



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P12-835-POE-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] 21 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

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

[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	1578
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	90
Total Luminaire Watts	17.5
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	10363	10363	10363
55	7773	7773	7773
65	6432	6432	6432
75	5233	5233	5233
85	2913	2913	2913

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CANDELA TABULATION

	<u>0</u>
0.0	5927.184
0.5	5920.297
1.0	5900.497
1.5	5869.505
2.0	5825.600
2.5	5771.364
3.0	5705.937
3.5	5630.179
4.0	5544.091
4.5	5449.394
5.0	5346.949
5.5	5235.895
6.0	5117.093
6.5	4988.821
7.0	4853.662
7.5	4712.477
8.0	4562.684
8.5	4408.585
9.0	4249.322
9.5	4086.615
10.0	3921.325
10.5	3753.453
11.0	3582.137
11.5	3410.821
12.0	3241.227
12.5	3072.494
13.0	2906.343
13.5	2742.776
14.0	2583.512
14.5	2429.414
15.0	2281.342
15.5	2138.435
16.0	2001.555
16.5	1870.700
17.0	1747.594
17.5	1629.653
18.0	1518.599
18.5	1414.432
19.0	1317.152
19.5	1226.759
20.0	1141.532
20.5	1060.609
21.0	984.851
21.5	915.980
22.0	849.606
22.5	787.881
23.0	730.202
23.5	676.827
24.0	627.154
24.5	580.666
25.0	537.880
25.5	498.452
26.0	461.864
26.5	428.290

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	397.298
<b>27.5</b>	368.889
<b>28.0</b>	342.890
<b>28.5</b>	319.044
<b>29.0</b>	297.177
<b>29.5</b>	277.032
<b>30.0</b>	258.696
<b>30.5</b>	241.822
<b>31.0</b>	226.326
<b>31.5</b>	212.208
<b>32.0</b>	199.381
<b>32.5</b>	187.414
<b>33.0</b>	176.481
<b>33.5</b>	166.409
<b>34.0</b>	157.283
<b>34.5</b>	148.847
<b>35.0</b>	141.185
<b>35.5</b>	134.212
<b>36.0</b>	127.669
<b>36.5</b>	121.729
<b>37.0</b>	116.305
<b>37.5</b>	111.226
<b>38.0</b>	106.663
<b>38.5</b>	102.445
<b>39.0</b>	98.485
<b>39.5</b>	94.783
<b>40.0</b>	91.340
<b>40.5</b>	88.154
<b>41.0</b>	85.227
<b>41.5</b>	82.473
<b>42.0</b>	79.890
<b>42.5</b>	77.480
<b>43.0</b>	75.155
<b>43.5</b>	73.003
<b>44.0</b>	70.937
<b>44.5</b>	68.957
<b>45.0</b>	67.063
<b>45.5</b>	65.341
<b>46.0</b>	63.619
<b>46.5</b>	61.984
<b>47.0</b>	60.434
<b>47.5</b>	58.884
<b>48.0</b>	57.421
<b>48.5</b>	55.957
<b>49.0</b>	54.580
<b>49.5</b>	53.203
<b>50.0</b>	51.911
<b>50.5</b>	50.706
<b>51.0</b>	49.415
<b>51.5</b>	48.296
<b>52.0</b>	47.090
<b>52.5</b>	45.971
<b>53.0</b>	44.938
<b>53.5</b>	43.819
<b>54.0</b>	42.786
<b>54.5</b>	41.839

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CANDELA TABULATION - (Cont.)

55.0	40.806
55.5	39.859
56.0	38.912
56.5	37.965
57.0	37.104
57.5	36.243
58.0	35.382
58.5	34.521
59.0	33.747
59.5	32.972
60.0	32.197
60.5	31.422
61.0	30.647
61.5	29.873
62.0	29.098
62.5	28.409
63.0	27.634
63.5	26.946
64.0	26.257
64.5	25.568
65.0	24.880
65.5	24.191
66.0	23.502
66.5	22.813
67.0	22.211
67.5	21.522
68.0	20.919
68.5	20.231
69.0	19.628
69.5	18.939
70.0	18.337
70.5	17.734
71.0	17.132
71.5	16.529
72.0	15.926
72.5	15.324
73.0	14.721
73.5	14.118
74.0	13.516
74.5	12.999
75.0	12.397
75.5	11.794
76.0	11.278
76.5	10.675
77.0	10.158
77.5	9.556
78.0	9.039
78.5	8.523
79.0	8.006
79.5	7.490
80.0	6.973
80.5	6.457
81.0	5.940
81.5	5.510
82.0	4.993
82.5	4.563

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CANDELA TABULATION - (Cont.)

