



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-L21-9TC-DIM-UNV-LW-OF-WH.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from 12316380.07

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 6/11/2018

[MANUFAC] WILLIAMS INDOOR - CARTHAGE, MO.

[LUMCAT] 4DR-L21-9TC-DIM-UNV-LW-OF-WH

[LUMINAIRE] Black formed aluminum housing, white reflector, clear patt

[MORE] erned glass lens enclosure

[LAMP] One white LED

[BALLAST] Philips XI025C070V054DSM5

[OTHER] 24.8 C, 120.064 V, 0.165704 A, 19.7871 W, 0.994575 PF, 59.9706

[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	1402
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	35
Total Luminaire Watts	40.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.00
Spacing Criterion (90-270)	1.00
Spacing Criterion (Diagonal)	0.90
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	38681	38681	38681
55	31784	31784	31784
65	23252	23252	23252
75	16097	16097	16097
85	8775	8775	8775

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CANDELA TABULATION

	<u>0</u>
0.0	984.631
0.5	984.320
1.0	983.698
1.5	982.869
2.0	982.039
2.5	981.106
3.0	979.861
3.5	979.135
4.0	978.617
4.5	978.306
5.0	977.891
5.5	977.476
6.0	977.165
6.5	976.750
7.0	976.439
7.5	976.232
8.0	976.128
8.5	975.817
9.0	975.506
9.5	974.884
10.0	974.469
10.5	973.743
11.0	973.017
11.5	972.084
12.0	971.047
12.5	969.802
13.0	968.351
13.5	966.691
14.0	964.617
14.5	962.129
15.0	959.121
15.5	955.492
16.0	951.447
16.5	946.677
17.0	941.492
17.5	935.685
18.0	928.841
18.5	921.789
19.0	914.115
19.5	905.508
20.0	896.072
20.5	885.805
21.0	874.709
21.5	862.784
22.0	849.614
22.5	835.615
23.0	820.578
23.5	804.401
24.0	786.979
24.5	768.417
25.0	748.299
25.5	727.248
26.0	704.745
26.5	680.894

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CANDELA TABULATION - (Cont.)

27.0	656.214
27.5	630.496
28.0	604.364
28.5	578.127
29.0	552.410
29.5	527.211
30.0	502.945
30.5	480.131
31.0	458.769
31.5	439.273
32.0	421.540
32.5	405.571
33.0	391.364
33.5	378.712
34.0	367.409
34.5	357.454
35.0	348.432
35.5	340.240
36.0	332.981
36.5	326.136
37.0	319.914
37.5	314.107
38.0	308.715
38.5	303.530
39.0	298.760
39.5	294.093
40.0	289.738
40.5	285.382
41.0	281.234
41.5	277.190
42.0	273.353
42.5	269.516
43.0	265.679
43.5	261.842
44.0	258.006
44.5	254.169
45.0	250.332
45.5	246.495
46.0	242.658
46.5	238.821
47.0	234.777
47.5	230.732
48.0	226.688
48.5	222.540
49.0	218.288
49.5	214.037
50.0	209.889
50.5	205.637
51.0	201.385
51.5	197.134
52.0	192.986
52.5	188.838
53.0	184.586
53.5	180.231
54.0	175.771
54.5	171.312

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CANDELA TABULATION - (Cont.)

55.0	166.853
55.5	162.394
56.0	158.039
56.5	153.787
57.0	149.535
57.5	145.284
58.0	141.136
58.5	137.091
59.0	133.047
59.5	129.106
60.0	125.270
60.5	121.433
61.0	117.699
61.5	114.070
62.0	110.440
62.5	106.811
63.0	103.347
63.5	99.905
64.0	96.524
64.5	93.195
65.0	89.939
65.5	86.766
66.0	83.634
66.5	80.585
67.0	77.609
67.5	74.685
68.0	71.854
68.5	69.085
69.0	66.316
69.5	63.641
70.0	61.038
70.5	58.476
71.0	55.977
71.5	53.540
72.0	51.186
72.5	48.863
73.0	46.603
73.5	44.404
74.0	42.247
74.5	40.163
75.0	38.130
75.5	36.160
76.0	34.231
76.5	32.354
77.0	30.560
77.5	28.777
78.0	27.055
78.5	25.386
79.0	23.747
79.5	22.171
80.0	20.626
80.5	19.122
81.0	17.639
81.5	16.198
82.0	14.788
82.5	13.419

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CANDELA TABULATION - (Cont.)

83.0	12.060
83.5	10.743
84.0	9.457
84.5	8.203
85.0	7.000
85.5	5.838
86.0	4.729
86.5	3.681
87.0	2.758
87.5	1.991
88.0	1.390
88.5	0.881
89.0	0.550
89.5	0.373
90.0	0.259
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
129.5	0.000
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
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
154.5	0.000
155.0	0.000
155.5	0.000
156.0	0.000
156.5	0.000
157.0	0.000
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	361.67	N.A.	25.80
0-30	693.73	N.A.	49.50
0-40	919.92	N.A.	65.60
0-60	1261.83	N.A.	90.00
0-80	1392.9	N.A.	99.40
0-90	1401.66	N.A.	100.00
10-90	1308.4	N.A.	93.30
20-40	558.24	N.A.	39.80
20-50	751.03	N.A.	53.60
40-70	431.84	N.A.	30.80
60-80	131.07	N.A.	9.40
70-80	41.14	N.A.	2.90
80-90	8.77	N.A.	0.60
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	1401.67	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	93.26
10-20	268.41
20-30	332.06
30-40	226.19
40-50	192.79
50-60	149.12
60-70	89.93
70-80	41.14
80-90	8.77
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

