



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P23-835-POE-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] 6 OCT 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-P23-835-PoE-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	3088
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	91
Total Luminaire Watts	34
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	20278	20278	20278
55	15211	15211	15211
65	12587	12587	12587
75	10241	10241	10241
85	5703	5703	5703

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CANDELA TABULATION

	<u>0</u>
0.0	11598.953
0.5	11585.475
1.0	11546.728
1.5	11486.080
2.0	11400.162
2.5	11294.027
3.0	11165.993
3.5	11017.742
4.0	10849.275
4.5	10663.961
5.0	10463.485
5.5	10246.163
6.0	10013.678
6.5	9762.662
7.0	9498.169
7.5	9221.883
8.0	8928.751
8.5	8627.195
9.0	8315.531
9.5	7997.128
10.0	7673.672
10.5	7345.161
11.0	7009.912
11.5	6674.662
12.0	6342.782
12.5	6012.587
13.0	5687.446
13.5	5367.359
14.0	5055.695
14.5	4754.139
15.0	4464.375
15.5	4184.720
16.0	3916.858
16.5	3660.788
17.0	3419.880
17.5	3189.080
18.0	2971.758
18.5	2767.913
19.0	2577.545
19.5	2400.655
20.0	2233.872
20.5	2075.513
21.0	1927.262
21.5	1792.489
22.0	1662.601
22.5	1541.810
23.0	1428.937
23.5	1324.488
24.0	1227.282
24.5	1136.310
25.0	1052.582
25.5	975.424
26.0	903.825
26.5	838.123

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CANDELA TABULATION - (Cont.)

27.0	777.475
27.5	721.881
28.0	671.004
28.5	624.339
29.0	581.548
29.5	542.127
30.0	506.243
30.5	473.224
31.0	442.900
31.5	415.271
32.0	390.170
32.5	366.753
33.0	345.357
33.5	325.647
34.0	307.789
34.5	291.279
35.0	276.286
35.5	262.640
36.0	249.837
36.5	238.212
37.0	227.599
37.5	217.659
38.0	208.731
38.5	200.476
39.0	192.726
39.5	185.482
40.0	178.743
40.5	172.510
41.0	166.782
41.5	161.391
42.0	156.337
42.5	151.620
43.0	147.072
43.5	142.860
44.0	138.817
44.5	134.942
45.0	131.236
45.5	127.866
46.0	124.497
46.5	121.296
47.0	118.264
47.5	115.231
48.0	112.367
48.5	109.504
49.0	106.808
49.5	104.113
50.0	101.586
50.5	99.227
51.0	96.700
51.5	94.510
52.0	92.151
52.5	89.961
53.0	87.940
53.5	85.750
54.0	83.728
54.5	81.875

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CANDELA TABULATION - (Cont.)

55.0	79.853
55.5	78.000
56.0	76.147
56.5	74.294
57.0	72.609
57.5	70.925
58.0	69.240
58.5	67.555
59.0	66.039
59.5	64.523
60.0	63.007
60.5	61.490
61.0	59.974
61.5	58.458
62.0	56.942
62.5	55.594
63.0	54.078
63.5	52.730
64.0	51.382
64.5	50.035
65.0	48.687
65.5	47.339
66.0	45.991
66.5	44.644
67.0	43.464
67.5	42.117
68.0	40.937
68.5	39.590
69.0	38.410
69.5	37.063
70.0	35.883
70.5	34.704
71.0	33.525
71.5	32.346
72.0	31.166
72.5	29.987
73.0	28.808
73.5	27.629
74.0	26.449
74.5	25.439
75.0	24.259
75.5	23.080
76.0	22.069
76.5	20.890
77.0	19.879
77.5	18.700
78.0	17.689
78.5	16.678
79.0	15.667
79.5	14.657
80.0	13.646
80.5	12.635
81.0	11.624
81.5	10.782
82.0	9.771
82.5	8.929

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CANDELA TABULATION - (Cont.)

