



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L27-835-DIM-UNV-LN-OF-WH\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.10

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 9 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-L27-835-DIM-UNV-LN-OF-WH

[LUMINAIRE] Black formed aluminum housing, white reflector, clear plastic optic w/ clear

[MORE] 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	3654
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	83
Total Luminaire Watts	44.2
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	23995	23995	23995
55	18000	18000	18000
65	14894	14894	14894
75	12118	12118	12118
85	6747	6747	6747

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CANDELA TABULATION

	<u>0</u>
0.0	13724.924
0.5	13708.976
1.0	13663.127
1.5	13591.363
2.0	13489.697
2.5	13364.109
3.0	13212.607
3.5	13037.183
4.0	12837.837
4.5	12618.558
5.0	12381.337
5.5	12124.181
6.0	11849.085
6.5	11552.060
7.0	11239.088
7.5	10912.162
8.0	10565.301
8.5	10208.473
9.0	9839.684
9.5	9462.922
10.0	9080.179
10.5	8691.455
11.0	8294.758
11.5	7898.061
12.0	7505.351
12.5	7114.634
13.0	6729.897
13.5	6351.141
14.0	5982.353
14.5	5625.524
15.0	5282.651
15.5	4951.737
16.0	4634.778
16.5	4331.773
17.0	4046.710
17.5	3773.607
18.0	3516.451
18.5	3275.243
19.0	3049.983
19.5	2840.671
20.0	2643.319
20.5	2455.934
21.0	2280.510
21.5	2121.034
22.0	1967.339
22.5	1824.408
23.0	1690.847
23.5	1567.253
24.0	1452.231
24.5	1344.584
25.0	1245.509
25.5	1154.209
26.0	1069.488
26.5	991.743

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : V4DR-L27-835-DIM-UNV-LN-OF-WH\_.IES****CANDELA TABULATION - (Cont.)**

27.0	919.979
27.5	854.195
28.0	793.992
28.5	738.774
29.0	688.140
29.5	641.493
30.0	599.033
30.5	559.961
31.0	524.079
31.5	491.386
32.0	461.684
32.5	433.975
33.0	408.658
33.5	385.334
34.0	364.204
34.5	344.668
35.0	326.926
35.5	310.779
36.0	295.629
36.5	281.874
37.0	269.316
37.5	257.554
38.0	246.989
38.5	237.221
39.0	228.051
39.5	219.479
40.0	211.505
40.5	204.130
41.0	197.352
41.5	190.973
42.0	184.992
42.5	179.411
43.0	174.028
43.5	169.045
44.0	164.261
44.5	159.676
45.0	155.290
45.5	151.303
46.0	147.316
46.5	143.529
47.0	139.940
47.5	136.352
48.0	132.963
48.5	129.574
49.0	126.385
49.5	123.195
50.0	120.205
50.5	117.414
51.0	114.424
51.5	111.833
52.0	109.042
52.5	106.450
53.0	104.058
53.5	101.467
54.0	99.075
54.5	96.882

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : V4DR-L27-835-DIM-UNV-LN-OF-WH\_.IES****CANDELA TABULATION - (Cont.)**

55.0	94.490
55.5	92.297
56.0	90.104
56.5	87.911
57.0	85.918
57.5	83.924
58.0	81.931
58.5	79.937
59.0	78.143
59.5	76.349
60.0	74.555
60.5	72.761
61.0	70.967
61.5	69.173
62.0	67.379
62.5	65.784
63.0	63.990
63.5	62.395
64.0	60.800
64.5	59.206
65.0	57.611
65.5	56.016
66.0	54.421
66.5	52.827
67.0	51.431
67.5	49.836
68.0	48.441
68.5	46.846
69.0	45.451
69.5	43.856
70.0	42.461
70.5	41.065
71.0	39.670
71.5	38.274
72.0	36.879
72.5	35.483
73.0	34.088
73.5	32.693
74.0	31.297
74.5	30.101
75.0	28.706
75.5	27.310
76.0	26.114
76.5	24.719
77.0	23.523
77.5	22.127
78.0	20.931
78.5	19.735
79.0	18.539
79.5	17.343
80.0	16.147
80.5	14.951
81.0	13.755
81.5	12.758
82.0	11.562
82.5	10.565

