



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6PR-TL-L20-830-DIM-UNV-LM-OF-WH\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] GEN FROM 12326812.31  
[TESTLAB] UL Verification Services Inc.  
[ISSUEDATE] 04/15/2021  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
[LUMCAT] 6PR-TL-L20-830-DIM-UNV-LM-OF-WH  
[LUMINAIRE] Black formed aluminum housing, white reflector, frosted pl  
[MORE] astic optic, clear glass patterned lens enclosure  
[LAMP] One white LED

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2194
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	97
Total Luminaire Watts	22.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.60
Spacing Criterion (90-270)	0.60
Spacing Criterion (Diagonal)	0.56
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.46 ft (Diameter)
Luminous Width (90-270)	0.46 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	12112	12112	12112
55	7795	7795	7795
65	5388	5388	5388
75	4127	4127	4127
85	2422	2422	2422

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CANDELA TABULATION

	<u>0</u>
0.0	5047.474
0.5	5045.514
1.0	5038.654
1.5	5028.855
2.0	5015.137
2.5	4996.519
3.0	4973.001
3.5	4946.544
4.0	4917.147
4.5	4885.790
5.0	4850.513
5.5	4811.317
6.0	4769.181
6.5	4721.166
7.0	4670.211
7.5	4615.337
8.0	4554.583
8.5	4488.930
9.0	4418.377
9.5	4342.924
10.0	4263.552
10.5	4177.321
11.0	4086.190
11.5	3988.200
12.0	3887.270
12.5	3780.461
13.0	3667.772
13.5	3551.164
14.0	3429.656
14.5	3304.228
15.0	3175.861
15.5	3046.514
16.0	2914.228
16.5	2782.921
17.0	2651.614
17.5	2520.307
18.0	2391.940
18.5	2266.513
19.0	2144.025
19.5	2024.477
20.0	1908.848
20.5	1797.140
21.0	1690.330
21.5	1588.421
22.0	1489.451
22.5	1396.360
23.0	1310.129
23.5	1225.857
24.0	1147.465
24.5	1072.992
25.0	1004.399
25.5	939.334
26.0	878.972
26.5	822.823

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**CANDELA TABULATION - (Cont.)**

27.0	770.301
27.5	721.894
28.0	676.328
28.5	634.486
29.0	595.780
29.5	559.720
30.0	526.305
30.5	495.046
31.0	466.139
31.5	439.486
32.0	414.596
32.5	391.569
33.0	370.011
33.5	350.021
34.0	331.403
34.5	314.058
35.0	298.086
35.5	283.192
36.0	269.277
36.5	256.342
37.0	244.387
37.5	233.315
38.0	223.026
38.5	213.521
39.0	204.505
39.5	196.176
40.0	188.337
40.5	181.086
41.0	174.129
41.5	167.759
42.0	161.684
42.5	155.902
43.0	150.513
43.5	145.319
44.0	140.322
44.5	135.716
45.0	131.209
45.5	126.995
46.0	122.880
46.5	118.960
47.0	115.138
47.5	111.415
48.0	107.887
48.5	104.458
49.0	101.126
49.5	97.892
50.0	94.854
50.5	91.817
51.0	88.877
51.5	86.035
52.0	83.292
52.5	80.646
53.0	78.098
53.5	75.550
54.0	73.101
54.5	70.749

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**CANDELA TABULATION - (Cont.)**

55.0	68.495
55.5	66.241
56.0	64.086
56.5	62.028
57.0	59.970
57.5	58.010
58.0	56.050
58.5	54.189
59.0	52.425
59.5	50.661
60.0	48.995
60.5	47.329
61.0	45.761
61.5	44.292
62.0	42.822
62.5	41.352
63.0	39.980
63.5	38.608
64.0	37.334
64.5	36.060
65.0	34.884
65.5	33.709
66.0	32.533
66.5	31.455
67.0	30.279
67.5	29.299
68.0	28.221
68.5	27.241
69.0	26.261
69.5	25.281
70.0	24.400
70.5	23.518
71.0	22.636
71.5	21.754
72.0	20.970
72.5	20.186
73.0	19.402
73.5	18.618
74.0	17.834
74.5	17.050
75.0	16.364
75.5	15.580
76.0	14.895
76.5	14.209
77.0	13.523
77.5	12.837
78.0	12.151
78.5	11.465
79.0	10.779
79.5	10.093
80.0	9.407
80.5	8.721
81.0	8.035
81.5	7.447
82.0	6.761
82.5	6.075

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CANDELA TABULATION - (Cont.)

