



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P17-835-POE-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] 6 OCT 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-P17-835-PoE-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	1620
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	70
Total Luminaire Watts	23.2
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	37482	37482	37482
55	30265	30265	30265
65	19578	19578	19578
75	10917	10917	10917
85	5608	5608	5608

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CANDELA TABULATION

	<u>0</u>
0.0	1301.633
0.5	1301.633
1.0	1300.408
1.5	1297.959
2.0	1295.510
2.5	1293.061
3.0	1289.388
3.5	1285.715
4.0	1282.041
4.5	1277.143
5.0	1273.470
5.5	1268.572
6.0	1263.674
6.5	1258.776
7.0	1253.878
7.5	1248.980
8.0	1244.082
8.5	1237.959
9.0	1233.061
9.5	1228.164
10.0	1223.510
10.5	1218.490
11.0	1213.347
11.5	1208.327
12.0	1203.551
12.5	1198.776
13.0	1194.000
13.5	1189.102
14.0	1184.204
14.5	1179.306
15.0	1174.286
15.5	1169.143
16.0	1163.755
16.5	1158.368
17.0	1152.857
17.5	1146.980
18.0	1140.735
18.5	1134.000
19.0	1127.510
19.5	1120.531
20.0	1112.939
20.5	1104.245
21.0	1094.204
21.5	1083.306
22.0	1070.817
22.5	1056.980
23.0	1041.306
23.5	1023.674
24.0	1004.327
24.5	982.408
25.0	957.919
25.5	930.857
26.0	901.592
26.5	870.490

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CANDELA TABULATION - (Cont.)

27.0	837.796
27.5	804.612
28.0	769.837
28.5	735.429
29.0	701.143
29.5	666.857
30.0	633.184
30.5	600.123
31.0	568.898
31.5	538.653
32.0	510.123
32.5	483.551
33.0	458.939
33.5	436.776
34.0	416.816
34.5	399.429
35.0	384.123
35.5	371.143
36.0	359.755
36.5	350.204
37.0	341.755
37.5	334.531
38.0	327.918
38.5	322.041
39.0	316.776
39.5	312.000
40.0	307.714
40.5	303.674
41.0	299.755
41.5	296.204
42.0	292.653
42.5	289.347
43.0	286.041
43.5	282.612
44.0	279.184
44.5	275.755
45.0	272.204
45.5	268.531
46.0	264.735
46.5	260.816
47.0	256.776
47.5	252.612
48.0	248.449
48.5	244.041
49.0	239.510
49.5	234.735
50.0	229.959
50.5	225.061
51.0	219.918
51.5	214.898
52.0	209.755
52.5	204.612
53.0	199.714
53.5	194.327
54.0	188.939
54.5	183.551

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CANDELA TABULATION - (Cont.)

55.0	178.286
55.5	172.898
56.0	167.633
56.5	162.490
57.0	157.347
57.5	152.204
58.0	147.184
58.5	142.286
59.0	137.388
59.5	132.612
60.0	127.837
60.5	123.184
61.0	118.653
61.5	114.122
62.0	109.837
62.5	105.429
63.0	101.265
63.5	96.980
64.0	92.939
64.5	88.898
65.0	84.980
65.5	81.061
66.0	77.265
66.5	73.592
67.0	70.041
67.5	66.490
68.0	63.061
68.5	59.633
69.0	56.327
69.5	53.143
70.0	50.204
70.5	47.388
71.0	44.816
71.5	42.367
72.0	40.041
72.5	37.837
73.0	35.755
73.5	33.918
74.0	32.082
74.5	30.490
75.0	29.020
75.5	27.673
76.0	26.204
76.5	24.857
77.0	23.510
77.5	22.163
78.0	20.939
78.5	19.592
79.0	18.367
79.5	17.143
80.0	15.918
80.5	14.694
81.0	13.592
81.5	12.490
82.0	11.265
82.5	10.286

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CANDELA TABULATION - (Cont.)