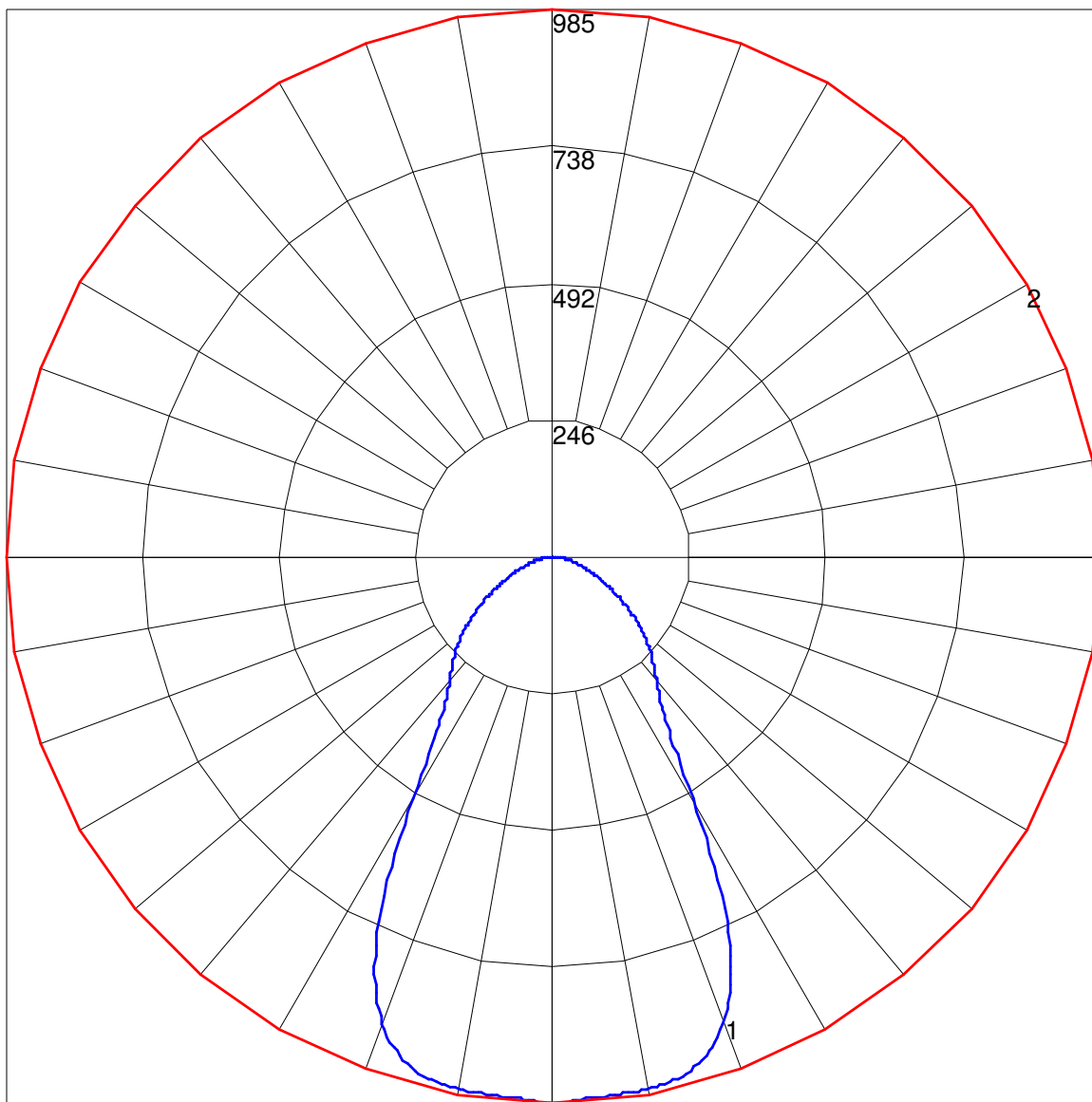
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	123	123	123	123	121	121	121	121	115	115	115	110	110	110	106	106	106	104
1	115	111	108	105	113	109	106	103	105	102	100	101	99	97	97	96	94	92
2	107	100	95	90	105	99	93	89	95	91	87	92	88	85	89	86	83	81
3	100	91	84	79	97	89	83	78	86	81	77	84	79	75	81	77	74	72
4	93	83	75	70	91	81	75	69	79	73	68	77	72	67	75	70	67	65
5	87	76	68	62	85	75	67	62	73	66	61	71	65	61	69	64	60	58
6	81	70	62	56	80	69	62	56	67	61	56	66	60	55	64	59	55	53
7	76	65	57	51	75	64	56	51	62	56	51	61	55	51	60	54	50	49
8	72	60	52	47	71	59	52	47	58	52	47	57	51	47	56	50	46	45
9	68	56	49	44	67	55	48	44	54	48	43	53	47	43	52	47	43	41
10	64	52	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38

POLAR GRAPH



Maximum Candela = 984.631 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.)