



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-L27-835-DIM-UNV-LW-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from 12316380.07

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 9 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-L27-835-DIM-UNV-LW-OF-WH

[LUMINAIRE] Black formed aluminum housing, white reflector, clear patt

[MORE] erned glass 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	2694
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	61
Total Luminaire Watts	44.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.00
Spacing Criterion (90-270)	1.00
Spacing Criterion (Diagonal)	0.90
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	74353	74353	74353
55	61096	61096	61096
65	44696	44696	44696
75	30942	30942	30942
85	16868	16868	16868

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CANDELA TABULATION

	<u>0</u>
0.0	1892.679
0.5	1892.081
1.0	1890.885
1.5	1889.290
2.0	1887.696
2.5	1885.902
3.0	1883.510
3.5	1882.114
4.0	1881.118
4.5	1880.520
5.0	1879.722
5.5	1878.925
6.0	1878.327
6.5	1877.530
7.0	1876.932
7.5	1876.533
8.0	1876.334
8.5	1875.736
9.0	1875.138
9.5	1873.942
10.0	1873.144
10.5	1871.749
11.0	1870.354
11.5	1868.560
12.0	1866.566
12.5	1864.174
13.0	1861.384
13.5	1858.194
14.0	1854.208
14.5	1849.424
15.0	1843.643
15.5	1836.666
16.0	1828.892
16.5	1819.723
17.0	1809.756
17.5	1798.593
18.0	1785.437
18.5	1771.883
19.0	1757.132
19.5	1740.587
20.0	1722.448
20.5	1702.714
21.0	1681.385
21.5	1658.461
22.0	1633.146
22.5	1606.236
23.0	1577.332
23.5	1546.236
24.0	1512.748
24.5	1477.067
25.0	1438.396
25.5	1397.931
26.0	1354.676
26.5	1308.829

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CANDELA TABULATION - (Cont.)

27.0	1261.387
27.5	1211.953
28.0	1161.720
28.5	1111.289
29.0	1061.854
29.5	1013.416
30.0	966.771
30.5	922.918
31.0	881.855
31.5	844.380
32.0	810.294
32.5	779.596
33.0	752.288
33.5	727.969
34.0	706.241
34.5	687.105
35.0	669.763
35.5	654.016
36.0	640.062
36.5	626.906
37.0	614.946
37.5	603.784
38.0	593.418
38.5	583.451
39.0	574.282
39.5	565.312
40.0	556.940
40.5	548.568
41.0	540.595
41.5	532.821
42.0	525.445
42.5	518.070
43.0	510.694
43.5	503.319
44.0	495.944
44.5	488.568
45.0	481.193
45.5	473.818
46.0	466.442
46.5	459.067
47.0	451.293
47.5	443.519
48.0	435.745
48.5	427.771
49.0	419.599
49.5	411.426
50.0	403.453
50.5	395.280
51.0	387.107
51.5	378.935
52.0	370.961
52.5	362.988
53.0	354.815
53.5	346.443
54.0	337.872
54.5	329.300

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CANDELA TABULATION - (Cont.)

55.0	320.729
55.5	312.158
56.0	303.785
56.5	295.613
57.0	287.440
57.5	279.267
58.0	271.294
58.5	263.520
59.0	255.746
59.5	248.171
60.0	240.796
60.5	233.420
61.0	226.244
61.5	219.268
62.0	212.291
62.5	205.314
63.0	198.657
63.5	192.039
64.0	185.540
64.5	179.142
65.0	172.883
65.5	166.783
66.0	160.763
66.5	154.903
67.0	149.182
67.5	143.561
68.0	138.119
68.5	132.797
69.0	127.474
69.5	122.331
70.0	117.328
70.5	112.405
71.0	107.601
71.5	102.916
72.0	98.391
72.5	93.926
73.0	89.581
73.5	85.355
74.0	81.209
74.5	77.202
75.0	73.295
75.5	69.508
76.0	65.800
76.5	62.192
77.0	58.744
77.5	55.315
78.0	52.006
78.5	48.797
79.0	45.648
79.5	42.618
80.0	39.648
80.5	36.757
81.0	33.907
81.5	31.136
82.0	28.425
82.5	25.794

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CANDELA TABULATION - (Cont.)

