



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-L21-9TC-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-L21-9TC-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	2076
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	52
Total Luminaire Watts	40.1
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	5155	5155	5155
55	1496	1496	1496
65	526	526	526
75	234	234	234
85	116	116	116

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CANDELA TABULATION

	<u>0</u>
0.0	4200.887
0.5	4203.998
1.0	4216.442
1.5	4227.849
2.0	4253.774
2.5	4270.366
3.0	4273.477
3.5	4274.514
4.0	4250.663
4.5	4218.516
5.0	4157.333
5.5	4079.558
6.0	3992.450
6.5	3894.972
7.0	3789.198
7.5	3679.276
8.0	3566.243
8.5	3454.247
9.0	3344.325
9.5	3237.514
10.0	3135.888
10.5	3040.484
11.0	2951.302
11.5	2867.305
12.0	2787.456
12.5	2712.792
13.0	2642.276
13.5	2574.871
14.0	2510.577
14.5	2451.468
15.0	2397.544
15.5	2349.842
16.0	2310.436
16.5	2275.178
17.0	2241.994
17.5	2212.958
18.0	2187.033
18.5	2165.256
19.0	2149.701
19.5	2136.220
20.0	2124.813
20.5	2111.332
21.0	2097.851
21.5	2083.333
22.0	2067.778
22.5	2048.075
23.0	2024.224
23.5	1995.188
24.0	1958.893
24.5	1911.191
25.0	1856.230
25.5	1798.158
26.0	1741.123
26.5	1677.866

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CANDELA TABULATION - (Cont.)

27.0	1611.498
27.5	1535.797
28.0	1449.726
28.5	1355.359
29.0	1256.844
29.5	1156.255
30.0	1049.444
30.5	938.796
31.0	822.963
31.5	707.545
32.0	596.586
32.5	492.782
33.0	402.460
33.5	325.411
34.0	260.494
34.5	206.570
35.0	162.809
35.5	129.832
36.0	108.678
36.5	97.582
37.0	90.945
37.5	85.138
38.0	80.056
38.5	75.390
39.0	71.138
39.5	67.301
40.0	63.672
40.5	60.250
41.0	57.035
41.5	54.131
42.0	51.331
42.5	48.739
43.0	46.146
43.5	43.865
44.0	41.584
44.5	39.406
45.0	37.436
45.5	35.465
46.0	33.495
46.5	31.628
47.0	29.658
47.5	27.792
48.0	26.029
48.5	24.369
49.0	22.710
49.5	21.051
50.0	19.392
50.5	17.836
51.0	16.488
51.5	15.244
52.0	13.999
52.5	12.962
53.0	11.925
53.5	11.096
54.0	10.266
54.5	9.437

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CANDELA TABULATION - (Cont.)

55.0	8.814
55.5	8.192
56.0	7.570
56.5	7.052
57.0	6.533
57.5	6.118
58.0	5.703
58.5	5.289
59.0	4.978
59.5	4.666
60.0	4.355
60.5	4.044
61.0	3.837
61.5	3.526
62.0	3.318
62.5	3.111
63.0	2.904
63.5	2.800
64.0	2.592
64.5	2.385
65.0	2.281
65.5	2.178
66.0	1.970
66.5	1.867
67.0	1.763
67.5	1.659
68.0	1.555
68.5	1.452
69.0	1.348
69.5	1.244
70.0	1.141
70.5	1.141
71.0	1.037
71.5	0.933
72.0	0.830
72.5	0.830
73.0	0.726
73.5	0.726
74.0	0.622
74.5	0.622
75.0	0.622
75.5	0.518
76.0	0.518
76.5	0.415
77.0	0.415
77.5	0.415
78.0	0.311
78.5	0.311
79.0	0.311
79.5	0.311
80.0	0.207
80.5	0.207
81.0	0.207
81.5	0.207
82.0	0.207
82.5	0.207

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CANDELA TABULATION - (Cont.)

83.0	0.207
83.5	0.104
84.0	0.104
84.5	0.104
85.0	0.104
85.5	0.104
86.0	0.104
86.5	0.104
87.0	0.104
87.5	0.104
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
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	1047.21	N.A.	50.40
0-30	1849.62	N.A.	89.10
0-40	2034.84	N.A.	98.00
0-60	2072.98	N.A.	99.80
0-80	2076.02	N.A.	100.00
0-90	2076.14	N.A.	100.00
10-90	1716.42	N.A.	82.70
20-40	987.63	N.A.	47.60
20-50	1017.11	N.A.	49.00
40-70	40.53	N.A.	2.00
60-80	3.04	N.A.	0.10
70-80	0.65	N.A.	0.00
80-90	0.12	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	2076.14	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	359.72
10-20	687.49
20-30	802.41
30-40	185.23
40-50	29.47
50-60	8.66
60-70	2.39
70-80	0.65
80-90	0.12
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

