



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L30-935-DIM-UNV-RW-OF-WH_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM 12316380.12
 [TESTLAB] UL Verification Services Inc.
 [ISSUEDATE] 08-05-2022
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4DR-TL-L30-935-DIM-UNV-RW-OF-WH
 [LUMINAIRE] Black formed aluminum housing, white reflector, clear glas
 [MORE] s patterned lens enclosure
 [LAMP] One white LED
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1623
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	58
Total Luminaire Watts	27.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.98
Spacing Criterion (90-270)	0.98
Spacing Criterion (Diagonal)	0.88
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.38 ft (Diameter)
Luminous Width (90-270)	0.38 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	37546	37546	37546
55	30317	30317	30317
65	19612	19612	19612
75	10936	10936	10936
85	5618	5618	5618

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CANDELA TABULATION

	<u>0</u>
0.0	1303.866
0.5	1303.866
1.0	1302.640
1.5	1300.186
2.0	1297.733
2.5	1295.280
3.0	1291.600
3.5	1287.921
4.0	1284.241
4.5	1279.334
5.0	1275.655
5.5	1270.748
6.0	1265.842
6.5	1260.936
7.0	1256.029
7.5	1251.123
8.0	1246.216
8.5	1240.083
9.0	1235.177
9.5	1230.271
10.0	1225.610
10.5	1220.581
11.0	1215.429
11.5	1210.400
12.0	1205.616
12.5	1200.833
13.0	1196.049
13.5	1191.143
14.0	1186.236
14.5	1181.330
15.0	1176.301
15.5	1171.149
16.0	1165.752
16.5	1160.355
17.0	1154.835
17.5	1148.948
18.0	1142.692
18.5	1135.946
19.0	1129.445
19.5	1122.453
20.0	1114.849
20.5	1106.140
21.0	1096.082
21.5	1085.165
22.0	1072.654
22.5	1058.793
23.0	1043.093
23.5	1025.430
24.0	1006.050
24.5	984.094
25.0	959.562
25.5	932.454
26.0	903.139
26.5	871.984

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CANDELA TABULATION - (Cont.)

27.0	839.234
27.5	805.993
28.0	771.158
28.5	736.691
29.0	702.346
29.5	668.001
30.0	634.270
30.5	601.152
31.0	569.874
31.5	539.577
32.0	510.998
32.5	484.381
33.0	459.726
33.5	437.525
34.0	417.532
34.5	400.114
35.0	384.782
35.5	371.780
36.0	360.372
36.5	350.805
37.0	342.342
37.5	335.105
38.0	328.481
38.5	322.593
39.0	317.319
39.5	312.535
40.0	308.242
40.5	304.195
41.0	300.269
41.5	296.712
42.0	293.155
42.5	289.843
43.0	286.532
43.5	283.097
44.0	279.663
44.5	276.228
45.0	272.671
45.5	268.991
46.0	265.189
46.5	261.264
47.0	257.216
47.5	253.046
48.0	248.875
48.5	244.460
49.0	239.921
49.5	235.137
50.0	230.354
50.5	225.447
51.0	220.296
51.5	215.267
52.0	210.115
52.5	204.963
53.0	200.057
53.5	194.660
54.0	189.263
54.5	183.866

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CANDELA TABULATION - (Cont.)

55.0	178.592
55.5	173.195
56.0	167.920
56.5	162.769
57.0	157.617
57.5	152.465
58.0	147.436
58.5	142.530
59.0	137.624
59.5	132.840
60.0	128.056
60.5	123.395
61.0	118.857
61.5	114.318
62.0	110.025
62.5	105.609
63.0	101.439
63.5	97.146
64.0	93.098
64.5	89.051
65.0	85.125
65.5	81.200
66.0	77.398
66.5	73.718
67.0	70.161
67.5	66.604
68.0	63.169
68.5	59.735
69.0	56.423
69.5	53.234
70.0	50.290
70.5	47.469
71.0	44.893
71.5	42.440
72.0	40.110
72.5	37.902
73.0	35.816
73.5	33.977
74.0	32.137
74.5	30.542
75.0	29.070
75.5	27.721
76.0	26.249
76.5	24.900
77.0	23.551
77.5	22.201
78.0	20.975
78.5	19.625
79.0	18.399
79.5	17.172
80.0	15.946
80.5	14.719
81.0	13.615
81.5	12.511
82.0	11.285
82.5	10.303

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CANDELA TABULATION - (Cont.)

