



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-L24-9DW-DIM-UNV-OM-OF-CS.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from 12316380.04

[TESTLAB] UL Verification Services Inc.

[ISSUEDATE] 6/4/2018

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 4DR-L24-9DW-DIM-UNV-OM-OF-CS

[LUMINAIRE] Black formed aluminum housing, specular reflector, no lens

[MORE] enclosure

[LAMP] One white LED

[BALLAST] Philips XI025C070V054DSM5

[OTHER] 25.3 C, 119.967 V, 0.166154 A, 19.8249 W, 0.994578 PF, 59.9698

[MORE] Hz

[OTHER] This test was performed using the calibrated photodetector met

[MORE] hod of absolute photometry.

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2226
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	59
Total Luminaire Watts	37.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.56
Spacing Criterion (90-270)	0.56
Spacing Criterion (Diagonal)	0.76
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	5528	5528	5528
55	1605	1605	1605
65	564	564	564
75	251	251	251
85	124	124	124

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CANDELA TABULATION

	<u>0</u>
0.0	4504.712
0.5	4508.048
1.0	4521.392
1.5	4533.624
2.0	4561.424
2.5	4579.216
3.0	4582.552
3.5	4583.664
4.0	4558.088
4.5	4523.616
5.0	4458.008
5.5	4374.608
6.0	4281.200
6.5	4176.672
7.0	4063.248
7.5	3945.376
8.0	3824.168
8.5	3704.072
9.0	3586.200
9.5	3471.664
10.0	3362.688
10.5	3260.384
11.0	3164.752
11.5	3074.680
12.0	2989.056
12.5	2908.992
13.0	2833.376
13.5	2761.096
14.0	2692.152
14.5	2628.768
15.0	2570.944
15.5	2519.792
16.0	2477.536
16.5	2439.728
17.0	2404.144
17.5	2373.008
18.0	2345.208
18.5	2321.856
19.0	2305.176
19.5	2290.720
20.0	2278.488
20.5	2264.032
21.0	2249.576
21.5	2234.008
22.0	2217.328
22.5	2196.200
23.0	2170.624
23.5	2139.488
24.0	2100.568
24.5	2049.416
25.0	1990.480
25.5	1928.208
26.0	1867.048
26.5	1799.216

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**CANDELA TABULATION - (Cont.)**

27.0	1728.048
27.5	1646.872
28.0	1554.576
28.5	1453.384
29.0	1347.744
29.5	1239.880
30.0	1125.344
30.5	1006.694
31.0	882.483
31.5	758.718
32.0	639.734
32.5	528.422
33.0	431.567
33.5	348.946
34.0	279.334
34.5	221.510
35.0	174.584
35.5	139.222
36.0	116.538
36.5	104.639
37.0	97.522
37.5	91.295
38.0	85.846
38.5	80.842
39.0	76.283
39.5	72.169
40.0	68.277
40.5	64.607
41.0	61.160
41.5	58.046
42.0	55.044
42.5	52.264
43.0	49.484
43.5	47.038
44.0	44.591
44.5	42.256
45.0	40.143
45.5	38.030
46.0	35.918
46.5	33.916
47.0	31.803
47.5	29.802
48.0	27.911
48.5	26.132
49.0	24.353
49.5	22.574
50.0	20.794
50.5	19.126
51.0	17.681
51.5	16.346
52.0	15.012
52.5	13.900
53.0	12.788
53.5	11.898
54.0	11.009
54.5	10.119

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CANDELA TABULATION - (Cont.)

55.0	9.452
55.5	8.785
56.0	8.118
56.5	7.562
57.0	7.006
57.5	6.561
58.0	6.116
58.5	5.671
59.0	5.338
59.5	5.004
60.0	4.670
60.5	4.337
61.0	4.114
61.5	3.781
62.0	3.558
62.5	3.336
63.0	3.114
63.5	3.002
64.0	2.780
64.5	2.558
65.0	2.446
65.5	2.335
66.0	2.113
66.5	2.002
67.0	1.890
67.5	1.779
68.0	1.668
68.5	1.557
69.0	1.446
69.5	1.334
70.0	1.223
70.5	1.223
71.0	1.112
71.5	1.001
72.0	0.890
72.5	0.890
73.0	0.778
73.5	0.778
74.0	0.667
74.5	0.667
75.0	0.667
75.5	0.556
76.0	0.556
76.5	0.445
77.0	0.445
77.5	0.445
78.0	0.334
78.5	0.334
79.0	0.334
79.5	0.334
80.0	0.222
80.5	0.222
81.0	0.222
81.5	0.222
82.0	0.222
82.5	0.222

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CANDELA TABULATION - (Cont.)

83.0	0.222
83.5	0.111
84.0	0.111
84.5	0.111
85.0	0.111
85.5	0.111
86.0	0.111
86.5	0.111
87.0	0.111
87.5	0.111
88.0	0.000
88.5	0.000
89.0	0.000
89.5	0.000
90.0	0.000
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
119.0	0.000
119.5	0.000
120.0	0.000
120.5	0.000
121.0	0.000
121.5	0.000
122.0	0.000
122.5	0.000
123.0	0.000
123.5	0.000
124.0	0.000
124.5	0.000
125.0	0.000
125.5	0.000
126.0	0.000
126.5	0.000
127.0	0.000
127.5	0.000
128.0	0.000
128.5	0.000
129.0	0.000
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130.0	0.000
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131.0	0.000
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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
149.0	0.000
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
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155.0	0.000
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156.0	0.000
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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	1122.95	N.A.	50.40
0-30	1983.39	N.A.	89.10
0-40	2182.01	N.A.	98.00
0-60	2222.91	N.A.	99.80
0-80	2226.16	N.A.	100.00
0-90	2226.29	N.A.	100.00
10-90	1840.56	N.A.	82.70
20-40	1059.06	N.A.	47.60
20-50	1090.67	N.A.	49.00
40-70	43.46	N.A.	2.00
60-80	3.26	N.A.	0.10
70-80	0.69	N.A.	0.00
80-90	0.13	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	2226.29	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	385.73
10-20	737.22
20-30	860.44
30-40	198.62
40-50	31.61
50-60	9.29
60-70	2.56
70-80	0.69
80-90	0.13
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