83.0	9.184
83.5	8.082
84.0	7.102
84.5	6.000
85.0	5.020
85.5	4.163
86.0	3.306
86.5	2.694
87.0	2.082
87.5	1.592
88.0	1.102
88.5	0.735
89.0	0.367
89.5	0.122
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
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
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128.0	0.000
128.5	0.000
129.0	0.000
129.5	0.000
130.0	0.000
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131.0	0.000
131.5	0.000
132.0	0.000
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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
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146.5	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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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	450.54	N.A.	27.80
0-30	871.85	N.A.	53.80
0-40	1128.6	N.A.	69.60
0-60	1496.69	N.A.	92.40
0-80	1613.8	N.A.	99.60
0-90	1620.43	N.A.	100.00
10-90	1500.55	N.A.	92.60
20-40	678.05	N.A.	41.80
20-50	886.95	N.A.	54.70
40-70	453.23	N.A.	28.00
60-80	117.12	N.A.	7.20
70-80	31.98	N.A.	2.00
80-90	6.62	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	1620.43	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	119.88
10-20	330.66
20-30	421.31
30-40	256.74
40-50	208.89
50-60	159.20
60-70	85.13
70-80	31.98
80-90	6.62
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	169	169	169	169	165	165	165	165	158	158	158	151	151	151	145	145	145	142
1	159	154	149	145	155	151	147	143	145	142	139	139	137	134	134	132	130	128
2	148	139	132	126	145	137	130	125	132	127	122	128	123	119	124	120	117	114
3	138	127	118	111	135	125	117	110	121	114	108	117	111	106	114	109	105	102
4	130	116	106	99	127	114	105	98	111	103	97	108	101	96	105	99	95	92
5	121	107	97	89	119	105	96	89	103	94	88	100	93	87	98	91	86	84
6	114	99	88	81	112	97	88	81	95	86	80	93	85	79	91	84	79	76
7	107	91	81	74	105	90	81	74	88	80	73	87	79	73	85	78	73	70
8	101	85	75	68	99	84	75	68	83	74	68	81	73	67	80	72	67	65
9	96	80	70	63	94	79	70	63	77	69	63	76	68	63	75	68	62	60
10	91	75	65	59	89	74	65	59	73	64	59	72	64	58	70	63	58	56

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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	20.1	21.4	20.4	21.7	22.0	20.1	21.4	20.4	21.7	22.0
	3H	20.8	22.0	21.2	22.3	22.7	20.8	22.0	21.2	22.3	22.7
	4H	21.0	22.1	21.4	22.4	22.8	21.0	22.1	21.4	22.4	22.8
	6H	21.1	22.1	21.5	22.5	22.9	21.1	22.1	21.5	22.5	22.9
	8H	21.1	22.1	21.5	22.4	22.9	21.1	22.1	21.5	22.4	22.9
	12H	21.1	22.0	21.5	22.4	22.8	21.1	22.0	21.5	22.4	22.8