83.0	9.199
83.5	8.096
84.0	7.114
84.5	6.010
85.0	5.029
85.5	4.170
86.0	3.312
86.5	2.699
87.0	2.085
87.5	1.595
88.0	1.104
88.5	0.736
89.0	0.368
89.5	0.123
90.0	0.000
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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120.0	0.000
120.5	0.000
121.0	0.000
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125.5	0.000
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127.0	0.000
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128.0	0.000
128.5	0.000
129.0	0.000
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130.0	0.000
130.5	0.000
131.0	0.000
131.5	0.000
132.0	0.000
132.5	0.000
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
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	451.31	N.A.	27.80
0-30	873.35	N.A.	53.80
0-40	1130.53	N.A.	69.60
0-60	1499.25	N.A.	92.40
0-80	1616.57	N.A.	99.60
0-90	1623.21	N.A.	100.00
10-90	1503.12	N.A.	92.60
20-40	679.22	N.A.	41.80
20-50	888.47	N.A.	54.70
40-70	454.00	N.A.	28.00
60-80	117.32	N.A.	7.20
70-80	32.04	N.A.	2.00
80-90	6.63	N.A.	0.40
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1623.21	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	120.09
10-20	331.23
20-30	422.03
30-40	257.18
40-50	209.25
50-60	159.47
60-70	85.28
70-80	32.04
80-90	6.63
90-100	0.00
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	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	83	78	75	80	77	74	72
4	91	82	75	70	89	80	74	69	78	73	68	76	71	67	74	70	67	65
5	85	75	68	63	84	74	67	62	72	66	62	70	65	61	69	64	61	59
6	80	69	62	57	79	69	62	57	67	61	56	65	60	56	64	59	55	54
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49
8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46
9	67	56	49	45	66	56	49	44	54	48	44	54	48	44	53	48	44	42
10	64	53	46	41	63	52	46	41	51	45	41	50	45	41	50	45	41	39

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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

