



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L14-835-DIM-UNV-LM-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.09

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 10 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-L14-835-DIM-UNV-LM-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	1794
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	83
Total Luminaire Watts	21.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.56
Spacing Criterion (90-270)	0.56
Spacing Criterion (Diagonal)	0.54
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	13613	13613	13613
55	10610	10610	10610
65	8868	8868	8868
75	7134	7134	7134
85	4262	4262	4262

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CANDELA TABULATION

	<u>0</u>
0.0	4642.0
0.5	4640.0
1.0	4633.0
1.5	4622.0
2.0	4608.0
2.5	4589.0
3.0	4567.0
3.5	4541.0
4.0	4511.0
4.5	4479.0
5.0	4443.0
5.5	4403.0
6.0	4359.0
6.5	4310.0
7.0	4257.0
7.5	4199.0
8.0	4136.0
8.5	4068.0
9.0	3996.0
9.5	3918.0
10.0	3834.0
10.5	3744.0
11.0	3650.0
11.5	3551.0
12.0	3446.0
12.5	3337.0
13.0	3223.0
13.5	3105.0
14.0	2982.0
14.5	2855.0
15.0	2727.0
15.5	2597.0
16.0	2467.0
16.5	2336.0
17.0	2206.0
17.5	2080.0
18.0	1955.0
18.5	1835.0
19.0	1720.0
19.5	1609.0
20.0	1504.0
20.5	1403.0
21.0	1309.0
21.5	1220.0
22.0	1136.0
22.5	1058.0
23.0	984.4
23.5	915.8
24.0	852.1
24.5	792.6
25.0	737.4
25.5	686.1
26.0	638.0
26.5	593.6

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CANDELA TABULATION - (Cont.)

27.0	552.2
27.5	514.3
28.0	479.0
28.5	446.4
29.0	416.5
29.5	388.6
30.0	362.7
30.5	338.8
31.0	316.7
31.5	296.4
32.0	277.6
32.5	260.3
33.0	244.4
33.5	229.7
34.0	216.3
34.5	203.9
35.0	192.7
35.5	182.3
36.0	172.8
36.5	164.1
37.0	156.1
37.5	148.8
38.0	142.2
38.5	136.1
39.0	130.5
39.5	125.4
40.0	120.7
40.5	116.3
41.0	112.2
41.5	108.5
42.0	105.0
42.5	101.7
43.0	98.7
43.5	95.8
44.0	93.1
44.5	90.6
45.0	88.1
45.5	85.8
46.0	83.7
46.5	81.6
47.0	79.6
47.5	77.8
48.0	75.9
48.5	74.2
49.0	72.5
49.5	70.8
50.0	69.3
50.5	67.8
51.0	66.4
51.5	64.9
52.0	63.5
52.5	62.2
53.0	60.8
53.5	59.5
54.0	58.2
54.5	56.9

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CANDELA TABULATION - (Cont.)

55.0	55.7
55.5	54.5
56.0	53.3
56.5	52.1
57.0	50.8
57.5	49.7
58.0	48.6
58.5	47.6
59.0	46.5
59.5	45.4
60.0	44.3
60.5	43.2
61.0	42.3
61.5	41.2
62.0	40.2
62.5	39.2
63.0	38.2
63.5	37.3
64.0	36.3
64.5	35.3
65.0	34.3
65.5	33.4
66.0	32.5
66.5	31.6
67.0	30.6
67.5	29.7
68.0	28.8
68.5	27.9
69.0	27.0
69.5	26.1
70.0	25.2
70.5	24.4
71.0	23.6
71.5	22.6
72.0	21.8
72.5	21.0
73.0	20.2
73.5	19.3
74.0	18.5
74.5	17.7
75.0	16.9
75.5	16.1
76.0	15.3
76.5	14.5
77.0	13.7
77.5	13.1
78.0	12.3
78.5	11.6
79.0	10.9
79.5	10.2
80.0	9.5
80.5	8.8
81.0	8.1
81.5	7.6
82.0	6.8
82.5	6.3

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CANDELA TABULATION - (Cont.)