83.0	23.183
83.5	20.651
84.0	18.179
84.5	15.767
85.0	13.455
85.5	11.223
86.0	9.090
86.5	7.076
87.0	5.302
87.5	3.827
88.0	2.671
88.5	1.694
89.0	1.056
89.5	0.718
90.0	0.498
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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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
145.5	0.000
146.0	0.000
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148.0	0.000
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149.0	0.000
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150.0	0.000
150.5	0.000
151.0	0.000
151.5	0.000
152.0	0.000
152.5	0.000
153.0	0.000
153.5	0.000
154.0	0.000
154.5	0.000
155.0	0.000
155.5	0.000
156.0	0.000
156.5	0.000
157.0	0.000
157.5	0.000
158.0	0.000
158.5	0.000
159.0	0.000
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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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	695.22	N.A.	25.80
0-30	1333.51	N.A.	49.50
0-40	1768.29	N.A.	65.60
0-60	2425.51	N.A.	90.00
0-80	2677.45	N.A.	99.40
0-90	2694.3	N.A.	100.00
10-90	2515.03	N.A.	93.30
20-40	1073.07	N.A.	39.80
20-50	1443.65	N.A.	53.60
40-70	830.09	N.A.	30.80
60-80	251.94	N.A.	9.40
70-80	79.08	N.A.	2.90
80-90	16.85	N.A.	0.60
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	2694.32	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	179.27
10-20	515.95
20-30	638.29
30-40	434.78
40-50	370.58
50-60	286.64
60-70	172.86
70-80	79.08
80-90	16.85
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	165	165	165	165	161	161	161	161	154	154	154	148	148	148	142	142	142	139
1	154	149	145	140	151	146	142	138	140	137	134	135	132	130	130	128	126	123
2	144	134	127	121	140	132	125	119	127	121	117	123	118	114	119	115	111	109
3	134	122	113	105	130	120	111	104	116	109	103	112	106	101	109	104	99	97
4	125	111	101	93	122	109	100	93	106	98	91	103	96	90	100	94	89	87
5	116	101	91	83	114	100	90	83	97	89	82	95	87	81	92	86	81	78
6	109	93	83	75	107	92	82	75	90	81	75	88	80	74	86	79	73	71
7	102	86	76	69	100	85	76	69	83	75	68	82	74	68	80	73	67	65
8	96	80	70	63	94	79	70	63	78	69	63	76	68	62	75	67	62	60
9	91	75	65	58	89	74	65	58	73	64	58	71	63	58	70	63	58	55
10	86	70	61	54	85	69	60	54	68	60	54	67	59	54	66	59	54	51

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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	22.9	24.3	23.3	24.6	24.9	22.9	24.3	23.3	24.6	24.9
	3H	24.0	25.2	24.4	25.6	25.9	24.0	25.2	24.4	25.6	25.9
	4H	24.4	25.5	24.8	25.9	26.2	24.4	25.5	24.8	25.9	26.2
	6H	24.6	25.6	25.0	26.0	26.4	24.6	25.6	25.0	26.0	26.4
	8H	24.6	25.6	25.1	26.0	26.4	24.6	25.6	25.1	26.0	26.4
	12H	24.6	25.6	25.1	26.0	26.4	24.6	25.6	25.1	26.0	26.4

