



## IES INDOOR REPORT

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

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN from 12316380.31  
 [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-LM-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] 25.4 C, 120.056 V, 0.190316 A, 22.7567 W, 0.995979 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	2232
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)	0.58
Spacing Criterion (90-270)	0.58
Spacing Criterion (Diagonal)	0.56
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	20210	20210	20210
55	12876	12876	12876
65	10052	10052	10052
75	8495	8495	8495
85	6306	6306	6306

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CANDELA TABULATION

	<u>0</u>
0.0	5244.192
0.5	5242.096
1.0	5232.664
1.5	5219.040
2.0	5198.080
2.5	5172.928
3.0	5142.536
3.5	5107.952
4.0	5068.128
4.5	5026.208
5.0	4979.048
5.5	4927.696
6.0	4872.152
6.5	4811.368
7.0	4746.392
7.5	4676.176
8.0	4600.720
8.5	4520.024
9.0	4435.136
9.5	4345.008
10.0	4249.640
10.5	4150.080
11.0	4046.328
11.5	3938.384
12.0	3828.344
12.5	3714.112
13.0	3596.736
13.5	3477.264
14.0	3355.696
14.5	3233.080
15.0	3110.464
15.5	2986.800
16.0	2863.136
16.5	2740.520
17.0	2618.952
17.5	2498.432
18.0	2378.960
18.5	2262.632
19.0	2150.496
19.5	2040.456
20.0	1931.464
20.5	1827.712
21.0	1726.056
21.5	1628.592
22.0	1534.272
22.5	1443.096
23.0	1357.160
23.5	1275.416
24.0	1197.864
24.5	1125.552
25.0	1055.336
25.5	989.312
26.0	927.899
26.5	869.840

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**CANDELA TABULATION - (Cont.)**

27.0	815.658
27.5	764.935
28.0	717.880
28.5	674.178
29.0	633.411
29.5	595.369
30.0	559.946
30.5	526.725
31.0	496.123
31.5	467.827
32.0	441.418
32.5	416.580
33.0	393.524
33.5	372.040
34.0	352.128
34.5	333.578
35.0	316.286
35.5	300.147
36.0	284.951
36.5	271.013
37.0	257.703
37.5	245.337
38.0	234.018
38.5	223.329
39.0	213.373
39.5	203.941
40.0	195.033
40.5	186.649
41.0	178.894
41.5	171.558
42.0	164.746
42.5	158.143
43.0	152.065
43.5	146.301
44.0	140.851
44.5	135.716
45.0	130.790
45.5	126.074
46.0	121.568
46.5	117.271
47.0	113.184
47.5	109.306
48.0	105.534
48.5	101.970
49.0	98.617
49.5	95.368
50.0	92.224
50.5	89.290
51.0	86.460
51.5	83.735
52.0	81.115
52.5	78.705
53.0	76.294
53.5	73.989
54.0	71.788
54.5	69.692

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**CANDELA TABULATION - (Cont.)**

55.0	67.596
55.5	65.605
56.0	63.718
56.5	61.937
57.0	60.155
57.5	58.478
58.0	56.802
58.5	55.334
59.0	53.762
59.5	52.295
60.0	50.933
60.5	49.570
61.0	48.208
61.5	46.950
62.0	45.693
62.5	44.540
63.0	43.282
63.5	42.130
64.0	40.977
64.5	39.929
65.0	38.881
65.5	37.833
66.0	36.785
66.5	35.737
67.0	34.689
67.5	33.746
68.0	32.698
68.5	31.754
69.0	30.811
69.5	29.868
70.0	28.925
70.5	28.086
71.0	27.143
71.5	26.200
72.0	25.362
72.5	24.523
73.0	23.580
73.5	22.742
74.0	21.903
74.5	21.065
75.0	20.122
75.5	19.283
76.0	18.445
76.5	17.606
77.0	16.768
77.5	15.930
78.0	15.196
78.5	14.358
79.0	13.519
79.5	12.681
80.0	11.947
80.5	11.109
81.0	10.375
81.5	9.642
82.0	8.908
82.5	8.174

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CANDELA TABULATION - (Cont.)

83.0	7.441
83.5	6.812
84.0	6.183
84.5	5.554
85.0	5.030
85.5	4.506
86.0	3.982
86.5	3.563
87.0	3.144
87.5	2.725
88.0	2.306
88.5	1.991
89.0	1.677
89.5	1.362
90.0	1.153
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

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 4PR-L20-9DW-DIM-UNV-LM-OF-WH.IES

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

IES INDOOR REPORT  
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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	1295.72	N.A.	58.00
0-30	1794.55	N.A.	80.40
0-40	2001.26	N.A.	89.70
0-60	2166.07	N.A.	97.00
0-80	2226.18	N.A.	99.70
0-90	2232.22	N.A.	100.00
10-90	1779.91	N.A.	79.70
20-40	705.54	N.A.	31.60
20-50	808.90	N.A.	36.20
40-70	203.57	N.A.	9.10
60-80	60.11	N.A.	2.70
70-80	21.35	N.A.	1.00
80-90	6.04	N.A.	0.30
90-110	0.03	N.A.	0.00
90-120	0.03	N.A.	0.00
90-130	0.03	N.A.	0.00
90-150	0.03	N.A.	0.00
90-180	0.03	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2232.25	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	452.31
10-20	843.41
20-30	498.84
30-40	206.71
40-50	103.35
50-60	61.46
60-70	38.76
70-80	21.35
80-90	6.04
90-100	0.03
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