83.0	5.6
83.5	5.1
84.0	4.5
84.5	3.9
85.0	3.4
85.5	2.8
86.0	2.4
86.5	1.9
87.0	1.6
87.5	1.3
88.0	1.0
88.5	0.8
89.0	0.6
89.5	0.4
90.0	0.3
90.5	0.0
91.0	0.0
91.5	0.0
92.0	0.0
92.5	0.0
93.0	0.0
93.5	0.0
94.0	0.0
94.5	0.0
95.0	0.0
95.5	0.0
96.0	0.0
96.5	0.0
97.0	0.0
97.5	0.0
98.0	0.0
98.5	0.0
99.0	0.0
99.5	0.0
100.0	0.0
100.5	0.0
101.0	0.0
101.5	0.0
102.0	0.0
102.5	0.0
103.0	0.0
103.5	0.0
104.0	0.0
104.5	0.0
105.0	0.0
105.5	0.0
106.0	0.0
106.5	0.0
107.0	0.0
107.5	0.0
108.0	0.0
108.5	0.0
109.0	0.0
109.5	0.0
110.0	0.0
110.5	0.0

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CANDELA TABULATION - (Cont.)

111.0	0.0
111.5	0.0
112.0	0.0
112.5	0.0
113.0	0.0
113.5	0.0
114.0	0.0
114.5	0.0
115.0	0.0
115.5	0.0
116.0	0.0
116.5	0.0
117.0	0.0
117.5	0.0
118.0	0.0
118.5	0.0
119.0	0.0
119.5	0.0
120.0	0.0
120.5	0.0
121.0	0.0
121.5	0.0
122.0	0.0
122.5	0.0
123.0	0.0
123.5	0.0
124.0	0.0
124.5	0.0
125.0	0.0
125.5	0.0
126.0	0.0
126.5	0.0
127.0	0.0
127.5	0.0
128.0	0.0
128.5	0.0
129.0	0.0
129.5	0.0
130.0	0.0
130.5	0.0
131.0	0.0
131.5	0.0
132.0	0.0
132.5	0.0
133.0	0.0
133.5	0.0
134.0	0.0
134.5	0.0
135.0	0.0
135.5	0.0
136.0	0.0
136.5	0.0
137.0	0.0
137.5	0.0
138.0	0.0
138.5	0.0

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CANDELA TABULATION - (Cont.)

139.0	0.0
139.5	0.0
140.0	0.0
140.5	0.0
141.0	0.0
141.5	0.0
142.0	0.0
142.5	0.0
143.0	0.0
143.5	0.0
144.0	0.0
144.5	0.0
145.0	0.0
145.5	0.0
146.0	0.0
146.5	0.0
147.0	0.0
147.5	0.0
148.0	0.0
148.5	0.0
149.0	0.0
149.5	0.0
150.0	0.0
150.5	0.0
151.0	0.0
151.5	0.0
152.0	0.0
152.5	0.0
153.0	0.0
153.5	0.0
154.0	0.0
154.5	0.0
155.0	0.0
155.5	0.0
156.0	0.0
156.5	0.0
157.0	0.0
157.5	0.0
158.0	0.0
158.5	0.0
159.0	0.0
159.5	0.0
160.0	0.0
160.5	0.0
161.0	0.0
161.5	0.0
162.0	0.0
162.5	0.0
163.0	0.0
163.5	0.0
164.0	0.0
164.5	0.0
165.0	0.0
165.5	0.0
166.0	0.0
166.5	0.0

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167.0	0.0
167.5	0.0
168.0	0.0
168.5	0.0
169.0	0.0
169.5	0.0
170.0	0.0
170.5	0.0
171.0	0.0
171.5	0.0
172.0	0.0
172.5	0.0
173.0	0.0
173.5	0.0
174.0	0.0
174.5	0.0
175.0	0.0
175.5	0.0
176.0	0.0
176.5	0.0
177.0	0.0
177.5	0.0
178.0	0.0
178.5	0.0
179.0	0.0
179.5	0.0
180.0	0.0

