



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P12-835-POE-RW-OF-WH\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.12

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 21 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-P12-835-PoE-RW-OF-WH

[LUMINAIRE] Black formed aluminum housing, white reflector, clear glas

[MORE] s patterned 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	1140
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	65
Total Luminaire Watts	17.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.98
Spacing Criterion (90-270)	0.98
Spacing Criterion (Diagonal)	0.88
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.38 ft (Diameter)
Luminous Width (90-270)	0.38 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	26376	26376	26376
55	21297	21297	21297
65	13777	13777	13777
75	7683	7683	7683
85	3947	3947	3947

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : V4DR-P12-835-POE-RW-OF-WH\_.IES

CANDELA TABULATION

	<u>0</u>
0.0	915.964
0.5	915.964
1.0	915.102
1.5	913.379
2.0	911.655
2.5	909.932
3.0	907.347
3.5	904.762
4.0	902.177
4.5	898.730
5.0	896.145
5.5	892.698
6.0	889.252
6.5	885.805
7.0	882.358
7.5	878.912
8.0	875.465
8.5	871.156
9.0	867.710
9.5	864.263
10.0	860.989
10.5	857.456
11.0	853.837
11.5	850.304
12.0	846.943
12.5	843.583
13.0	840.222
13.5	836.776
14.0	833.329
14.5	829.882
15.0	826.349
15.5	822.730
16.0	818.939
16.5	815.147
17.0	811.270
17.5	807.134
18.0	802.739
18.5	798.000
19.0	793.433
19.5	788.522
20.0	783.179
20.5	777.061
21.0	769.995
21.5	762.327
22.0	753.537
22.5	743.800
23.0	732.771
23.5	720.363
24.0	706.748
24.5	691.324
25.0	674.091
25.5	655.048
26.0	634.454
26.5	612.567

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : V4DR-P12-835-POE-RW-OF-WH\_.IES**

**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	589.560
<b>27.5</b>	566.209
<b>28.0</b>	541.737
<b>28.5</b>	517.524
<b>29.0</b>	493.397
<b>29.5</b>	469.270
<b>30.0</b>	445.574
<b>30.5</b>	422.308
<b>31.0</b>	400.336
<b>31.5</b>	379.052
<b>32.0</b>	358.975
<b>32.5</b>	340.277
<b>33.0</b>	322.957
<b>33.5</b>	307.361
<b>34.0</b>	293.315
<b>34.5</b>	281.079
<b>35.0</b>	270.308
<b>35.5</b>	261.175
<b>36.0</b>	253.161
<b>36.5</b>	246.440
<b>37.0</b>	240.494
<b>37.5</b>	235.410
<b>38.0</b>	230.757
<b>38.5</b>	226.621
<b>39.0</b>	222.916
<b>39.5</b>	219.556
<b>40.0</b>	216.540
<b>40.5</b>	213.696
<b>41.0</b>	210.939
<b>41.5</b>	208.440
<b>42.0</b>	205.941
<b>42.5</b>	203.615
<b>43.0</b>	201.288
<b>43.5</b>	198.875
<b>44.0</b>	196.463
<b>44.5</b>	194.050
<b>45.0</b>	191.551
<b>45.5</b>	188.966
<b>46.0</b>	186.295
<b>46.5</b>	183.537
<b>47.0</b>	180.694
<b>47.5</b>	177.764
<b>48.0</b>	174.834
<b>48.5</b>	171.732
<b>49.0</b>	168.544
<b>49.5</b>	165.184
<b>50.0</b>	161.823
<b>50.5</b>	158.376
<b>51.0</b>	154.757
<b>51.5</b>	151.224
<b>52.0</b>	147.605
<b>52.5</b>	143.986
<b>53.0</b>	140.540
<b>53.5</b>	136.748
<b>54.0</b>	132.957
<b>54.5</b>	129.166

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : V4DR-P12-835-POE-RW-OF-WH\_.IES**

