



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4PR-TL-L10-835-DIM-UNV-LW-OF-WH\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN from UL 12316380.33  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUE DATE] 12/112/2019  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 4PR-TL-L10-835-DIM-UNV-LW-OF-WH-DIM-UNV  
 [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	921
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	86
Total Luminaire Watts	10.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.84
Spacing Criterion (90-270)	0.84
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	24002	24002	24002
55	16983	16983	16983
65	13394	13394	13394
75	10867	10867	10867
85	7938	7938	7938

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 4PR-TL-L10-835-DIM-UNV-LW-OF-WH\_.IES

CANDELA TABULATION

	<u>0</u>
0.0	749.582
0.5	748.699
1.0	746.932
1.5	743.692
2.0	739.274
2.5	733.383
3.0	726.609
3.5	718.951
4.0	710.410
4.5	701.279
5.0	691.560
5.5	680.957
6.0	670.059
6.5	659.161
7.0	647.969
7.5	636.482
8.0	625.585
8.5	614.687
9.0	604.378
9.5	594.659
10.0	586.117
10.5	578.165
11.0	570.213
11.5	562.555
12.0	555.781
12.5	549.301
13.0	543.705
13.5	538.109
14.0	533.102
14.5	528.095
15.0	523.088
15.5	518.081
16.0	513.663
16.5	509.245
17.0	505.416
17.5	501.587
18.0	498.347
18.5	495.402
19.0	492.457
19.5	490.100
20.0	487.744
20.5	485.682
21.0	483.621
21.5	481.853
22.0	479.792
22.5	477.435
23.0	474.785
23.5	472.134
24.0	469.483
24.5	466.243
25.0	462.709
25.5	458.880
26.0	454.756
26.5	450.633

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 4PR-TL-L10-835-DIM-UNV-LW-OF-WH\_.IES**

**CANDELA TABULATION - (Cont.)**

<b>27.0</b>	446.215
<b>27.5</b>	441.503
<b>28.0</b>	436.790
<b>28.5</b>	431.489
<b>29.0</b>	426.187
<b>29.5</b>	420.591
<b>30.0</b>	414.700
<b>30.5</b>	408.515
<b>31.0</b>	401.741
<b>31.5</b>	394.967
<b>32.0</b>	387.898
<b>32.5</b>	380.535
<b>33.0</b>	372.582
<b>33.5</b>	364.630
<b>34.0</b>	356.383
<b>34.5</b>	348.136
<b>35.0</b>	339.300
<b>35.5</b>	330.170
<b>36.0</b>	320.745
<b>36.5</b>	311.025
<b>37.0</b>	301.011
<b>37.5</b>	290.968
<b>38.0</b>	280.571
<b>38.5</b>	270.203
<b>39.0</b>	259.806
<b>39.5</b>	249.380
<b>40.0</b>	239.071
<b>40.5</b>	228.821
<b>41.0</b>	218.925
<b>41.5</b>	209.353
<b>42.0</b>	200.164
<b>42.5</b>	191.416
<b>43.0</b>	183.140
<b>43.5</b>	175.452
<b>44.0</b>	168.266
<b>44.5</b>	161.580
<b>45.0</b>	155.336
<b>45.5</b>	149.622
<b>46.0</b>	144.438
<b>46.5</b>	139.637
<b>47.0</b>	135.190
<b>47.5</b>	131.096
<b>48.0</b>	127.296
<b>48.5</b>	123.733
<b>49.0</b>	120.404
<b>49.5</b>	117.223
<b>50.0</b>	114.249
<b>50.5</b>	111.362
<b>51.0</b>	108.623
<b>51.5</b>	105.943
<b>52.0</b>	103.381
<b>52.5</b>	100.877
<b>53.0</b>	98.462
<b>53.5</b>	96.076
<b>54.0</b>	93.749
<b>54.5</b>	91.423

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 4PR-TL-L10-835-DIM-UNV-LW-OF-WH\_.IES**

**CANDELA TABULATION - (Cont.)**

55.0	89.155
55.5	86.975
56.0	84.825
56.5	82.704
57.0	80.613
57.5	78.581
58.0	76.549
58.5	74.605
59.0	72.661
59.5	70.746
60.0	68.861
60.5	67.006
61.0	65.209
61.5	63.383
62.0	61.645
62.5	59.908
63.0	58.258
63.5	56.579
64.0	54.960
64.5	53.369
65.0	51.808
65.5	50.306
66.0	48.804
66.5	47.331
67.0	45.917
67.5	44.474
68.0	43.090
68.5	41.706
69.0	40.321
69.5	38.967
70.0	37.641
70.5	36.316
71.0	35.049
71.5	33.783
72.0	32.546
72.5	31.368
73.0	30.189
73.5	29.041
74.0	27.922
74.5	26.832
75.0	25.742
75.5	24.682
76.0	23.621
76.5	22.561
77.0	21.501
77.5	20.499
78.0	19.469
78.5	18.438
79.0	17.436
79.5	16.464
80.0	15.492
80.5	14.520
81.0	13.578
81.5	12.635
82.0	11.722
82.5	10.809

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : 4PR-TL-L10-835-DIM-UNV-LW-OF-WH\_.IES

CANDELA TABULATION - (Cont.)