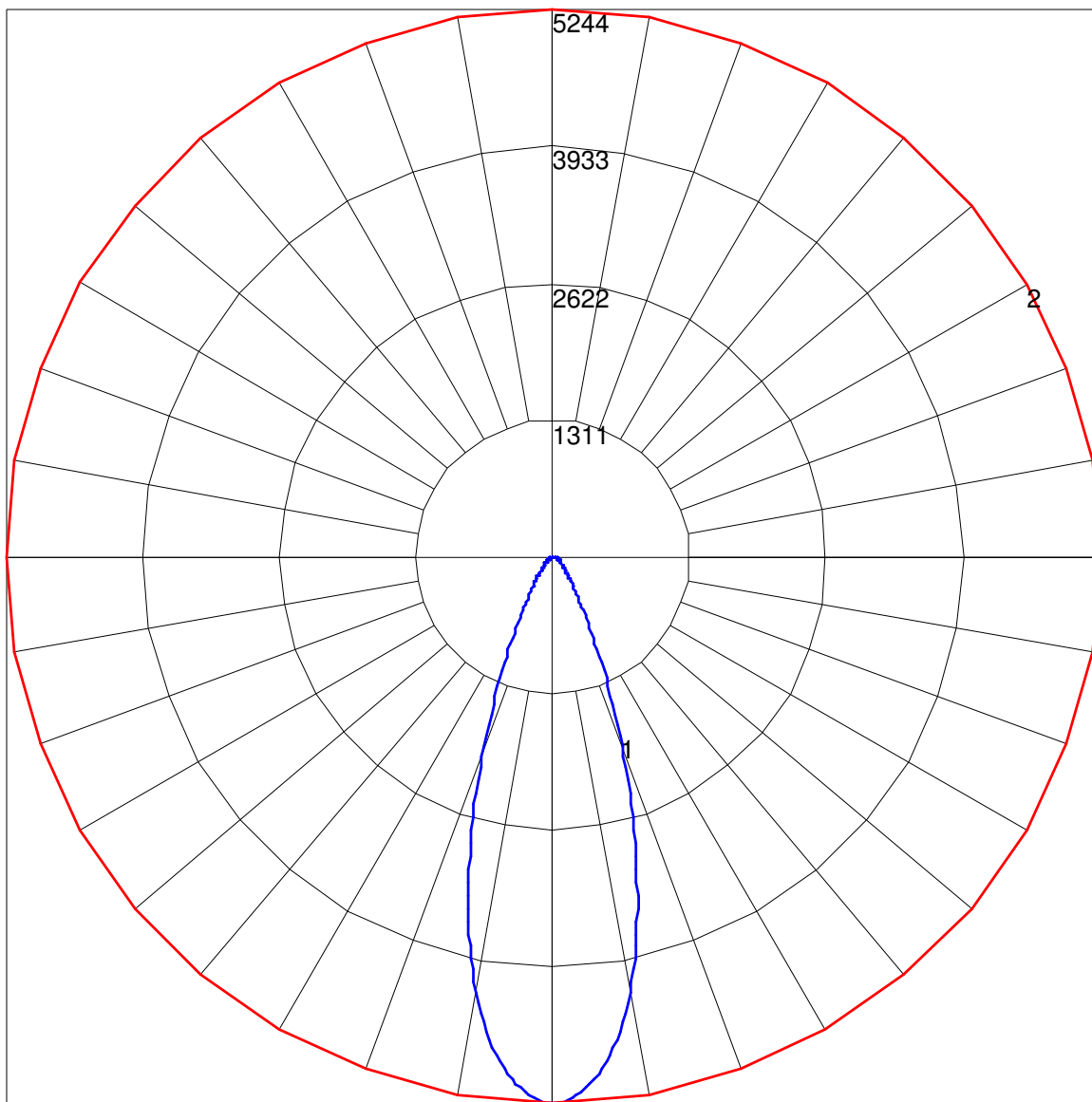
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	111	111	111	107	107	107	105
1	119	116	114	112	117	114	112	110	110	108	106	106	105	103	102	101	100	98
2	114	109	105	101	111	107	103	100	104	101	98	101	98	96	98	96	94	92
3	109	102	97	94	107	101	96	93	98	94	91	96	93	90	93	91	89	87
4	104	97	91	87	102	95	90	87	93	89	86	91	88	85	89	86	84	82
5	99	92	86	82	98	91	85	81	89	84	81	87	83	80	85	82	79	78
6	95	87	81	77	94	86	81	77	85	80	76	83	79	76	82	78	75	74
7	92	83	77	73	90	82	77	73	81	76	73	80	76	72	79	75	72	71
8	88	79	74	70	87	79	73	70	78	73	69	77	72	69	76	72	69	68
9	85	76	70	67	84	75	70	67	74	70	66	74	69	66	73	69	66	65
10	82	73	67	64	81	72	67	64	72	67	64	71	66	63	70	66	63	62

POLAR GRAPH



Maximum Candela = 5244.192 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.)