



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4PR-TL-L15-930-DIM-UNV-LM-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM 12316380.31
[TESTLAB] UL Verification Services Inc.
[ISSUEDATE] 27 JAN 2022
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
[LUMCAT] 4PR-TL-L15-930-DIM-UNV-LM-OF-WH
[LUMINAIRE] Black formed aluminum housing, clear plastic optic, white
[MORE] reflector, clear glass patterned lens enclosure
[LAMP] One white LED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1292
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	77
Total Luminaire Watts	16.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.58
Spacing Criterion (90-270)	0.58
Spacing Criterion (Diagonal)	0.56
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	11697	11697	11697
55	7453	7453	7453
65	5818	5818	5818
75	4916	4916	4916
85	3651	3651	3651

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CANDELA TABULATION

	<u>0</u>
0.0	3035.290
0.5	3034.077
1.0	3028.617
1.5	3020.732
2.0	3008.601
2.5	2994.043
3.0	2976.452
3.5	2956.435
4.0	2933.386
4.5	2909.123
5.0	2881.827
5.5	2852.105
6.0	2819.956
6.5	2784.775
7.0	2747.168
7.5	2706.527
8.0	2662.854
8.5	2616.148
9.0	2567.016
9.5	2514.850
10.0	2459.652
10.5	2402.028
11.0	2341.977
11.5	2279.500
12.0	2215.810
12.5	2149.694
13.0	2081.757
13.5	2012.608
14.0	1942.246
14.5	1871.277
15.0	1800.308
15.5	1728.732
16.0	1657.157
16.5	1586.188
17.0	1515.825
17.5	1446.069
18.0	1376.920
18.5	1309.590
19.0	1244.687
19.5	1180.997
20.0	1117.913
20.5	1057.863
21.0	999.025
21.5	942.614
22.0	888.022
22.5	835.251
23.0	785.512
23.5	738.199
24.0	693.313
24.5	651.459
25.0	610.819
25.5	572.605
26.0	537.059
26.5	503.455

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CANDELA TABULATION - (Cont.)

27.0	472.096
27.5	442.737
28.0	415.502
28.5	390.208
29.0	366.613
29.5	344.594
30.0	324.092
30.5	304.863
31.0	287.152
31.5	270.774
32.0	255.488
32.5	241.113
33.0	227.768
33.5	215.333
34.0	203.808
34.5	193.072
35.0	183.064
35.5	173.722
36.0	164.927
36.5	156.860
37.0	149.156
37.5	141.999
38.0	135.448
38.5	129.261
39.0	123.498
39.5	118.039
40.0	112.883
40.5	108.031
41.0	103.542
41.5	99.296
42.0	95.353
42.5	91.532
43.0	88.014
43.5	84.678
44.0	81.523
44.5	78.551
45.0	75.700
45.5	72.971
46.0	70.362
46.5	67.875
47.0	65.510
47.5	63.266
48.0	61.082
48.5	59.020
49.0	57.078
49.5	55.198
50.0	53.378
50.5	51.680
51.0	50.042
51.5	48.465
52.0	46.949
52.5	45.554
53.0	44.158
53.5	42.824
54.0	41.550
54.5	40.337

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CANDELA TABULATION - (Cont.)

55.0	39.124
55.5	37.971
56.0	36.880
56.5	35.848
57.0	34.817
57.5	33.847
58.0	32.876
58.5	32.027
59.0	31.117
59.5	30.268
60.0	29.479
60.5	28.691
61.0	27.902
61.5	27.174
62.0	26.447
62.5	25.779
63.0	25.051
63.5	24.384
64.0	23.717
64.5	23.110
65.0	22.504
65.5	21.897
66.0	21.291
66.5	20.684
67.0	20.078
67.5	19.532
68.0	18.925
68.5	18.379
69.0	17.833
69.5	17.287
70.0	16.741
70.5	16.256
71.0	15.710
71.5	15.164
72.0	14.679
72.5	14.194
73.0	13.648
73.5	13.163
74.0	12.677
74.5	12.192
75.0	11.646
75.5	11.161
76.0	10.676
76.5	10.190
77.0	9.705
77.5	9.220
78.0	8.795
78.5	8.310
79.0	7.825
79.5	7.340
80.0	6.915
80.5	6.430
81.0	6.005
81.5	5.580
82.0	5.156
82.5	4.731

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CANDELA TABULATION - (Cont.)

