



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4PR-TL-L12-9DW-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] 12/12/2019
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4PR-TL-L12-9DW-DIM-UNV-LW-OF-WH
 [LUMINAIRE] Black formed aluminum housing, white reflector, clear glass
 [MORE] s patterned lens enclosure
 [LAMP] One white LED
 [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	1171
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	50
Total Luminaire Watts	23.4
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	30068	30068	30068
55	21636	21636	21636
65	17189	17189	17189
75	14020	14020	14020
85	10349	10349	10349

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4PR-TL-L12-9DW-DIM-UNV-LW-OF-WH_.IES

CANDELA TABULATION

	<u>0</u>
0.0	937.440
0.5	936.800
1.0	934.880
1.5	931.041
2.0	925.922
2.5	919.523
3.0	911.844
3.5	903.526
4.0	894.567
4.5	884.329
5.0	873.451
5.5	862.573
6.0	851.694
6.5	839.537
7.0	828.019
7.5	815.861
8.0	804.343
8.5	792.185
9.0	781.307
9.5	770.428
10.0	759.550
10.5	749.312
11.0	739.714
11.5	730.115
12.0	721.157
12.5	712.838
13.0	704.520
13.5	696.841
14.0	689.802
14.5	682.763
15.0	676.364
15.5	669.966
16.0	664.207
16.5	658.448
17.0	653.968
17.5	648.849
18.0	645.010
18.5	640.531
19.0	636.691
19.5	633.236
20.0	630.100
20.5	627.029
21.0	623.829
21.5	620.694
22.0	617.303
22.5	613.783
23.0	610.136
23.5	606.232
24.0	602.073
24.5	597.530
25.0	592.539
25.5	587.292
26.0	581.661
26.5	575.710

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4PR-TL-L12-9DW-DIM-UNV-LW-OF-WH_.IES

CANDELA TABULATION - (Cont.)

27.0	569.375
27.5	562.912
28.0	556.065
28.5	548.962
29.0	541.667
29.5	534.117
30.0	526.054
30.5	517.416
31.0	508.457
31.5	499.307
32.0	489.580
32.5	479.662
33.0	469.424
33.5	458.674
34.0	447.476
34.5	435.766
35.0	423.928
35.5	411.642
36.0	399.036
36.5	385.982
37.0	372.800
37.5	359.683
38.0	346.501
38.5	333.127
39.0	319.881
39.5	306.828
40.0	294.350
40.5	281.872
41.0	269.906
41.5	258.516
42.0	247.766
42.5	237.527
43.0	227.737
43.5	218.587
44.0	210.012
44.5	202.013
45.0	194.591
45.5	187.744
46.0	181.409
46.5	175.586
47.0	170.147
47.5	165.156
48.0	160.485
48.5	156.069
49.0	151.974
49.5	148.071
50.0	144.359
50.5	140.776
51.0	137.449
51.5	134.249
52.0	131.178
52.5	128.106
53.0	125.099
53.5	122.091
54.0	119.212
54.5	116.332

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4PR-TL-L12-9DW-DIM-UNV-LW-OF-WH_.IES

CANDELA TABULATION - (Cont.)

55.0	113.581
55.5	110.829
56.0	108.206
56.5	105.646
57.0	103.086
57.5	100.463
58.0	97.903
58.5	95.408
59.0	92.912
59.5	90.545
60.0	88.113
60.5	85.809
61.0	83.506
61.5	81.202
62.0	79.026
62.5	76.851
63.0	74.675
63.5	72.564
64.0	70.516
64.5	68.468
65.0	66.485
65.5	64.501
66.0	62.581
66.5	60.662
67.0	58.806
67.5	57.014
68.0	55.223
68.5	53.495
69.0	51.767
69.5	50.039
70.0	48.440
70.5	46.776
71.0	45.176
71.5	43.577
72.0	42.041
72.5	40.505
73.0	38.969
73.5	37.498
74.0	36.026
74.5	34.618
75.0	33.210
75.5	31.803
76.0	30.459
76.5	29.115
77.0	27.771
77.5	26.427
78.0	25.148
78.5	23.804
79.0	22.588
79.5	21.308
80.0	20.093
80.5	18.877
81.0	17.661
81.5	16.509
82.0	15.293
82.5	14.142

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4PR-TL-L12-9DW-DIM-UNV-LW-OF-WH_.IES

CANDELA TABULATION - (Cont.)

