

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 2DR-L20-835-DIM-UNV-OW-OF-SG-WETCC\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST]GEN FROM 13131414.04  
[TESTLAB] UL Verification Services Inc.  
[ISSUE DATE] 06-05-2023  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO. 64836  
[LUMCAT] 2DR-L20-835-DIM-UNV-OW-OF-SG-WETCC  
[LUMINAIRE] Aluminum housing and reflector, no enclosure  
[LAMP] One white LED  
[BALLAST] Philips Advance XI036C100V054DSM1  
[OTHER] 25.1 C, 120.023 V, 0.251417 A, 30.0672 W, 0.996403 PF, 59.9702  
[MORE] Hz  
[OTHER] This test was performed using the calibrated photodetector met  
[MORE] hod of absolute photometry.  
[ \_SEARCH\_SOURCE TYPE] LED  
[ \_SEARCH\_APPLICATION] Indoor, Downlight  
[ \_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1613
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	68
Total Luminaire Watts	23.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.02
Spacing Criterion (90-270)	1.02
Spacing Criterion (Diagonal)	0.88
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.21 ft (Diameter)
Luminous Width (90-270)	0.21 ft (Diameter)
Luminous Height	0.00 ft

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**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	100308	100308	100308
55	38653	38653	38653
65	14004	14004	14004
75	5101	5101	5101
85	1569	1569	1569

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CANDELA TABULATION

	<u>0</u>
0.0	1464.382
0.5	1464.382
1.0	1463.663
1.5	1462.225
2.0	1460.786
2.5	1458.628
3.0	1456.471
3.5	1454.313
4.0	1451.436
4.5	1449.997
5.0	1447.840
5.5	1447.120
6.0	1445.682
6.5	1444.963
7.0	1444.244
7.5	1443.524
8.0	1443.524
8.5	1442.805
9.0	1442.086
9.5	1442.086
10.0	1442.086
10.5	1441.367
11.0	1441.367
11.5	1441.367
12.0	1441.367
12.5	1441.367
13.0	1439.928
13.5	1438.490
14.0	1435.613
14.5	1432.736
15.0	1428.420
15.5	1424.105
16.0	1419.789
16.5	1415.474
17.0	1411.158
17.5	1406.843
18.0	1401.808
18.5	1396.054
19.0	1390.300
19.5	1383.827
20.0	1377.354
20.5	1368.004
21.0	1358.653
21.5	1343.549
22.0	1324.130
22.5	1301.114
23.0	1276.659
23.5	1250.047
24.0	1221.997
24.5	1190.350
25.0	1156.546
25.5	1116.268
26.0	1073.832
26.5	1027.082

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**CANDELA TABULATION - (Cont.)**

27.0	978.892
27.5	929.983
28.0	881.075
28.5	833.605
29.0	788.292
29.5	746.576
30.0	708.744
30.5	674.364
31.0	642.501
31.5	612.797
32.0	584.530
32.5	557.846
33.0	533.608
33.5	512.750
34.0	494.912
34.5	480.456
35.0	468.228
35.5	457.152
36.0	445.788
36.5	433.777
37.0	421.549
37.5	409.250
38.0	396.735
38.5	383.861
39.0	370.915
39.5	357.824
40.0	344.734
40.5	331.644
41.0	318.625
41.5	305.895
42.0	293.380
42.5	281.153
43.0	269.069
43.5	257.346
44.0	245.910
44.5	234.833
45.0	224.117
45.5	213.831
46.0	203.834
46.5	194.124
47.0	184.918
47.5	175.927
48.0	167.296
48.5	158.881
49.0	150.610
49.5	142.410
50.0	134.499
50.5	126.875
51.0	119.538
51.5	112.562
52.0	105.801
52.5	99.256
53.0	92.855
53.5	86.669
54.0	80.843
54.5	75.305

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CANDELA TABULATION - (Cont.)

55.0	70.054
55.5	65.092
56.0	60.560
56.5	56.317
57.0	52.433
57.5	48.909
58.0	45.672
58.5	42.651
59.0	39.846
59.5	37.329
60.0	34.955
60.5	32.798
61.0	30.784
61.5	28.914
62.0	27.187
62.5	25.533
63.0	23.951
63.5	22.512
64.0	21.218
64.5	19.923
65.0	18.700
65.5	17.550
66.0	16.399
66.5	15.392
67.0	14.385
67.5	13.450
68.0	12.515
68.5	11.652
69.0	10.861
69.5	10.069
70.0	9.350
70.5	8.703
71.0	8.056
71.5	7.480
72.0	6.905
72.5	6.329
73.0	5.826
73.5	5.394
74.0	4.963
74.5	4.531
75.0	4.172
75.5	3.812
76.0	3.452
76.5	3.165
77.0	2.877
77.5	2.589
78.0	2.374
78.5	2.158
79.0	1.942
79.5	1.726
80.0	1.510
80.5	1.367
81.0	1.223
81.5	1.079
82.0	1.007
82.5	0.863

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CANDELA TABULATION - (Cont.)

