



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L7-835-DIM-UNV-RN-OF-WH\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.15

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 15 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-L7-835-DIM-UNV-RN-OF-WH

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

[MORE] tic optic, clear glass 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	882
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	82
Total Luminaire Watts	10.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.44
Spacing Criterion (90-270)	0.44
Spacing Criterion (Diagonal)	0.46
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	4414	4414	4414
55	2937	2937	2937
65	2022	2022	2022
75	1313	1313	1313
85	1058	1058	1058

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CANDELA TABULATION

	<u>0</u>
0.0	3308.123
0.5	3304.134
1.0	3293.664
1.5	3275.216
2.0	3250.287
2.5	3218.876
3.0	3181.482
3.5	3138.603
4.0	3090.240
4.5	3036.892
5.0	2979.056
5.5	2916.732
6.0	2849.922
6.5	2778.125
7.0	2702.340
7.5	2623.563
8.0	2541.795
8.5	2456.537
9.0	2369.783
9.5	2280.536
10.0	2190.790
10.5	2099.549
11.0	2007.809
11.5	1916.069
12.0	1824.827
12.5	1735.082
13.0	1645.835
13.5	1558.582
14.0	1472.825
14.5	1389.561
15.0	1309.289
15.5	1232.008
16.0	1156.721
16.5	1085.423
17.0	1017.117
17.5	951.802
18.0	889.977
18.5	831.144
19.0	775.801
19.5	723.948
20.0	675.086
20.5	628.718
21.0	585.341
21.5	545.454
22.0	507.063
22.5	471.065
23.0	436.762
23.5	405.002
24.0	375.386
24.5	347.665
25.0	321.788
25.5	297.756
26.0	275.619
26.5	255.127

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	236.230
<b>27.5</b>	218.830
<b>28.0</b>	202.825
<b>28.5</b>	188.266
<b>29.0</b>	174.854
<b>29.5</b>	162.539
<b>30.0</b>	151.221
<b>30.5</b>	140.751
<b>31.0</b>	131.228
<b>31.5</b>	122.453
<b>32.0</b>	114.326
<b>32.5</b>	106.847
<b>33.0</b>	100.016
<b>33.5</b>	93.734
<b>34.0</b>	87.901
<b>34.5</b>	82.566
<b>35.0</b>	77.730
<b>35.5</b>	73.242
<b>36.0</b>	69.154
<b>36.5</b>	65.415
<b>37.0</b>	61.974
<b>37.5</b>	58.833
<b>38.0</b>	55.941
<b>38.5</b>	53.299
<b>39.0</b>	50.906
<b>39.5</b>	48.662
<b>40.0</b>	46.568
<b>40.5</b>	44.624
<b>41.0</b>	42.829
<b>41.5</b>	41.133
<b>42.0</b>	39.588
<b>42.5</b>	38.142
<b>43.0</b>	36.746
<b>43.5</b>	35.450
<b>44.0</b>	34.253
<b>44.5</b>	33.106
<b>45.0</b>	32.059
<b>45.5</b>	31.012
<b>46.0</b>	30.065
<b>46.5</b>	29.117
<b>47.0</b>	28.220
<b>47.5</b>	27.323
<b>48.0</b>	26.475
<b>48.5</b>	25.677
<b>49.0</b>	24.879
<b>49.5</b>	24.132
<b>50.0</b>	23.384
<b>50.5</b>	22.686
<b>51.0</b>	21.988
<b>51.5</b>	21.340
<b>52.0</b>	20.691
<b>52.5</b>	20.093
<b>53.0</b>	19.495
<b>53.5</b>	18.896
<b>54.0</b>	18.348
<b>54.5</b>	17.849

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**CANDELA TABULATION - (Cont.)**

55.0	17.301
55.5	16.802
56.0	16.304
56.5	15.805
57.0	15.356
57.5	14.908
58.0	14.409
58.5	13.960
59.0	13.562
59.5	13.113
60.0	12.664
60.5	12.265
61.0	11.866
61.5	11.467
62.0	11.069
62.5	10.670
63.0	10.271
63.5	9.872
64.0	9.523
64.5	9.174
65.0	8.775
65.5	8.426
66.0	8.077
66.5	7.728
67.0	7.429
67.5	7.080
68.0	6.781
68.5	6.432
69.0	6.133
69.5	5.833
70.0	5.534
70.5	5.285
71.0	5.036
71.5	4.786
72.0	4.587
72.5	4.338
73.0	4.138
73.5	3.989
74.0	3.789
74.5	3.640
75.0	3.490
75.5	3.341
76.0	3.191
76.5	3.041
77.0	2.892
77.5	2.742
78.0	2.643
78.5	2.493
79.0	2.343
79.5	2.244
80.0	2.094
80.5	1.944
81.0	1.845
81.5	1.695
82.0	1.595
82.5	1.496

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CANDELA TABULATION - (Cont.)

