



IES INDOOR REPORT

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

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from 12316380.32

[TESTLAB] UL Verification Services Inc.

[ISSUE DATE] 6/13/2018

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 4PR-L20-9DW-DIM-UNV-LN-OF-WH

[LUMINAIRE] Black formed aluminum housing, clear plastic optic, white

[MORE] reflector, clear glass patterned lens enclosure

[LAMP] One white LED

[BALLAST] Philips XI025C070V054DSM5

[OTHER] 25.1 C, 120.057 V, 0.190218 A, 22.7453 W, 0.995981 PF, 59.9705

[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	2216
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)	0.46
Spacing Criterion (90-270)	0.46
Spacing Criterion (Diagonal)	0.48
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	16922	16922	16922
55	12617	12617	12617
65	10242	10242	10242
75	8406	8406	8406
85	5649	5649	5649

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CANDELA TABULATION

	<u>0</u>
0.0	7436.608
0.5	7428.224
1.0	7405.168
1.5	7366.392
2.0	7312.944
2.5	7244.824
3.0	7162.032
3.5	7066.664
4.0	6959.768
4.5	6842.392
5.0	6715.584
5.5	6579.344
6.0	6432.624
6.5	6278.568
7.0	6116.128
7.5	5945.304
8.0	5769.240
8.5	5587.936
9.0	5404.536
9.5	5217.992
10.0	5027.256
10.5	4835.472
11.0	4642.640
11.5	4449.808
12.0	4258.024
12.5	4067.288
13.0	3877.600
13.5	3692.104
14.0	3507.656
14.5	3325.304
15.0	3147.144
15.5	2974.224
16.0	2805.496
16.5	2642.008
17.0	2485.856
17.5	2334.944
18.0	2191.368
18.5	2055.128
19.0	1925.176
19.5	1802.560
20.0	1685.184
20.5	1575.144
21.0	1470.344
21.5	1376.024
22.0	1282.752
22.5	1197.864
23.0	1117.168
23.5	1041.502
24.0	969.400
24.5	902.852
25.0	840.915
25.5	782.751
26.0	729.094
26.5	678.894

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CANDELA TABULATION - (Cont.)

27.0	632.468
27.5	589.814
28.0	550.200
28.5	513.730
29.0	480.089
29.5	449.173
30.0	420.562
30.5	393.943
31.0	369.525
31.5	347.098
32.0	326.452
32.5	307.588
33.0	290.086
33.5	273.842
34.0	258.856
34.5	245.337
35.0	232.866
35.5	221.233
36.0	210.648
36.5	200.797
37.0	191.679
37.5	183.400
38.0	175.750
38.5	168.623
39.0	162.021
39.5	155.838
40.0	150.074
40.5	144.834
41.0	139.908
41.5	135.297
42.0	131.000
42.5	126.913
43.0	123.035
43.5	119.367
44.0	115.909
44.5	112.660
45.0	109.516
45.5	106.582
46.0	103.752
46.5	101.027
47.0	98.407
47.5	95.787
48.0	93.377
48.5	91.071
49.0	88.766
49.5	86.460
50.0	84.364
50.5	82.373
51.0	80.382
51.5	78.390
52.0	76.504
52.5	74.722
53.0	72.941
53.5	71.264
54.0	69.587
54.5	67.910

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CANDELA TABULATION - (Cont.)

55.0	66.234
55.5	64.662
56.0	63.194
56.5	61.622
57.0	60.155
57.5	58.793
58.0	57.326
58.5	55.963
59.0	54.601
59.5	53.238
60.0	51.876
60.5	50.618
61.0	49.256
61.5	47.998
62.0	46.846
62.5	45.588
63.0	44.330
63.5	43.178
64.0	41.920
64.5	40.767
65.0	39.614
65.5	38.462
66.0	37.414
66.5	36.261
67.0	35.213
67.5	34.060
68.0	33.012
68.5	31.964
69.0	31.021
69.5	29.973
70.0	29.030
70.5	27.982
71.0	27.038
71.5	26.095
72.0	25.152
72.5	24.314
73.0	23.370
73.5	22.532
74.0	21.589
74.5	20.750
75.0	19.912
75.5	19.074
76.0	18.235
76.5	17.397
77.0	16.558
77.5	15.720
78.0	14.882
78.5	14.043
79.0	13.310
79.5	12.471
80.0	11.738
80.5	10.899
81.0	10.166
81.5	9.432
82.0	8.594
82.5	7.860

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CANDELA TABULATION - (Cont.)

