



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 6PR-TL-L21-8TW-DIM-UNV-LW-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from 12326812.29
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 6/JAN/2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 6PR-TL-L21-8TW-DIM-UNV-LW-OF-WH 4000k
 [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	2162
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	90
Total Luminaire Watts	24
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.26
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	50238	50238	50238
55	24805	24805	24805
65	16802	16802	16802
75	12496	12496	12496
85	8653	8653	8653

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CANDELA TABULATION

	<u>0</u>
0.0	1144.646
0.5	1143.667
1.0	1142.687
1.5	1141.708
2.0	1139.750
2.5	1137.792
3.0	1134.854
3.5	1132.896
4.0	1129.958
4.5	1127.021
5.0	1124.083
5.5	1121.146
6.0	1118.208
6.5	1115.271
7.0	1112.333
7.5	1108.417
8.0	1105.479
8.5	1102.542
9.0	1098.625
9.5	1094.708
10.0	1091.771
10.5	1087.854
11.0	1083.937
11.5	1081.000
12.0	1077.083
12.5	1073.167
13.0	1069.250
13.5	1065.333
14.0	1061.417
14.5	1057.500
15.0	1052.604
15.5	1048.687
16.0	1044.771
16.5	1040.854
17.0	1035.958
17.5	1032.042
18.0	1029.104
18.5	1025.187
19.0	1021.271
19.5	1017.354
20.0	1013.437
20.5	1010.500
21.0	1006.583
21.5	1002.667
22.0	997.771
22.5	992.875
23.0	988.958
23.5	983.083
24.0	978.481
24.5	973.292
25.0	968.004
25.5	962.717
26.0	957.429
26.5	951.946

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CANDELA TABULATION - (Cont.)

27.0	946.560
27.5	941.175
28.0	935.790
28.5	930.502
29.0	925.410
29.5	920.221
30.0	914.640
30.5	909.058
31.0	903.183
31.5	897.112
32.0	890.454
32.5	883.404
33.0	876.158
33.5	868.325
34.0	859.904
34.5	850.896
35.0	841.496
35.5	831.312
36.0	820.737
36.5	809.575
37.0	797.727
37.5	785.585
38.0	772.856
38.5	759.344
39.0	745.342
39.5	730.654
40.0	715.673
40.5	700.006
41.0	684.633
41.5	668.575
42.0	652.223
42.5	635.185
43.0	617.854
43.5	599.935
44.0	581.821
44.5	563.217
45.0	544.221
45.5	524.637
46.0	504.467
46.5	484.100
47.0	463.537
47.5	443.171
48.0	422.902
48.5	402.829
49.0	383.540
49.5	364.446
50.0	346.625
50.5	329.294
51.0	313.235
51.5	298.156
52.0	284.056
52.5	270.935
53.0	258.598
53.5	247.142
54.0	236.762
54.5	226.971

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CANDELA TABULATION - (Cont.)

55.0	217.962
55.5	209.640
56.0	201.904
56.5	194.658
57.0	187.608
57.5	181.048
58.0	174.879
58.5	168.906
59.0	163.423
59.5	158.135
60.0	152.848
60.5	147.854
61.0	142.958
61.5	138.258
62.0	133.656
62.5	129.250
63.0	124.942
63.5	120.731
64.0	116.619
64.5	112.702
65.0	108.785
65.5	105.065
66.0	101.344
66.5	97.721
67.0	94.196
67.5	90.867
68.0	87.440
68.5	84.306
69.0	81.075
69.5	78.040
70.0	75.004
70.5	72.165
71.0	69.423
71.5	66.681
72.0	64.037
72.5	61.590
73.0	59.044
73.5	56.596
74.0	54.246
74.5	51.896
75.0	49.546
75.5	47.392
76.0	45.140
76.5	43.083
77.0	40.929
77.5	38.873
78.0	36.817
78.5	34.858
79.0	32.900
79.5	30.942
80.0	29.081
80.5	27.221
81.0	25.360
81.5	23.500
82.0	21.737
82.5	19.975

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CANDELA TABULATION - (Cont.)