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83.0	9.369
83.5	8.373
84.0	7.376
84.5	6.379
85.0	5.382
85.5	4.585
86.0	3.987
86.5	3.190
87.0	2.591
87.5	2.193
88.0	1.595
88.5	1.196
89.0	0.797
89.5	0.598
90.0	0.399
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-L27-835-DIM-UNV-LN-OF-WH\_.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

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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



**IES INDOOR REPORT****PHOTOMETRIC FILENAME : V4DR-L27-835-DIM-UNV-LN-OF-WH\_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	2529.49	N.A.	69.20
0-30	3135.44	N.A.	85.80
0-40	3352.16	N.A.	91.70
0-60	3559.34	N.A.	97.40
0-80	3647.05	N.A.	99.80
0-90	3654.09	N.A.	100.00
10-90	2579.34	N.A.	70.60
20-40	822.66	N.A.	22.50
20-50	944.63	N.A.	25.90
40-70	264.43	N.A.	7.20
60-80	87.70	N.A.	2.40
70-80	30.46	N.A.	0.80
80-90	7.04	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	3654.1	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	1074.74
10-20	1454.75
20-30	605.95
30-40	216.72
40-50	121.97
50-60	85.22
60-70	57.24
70-80	30.46
80-90	7.04
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	237	237	237	237	232	232	232	232	222	222	222	212	212	212	203	203	203	199
1	228	223	218	214	223	218	214	211	210	207	204	203	201	198	196	194	193	189
2	218	210	203	197	214	207	200	195	200	195	191	194	190	187	189	186	183	180
3	210	199	190	184	206	196	189	182	191	185	179	187	181	177	182	178	174	171
4	202	189	180	173	199	187	179	172	183	176	170	179	173	168	176	171	166	164
5	195	181	171	164	192	179	170	164	176	168	162	173	166	161	170	164	159	157
6	188	173	164	157	185	172	163	156	169	161	155	167	160	154	164	158	153	151
7	182	167	157	150	179	166	156	150	163	155	149	161	154	148	159	153	148	145
8	176	161	151	145	174	160	151	144	158	150	144	156	149	143	154	148	143	140
9	170	155	146	139	168	154	145	139	153	144	139	151	144	138	149	143	138	136
10	165	150	141	135	164	149	141	135	148	140	134	146	139	134	145	138	134	132

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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	12.7	13.7	13.1	14.0	14.4	12.7	13.7	13.1	14.0	14.4
	3H	14.2	15.1	14.6	15.4	15.8	14.2	15.1	14.6	15.4	15.8
	4H	14.7	15.5	15.1	15.9	16.3	14.7	15.5	15.1	15.9	16.3
	6H	15.0	15.8	15.4	16.1	16.5	15.0	15.8	15.4	16.1	16.5
	8H	15.1	15.8	15.5	16.2	16.6	15.1	15.8	15.5	16.2	16.6
	12H	15.1	15.8	15.6	16.2	16.6	15.1	15.8	15.6	16.2	16.6