83.0	12.990
83.5	11.774
84.0	10.622
84.5	9.406
85.0	8.255
85.5	7.295
86.0	6.463
86.5	5.695
87.0	5.055
87.5	4.479
88.0	3.839
88.5	3.263
89.0	2.688
89.5	2.048
90.0	1.472
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-TL-L12-9DW-DIM-UNV-LW-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
PHOTOMETRIC FILENAME : 4PR-TL-L12-9DW-DIM-UNV-LW-OF-WH_.IES

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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4PR-TL-L12-9DW-DIM-UNV-LW-OF-WH_.IES

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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4PR-TL-L12-9DW-DIM-UNV-LW-OF-WH_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	271.04	N.A.	23.10
0-30	541.42	N.A.	46.20
0-40	801.42	N.A.	68.40
0-60	1059.33	N.A.	90.40
0-80	1161.03	N.A.	99.10
0-90	1171.21	N.A.	100.00
10-90	1091.65	N.A.	93.20
20-40	530.38	N.A.	45.30
20-50	686.11	N.A.	58.60
40-70	324.22	N.A.	27.70
60-80	101.69	N.A.	8.70
70-80	35.38	N.A.	3.00
80-90	10.18	N.A.	0.90
90-110	0.04	N.A.	0.00
90-120	0.04	N.A.	0.00
90-130	0.04	N.A.	0.00
90-150	0.04	N.A.	0.00
90-180	0.04	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1171.25	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	79.56
10-20	191.48
20-30	270.38
30-40	260.00
40-50	155.73
50-60	102.19
60-70	66.31
70-80	35.38
80-90	10.18
90-100	0.04
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4PR-TL-L12-9DW-DIM-UNV-LW-OF-WH_.IES

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	73	73	73	73	71	71	71	71	68	68	68	65	65	65	62	62	62	61
1	68	66	64	62	66	64	62	61	62	60	59	59	58	57	57	56	55	54
2	63	59	56	53	62	58	55	52	56	53	51	54	52	50	52	51	49	48
3	59	54	50	46	57	53	49	46	51	48	45	49	47	44	48	46	44	43
4	55	49	44	41	54	48	44	41	47	43	40	45	42	40	44	41	39	38
5	51	45	40	37	50	44	40	37	43	39	36	42	38	36	41	38	35	34
6	48	41	36	33	47	41	36	33	40	36	33	39	35	33	38	35	32	31
7	45	38	33	30	44	37	33	30	37	33	30	36	32	30	35	32	30	28
8	42	35	31	28	41	35	31	28	34	30	27	33	30	27	33	29	27	26
9	40	33	28	25	39	32	28	25	32	28	25	31	28	25	31	27	25	24
10	38	31	26	24	37	30	26	23	30	26	23	29	26	23	29	26	23	22

