



IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P12-835-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] 21 SEP 2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] V4DR-P12-835-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	1546
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	88
Total Luminaire Watts	17.5
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	8871	8871	8871
55	6170	6170	6170
65	4405	4405	4405
75	2949	2949	2949
85	2405	2405	2405

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CANDELA TABULATION

	<u>0</u>
0.0	4457.992
0.5	4454.547
1.0	4444.211
1.5	4427.847
2.0	4405.454
2.5	4377.031
3.0	4343.441
3.5	4303.823
4.0	4258.175
4.5	4209.082
5.0	4154.821
5.5	4094.531
6.0	4029.935
6.5	3961.033
7.0	3886.962
7.5	3807.725
8.0	3725.042
8.5	3637.191
9.0	3546.756
9.5	3452.877
10.0	3355.552
10.5	3255.643
11.0	3153.151
11.5	3048.936
12.0	2942.998
12.5	2837.922
13.0	2732.845
13.5	2626.908
14.0	2520.109
14.5	2413.310
15.0	2308.234
15.5	2204.019
16.0	2099.804
16.5	1998.173
17.0	1897.403
17.5	1798.355
18.0	1701.031
18.5	1606.290
19.0	1515.855
19.5	1427.143
20.0	1341.015
20.5	1259.193
21.0	1179.955
21.5	1104.163
22.0	1032.676
22.5	964.635
23.0	900.900
23.5	839.922
24.0	782.216
24.5	727.869
25.0	677.053
25.5	629.769
26.0	585.671
26.5	544.330

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CANDELA TABULATION - (Cont.)

27.0	505.917
27.5	470.346
28.0	437.273
28.5	406.439
29.0	378.189
29.5	351.833
30.0	327.459
30.5	305.066
31.0	284.395
31.5	265.275
32.0	247.618
32.5	231.426
33.0	216.440
33.5	202.487
34.0	189.740
34.5	177.855
35.0	166.916
35.5	156.839
36.0	147.451
36.5	138.839
37.0	130.829
37.5	123.594
38.0	116.876
38.5	110.847
39.0	105.249
39.5	100.167
40.0	95.602
40.5	91.296
41.0	87.420
41.5	83.803
42.0	80.444
42.5	77.343
43.0	74.415
43.5	71.659
44.0	69.075
44.5	66.663
45.0	64.424
45.5	62.357
46.0	60.376
46.5	58.481
47.0	56.672
47.5	55.036
48.0	53.486
48.5	51.935
49.0	50.471
49.5	49.093
50.0	47.801
50.5	46.509
51.0	45.303
51.5	44.011
52.0	42.892
52.5	41.686
53.0	40.652
53.5	39.533
54.0	38.413
54.5	37.380

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CANDELA TABULATION - (Cont.)

55.0	36.346
55.5	35.313
56.0	34.365
56.5	33.418
57.0	32.470
57.5	31.523
58.0	30.575
58.5	29.714
59.0	28.853
59.5	27.992
60.0	27.130
60.5	26.269
61.0	25.408
61.5	24.633
62.0	23.771
62.5	22.996
63.0	22.135
63.5	21.360
64.0	20.585
64.5	19.809
65.0	19.120
65.5	18.345
66.0	17.656
66.5	16.881
67.0	16.192
67.5	15.503
68.0	14.814
68.5	14.211
69.0	13.522
69.5	12.919
70.0	12.316
70.5	11.800
71.0	11.283
71.5	10.766
72.0	10.249
72.5	9.819
73.0	9.388
73.5	8.957
74.0	8.613
74.5	8.182
75.0	7.838
75.5	7.493
76.0	7.149
76.5	6.890
77.0	6.546
77.5	6.201
78.0	5.943
78.5	5.598
79.0	5.340
79.5	5.082
80.0	4.737
80.5	4.479
81.0	4.220
81.5	3.962
82.0	3.617
82.5	3.359

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CANDELA TABULATION - (Cont.)