83.0	0.791
83.5	0.647
84.0	0.575
84.5	0.503
85.0	0.432
85.5	0.360
86.0	0.288
86.5	0.288
87.0	0.216
87.5	0.144
88.0	0.144
88.5	0.144
89.0	0.072
89.5	0.072
90.0	0.072
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

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 2DR-L20-835-DIM-UNV-OW-OF-SG-WETCC\_.IES

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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121.0	0.000
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134.0	0.000
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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

IES INDOOR REPORT  
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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
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152.0	0.000
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153.0	0.000
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154.5	0.000
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155.5	0.000
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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	540.18	N.A.	33.50
0-30	1043.95	N.A.	64.70
0-40	1346.36	N.A.	83.50
0-60	1588.38	N.A.	98.50
0-80	1612.69	N.A.	100.00
0-90	1613.29	N.A.	100.00
10-90	1475.21	N.A.	91.40
20-40	806.18	N.A.	50.00
20-50	981.68	N.A.	60.80
40-70	261.50	N.A.	16.20
60-80	24.31	N.A.	1.50
70-80	4.83	N.A.	0.30
80-90	0.60	N.A.	0.00
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	1613.29	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	138.08
10-20	402.10
20-30	503.78
30-40	302.40
40-50	175.50
50-60	66.52
60-70	19.48
70-80	4.83
80-90	0.60
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	110	107	105	111	108	106	103	104	102	100	100	99	97	97	95	94	93
2	107	102	97	94	105	100	96	93	97	93	90	94	91	89	91	89	87	85
3	101	94	89	84	99	93	88	84	90	86	82	87	84	81	85	82	80	78
4	95	87	81	77	93	86	80	76	84	79	75	82	78	74	80	76	73	72
5	90	81	75	70	88	80	74	70	78	73	69	76	72	68	75	71	68	66
6	85	75	69	64	83	75	69	64	73	68	64	72	67	63	70	66	63	61
7	80	71	64	60	79	70	64	59	68	63	59	67	62	59	66	62	58	57
8	76	66	60	55	75	65	59	55	64	59	55	63	58	55	62	58	54	53
9	72	62	56	52	71	62	56	51	61	55	51	60	55	51	59	54	51	49
10	69	58	52	48	68	58	52	48	57	52	48	56	51	48	56	51	48	46