83.0	4.307
83.5	3.943
84.0	3.579
84.5	3.215
85.0	2.912
85.5	2.608
86.0	2.305
86.5	2.062
87.0	1.820
87.5	1.577
88.0	1.334
88.5	1.152
89.0	0.971
89.5	0.789
90.0	0.667
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
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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
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147.5	0.000
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159.5	0.000
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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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Zone	Lumens	%Lamp	%Fixt
0-20	749.95	N.A.	58.00
0-30	1038.67	N.A.	80.40
0-40	1158.31	N.A.	89.70
0-60	1253.7	N.A.	97.00
0-80	1288.49	N.A.	99.70
0-90	1291.99	N.A.	100.00
10-90	1030.2	N.A.	79.70
20-40	408.36	N.A.	31.60
20-50	468.18	N.A.	36.20
40-70	117.83	N.A.	9.10
60-80	34.79	N.A.	2.70
70-80	12.36	N.A.	1.00
80-90	3.50	N.A.	0.30
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	1292.01	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	261.79
10-20	488.16
20-30	288.72
30-40	119.64
40-50	59.82
50-60	35.57
60-70	22.44
70-80	12.36
80-90	3.50
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	111	109	106	111	109	107	105	105	103	102	101	100	98	98	97	96	94
2	108	104	100	97	106	102	99	96	99	96	94	96	94	92	93	91	90	88
3	104	98	93	89	102	96	92	89	94	90	87	91	88	86	89	87	84	83
4	99	92	87	83	97	91	86	83	89	85	82	87	84	81	85	82	80	78
5	95	87	82	78	93	86	81	78	85	80	77	83	79	76	82	78	76	74
6	91	83	78	74	90	82	77	73	81	76	73	79	75	72	78	75	72	71
7	87	79	74	70	86	78	73	70	77	73	69	76	72	69	75	71	69	67
8	84	76	70	67	83	75	70	66	74	69	66	73	69	66	72	68	66	64
9	81	72	67	64	80	72	67	64	71	66	63	70	66	63	69	66	63	62
10	78	69	64	61	77	69	64	61	68	64	61	68	63	61	67	63	60	59

