



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L34-835-DIM-UNV-RW-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.12

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 13 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-L34-835-DIM-UNV-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	3293
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	64
Total Luminaire Watts	51.4
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	76167	76167	76167
55	61501	61501	61501
65	39785	39785	39785
75	22185	22185	22185
85	11397	11397	11397

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CANDELA TABULATION

	<u>0</u>
0.0	2645.046
0.5	2645.046
1.0	2642.558
1.5	2637.581
2.0	2632.605
2.5	2627.628
3.0	2620.163
3.5	2612.698
4.0	2605.233
4.5	2595.280
5.0	2587.815
5.5	2577.862
6.0	2567.909
6.5	2557.956
7.0	2548.003
7.5	2538.050
8.0	2528.097
8.5	2515.655
9.0	2505.702
9.5	2495.749
10.0	2486.293
10.5	2476.092
11.0	2465.641
11.5	2455.439
12.0	2445.734
12.5	2436.030
13.0	2426.326
13.5	2416.373
14.0	2406.420
14.5	2396.466
15.0	2386.264
15.5	2375.814
16.0	2364.865
16.5	2353.917
17.0	2342.719
17.5	2330.776
18.0	2318.085
18.5	2304.400
19.0	2291.212
19.5	2277.029
20.0	2261.601
20.5	2243.935
21.0	2223.531
21.5	2201.385
22.0	2176.004
22.5	2147.887
23.0	2116.037
23.5	2080.206
24.0	2040.891
24.5	1996.350
25.0	1946.585
25.5	1891.594
26.0	1832.124
26.5	1768.921

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CANDELA TABULATION - (Cont.)

27.0	1702.484
27.5	1635.051
28.0	1564.384
28.5	1494.463
29.0	1424.791
29.5	1355.120
30.0	1286.692
30.5	1219.508
31.0	1156.057
31.5	1094.596
32.0	1036.619
32.5	982.623
33.0	932.609
33.5	887.571
34.0	847.012
34.5	811.678
35.0	780.575
35.5	754.199
36.0	731.058
36.5	711.649
37.0	694.480
37.5	679.799
38.0	666.362
38.5	654.419
39.0	643.719
39.5	634.015
40.0	625.306
40.5	617.094
41.0	609.132
41.5	601.916
42.0	594.700
42.5	587.982
43.0	581.263
43.5	574.296
44.0	567.329
44.5	560.362
45.0	553.146
45.5	545.681
46.0	537.967
46.5	530.005
47.0	521.793
47.5	513.333
48.0	504.873
48.5	495.915
49.0	486.708
49.5	477.004
50.0	467.300
50.5	457.347
51.0	446.896
51.5	436.694
52.0	426.243
52.5	415.792
53.0	405.839
53.5	394.891
54.0	383.942
54.5	372.994

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CANDELA TABULATION - (Cont.)

55.0	362.294
55.5	351.346
56.0	340.646
56.5	330.195
57.0	319.745
57.5	309.294
58.0	299.092
58.5	289.139
59.0	279.185
59.5	269.481
60.0	259.777
60.5	250.321
61.0	241.115
61.5	231.908
62.0	223.199
62.5	214.241
63.0	205.781
63.5	197.072
64.0	188.861
64.5	180.649
65.0	172.687
65.5	164.724
66.0	157.011
66.5	149.546
67.0	142.330
67.5	135.114
68.0	128.147
68.5	121.179
69.0	114.461
69.5	107.992
70.0	102.020
70.5	96.297
71.0	91.071
71.5	86.095
72.0	81.367
72.5	76.888
73.0	72.658
73.5	68.925
74.0	65.193
74.5	61.958
75.0	58.972
75.5	56.235
76.0	53.249
76.5	50.512
77.0	47.775
77.5	45.038
78.0	42.550
78.5	39.813
79.0	37.324
79.5	34.836
80.0	32.348
80.5	29.859
81.0	27.620
81.5	25.380
82.0	22.892
82.5	20.902

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CANDELA TABULATION - (Cont.)