83.0	1.346
83.5	1.246
84.0	1.147
84.5	1.047
85.0	0.947
85.5	0.848
86.0	0.698
86.5	0.648
87.0	0.548
87.5	0.449
88.0	0.349
88.5	0.249
89.0	0.199
89.5	0.150
90.0	0.100
90.5	0.100
91.0	0.050
91.5	0.000
92.0	0.050
92.5	0.050
93.0	0.050
93.5	0.050
94.0	0.000
94.5	0.050
95.0	0.050
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	0.050
103.0	0.000
103.5	0.050
104.0	0.050
104.5	0.050
105.0	0.050
105.5	0.050
106.0	0.050
106.5	0.050
107.0	0.050
107.5	0.000
108.0	0.050
108.5	0.050
109.0	0.050
109.5	0.050
110.0	0.050
110.5	0.050

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CANDELA TABULATION - (Cont.)

111.0	0.050
111.5	0.050
112.0	0.050
112.5	0.050
113.0	0.050
113.5	0.050
114.0	0.050
114.5	0.050
115.0	0.050
115.5	0.050
116.0	0.050
116.5	0.050
117.0	0.050
117.5	0.050
118.0	0.050
118.5	0.050
119.0	0.050
119.5	0.050
120.0	0.050
120.5	0.050
121.0	0.050
121.5	0.050
122.0	0.050
122.5	0.050
123.0	0.050
123.5	0.050
124.0	0.050
124.5	0.050
125.0	0.050
125.5	0.050
126.0	0.050
126.5	0.050
127.0	0.050
127.5	0.050
128.0	0.050
128.5	0.050
129.0	0.050
129.5	0.050
130.0	0.050
130.5	0.050
131.0	0.100
131.5	0.100
132.0	0.100
132.5	0.100
133.0	0.100
133.5	0.100
134.0	0.100
134.5	0.100
135.0	0.150
135.5	0.150
136.0	0.150
136.5	0.150
137.0	0.150
137.5	0.199
138.0	0.199
138.5	0.199

IES INDOOR REPORT  
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CANDELA TABULATION - (Cont.)

139.0	0.199
139.5	0.249
140.0	0.249
140.5	0.249
141.0	0.299
141.5	0.299
142.0	0.299
142.5	0.349
143.0	0.349
143.5	0.349
144.0	0.399
144.5	0.399
145.0	0.449
145.5	0.449
146.0	0.499
146.5	0.499
147.0	0.548
147.5	0.548
148.0	0.598
148.5	0.598
149.0	0.648
149.5	0.648
150.0	0.698
150.5	0.698
151.0	0.748
151.5	0.748
152.0	0.798
152.5	0.798
153.0	0.848
153.5	0.848
154.0	0.897
154.5	0.897
155.0	0.947
155.5	0.947
156.0	0.997
156.5	0.997
157.0	0.997
157.5	1.047
158.0	1.047
158.5	1.097
159.0	1.097
159.5	1.097
160.0	1.147
160.5	1.147
161.0	1.147
161.5	1.147
162.0	1.197
162.5	1.197
163.0	1.197
163.5	1.197
164.0	1.197
164.5	1.197
165.0	1.197
165.5	1.197
166.0	1.246
166.5	1.197

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**CANDELA TABULATION - (Cont.)**

<b>167.0</b>	1.246
<b>167.5</b>	1.246
<b>168.0</b>	1.246
<b>168.5</b>	1.197
<b>169.0</b>	1.197
<b>169.5</b>	1.197
<b>170.0</b>	1.197
<b>170.5</b>	1.197
<b>171.0</b>	1.197
<b>171.5</b>	1.197
<b>172.0</b>	1.197
<b>172.5</b>	1.197
<b>173.0</b>	1.197
<b>173.5</b>	1.197
<b>174.0</b>	1.197
<b>174.5</b>	1.197
<b>175.0</b>	1.197
<b>175.5</b>	1.197
<b>176.0</b>	1.197
<b>176.5</b>	1.197
<b>177.0</b>	1.197
<b>177.5</b>	1.147
<b>178.0</b>	1.147
<b>178.5</b>	1.147
<b>179.0</b>	1.147
<b>179.5</b>	1.147
<b>180.0</b>	1.147



