



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L14-835-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.

[ISSUEDATE] 15 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-L14-835-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	1232
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	57
Total Luminaire Watts	21.7
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	28505	28505	28505
55	23016	23016	23016
65	14889	14889	14889
75	8303	8303	8303
85	4265	4265	4265

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CANDELA TABULATION

	<u>0</u>
0.0	989.884
0.5	989.884
1.0	988.952
1.5	987.090
2.0	985.227
2.5	983.365
3.0	980.571
3.5	977.778
4.0	974.984
4.5	971.259
5.0	968.466
5.5	964.741
6.0	961.016
6.5	957.291
7.0	953.566
7.5	949.841
8.0	946.116
8.5	941.460
9.0	937.735
9.5	934.011
10.0	930.472
10.5	926.654
11.0	922.743
11.5	918.925
12.0	915.293
12.5	911.661
13.0	908.030
13.5	904.305
14.0	900.580
14.5	896.855
15.0	893.037
15.5	889.126
16.0	885.029
16.5	880.931
17.0	876.741
17.5	872.271
18.0	867.522
18.5	862.400
19.0	857.465
19.5	852.157
20.0	846.383
20.5	839.771
21.0	832.135
21.5	823.848
22.0	814.349
22.5	803.826
23.0	791.907
23.5	778.497
24.0	763.784
24.5	747.115
25.0	728.491
25.5	707.911
26.0	685.655
26.5	662.002

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CANDELA TABULATION - (Cont.)

27.0	637.139
27.5	611.903
28.0	585.456
28.5	559.289
29.0	533.215
29.5	507.141
30.0	481.532
30.5	456.389
31.0	432.643
31.5	409.642
32.0	387.945
32.5	367.738
33.0	349.020
33.5	332.165
34.0	316.986
34.5	303.763
35.0	292.123
35.5	282.252
36.0	273.592
36.5	266.328
37.0	259.903
37.5	254.408
38.0	249.380
38.5	244.910
39.0	240.906
39.5	237.274
40.0	234.015
40.5	230.942
41.0	227.962
41.5	225.261
42.0	222.561
42.5	220.047
43.0	217.532
43.5	214.925
44.0	212.317
44.5	209.710
45.0	207.010
45.5	204.216
46.0	201.329
46.5	198.349
47.0	195.276
47.5	192.110
48.0	188.944
48.5	185.592
49.0	182.146
49.5	178.514
50.0	174.883
50.5	171.158
51.0	167.247
51.5	163.429
52.0	159.517
52.5	155.606
53.0	151.881
53.5	147.784
54.0	143.687
54.5	139.589

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CANDELA TABULATION - (Cont.)

55.0	135.585
55.5	131.488
56.0	127.484
56.5	123.572
57.0	119.661
57.5	115.750
58.0	111.932
58.5	108.207
59.0	104.483
59.5	100.851
60.0	97.219
60.5	93.680
61.0	90.235
61.5	86.789
62.0	83.530
62.5	80.178
63.0	77.012
63.5	73.752
64.0	70.679
64.5	67.606
65.0	64.626
65.5	61.647
66.0	58.760
66.5	55.966
67.0	53.266
67.5	50.565
68.0	47.958
68.5	45.350
69.0	42.836
69.5	40.415
70.0	38.180
70.5	36.038
71.0	34.083
71.5	32.220
72.0	30.451
72.5	28.775
73.0	27.192
73.5	25.795
74.0	24.398
74.5	23.187
75.0	22.070
75.5	21.046
76.0	19.928
76.5	18.904
77.0	17.879
77.5	16.855
78.0	15.924
78.5	14.899
79.0	13.968
79.5	13.037
80.0	12.106
80.5	11.175
81.0	10.337
81.5	9.498
82.0	8.567
82.5	7.822

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CANDELA TABULATION - (Cont.)