83.0	9.896
83.5	8.983
84.0	8.100
84.5	7.216
85.0	6.332
85.5	5.390
86.0	4.447
86.5	3.564
87.0	2.798
87.5	2.121
88.0	1.590
88.5	1.119
89.0	0.766
89.5	0.442
90.0	0.265
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-L10-835-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-L10-835-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-L10-835-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-L10-835-DIM-UNV-LW-OF-WH\_.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	210.31	N.A.	22.80
0-30	421.54	N.A.	45.80
0-40	629.54	N.A.	68.40
0-60	834.58	N.A.	90.60
0-80	913.72	N.A.	99.20
0-90	921.00	N.A.	100.00
10-90	858.63	N.A.	93.20
20-40	419.23	N.A.	45.50
20-50	543.99	N.A.	59.10
40-70	256.76	N.A.	27.90
60-80	79.14	N.A.	8.60
70-80	27.42	N.A.	3.00
80-90	7.28	N.A.	0.80
90-110	0.01	N.A.	0.00
90-120	0.01	N.A.	0.00
90-130	0.01	N.A.	0.00
90-150	0.01	N.A.	0.00
90-180	0.01	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	921.01	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	62.37
10-20	147.94
20-30	211.23
30-40	207.99
40-50	124.76
50-60	80.28
60-70	51.72
70-80	27.42
80-90	7.28
90-100	0.01
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-L10-835-DIM-UNV-LW-OF-WH\_.IES**

**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	35	35	35	35	34	34	34	34	33	33	33	31	31	31	30	30	30	29
1	33	32	31	30	32	31	30	29	30	29	28	29	28	28	28	27	27	26
2	30	29	27	26	30	28	27	25	27	26	25	26	25	24	25	24	24	23
3	28	26	24	22	28	25	24	22	25	23	22	24	23	21	23	22	21	21
4	26	24	21	20	26	23	21	20	22	21	19	22	20	19	21	20	19	18
5	25	22	19	18	24	21	19	18	21	19	17	20	19	17	20	18	17	17
6	23	20	18	16	23	20	17	16	19	17	16	19	17	16	18	17	16	15
7	22	18	16	15	21	18	16	14	18	16	14	17	16	14	17	15	14	14
8	20	17	15	13	20	17	15	13	16	15	13	16	14	13	16	14	13	13
9	19	16	14	12	19	16	14	12	15	13	12	15	13	12	15	13	12	12
10	18	15	13	11	18	15	13	11	14	12	11	14	12	11	14	12	11	11

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4PR-TL-L10-835-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

X=2H	Y=2H	23.3	24.7	23.7	25.0	25.3	23.3	24.7	23.7	25.0	25.3
	3H	24.7	25.9	25.1	26.2	26.6	24.7	25.9	25.1	26.2	26.6
	4H	25.2	26.3	25.6	26.6	27.0	25.2	26.3	25.6	26.6	27.0
	6H	25.6	26.6	26.0	27.0	27.3	25.6	26.6	26.0	27.0	27.3
	8H	25.7	26.6	26.1	27.0	27.4	25.7	26.6	26.1	27.0	27.4
	12H	25.7	26.7	26.2	27.0	27.5	25.7	26.7	26.2	27.0	27.5