83.0	4.046
83.5	3.616
84.0	3.185
84.5	2.755
85.0	2.324
85.5	1.980
86.0	1.722
86.5	1.377
87.0	1.119
87.5	0.947
88.0	0.689
88.5	0.517
89.0	0.344
89.5	0.258
90.0	0.172
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  
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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
117.0	0.000
117.5	0.000
118.0	0.000
118.5	0.000
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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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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	1092.38	N.A.	69.20
0-30	1354.06	N.A.	85.80
0-40	1447.65	N.A.	91.70
0-60	1537.12	N.A.	97.40
0-80	1575.00	N.A.	99.80
0-90	1578.04	N.A.	100.00
10-90	1113.9	N.A.	70.60
20-40	355.27	N.A.	22.50
20-50	407.94	N.A.	25.90
40-70	114.20	N.A.	7.20
60-80	37.87	N.A.	2.40
70-80	13.15	N.A.	0.80
80-90	3.04	N.A.	0.20
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	1578.04	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	464.13
10-20	628.24
20-30	261.68
30-40	93.59
40-50	52.67
50-60	36.80
60-70	24.72
70-80	13.15
80-90	3.04
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

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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	138	138	138	138	134	134	134	134	128	128	128	123	123	123	118	118	118	116
1	132	129	127	124	129	127	124	122	122	120	119	118	116	115	114	113	112	110
2	127	122	118	114	124	120	116	113	116	113	111	113	110	108	110	108	106	104
3	122	115	110	107	120	114	109	106	111	107	104	108	105	102	106	103	101	99
4	117	110	104	100	115	109	104	100	106	102	99	104	100	98	102	99	96	95
5	113	105	99	95	111	104	99	95	102	97	94	100	96	93	98	95	92	91
6	109	101	95	91	107	100	94	91	98	94	90	97	93	89	95	92	89	88
7	105	97	91	87	104	96	91	87	95	90	87	93	89	86	92	88	86	84
8	102	93	88	84	101	93	87	84	91	87	83	90	86	83	89	86	83	81
9	99	90	85	81	98	89	84	81	88	84	81	88	83	80	87	83	80	79
10	96	87	82	78	95	87	81	78	86	81	78	85	81	78	84	80	78	76

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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	11.7	12.7	12.1	13.0	13.4	UGR Viewed Endwise			
	3H	13.2	14.1	13.6	14.4	14.8	11.7	12.7	12.1	13.0
	4H	13.7	14.5	14.1	14.9	15.3	13.2	14.1	13.6	14.4
	6H	14.0	14.8	14.4	15.1	15.5	13.7	14.5	14.1	14.9
	8H	14.1	14.8	14.5	15.2	15.6	14.0	14.8	14.4	15.1
	12H	14.1	14.8	14.6	15.2	15.6	14.1	14.8	14.5	15.2

