



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P23-835-POE-RM-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12316380.14

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 6 OCT 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-P23-835-PoE x-RM-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	3027
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
Total Luminaire Watts	34
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.52
Spacing Criterion (90-270)	0.52
Spacing Criterion (Diagonal)	0.52
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	17363	17363	17363
55	12076	12076	12076
65	8622	8622	8622
75	5771	5771	5771
85	4708	4708	4708

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CANDELA TABULATION

	<u>0</u>
0.0	8725.670
0.5	8718.927
1.0	8698.697
1.5	8666.667
2.0	8622.836
2.5	8567.205
3.0	8501.459
3.5	8423.913
4.0	8334.566
4.5	8238.475
5.0	8132.270
5.5	8014.265
6.0	7887.830
6.5	7752.967
7.0	7607.988
7.5	7452.895
8.0	7291.059
8.5	7119.108
9.0	6942.100
9.5	6758.348
10.0	6567.853
10.5	6372.301
11.0	6171.692
11.5	5967.711
12.0	5760.358
12.5	5554.691
13.0	5349.024
13.5	5141.672
14.0	4932.633
14.5	4723.595
15.0	4517.928
15.5	4313.947
16.0	4109.966
16.5	3911.042
17.0	3713.804
17.5	3519.938
18.0	3329.443
18.5	3144.006
19.0	2966.997
19.5	2793.361
20.0	2624.781
20.5	2464.631
21.0	2309.538
21.5	2161.188
22.0	2021.267
22.5	1888.089
23.0	1763.341
23.5	1643.986
24.0	1531.038
24.5	1424.665
25.0	1325.203
25.5	1232.653
26.0	1146.340
26.5	1065.422

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CANDELA TABULATION - (Cont.)

27.0	990.235
27.5	920.612
28.0	855.878
28.5	795.526
29.0	740.232
29.5	688.647
30.0	640.939
30.5	597.108
31.0	556.649
31.5	519.225
32.0	484.666
32.5	452.973
33.0	423.640
33.5	396.330
34.0	371.380
34.5	348.116
35.0	326.707
35.5	306.983
36.0	288.608
36.5	271.750
37.0	256.072
37.5	241.911
38.0	228.762
38.5	216.962
39.0	206.004
39.5	196.058
40.0	187.123
40.5	178.694
41.0	171.108
41.5	164.028
42.0	157.453
42.5	151.384
43.0	145.653
43.5	140.258
44.0	135.201
44.5	130.480
45.0	126.097
45.5	122.051
46.0	118.174
46.5	114.465
47.0	110.925
47.5	107.722
48.0	104.688
48.5	101.653
49.0	98.788
49.5	96.090
50.0	93.562
50.5	91.033
51.0	88.673
51.5	86.144
52.0	83.953
52.5	81.592
53.0	79.569
53.5	77.378
54.0	75.186
54.5	73.163

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CANDELA TABULATION - (Cont.)

55.0	71.141
55.5	69.118
56.0	67.263
56.5	65.409
57.0	63.554
57.5	61.700
58.0	59.846
58.5	58.160
59.0	56.474
59.5	54.788
60.0	53.103
60.5	51.417
61.0	49.731
61.5	48.214
62.0	46.528
62.5	45.011
63.0	43.325
63.5	41.808
64.0	40.290
64.5	38.773
65.0	37.425
65.5	35.907
66.0	34.559
66.5	33.042
67.0	31.693
67.5	30.344
68.0	28.996
68.5	27.816
69.0	26.467
69.5	25.287
70.0	24.107
70.5	23.095
71.0	22.084
71.5	21.072
72.0	20.061
72.5	19.218
73.0	18.375
73.5	17.532
74.0	16.858
74.5	16.015
75.0	15.341
75.5	14.666
76.0	13.992
76.5	13.486
77.0	12.812
77.5	12.138
78.0	11.632
78.5	10.958
79.0	10.452
79.5	9.946
80.0	9.272
80.5	8.766
81.0	8.260
81.5	7.755
82.0	7.080
82.5	6.575

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CANDELA TABULATION - (Cont.)