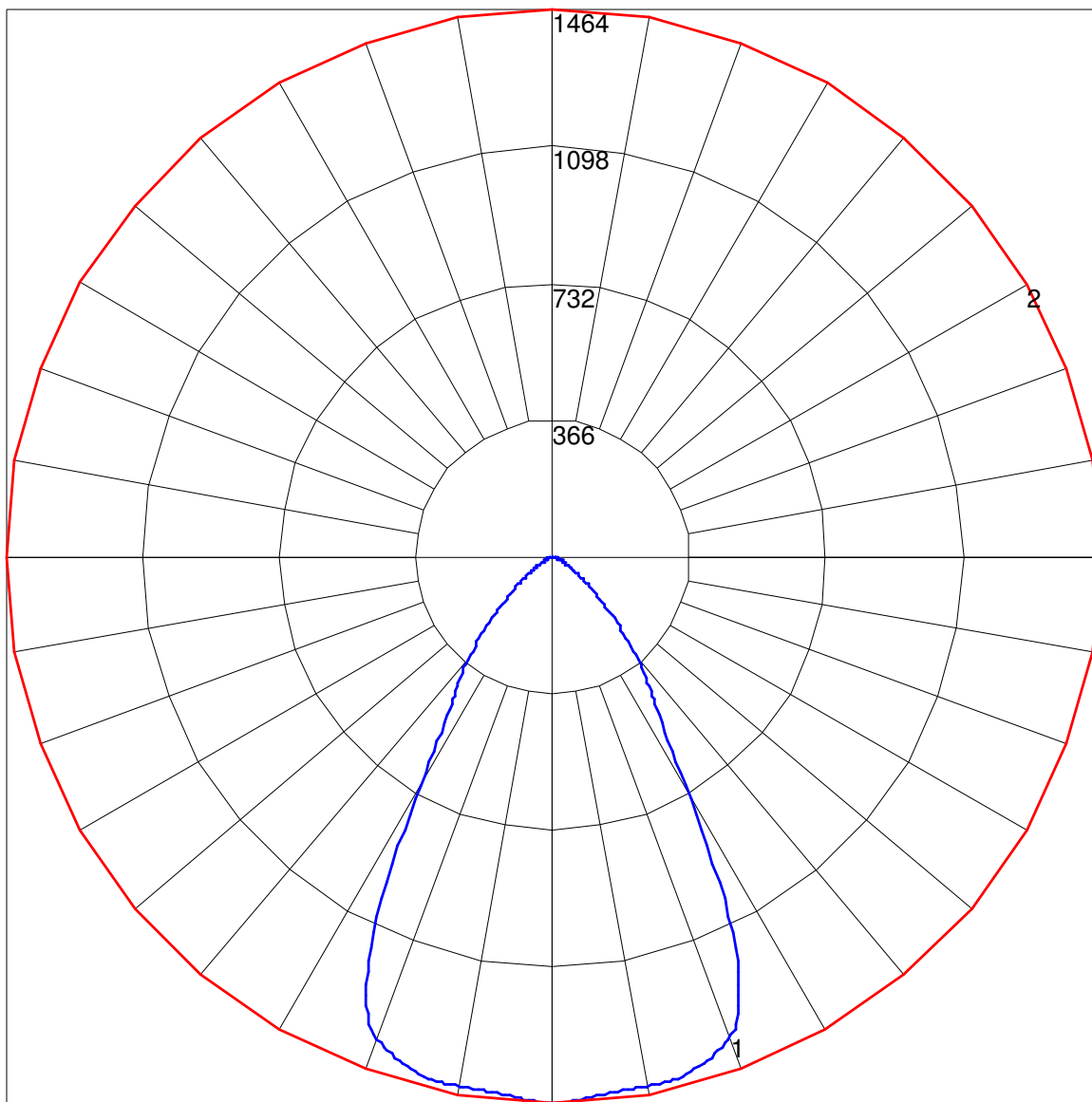
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**UGR TABLE - CORRECTED**

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	17.7	18.8	18.1	19.1	19.4	17.7	18.8	18.1	19.1	19.4
	3H	17.9	18.9	18.3	19.2	19.6	17.9	18.9	18.3	19.2	19.6
	4H	17.9	18.8	18.3	19.1	19.5	17.9	18.8	18.3	19.1	19.5
	6H	17.8	18.6	18.2	19.0	19.4	17.8	18.6	18.2	19.0	19.4
	8H	17.8	18.5	18.2	18.9	19.3	17.8	18.5	18.2	18.9	19.3
	12H	17.7	18.4	18.2	18.8	19.3	17.7	18.4	18.2	18.8	19.3
4H	2H	17.7	18.6	18.1	18.9	19.3	17.7	18.6	18.1	18.9	19.3
	3H	18.0	18.7	18.4	19.1	19.5	18.0	18.7	18.4	19.1	19.5
	4H	17.9	18.6	18.4	19.0	19.4	17.9	18.6	18.4	19.0	19.4
	6H	17.9	18.4	18.4	18.9	19.4	17.9	18.4	18.4	18.9	19.4
	8H	17.8	18.3	18.3	18.8	19.3	17.8	18.3	18.3	18.8	19.3
	12H	17.8	18.2	18.3	18.7	19.2	17.8	18.2	18.3	18.7	19.2
8H	4H	17.8	18.3	18.3	18.8	19.3	17.8	18.3	18.3	18.8	19.3
	6H	17.8	18.2	18.3	18.7	19.1	17.8	18.2	18.3	18.7	19.1
	8H	17.7	18.1	18.2	18.6	19.1	17.7	18.1	18.2	18.6	19.1
	12H	17.7	18.0	18.2	18.5	19.0	17.7	18.0	18.2	18.5	19.0
12H	4H	17.8	18.2	18.3	18.7	19.2	17.8	18.2	18.3	18.7	19.2
	6H	17.7	18.1	18.2	18.5	19.1	17.7	18.1	18.2	18.5	19.1
	8H	17.7	18.0	18.2	18.5	19.0	17.7	18.0	18.2	18.5	19.0

Maximum UGR = 19.6

POLAR GRAPH



Maximum Candela = 1464.382 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)