



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L37-835-DIM-UNV-LW-OF-WH\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from 12316380.07

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 9 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-L37-835-DIM-UNV-LW-OF-WH

[LUMINAIRE] Black formed aluminum housing, white reflector, clear patterned glass lens

[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	3677
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	63
Total Luminaire Watts	58.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.00
Spacing Criterion (90-270)	1.00
Spacing Criterion (Diagonal)	0.90
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	101474	101474	101474
55	83381	83381	83381
65	60999	60999	60999
75	42228	42228	42228
85	23020	23020	23020

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CANDELA TABULATION

	<u>0</u>
0.0	2583.033
0.5	2582.217
1.0	2580.585
1.5	2578.408
2.0	2576.232
2.5	2573.784
3.0	2570.519
3.5	2568.615
4.0	2567.255
4.5	2566.438
5.0	2565.350
5.5	2564.262
6.0	2563.446
6.5	2562.358
7.0	2561.542
7.5	2560.998
8.0	2560.726
8.5	2559.910
9.0	2559.093
9.5	2557.461
10.0	2556.373
10.5	2554.469
11.0	2552.564
11.5	2550.116
12.0	2547.396
12.5	2544.131
13.0	2540.323
13.5	2535.970
14.0	2530.529
14.5	2524.000
15.0	2516.111
15.5	2506.589
16.0	2495.980
16.5	2483.466
17.0	2469.864
17.5	2454.629
18.0	2436.675
18.5	2418.176
19.0	2398.045
19.5	2375.465
20.0	2350.710
20.5	2323.778
21.0	2294.669
21.5	2263.384
22.0	2228.835
22.5	2192.110
23.0	2152.664
23.5	2110.225
24.0	2064.522
24.5	2015.827
25.0	1963.051
25.5	1907.826
26.0	1848.793
26.5	1786.224

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**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	1721.478
<b>27.5</b>	1654.012
<b>28.0</b>	1585.457
<b>28.5</b>	1516.631
<b>29.0</b>	1449.164
<b>29.5</b>	1383.058
<b>30.0</b>	1319.401
<b>30.5</b>	1259.552
<b>31.0</b>	1203.511
<b>31.5</b>	1152.367
<b>32.0</b>	1105.848
<b>32.5</b>	1063.954
<b>33.0</b>	1026.684
<b>33.5</b>	993.495
<b>34.0</b>	963.843
<b>34.5</b>	937.727
<b>35.0</b>	914.059
<b>35.5</b>	892.568
<b>36.0</b>	873.525
<b>36.5</b>	855.570
<b>37.0</b>	839.248
<b>37.5</b>	824.013
<b>38.0</b>	809.867
<b>38.5</b>	796.265
<b>39.0</b>	783.751
<b>39.5</b>	771.509
<b>40.0</b>	760.084
<b>40.5</b>	748.658
<b>41.0</b>	737.776
<b>41.5</b>	727.167
<b>42.0</b>	717.101
<b>42.5</b>	707.036
<b>43.0</b>	696.970
<b>43.5</b>	686.905
<b>44.0</b>	676.839
<b>44.5</b>	666.773
<b>45.0</b>	656.708
<b>45.5</b>	646.642
<b>46.0</b>	636.577
<b>46.5</b>	626.511
<b>47.0</b>	615.902
<b>47.5</b>	605.292
<b>48.0</b>	594.682
<b>48.5</b>	583.801
<b>49.0</b>	572.647
<b>49.5</b>	561.493
<b>50.0</b>	550.612
<b>50.5</b>	539.458
<b>51.0</b>	528.304
<b>51.5</b>	517.151
<b>52.0</b>	506.269
<b>52.5</b>	495.387
<b>53.0</b>	484.234
<b>53.5</b>	472.808
<b>54.0</b>	461.110
<b>54.5</b>	449.412

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**CANDELA TABULATION - (Cont.)**

55.0	437.715
55.5	426.017
56.0	414.591
56.5	403.437
57.0	392.284
57.5	381.130
58.0	370.248
58.5	359.639
59.0	349.029
59.5	338.692
60.0	328.626
60.5	318.560
61.0	308.767
61.5	299.246
62.0	289.724
62.5	280.203
63.0	271.116
63.5	262.085
64.0	253.216
64.5	244.484
65.0	235.941
65.5	227.617
66.0	219.401
66.5	211.403
67.0	203.596
67.5	195.924
68.0	188.497
68.5	181.234
69.0	173.970
69.5	166.952
70.0	160.124
70.5	153.404
71.0	146.848
71.5	140.455
72.0	134.280
72.5	128.186
73.0	122.255
73.5	116.488
74.0	110.830
74.5	105.362
75.0	100.030
75.5	94.861
76.0	89.801
76.5	84.877
77.0	80.171
77.5	75.491
78.0	70.976
78.5	66.596
79.0	62.297
79.5	58.162
80.0	54.109
80.5	50.164
81.0	46.274
81.5	42.493
82.0	38.793
82.5	35.202

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CANDELA TABULATION - (Cont.)

