



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L10-835-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.

[ISSUEDATE] 15 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-L10-835-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	1300
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	81
Total Luminaire Watts	16.1
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	6507	6507	6507
55	4329	4329	4329
65	2980	2980	2980
75	1935	1935	1935
85	1560	1560	1560

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CANDELA TABULATION

	<u>0</u>
0.0	4875.918
0.5	4870.039
1.0	4854.607
1.5	4827.416
2.0	4790.672
2.5	4744.375
3.0	4689.259
3.5	4626.060
4.0	4554.776
4.5	4476.144
5.0	4390.899
5.5	4299.039
6.0	4200.565
6.5	4094.743
7.0	3983.041
7.5	3866.930
8.0	3746.410
8.5	3620.746
9.0	3492.877
9.5	3361.334
10.0	3229.056
10.5	3094.573
11.0	2959.355
11.5	2824.138
12.0	2689.655
12.5	2557.377
13.0	2425.834
13.5	2297.230
14.0	2170.831
14.5	2048.106
15.0	1929.791
15.5	1815.885
16.0	1704.918
16.5	1599.830
17.0	1499.152
17.5	1402.883
18.0	1311.758
18.5	1225.042
19.0	1143.471
19.5	1067.043
20.0	995.025
20.5	926.682
21.0	862.747
21.5	803.957
22.0	747.371
22.5	694.313
23.0	643.753
23.5	596.942
24.0	553.290
24.5	512.431
25.0	474.291
25.5	438.869
26.0	406.241
26.5	376.037

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CANDELA TABULATION - (Cont.)

27.0	348.185
27.5	322.538
28.0	298.949
28.5	277.490
29.0	257.722
29.5	239.570
30.0	222.889
30.5	207.456
31.0	193.420
31.5	180.486
32.0	168.508
32.5	157.484
33.0	147.417
33.5	138.157
34.0	129.559
34.5	121.696
35.0	114.568
35.5	107.954
36.0	101.928
36.5	96.416
37.0	91.345
37.5	86.716
38.0	82.453
38.5	78.559
39.0	75.031
39.5	71.724
40.0	68.638
40.5	65.772
41.0	63.126
41.5	60.627
42.0	58.349
42.5	56.218
43.0	54.161
43.5	52.250
44.0	50.486
44.5	48.796
45.0	47.253
45.5	45.709
46.0	44.313
46.5	42.917
47.0	41.594
47.5	40.271
48.0	39.022
48.5	37.846
49.0	36.670
49.5	35.568
50.0	34.466
50.5	33.437
51.0	32.408
51.5	31.453
52.0	30.497
52.5	29.616
53.0	28.734
53.5	27.852
54.0	27.044
54.5	26.309

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CANDELA TABULATION - (Cont.)

55.0	25.500
55.5	24.765
56.0	24.031
56.5	23.296
57.0	22.634
57.5	21.973
58.0	21.238
58.5	20.577
59.0	19.989
59.5	19.327
60.0	18.666
60.5	18.078
61.0	17.490
61.5	16.902
62.0	16.314
62.5	15.726
63.0	15.138
63.5	14.551
64.0	14.036
64.5	13.522
65.0	12.934
65.5	12.419
66.0	11.905
66.5	11.391
67.0	10.950
67.5	10.435
68.0	9.994
68.5	9.480
69.0	9.039
69.5	8.598
70.0	8.157
70.5	7.790
71.0	7.422
71.5	7.055
72.0	6.761
72.5	6.393
73.0	6.099
73.5	5.879
74.0	5.585
74.5	5.365
75.0	5.144
75.5	4.924
76.0	4.703
76.5	4.483
77.0	4.262
77.5	4.042
78.0	3.895
78.5	3.674
79.0	3.454
79.5	3.307
80.0	3.086
80.5	2.866
81.0	2.719
81.5	2.499
82.0	2.352
82.5	2.205

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CANDELA TABULATION - (Cont.)

83.0	1.984
83.5	1.837
84.0	1.690
84.5	1.543
85.0	1.396
85.5	1.249
86.0	1.029
86.5	0.955
87.0	0.808
87.5	0.661
88.0	0.514
88.5	0.367
89.0	0.294
89.5	0.220
90.0	0.147
90.5	0.147
91.0	0.073
91.5	0.000
92.0	0.073
92.5	0.073
93.0	0.073
93.5	0.073
94.0	0.000
94.5	0.073
95.0	0.073
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	0.073
103.0	0.000
103.5	0.073
104.0	0.073
104.5	0.073
105.0	0.073
105.5	0.073
106.0	0.073
106.5	0.073
107.0	0.073
107.5	0.000
108.0	0.073
108.5	0.073
109.0	0.073
109.5	0.073
110.0	0.073
110.5	0.073

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CANDELA TABULATION - (Cont.)

