



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L30-835-DIM-UNV-RW-OF-CS-IP_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM 12316380.12
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 10-20-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT] 4DR-TL-L30-835-DIM-UNV-RW-OF-CS-IP-MWT
 [LUMINAIRE] Black formed aluminum housing, semi-spec reflector, diffuse lens
 [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	1940
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	70
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	44872	44872	44872
55	36232	36232	36232
65	23439	23439	23439
75	13070	13070	13070
85	6714	6714	6714

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L30-835-DIM-UNV-RW-OF-CS-IP_.IES

CANDELA TABULATION

	<u>0</u>
0.0	1558.279
0.5	1558.279
1.0	1556.813
1.5	1553.882
2.0	1550.950
2.5	1548.018
3.0	1543.620
3.5	1539.222
4.0	1534.825
4.5	1528.961
5.0	1524.563
5.5	1518.699
6.0	1512.836
6.5	1506.972
7.0	1501.108
7.5	1495.245
8.0	1489.381
8.5	1482.051
9.0	1476.188
9.5	1470.324
10.0	1464.753
10.5	1458.743
11.0	1452.586
11.5	1446.576
12.0	1440.859
12.5	1435.142
13.0	1429.424
13.5	1423.561
14.0	1417.697
14.5	1411.833
15.0	1405.823
15.5	1399.666
16.0	1393.216
16.5	1386.766
17.0	1380.169
17.5	1373.133
18.0	1365.657
18.5	1357.594
19.0	1349.825
19.5	1341.469
20.0	1332.380
20.5	1321.972
21.0	1309.952
21.5	1296.905
22.0	1281.952
22.5	1265.387
23.0	1246.624
23.5	1225.514
24.0	1202.353
24.5	1176.112
25.0	1146.794
25.5	1114.397
26.0	1079.361
26.5	1042.127

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L30-835-DIM-UNV-RW-OF-CS-IP_.IES

CANDELA TABULATION - (Cont.)

27.0	1002.987
27.5	963.260
28.0	921.628
28.5	880.435
29.0	839.389
29.5	798.343
30.0	758.030
30.5	718.450
31.0	681.069
31.5	644.861
32.0	610.705
32.5	578.894
33.0	549.429
33.5	522.896
34.0	499.001
34.5	478.185
35.0	459.861
35.5	444.322
36.0	430.689
36.5	419.255
37.0	409.140
37.5	400.491
38.0	392.575
38.5	385.539
39.0	379.235
39.5	373.518
40.0	368.387
40.5	363.550
41.0	358.859
41.5	354.608
42.0	350.356
42.5	346.398
43.0	342.440
43.5	338.336
44.0	334.231
44.5	330.127
45.0	325.875
45.5	321.478
46.0	316.933
46.5	312.242
47.0	307.405
47.5	302.421
48.0	297.436
48.5	292.159
49.0	286.735
49.5	281.018
50.0	275.301
50.5	269.437
51.0	263.280
51.5	257.270
52.0	251.113
52.5	244.956
53.0	239.093
53.5	232.642
54.0	226.192
54.5	219.742

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L30-835-DIM-UNV-RW-OF-CS-IP_.IES

CANDELA TABULATION - (Cont.)

55.0	213.439
55.5	206.989
56.0	200.685
56.5	194.528
57.0	188.371
57.5	182.215
58.0	176.204
58.5	170.341
59.0	164.477
59.5	158.760
60.0	153.043
60.5	147.472
61.0	142.048
61.5	136.624
62.0	131.494
62.5	126.216
63.0	121.232
63.5	116.101
64.0	111.264
64.5	106.426
65.0	101.735
65.5	97.044
66.0	92.500
66.5	88.102
67.0	83.851
67.5	79.600
68.0	75.495
68.5	71.391
69.0	67.433
69.5	63.621
70.0	60.103
70.5	56.731
71.0	53.653
71.5	50.721
72.0	47.936
72.5	45.297
73.0	42.805
73.5	40.606
74.0	38.407
74.5	36.502
75.0	34.742
75.5	33.130
76.0	31.371
76.5	29.758
77.0	28.146
77.5	26.533
78.0	25.067
78.5	23.455
79.0	21.989
79.5	20.523
80.0	19.057
80.5	17.591
81.0	16.272
81.5	14.952
82.0	13.487
82.5	12.314

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L30-835-DIM-UNV-RW-OF-CS-IP_.IES

CANDELA TABULATION - (Cont.)

