



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P23-835-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-P23-835-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	2231
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	66
Total Luminaire Watts	34
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	51595	51595	51595
55	41661	41661	41661
65	26950	26950	26950
75	15028	15028	15028
85	7721	7721	7721

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CANDELA TABULATION

	<u>0</u>
0.0	1791.753
0.5	1791.753
1.0	1790.068
1.5	1786.697
2.0	1783.326
2.5	1779.954
3.0	1774.898
3.5	1769.841
4.0	1764.784
4.5	1758.042
5.0	1752.985
5.5	1746.243
6.0	1739.501
6.5	1732.759
7.0	1726.016
7.5	1719.274
8.0	1712.532
8.5	1704.104
9.0	1697.362
9.5	1690.620
10.0	1684.215
10.5	1677.304
11.0	1670.224
11.5	1663.314
12.0	1656.740
12.5	1650.166
13.0	1643.592
13.5	1636.850
14.0	1630.108
14.5	1623.366
15.0	1616.455
15.5	1609.376
16.0	1601.959
16.5	1594.543
17.0	1586.958
17.5	1578.867
18.0	1570.270
18.5	1561.000
19.0	1552.066
19.5	1542.459
20.0	1532.008
20.5	1520.041
21.0	1506.219
21.5	1491.218
22.0	1474.025
22.5	1454.978
23.0	1433.403
23.5	1409.131
24.0	1382.499
24.5	1352.327
25.0	1318.616
25.5	1281.365
26.0	1241.080
26.5	1198.267

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CANDELA TABULATION - (Cont.)

27.0	1153.262
27.5	1107.583
28.0	1059.713
28.5	1012.349
29.0	965.153
29.5	917.958
30.0	871.605
30.5	826.094
31.0	783.113
31.5	741.479
32.0	702.206
32.5	665.629
33.0	631.749
33.5	601.240
34.0	573.766
34.5	549.831
35.0	528.761
35.5	510.894
36.0	495.218
36.5	482.071
37.0	470.441
37.5	460.496
38.0	451.394
38.5	443.303
39.0	436.055
39.5	429.481
40.0	423.582
40.5	418.020
41.0	412.626
41.5	407.738
42.0	402.850
42.5	398.299
43.0	393.748
43.5	389.028
44.0	384.308
44.5	379.589
45.0	374.701
45.5	369.644
46.0	364.419
46.5	359.025
47.0	353.463
47.5	347.732
48.0	342.001
48.5	335.933
49.0	329.696
49.5	323.122
50.0	316.549
50.5	309.806
51.0	302.727
51.5	295.816
52.0	288.737
52.5	281.658
53.0	274.915
53.5	267.499
54.0	260.082
54.5	252.666

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CANDELA TABULATION - (Cont.)

55.0	245.418
55.5	238.001
56.0	230.754
56.5	223.674
57.0	216.595
57.5	209.515
58.0	202.605
58.5	195.862
59.0	189.120
59.5	182.546
60.0	175.973
60.5	169.568
61.0	163.331
61.5	157.094
62.0	151.195
62.5	145.127
63.0	139.396
63.5	133.497
64.0	127.934
64.5	122.372
65.0	116.978
65.5	111.584
66.0	106.359
66.5	101.302
67.0	96.414
67.5	91.526
68.0	86.806
68.5	82.087
69.0	77.536
69.5	73.153
70.0	69.108
70.5	65.231
71.0	61.692
71.5	58.320
72.0	55.118
72.5	52.084
73.0	49.218
73.5	46.690
74.0	44.162
74.5	41.971
75.0	39.948
75.5	38.094
76.0	36.071
76.5	34.217
77.0	32.363
77.5	30.509
78.0	28.823
78.5	26.969
79.0	25.283
79.5	23.598
80.0	21.912
80.5	20.227
81.0	18.710
81.5	17.193
82.0	15.507
82.5	14.159

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CANDELA TABULATION - (Cont.)

