



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6PR-TL-L20-830-DIM-UNV-LN-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM 12326812.32
[TESTLAB] UL Verification Services Inc.
[ISSUE DATE] 04/14/2021
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
[LUMCAT] 6PR-TL-L20-830-DIM-UNV-LN-OF-WH
[LUMINAIRE] Black formed aluminum housing, white reflector, clear plas
[MORE] tic 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	2215
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	98
Total Luminaire Watts	22.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.44
Spacing Criterion (90-270)	0.44
Spacing Criterion (Diagonal)	0.44
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	9680	9680	9680
55	7316	7316	7316
65	5540	5540	5540
75	3979	3979	3979
85	2422	2422	2422

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CANDELA TABULATION

	<u>0</u>
0.0	8181.040
0.5	8173.200
1.0	8149.680
1.5	8108.520
2.0	8050.700
2.5	7976.220
3.0	7886.060
3.5	7781.200
4.0	7664.580
4.5	7536.200
5.0	7396.060
5.5	7243.180
6.0	7076.580
6.5	6898.220
7.0	6711.040
7.5	6514.060
8.0	6309.240
8.5	6097.560
9.0	5879.020
9.5	5655.580
10.0	5427.240
10.5	5196.940
11.0	4961.740
11.5	4727.520
12.0	4495.260
12.5	4263.980
13.0	4036.620
13.5	3810.240
14.0	3589.740
14.5	3376.100
15.0	3170.300
15.5	2971.360
16.0	2782.220
16.5	2600.920
17.0	2429.420
17.5	2265.760
18.0	2111.900
18.5	1967.840
19.0	1832.600
19.5	1706.180
20.0	1587.600
20.5	1475.880
21.0	1371.020
21.5	1274.980
22.0	1184.820
22.5	1100.540
23.0	1020.180
23.5	946.680
24.0	877.786
24.5	814.282
25.0	755.482
25.5	700.798
26.0	650.524
26.5	604.268

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CANDELA TABULATION - (Cont.)

27.0	561.442
27.5	521.948
28.0	485.688
28.5	452.662
29.0	422.576
29.5	395.038
30.0	369.460
30.5	346.136
31.0	324.870
31.5	305.466
32.0	287.630
32.5	271.460
33.0	256.466
33.5	242.746
34.0	230.202
34.5	218.638
35.0	208.152
35.5	198.450
36.0	189.532
36.5	181.300
37.0	173.754
37.5	166.796
38.0	160.328
38.5	154.448
39.0	148.960
39.5	143.766
40.0	139.062
40.5	134.652
41.0	130.438
41.5	126.616
42.0	122.990
42.5	119.560
43.0	116.326
43.5	113.190
44.0	110.250
44.5	107.506
45.0	104.860
45.5	102.312
46.0	99.862
46.5	97.510
47.0	95.256
47.5	93.002
48.0	90.846
48.5	88.690
49.0	86.632
49.5	84.574
50.0	82.614
50.5	80.654
51.0	78.694
51.5	76.734
52.0	74.970
52.5	73.108
53.0	71.246
53.5	69.482
54.0	67.718
54.5	66.052

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CANDELA TABULATION - (Cont.)

55.0	64.288
55.5	62.622
56.0	61.054
56.5	59.486
57.0	57.918
57.5	56.350
58.0	54.880
58.5	53.410
59.0	51.940
59.5	50.568
60.0	49.098
60.5	47.726
61.0	46.354
61.5	44.982
62.0	43.610
62.5	42.336
63.0	41.062
63.5	39.690
64.0	38.416
64.5	37.142
65.0	35.868
65.5	34.594
66.0	33.418
66.5	32.144
67.0	30.968
67.5	29.890
68.0	28.714
68.5	27.636
69.0	26.558
69.5	25.578
70.0	24.500
70.5	23.618
71.0	22.638
71.5	21.658
72.0	20.678
72.5	19.894
73.0	19.012
73.5	18.130
74.0	17.346
74.5	16.562
75.0	15.778
75.5	14.994
76.0	14.308
76.5	13.524
77.0	12.838
77.5	12.152
78.0	11.466
78.5	10.878
79.0	10.192
79.5	9.604
80.0	8.918
80.5	8.330
81.0	7.742
81.5	7.154
82.0	6.566
82.5	5.978

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CANDELA TABULATION - (Cont.)

