



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4PR-TL-L11-8TW-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.
 [ISSUEDATE] 12/12/2019
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4PR-TL-L11-8TW-DIM-UNV-LW-OF-WH 3000k
 [LUMINAIRE] Black formed aluminum housing, white reflector, clear glas
 [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	1025
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	70
Total Luminaire Watts	14.6
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	26319	26319	26319
55	18938	18938	18938
65	15045	15045	15045
75	12272	12272	12272
85	9058	9058	9058

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CANDELA TABULATION

	<u>0</u>
0.0	820.560
0.5	820.000
1.0	818.320
1.5	814.959
2.0	810.478
2.5	804.877
3.0	798.156
3.5	790.874
4.0	783.033
4.5	774.071
5.0	764.549
5.5	755.027
6.0	745.505
6.5	734.863
7.0	724.781
7.5	714.139
8.0	704.057
8.5	693.415
9.0	683.893
9.5	674.371
10.0	664.850
10.5	655.888
11.0	647.486
11.5	639.085
12.0	631.243
12.5	623.962
13.0	616.680
13.5	609.959
14.0	603.798
14.5	597.637
15.0	592.035
15.5	586.434
16.0	581.393
16.5	576.352
17.0	572.432
17.5	567.951
18.0	564.590
18.5	560.669
19.0	557.309
19.5	554.284
20.0	551.540
20.5	548.851
21.0	546.050
21.5	543.306
22.0	540.337
22.5	537.257
23.0	534.064
23.5	530.647
24.0	527.007
24.5	523.030
25.0	518.661
25.5	514.068
26.0	509.139
26.5	503.930

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CANDELA TABULATION - (Cont.)

27.0	498.385
27.5	492.728
28.0	486.735
28.5	480.518
29.0	474.132
29.5	467.523
30.0	460.466
30.5	452.904
31.0	445.063
31.5	437.053
32.0	428.540
32.5	419.858
33.0	410.896
33.5	401.486
34.0	391.684
34.5	381.434
35.0	371.072
35.5	360.318
36.0	349.284
36.5	337.858
37.0	326.320
37.5	314.837
38.0	303.299
38.5	291.593
39.0	279.999
39.5	268.572
40.0	257.650
40.5	246.728
41.0	236.254
41.5	226.284
42.0	216.874
42.5	207.913
43.0	199.343
43.5	191.333
44.0	183.828
44.5	176.826
45.0	170.329
45.5	164.336
46.0	158.791
46.5	153.694
47.0	148.933
47.5	144.564
48.0	140.475
48.5	136.611
49.0	133.026
49.5	129.609
50.0	126.361
50.5	123.224
51.0	120.311
51.5	117.511
52.0	114.822
52.5	112.134
53.0	109.501
53.5	106.869
54.0	104.348
54.5	101.828

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CANDELA TABULATION - (Cont.)

55.0	99.419
55.5	97.011
56.0	94.714
56.5	92.474
57.0	90.234
57.5	87.937
58.0	85.697
58.5	83.512
59.0	81.328
59.5	79.255
60.0	77.127
60.5	75.111
61.0	73.094
61.5	71.078
62.0	69.173
62.5	67.269
63.0	65.365
63.5	63.516
64.0	61.724
64.5	59.932
65.0	58.195
65.5	56.459
66.0	54.779
66.5	53.098
67.0	51.474
67.5	49.906
68.0	48.337
68.5	46.825
69.0	45.313
69.5	43.801
70.0	42.400
70.5	40.944
71.0	39.544
71.5	38.143
72.0	36.799
72.5	35.455
73.0	34.111
73.5	32.822
74.0	31.534
74.5	30.302
75.0	29.070
75.5	27.837
76.0	26.661
76.5	25.485
77.0	24.309
77.5	23.133
78.0	22.012
78.5	20.836
79.0	19.772
79.5	18.652
80.0	17.587
80.5	16.523
81.0	15.459
81.5	14.451
82.0	13.387
82.5	12.378

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CANDELA TABULATION - (Cont.)

