



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : V4DR-P17-835-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-P17-835-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	2243
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	97
Total Luminaire Watts	23.2
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	14729	14729	14729
55	11049	11049	11049
65	9143	9143	9143
75	7439	7439	7439
85	4142	4142	4142

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CANDELA TABULATION

	<u>0</u>
0.0	8425.016
0.5	8415.227
1.0	8387.082
1.5	8343.030
2.0	8280.623
2.5	8203.531
3.0	8110.531
3.5	8002.848
4.0	7880.480
4.5	7745.876
5.0	7600.258
5.5	7442.404
6.0	7273.536
6.5	7091.208
7.0	6899.091
7.5	6698.408
8.0	6485.488
8.5	6266.450
9.0	6040.070
9.5	5808.795
10.0	5573.849
10.5	5335.232
11.0	5091.720
11.5	4848.208
12.0	4607.144
12.5	4367.303
13.0	4131.134
13.5	3898.635
14.0	3672.255
14.5	3453.217
15.0	3242.744
15.5	3039.614
16.0	2845.049
16.5	2659.050
17.0	2484.064
17.5	2316.421
18.0	2158.566
18.5	2010.501
19.0	1872.226
19.5	1743.740
20.0	1622.596
20.5	1507.570
21.0	1399.887
21.5	1301.992
22.0	1207.647
22.5	1119.909
23.0	1037.923
23.5	962.055
24.0	891.449
24.5	825.370
25.0	764.553
25.5	708.509
26.0	656.503
26.5	608.779

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**CANDELA TABULATION - (Cont.)**

27.0	564.727
27.5	524.346
28.0	487.391
28.5	453.495
29.0	422.413
29.5	393.779
30.0	367.715
30.5	343.731
31.0	321.705
31.5	301.636
32.0	283.404
32.5	266.394
33.0	250.854
33.5	236.537
34.0	223.566
34.5	211.574
35.0	200.683
35.5	190.771
36.0	181.471
36.5	173.028
37.0	165.319
37.5	158.099
38.0	151.614
38.5	145.618
39.0	139.989
39.5	134.727
40.0	129.832
40.5	125.305
41.0	121.144
41.5	117.228
42.0	113.557
42.5	110.131
43.0	106.827
43.5	103.768
44.0	100.831
44.5	98.017
45.0	95.324
45.5	92.877
46.0	90.430
46.5	88.105
47.0	85.902
47.5	83.700
48.0	81.619
48.5	79.539
49.0	77.581
49.5	75.623
50.0	73.788
50.5	72.075
51.0	70.239
51.5	68.648
52.0	66.935
52.5	65.344
53.0	63.876
53.5	62.285
54.0	60.817
54.5	59.471

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**CANDELA TABULATION - (Cont.)**

<b>55.0</b>	58.002
<b>55.5</b>	56.656
<b>56.0</b>	55.310
<b>56.5</b>	53.964
<b>57.0</b>	52.740
<b>57.5</b>	51.517
<b>58.0</b>	50.293
<b>58.5</b>	49.069
<b>59.0</b>	47.968
<b>59.5</b>	46.867
<b>60.0</b>	45.766
<b>60.5</b>	44.664
<b>61.0</b>	43.563
<b>61.5</b>	42.462
<b>62.0</b>	41.360
<b>62.5</b>	40.381
<b>63.0</b>	39.280
<b>63.5</b>	38.301
<b>64.0</b>	37.322
<b>64.5</b>	36.343
<b>65.0</b>	35.364
<b>65.5</b>	34.385
<b>66.0</b>	33.406
<b>66.5</b>	32.427
<b>67.0</b>	31.571
<b>67.5</b>	30.592
<b>68.0</b>	29.735
<b>68.5</b>	28.756
<b>69.0</b>	27.900
<b>69.5</b>	26.921
<b>70.0</b>	26.064
<b>70.5</b>	25.208
<b>71.0</b>	24.351
<b>71.5</b>	23.495
<b>72.0</b>	22.638
<b>72.5</b>	21.781
<b>73.0</b>	20.925
<b>73.5</b>	20.068
<b>74.0</b>	19.212
<b>74.5</b>	18.478
<b>75.0</b>	17.621
<b>75.5</b>	16.764
<b>76.0</b>	16.030
<b>76.5</b>	15.174
<b>77.0</b>	14.439
<b>77.5</b>	13.583
<b>78.0</b>	12.849
<b>78.5</b>	12.114
<b>79.0</b>	11.380
<b>79.5</b>	10.646
<b>80.0</b>	9.912
<b>80.5</b>	9.178
<b>81.0</b>	8.443
<b>81.5</b>	7.832
<b>82.0</b>	7.097
<b>82.5</b>	6.485

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CANDELA TABULATION - (Cont.)

