



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L10-835-DIM-UNV-LN-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN From UL #12316380.10

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 10 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-L10-835-DIM-UNV-LN-OF-WH

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

[MORE] tic optic, clear glass patterned 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	1347
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	84
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)	0.44
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	8846	8846	8846
55	6635	6635	6635
65	5490	5490	5490
75	4467	4467	4467
85	2487	2487	2487

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CANDELA TABULATION

	<u>0</u>
0.0	5059.516
0.5	5053.638
1.0	5036.736
1.5	5010.281
2.0	4972.803
2.5	4926.507
3.0	4870.657
3.5	4805.989
4.0	4732.503
4.5	4651.669
5.0	4564.220
5.5	4469.423
6.0	4368.012
6.5	4258.518
7.0	4143.145
7.5	4022.628
8.0	3894.762
8.5	3763.222
9.0	3627.273
9.5	3488.384
10.0	3347.291
10.5	3203.993
11.0	3057.756
11.5	2911.518
12.0	2766.751
12.5	2622.718
13.0	2480.890
13.5	2341.266
14.0	2205.317
14.5	2073.777
15.0	1947.381
15.5	1825.394
16.0	1708.551
16.5	1596.852
17.0	1491.767
17.5	1391.091
18.0	1296.294
18.5	1207.376
19.0	1124.337
19.5	1047.177
20.0	974.425
20.5	905.348
21.0	840.681
21.5	781.892
22.0	725.234
22.5	672.545
23.0	623.309
23.5	577.748
24.0	535.346
24.5	495.664
25.0	459.141
25.5	425.484
26.0	394.253
26.5	365.593

IES INDOOR REPORT**PHOTOMETRIC FILENAME : V4DR-L10-835-DIM-UNV-LN-OF-WH_.IES****CANDELA TABULATION - (Cont.)**

27.0	339.138
27.5	314.888
28.0	292.695
28.5	272.339
29.0	253.674
29.5	236.478
30.0	220.826
30.5	206.422
31.0	193.195
31.5	181.143
32.0	170.194
32.5	159.979
33.0	150.646
33.5	142.049
34.0	134.259
34.5	127.057
35.0	120.517
35.5	114.565
36.0	108.980
36.5	103.909
37.0	99.280
37.5	94.944
38.0	91.049
38.5	87.448
39.0	84.068
39.5	80.908
40.0	77.969
40.5	75.250
41.0	72.751
41.5	70.400
42.0	68.195
42.5	66.137
43.0	64.153
43.5	62.316
44.0	60.553
44.5	58.862
45.0	57.246
45.5	55.776
46.0	54.306
46.5	52.910
47.0	51.587
47.5	50.264
48.0	49.015
48.5	47.766
49.0	46.590
49.5	45.414
50.0	44.312
50.5	43.283
51.0	42.181
51.5	41.226
52.0	40.197
52.5	39.242
53.0	38.360
53.5	37.404
54.0	36.523
54.5	35.714

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55.0	34.832
55.5	34.024
56.0	33.216
56.5	32.407
57.0	31.672
57.5	30.938
58.0	30.203
58.5	29.468
59.0	28.807
59.5	28.145
60.0	27.484
60.5	26.822
61.0	26.161
61.5	25.500
62.0	24.838
62.5	24.250
63.0	23.589
63.5	23.001
64.0	22.413
64.5	21.825
65.0	21.237
65.5	20.650
66.0	20.062
66.5	19.474
67.0	18.959
67.5	18.372
68.0	17.857
68.5	17.269
69.0	16.755
69.5	16.167
70.0	15.653
70.5	15.138
71.0	14.624
71.5	14.109
72.0	13.595
72.5	13.081
73.0	12.566
73.5	12.052
74.0	11.537
74.5	11.096
75.0	10.582
75.5	10.068
76.0	9.627
76.5	9.112
77.0	8.671
77.5	8.157
78.0	7.716
78.5	7.275
79.0	6.834
79.5	6.393
80.0	5.952
80.5	5.511
81.0	5.071
81.5	4.703
82.0	4.262
82.5	3.895