111.0	0.073
111.5	0.073
112.0	0.073
112.5	0.073
113.0	0.073
113.5	0.073
114.0	0.073
114.5	0.073
115.0	0.073
115.5	0.073
116.0	0.073
116.5	0.073
117.0	0.073
117.5	0.073
118.0	0.073
118.5	0.073
119.0	0.073
119.5	0.073
120.0	0.073
120.5	0.073
121.0	0.073
121.5	0.073
122.0	0.073
122.5	0.073
123.0	0.073
123.5	0.073
124.0	0.073
124.5	0.073
125.0	0.073
125.5	0.073
126.0	0.073
126.5	0.073
127.0	0.073
127.5	0.073
128.0	0.073
128.5	0.073
129.0	0.073
129.5	0.073
130.0	0.073
130.5	0.073
131.0	0.147
131.5	0.147
132.0	0.147
132.5	0.147
133.0	0.147
133.5	0.147
134.0	0.147
134.5	0.147
135.0	0.220
135.5	0.220
136.0	0.220
136.5	0.220
137.0	0.220
137.5	0.294
138.0	0.294
138.5	0.294

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CANDELA TABULATION - (Cont.)

139.0	0.294
139.5	0.367
140.0	0.367
140.5	0.367
141.0	0.441
141.5	0.441
142.0	0.441
142.5	0.514
143.0	0.514
143.5	0.514
144.0	0.588
144.5	0.588
145.0	0.661
145.5	0.661
146.0	0.735
146.5	0.735
147.0	0.808
147.5	0.808
148.0	0.882
148.5	0.882
149.0	0.955
149.5	0.955
150.0	1.029
150.5	1.029
151.0	1.102
151.5	1.102
152.0	1.176
152.5	1.176
153.0	1.249
153.5	1.249
154.0	1.323
154.5	1.323
155.0	1.396
155.5	1.396
156.0	1.470
156.5	1.470
157.0	1.470
157.5	1.543
158.0	1.543
158.5	1.617
159.0	1.617
159.5	1.617
160.0	1.690
160.5	1.690
161.0	1.690
161.5	1.690
162.0	1.764
162.5	1.764
163.0	1.764
163.5	1.764
164.0	1.764
164.5	1.764
165.0	1.764
165.5	1.764
166.0	1.837
166.5	1.764

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CANDELA TABULATION - (Cont.)

167.0	1.837
167.5	1.837
168.0	1.837
168.5	1.764
169.0	1.764
169.5	1.764
170.0	1.764
170.5	1.764
171.0	1.764
171.5	1.764
172.0	1.764
172.5	1.764
173.0	1.764
173.5	1.764
174.0	1.764
174.5	1.764
175.0	1.764
175.5	1.764
176.0	1.764
176.5	1.764
177.0	1.764
177.5	1.690
178.0	1.690
178.5	1.690
179.0	1.690
179.5	1.690
180.0	1.690

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	911.57	N.A.	70.10
0-30	1141.12	N.A.	87.80
0-40	1217.62	N.A.	93.70
0-60	1277.96	N.A.	98.30
0-80	1296.49	N.A.	99.70
0-90	1298.06	N.A.	99.80
10-90	916.78	N.A.	70.50
20-40	306.04	N.A.	23.50
20-50	343.33	N.A.	26.40
40-70	73.29	N.A.	5.60
60-80	18.53	N.A.	1.40
70-80	5.58	N.A.	0.40
80-90	1.57	N.A.	0.10
90-110	0.09	N.A.	0.00
90-120	0.16	N.A.	0.00
90-130	0.23	N.A.	0.00
90-150	0.79	N.A.	0.10
90-180	2.08	N.A.	0.20
110-180	1.99	N.A.	0.20
0-180	1300.14	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	381.28
10-20	530.29
20-30	229.55
30-40	76.49
40-50	37.29
50-60	23.06
60-70	12.95
70-80	5.58
80-90	1.57
90-100	0.04
100-110	0.05
110-120	0.07
120-130	0.07
130-140	0.16
140-150	0.41
150-160	0.62
160-170	0.50
170-180	0.17

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	87	87	87	87	85	85	85	85	82	82	82	78	78	78	75	75	75	73
1	84	82	81	79	82	81	79	78	78	77	76	75	74	73	73	72	71	70
2	81	78	75	73	79	77	74	72	74	72	71	72	71	69	70	69	68	67
3	78	74	71	68	76	73	70	68	71	69	67	69	67	66	68	66	65	64
4	75	70	67	65	74	70	67	64	68	66	63	67	64	63	65	64	62	61
5	72	67	64	61	71	67	63	61	65	63	61	64	62	60	63	61	60	59
6	70	65	61	59	69	64	61	58	63	60	58	62	60	58	61	59	57	56
7	67	62	59	56	67	62	58	56	61	58	56	60	57	56	59	57	55	54
8	65	60	56	54	65	59	56	54	59	56	54	58	55	54	57	55	53	53
9	63	58	54	52	63	57	54	52	57	54	52	56	54	52	56	53	52	51
10	61	56	53	50	61	56	52	50	55	52	50	55	52	50	54	52	50	49