83.0	10.994
83.5	9.675
84.0	8.502
84.5	7.183
85.0	6.010
85.5	4.984
86.0	3.958
86.5	3.225
87.0	2.492
87.5	1.906
88.0	1.319
88.5	0.880
89.0	0.440
89.5	0.147
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L30-835-DIM-UNV-RW-OF-CS-IP_.IES

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
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L30-835-DIM-UNV-RW-OF-CS-IP_.IES

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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L30-835-DIM-UNV-RW-OF-CS-IP_.IES

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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L30-835-DIM-UNV-RW-OF-CS-IP_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	539.37	N.A.	27.80
0-30	1043.76	N.A.	53.80
0-40	1351.12	N.A.	69.60
0-60	1791.79	N.A.	92.40
0-80	1932.00	N.A.	99.60
0-90	1939.93	N.A.	100.00
10-90	1796.41	N.A.	92.60
20-40	811.75	N.A.	41.80
20-50	1061.83	N.A.	54.70
40-70	542.59	N.A.	28.00
60-80	140.21	N.A.	7.20
70-80	38.29	N.A.	2.00
80-90	7.93	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	1939.93	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	143.52
10-20	395.86
20-30	504.38
30-40	307.37
40-50	250.08
50-60	190.59
60-70	101.92
70-80	38.29
80-90	7.93
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

IES INDOOR REPORT
 PHOTOMETRIC FILENAME : 4DR-TL-L30-835-DIM-UNV-RW-OF-CS-IP_.IES

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	82	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	44	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

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L30-835-DIM-UNV-RW-OF-CS-IP_.IES

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	21.9	23.2	22.3	23.5	23.8	21.9	23.2	22.3	23.5	23.8
	3H	22.7	23.8	23.0	24.2	24.5	22.7	23.8	23.0	24.2	24.5
	4H	22.8	23.9	23.2	24.3	24.6	22.8	23.9	23.2	24.3	24.6
	6H	23.0	23.9	23.4	24.3	24.7	23.0	23.9	23.4	24.3	24.7
	8H	23.0	23.9	23.4	24.3	24.7	23.0	23.9	23.4	24.3	24.7
	12H	22.9	23.8	23.4	24.2	24.7	22.9	23.8	23.4	24.2	24.7