**CANDELA TABULATION - (Cont.)**

<b>55.0</b>	125.460
<b>55.5</b>	121.669
<b>56.0</b>	117.964
<b>56.5</b>	114.345
<b>57.0</b>	110.726
<b>57.5</b>	107.107
<b>58.0</b>	103.574
<b>58.5</b>	100.127
<b>59.0</b>	96.680
<b>59.5</b>	93.320
<b>60.0</b>	89.959
<b>60.5</b>	86.685
<b>61.0</b>	83.497
<b>61.5</b>	80.308
<b>62.0</b>	77.293
<b>62.5</b>	74.190
<b>63.0</b>	71.261
<b>63.5</b>	68.245
<b>64.0</b>	65.401
<b>64.5</b>	62.558
<b>65.0</b>	59.800
<b>65.5</b>	57.043
<b>66.0</b>	54.372
<b>66.5</b>	51.787
<b>67.0</b>	49.288
<b>67.5</b>	46.789
<b>68.0</b>	44.376
<b>68.5</b>	41.964
<b>69.0</b>	39.637
<b>69.5</b>	37.397
<b>70.0</b>	35.329
<b>70.5</b>	33.347
<b>71.0</b>	31.537
<b>71.5</b>	29.814
<b>72.0</b>	28.177
<b>72.5</b>	26.626
<b>73.0</b>	25.161
<b>73.5</b>	23.868
<b>74.0</b>	22.576
<b>74.5</b>	21.456
<b>75.0</b>	20.422
<b>75.5</b>	19.474
<b>76.0</b>	18.440
<b>76.5</b>	17.492
<b>77.0</b>	16.544
<b>77.5</b>	15.596
<b>78.0</b>	14.735
<b>78.5</b>	13.787
<b>79.0</b>	12.925
<b>79.5</b>	12.063
<b>80.0</b>	11.202
<b>80.5</b>	10.340
<b>81.0</b>	9.565
<b>81.5</b>	8.789
<b>82.0</b>	7.927
<b>82.5</b>	7.238

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : V4DR-P12-835-POE-RW-OF-WH\_.IES

CANDELA TABULATION - (Cont.)

83.0	6.463
83.5	5.687
84.0	4.998
84.5	4.222
85.0	3.533
85.5	2.930
86.0	2.327
86.5	1.896
87.0	1.465
87.5	1.120
88.0	0.776
88.5	0.517
89.0	0.259
89.5	0.086
90.0	0.000
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-P12-835-POE-RW-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

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : V4DR-P12-835-POE-RW-OF-WH\_.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-P12-835-POE-RW-OF-WH\_.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-P12-835-POE-RW-OF-WH\_.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	317.05	N.A.	27.80
0-30	613.53	N.A.	53.80
0-40	794.20	N.A.	69.60
0-60	1053.22	N.A.	92.40
0-80	1135.64	N.A.	99.60
0-90	1140.3	N.A.	100.00
10-90	1055.94	N.A.	92.60
20-40	477.15	N.A.	41.80
20-50	624.15	N.A.	54.70
40-70	318.94	N.A.	28.00
60-80	82.42	N.A.	7.20
70-80	22.51	N.A.	2.00
80-90	4.66	N.A.	0.40
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1140.3	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	84.36
10-20	232.69
20-30	296.48
30-40	180.67
40-50	147.00
50-60	112.03
60-70	59.91
70-80	22.51
80-90	4.66
90-100	0.00
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-P12-835-POE-RW-OF-WH\_.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	112	112	112	112	110	110	110	110	105	105	105	100	100	100	96	96	96	94
1	105	102	99	97	103	100	97	95	96	94	92	93	91	89	89	88	87	85
2	98	93	88	84	96	91	86	83	88	84	81	85	82	79	82	80	77	76
3	92	84	78	74	90	83	77	73	80	76	72	78	74	71	76	72	70	68
4	86	77	71	66	84	76	70	65	74	69	64	72	67	64	70	66	63	61
5	81	71	64	59	79	70	64	59	68	63	58	66	62	58	65	61	57	56
6	76	65	59	54	74	65	58	54	63	57	53	62	57	53	60	56	52	51
7	71	61	54	49	70	60	54	49	59	53	49	58	52	48	56	52	48	47
8	67	57	50	45	66	56	50	45	55	49	45	54	49	45	53	48	45	43
9	64	53	46	42	62	52	46	42	51	46	42	51	45	42	50	45	41	40
10	60	50	43	39	59	49	43	39	48	43	39	48	42	39	47	42	39	37

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : V4DR-P12-835-POE-RW-OF-WH\_.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

X=2H	Y=2H	20.3	21.6	20.7	21.9	22.2	20.3	21.6	20.7	21.9	22.2
	3H	21.1	22.2	21.4	22.6	22.9	21.1	22.2	21.4	22.6	22.9
	4H	21.2	22.3	21.6	22.7	23.0	21.2	22.3	21.6	22.7	23.0
	6H	21.3	22.3	21.8	22.7	23.1	21.3	22.3	21.8	22.7	23.1
	8H	21.4	22.3	21.8	22.7	23.1	21.4	22.3	21.8	22.7	23.1
	12H	21.3	22.2	21.8	22.6	23.1	21.3	22.2	21.8	22.6	23.1