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1134.59	N.A.	63.20
0-30	1490.12	N.A.	83.10
0-40	1618.29	N.A.	90.20
0-60	1737.76	N.A.	96.90
0-80	1789.85	N.A.	99.80
0-90	1794.08	N.A.	100.00
10-90	1388.95	N.A.	77.40
20-40	483.70	N.A.	27.00
20-50	553.11	N.A.	30.80
40-70	153.59	N.A.	8.60
60-80	52.08	N.A.	2.90
70-80	17.97	N.A.	1.00
80-90	4.23	N.A.	0.20
90-110	0.01	N.A.	0.00
90-120	0.01	N.A.	0.00
90-130	0.01	N.A.	0.00
90-150	0.01	N.A.	0.00
90-180	0.01	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1794.09	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	405.13
10-20	729.46
20-30	355.53
30-40	128.16
40-50	69.41
50-60	50.07
60-70	34.11
70-80	17.97
80-90	4.23
90-100	0.01
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	239	239	239	239	233	233	233	233	223	223	223	213	213	213	205	205	205	200
1	228	223	218	214	223	219	214	211	211	207	204	203	200	198	196	194	192	189
2	218	209	202	195	214	206	199	193	199	194	189	193	189	185	188	184	181	178
3	209	197	188	181	205	194	186	179	189	182	177	184	179	174	180	175	171	168
4	200	187	177	169	197	184	175	168	180	172	166	176	170	164	173	167	162	160
5	192	177	167	159	189	176	166	159	172	164	157	169	162	156	166	160	155	152
6	185	169	159	151	182	168	158	151	165	156	150	162	155	149	160	153	148	145
7	178	162	151	144	175	160	151	144	158	149	143	156	148	142	154	147	142	139
8	171	155	145	138	169	154	144	137	152	143	137	150	142	136	148	141	136	133
9	165	149	139	132	163	148	138	132	146	138	131	145	137	131	143	136	131	128
10	160	143	134	127	158	143	133	127	141	132	126	140	132	126	138	131	126	124

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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	11.5	12.6	11.9	12.9	13.2	11.5	12.6	11.9	12.9	13.2
	3H	13.0	13.9	13.4	14.2	14.6	13.0	13.9	13.4	14.2	14.6
	4H	13.5	14.3	13.9	14.7	15.1	13.5	14.3	13.9	14.7	15.1
	6H	13.8	14.6	14.3	15.0	15.4	13.8	14.6	14.3	15.0	15.4
	8H	13.9	14.6	14.4	15.0	15.4	13.9	14.6	14.4	15.0	15.4
	12H	13.9	14.6	14.4	15.0	15.4	13.9	14.6	14.4	15.0	15.4