83.0	18.662
83.5	16.423
84.0	14.432
84.5	12.193
85.0	10.202
85.5	8.460
86.0	6.718
86.5	5.474
87.0	4.230
87.5	3.235
88.0	2.239
88.5	1.493
89.0	0.746
89.5	0.249
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

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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
119.0	0.000
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122.0	0.000
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131.5	0.000
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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
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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	915.54	N.A.	27.80
0-30	1771.69	N.A.	53.80
0-40	2293.42	N.A.	69.60
0-60	3041.42	N.A.	92.40
0-80	3279.41	N.A.	99.60
0-90	3292.87	N.A.	100.00
10-90	3049.25	N.A.	92.60
20-40	1377.87	N.A.	41.80
20-50	1802.36	N.A.	54.70
40-70	921.00	N.A.	28.00
60-80	237.99	N.A.	7.20
70-80	64.99	N.A.	2.00
80-90	13.46	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	3292.87	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	243.61
10-20	671.93
20-30	856.15
30-40	521.73
40-50	424.49
50-60	323.51
60-70	173.00
70-80	64.99
80-90	13.46
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	198	198	198	198	193	193	193	193	185	185	185	177	177	177	170	170	170	166
1	186	180	175	170	182	176	172	167	169	166	162	163	160	157	157	155	153	149
2	174	163	155	147	170	160	152	146	155	148	142	149	144	139	145	140	136	133
3	162	149	138	130	158	146	136	129	141	133	127	137	130	124	133	127	122	119
4	152	136	124	116	148	134	123	115	130	121	113	126	118	112	123	116	111	108
5	142	125	113	104	139	123	112	104	120	110	103	117	108	102	114	107	101	98
6	133	115	103	95	131	114	103	94	111	101	94	109	100	93	106	98	92	89
7	126	107	95	87	123	106	94	86	103	93	86	101	92	85	99	91	85	82
8	118	100	88	80	116	99	87	80	97	87	79	95	86	79	93	85	79	76
9	112	93	82	74	110	92	81	74	91	81	74	89	80	73	87	79	73	70
10	106	87	76	69	104	87	76	69	85	75	69	84	75	68	82	74	68	66

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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

