



IES INDOOR REPORT

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

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-P17-835-PoE-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	2166
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	93
Total Luminaire Watts	23.2
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	10841	10841	10841
55	7212	7212	7212
65	4965	4965	4965
75	3224	3224	3224
85	2599	2599	2599

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CANDELA TABULATION

	<u>0</u>
0.0	8124.033
0.5	8114.238
1.0	8088.525
1.5	8043.222
2.0	7982.001
2.5	7904.862
3.0	7813.031
3.5	7707.730
4.0	7588.962
4.5	7457.948
5.0	7315.916
5.5	7162.863
6.0	6998.791
6.5	6822.474
7.0	6636.362
7.5	6442.903
8.0	6242.098
8.5	6032.722
9.0	5819.673
9.5	5600.502
10.0	5380.106
10.5	5156.037
11.0	4930.743
11.5	4705.450
12.0	4481.381
12.5	4260.985
13.0	4041.814
13.5	3827.540
14.0	3616.940
14.5	3412.461
15.0	3215.330
15.5	3025.544
16.0	2840.657
16.5	2665.565
17.0	2497.819
17.5	2337.420
18.0	2185.592
18.5	2041.110
19.0	1905.199
19.5	1777.859
20.0	1657.866
20.5	1543.995
21.0	1437.470
21.5	1339.517
22.0	1245.236
22.5	1156.833
23.0	1072.593
23.5	994.597
24.0	921.867
24.5	853.789
25.0	790.241
25.5	731.224
26.0	676.860
26.5	626.536

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CANDELA TABULATION - (Cont.)

27.0	580.131
27.5	537.398
28.0	498.094
28.5	462.341
29.0	429.404
29.5	399.161
30.0	371.367
30.5	345.654
31.0	322.268
31.5	300.718
32.0	280.760
32.5	262.393
33.0	245.619
33.5	230.191
34.0	215.865
34.5	202.764
35.0	190.887
35.5	179.867
36.0	169.827
36.5	160.644
37.0	152.196
37.5	144.482
38.0	137.380
38.5	130.891
39.0	125.013
39.5	119.503
40.0	114.361
40.5	109.586
41.0	105.178
41.5	101.015
42.0	97.219
42.5	93.668
43.0	90.240
43.5	87.056
44.0	84.118
44.5	81.302
45.0	78.730
45.5	76.159
46.0	73.833
46.5	71.506
47.0	69.302
47.5	67.098
48.0	65.017
48.5	63.058
49.0	61.099
49.5	59.262
50.0	57.425
50.5	55.711
51.0	53.997
51.5	52.405
52.0	50.813
52.5	49.344
53.0	47.875
53.5	46.406
54.0	45.059
54.5	43.834

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CANDELA TABULATION - (Cont.)

55.0	42.487
55.5	41.263
56.0	40.039
56.5	38.814
57.0	37.712
57.5	36.610
58.0	35.386
58.5	34.284
59.0	33.304
59.5	32.202
60.0	31.100
60.5	30.121
61.0	29.141
61.5	28.162
62.0	27.182
62.5	26.203
63.0	25.223
63.5	24.244
64.0	23.386
64.5	22.529
65.0	21.550
65.5	20.693
66.0	19.836
66.5	18.979
67.0	18.244
67.5	17.387
68.0	16.652
68.5	15.795
69.0	15.060
69.5	14.326
70.0	13.591
70.5	12.979
71.0	12.367
71.5	11.754
72.0	11.265
72.5	10.652
73.0	10.163
73.5	9.795
74.0	9.306
74.5	8.938
75.0	8.571
75.5	8.204
76.0	7.836
76.5	7.469
77.0	7.102
77.5	6.734
78.0	6.489
78.5	6.122
79.0	5.755
79.5	5.510
80.0	5.143
80.5	4.775
81.0	4.530
81.5	4.163
82.0	3.918
82.5	3.673

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CANDELA TABULATION - (Cont.)