UGR Viewed Endwise

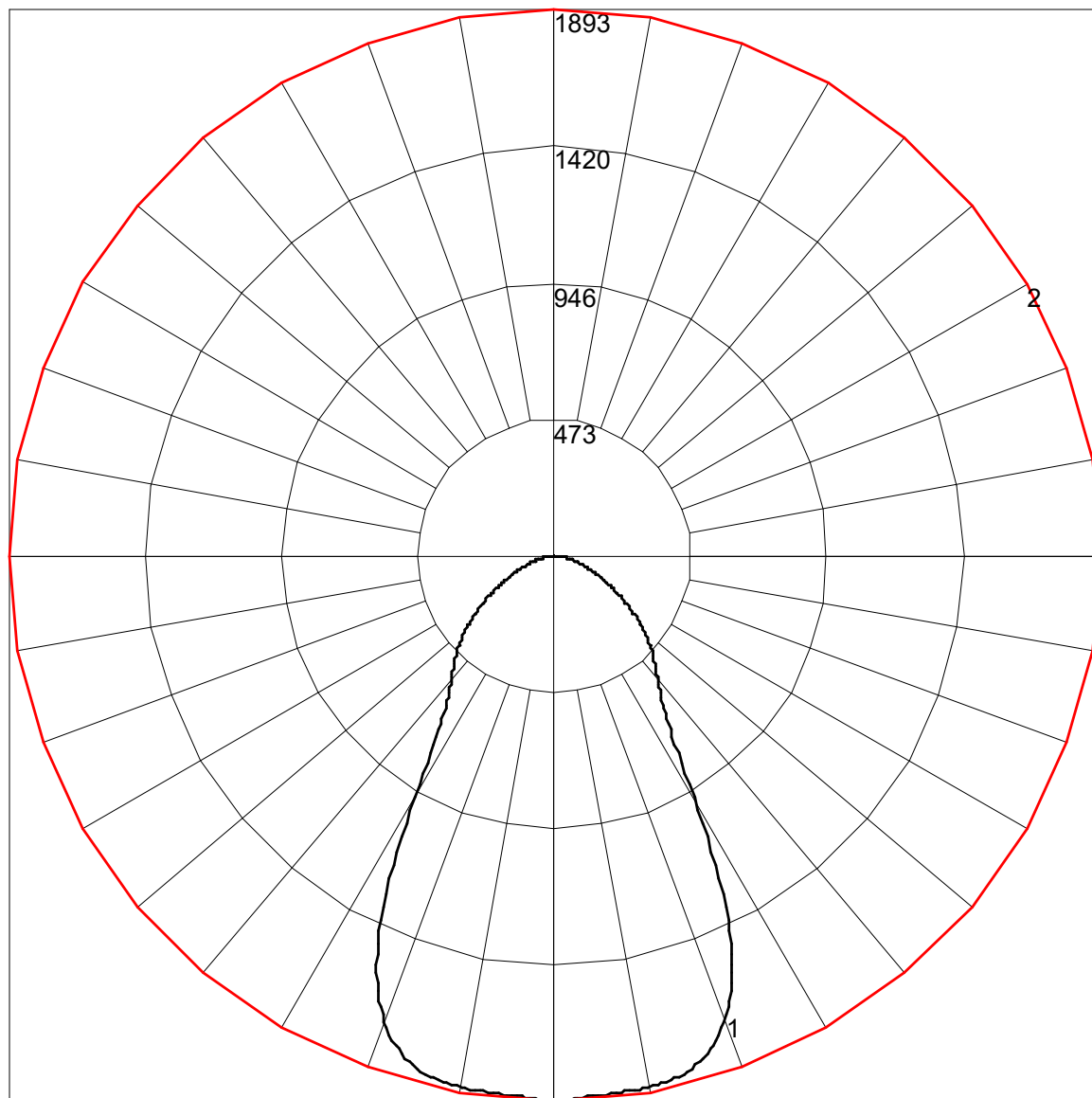
4H	2H	23.3	24.4	23.7	24.8	25.1	23.3	24.4	23.7	24.8	25.1
	3H	24.6	25.5	25.0	25.9	26.3	24.6	25.5	25.0	25.9	26.3
	4H	25.0	25.9	25.4	26.3	26.7	25.0	25.9	25.4	26.3	26.7
	6H	25.3	26.1	25.8	26.5	27.0	25.3	26.1	25.8	26.5	27.0
	8H	25.4	26.1	25.9	26.5	27.0	25.4	26.1	25.9	26.5	27.0
	12H	25.4	26.0	25.9	26.5	27.0	25.4	26.0	25.9	26.5	27.0

8H	4H	25.1	25.8	25.6	26.3	26.7	25.1	25.8	25.6	26.3	26.7
	6H	25.5	26.1	26.0	26.6	27.1	25.5	26.1	26.0	26.6	27.1
	8H	25.6	26.1	26.2	26.7	27.1	25.6	26.1	26.2	26.7	27.1
	12H	25.7	26.1	26.2	26.6	27.2	25.7	26.1	26.2	26.6	27.2

12H	4H	25.1	25.7	25.6	26.2	26.7	25.1	25.7	25.6	26.2	26.7
	6H	25.5	26.0	26.1	26.5	27.0	25.5	26.0	26.1	26.5	27.0
	8H	25.7	26.1	26.2	26.6	27.2	25.7	26.1	26.2	26.6	27.2

Maximum UGR = 27.2

POLAR GRAPH



Maximum Candela = 1892.679 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.)