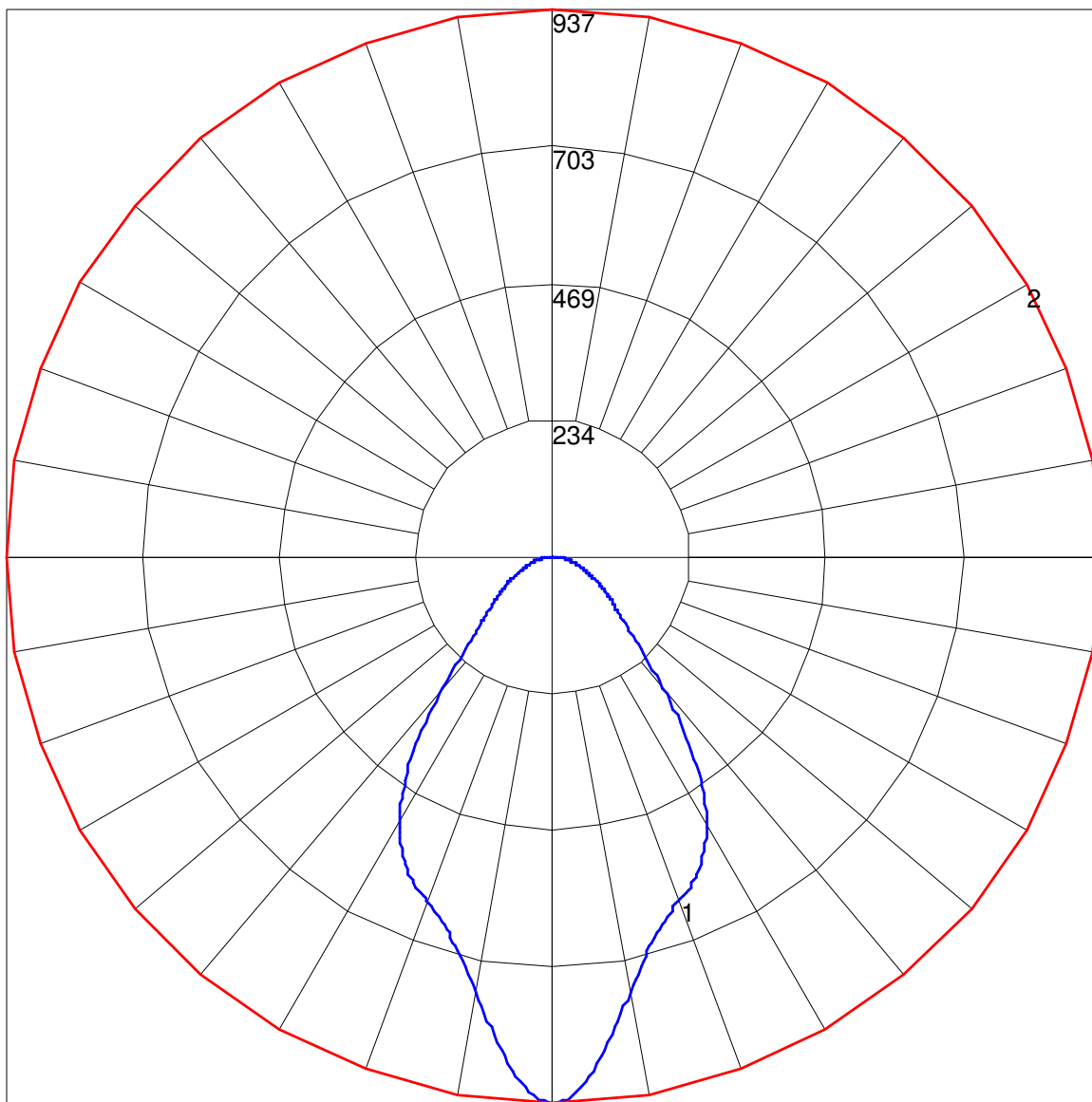
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4PR-TL-L12-9DW-DIM-UNV-LW-OF-WH_.IES

UGR TABLE - CORRECTED

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size											
		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	21.7	23.0	22.0	23.3	23.6	21.7	23.0	22.0	23.3	23.6
	3H	23.0	24.2	23.4	24.6	24.9	23.0	24.2	23.4	24.6	24.9
	4H	23.5	24.7	23.9	25.0	25.4	23.5	24.7	23.9	25.0	25.4
	6H	23.9	24.9	24.4	25.3	25.7	23.9	24.9	24.4	25.3	25.7
	8H	24.1	25.0	24.5	25.4	25.8	24.1	25.0	24.5	25.4	25.8
	12H	24.1	25.0	24.5	25.4	25.8	24.1	25.0	24.5	25.4	25.8
4H	2H	22.1	23.2	22.5	23.6	23.9	22.1	23.2	22.5	23.6	23.9
	3H	23.7	24.6	24.1	25.0	25.4	23.7	24.6	24.1	25.0	25.4
	4H	24.3	25.1	24.8	25.6	26.0	24.3	25.1	24.8	25.6	26.0
	6H	24.8	25.5	25.3	26.0	26.5	24.8	25.5	25.3	26.0	26.5
	8H	25.0	25.7	25.5	26.1	26.6	25.0	25.7	25.5	26.1	26.6
	12H	25.1	25.7	25.6	26.2	26.6	25.1	25.7	25.6	26.2	26.6
8H	4H	24.6	25.2	25.0	25.6	26.1	24.6	25.2	25.0	25.6	26.1
	6H	25.2	25.7	25.7	26.2	26.7	25.2	25.7	25.7	26.2	26.7
	8H	25.4	25.9	25.9	26.4	26.9	25.4	25.9	25.9	26.4	26.9
	12H	25.6	26.0	26.1	26.5	27.1	25.6	26.0	26.1	26.5	27.1
12H	4H	24.6	25.1	25.0	25.6	26.1	24.6	25.1	25.0	25.6	26.1
	6H	25.2	25.7	25.7	26.1	26.7	25.2	25.7	25.7	26.1	26.7
	8H	25.5	25.9	26.0	26.4	27.0	25.5	25.9	26.0	26.4	27.0

Maximum UGR = 27.1

POLAR GRAPH



Maximum Candela = 937.44 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.)