83.0	11.370
83.5	10.306
84.0	9.298
84.5	8.234
85.0	7.225
85.5	6.385
86.0	5.657
86.5	4.985
87.0	4.425
87.5	3.921
88.0	3.361
88.5	2.857
89.0	2.352
89.5	1.792
90.0	1.288
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
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121.0	0.000
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122.0	0.000
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123.5	0.000
124.0	0.000
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125.5	0.000
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126.5	0.000
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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
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133.0	0.000
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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
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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	237.25	N.A.	23.10
0-30	473.92	N.A.	46.20
0-40	701.50	N.A.	68.40
0-60	927.26	N.A.	90.40
0-80	1016.27	N.A.	99.10
0-90	1025.18	N.A.	100.00
10-90	955.54	N.A.	93.20
20-40	464.25	N.A.	45.30
20-50	600.56	N.A.	58.60
40-70	283.80	N.A.	27.70
60-80	89.01	N.A.	8.70
70-80	30.97	N.A.	3.00
80-90	8.91	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	1025.22	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	69.64
10-20	167.61
20-30	236.67
30-40	227.58
40-50	136.31
50-60	89.45
60-70	58.04
70-80	30.97
80-90	8.91
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

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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	73	73	73	73	72	72	72	72	68	68	68	66	66	66	63	63	63	62
1	69	66	64	62	67	65	63	61	62	61	59	60	59	58	58	57	56	55
2	64	60	56	54	62	59	56	53	56	54	52	55	52	51	53	51	49	48
3	59	54	50	47	58	53	49	46	51	48	46	50	47	45	48	46	44	43
4	55	49	45	41	54	48	44	41	47	43	41	46	43	40	44	42	40	38
5	52	45	40	37	50	44	40	37	43	39	37	42	39	36	41	38	36	35
6	48	41	37	33	47	41	37	33	40	36	33	39	35	33	38	35	33	31
7	45	38	34	30	44	38	33	30	37	33	30	36	33	30	35	32	30	29
8	43	35	31	28	42	35	31	28	34	30	28	34	30	28	33	30	27	26
9	40	33	29	26	39	33	28	26	32	28	25	31	28	25	31	28	25	24
10	38	31	27	24	37	31	26	24	30	26	24	29	26	24	29	26	23	22

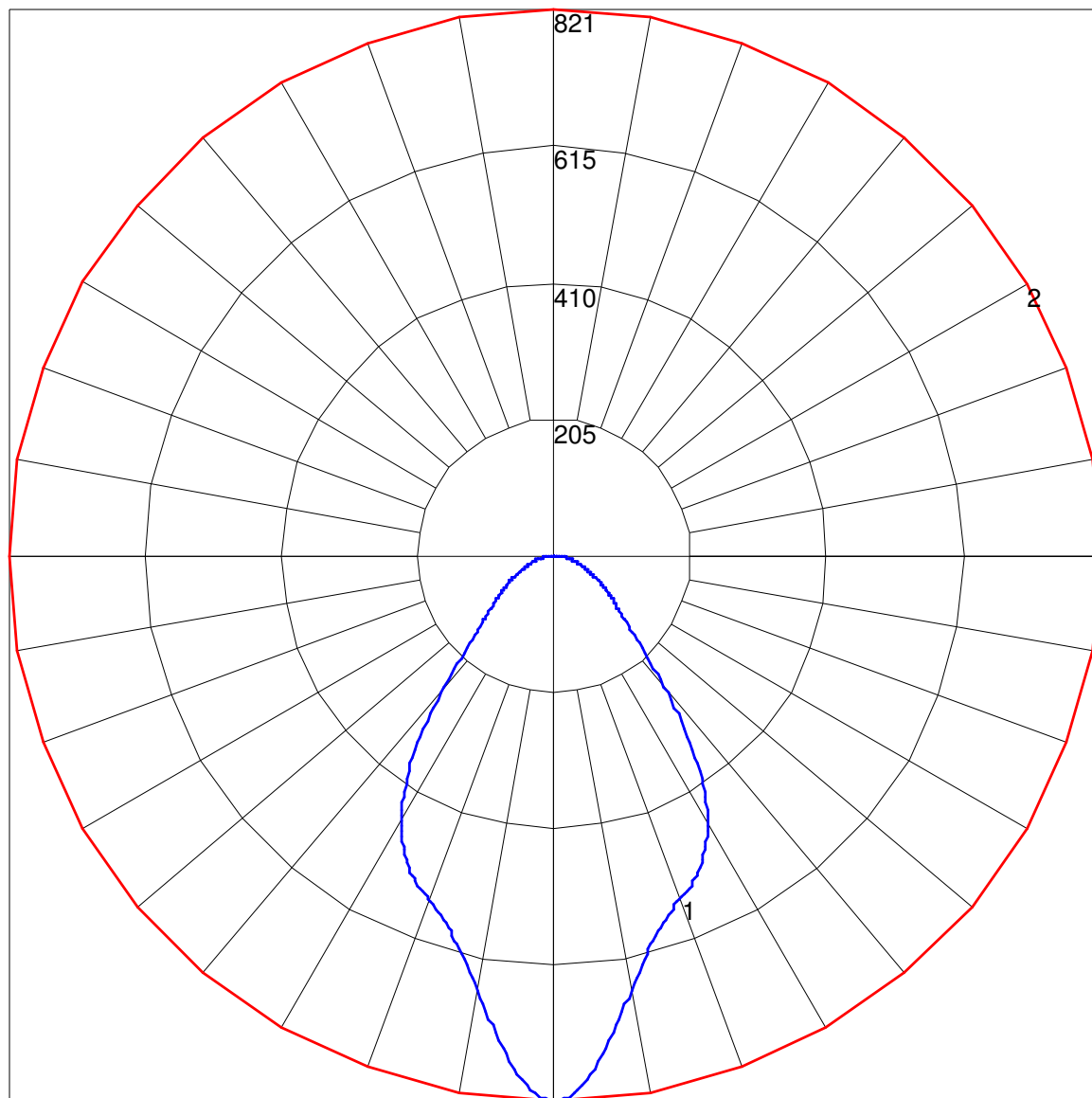
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UGR TABLE - CORRECTED

