



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4PR-L20-9DW-DIM-UNV-LW-OF-WH.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from 12316380.29
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 6/12/2018
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4PR-L20-9DW-DIM-UNV-LW-OF-WH
 [LUMINAIRE] Black formed aluminum housing, white reflector, clear glass
 [MORE] s patterned lens enclosure
 [LAMP] One white LED
 [BALLAST] Philips XI025C070V054DSM5
 [OTHER] 25.3 C, 120.057 V, 0.19044 A, 22.7717 W, 0.995981 PF, 59.9693
 [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	1918
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	51
Total Luminaire Watts	37.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.88
Spacing Criterion (90-270)	0.88
Spacing Criterion (Diagonal)	1.00
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	49245	49245	49245
55	35435	35435	35435
65	28151	28151	28151
75	22961	22961	22961
85	16948	16948	16948

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CANDELA TABULATION

	<u>0</u>
0.0	1535.320
0.5	1534.272
1.0	1531.128
1.5	1524.840
2.0	1516.456
2.5	1505.976
3.0	1493.400
3.5	1479.776
4.0	1465.104
4.5	1448.336
5.0	1430.520
5.5	1412.704
6.0	1394.888
6.5	1374.976
7.0	1356.112
7.5	1336.200
8.0	1317.336
8.5	1297.424
9.0	1279.608
9.5	1261.792
10.0	1243.976
10.5	1227.208
11.0	1211.488
11.5	1195.768
12.0	1181.096
12.5	1167.472
13.0	1153.848
13.5	1141.272
14.0	1129.744
14.5	1118.216
15.0	1107.736
15.5	1097.256
16.0	1087.824
16.5	1078.392
17.0	1071.056
17.5	1062.672
18.0	1056.384
18.5	1049.048
19.0	1042.760
19.5	1037.101
20.0	1031.966
20.5	1026.935
21.0	1021.695
21.5	1016.560
22.0	1011.006
22.5	1005.242
23.0	999.268
23.5	992.875
24.0	986.063
24.5	978.622
25.0	970.448
25.5	961.854
26.0	952.632
26.5	942.886

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CANDELA TABULATION - (Cont.)

27.0	932.510
27.5	921.926
28.0	910.712
28.5	899.079
29.0	887.132
29.5	874.766
30.0	861.561
30.5	847.413
31.0	832.741
31.5	817.754
32.0	801.825
32.5	785.581
33.0	768.813
33.5	751.206
34.0	732.866
34.5	713.688
35.0	694.300
35.5	674.178
36.0	653.533
36.5	632.154
37.0	610.565
37.5	589.081
38.0	567.492
38.5	545.589
39.0	523.895
39.5	502.516
40.0	482.080
40.5	461.644
41.0	442.046
41.5	423.392
42.0	405.786
42.5	389.018
43.0	372.983
43.5	357.997
44.0	343.954
44.5	330.854
45.0	318.697
45.5	307.483
46.0	297.108
46.5	287.571
47.0	278.663
47.5	270.489
48.0	262.838
48.5	255.607
49.0	248.900
49.5	242.507
50.0	236.429
50.5	230.560
51.0	225.110
51.5	219.870
52.0	214.840
52.5	209.810
53.0	204.884
53.5	199.958
54.0	195.242
54.5	190.526

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CANDELA TABULATION - (Cont.)

55.0	186.020
55.5	181.514
56.0	177.217
56.5	173.025
57.0	168.833
57.5	164.536
58.0	160.344
58.5	156.257
59.0	152.170
59.5	148.292
60.0	144.310
60.5	140.537
61.0	136.764
61.5	132.991
62.0	129.428
62.5	125.865
63.0	122.302
63.5	118.843
64.0	115.490
64.5	112.136
65.0	108.887
65.5	105.638
66.0	102.494
66.5	99.350
67.0	96.311
67.5	93.377
68.0	90.442
68.5	87.613
69.0	84.783
69.5	81.954
70.0	79.334
70.5	76.609
71.0	73.989
71.5	71.369
72.0	68.854
72.5	66.338
73.0	63.823
73.5	61.413
74.0	59.002
74.5	56.697
75.0	54.391
75.5	52.086
76.0	49.885
76.5	47.684
77.0	45.483
77.5	43.282
78.0	41.186
78.5	38.986
79.0	36.994
79.5	34.898
80.0	32.907
80.5	30.916
81.0	28.925
81.5	27.038
82.0	25.047
82.5	23.161

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CANDELA TABULATION - (Cont.)

83.0	21.274
83.5	19.283
84.0	17.397
84.5	15.406
85.0	13.519
85.5	11.947
86.0	10.585
86.5	9.327
87.0	8.279
87.5	7.336
88.0	6.288
88.5	5.345
89.0	4.402
89.5	3.354
90.0	2.410
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	443.90	N.A.	23.10
0-30	886.73	N.A.	46.20
0-40	1312.55	N.A.	68.40
0-60	1734.96	N.A.	90.40
0-80	1901.5	N.A.	99.10
0-90	1918.18	N.A.	100.00
10-90	1787.88	N.A.	93.20
20-40	868.65	N.A.	45.30
20-50	1123.7	N.A.	58.60
40-70	531.01	N.A.	27.70
60-80	166.55	N.A.	8.70
70-80	57.95	N.A.	3.00
80-90	16.68	N.A.	0.90
90-110	0.07	N.A.	0.00
90-120	0.07	N.A.	0.00
90-130	0.07	N.A.	0.00
90-150	0.07	N.A.	0.00
90-180	0.07	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1918.25	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	130.30
10-20	313.60
20-30	442.83
30-40	425.82
40-50	255.05
50-60	167.36
60-70	108.60
70-80	57.95
80-90	16.68
90-100	0.07
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