83.0	7.918
83.5	7.076
84.0	6.233
84.5	5.391
85.0	4.549
85.5	3.875
86.0	3.369
86.5	2.695
87.0	2.190
87.5	1.853
88.0	1.348
88.5	1.011
89.0	0.674
89.5	0.505
90.0	0.337
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
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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
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147.0	0.000
147.5	0.000
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150.0	0.000
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151.0	0.000
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152.0	0.000
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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	2137.68	N.A.	69.20
0-30	2649.76	N.A.	85.80
0-40	2832.91	N.A.	91.70
0-60	3008.01	N.A.	97.40
0-80	3082.12	N.A.	99.80
0-90	3088.07	N.A.	100.00
10-90	2179.8	N.A.	70.60
20-40	695.23	N.A.	22.50
20-50	798.31	N.A.	25.90
40-70	223.47	N.A.	7.20
60-80	74.12	N.A.	2.40
70-80	25.74	N.A.	0.80
80-90	5.95	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	3088.08	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	908.27
10-20	1229.41
20-30	512.09
30-40	183.15
40-50	103.08
50-60	72.02
60-70	48.38
70-80	25.74
80-90	5.95
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	164	164	164	164	160	160	160	160	153	153	153	146	146	146	140	140	140	138
1	157	154	151	148	154	151	148	146	145	143	141	140	139	137	136	134	133	131
2	151	145	140	136	148	143	138	135	138	135	132	134	131	129	131	128	126	124
3	145	137	132	127	142	136	130	126	132	128	124	129	125	122	126	123	120	118
4	139	131	124	120	137	129	123	119	126	121	118	124	120	116	121	118	115	113
5	134	125	118	113	132	124	118	113	121	116	112	119	115	111	117	113	110	108
6	130	120	113	108	128	119	113	108	117	111	107	115	110	107	113	109	106	104
7	125	115	108	104	124	114	108	104	113	107	103	111	106	103	110	105	102	100
8	121	111	104	100	120	110	104	100	109	103	99	108	103	99	106	102	99	97
9	118	107	101	96	116	107	100	96	105	100	96	104	99	96	103	99	95	94
10	114	104	97	93	113	103	97	93	102	97	93	101	96	93	100	96	92	91

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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	13.4	14.4	13.8	14.7	15.1	UGR Viewed Endwise			
	3H	14.9	15.8	15.3	16.1	16.5	13.4	14.4	13.8	14.7
	4H	15.4	16.2	15.8	16.6	17.0	14.9	15.8	15.3	16.1
	6H	15.7	16.5	16.1	16.8	17.2	15.4	16.2	15.8	16.6
	8H	15.8	16.5	16.2	16.9	17.3	15.7	16.5	16.1	16.8
	12H	15.8	16.5	16.3	16.9	17.3	15.8	16.5	16.2	16.9