### UGR Viewed Endwise

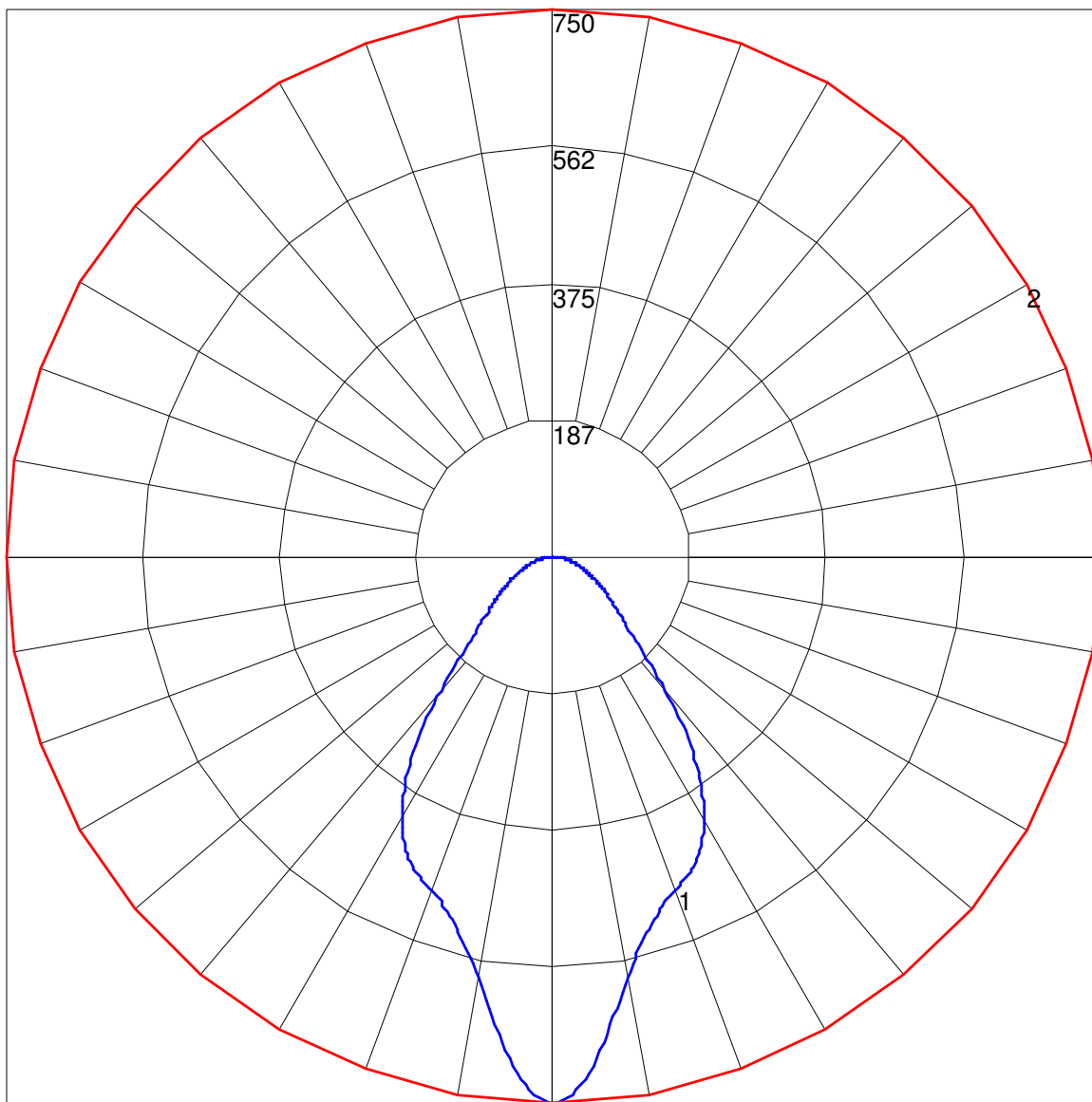
4H	2H	23.8	24.9	24.2	25.2	25.6	23.8	24.9	24.2	25.2	25.6
	3H	25.3	26.3	25.8	26.7	27.1	25.3	26.3	25.8	26.7	27.1
	4H	26.0	26.8	26.4	27.2	27.6	26.0	26.8	26.4	27.2	27.6
	6H	26.5	27.2	26.9	27.6	28.1	26.5	27.2	26.9	27.6	28.1
	8H	26.6	27.3	27.1	27.7	28.2	26.6	27.3	27.1	27.7	28.2
	12H	26.7	27.3	27.2	27.8	28.3	26.7	27.3	27.2	27.8	28.3

8H	4H	26.2	26.8	26.7	27.3	27.8	26.2	26.8	26.7	27.3	27.8
	6H	26.8	27.3	27.3	27.8	28.3	26.8	27.3	27.3	27.8	28.3
	8H	27.0	27.5	27.5	28.0	28.5	27.0	27.5	27.5	28.0	28.5
	12H	27.2	27.6	27.7	28.1	28.7	27.2	27.6	27.7	28.1	28.7

12H	4H	26.2	26.8	26.7	27.2	27.7	26.2	26.8	26.7	27.2	27.7
	6H	26.8	27.3	27.3	27.8	28.3	26.8	27.3	27.3	27.8	28.3
	8H	27.1	27.5	27.6	28.0	28.6	27.1	27.5	27.6	28.0	28.6

Maximum UGR = 28.7

POLAR GRAPH



Maximum Candela = 749.582 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.)