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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	618.47	N.A.	70.10
0-30	774.21	N.A.	87.80
0-40	826.11	N.A.	93.70
0-60	867.05	N.A.	98.30
0-80	879.62	N.A.	99.70
0-90	880.68	N.A.	99.80
10-90	622.00	N.A.	70.50
20-40	207.64	N.A.	23.50
20-50	232.94	N.A.	26.40
40-70	49.73	N.A.	5.60
60-80	12.57	N.A.	1.40
70-80	3.79	N.A.	0.40
80-90	1.06	N.A.	0.10
90-110	0.06	N.A.	0.00
90-120	0.11	N.A.	0.00
90-130	0.16	N.A.	0.00
90-150	0.54	N.A.	0.10
90-180	1.41	N.A.	0.20
110-180	1.35	N.A.	0.20
0-180	882.09	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	258.68
10-20	359.78
20-30	155.74
30-40	51.90
40-50	25.30
50-60	15.65
60-70	8.78
70-80	3.79
80-90	1.06
90-100	0.03
100-110	0.04
110-120	0.05
120-130	0.04
130-140	0.11
140-150	0.28
150-160	0.42
160-170	0.34
170-180	0.11

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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	59	59	59	59	58	58	58	58	55	55	55	53	53	53	51	51	51	50
1	57	56	55	54	56	55	54	53	53	52	51	51	50	50	49	49	48	47
2	55	53	51	50	54	52	50	49	50	49	48	49	48	47	48	47	46	45
3	53	50	48	46	52	49	48	46	48	47	45	47	46	45	46	45	44	43
4	51	48	46	44	50	47	45	44	46	44	43	45	44	43	44	43	42	41
5	49	46	43	42	48	45	43	41	44	43	41	44	42	41	43	42	40	40
6	47	44	41	40	47	43	41	40	43	41	39	42	40	39	42	40	39	38
7	46	42	40	38	45	42	40	38	41	39	38	41	39	38	40	39	37	37
8	44	41	38	37	44	40	38	37	40	38	36	39	38	36	39	37	36	36
9	43	39	37	35	42	39	37	35	39	37	35	38	36	35	38	36	35	34
10	42	38	36	34	41	38	36	34	37	35	34	37	35	34	37	35	34	33