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	21.1	22.5	21.5	22.8	23.1	21.1	22.5	21.5	22.8	23.1
	3H	22.5	23.7	22.9	24.0	24.4	22.5	23.7	22.9	24.0	24.4
	4H	23.0	24.1	23.4	24.5	24.8	23.0	24.1	23.4	24.5	24.8
	6H	23.4	24.4	23.8	24.8	25.2	23.4	24.4	23.8	24.8	25.2
	8H	23.5	24.5	23.9	24.9	25.3	23.5	24.5	23.9	24.9	25.3
	12H	23.6	24.5	24.0	24.9	25.3	23.6	24.5	24.0	24.9	25.3
4H	2H	21.6	22.7	22.0	23.0	23.4	21.6	22.7	22.0	23.0	23.4
	3H	23.1	24.1	23.6	24.5	24.9	23.1	24.1	23.6	24.5	24.9
	4H	23.8	24.6	24.2	25.0	25.5	23.8	24.6	24.2	25.0	25.5
	6H	24.3	25.0	24.7	25.4	25.9	24.3	25.0	24.7	25.4	25.9
	8H	24.5	25.1	24.9	25.6	26.0	24.5	25.1	24.9	25.6	26.0
	12H	24.6	25.1	25.0	25.6	26.1	24.6	25.1	25.0	25.6	26.1
8H	4H	24.0	24.7	24.5	25.1	25.6	24.0	24.7	24.5	25.1	25.6
	6H	24.6	25.2	25.1	25.7	26.1	24.6	25.2	25.1	25.7	26.1
	8H	24.8	25.3	25.3	25.8	26.3	24.8	25.3	25.3	25.8	26.3
	12H	25.0	25.5	25.5	25.9	26.5	25.0	25.5	25.5	25.9	26.5
12H	4H	24.0	24.6	24.5	25.1	25.5	24.0	24.6	24.5	25.1	25.5
	6H	24.6	25.1	25.2	25.6	26.2	24.6	25.1	25.2	25.6	26.2
	8H	24.9	25.4	25.4	25.9	26.4	24.9	25.4	25.4	25.9	26.4

Maximum UGR = 26.5

POLAR GRAPH



Maximum Candela = 820.56 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.)