83.0	31.638
83.5	28.183
84.0	24.810
84.5	21.518
85.0	18.363
85.5	15.316
86.0	12.405
86.5	9.657
87.0	7.236
87.5	5.223
88.0	3.645
88.5	2.312
89.0	1.442
89.5	0.979
90.0	0.680
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
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126.0	0.000
126.5	0.000
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128.5	0.000
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130.0	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
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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
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156.5	0.000
157.0	0.000
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158.0	0.000
158.5	0.000
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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	948.80	N.A.	25.80
0-30	1819.9	N.A.	49.50
0-40	2413.27	N.A.	65.60
0-60	3310.22	N.A.	90.00
0-80	3654.05	N.A.	99.40
0-90	3677.05	N.A.	100.00
10-90	3432.39	N.A.	93.30
20-40	1464.47	N.A.	39.80
20-50	1970.22	N.A.	53.60
40-70	1132.87	N.A.	30.80
60-80	343.84	N.A.	9.40
70-80	107.92	N.A.	2.90
80-90	23.00	N.A.	0.60
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	3677.07	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	244.66
10-20	704.14
20-30	871.10
30-40	593.36
40-50	505.75
50-60	391.20
60-70	235.92
70-80	107.92
80-90	23.00
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	162	162	162	162	159	159	159	159	152	152	152	145	145	145	139	139	139	136
1	152	147	142	138	148	144	140	136	138	135	132	133	130	128	128	126	124	121
2	141	132	125	119	138	130	123	117	125	119	115	121	116	112	117	113	110	107
3	131	120	111	103	128	118	109	103	114	107	101	110	104	99	107	102	98	95
4	122	109	99	92	120	107	98	91	104	96	90	101	94	89	98	93	88	85
5	114	100	90	82	112	98	89	82	96	87	81	93	86	80	91	84	79	77
6	107	92	82	74	105	91	81	74	88	80	73	86	79	73	84	78	72	70
7	101	85	75	68	99	84	74	67	82	73	67	80	72	67	79	72	66	64
8	95	79	69	62	93	78	69	62	76	68	62	75	67	61	73	66	61	59
9	90	74	64	57	88	73	64	57	71	63	57	70	62	57	69	62	57	54
10	85	69	60	53	83	68	59	53	67	59	53	66	58	53	65	58	53	51

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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	24.1	25.5	24.5	25.8	26.1	24.1	25.5	24.5	25.8	26.1
	3H	25.2	26.4	25.6	26.8	27.1	25.2	26.4	25.6	26.8	27.1
	4H	25.6	26.7	26.0	27.1	27.4	25.6	26.7	26.0	27.1	27.4
	6H	25.8	26.8	26.2	27.2	27.6	25.8	26.8	26.2	27.2	27.6
	8H	25.8	26.8	26.3	27.2	27.6	25.8	26.8	26.3	27.2	27.6
	12H	25.8	26.8	26.3	27.2	27.6	25.8	26.8	26.3	27.2	27.6

