



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P17-8TW-POE-LN-OF-WH\_4000K.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.10

[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-LN-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	2165
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	96
Total Luminaire Watts	22.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.44
Spacing Criterion (90-270)	0.44
Spacing Criterion (Diagonal)	0.44
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	14217	14217	14217
55	10665	10665	10665
65	8825	8825	8825
75	7180	7180	7180
85	3998	3998	3998

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CANDELA TABULATION

	<u>0</u>
0.0	8132.039
0.5	8122.590
1.0	8095.424
1.5	8052.903
2.0	7992.666
2.5	7918.255
3.0	7828.490
3.5	7724.551
4.0	7606.438
4.5	7476.515
5.0	7335.961
5.5	7183.596
6.0	7020.601
6.5	6844.613
7.0	6659.177
7.5	6465.473
8.0	6259.957
8.5	6048.536
9.0	5830.028
9.5	5606.795
10.0	5380.020
10.5	5149.701
11.0	4914.657
11.5	4679.613
12.0	4446.932
12.5	4215.431
13.0	3987.475
13.5	3763.061
14.0	3544.553
14.5	3333.132
15.0	3129.979
15.5	2933.912
16.0	2746.113
16.5	2566.582
17.0	2397.682
17.5	2235.868
18.0	2083.503
18.5	1940.587
19.0	1807.120
19.5	1683.102
20.0	1566.170
20.5	1455.145
21.0	1351.206
21.5	1256.716
22.0	1165.651
22.5	1080.965
23.0	1001.829
23.5	928.600
24.0	860.449
24.5	796.668
25.0	737.966
25.5	683.871
26.0	633.673
26.5	587.609

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**CANDELA TABULATION - (Cont.)**

27.0	545.089
27.5	506.112
28.0	470.442
28.5	437.725
29.0	407.724
29.5	380.086
30.0	354.928
30.5	331.778
31.0	310.517
31.5	291.147
32.0	273.548
32.5	257.131
33.0	242.130
33.5	228.311
34.0	215.791
34.5	204.216
35.0	193.704
35.5	184.137
36.0	175.161
36.5	167.011
37.0	159.570
37.5	152.601
38.0	146.341
38.5	140.554
39.0	135.121
39.5	130.042
40.0	125.317
40.5	120.947
41.0	116.931
41.5	113.152
42.0	109.608
42.5	106.301
43.0	103.112
43.5	100.159
44.0	97.325
44.5	94.608
45.0	92.010
45.5	89.647
46.0	87.285
46.5	85.041
47.0	82.915
47.5	80.789
48.0	78.781
48.5	76.773
49.0	74.883
49.5	72.993
50.0	71.222
50.5	69.568
51.0	67.797
51.5	66.261
52.0	64.607
52.5	63.072
53.0	61.655
53.5	60.119
54.0	58.702
54.5	57.403

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**CANDELA TABULATION - (Cont.)**

<b>55.0</b>	55.985
<b>55.5</b>	54.686
<b>56.0</b>	53.387
<b>56.5</b>	52.088
<b>57.0</b>	50.906
<b>57.5</b>	49.725
<b>58.0</b>	48.544
<b>58.5</b>	47.363
<b>59.0</b>	46.300
<b>59.5</b>	45.237
<b>60.0</b>	44.174
<b>60.5</b>	43.111
<b>61.0</b>	42.048
<b>61.5</b>	40.985
<b>62.0</b>	39.922
<b>62.5</b>	38.977
<b>63.0</b>	37.914
<b>63.5</b>	36.969
<b>64.0</b>	36.024
<b>64.5</b>	35.079
<b>65.0</b>	34.134
<b>65.5</b>	33.190
<b>66.0</b>	32.245
<b>66.5</b>	31.300
<b>67.0</b>	30.473
<b>67.5</b>	29.528
<b>68.0</b>	28.701
<b>68.5</b>	27.756
<b>69.0</b>	26.930
<b>69.5</b>	25.985
<b>70.0</b>	25.158
<b>70.5</b>	24.331
<b>71.0</b>	23.504
<b>71.5</b>	22.678
<b>72.0</b>	21.851
<b>72.5</b>	21.024
<b>73.0</b>	20.197
<b>73.5</b>	19.370
<b>74.0</b>	18.544
<b>74.5</b>	17.835
<b>75.0</b>	17.008
<b>75.5</b>	16.181
<b>76.0</b>	15.473
<b>76.5</b>	14.646
<b>77.0</b>	13.937
<b>77.5</b>	13.110
<b>78.0</b>	12.402
<b>78.5</b>	11.693
<b>79.0</b>	10.984
<b>79.5</b>	10.276
<b>80.0</b>	9.567
<b>80.5</b>	8.858
<b>81.0</b>	8.150
<b>81.5</b>	7.559
<b>82.0</b>	6.851
<b>82.5</b>	6.260

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CANDELA TABULATION - (Cont.)