83.0	7.126
83.5	6.498
84.0	5.764
84.5	5.135
85.0	4.506
85.5	3.982
86.0	3.458
86.5	2.934
87.0	2.515
87.5	2.096
88.0	1.782
88.5	1.467
89.0	1.153
89.5	0.943
90.0	0.734
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	1445.96	N.A.	65.30
0-30	1850.06	N.A.	83.50
0-40	2003.76	N.A.	90.40
0-60	2149.54	N.A.	97.00
0-80	2210.12	N.A.	99.70
0-90	2215.7	N.A.	100.00
10-90	1629.86	N.A.	73.60
20-40	557.80	N.A.	25.20
20-50	643.86	N.A.	29.10
40-70	185.23	N.A.	8.40
60-80	60.58	N.A.	2.70
70-80	21.13	N.A.	1.00
80-90	5.58	N.A.	0.30
90-110	0.02	N.A.	0.00
90-120	0.02	N.A.	0.00
90-130	0.02	N.A.	0.00
90-150	0.02	N.A.	0.00
90-180	0.02	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2215.72	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	585.84
10-20	860.12
20-30	404.10
30-40	153.70
40-50	86.05
50-60	59.73
60-70	39.45
70-80	21.13
80-90	5.58
90-100	0.02
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

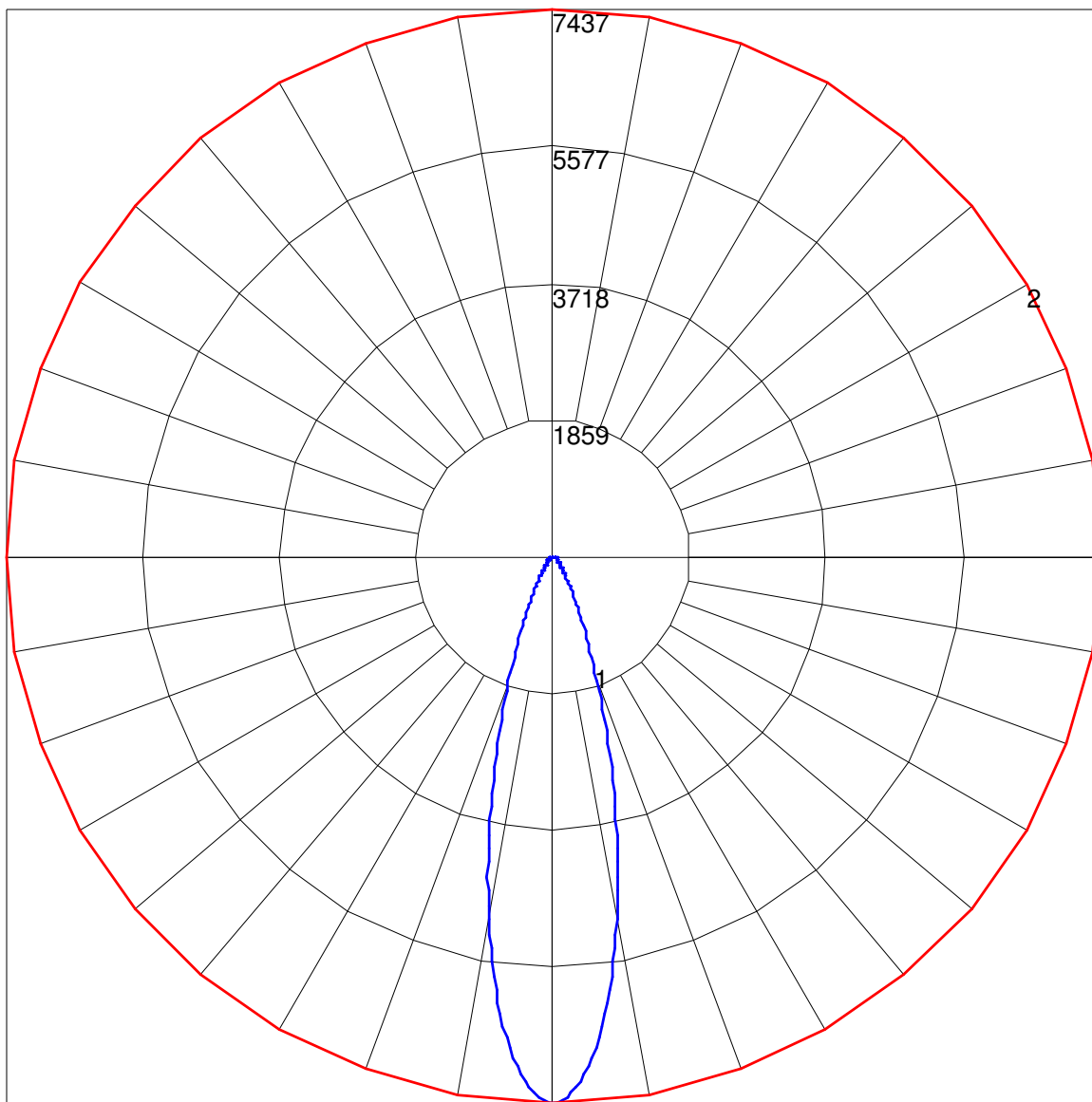
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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

POLAR GRAPH



Maximum Candela = 7436.608 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.)