83.0	5.390
83.5	4.802
84.0	4.214
84.5	3.626
85.0	3.234
85.5	2.646
86.0	2.156
86.5	1.764
87.0	1.372
87.5	1.176
88.0	0.980
88.5	0.784
89.0	0.588
89.5	0.490
90.0	0.392
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
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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

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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
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150.5	0.000
151.0	0.000
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152.0	0.000
152.5	0.000
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153.5	0.000
154.0	0.000
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155.5	0.000
156.0	0.000
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157.0	0.000
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158.5	0.000
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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	1514.25	N.A.	68.40
0-30	1881.22	N.A.	84.90
0-40	2018.55	N.A.	91.10
0-60	2158.52	N.A.	97.40
0-80	2211.23	N.A.	99.80
0-90	2215.23	N.A.	100.00
10-90	1573.4	N.A.	71.00
20-40	504.30	N.A.	22.80
20-50	586.39	N.A.	26.50
40-70	175.71	N.A.	7.90
60-80	52.71	N.A.	2.40
70-80	16.97	N.A.	0.80
80-90	4.00	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	2215.25	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	641.84
10-20	872.42
20-30	366.97
30-40	137.33
40-50	82.09
50-60	57.88
60-70	35.74
70-80	16.97
80-90	4.00
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	112	109	107	112	110	108	106	106	104	102	102	101	99	98	97	97	95
2	109	105	102	99	107	104	100	98	100	98	95	97	95	93	95	93	92	90
3	105	100	95	92	103	98	94	91	96	92	90	93	91	88	91	89	87	86
4	101	95	90	86	99	94	89	86	92	88	85	90	87	84	88	85	83	82
5	97	90	86	82	96	90	85	82	88	84	81	86	83	80	85	82	80	78
6	94	87	82	78	93	86	81	78	84	80	77	83	80	77	82	79	76	75
7	91	83	78	75	90	83	78	75	81	77	74	80	77	74	79	76	74	72
8	88	80	75	72	87	80	75	72	79	74	72	78	74	71	77	73	71	70
9	85	77	73	69	84	77	72	69	76	72	69	75	72	69	74	71	69	68
10	82	75	70	67	82	74	70	67	74	70	67	73	69	67	72	69	66	65

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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	12.3	13.3	12.7	13.7	14.0	UGR Viewed Endwise	12.3	13.3	12.7	13.7	14.0
	3H	13.5	14.4	13.9	14.7	15.1		13.5	14.4	13.9	14.7	15.1
	4H	13.9	14.7	14.3	15.0	15.4		13.9	14.7	14.3	15.0	15.4
	6H	14.1	14.8	14.5	15.2	15.6		14.1	14.8	14.5	15.2	15.6
	8H	14.1	14.8	14.6	15.2	15.6		14.1	14.8	14.6	15.2	15.6
	12H	14.2	14.8	14.6	15.2	15.6		14.2	14.8	14.6	15.2	15.6