83.0	5.551
83.5	4.961
84.0	4.370
84.5	3.780
85.0	3.189
85.5	2.717
86.0	2.362
86.5	1.890
87.0	1.535
87.5	1.299
88.0	0.945
88.5	0.709
89.0	0.472
89.5	0.354
90.0	0.236
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
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97.5	0.000
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99.0	0.000
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100.0	0.000
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101.5	0.000
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103.5	0.000
104.0	0.000
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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  
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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
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117.5	0.000
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127.0	0.000
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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  
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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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159.5	0.000
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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	1498.73	N.A.	69.20
0-30	1857.75	N.A.	85.80
0-40	1986.16	N.A.	91.70
0-60	2108.92	N.A.	97.40
0-80	2160.88	N.A.	99.80
0-90	2165.05	N.A.	100.00
10-90	1528.26	N.A.	70.60
20-40	487.43	N.A.	22.50
20-50	559.70	N.A.	25.90
40-70	156.68	N.A.	7.20
60-80	51.96	N.A.	2.40
70-80	18.05	N.A.	0.80
80-90	4.17	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	2165.06	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	636.79
10-20	861.94
20-30	359.02
30-40	128.41
40-50	72.27
50-60	50.49
60-70	33.92
70-80	18.05
80-90	4.17
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	153	149	146	144	149	146	144	141	141	139	137	136	134	133	132	130	129	127
2	146	141	136	132	144	138	134	131	134	131	128	130	128	125	127	125	123	120
3	141	133	128	123	138	132	126	122	128	124	120	125	121	118	122	119	117	115
4	135	127	121	116	133	126	120	115	123	118	114	120	116	113	118	114	112	110
5	130	121	115	110	129	120	114	110	118	113	109	116	111	108	114	110	107	105
6	126	116	110	105	124	115	109	105	113	108	104	112	107	103	110	106	103	101
7	122	112	105	101	120	111	105	101	109	104	100	108	103	100	107	102	99	98
8	118	108	101	97	116	107	101	97	106	100	96	104	100	96	103	99	96	94
9	114	104	98	93	113	103	97	93	102	97	93	101	96	93	100	96	92	91
10	111	101	94	90	110	100	94	90	99	94	90	98	93	90	97	93	90	88