83.0	3.306
83.5	3.061
84.0	2.816
84.5	2.571
85.0	2.326
85.5	2.082
86.0	1.714
86.5	1.592
87.0	1.347
87.5	1.102
88.0	0.857
88.5	0.612
89.0	0.490
89.5	0.367
90.0	0.245
90.5	0.245
91.0	0.122
91.5	0.000
92.0	0.122
92.5	0.122
93.0	0.122
93.5	0.122
94.0	0.000
94.5	0.122
95.0	0.122
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	0.122
103.0	0.000
103.5	0.122
104.0	0.122
104.5	0.122
105.0	0.122
105.5	0.122
106.0	0.122
106.5	0.122
107.0	0.122
107.5	0.000
108.0	0.122
108.5	0.122
109.0	0.122
109.5	0.122
110.0	0.122
110.5	0.122

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CANDELA TABULATION - (Cont.)

111.0	0.122
111.5	0.122
112.0	0.122
112.5	0.122
113.0	0.122
113.5	0.122
114.0	0.122
114.5	0.122
115.0	0.122
115.5	0.122
116.0	0.122
116.5	0.122
117.0	0.122
117.5	0.122
118.0	0.122
118.5	0.122
119.0	0.122
119.5	0.122
120.0	0.122
120.5	0.122
121.0	0.122
121.5	0.122
122.0	0.122
122.5	0.122
123.0	0.122
123.5	0.122
124.0	0.122
124.5	0.122
125.0	0.122
125.5	0.122
126.0	0.122
126.5	0.122
127.0	0.122
127.5	0.122
128.0	0.122
128.5	0.122
129.0	0.122
129.5	0.122
130.0	0.122
130.5	0.122
131.0	0.245
131.5	0.245
132.0	0.245
132.5	0.245
133.0	0.245
133.5	0.245
134.0	0.245
134.5	0.245
135.0	0.367
135.5	0.367
136.0	0.367
136.5	0.367
137.0	0.367
137.5	0.490
138.0	0.490
138.5	0.490

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CANDELA TABULATION - (Cont.)

139.0	0.490
139.5	0.612
140.0	0.612
140.5	0.612
141.0	0.735
141.5	0.735
142.0	0.735
142.5	0.857
143.0	0.857
143.5	0.857
144.0	0.980
144.5	0.980
145.0	1.102
145.5	1.102
146.0	1.224
146.5	1.224
147.0	1.347
147.5	1.347
148.0	1.469
148.5	1.469
149.0	1.592
149.5	1.592
150.0	1.714
150.5	1.714
151.0	1.837
151.5	1.837
152.0	1.959
152.5	1.959
153.0	2.082
153.5	2.082
154.0	2.204
154.5	2.204
155.0	2.326
155.5	2.326
156.0	2.449
156.5	2.449
157.0	2.449
157.5	2.571
158.0	2.571
158.5	2.694
159.0	2.694
159.5	2.694
160.0	2.816
160.5	2.816
161.0	2.816
161.5	2.816
162.0	2.939
162.5	2.939
163.0	2.939
163.5	2.939
164.0	2.939
164.5	2.939
165.0	2.939
165.5	2.939
166.0	3.061
166.5	2.939

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CANDELA TABULATION - (Cont.)

167.0	3.061
167.5	3.061
168.0	3.061
168.5	2.939
169.0	2.939
169.5	2.939
170.0	2.939
170.5	2.939
171.0	2.939
171.5	2.939
172.0	2.939
172.5	2.939
173.0	2.939
173.5	2.939
174.0	2.939
174.5	2.939
175.0	2.939
175.5	2.939
176.0	2.939
176.5	2.939
177.0	2.939
177.5	2.816
178.0	2.816
178.5	2.816
179.0	2.816
179.5	2.816
180.0	2.816