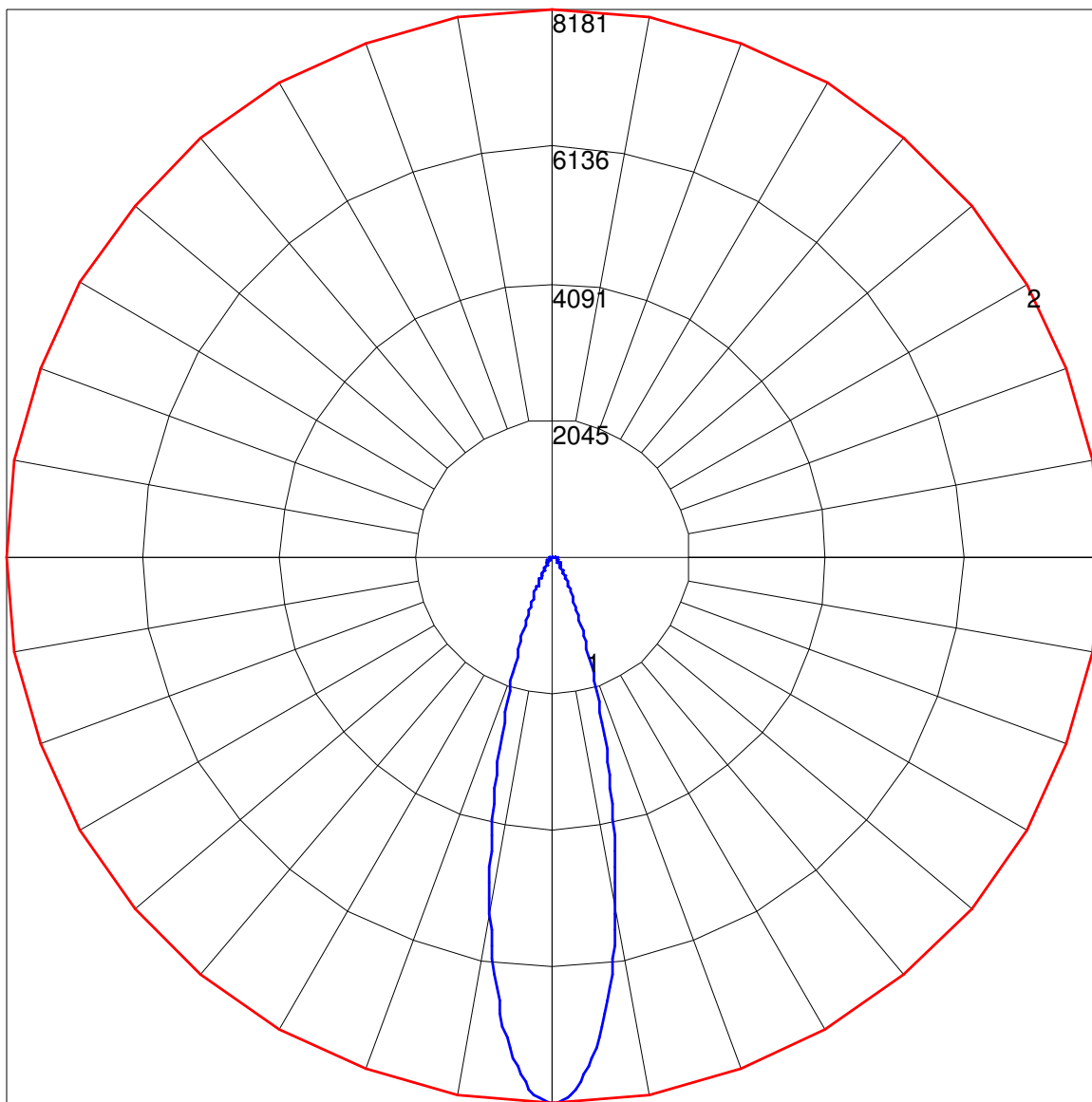
4H	2H	12.7	13.5	13.1	13.9	14.2	12.7	13.5	13.1	13.9	14.2
	3H	14.0	14.7	14.4	15.1	15.5	14.0	14.7	14.4	15.1	15.5
	4H	14.5	15.1	14.9	15.5	15.9	14.5	15.1	14.9	15.5	15.9
	6H	14.8	15.3	15.2	15.7	16.2	14.8	15.3	15.2	15.7	16.2
	8H	14.9	15.3	15.3	15.8	16.3	14.9	15.3	15.3	15.8	16.3
	12H	14.9	15.3	15.4	15.8	16.3	14.9	15.3	15.4	15.8	16.3

8H	4H	14.5	15.0	15.0	15.5	16.0	14.5	15.0	15.0	15.5	16.0
	6H	15.0	15.4	15.5	15.9	16.3	15.0	15.4	15.5	15.9	16.3
	8H	15.1	15.5	15.7	16.0	16.5	15.1	15.5	15.7	16.0	16.5
	12H	15.2	15.5	15.7	16.0	16.6	15.2	15.5	15.7	16.0	16.6

12H	4H	14.5	14.9	15.0	15.4	15.9	14.5	14.9	15.0	15.4	15.9
	6H	15.0	15.3	15.5	15.8	16.3	15.0	15.3	15.5	15.8	16.3
	8H	15.2	15.4	15.7	15.9	16.5	15.2	15.4	15.7	15.9	16.5

Maximum UGR = 16.6

POLAR GRAPH



Maximum Candela = 8181.04 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.)