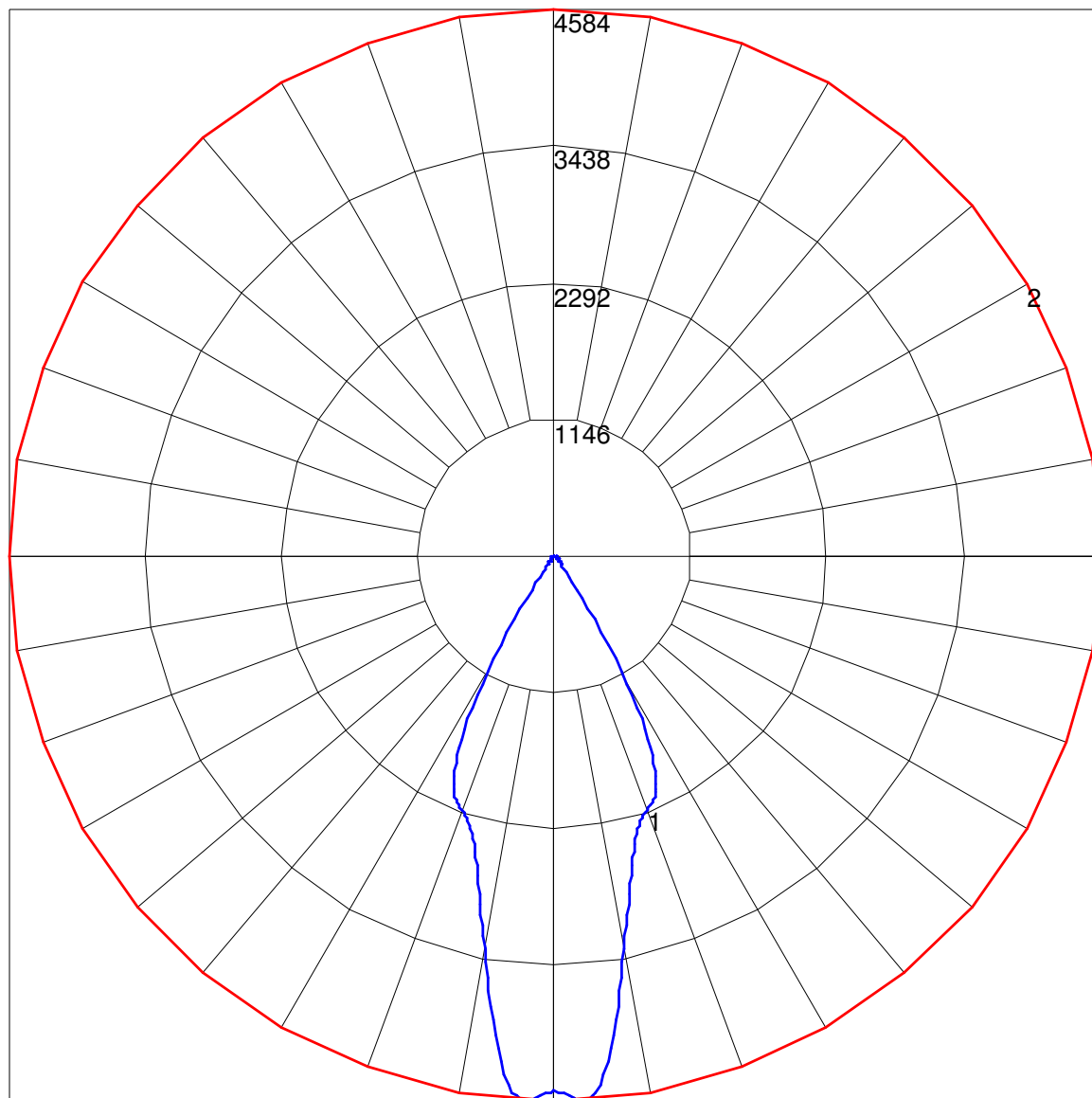
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	132	132	132	132	129	129	129	129	124	124	124	118	118	118	113	113	113	111
1	127	124	122	120	124	122	120	118	117	116	114	113	112	111	109	108	107	106
2	122	117	113	110	119	115	111	108	111	109	106	108	106	104	105	103	102	100
3	117	110	105	102	114	109	104	101	106	102	99	103	100	98	101	98	96	95
4	112	104	99	95	110	103	98	94	101	97	93	99	95	92	97	94	91	90
5	107	99	93	89	105	98	93	89	96	92	88	94	90	87	93	89	87	85
6	103	94	88	84	101	93	88	84	92	87	83	90	86	83	89	85	82	81
7	98	89	84	80	97	89	83	79	87	83	79	86	82	79	85	81	78	77
8	95	85	80	76	93	85	79	75	84	79	75	83	78	75	82	78	75	73
9	91	81	76	72	90	81	76	72	80	75	72	79	75	71	78	74	71	70
10	87	78	72	69	86	77	72	68	77	72	68	76	71	68	75	71	68	67

POLAR GRAPH



Maximum Candela = 4583.664 Located At Horizontal Angle = 0, Vertical Angle = 3.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (3.5) (Through Max. Cd.)