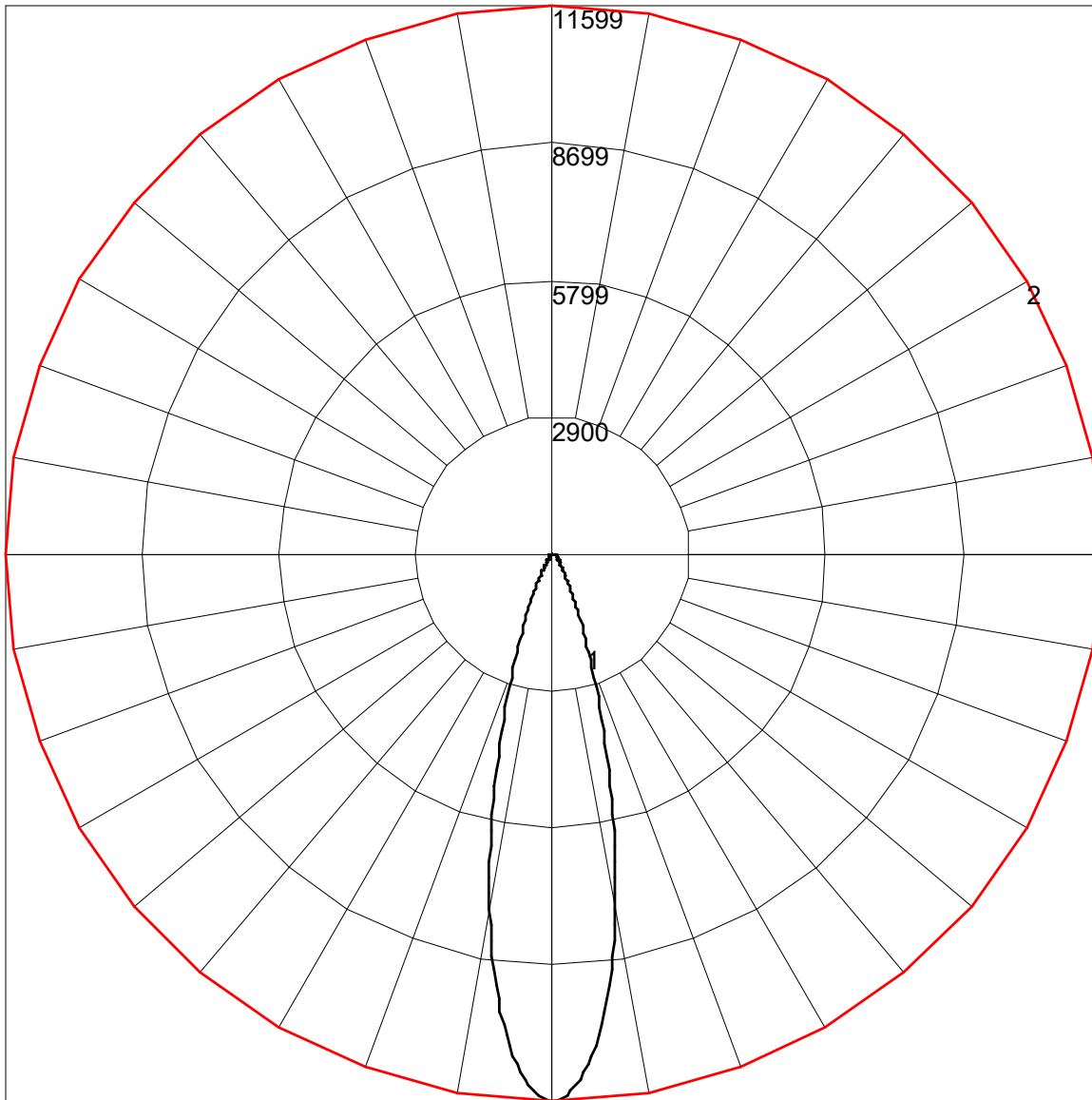
4H	2H	13.9	14.7	14.3	15.0	15.4	13.9	14.7	14.3	15.0
	3H	15.5	16.2	15.9	16.6	17.0	14.9	15.8	15.3	16.1
	4H	16.1	16.7	16.6	17.1	17.6	15.4	16.2	15.8	16.6
	6H	16.6	17.1	17.0	17.5	18.0	15.7	16.5	16.1	16.8
	8H	16.7	17.1	17.2	17.6	18.1	15.8	16.5	16.2	16.9
	12H	16.7	17.1	17.2	17.6	18.1	15.8	16.5	16.3	16.9

8H	4H	16.3	16.8	16.8	17.2	17.7	13.9	14.7	14.3	15.0
	6H	16.8	17.2	17.4	17.7	18.2	14.9	15.8	15.9	16.6
	8H	17.0	17.3	17.5	17.8	18.3	15.4	16.2	15.8	16.6
	12H	17.1	17.4	17.6	17.9	18.4	15.7	16.5	16.1	16.8

12H	4H	16.3	16.7	16.8	17.2	17.6	15.8	16.5	16.2	16.9
	6H	16.9	17.2	17.4	17.6	18.2	15.8	16.5	16.3	16.9
	8H	17.0	17.3	17.6	17.8	18.4	15.8	16.5	16.3	16.9

Maximum UGR = 18.4

POLAR GRAPH



Maximum Candela = 11598.953 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.)