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**UGR TABLE - CORRECTED**

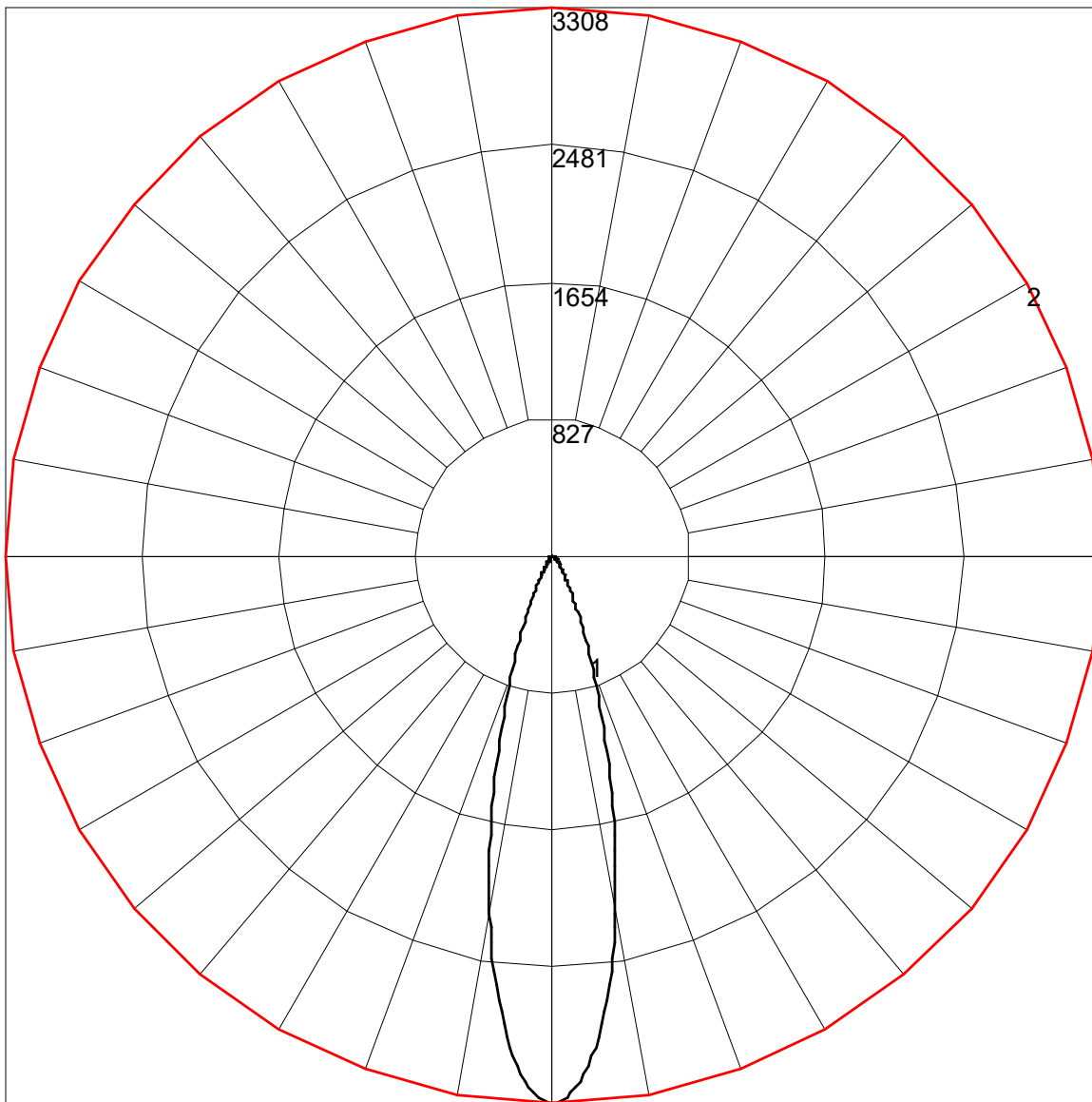
Reflectances

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	10.1	11.1	10.5	11.4	11.7	10.1	11.1	10.5	11.4	11.7
	3H	11.0	11.9	11.4	12.2	12.6	11.0	11.9	11.4	12.2	12.6
	4H	11.2	12.0	11.7	12.4	12.8	11.2	12.0	11.7	12.4	12.8
	6H	11.4	12.1	11.8	12.5	12.9	11.4	12.1	11.8	12.5	12.9
	8H	11.5	12.1	11.9	12.5	12.9	11.5	12.1	11.9	12.5	12.9
	12H	11.5	12.1	11.9	12.5	12.9	11.5	12.1	11.9	12.5	12.9
4H	2H	10.4	11.2	10.8	11.5	11.9	10.4	11.2	10.8	11.5	11.9
	3H	11.4	12.0	11.8	12.4	12.8	11.4	12.0	11.8	12.4	12.8
	4H	11.7	12.3	12.2	12.7	13.2	11.7	12.3	12.2	12.7	13.2
	6H	12.0	12.5	12.5	12.9	13.4	12.0	12.5	12.5	12.9	13.4
	8H	12.1	12.5	12.5	13.0	13.5	12.1	12.5	12.5	13.0	13.5
	12H	12.1	12.5	12.6	13.0	13.5	12.1	12.5	12.6	13.0	13.5
8H	4H	11.8	12.2	12.2	12.7	13.1	11.8	12.2	12.2	12.7	13.1
	6H	12.1	12.5	12.6	13.0	13.5	12.1	12.5	12.6	13.0	13.5
	8H	12.3	12.6	12.8	13.1	13.6	12.3	12.6	12.8	13.1	13.6
	12H	12.4	12.7	12.9	13.2	13.7	12.4	12.7	12.9	13.2	13.7
12H	4H	11.7	12.1	12.2	12.6	13.1	11.7	12.1	12.2	12.6	13.1
	6H	12.1	12.4	12.7	12.9	13.5	12.1	12.4	12.7	12.9	13.5
	8H	12.3	12.6	12.8	13.1	13.7	12.3	12.6	12.8	13.1	13.7

Maximum UGR = 13.7

POLAR GRAPH



Maximum Candela = 3308.123 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.)