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**UGR TABLE - CORRECTED**

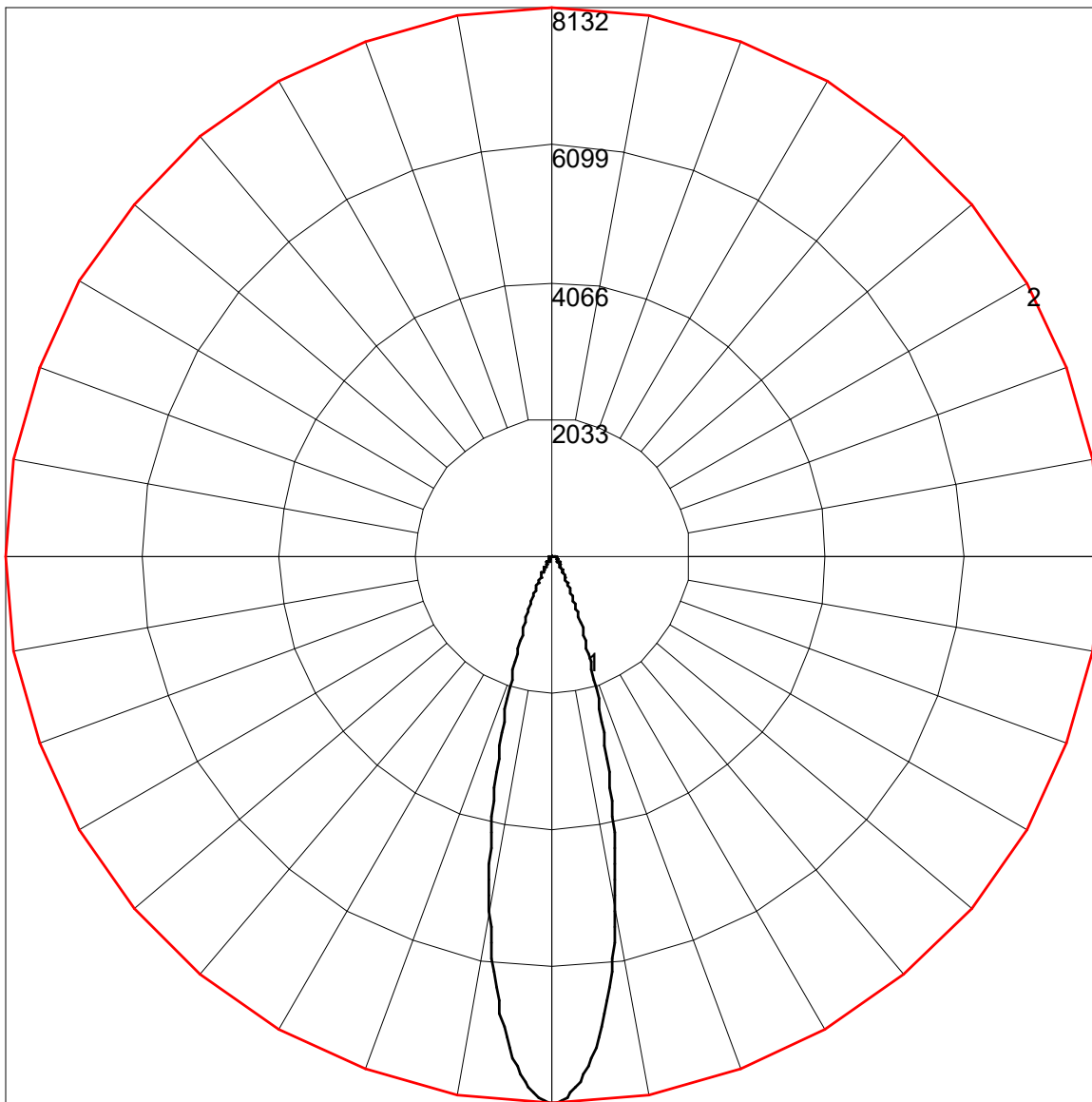
Reflectances

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	12.3	13.3	12.7	13.6	14.0	12.3	13.3	12.7	13.6	14.0
	3H	13.8	14.7	14.2	15.0	15.4	13.8	14.7	14.2	15.0	15.4
	4H	14.3	15.1	14.7	15.5	15.9	14.3	15.1	14.7	15.5	15.9
	6H	14.6	15.4	15.0	15.7	16.1	14.6	15.4	15.0	15.7	16.1
	8H	14.7	15.4	15.1	15.8	16.2	14.7	15.4	15.1	15.8	16.2
	12H	14.7	15.4	15.2	15.8	16.2	14.7	15.4	15.2	15.8	16.2
4H	2H	12.8	13.6	13.2	13.9	14.3	12.8	13.6	13.2	13.9	14.3
	3H	14.4	15.1	14.8	15.5	15.9	14.4	15.1	14.8	15.5	15.9
	4H	15.0	15.6	15.5	16.0	16.5	15.0	15.6	15.5	16.0	16.5
	6H	15.5	16.0	15.9	16.4	16.9	15.5	16.0	15.9	16.4	16.9
	8H	15.6	16.0	16.1	16.5	17.0	15.6	16.0	16.1	16.5	17.0
	12H	15.6	16.0	16.1	16.5	17.0	15.6	16.0	16.1	16.5	17.0
8H	4H	15.2	15.7	15.7	16.1	16.6	15.2	15.7	15.7	16.1	16.6
	6H	15.7	16.1	16.3	16.6	17.1	15.7	16.1	16.3	16.6	17.1
	8H	15.9	16.2	16.4	16.7	17.2	15.9	16.2	16.4	16.7	17.2
	12H	16.0	16.3	16.5	16.8	17.3	16.0	16.3	16.5	16.8	17.3
12H	4H	15.2	15.6	15.7	16.1	16.5	15.2	15.6	15.7	16.1	16.5
	6H	15.8	16.1	16.3	16.5	17.1	15.8	16.1	16.3	16.5	17.1
	8H	15.9	16.2	16.5	16.7	17.3	15.9	16.2	16.5	16.7	17.3

Maximum UGR = 17.3

POLAR GRAPH



Maximum Candela = 8132.039 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.)