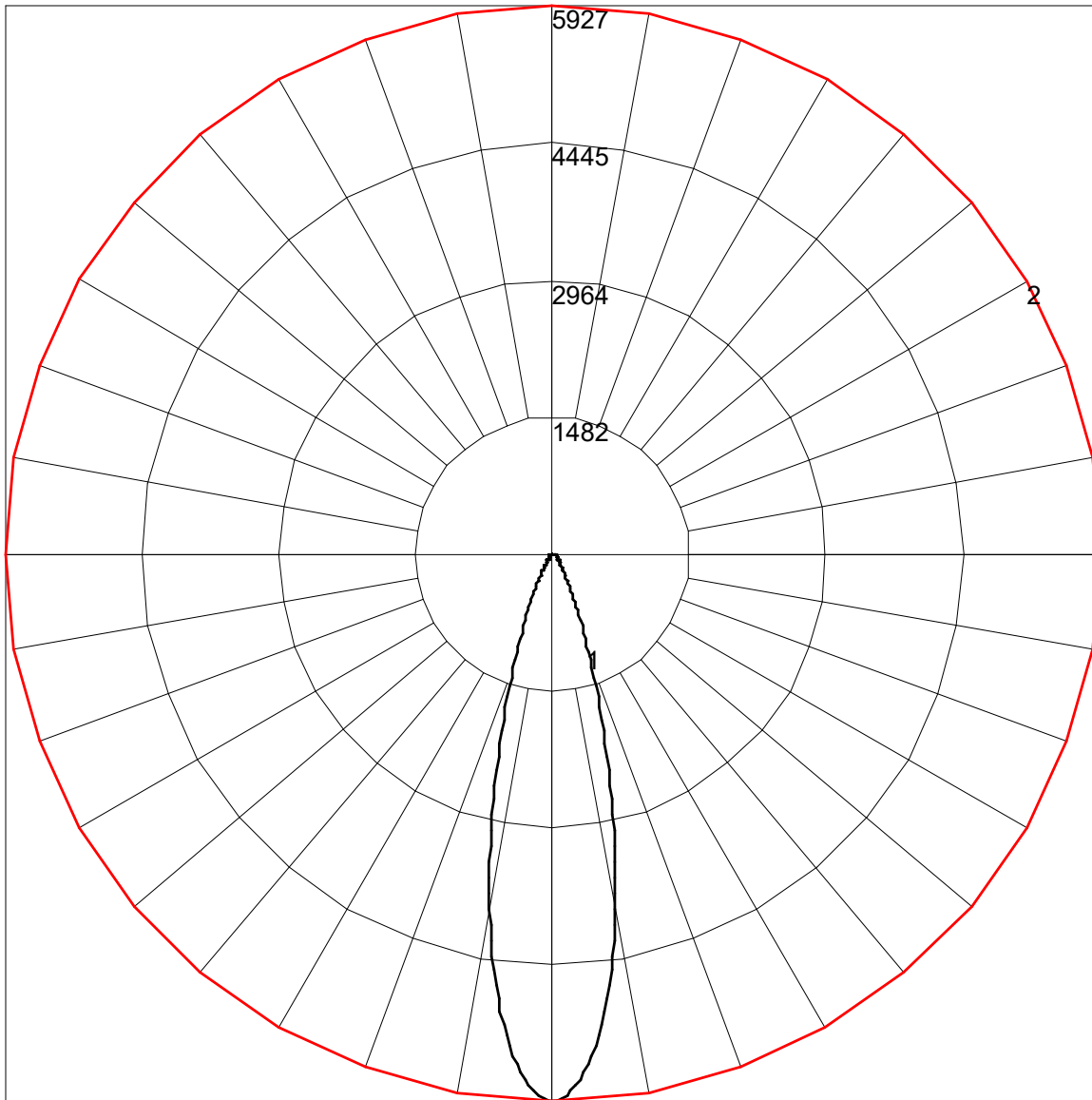
4H	2H	12.2	13.0	12.6	13.3	13.7	11.7	12.7	12.1	13.0
	3H	13.8	14.5	14.2	14.9	15.3	13.2	14.1	13.6	14.4
	4H	14.4	15.0	14.9	15.4	15.9	13.7	14.5	14.1	14.9
	6H	14.9	15.4	15.3	15.8	16.3	14.0	14.8	14.4	15.1
	8H	15.0	15.4	15.5	15.9	16.4	14.1	14.8	14.5	15.2
	12H	15.0	15.4	15.5	15.9	16.4	14.1	14.8	14.6	15.2

8H	4H	14.6	15.1	15.1	15.5	16.0	14.1	14.8	14.6	15.2
	6H	15.1	15.5	15.7	16.0	16.5	14.0	14.8	14.4	15.1
	8H	15.3	15.6	15.8	16.1	16.6	14.1	14.8	14.5	15.2
	12H	15.4	15.7	15.9	16.2	16.7	14.1	14.8	14.6	15.2

12H	4H	14.6	15.0	15.1	15.5	15.9	14.1	14.8	14.6	15.2
	6H	15.2	15.5	15.7	15.9	16.5	14.0	14.8	14.4	15.1
	8H	15.3	15.6	15.9	16.1	16.7	14.1	14.8	14.5	15.2

Maximum UGR = 16.7

POLAR GRAPH



Maximum Candela = 5927.184 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.)