83.0	5.751
83.5	5.139
84.0	4.528
84.5	3.916
85.0	3.304
85.5	2.814
86.0	2.447
86.5	1.958
87.0	1.591
87.5	1.346
88.0	0.979
88.5	0.734
89.0	0.489
89.5	0.367
90.0	0.245
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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130.0	0.000
130.5	0.000
131.0	0.000
131.5	0.000
132.0	0.000
132.5	0.000
133.0	0.000
133.5	0.000
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
145.5	0.000
146.0	0.000
146.5	0.000
147.0	0.000
147.5	0.000
148.0	0.000
148.5	0.000
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149.5	0.000
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
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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	1552.72	N.A.	69.20
0-30	1924.68	N.A.	85.80
0-40	2057.71	N.A.	91.70
0-60	2184.9	N.A.	97.40
0-80	2238.73	N.A.	99.80
0-90	2243.05	N.A.	100.00
10-90	1583.32	N.A.	70.60
20-40	504.99	N.A.	22.50
20-50	579.86	N.A.	25.90
40-70	162.32	N.A.	7.20
60-80	53.84	N.A.	2.40
70-80	18.70	N.A.	0.80
80-90	4.32	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	2243.06	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	659.73
10-20	892.99
20-30	371.96
30-40	133.03
40-50	74.87
50-60	52.31
60-70	35.14
70-80	18.70
80-90	4.32
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	169	169	169	169	165	165	165	165	158	158	158	151	151	151	145	145	145	142
1	162	159	156	153	159	156	153	150	150	148	146	145	143	141	140	139	137	135
2	156	150	145	141	153	147	143	139	143	139	136	139	136	133	135	132	130	128
3	150	142	136	131	147	140	134	130	136	132	128	133	129	126	130	127	124	122
4	144	135	128	123	142	133	127	123	131	125	121	128	123	120	125	122	119	117
5	139	129	122	117	137	128	121	117	125	120	116	123	118	115	121	117	114	112
6	134	124	117	112	132	123	116	111	121	115	111	119	114	110	117	113	109	108
7	129	119	112	107	128	118	112	107	116	111	106	115	110	106	113	109	105	104
8	125	115	108	103	124	114	107	103	112	107	102	111	106	102	110	105	102	100
9	121	111	104	99	120	110	104	99	109	103	99	108	102	99	107	102	98	97
10	118	107	100	96	117	106	100	96	105	100	96	104	99	96	104	99	95	94

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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	12.2	13.2	12.6	13.5	13.9	UGR Viewed Endwise			
	3H	13.7	14.6	14.1	14.9	15.3	12.2	13.2	12.6	13.5
	4H	14.2	15.0	14.6	15.4	15.8	13.7	14.6	14.1	14.9
	6H	14.5	15.3	14.9	15.6	16.0	14.2	15.0	14.6	15.4
	8H	14.6	15.3	15.0	15.7	16.1	14.5	15.3	14.9	15.6
	12H	14.6	15.3	15.1	15.7	16.1	14.6	15.3	15.0	15.7