UGR Viewed Endwise

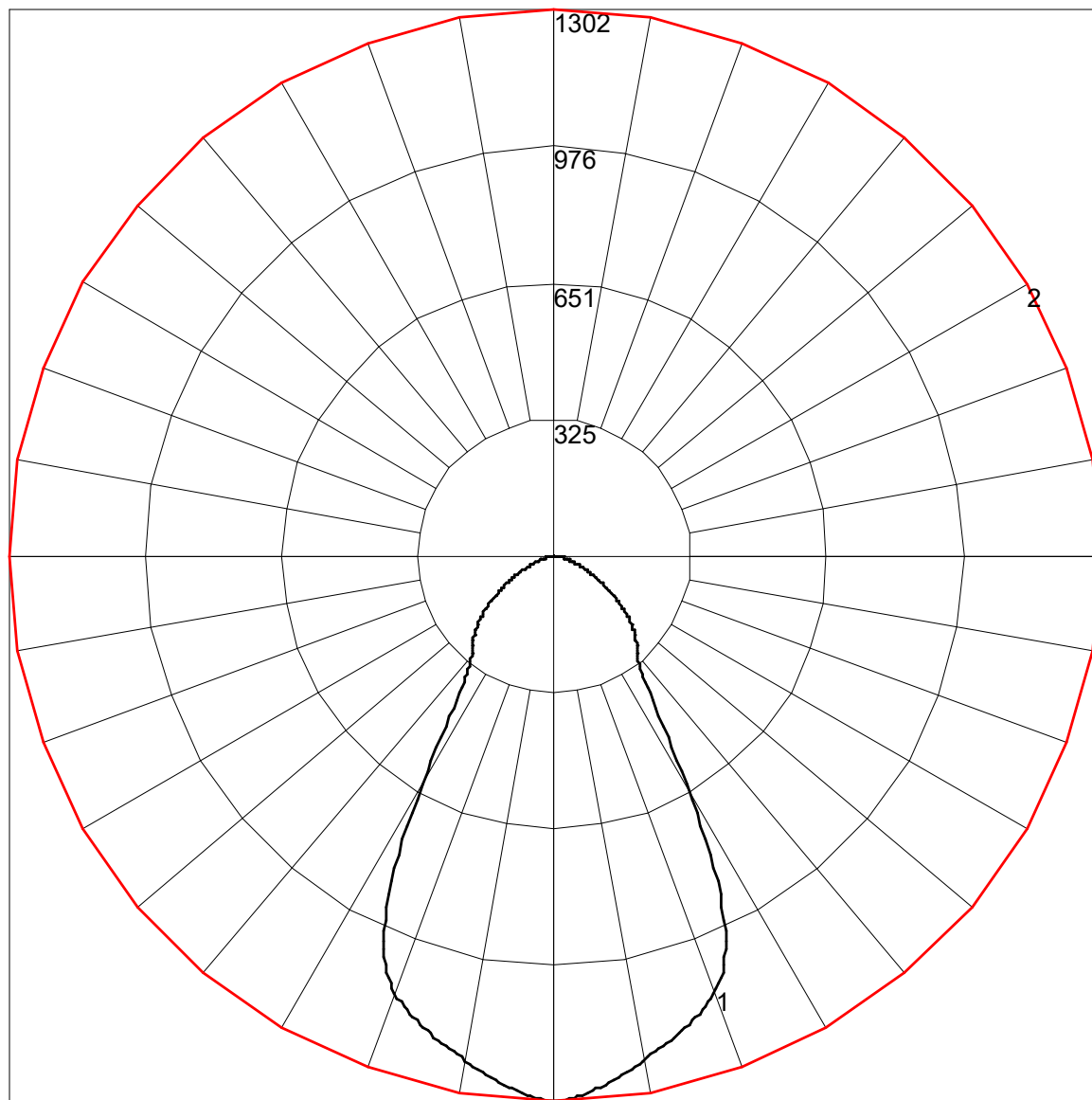
4H	2H	20.3	21.4	20.7	21.8	22.2	20.3	21.4	20.7	21.8	22.2
	3H	21.2	22.1	21.6	22.5	22.9	21.2	22.1	21.6	22.5	22.9
	4H	21.4	22.3	21.9	22.7	23.1	21.4	22.3	21.9	22.7	23.1
	6H	21.6	22.3	22.1	22.8	23.2	21.6	22.3	22.1	22.8	23.2
	8H	21.7	22.3	22.1	22.8	23.2	21.7	22.3	22.1	22.8	23.2
	12H	21.7	22.2	22.2	22.7	23.2	21.7	22.2	22.2	22.7	23.2

8H	4H	21.5	22.1	22.0	22.6	23.1	21.5	22.1	22.0	22.6	23.1
	6H	21.7	22.3	22.2	22.8	23.2	21.7	22.3	22.2	22.8	23.2
	8H	21.8	22.3	22.3	22.8	23.3	21.8	22.3	22.3	22.8	23.3
	12H	21.8	22.2	22.3	22.7	23.3	21.8	22.2	22.3	22.7	23.3

12H	4H	21.5	22.0	22.0	22.5	23.0	21.5	22.0	22.0	22.5	23.0
	6H	21.7	22.2	22.2	22.7	23.2	21.7	22.2	22.2	22.7	23.2
	8H	21.8	22.2	22.3	22.7	23.3	21.8	22.2	22.3	22.7	23.3

Maximum UGR = 23.3

POLAR GRAPH



Maximum Candela = 1301.633 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.)