83.0	12.642
83.5	11.125
84.0	9.776
84.5	8.259
85.0	6.911
85.5	5.731
86.0	4.551
86.5	3.708
87.0	2.865
87.5	2.191
88.0	1.517
88.5	1.011
89.0	0.506
89.5	0.169
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
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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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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	620.19	N.A.	27.80
0-30	1200.14	N.A.	53.80
0-40	1553.56	N.A.	69.60
0-60	2060.25	N.A.	92.40
0-80	2221.47	N.A.	99.60
0-90	2230.59	N.A.	100.00
10-90	2065.56	N.A.	92.60
20-40	933.37	N.A.	41.80
20-50	1220.92	N.A.	54.70
40-70	623.88	N.A.	28.00
60-80	161.22	N.A.	7.20
70-80	44.03	N.A.	2.00
80-90	9.12	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	2230.59	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	165.02
10-20	455.17
20-30	579.95
30-40	353.42
40-50	287.55
50-60	219.14
60-70	117.19
70-80	44.03
80-90	9.12
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	164	164	164	164	160	160	160	160	153	153	153	146	146	146	141	141	141	138
1	154	149	145	141	150	146	142	138	140	137	134	135	133	130	130	128	126	124
2	144	135	128	122	140	133	126	121	128	123	118	124	119	115	120	116	113	110
3	134	123	114	107	131	121	113	107	117	110	105	114	108	103	110	106	101	99
4	125	112	103	96	123	111	102	95	108	100	94	105	98	93	102	96	92	89
5	118	103	94	86	115	102	93	86	99	91	85	97	90	84	95	88	83	81
6	110	96	86	78	108	94	85	78	92	84	77	90	83	77	88	81	76	74
7	104	89	79	72	102	88	78	72	86	77	71	84	76	71	82	75	70	68
8	98	83	73	66	96	82	72	66	80	72	66	78	71	65	77	70	65	63
9	93	77	68	61	91	76	67	61	75	67	61	74	66	61	72	65	60	58
10	88	72	63	57	86	72	63	57	71	62	57	69	62	57	68	61	56	54

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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	21.3	22.6	21.7	22.9	23.2	21.3	22.6	21.7	22.9	23.2
	3H	22.1	23.2	22.4	23.6	23.9	22.1	23.2	22.4	23.6	23.9
	4H	22.2	23.3	22.6	23.7	24.0	22.2	23.3	22.6	23.7	24.0
	6H	22.3	23.3	22.8	23.7	24.1	22.3	23.3	22.8	23.7	24.1
	8H	22.4	23.3	22.8	23.7	24.1	22.4	23.3	22.8	23.7	24.1
	12H	22.3	23.2	22.8	23.6	24.1	22.3	23.2	22.8	23.6	24.1