83.0	6.984
83.5	6.146
84.0	5.401
84.5	4.563
85.0	3.818
85.5	3.166
86.0	2.514
86.5	2.049
87.0	1.583
87.5	1.211
88.0	0.838
88.5	0.559
89.0	0.279
89.5	0.093
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
119.5	0.000
120.0	0.000
120.5	0.000
121.0	0.000
121.5	0.000
122.0	0.000
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123.0	0.000
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131.5	0.000
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133.0	0.000
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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
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150.0	0.000
150.5	0.000
151.0	0.000
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152.0	0.000
152.5	0.000
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153.5	0.000
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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	342.63	N.A.	27.80
0-30	663.04	N.A.	53.80
0-40	858.29	N.A.	69.60
0-60	1138.22	N.A.	92.40
0-80	1227.29	N.A.	99.60
0-90	1232.32	N.A.	100.00
10-90	1141.16	N.A.	92.60
20-40	515.66	N.A.	41.80
20-50	674.52	N.A.	54.70
40-70	344.68	N.A.	28.00
60-80	89.07	N.A.	7.20
70-80	24.32	N.A.	2.00
80-90	5.04	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	1232.32	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	91.17
10-20	251.46
20-30	320.40
30-40	195.25
40-50	158.86
50-60	121.07
60-70	64.74
70-80	24.32
80-90	5.04
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	151	151	151	151	147	147	147	147	141	141	141	135	135	135	129	129	129	127
1	142	137	133	130	138	134	131	128	129	126	124	124	122	120	120	118	116	114
2	132	124	118	112	129	122	116	111	118	113	109	114	110	106	110	107	104	102
3	124	113	105	99	121	111	104	98	108	102	96	105	99	95	102	97	93	91
4	116	104	95	88	113	102	94	88	99	92	86	96	90	85	94	89	84	82
5	108	95	86	79	106	94	85	79	91	84	78	89	83	78	87	81	77	75
6	102	88	79	72	100	87	78	72	85	77	71	83	76	71	81	75	70	68
7	96	82	72	66	94	81	72	66	79	71	65	77	70	65	76	69	65	63
8	90	76	67	61	89	75	67	61	74	66	60	72	65	60	71	65	60	58
9	85	71	62	56	84	70	62	56	69	61	56	68	61	56	67	60	56	54
10	81	67	58	53	79	66	58	52	65	57	52	64	57	52	63	56	52	50

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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