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83.0	3.454
83.5	3.086
84.0	2.719
84.5	2.352
85.0	1.984
85.5	1.690
86.0	1.470
86.5	1.176
87.0	0.955
87.5	0.808
88.0	0.588
88.5	0.441
89.0	0.294
89.5	0.220
90.0	0.147
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**PHOTOMETRIC FILENAME : V4DR-L10-835-DIM-UNV-LN-OF-WH_.IES****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
119.5	0.000
120.0	0.000
120.5	0.000
121.0	0.000
121.5	0.000
122.0	0.000
122.5	0.000
123.0	0.000
123.5	0.000
124.0	0.000
124.5	0.000
125.0	0.000
125.5	0.000
126.0	0.000
126.5	0.000
127.0	0.000
127.5	0.000
128.0	0.000
128.5	0.000
129.0	0.000
129.5	0.000
130.0	0.000
130.5	0.000
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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : V4DR-L10-835-DIM-UNV-LN-OF-WH_.IES****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
158.5	0.000
159.0	0.000
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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Zone	Lumens	%Lamp	%Fixt
0-20	932.46	N.A.	69.20
0-30	1155.84	N.A.	85.80
0-40	1235.73	N.A.	91.70
0-60	1312.11	N.A.	97.40
0-80	1344.44	N.A.	99.80
0-90	1347.03	N.A.	100.00
10-90	950.84	N.A.	70.60
20-40	303.26	N.A.	22.50
20-50	348.23	N.A.	25.90
40-70	97.48	N.A.	7.20
60-80	32.33	N.A.	2.40
70-80	11.23	N.A.	0.80
80-90	2.60	N.A.	0.20
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	1347.04	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	396.19
10-20	536.27
20-30	223.37
30-40	79.89
40-50	44.96
50-60	31.42
60-70	21.10
70-80	11.23
80-90	2.60
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	87	87	87	87	85	85	85	85	82	82	82	78	78	78	75	75	75	73
1	84	82	80	79	82	81	79	78	78	76	75	75	74	73	72	72	71	70
2	81	77	75	73	79	76	74	72	74	72	70	72	70	69	70	68	67	66
3	77	73	70	68	76	72	69	67	70	68	66	69	67	65	67	66	64	63
4	74	70	66	64	73	69	66	63	68	65	63	66	64	62	65	63	61	60
5	72	67	63	61	71	66	63	60	65	62	60	64	61	59	63	60	59	58
6	69	64	60	58	68	63	60	58	62	59	57	61	59	57	61	58	57	56
7	67	61	58	55	66	61	58	55	60	57	55	59	57	55	59	56	54	54
8	65	59	56	53	64	59	56	53	58	55	53	57	55	53	57	54	53	52
9	63	57	54	51	62	57	54	51	56	53	51	56	53	51	55	53	51	50
10	61	55	52	50	60	55	52	50	54	52	50	54	51	49	54	51	49	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	12.7	13.7	13.1	14.0	14.4	12.7	13.7	13.1	14.0	14.4
	3H	14.2	15.1	14.6	15.4	15.8	14.2	15.1	14.6	15.4	15.8
	4H	14.7	15.5	15.1	15.9	16.3	14.7	15.5	15.1	15.9	16.3
	6H	15.0	15.8	15.4	16.1	16.5	15.0	15.8	15.4	16.1	16.5
	8H	15.1	15.8	15.5	16.2	16.6	15.1	15.8	15.5	16.2	16.6
	12H	15.1	15.8	15.6	16.2	16.6	15.1	15.8	15.6	16.2	16.6