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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	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

UGR Viewed Endwise

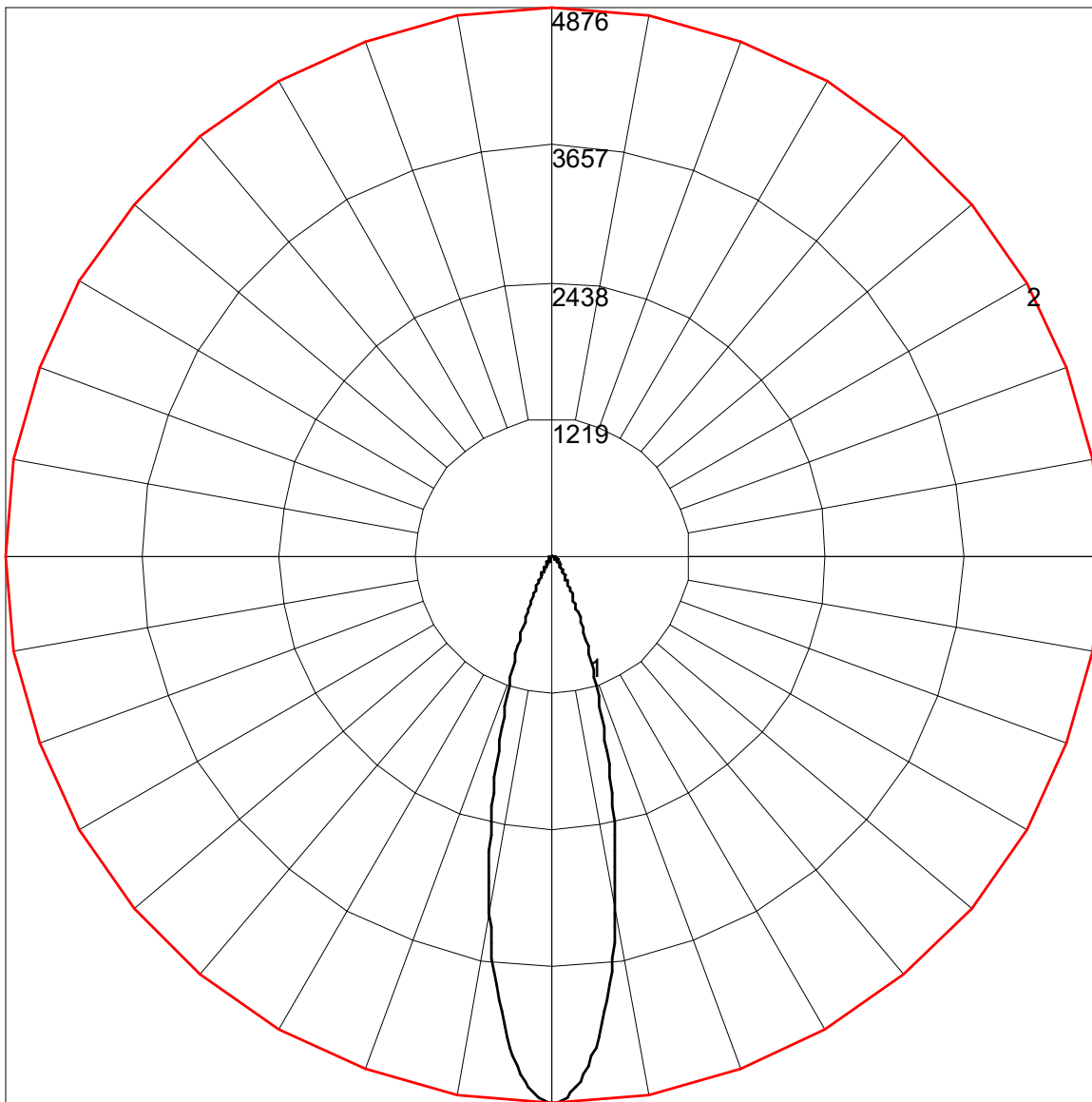
4H	2H	10.4	11.2	10.8	11.5	11.9	10.4	11.2	10.8	11.5	11.9
	3H	11.4	12.0	11.8	12.4	12.8	11.4	12.0	11.8	12.4	12.8
	4H	11.7	12.3	12.2	12.7	13.2	11.7	12.3	12.2	12.7	13.2
	6H	12.0	12.5	12.5	12.9	13.4	12.0	12.5	12.5	12.9	13.4
	8H	12.1	12.5	12.5	13.0	13.5	12.1	12.5	12.5	13.0	13.5
	12H	12.1	12.5	12.6	13.0	13.5	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 = 4875.918 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.)