UGR Viewed Endwise

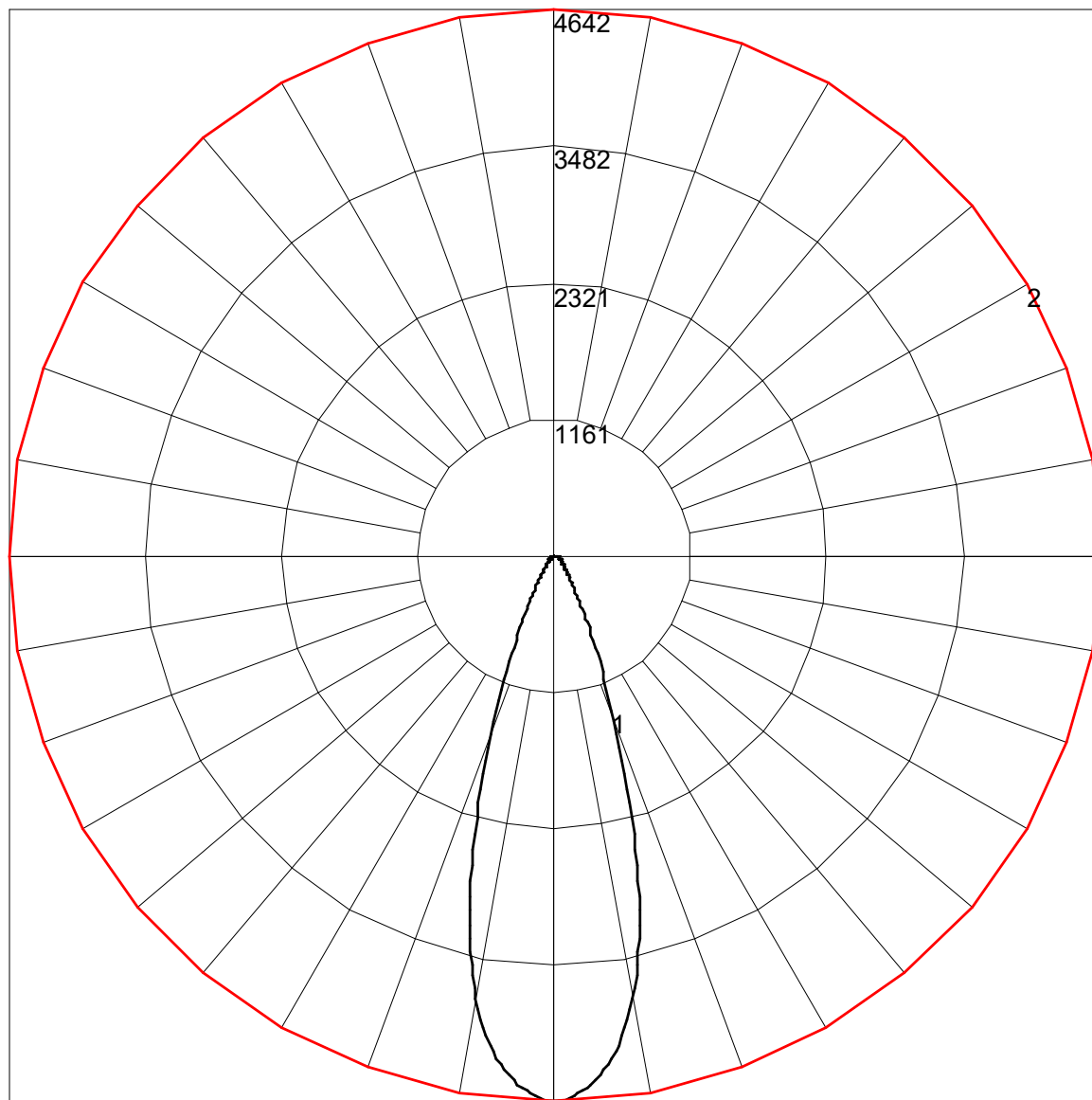
4H	2H	12.0	12.8	12.4	13.2	13.6	12.0	12.8	12.4	13.2	13.6
	3H	13.6	14.3	14.0	14.7	15.1	13.6	14.3	14.0	14.7	15.1
	4H	14.3	14.9	14.7	15.3	15.7	14.3	14.9	14.7	15.3	15.7
	6H	14.7	15.2	15.2	15.7	16.1	14.7	15.2	15.2	15.7	16.1
	8H	14.8	15.3	15.3	15.7	16.2	14.8	15.3	15.3	15.7	16.2
	12H	14.8	15.3	15.3	15.7	16.2	14.8	15.3	15.3	15.7	16.2

8H	4H	14.4	14.9	14.9	15.4	15.8	14.4	14.9	14.9	15.4	15.8
	6H	14.9	15.3	15.5	15.8	16.3	14.9	15.3	15.5	15.8	16.3
	8H	15.1	15.5	15.6	16.0	16.5	15.1	15.5	15.6	16.0	16.5
	12H	15.2	15.5	15.7	16.0	16.6	15.2	15.5	15.7	16.0	16.6

12H	4H	14.4	14.8	14.9	15.3	15.8	14.4	14.8	14.9	15.3	15.8
	6H	15.0	15.3	15.5	15.8	16.3	15.0	15.3	15.5	15.8	16.3
	8H	15.1	15.5	15.7	15.9	16.5	15.1	15.5	15.7	15.9	16.5

Maximum UGR = 16.6

POLAR GRAPH



Maximum Candela = 4642 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.)