83.0	6.069
83.5	5.563
84.0	5.057
84.5	4.552
85.0	4.214
85.5	3.709
86.0	3.203
86.5	2.697
87.0	2.360
87.5	2.023
88.0	1.686
88.5	1.349
89.0	1.180
89.5	0.843
90.0	0.674
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
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98.5	0.000
99.0	0.000
99.5	0.000
100.0	0.000
100.5	0.000
101.0	0.000
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102.0	0.000
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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
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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
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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	1952.51	N.A.	64.50
0-30	2586.16	N.A.	85.40
0-40	2803.59	N.A.	92.60
0-60	2967.96	N.A.	98.10
0-80	3021.92	N.A.	99.80
0-90	3026.7	N.A.	100.00
10-90	2300.8	N.A.	76.00
20-40	851.08	N.A.	28.10
20-50	951.33	N.A.	31.40
40-70	201.65	N.A.	6.70
60-80	53.96	N.A.	1.80
70-80	16.68	N.A.	0.60
80-90	4.78	N.A.	0.20
90-110	0.02	N.A.	0.00
90-120	0.02	N.A.	0.00
90-130	0.02	N.A.	0.00
90-150	0.02	N.A.	0.00
90-180	0.02	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	3026.72	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	725.90
10-20	1226.61
20-30	633.65
30-40	217.43
40-50	100.25
50-60	64.12
60-70	37.29
70-80	16.68
80-90	4.78
90-100	0.02
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	145	145	143	141	140	138	137	135	134	133	130
2	151	145	140	136	148	142	138	134	138	134	131	134	131	128	130	128	126	124
3	144	137	131	126	142	135	129	125	131	127	123	128	124	121	125	122	119	117
4	139	130	123	118	136	128	122	118	125	120	116	123	118	115	120	117	114	112
5	133	124	117	112	131	122	116	111	120	114	110	118	113	109	116	112	108	107
6	128	118	111	106	126	117	110	106	115	109	105	113	108	104	112	107	104	102
7	124	113	106	101	122	112	106	101	111	105	100	109	104	100	108	103	99	98
8	119	108	102	97	118	108	101	97	106	101	96	105	100	96	104	99	96	94
9	115	104	98	93	114	104	97	93	103	97	93	101	96	92	100	96	92	90
10	111	100	94	90	110	100	94	89	99	93	89	98	93	89	97	92	89	87