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1518.82	N.A.	70.10
0-30	1901.29	N.A.	87.80
0-40	2028.74	N.A.	93.70
0-60	2129.28	N.A.	98.30
0-80	2160.15	N.A.	99.70
0-90	2162.77	N.A.	99.80
10-90	1527.49	N.A.	70.50
20-40	509.92	N.A.	23.50
20-50	572.04	N.A.	26.40
40-70	122.12	N.A.	5.60
60-80	30.87	N.A.	1.40
70-80	9.30	N.A.	0.40
80-90	2.61	N.A.	0.10
90-110	0.15	N.A.	0.00
90-120	0.27	N.A.	0.00
90-130	0.38	N.A.	0.00
90-150	1.32	N.A.	0.10
90-180	3.47	N.A.	0.20
110-180	3.31	N.A.	0.20
0-180	2166.23	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	635.27
10-20	883.55
20-30	382.47
30-40	127.45
40-50	62.12
50-60	38.42
60-70	21.57
70-80	9.30
80-90	2.61
90-100	0.07
100-110	0.09
110-120	0.12
120-130	0.11
130-140	0.26
140-150	0.68
150-160	1.03
160-170	0.83
170-180	0.28

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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	163	159	156	153	159	156	153	151	150	148	146	145	143	142	140	139	138	135
2	156	150	146	142	153	148	144	140	143	140	137	139	136	134	135	133	131	129
3	150	143	137	132	148	141	136	131	137	133	129	134	130	127	131	128	125	123
4	145	136	130	125	142	135	129	124	132	127	123	129	125	121	126	123	120	118
5	140	130	124	119	138	129	123	118	127	121	117	124	120	116	122	118	115	113
6	135	125	118	113	133	124	118	113	122	116	112	120	115	112	118	114	111	109
7	130	120	113	109	129	119	113	108	118	112	108	116	111	107	115	110	107	105
8	126	116	109	105	125	115	109	104	114	108	104	112	107	104	111	107	103	102
9	122	112	105	101	121	111	105	101	110	104	100	109	104	100	108	103	100	98
10	119	108	102	98	118	108	102	97	107	101	97	106	101	97	105	100	97	95

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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	9.6	10.6	10.0	10.9	11.2	9.6	10.6	10.0	10.9	11.2
	3H	10.5	11.4	10.9	11.7	12.1	10.5	11.4	10.9	11.7	12.1
	4H	10.7	11.5	11.2	11.9	12.3	10.7	11.5	11.2	11.9	12.3
	6H	10.9	11.6	11.3	12.0	12.4	10.9	11.6	11.3	12.0	12.4
	8H	11.0	11.6	11.4	12.0	12.4	11.0	11.6	11.4	12.0	12.4
	12H	11.0	11.6	11.4	12.0	12.4	11.0	11.6	11.4	12.0	12.4