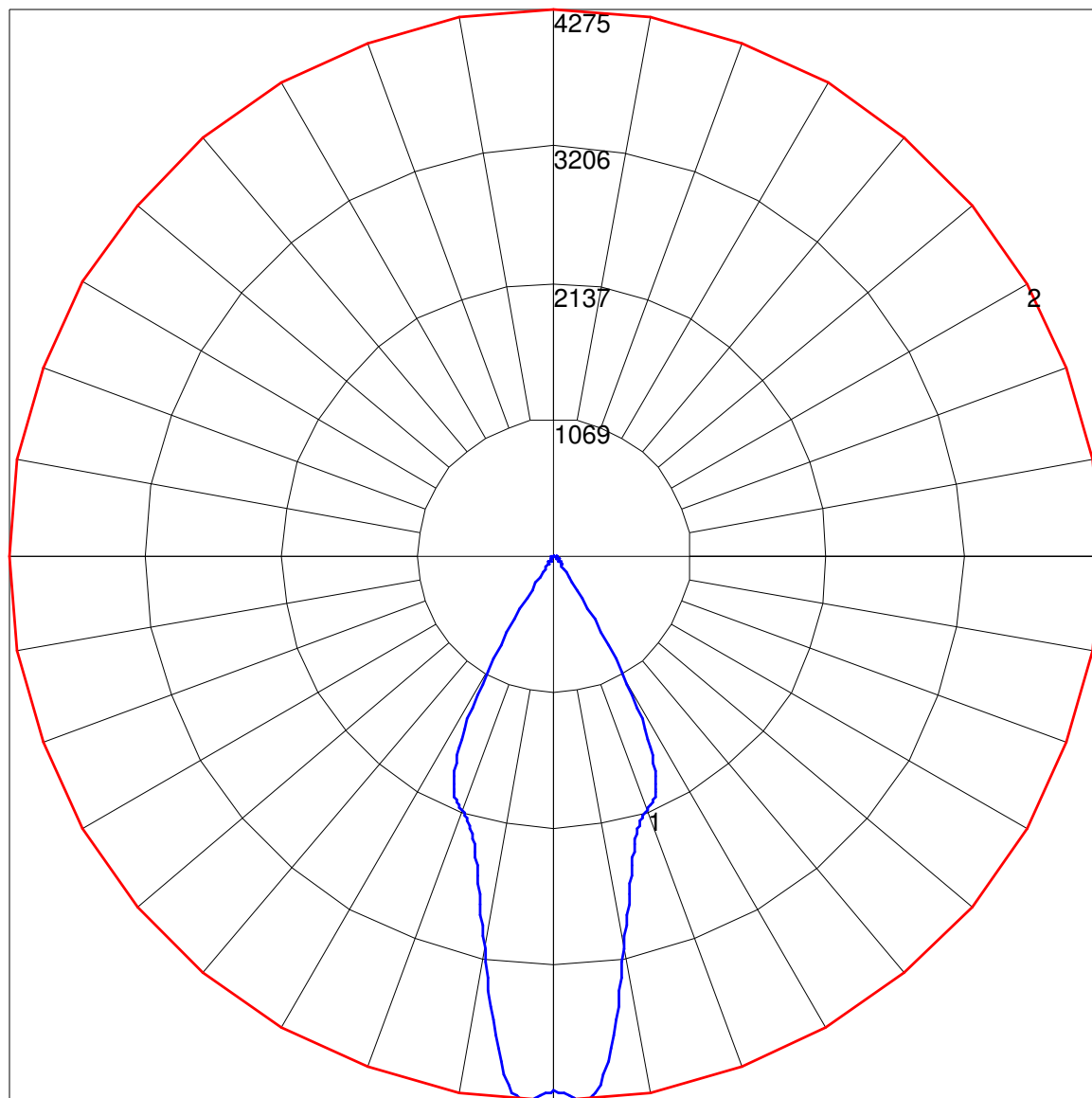
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	123	123	123	123	121	121	121	121	115	115	115	110	110	110	106	106	106	104
1	118	116	114	111	116	114	112	110	109	108	106	106	104	103	102	101	100	98
2	113	109	105	102	111	107	104	101	104	101	99	101	99	97	98	96	95	93
3	109	103	98	95	107	101	97	94	99	95	93	96	94	91	94	92	90	88
4	104	97	92	89	102	96	92	88	94	90	87	92	89	86	90	87	85	84
5	100	92	87	83	98	91	86	83	90	85	82	88	84	81	86	83	81	79
6	96	88	82	78	94	87	82	78	85	81	78	84	80	77	83	79	77	75
7	92	83	78	74	91	83	78	74	82	77	74	80	76	73	79	76	73	72
8	88	80	74	70	87	79	74	70	78	73	70	77	73	70	76	72	69	68
9	85	76	71	67	84	75	70	67	75	70	67	74	70	67	73	69	66	65
10	81	73	67	64	80	72	67	64	71	67	64	71	66	63	70	66	63	62

POLAR GRAPH



Maximum Candela = 4274.514 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.)