UGR Viewed Endwise

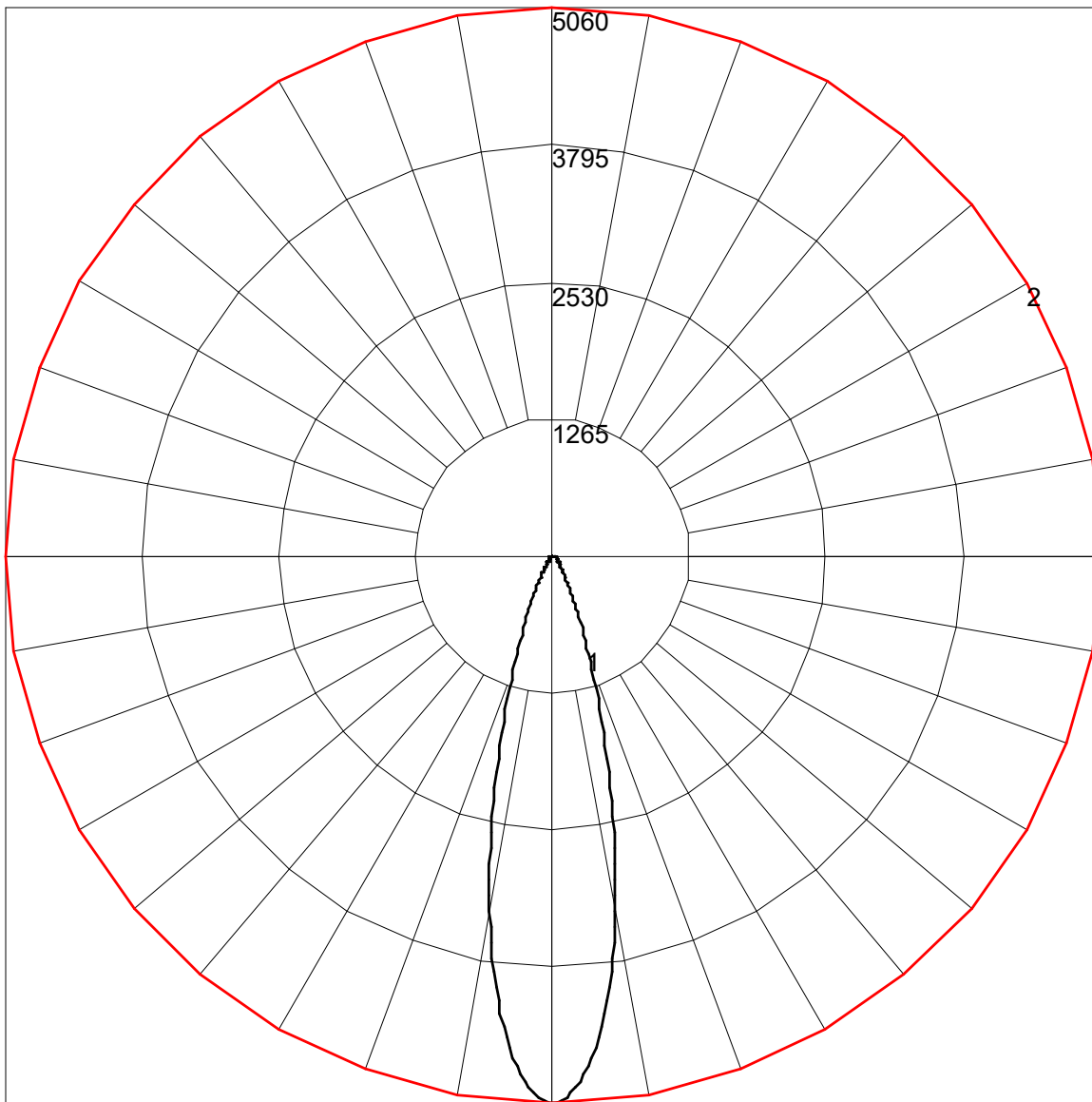
4H	2H	13.2	14.0	13.6	14.3	14.7	13.2	14.0	13.6	14.3	14.7
	3H	14.8	15.5	15.2	15.9	16.3	14.8	15.5	15.2	15.9	16.3
	4H	15.4	16.0	15.9	16.4	16.9	15.4	16.0	15.9	16.4	16.9
	6H	15.9	16.4	16.3	16.8	17.3	15.9	16.4	16.3	16.8	17.3
	8H	16.0	16.4	16.5	16.9	17.4	16.0	16.4	16.5	16.9	17.4
	12H	16.0	16.4	16.5	16.9	17.4	16.0	16.4	16.5	16.9	17.4

8H	4H	15.6	16.1	16.1	16.5	17.0	15.6	16.1	16.1	16.5	17.0
	6H	16.1	16.5	16.7	17.0	17.5	16.1	16.5	16.7	17.0	17.5
	8H	16.3	16.6	16.8	17.1	17.6	16.3	16.6	16.8	17.1	17.6
	12H	16.4	16.7	16.9	17.2	17.7	16.4	16.7	16.9	17.2	17.7

12H	4H	15.6	16.0	16.1	16.5	16.9	15.6	16.0	16.1	16.5	16.9
	6H	16.2	16.5	16.7	16.9	17.5	16.2	16.5	16.7	16.9	17.5
	8H	16.3	16.6	16.9	17.1	17.7	16.3	16.6	16.9	17.1	17.7

Maximum UGR = 17.7

POLAR GRAPH



Maximum Candela = 5059.516 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.)