



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : V6DR-L23-835-DIM-UNV-LW-OF-WH\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM 12326812.07

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 9 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V6DR-L23-835-DIM-UNV-LW-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, Architectural, Classroom, Commercial, Healthcare, Office, Downlight

[\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2334
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	79
Total Luminaire Watts	29.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.08
Spacing Criterion (90-270)	1.08
Spacing Criterion (Diagonal)	0.98
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.46 ft (Diameter)
Luminous Width (90-270)	0.46 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	38804	38804	38804
55	32306	32306	32306
65	24543	24543	24543
75	17799	17799	17799
85	11599	11599	11599

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CANDELA TABULATION

	<u>0</u>
0.0	1484.862
0.5	1484.563
1.0	1483.367
1.5	1481.574
2.0	1479.331
2.5	1476.342
3.0	1473.352
3.5	1469.914
4.0	1466.774
4.5	1463.635
5.0	1461.393
5.5	1459.300
6.0	1457.357
6.5	1455.413
7.0	1453.320
7.5	1451.377
8.0	1449.434
8.5	1447.640
9.0	1445.846
9.5	1444.351
10.0	1442.856
10.5	1441.660
11.0	1440.614
11.5	1440.016
12.0	1438.970
12.5	1437.923
13.0	1436.428
13.5	1434.485
14.0	1432.093
14.5	1429.402
15.0	1426.562
15.5	1422.974
16.0	1419.088
16.5	1415.201
17.0	1411.314
17.5	1407.278
18.0	1402.943
18.5	1398.010
19.0	1392.479
19.5	1386.350
20.0	1379.324
20.5	1371.700
21.0	1362.282
21.5	1351.071
22.0	1338.364
22.5	1324.013
23.0	1308.317
23.5	1291.276
24.0	1272.440
24.5	1252.110
25.0	1230.135
25.5	1207.264
26.0	1182.897
26.5	1157.484

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	1130.427
<b>27.5</b>	1102.622
<b>28.0</b>	1073.322
<b>28.5</b>	1042.378
<b>29.0</b>	1010.239
<b>29.5</b>	976.454
<b>30.0</b>	941.773
<b>30.5</b>	906.046
<b>31.0</b>	870.318
<b>31.5</b>	834.291
<b>32.0</b>	799.311
<b>32.5</b>	765.826
<b>33.0</b>	733.686
<b>33.5</b>	703.639
<b>34.0</b>	675.984
<b>34.5</b>	650.870
<b>35.0</b>	628.447
<b>35.5</b>	607.817
<b>36.0</b>	589.729
<b>36.5</b>	573.136
<b>37.0</b>	558.337
<b>37.5</b>	545.033
<b>38.0</b>	532.924
<b>38.5</b>	521.862
<b>39.0</b>	511.398
<b>39.5</b>	501.980
<b>40.0</b>	492.861
<b>40.5</b>	484.340
<b>41.0</b>	476.418
<b>41.5</b>	468.644
<b>42.0</b>	461.170
<b>42.5</b>	454.293
<b>43.0</b>	447.268
<b>43.5</b>	440.391
<b>44.0</b>	433.664
<b>44.5</b>	427.087
<b>45.0</b>	420.360
<b>45.5</b>	413.932
<b>46.0</b>	407.354
<b>46.5</b>	400.777
<b>47.0</b>	394.050
<b>47.5</b>	387.472
<b>48.0</b>	380.745
<b>48.5</b>	374.018
<b>49.0</b>	367.292
<b>49.5</b>	360.266
<b>50.0</b>	353.539
<b>50.5</b>	346.662
<b>51.0</b>	339.786
<b>51.5</b>	332.760
<b>52.0</b>	325.734
<b>52.5</b>	318.708
<b>53.0</b>	311.682
<b>53.5</b>	304.656
<b>54.0</b>	297.929
<b>54.5</b>	291.053

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CANDELA TABULATION - (Cont.)