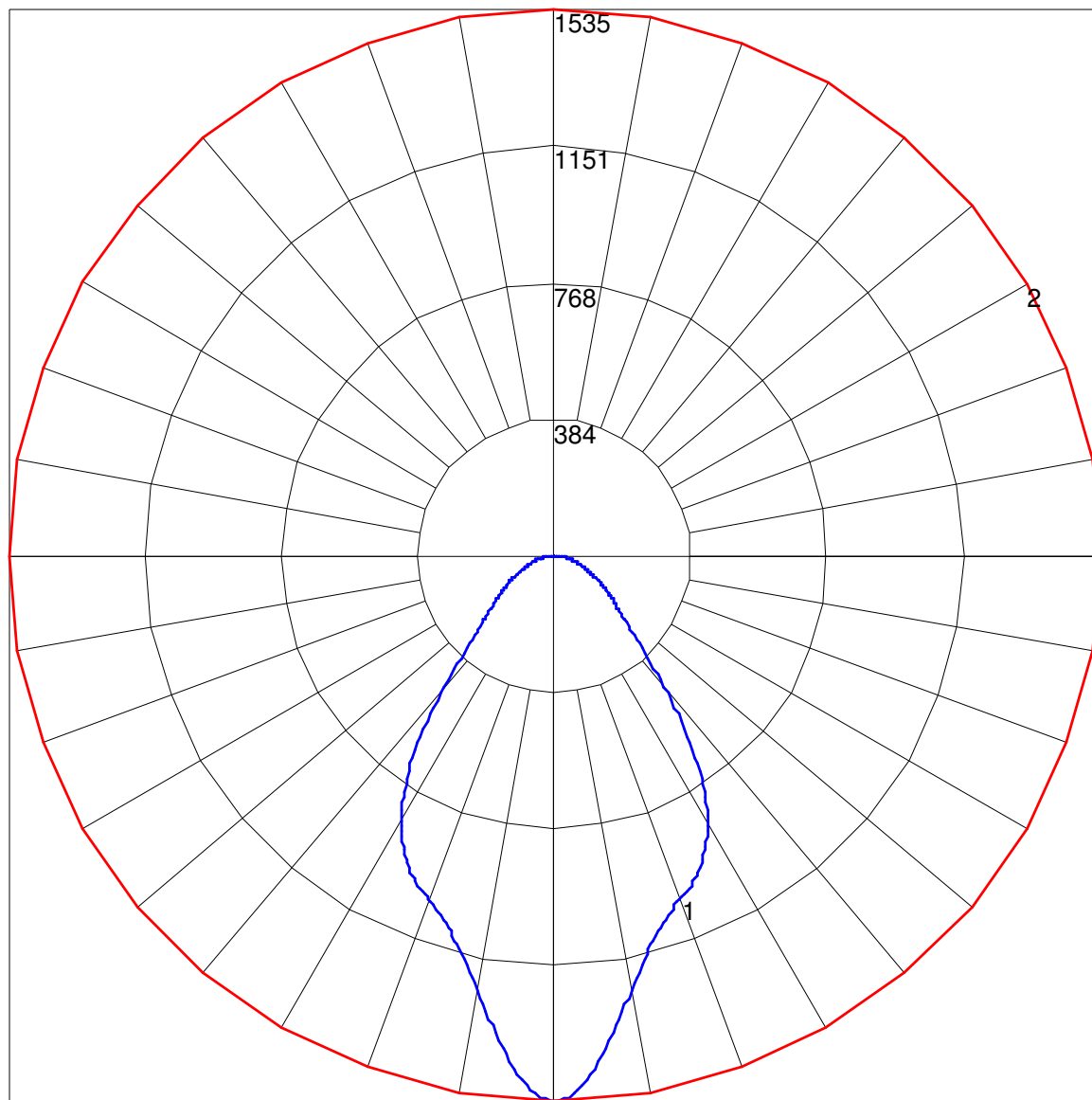
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	125	125	125	125	122	122	122	122	116	116	116	112	112	112	107	107	107	105
1	117	113	109	106	114	110	107	104	106	103	101	102	100	98	98	97	95	93
2	108	102	96	91	106	100	94	90	96	92	88	93	89	86	90	87	84	82
3	101	92	85	80	99	90	84	79	87	82	78	85	80	76	82	78	75	73
4	94	84	76	70	92	82	75	70	80	74	69	78	72	68	76	71	67	65
5	88	77	69	63	86	76	68	63	74	67	62	72	66	61	70	65	61	59
6	82	70	63	57	80	70	62	57	68	61	56	66	60	56	65	59	55	54
7	77	65	57	52	76	64	57	52	63	56	51	61	55	51	60	55	51	49
8	73	60	53	47	71	60	52	47	58	52	47	57	51	47	56	51	47	45
9	68	56	49	44	67	56	48	44	55	48	43	53	47	43	52	47	43	41
10	65	52	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38

POLAR GRAPH



Maximum Candela = 1535.32 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.)