83.0	3.101
83.5	2.842
84.0	2.584
84.5	2.325
85.0	2.153
85.5	1.895
86.0	1.636
86.5	1.378
87.0	1.206
87.5	1.034
88.0	0.861
88.5	0.689
89.0	0.603
89.5	0.431
90.0	0.345
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
118.0	0.000
118.5	0.000
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119.5	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
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147.0	0.000
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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	997.55	N.A.	64.50
0-30	1321.28	N.A.	85.40
0-40	1432.37	N.A.	92.60
0-60	1516.34	N.A.	98.10
0-80	1543.92	N.A.	99.80
0-90	1546.36	N.A.	100.00
10-90	1175.49	N.A.	76.00
20-40	434.82	N.A.	28.10
20-50	486.04	N.A.	31.40
40-70	103.03	N.A.	6.70
60-80	27.57	N.A.	1.80
70-80	8.52	N.A.	0.60
80-90	2.44	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	1546.37	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	370.87
10-20	626.68
20-30	323.74
30-40	111.08
40-50	51.22
50-60	32.76
60-70	19.05
70-80	8.52
80-90	2.44
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	135	135	135	135	132	132	132	132	126	126	126	121	121	121	116	116	116	114
1	130	127	124	122	127	124	122	120	120	118	116	116	114	113	112	111	110	108
2	124	119	115	112	122	117	114	111	114	111	108	110	108	106	107	105	104	102
3	119	113	108	104	117	111	107	103	108	105	102	106	103	100	103	101	98	97
4	114	107	102	98	113	106	101	97	104	99	96	101	98	95	99	96	94	92
5	110	102	96	92	108	101	96	92	99	94	91	97	93	90	96	92	89	88
6	106	97	92	88	104	97	91	87	95	90	87	93	89	86	92	88	86	84
7	102	93	88	84	101	93	87	83	91	86	83	90	86	83	89	85	82	81
8	99	90	84	80	97	89	84	80	88	83	80	87	82	79	86	82	79	78
9	95	86	81	77	94	86	80	77	85	80	76	84	79	76	83	79	76	75
10	92	83	78	74	91	83	77	74	82	77	74	81	77	73	80	76	73	72