83.0	5.487
83.5	4.900
84.0	4.312
84.5	3.724
85.0	3.234
85.5	2.744
86.0	2.254
86.5	1.862
87.0	1.470
87.5	1.078
88.0	0.882
88.5	0.588
89.0	0.490
89.5	0.294
90.0	0.196
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
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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	1298.47	N.A.	59.20
0-30	1777.25	N.A.	81.00
0-40	1972.49	N.A.	89.90
0-60	2137.74	N.A.	97.40
0-80	2190.21	N.A.	99.80
0-90	2194.3	N.A.	100.00
10-90	1749.57	N.A.	79.70
20-40	674.02	N.A.	30.70
20-50	777.23	N.A.	35.40
40-70	200.29	N.A.	9.10
60-80	52.48	N.A.	2.40
70-80	17.43	N.A.	0.80
80-90	4.09	N.A.	0.20
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	2194.31	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	444.73
10-20	853.74
20-30	478.78
30-40	195.24
40-50	103.21
50-60	62.04
60-70	35.04
70-80	17.43
80-90	4.09
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

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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	109	104	100	97	106	102	99	96	99	96	94	96	94	92	93	92	90	88
3	104	98	93	90	102	97	92	89	94	90	87	92	89	86	89	87	85	83
4	99	92	87	84	98	91	87	83	89	85	82	87	84	81	85	83	80	79
5	95	88	82	78	94	87	82	78	85	81	77	83	80	77	82	79	76	75
6	91	83	78	74	90	83	78	74	81	77	73	80	76	73	79	75	72	71
7	88	79	74	70	86	79	74	70	78	73	70	76	72	69	75	72	69	68
8	84	76	71	67	83	75	70	67	74	70	67	73	69	66	72	69	66	65
9	81	73	68	64	80	72	67	64	71	67	64	71	66	64	70	66	63	62
10	78	70	65	61	77	69	65	61	69	64	61	68	64	61	67	64	61	60

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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

X=2H	Y=2H	12.5	13.5	12.9	13.8	14.2	12.5	13.5	12.9	13.8	14.2
	3H	13.6	14.5	13.9	14.8	15.2	13.6	14.5	13.9	14.8	15.2
	4H	13.9	14.8	14.4	15.1	15.5	13.9	14.8	14.4	15.1	15.5
	6H	14.2	15.0	14.6	15.3	15.7	14.2	15.0	14.6	15.3	15.7
	8H	14.3	15.0	14.7	15.4	15.8	14.3	15.0	14.7	15.4	15.8
	12H	14.3	14.9	14.7	15.3	15.8	14.3	14.9	14.7	15.3	15.8