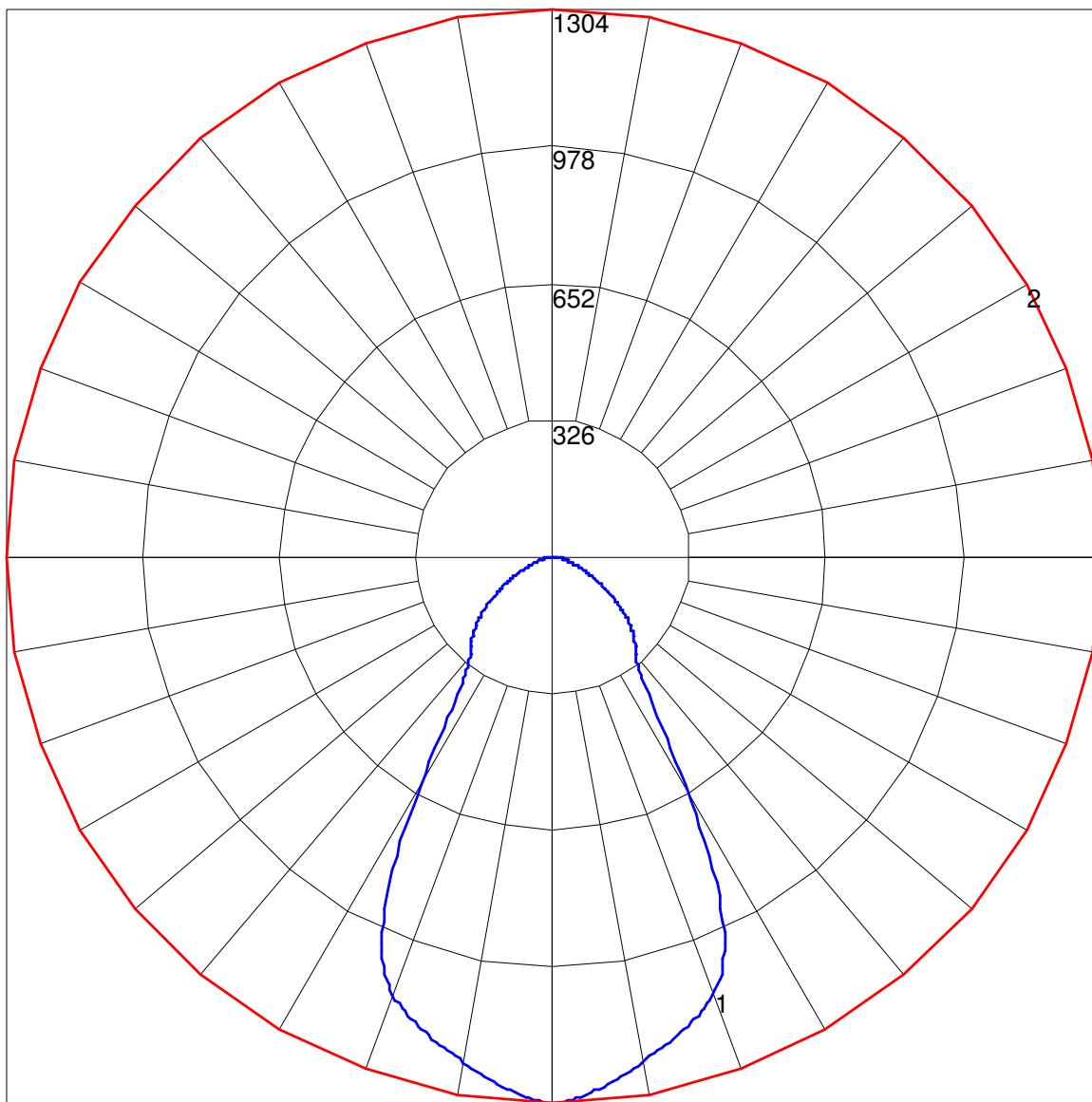
X=2H	Y=2H	21.3	22.6	21.7	22.9	23.2	21.3	22.6	21.7	22.9	23.2
	3H	22.1	23.2	22.4	23.6	23.9	22.1	23.2	22.4	23.6	23.9
	4H	22.2	23.3	22.6	23.7	24.0	22.2	23.3	22.6	23.7	24.0
	6H	22.3	23.3	22.8	23.7	24.1	22.3	23.3	22.8	23.7	24.1
	8H	22.4	23.3	22.8	23.7	24.1	22.4	23.3	22.8	23.7	24.1
	12H	22.3	23.2	22.8	23.6	24.1	22.3	23.2	22.8	23.6	24.1

UGR Viewed Endwise

4H	2H	21.6	22.7	22.0	23.0	23.4	21.6	22.7	22.0	23.0	23.4
	3H	22.5	23.4	22.9	23.8	24.2	22.5	23.4	22.9	23.8	24.2
	4H	22.7	23.5	23.1	23.9	24.4	22.7	23.5	23.1	23.9	24.4
	6H	22.9	23.6	23.3	24.0	24.5	22.9	23.6	23.3	24.0	24.5
	8H	22.9	23.5	23.4	24.0	24.5	22.9	23.5	23.4	24.0	24.5
	12H	22.9	23.5	23.4	24.0	24.4	22.9	23.5	23.4	24.0	24.4
8H	4H	22.8	23.4	23.2	23.8	24.3	22.8	23.4	23.2	23.8	24.3
	6H	23.0	23.5	23.5	24.0	24.5	23.0	23.5	23.5	24.0	24.5
	8H	23.0	23.5	23.6	24.0	24.5	23.0	23.5	23.6	24.0	24.5
	12H	23.1	23.5	23.6	24.0	24.5	23.1	23.5	23.6	24.0	24.5
12H	4H	22.7	23.3	23.2	23.8	24.2	22.7	23.3	23.2	23.8	24.2
	6H	23.0	23.4	23.5	23.9	24.4	23.0	23.4	23.5	23.9	24.4
	8H	23.0	23.4	23.6	23.9	24.5	23.0	23.4	23.6	23.9	24.5

Maximum UGR = 24.5

POLAR GRAPH



Maximum Candela = 1303.866 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.)