55.0	283.877
55.5	276.851
56.0	269.825
56.5	263.248
57.0	256.671
57.5	249.794
58.0	242.918
58.5	236.191
59.0	229.613
59.5	223.036
60.0	216.757
60.5	210.479
61.0	204.350
61.5	198.221
62.0	192.391
62.5	186.561
63.0	180.880
63.5	175.200
64.0	169.669
64.5	164.287
65.0	158.906
65.5	153.673
66.0	148.456
66.5	143.329
67.0	138.261
67.5	133.298
68.0	128.425
68.5	123.537
69.0	118.798
69.5	114.104
70.0	109.545
70.5	105.135
71.0	100.815
71.5	96.629
72.0	92.593
72.5	88.676
73.0	84.864
73.5	81.127
74.0	77.539
74.5	74.026
75.0	70.573
75.5	67.240
76.0	63.966
76.5	60.752
77.0	57.628
77.5	54.563
78.0	51.588
78.5	48.673
79.0	45.818
79.5	43.067
80.0	40.332
80.5	37.686
81.0	35.070
81.5	32.469
82.0	29.927
82.5	27.401

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CANDELA TABULATION - (Cont.)

83.0	24.935
83.5	22.513
84.0	20.121
84.5	17.774
85.0	15.487
85.5	13.275
86.0	11.137
86.5	9.074
87.0	7.071
87.5	5.397
88.0	4.126
88.5	3.020
89.0	2.093
89.5	1.315
90.0	0.837
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
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98.0	0.000
98.5	0.000
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99.5	0.000
100.0	0.000
100.5	0.000
101.0	0.000
101.5	0.000
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102.5	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

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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
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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

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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
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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
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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	540.89	N.A.	23.20
0-30	1093.35	N.A.	46.80
0-40	1503.01	N.A.	64.40
0-60	2081.44	N.A.	89.20
0-80	2315.73	N.A.	99.20
0-90	2334.25	N.A.	100.00
10-90	2195.3	N.A.	94.00
20-40	962.12	N.A.	41.20
20-50	1286.74	N.A.	55.10
40-70	736.83	N.A.	31.60
60-80	234.29	N.A.	10.00
70-80	75.90	N.A.	3.30
80-90	18.51	N.A.	0.80
90-110	0.02	N.A.	0.00
90-120	0.02	N.A.	0.00
90-130	0.02	N.A.	0.00
90-150	0.02	N.A.	0.00
90-180	0.02	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2334.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	138.95
10-20	401.94
20-30	552.47
30-40	409.66
40-50	324.62
50-60	253.81
60-70	158.40
70-80	75.90
80-90	18.51
90-100	0.02
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	96	87	80	75	93	85	79	74	83	77	73	80	75	72	78	74	70	69
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61
5	83	72	64	59	81	71	64	58	69	63	58	67	62	57	65	61	57	55
6	78	66	58	53	76	65	58	53	64	57	52	62	56	52	61	55	52	50
7	73	61	53	48	71	60	53	48	59	52	48	58	52	47	56	51	47	45
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38
10	61	49	42	37	60	49	42	37	48	42	37	47	41	37	46	41	37	35