### UGR Viewed Endwise

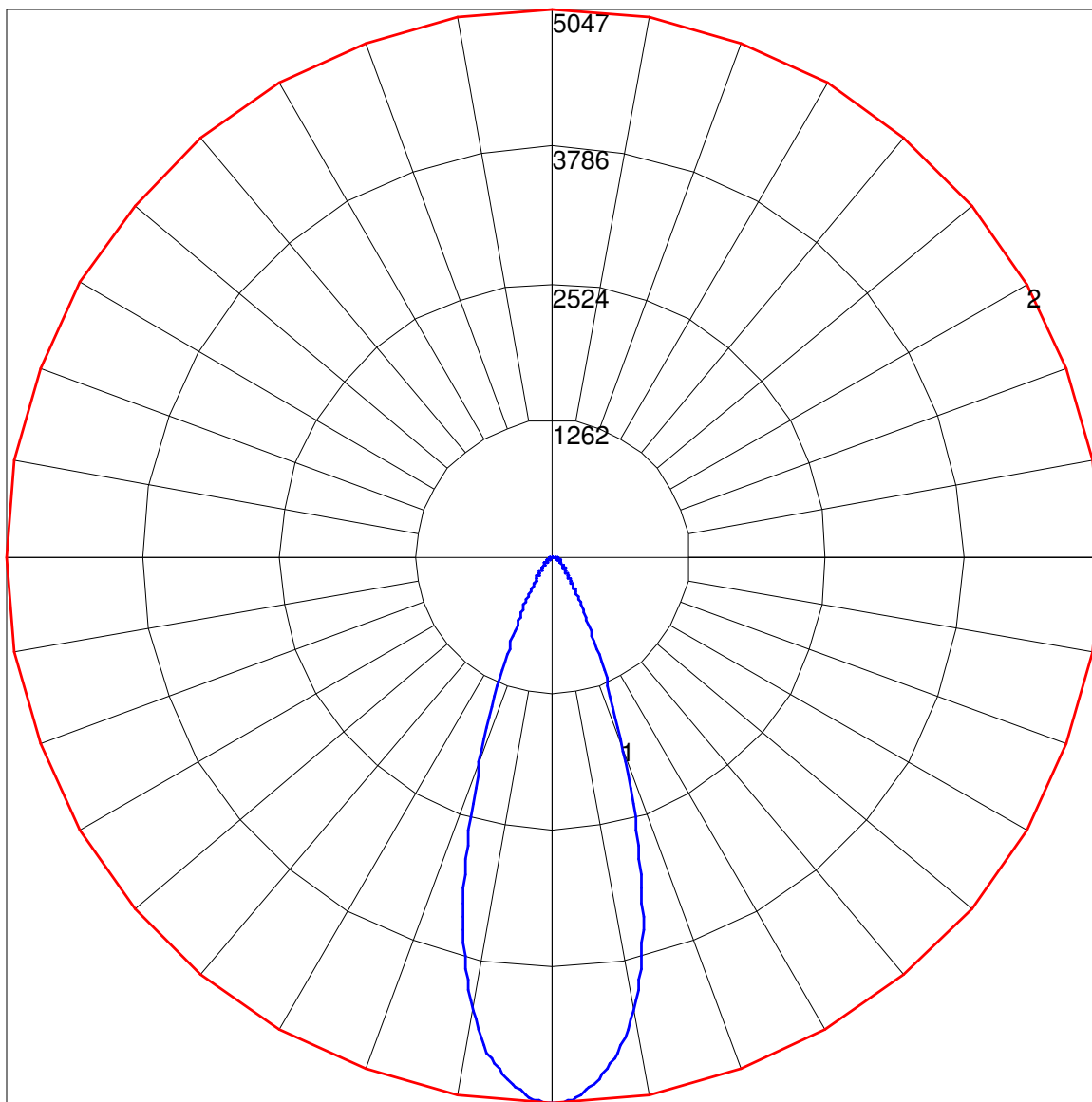
4H	2H	12.8	13.6	13.2	14.0	14.4	12.8	13.6	13.2	14.0	14.4
	3H	14.1	14.7	14.5	15.1	15.5	14.1	14.7	14.5	15.1	15.5
	4H	14.5	15.1	15.0	15.6	16.0	14.5	15.1	15.0	15.6	16.0
	6H	14.9	15.4	15.4	15.9	16.3	14.9	15.4	15.4	15.9	16.3
	8H	15.0	15.5	15.5	15.9	16.4	15.0	15.5	15.5	15.9	16.4
	12H	15.0	15.4	15.5	15.9	16.4	15.0	15.4	15.5	15.9	16.4

8H	4H	14.6	15.1	15.1	15.6	16.1	14.6	15.1	15.1	15.6	16.1
	6H	15.1	15.5	15.6	16.0	16.5	15.1	15.5	15.6	16.0	16.5
	8H	15.2	15.6	15.8	16.1	16.6	15.2	15.6	15.8	16.1	16.6
	12H	15.3	15.6	15.9	16.1	16.7	15.3	15.6	15.9	16.1	16.7

12H	4H	14.6	15.0	15.1	15.5	16.0	14.6	15.0	15.1	15.5	16.0
	6H	15.1	15.5	15.6	15.9	16.5	15.1	15.5	15.6	15.9	16.5
	8H	15.3	15.6	15.8	16.1	16.7	15.3	15.6	15.8	16.1	16.7

Maximum UGR = 16.7

POLAR GRAPH



Maximum Candela = 5047.474 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.)