UGR Viewed Endwise

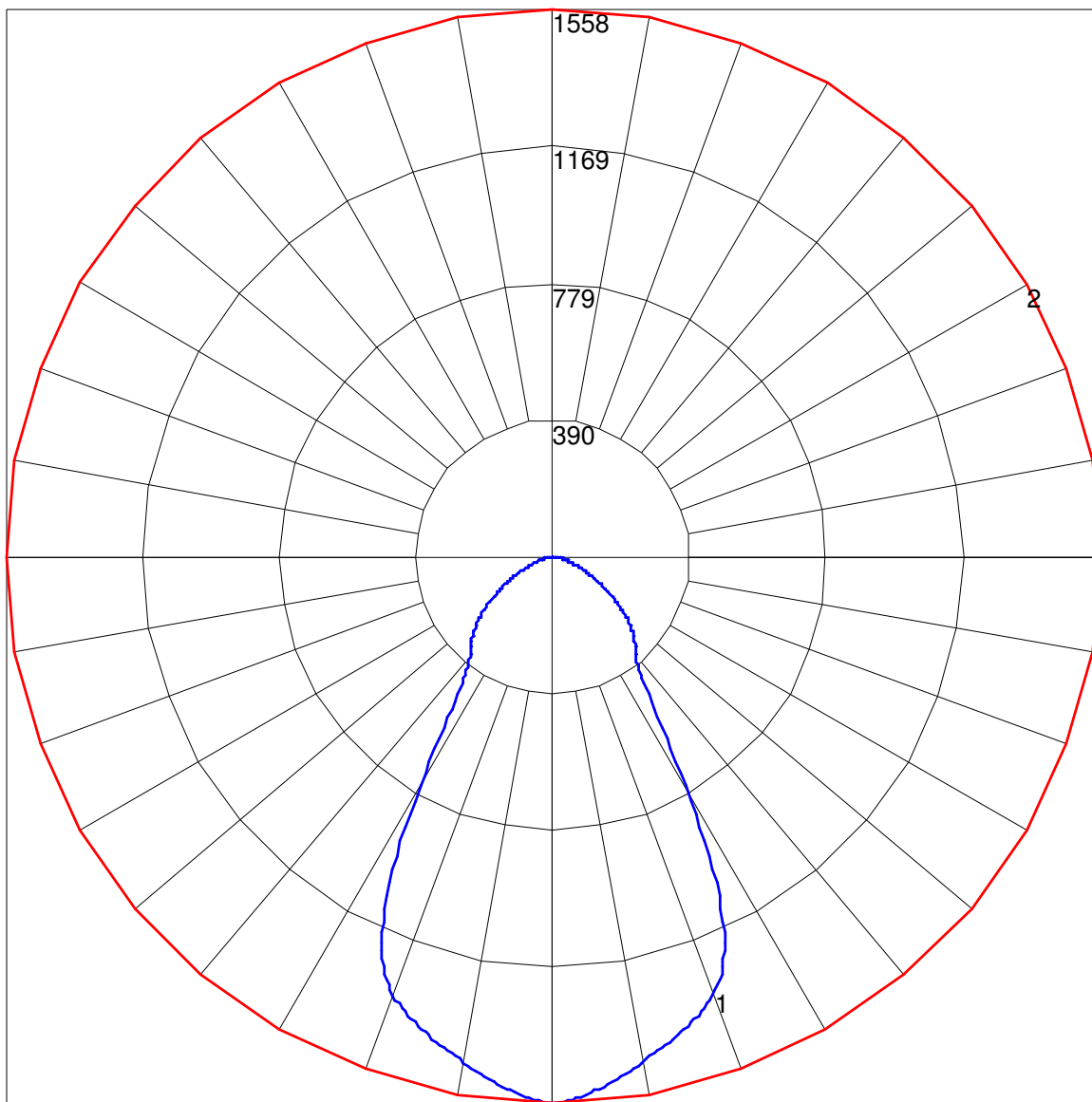
4H	2H	22.2	23.3	22.6	23.6	24.0	22.2	23.3	22.6	23.6	24.0
	3H	23.1	24.0	23.5	24.4	24.8	23.1	24.0	23.5	24.4	24.8
	4H	23.3	24.1	23.7	24.5	25.0	23.3	24.1	23.7	24.5	25.0
	6H	23.5	24.2	24.0	24.6	25.1	23.5	24.2	24.0	24.6	25.1
	8H	23.5	24.2	24.0	24.6	25.1	23.5	24.2	24.0	24.6	25.1
	12H	23.5	24.1	24.0	24.6	25.0	23.5	24.1	24.0	24.6	25.0

8H	4H	23.4	24.0	23.8	24.4	24.9	23.4	24.0	23.8	24.4	24.9
	6H	23.6	24.1	24.1	24.6	25.1	23.6	24.1	24.1	24.6	25.1
	8H	23.6	24.1	24.2	24.6	25.1	23.6	24.1	24.2	24.6	25.1
	12H	23.7	24.1	24.2	24.6	25.1	23.7	24.1	24.2	24.6	25.1

12H	4H	23.3	23.9	23.8	24.4	24.8	23.3	23.9	23.8	24.4	24.8
	6H	23.6	24.0	24.1	24.5	25.0	23.6	24.0	24.1	24.5	25.0
	8H	23.7	24.1	24.2	24.5	25.1	23.7	24.1	24.2	24.5	25.1

Maximum UGR = 25.1

POLAR GRAPH



Maximum Candela = 1558.279 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.)