83.0	18.212
83.5	16.548
84.0	14.785
84.5	13.219
85.0	11.554
85.5	9.987
86.0	8.421
86.5	6.952
87.0	5.581
87.5	4.406
88.0	3.427
88.5	2.546
89.0	1.860
89.5	1.273
90.0	0.783
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
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124.0	0.000
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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
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132.5	0.000
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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
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	403.50	N.A.	18.70
0-30	849.57	N.A.	39.30
0-40	1369.93	N.A.	63.40
0-60	1986.26	N.A.	91.90
0-80	2148.55	N.A.	99.40
0-90	2162.23	N.A.	100.00
10-90	2055.96	N.A.	95.10
20-40	966.44	N.A.	44.70
20-50	1379.34	N.A.	63.80
40-70	725.48	N.A.	33.60
60-80	162.29	N.A.	7.50
70-80	53.14	N.A.	2.50
80-90	13.68	N.A.	0.60
90-110	0.02	N.A.	0.00
90-120	0.02	N.A.	0.00
90-130	0.02	N.A.	0.00
90-150	0.02	N.A.	0.00
90-180	0.02	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2162.25	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	106.27
10-20	297.23
20-30	446.08
30-40	520.36
40-50	412.90
50-60	203.43
60-70	109.15
70-80	53.14
80-90	13.68
90-100	0.02
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	224	224	224	224	219	219	219	219	209	209	209	200	200	200	192	192	192	188
1	209	202	196	190	204	198	192	187	190	186	181	183	179	176	176	173	171	167
2	194	182	171	163	190	178	169	161	172	164	157	166	159	154	160	155	150	147
3	180	164	151	141	176	161	149	140	155	145	137	151	142	135	146	139	133	129
4	167	148	134	123	163	146	133	123	141	130	121	137	127	119	133	125	118	114
5	155	135	120	109	152	133	119	109	129	117	108	125	115	107	122	113	105	102
6	145	123	108	98	141	121	107	97	118	106	96	115	104	96	112	102	95	91
7	135	113	98	88	132	111	97	87	108	96	87	106	95	86	103	93	86	82
8	126	104	89	79	124	102	89	79	100	88	79	98	87	78	96	86	78	75
9	119	96	82	72	116	95	81	72	93	80	72	91	80	71	89	79	71	68
10	112	89	75	66	109	88	75	66	86	74	66	84	73	66	83	73	65	62