UGR Viewed Endwise

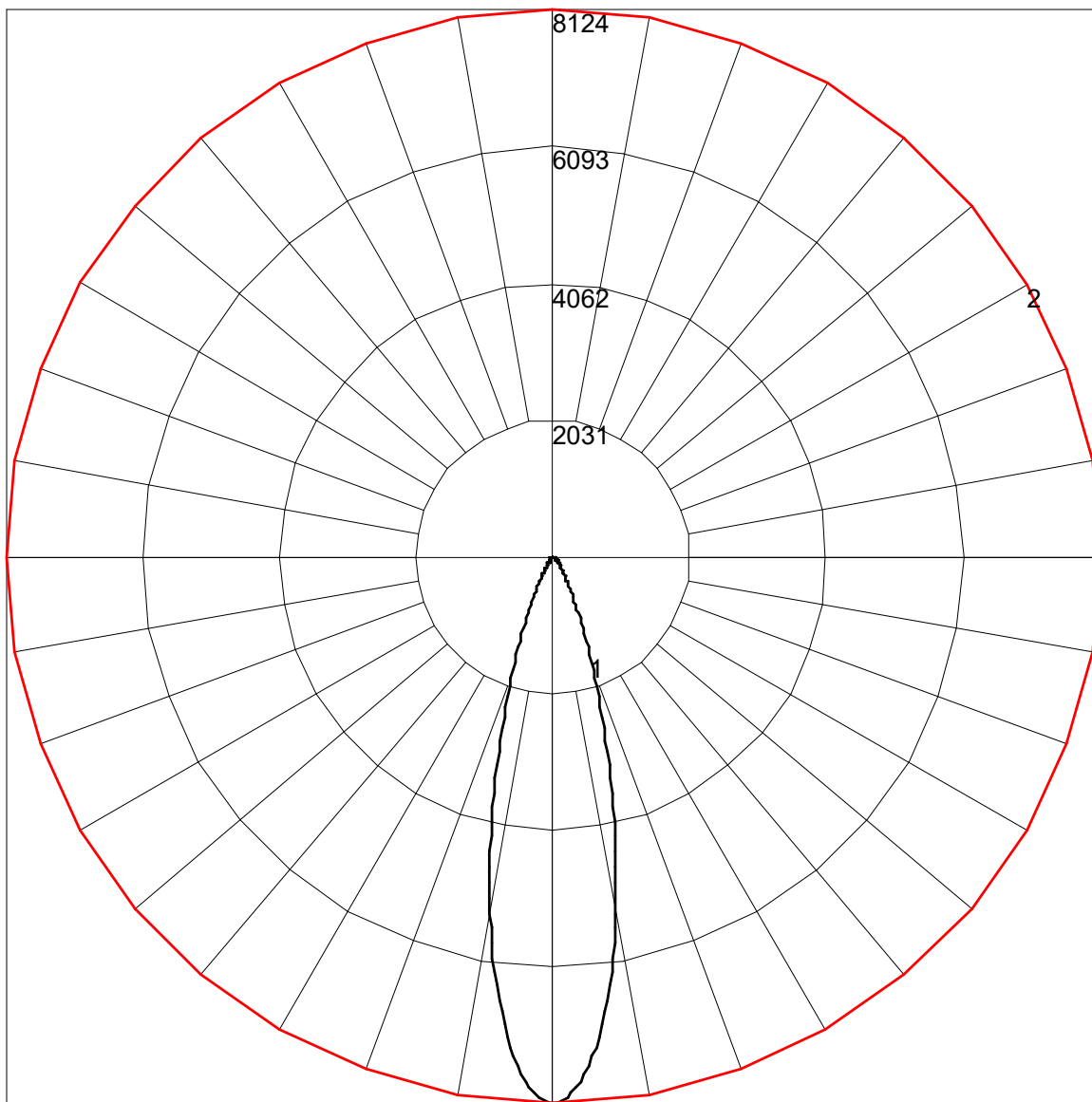
4H	2H	9.9	10.7	10.3	11.0	11.4	9.9	10.7	10.3	11.0	11.4
	3H	10.9	11.5	11.3	11.9	12.4	10.9	11.5	11.3	11.9	12.4
	4H	11.2	11.8	11.7	12.2	12.7	11.2	11.8	11.7	12.2	12.7
	6H	11.5	12.0	12.0	12.4	12.9	11.5	12.0	12.0	12.4	12.9
	8H	11.6	12.0	12.0	12.5	13.0	11.6	12.0	12.0	12.5	13.0
	12H	11.6	12.0	12.1	12.5	13.0	11.6	12.0	12.1	12.5	13.0

8H	4H	11.3	11.7	11.7	12.2	12.6	11.3	11.7	11.7	12.2	12.6
	6H	11.6	12.0	12.1	12.5	13.0	11.6	12.0	12.1	12.5	13.0
	8H	11.8	12.1	12.3	12.6	13.1	11.8	12.1	12.3	12.6	13.1
	12H	11.9	12.2	12.4	12.7	13.2	11.9	12.2	12.4	12.7	13.2

12H	4H	11.2	11.6	11.7	12.1	12.6	11.2	11.6	11.7	12.1	12.6
	6H	11.6	11.9	12.2	12.4	13.0	11.6	11.9	12.2	12.4	13.0
	8H	11.8	12.1	12.3	12.6	13.2	11.8	12.1	12.3	12.6	13.2

Maximum UGR = 13.2

POLAR GRAPH



Maximum Candela = 8124.033 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.)