UGR Viewed Endwise

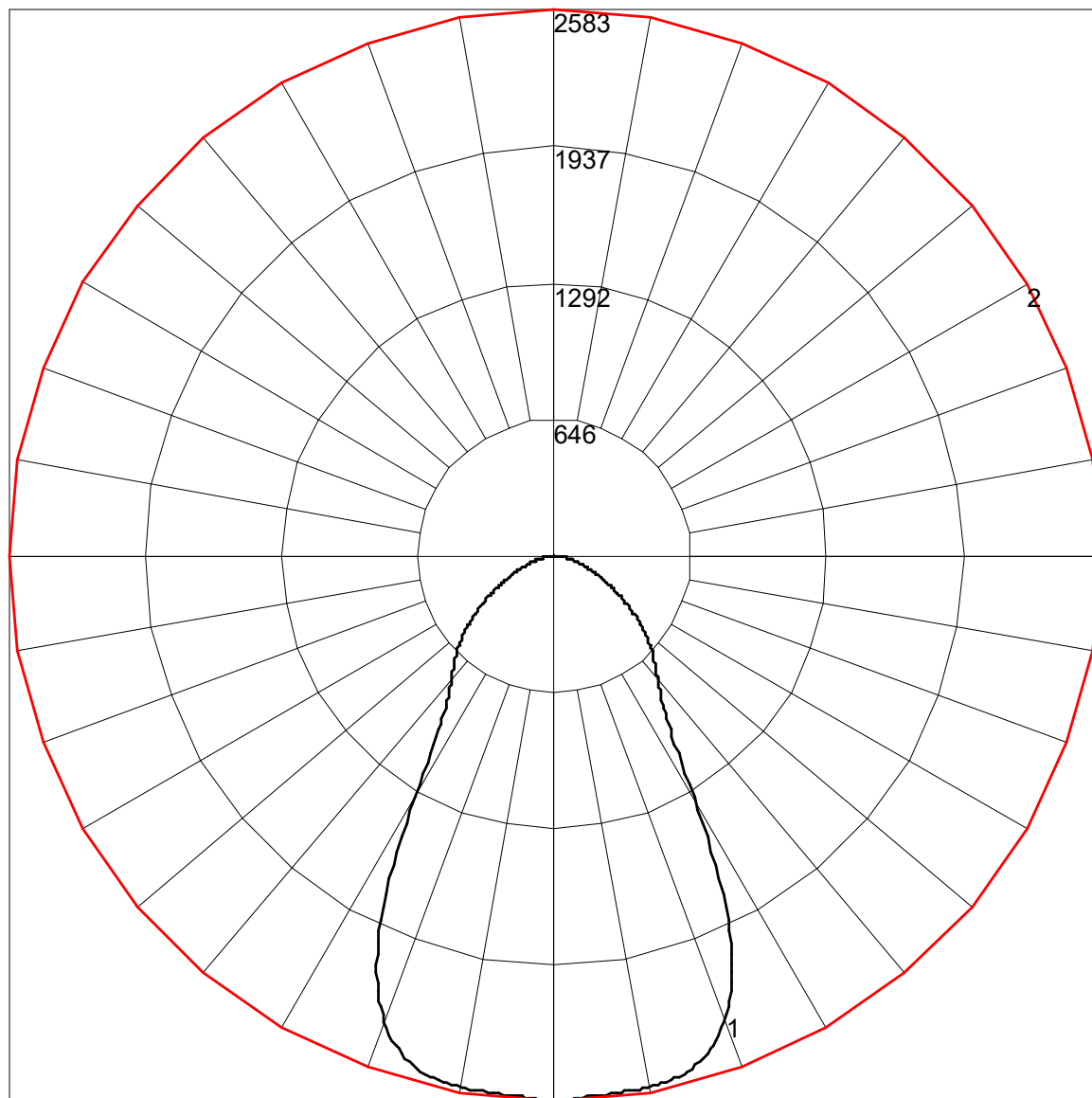
4H	2H	24.5	25.6	24.9	26.0	26.3	24.5	25.6	24.9	26.0	26.3
	3H	25.8	26.7	26.2	27.1	27.5	25.8	26.7	26.2	27.1	27.5
	4H	26.2	27.1	26.6	27.5	27.9	26.2	27.1	26.6	27.5	27.9
	6H	26.5	27.3	27.0	27.7	28.2	26.5	27.3	27.0	27.7	28.2
	8H	26.6	27.3	27.1	27.7	28.2	26.6	27.3	27.1	27.7	28.2
	12H	26.6	27.2	27.1	27.7	28.2	26.6	27.2	27.1	27.7	28.2

8H	4H	26.3	27.0	26.8	27.5	27.9	26.3	27.0	26.8	27.5	27.9
	6H	26.7	27.3	27.2	27.8	28.3	26.7	27.3	27.2	27.8	28.3
	8H	26.8	27.3	27.4	27.9	28.3	26.8	27.3	27.4	27.9	28.3
	12H	26.9	27.4	27.4	27.8	28.4	26.9	27.4	27.4	27.8	28.4

12H	4H	26.3	26.9	26.8	27.4	27.9	26.3	26.9	26.8	27.4	27.9
	6H	26.7	27.2	27.3	27.7	28.2	26.7	27.2	27.3	27.7	28.2
	8H	26.9	27.3	27.4	27.8	28.4	26.9	27.3	27.4	27.8	28.4

Maximum UGR = 28.4

POLAR GRAPH



Maximum Candela = 2583.033 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.)