### UGR Viewed Endwise

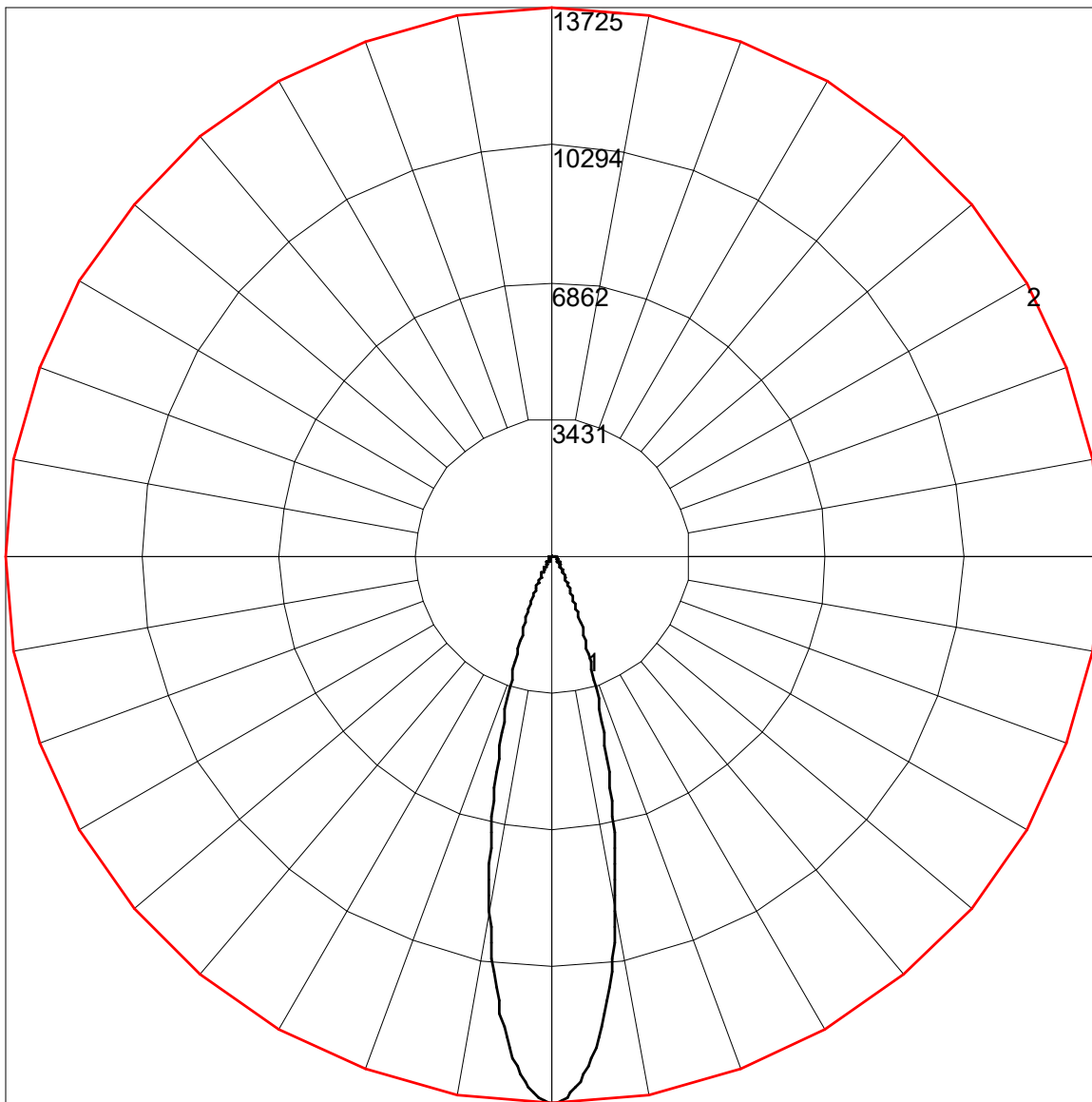
4H	2H	13.2	14.0	13.6	14.3	14.7	13.2	14.0	13.6	14.3	14.7
	3H	14.8	15.5	15.2	15.9	16.3	14.8	15.5	15.2	15.9	16.3
	4H	15.4	16.0	15.9	16.4	16.9	15.4	16.0	15.9	16.4	16.9
	6H	15.9	16.4	16.3	16.8	17.3	15.9	16.4	16.3	16.8	17.3
	8H	16.0	16.4	16.5	16.9	17.4	16.0	16.4	16.5	16.9	17.4
	12H	16.0	16.4	16.5	16.9	17.4	16.0	16.4	16.5	16.9	17.4

8H	4H	15.6	16.1	16.1	16.5	17.0	15.6	16.1	16.1	16.5	17.0
	6H	16.1	16.5	16.7	17.0	17.5	16.1	16.5	16.7	17.0	17.5
	8H	16.3	16.6	16.8	17.1	17.6	16.3	16.6	16.8	17.1	17.6
	12H	16.4	16.7	16.9	17.2	17.7	16.4	16.7	16.9	17.2	17.7

12H	4H	15.6	16.0	16.1	16.5	16.9	15.6	16.0	16.1	16.5	16.9
	6H	16.2	16.5	16.7	16.9	17.5	16.2	16.5	16.7	16.9	17.5
	8H	16.3	16.6	16.9	17.1	17.7	16.3	16.6	16.9	17.1	17.7

Maximum UGR = 17.7

POLAR GRAPH



Maximum Candela = 13724.924 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.)