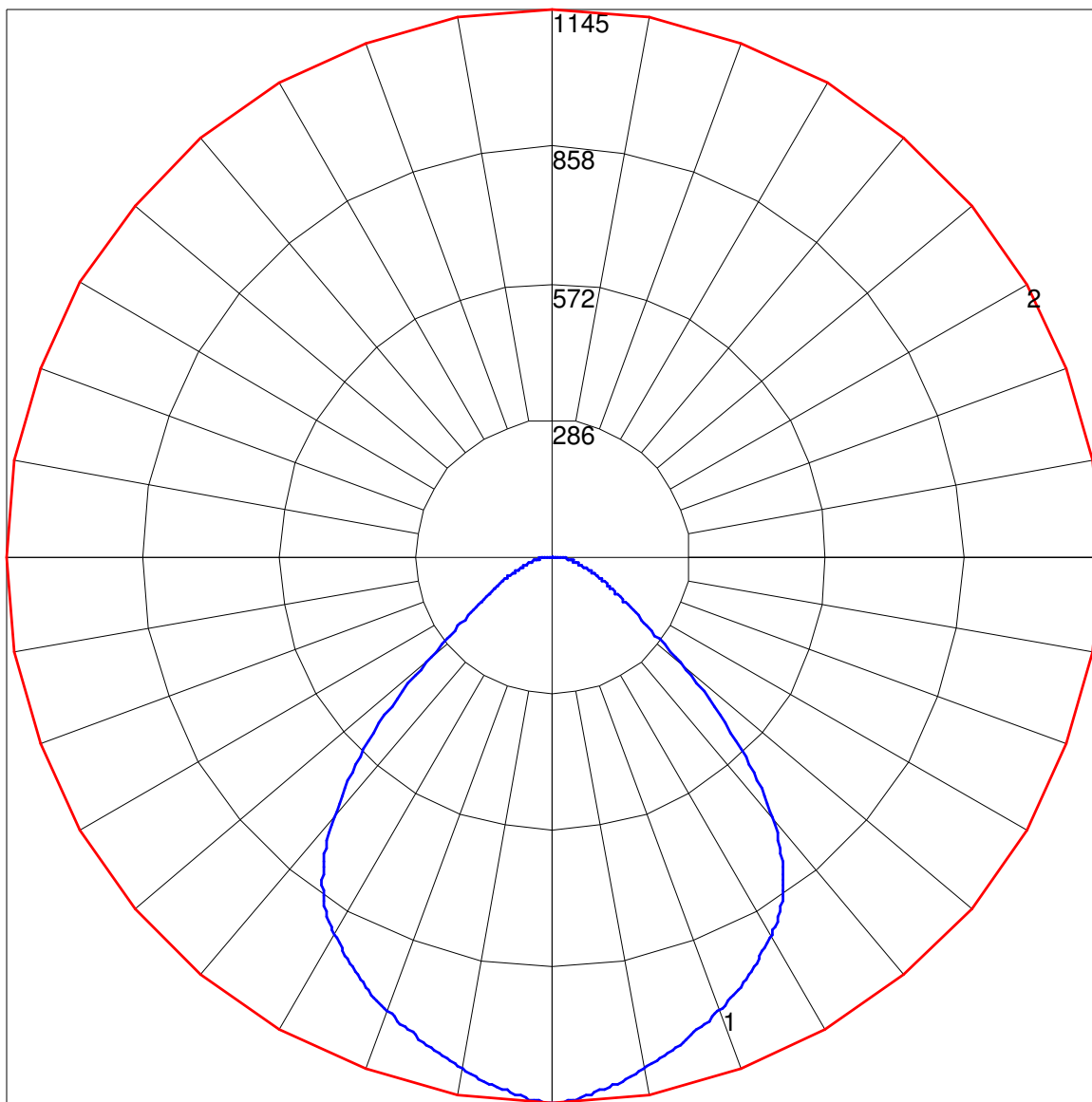
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UGR TABLE - CORRECTED

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	17.8	19.2	18.1	19.5	19.8	17.8	19.2	18.1	19.5	19.8
	3H	18.9	20.1	19.3	20.4	20.8	18.9	20.1	19.3	20.4	20.8
	4H	19.3	20.4	19.7	20.8	21.1	19.3	20.4	19.7	20.8	21.1
	6H	19.5	20.6	19.9	21.0	21.4	19.5	20.6	19.9	21.0	21.4
	8H	19.6	20.6	20.0	21.0	21.4	19.6	20.6	20.0	21.0	21.4
	12H	19.7	20.6	20.1	21.0	21.4	19.7	20.6	20.1	21.0	21.4
4H	2H	18.2	19.3	18.6	19.6	20.0	18.2	19.3	18.6	19.6	20.0
	3H	19.4	20.4	19.8	20.8	21.2	19.4	20.4	19.8	20.8	21.2
	4H	19.9	20.8	20.4	21.2	21.6	19.9	20.8	20.4	21.2	21.6
	6H	20.3	21.0	20.8	21.5	22.0	20.3	21.0	20.8	21.5	22.0
	8H	20.4	21.1	20.9	21.6	22.0	20.4	21.1	20.9	21.6	22.0
	12H	20.5	21.1	21.0	21.6	22.1	20.5	21.1	21.0	21.6	22.1
8H	4H	20.1	20.8	20.6	21.2	21.7	20.1	20.8	20.6	21.2	21.7
	6H	20.6	21.1	21.1	21.6	22.1	20.6	21.1	21.1	21.6	22.1
	8H	20.7	21.2	21.3	21.8	22.2	20.7	21.2	21.3	21.8	22.2
	12H	20.9	21.3	21.4	21.8	22.4	20.9	21.3	21.4	21.8	22.4
12H	4H	20.1	20.7	20.6	21.2	21.6	20.1	20.7	20.6	21.2	21.6
	6H	20.6	21.1	21.1	21.6	22.1	20.6	21.1	21.1	21.6	22.1
	8H	20.8	21.2	21.3	21.7	22.3	20.8	21.2	21.3	21.7	22.3

Maximum UGR = 22.4

POLAR GRAPH



Maximum Candela = 1144.646 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.)