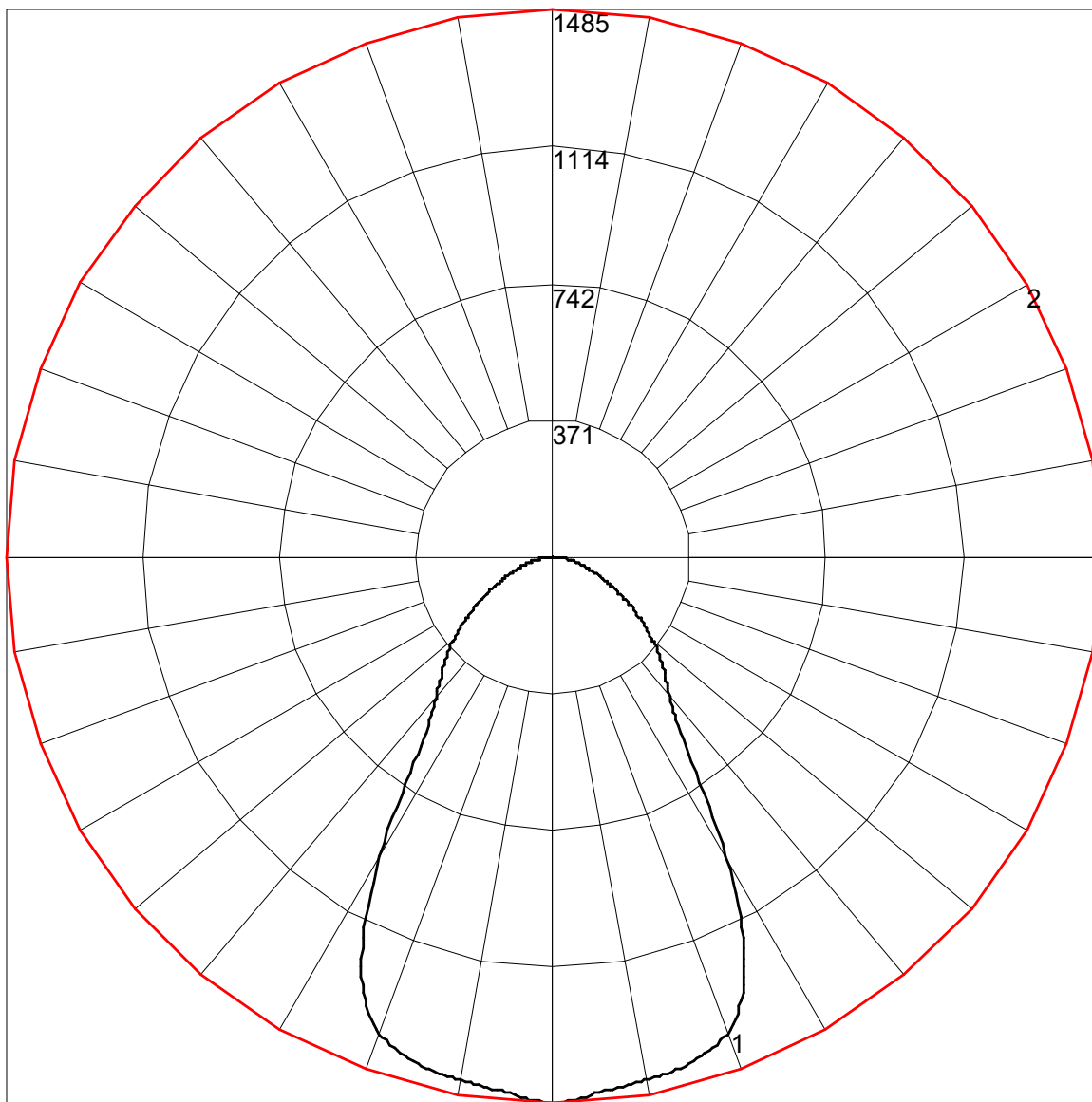
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**UGR TABLE - CORRECTED**

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	22.0	23.4	22.4	23.7	24.0	22.0	23.4	22.4	23.7	24.0
	3H	23.2	24.5	23.6	24.8	25.1	23.2	24.5	23.6	24.8	25.1
	4H	23.6	24.8	24.0	25.1	25.5	23.6	24.8	24.0	25.1	25.5
	6H	23.9	24.9	24.3	25.3	25.7	23.9	24.9	24.3	25.3	25.7
	8H	23.9	25.0	24.4	25.4	25.8	23.9	25.0	24.4	25.4	25.8
	12H	24.0	25.0	24.4	25.3	25.8	24.0	25.0	24.4	25.3	25.8
4H	2H	22.4	23.6	22.8	23.9	24.3	22.4	23.6	22.8	23.9	24.3
	3H	23.8	24.8	24.2	25.2	25.6	23.8	24.8	24.2	25.2	25.6
	4H	24.3	25.2	24.8	25.6	26.0	24.3	25.2	24.8	25.6	26.0
	6H	24.7	25.4	25.2	25.9	26.3	24.7	25.4	25.2	25.9	26.3
	8H	24.8	25.5	25.2	25.9	26.4	24.8	25.5	25.2	25.9	26.4
	12H	24.9	25.5	25.3	26.0	26.4	24.9	25.5	25.3	26.0	26.4
8H	4H	24.5	25.2	24.9	25.6	26.1	24.5	25.2	24.9	25.6	26.1
	6H	24.9	25.5	25.4	26.0	26.5	24.9	25.5	25.4	26.0	26.5
	8H	25.1	25.6	25.6	26.1	26.6	25.1	25.6	25.6	26.1	26.6
	12H	25.2	25.7	25.7	26.2	26.7	25.2	25.7	25.7	26.2	26.7
12H	4H	24.5	25.1	25.0	25.6	26.0	24.5	25.1	25.0	25.6	26.0
	6H	25.0	25.5	25.5	25.9	26.5	25.0	25.5	25.5	25.9	26.5
	8H	25.2	25.6	25.7	26.1	26.7	25.2	25.6	25.7	26.1	26.7

Maximum UGR = 26.7

POLAR GRAPH



Maximum Candela = 1484.862 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.)