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UGR TABLE - CORRECTED

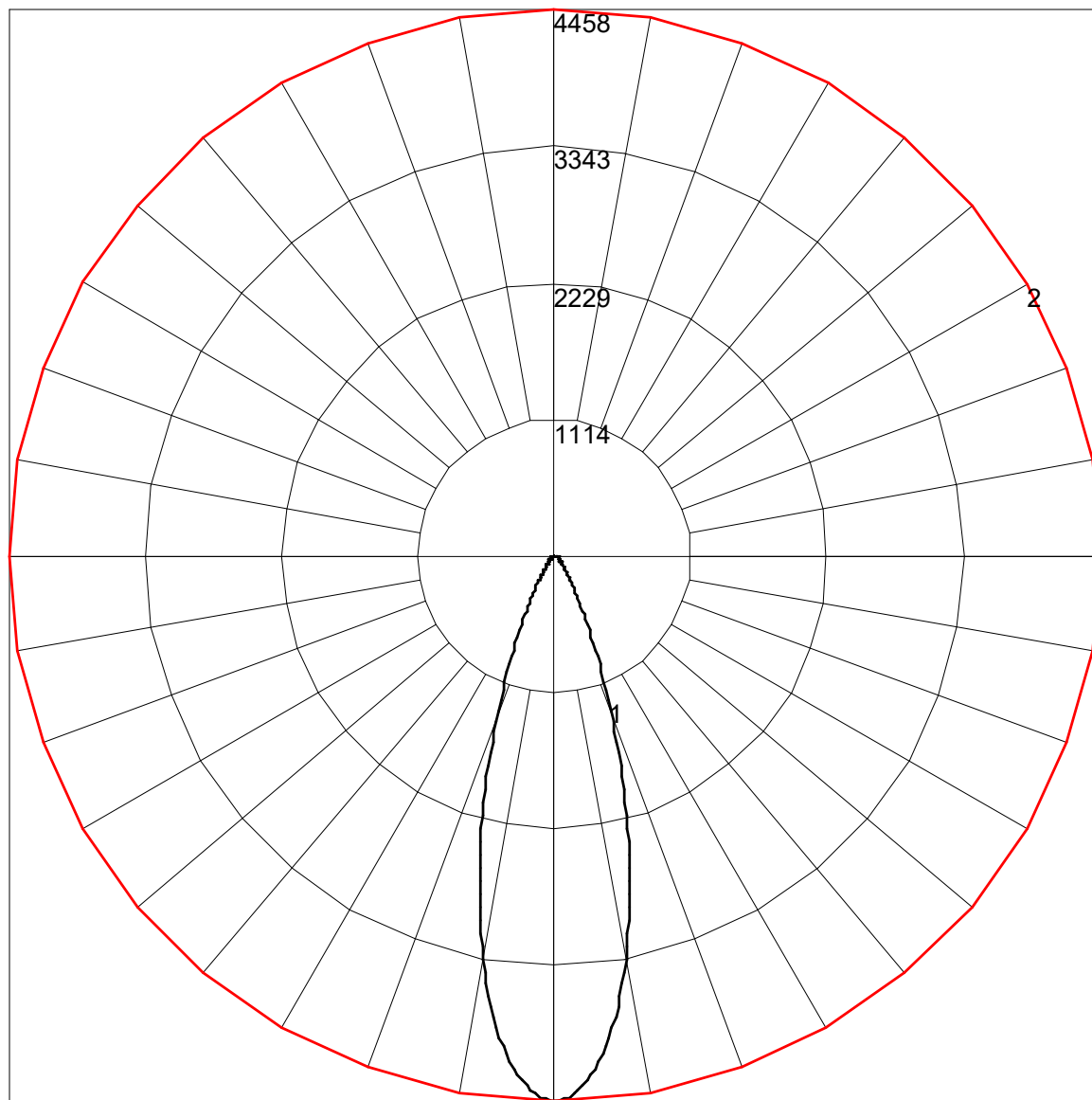
Reflectances

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	10.4	11.4	10.8	11.7	12.0	10.4	11.4	10.8	11.7	12.0
	3H	11.4	12.3	11.8	12.6	13.0	11.4	12.3	11.8	12.6	13.0
	4H	11.7	12.5	12.1	12.8	13.2	11.7	12.5	12.1	12.8	13.2
	6H	11.9	12.6	12.3	13.0	13.4	11.9	12.6	12.3	13.0	13.4
	8H	11.9	12.6	12.4	13.0	13.4	11.9	12.6	12.4	13.0	13.4
	12H	12.0	12.6	12.4	13.0	13.4	12.0	12.6	12.4	13.0	13.4
4H	2H	10.7	11.5	11.1	11.9	12.2	10.7	11.5	11.1	11.9	12.2
	3H	11.8	12.5	12.2	12.9	13.3	11.8	12.5	12.2	12.9	13.3
	4H	12.2	12.8	12.6	13.2	13.6	12.2	12.8	12.6	13.2	13.6
	6H	12.5	13.0	13.0	13.5	13.9	12.5	13.0	13.0	13.5	13.9
	8H	12.6	13.1	13.1	13.5	14.0	12.6	13.1	13.1	13.5	14.0
	12H	12.6	13.0	13.1	13.5	14.0	12.6	13.0	13.1	13.5	14.0
8H	4H	12.3	12.7	12.7	13.2	13.7	12.3	12.7	12.7	13.2	13.7
	6H	12.7	13.0	13.2	13.5	14.0	12.7	13.0	13.2	13.5	14.0
	8H	12.8	13.2	13.4	13.7	14.2	12.8	13.2	13.4	13.7	14.2
	12H	13.0	13.2	13.5	13.7	14.3	13.0	13.2	13.5	13.7	14.3
12H	4H	12.2	12.6	12.7	13.1	13.6	12.2	12.6	12.7	13.1	13.6
	6H	12.7	13.0	13.2	13.5	14.0	12.7	13.0	13.2	13.5	14.0
	8H	12.9	13.1	13.4	13.6	14.2	12.9	13.1	13.4	13.6	14.2

Maximum UGR = 14.3

POLAR GRAPH



Maximum Candela = 4457.992 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.)