4	17.6	18.0	18.5
	12H	17.2	17.5	17.7	18.0	18.6	17.2	17.5	17.7	18.0	18.6
12H	4H	16.4	16.8	16.9	17.3	17.8	16.4	16.8	16.9	17.3	17.8
	6H	17.0	17.3	17.5	17.8	18.3	17.0	17.3	17.5	17.8	18.3
	8H	17.1	17.4	17.7	17.9	18.5	17.1	17.4	17.7	17.9	18.5

Maximum UGR = 18.6

POLAR GRAPH



Maximum Candela = 5482.94 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.)