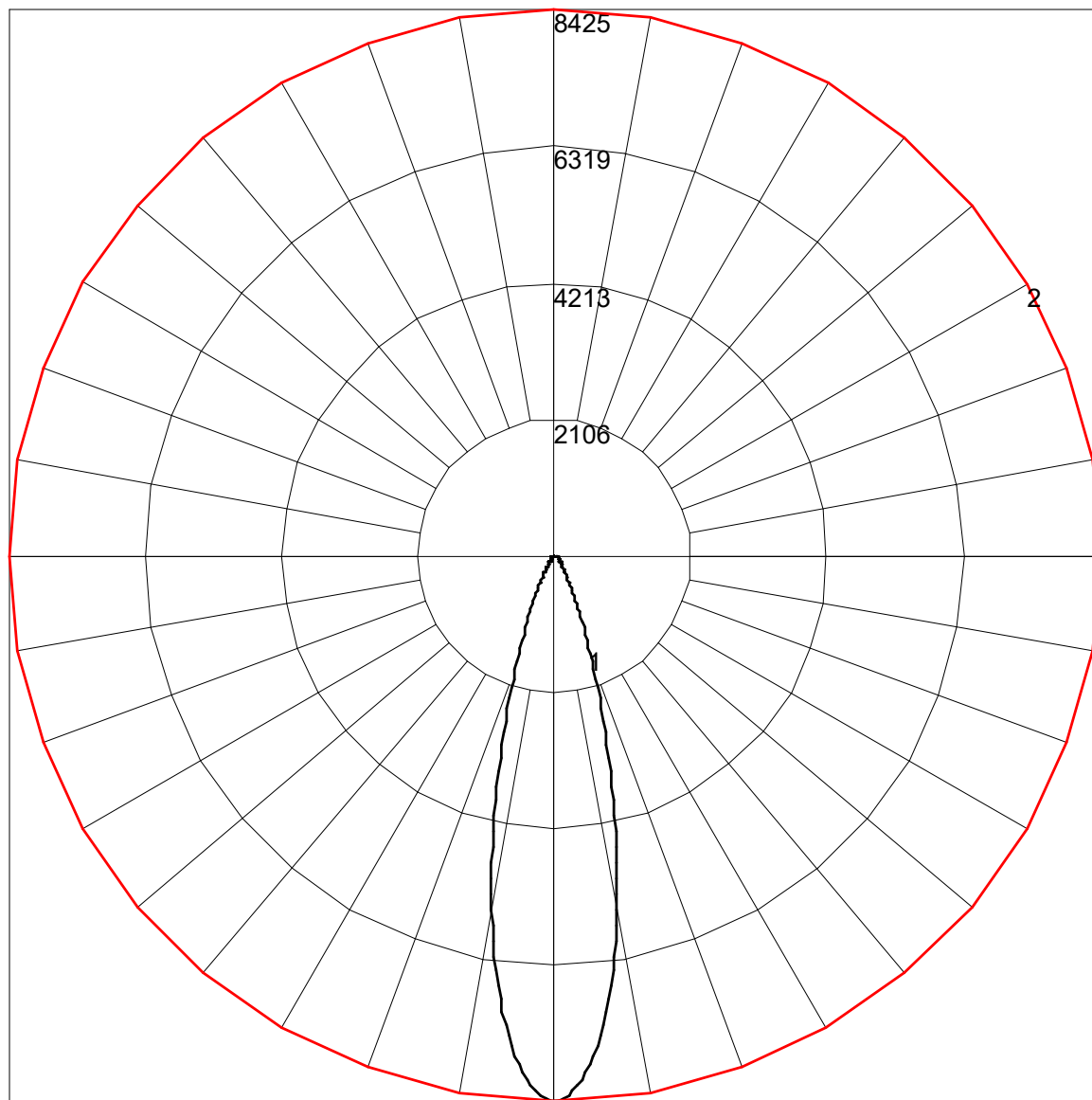
4H	2H	12.7	13.5	13.1	13.8	14.2	12.7	13.5	13.1	13.8
	3H	14.3	15.0	14.7	15.4	15.8	13.7	14.6	14.1	14.9
	4H	14.9	15.5	15.4	15.9	16.4	14.2	15.0	14.6	15.4
	6H	15.4	15.9	15.8	16.3	16.8	14.5	15.3	14.9	15.6
	8H	15.5	15.9	16.0	16.4	16.9	14.6	15.3	15.0	15.7
	12H	15.5	15.9	16.0	16.4	16.9	14.6	15.3	15.1	15.7

8H	4H	15.1	15.6	15.6	16.0	16.5	15.1	15.6	15.6	16.0
	6H	15.6	16.0	16.2	16.5	17.0	13.7	14.6	14.1	14.9
	8H	15.8	16.1	16.3	16.6	17.1	14.2	15.0	14.6	15.4
	12H	15.9	16.2	16.4	16.7	17.2	14.5	15.3	14.9	15.6

12H	4H	15.1	15.5	15.6	16.0	16.4	15.1	15.5	15.6	16.0
	6H	15.7	16.0	16.2	16.4	17.0	13.7	14.6	14.1	14.9
	8H	15.8	16.1	16.4	16.6	17.2	14.2	15.0	14.6	15.4

Maximum UGR = 17.2

POLAR GRAPH



Maximum Candela = 8425.016 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.)