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UGR TABLE - CORRECTED

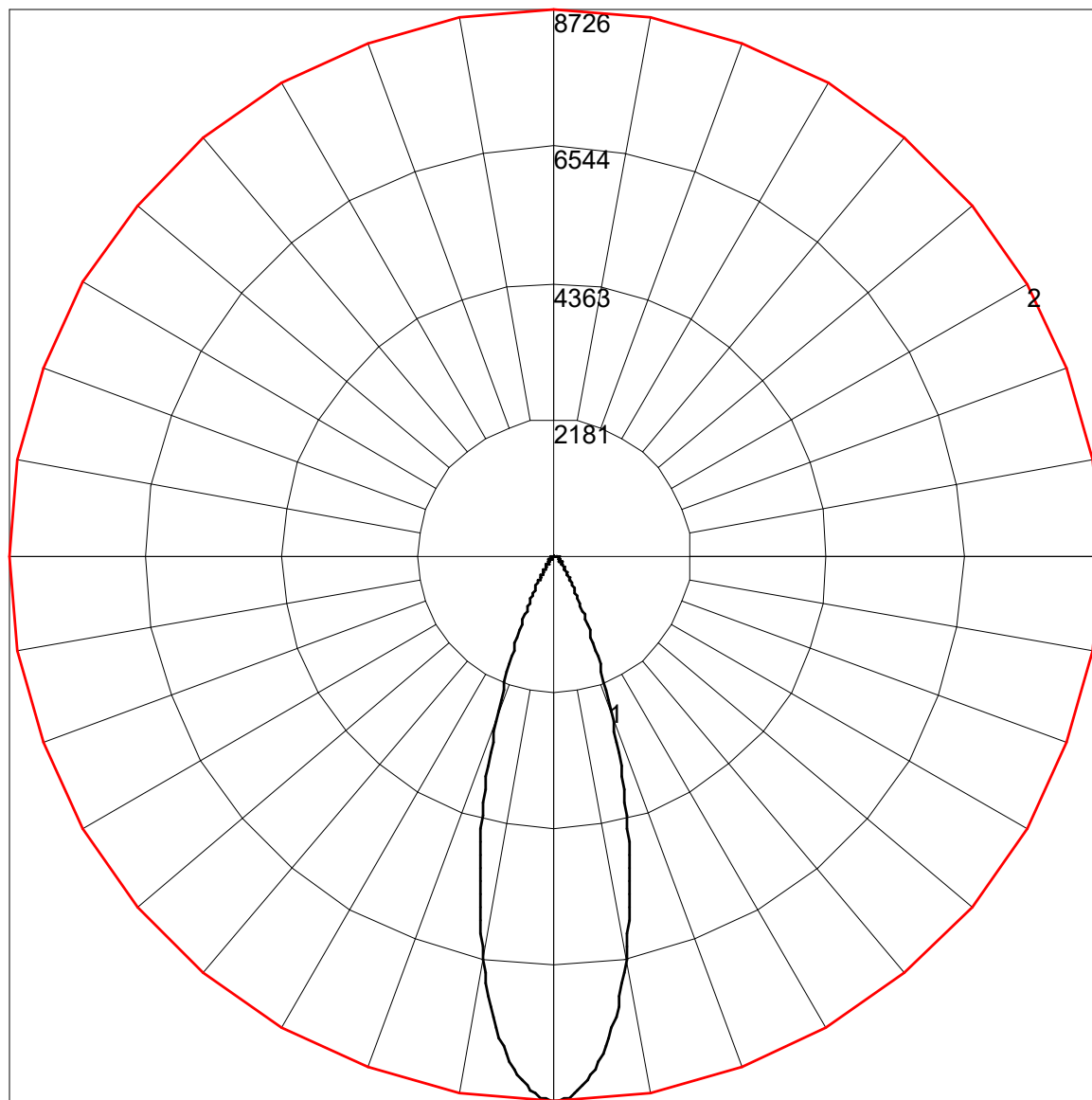
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	12.1	13.1	12.5	13.4	13.7	12.1	13.1	12.5	13.4	13.7
	3H	13.1	13.9	13.4	14.3	14.6	13.1	13.9	13.4	14.3	14.6
	4H	13.4	14.2	13.8	14.5	14.9	13.4	14.2	13.8	14.5	14.9
	6H	13.6	14.3	14.0	14.7	15.1	13.6	14.3	14.0	14.7	15.1
	8H	13.6	14.3	14.1	14.7	15.1	13.6	14.3	14.1	14.7	15.1
	12H	13.7	14.3	14.1	14.7	15.1	13.7	14.3	14.1	14.7	15.1
4H	2H	12.4	13.2	12.8	13.6	13.9	12.4	13.2	12.8	13.6	13.9
	3H	13.5	14.2	13.9	14.6	15.0	13.5	14.2	13.9	14.6	15.0
	4H	13.9	14.5	14.3	14.9	15.3	13.9	14.5	14.3	14.9	15.3
	6H	14.2	14.7	14.7	15.1	15.6	14.2	14.7	14.7	15.1	15.6
	8H	14.3	14.8	14.8	15.2	15.7	14.3	14.8	14.8	15.2	15.7
	12H	14.3	14.7	14.8	15.2	15.7	14.3	14.7	14.8	15.2	15.7
8H	4H	14.0	14.4	14.4	14.9	15.3	14.0	14.4	14.4	14.9	15.3
	6H	14.4	14.7	14.9	15.2	15.7	14.4	14.7	14.9	15.2	15.7
	8H	14.5	14.8	15.1	15.4	15.9	14.5	14.8	15.1	15.4	15.9
	12H	14.7	14.9	15.2	15.4	16.0	14.7	14.9	15.2	15.4	16.0
12H	4H	13.9	14.3	14.4	14.8	15.3	13.9	14.3	14.4	14.8	15.3
	6H	14.4	14.7	14.9	15.2	15.7	14.4	14.7	14.9	15.2	15.7
	8H	14.6	14.8	15.1	15.3	15.9	14.6	14.8	15.1	15.3	15.9

Maximum UGR = 16.0

POLAR GRAPH



Maximum Candela = 8725.67 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.)