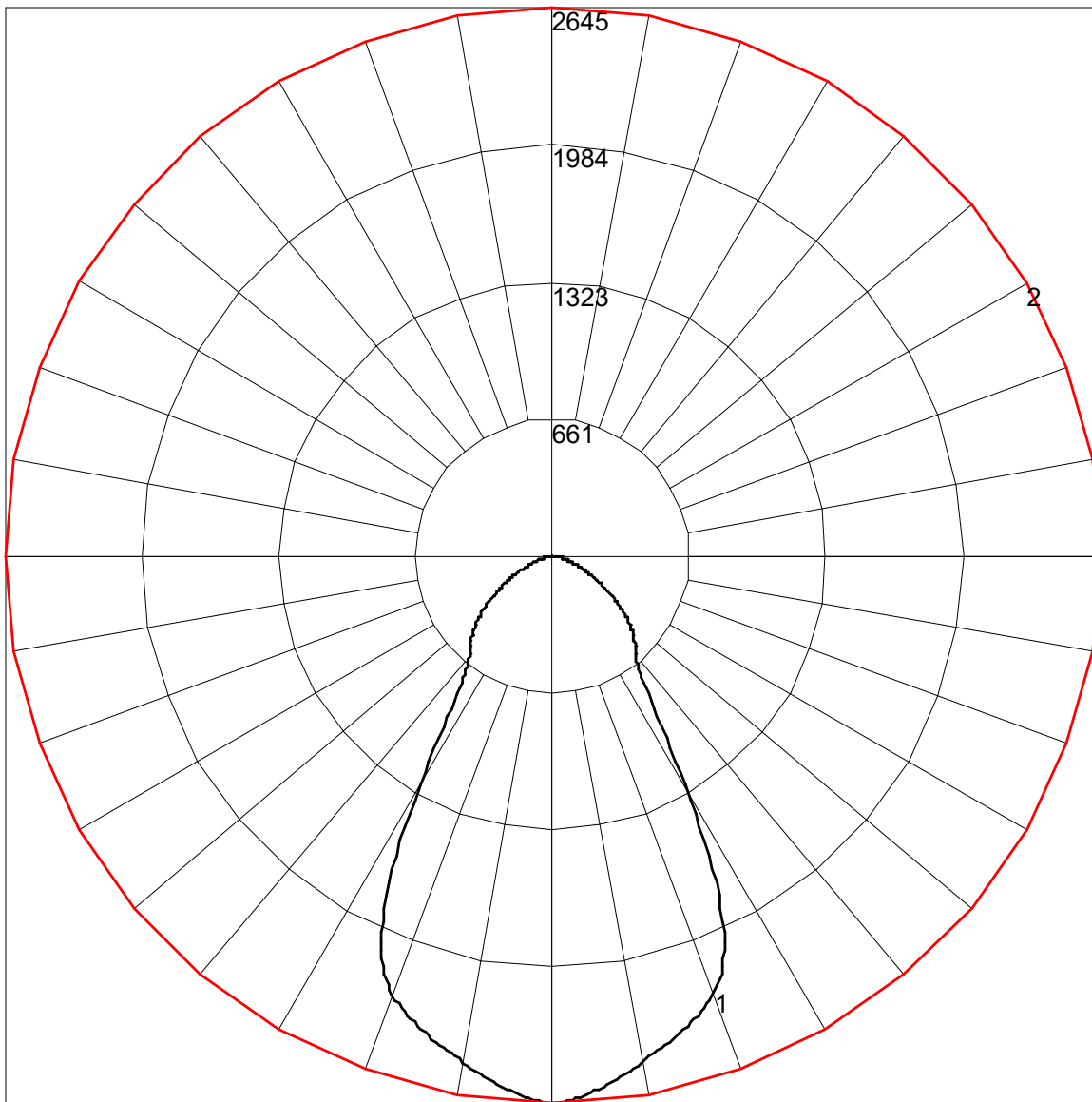
X=2H	Y=2H	22.0	23.3	22.4	23.6	23.9	22.0	23.3	22.4	23.6	23.9
	3H	22.8	23.9	23.1	24.3	24.6	22.8	23.9	23.1	24.3	24.6
	4H	22.9	24.0	23.3	24.4	24.7	22.9	24.0	23.3	24.4	24.7
	6H	23.0	24.0	23.5	24.4	24.8	23.0	24.0	23.5	24.4	24.8
	8H	23.1	24.0	23.5	24.4	24.8	23.1	24.0	23.5	24.4	24.8
	12H	23.0	23.9	23.5	24.3	24.8	23.0	23.9	23.5	24.3	24.8

UGR Viewed Endwise

4H	2H	22.3	23.4	22.7	23.7	24.1	22.3	23.4	22.7	23.7	24.1
	3H	23.2	24.1	23.6	24.5	24.9	23.2	24.1	23.6	24.5	24.9
	4H	23.4	24.2	23.8	24.6	25.1	23.4	24.2	23.8	24.6	25.1
	6H	23.6	24.3	24.0	24.7	25.2	23.6	24.3	24.0	24.7	25.2
	8H	23.6	24.2	24.1	24.7	25.2	23.6	24.2	24.1	24.7	25.2
	12H	23.6	24.2	24.1	24.7	25.1	23.6	24.2	24.1	24.7	25.1
8H	4H	23.5	24.1	23.9	24.5	25.0	23.5	24.1	23.9	24.5	25.0
	6H	23.7	24.2	24.2	24.7	25.2	23.7	24.2	24.2	24.7	25.2
	8H	23.7	24.2	24.3	24.7	25.2	23.7	24.2	24.3	24.7	25.2
	12H	23.8	24.2	24.3	24.7	25.2	23.8	24.2	24.3	24.7	25.2
12H	4H	23.4	24.0	23.9	24.5	24.9	23.4	24.0	23.9	24.5	24.9
	6H	23.7	24.1	24.2	24.6	25.1	23.7	24.1	24.2	24.6	25.1
	8H	23.7	24.2	24.3	24.6	25.2	23.7	24.2	24.3	24.6	25.2

Maximum UGR = 25.2

POLAR GRAPH



Maximum Candela = 2645.046 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.)