UGR Viewed Endwise

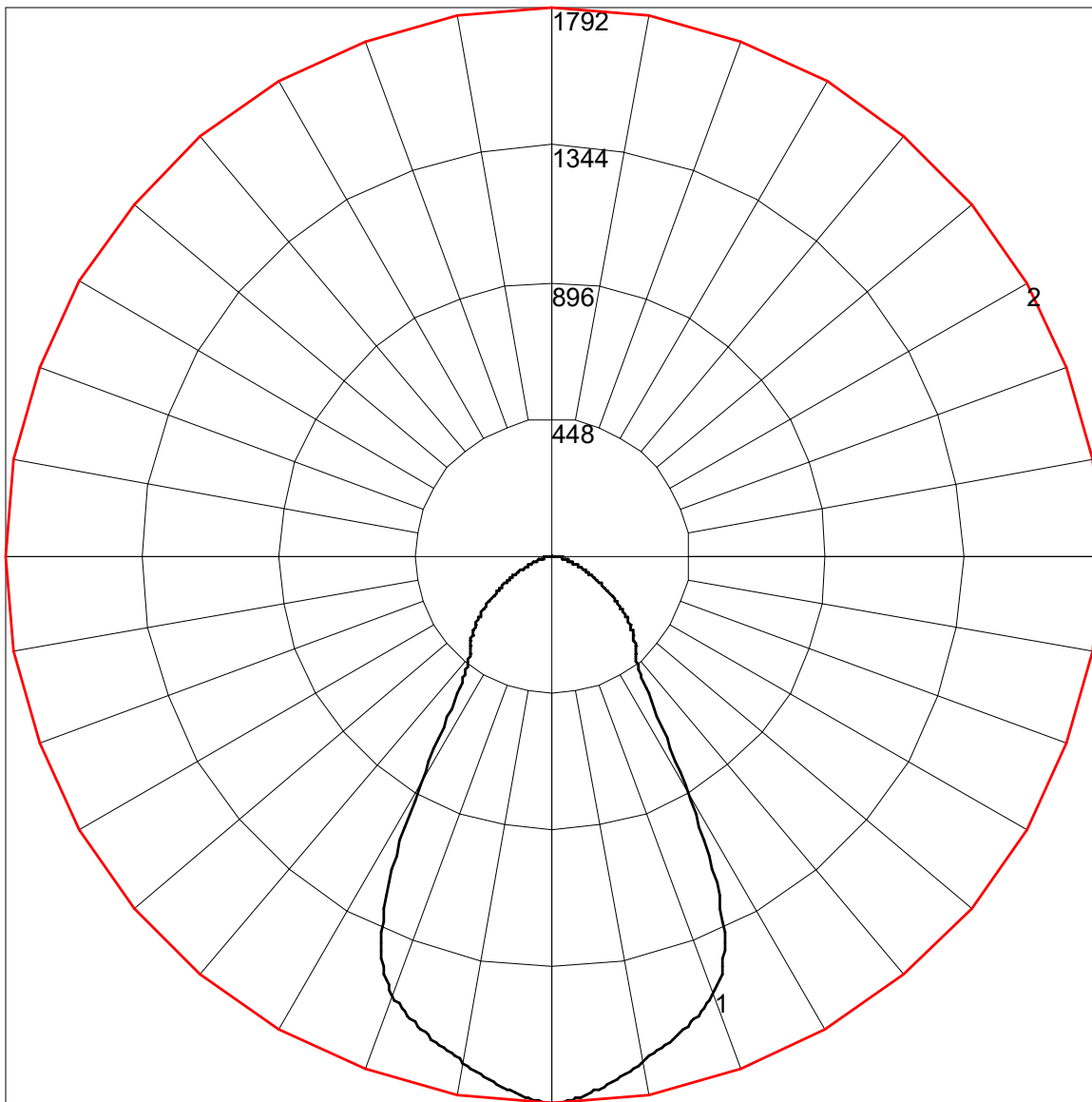
4H	2H	21.6	22.7	22.0	23.0	23.4	21.6	22.7	22.0	23.0	23.4
	3H	22.5	23.4	22.9	23.8	24.2	22.5	23.4	22.9	23.8	24.2
	4H	22.7	23.5	23.1	23.9	24.4	22.7	23.5	23.1	23.9	24.4
	6H	22.9	23.6	23.3	24.0	24.5	22.9	23.6	23.3	24.0	24.5
	8H	22.9	23.5	23.4	24.0	24.5	22.9	23.5	23.4	24.0	24.5
	12H	22.9	23.5	23.4	24.0	24.4	22.9	23.5	23.4	24.0	24.4

8H	4H	22.8	23.4	23.2	23.8	24.3	22.8	23.4	23.2	23.8	24.3
	6H	23.0	23.5	23.5	24.0	24.5	23.0	23.5	23.5	24.0	24.5
	8H	23.0	23.5	23.6	24.0	24.5	23.0	23.5	23.6	24.0	24.5
	12H	23.1	23.5	23.6	24.0	24.5	23.1	23.5	23.6	24.0	24.5

12H	4H	22.7	23.3	23.2	23.8	24.2	22.7	23.3	23.2	23.8	24.2
	6H	23.0	23.4	23.5	23.9	24.4	23.0	23.4	23.5	23.9	24.4
	8H	23.0	23.5	23.6	23.9	24.5	23.0	23.5	23.6	23.9	24.5

Maximum UGR = 24.5

POLAR GRAPH



Maximum Candela = 1791.753 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.)