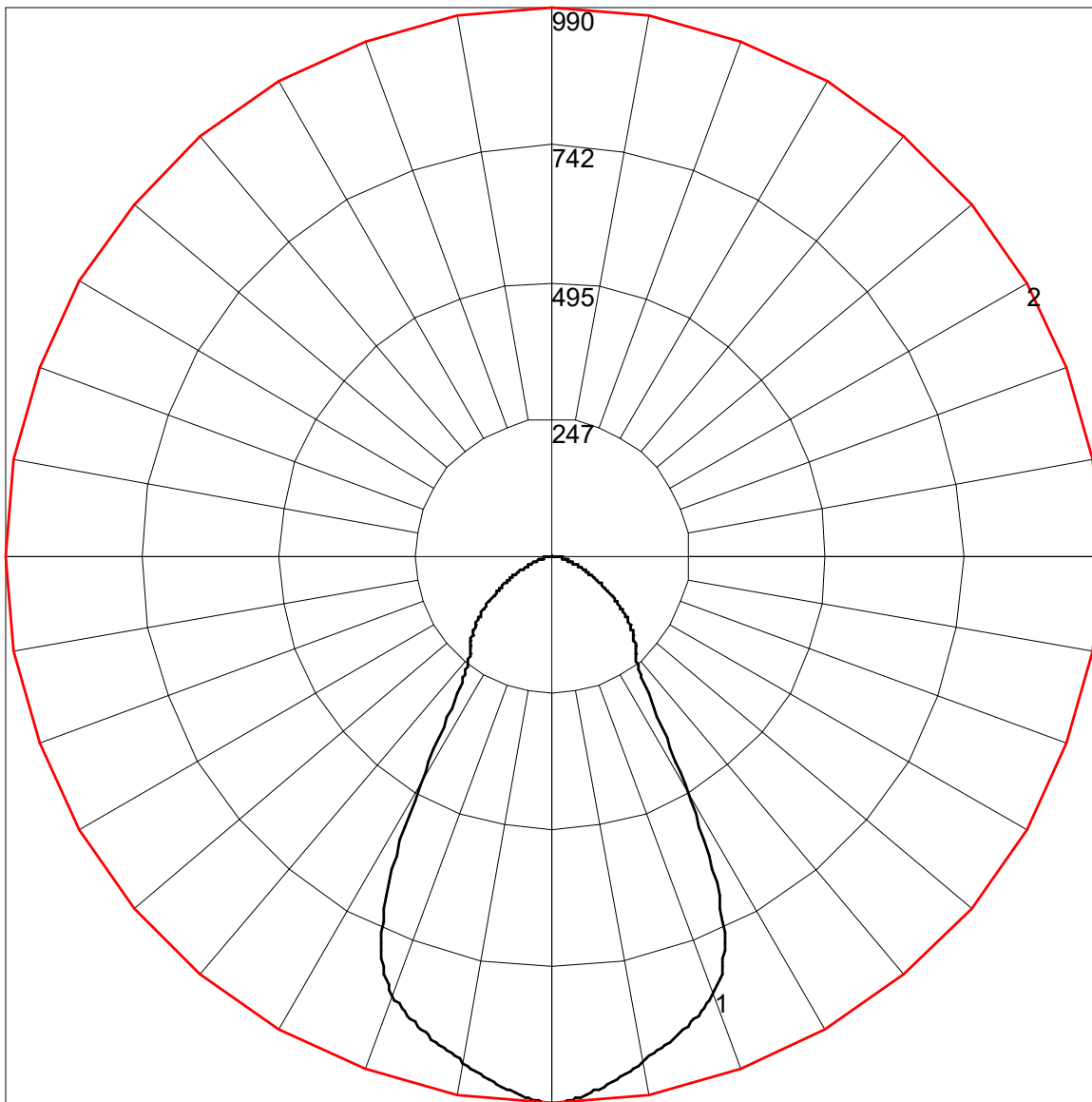
X=2H	Y=2H	19.5	20.8	19.8	21.1	21.4	19.5	20.8	19.8	21.1	21.4
	3H	20.2	21.4	20.6	21.7	22.1	20.2	21.4	20.6	21.7	22.1
	4H	20.4	21.5	20.8	21.8	22.2	20.4	21.5	20.8	21.8	22.2
	6H	20.5	21.5	20.9	21.9	22.3	20.5	21.5	20.9	21.9	22.3
	8H	20.5	21.5	20.9	21.8	22.3	20.5	21.5	20.9	21.8	22.3
	12H	20.5	21.4	20.9	21.8	22.2	20.5	21.4	20.9	21.8	22.2

UGR Viewed Endwise

4H	2H	19.7	20.8	20.1	21.2	21.6	19.7	20.8	20.1	21.2	21.6
	3H	20.6	21.5	21.0	21.9	22.3	20.6	21.5	21.0	21.9	22.3
	4H	20.9	21.7	21.3	22.1	22.5	20.9	21.7	21.3	22.1	22.5
	6H	21.0	21.7	21.5	22.2	22.6	21.0	21.7	21.5	22.2	22.6
	8H	21.1	21.7	21.5	22.2	22.6	21.1	21.7	21.5	22.2	22.6
	12H	21.1	21.6	21.6	22.1	22.6	21.1	21.6	21.6	22.1	22.6
8H	4H	20.9	21.5	21.4	22.0	22.5	20.9	21.5	21.4	22.0	22.5
	6H	21.1	21.7	21.6	22.2	22.6	21.1	21.7	21.6	22.2	22.6
	8H	21.2	21.7	21.7	22.2	22.7	21.2	21.7	21.7	22.2	22.7
	12H	21.2	21.6	21.7	22.1	22.7	21.2	21.6	21.7	22.1	22.7
12H	4H	20.9	21.4	21.4	21.9	22.4	20.9	21.4	21.4	21.9	22.4
	6H	21.1	21.6	21.6	22.1	22.6	21.1	21.6	21.6	22.1	22.6
	8H	21.2	21.6	21.7	22.1	22.7	21.2	21.6	21.7	22.1	22.7

Maximum UGR = 22.7

POLAR GRAPH



Maximum Candela = 989.884 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.)