UGR Viewed Endwise

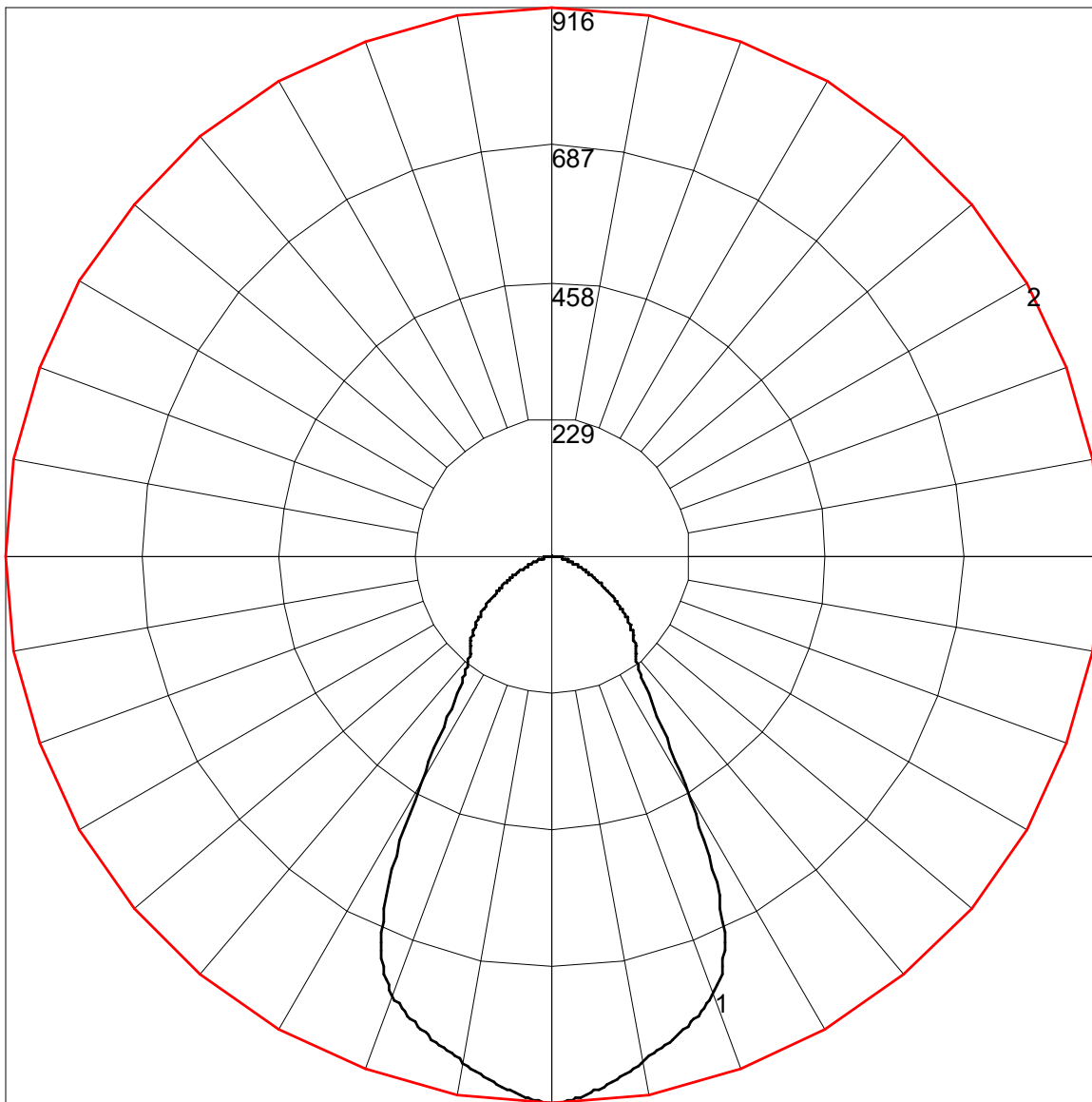
4H	2H	20.6	21.6	21.0	22.0	22.4	20.6	21.6	21.0	22.0	22.4
	3H	21.5	22.4	21.9	22.8	23.2	21.5	22.4	21.9	22.8	23.2
	4H	21.7	22.5	22.1	22.9	23.4	21.7	22.5	22.1	22.9	23.4
	6H	21.9	22.6	22.3	23.0	23.5	21.9	22.6	22.3	23.0	23.5
	8H	21.9	22.5	22.4	23.0	23.5	21.9	22.5	22.4	23.0	23.5
	12H	21.9	22.5	22.4	23.0	23.4	21.9	22.5	22.4	23.0	23.4

8H	4H	21.8	22.4	22.2	22.8	23.3	21.8	22.4	22.2	22.8	23.3
	6H	22.0	22.5	22.5	23.0	23.5	22.0	22.5	22.5	23.0	23.5
	8H	22.0	22.5	22.6	23.0	23.5	22.0	22.5	22.6	23.0	23.5
	12H	22.1	22.5	22.6	23.0	23.5	22.1	22.5	22.6	23.0	23.5

12H	4H	21.7	22.3	22.2	22.8	23.2	21.7	22.3	22.2	22.8	23.2
	6H	22.0	22.4	22.5	22.9	23.4	22.0	22.4	22.5	22.9	23.4
	8H	22.0	22.4	22.6	22.9	23.5	22.0	22.4	22.6	22.9	23.5

Maximum UGR = 23.5

POLAR GRAPH



Maximum Candela = 915.964 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.)