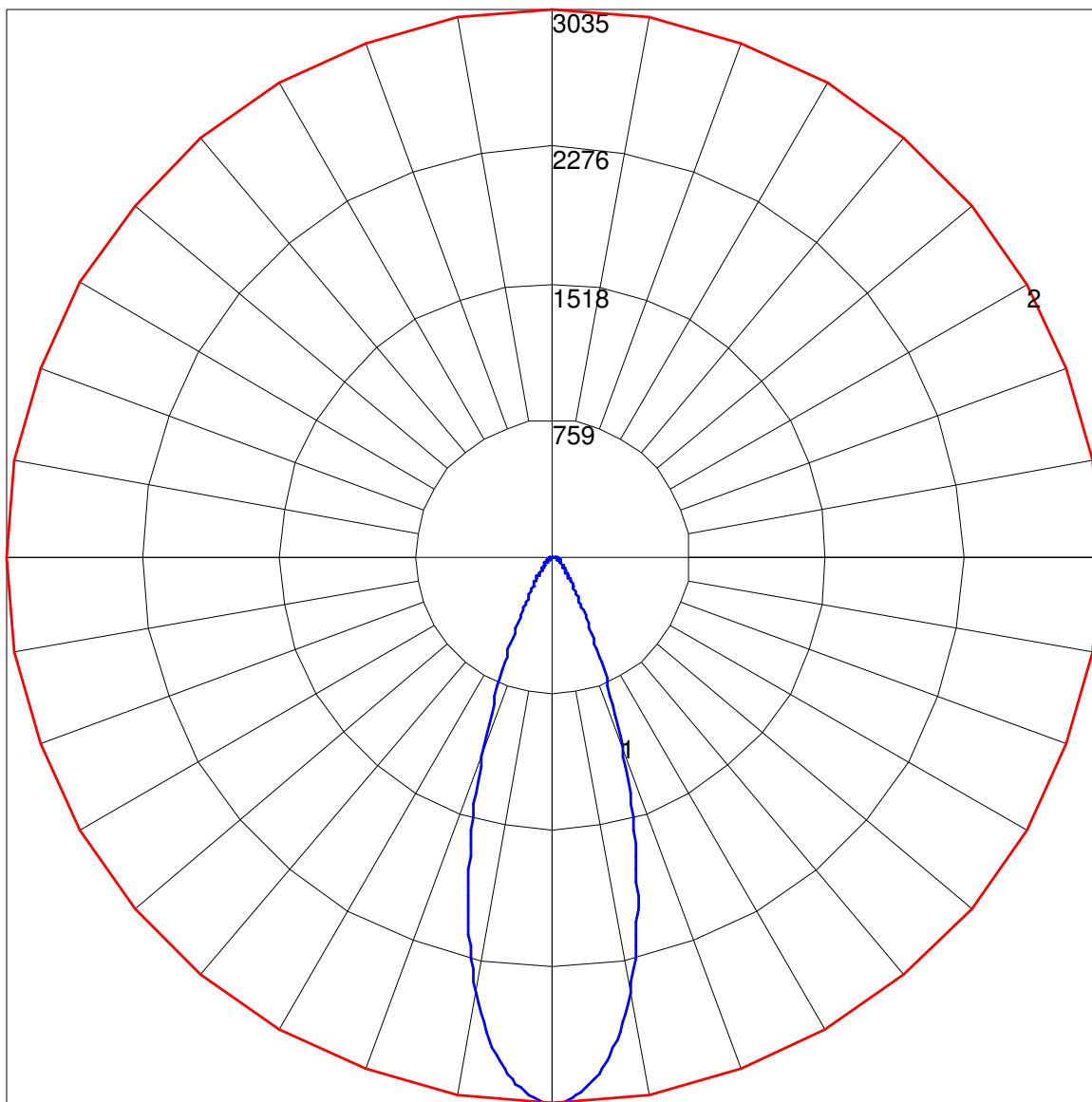
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UGR TABLE - CORRECTED

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	12.3	13.4	12.7	13.7	14.0	12.3	13.4	12.7	13.7	14.0
	3H	13.7	14.6	14.1	15.0	15.3	13.7	14.6	14.1	15.0	15.3
	4H	14.3	15.1	14.7	15.5	15.8	14.3	15.1	14.7	15.5	15.8
	6H	14.6	15.4	15.0	15.8	16.2	14.6	15.4	15.0	15.8	16.2
	8H	14.7	15.5	15.2	15.8	16.3	14.7	15.5	15.2	15.8	16.3
	12H	14.8	15.5	15.2	15.9	16.3	14.8	15.5	15.2	15.9	16.3
4H	2H	12.7	13.6	13.2	13.9	14.3	12.7	13.6	13.2	13.9	14.3
	3H	14.3	15.0	14.8	15.4	15.8	14.3	15.0	14.8	15.4	15.8
	4H	15.0	15.6	15.4	16.0	16.5	15.0	15.6	15.4	16.0	16.5
	6H	15.5	16.0	16.0	16.5	16.9	15.5	16.0	16.0	16.5	16.9
	8H	15.6	16.1	16.1	16.6	17.0	15.6	16.1	16.1	16.6	17.0
	12H	15.7	16.1	16.2	16.6	17.1	15.7	16.1	16.2	16.6	17.1
8H	4H	15.2	15.7	15.7	16.1	16.6	15.2	15.7	15.7	16.1	16.6
	6H	15.8	16.2	16.3	16.7	17.2	15.8	16.2	16.3	16.7	17.2
	8H	16.0	16.3	16.5	16.9	17.4	16.0	16.3	16.5	16.9	17.4
	12H	16.1	16.4	16.7	16.9	17.5	16.1	16.4	16.7	16.9	17.5
12H	4H	15.2	15.6	15.7	16.1	16.6	15.2	15.6	15.7	16.1	16.6
	6H	15.8	16.1	16.3	16.6	17.2	15.8	16.1	16.3	16.6	17.2
	8H	16.0	16.4	16.6	16.9	17.4	16.0	16.4	16.6	16.9	17.4

Maximum UGR = 17.5

POLAR GRAPH



Maximum Candela = 3035.29 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.)