IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L70-8TW-DIM-UNV-SW-OF-WH_3500K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN from UL #12316380.11
[TESTLAB] UL Verification Services Inc.
[ISSUEDATE] 2026-10-14
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
[LUMCAT] 4DR-TL-L70-8TW-DIM-UNV-SW-OF-WH_3500K_
[LUMINAIRE] Black formed aluminum housing, white reflector, frosted plastic
[MORE] lens enclosure
[LAMP] One LED
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Commercial, Corridor, Hotel, Office, Downlight
[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4470
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	77
Total Luminaire Watts	58.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.28
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	161419	161419	161419
55	137778	137778	137778
65	117520	117520	117520
75	97180	97180	97180
85	60139	60139	60139

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L70-8TW-DIM-UNV-SW-OF-WH_3500K_.IES

CANDELA TABULATION

	0
0.0	1881.993
0.5	1881.657
1.0	1880.651
1.5	1879.645
2.0	1877.632
2.5	1875.619
3.0	1872.935
3.5	1870.251
4.0	1867.568
4.5	1864.884
5.0	1862.536
5.5	1859.852
6.0	1857.168
6.5	1854.484
7.0	1851.465
7.5	1848.110
8.0	1844.756
8.5	1841.401
9.0	1837.711
9.5	1834.021
10.0	1829.995
10.5	1825.969
11.0	1821.608
11.5	1816.912
12.0	1812.215
12.5	1807.183
13.0	1801.815
13.5	1796.112
14.0	1790.074
14.5	1783.700
15.0	1776.990
15.5	1770.281
16.0	1763.236
16.5	1756.527
17.0	1749.146
17.5	1741.766
18.0	1734.386
18.5	1727.005
19.0	1719.625
19.5	1712.245
20.0	1704.864
20.5	1697.484
21.0	1689.768
21.5	1681.717
22.0	1673.330
22.5	1663.937
23.0	1654.543
23.5	1644.144
24.0	1633.744
24.5	1622.674
25.0	1611.268
25.5	1599.862
26.0	1587.785
26.5	1575.708

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

CANDELA TABULATION - (Cont.)

27.0	1563.295
27.5	1550.547
28.0	1537.800
28.5	1525.387
29.0	1512.975
29.5	1500.227
30.0	1487.814
30.5	1474.731
31.0	1461.312
31.5	1448.229
32.0	1434.810
32.5	1421.391
33.0	1407.637
33.5	1393.547
34.0	1379.793
34.5	1365.703
35.0	1351.613
35.5	1337.188
36.0	1322.763
36.5	1308.002
37.0	1293.241
37.5	1278.480
38.0	1263.384
38.5	1247.953
39.0	1233.192
39.5	1217.760
40.0	1202.328
40.5	1187.232
41.0	1171.465
41.5	1156.369
42.0	1140.602
42.5	1125.170
43.0	1109.403
43.5	1093.300
44.0	1077.198
44.5	1061.095
45.0	1044.657
45.5	1028.554
46.0	1012.116
46.5	995.678
47.0	979.240
47.5	962.467
48.0	946.029
48.5	929.255
49.0	912.817
49.5	896.379
50.0	879.941
50.5	863.838
51.0	847.735
51.5	831.633
52.0	815.866
52.5	800.099
53.0	784.667
53.5	769.235
54.0	753.804
54.5	738.707

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

CANDELA TABULATION - (Cont.)

55.0	723.276
55.5	708.180
56.0	694.425
56.5	679.664
57.0	665.575
57.5	651.485
58.0	637.395
58.5	623.305
59.0	609.886
59.5	596.468
60.0	583.049
60.5	570.301
61.0	557.218
61.5	543.799
62.0	530.715
62.5	517.632
63.0	504.884
63.5	492.136
64.0	479.388
64.5	466.976
65.0	454.563
65.5	442.151
66.0	429.738
66.5	417.662
67.0	405.920
67.5	394.179
68.0	382.437
68.5	371.031
69.0	359.625
69.5	348.219
70.0	336.813
70.5	325.742
71.0	314.739
71.5	303.803
72.0	293.000
72.5	282.366
73.0	271.765
73.5	261.265
74.0	250.865
74.5	240.466
75.0	230.200
75.5	220.069
76.0	209.938
76.5	199.907
77.0	190.011
77.5	180.148
78.0	170.419
78.5	160.858
79.0	151.365
79.5	141.971
80.0	132.813
80.5	123.789
81.0	114.865
81.5	106.009
82.0	97.320
82.5	88.766

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

CANDELA TABULATION - (Cont.)

83.0	80.312
83.5	71.959
84.0	63.807
84.5	55.789
85.0	47.972
85.5	40.491
86.0	33.514
86.5	27.408
87.0	21.839
87.5	16.841
88.0	12.547
88.5	9.158
89.0	6.374
89.5	4.126
90.0	2.550
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

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.

Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

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

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

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

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.

Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

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

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.

Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L70-8TW-DIM-UNV-SW-OF-WH_3500K_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	677.61	N.A.	15.20
0-30	1417.84	N.A.	31.70
0-40	2261.74	N.A.	50.60
0-60	3715.17	N.A.	83.10
0-80	4410.83	N.A.	98.70
0-90	4470.12	N.A.	100.00
10-90	4293.33	N.A.	96.00
20-40	1584.13	N.A.	35.40
20-50	2388.63	N.A.	53.40
40-70	1904.82	N.A.	42.60
60-80	695.66	N.A.	15.60
70-80	244.26	N.A.	5.50
80-90	59.30	N.A.	1.30
90-110	0.07	N.A.	0.00
90-120	0.07	N.A.	0.00
90-130	0.07	N.A.	0.00
90-150	0.07	N.A.	0.00
90-180	0.07	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	4470.19	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	176.79
10-20	500.82
20-30	740.22
30-40	843.90
40-50	804.50
50-60	648.93
60-70	451.39
70-80	244.26
80-90	59.30
90-100	0.07
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

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L70-8TW-DIM-UNV-SW-OF-WH_3500K_.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	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	53
5	78	66	57	51	76	65	56	50	62	55	50	60	54	49	59	53	49	47
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37
8	63	50	41	36	61	49	41	35	48	40	35	46	40	35	45	39	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30
10	55	42	34	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L70-8TW-DIM-UNV-SW-OF-WH_3500K_.IES

UGR TABLE - CORRECTED

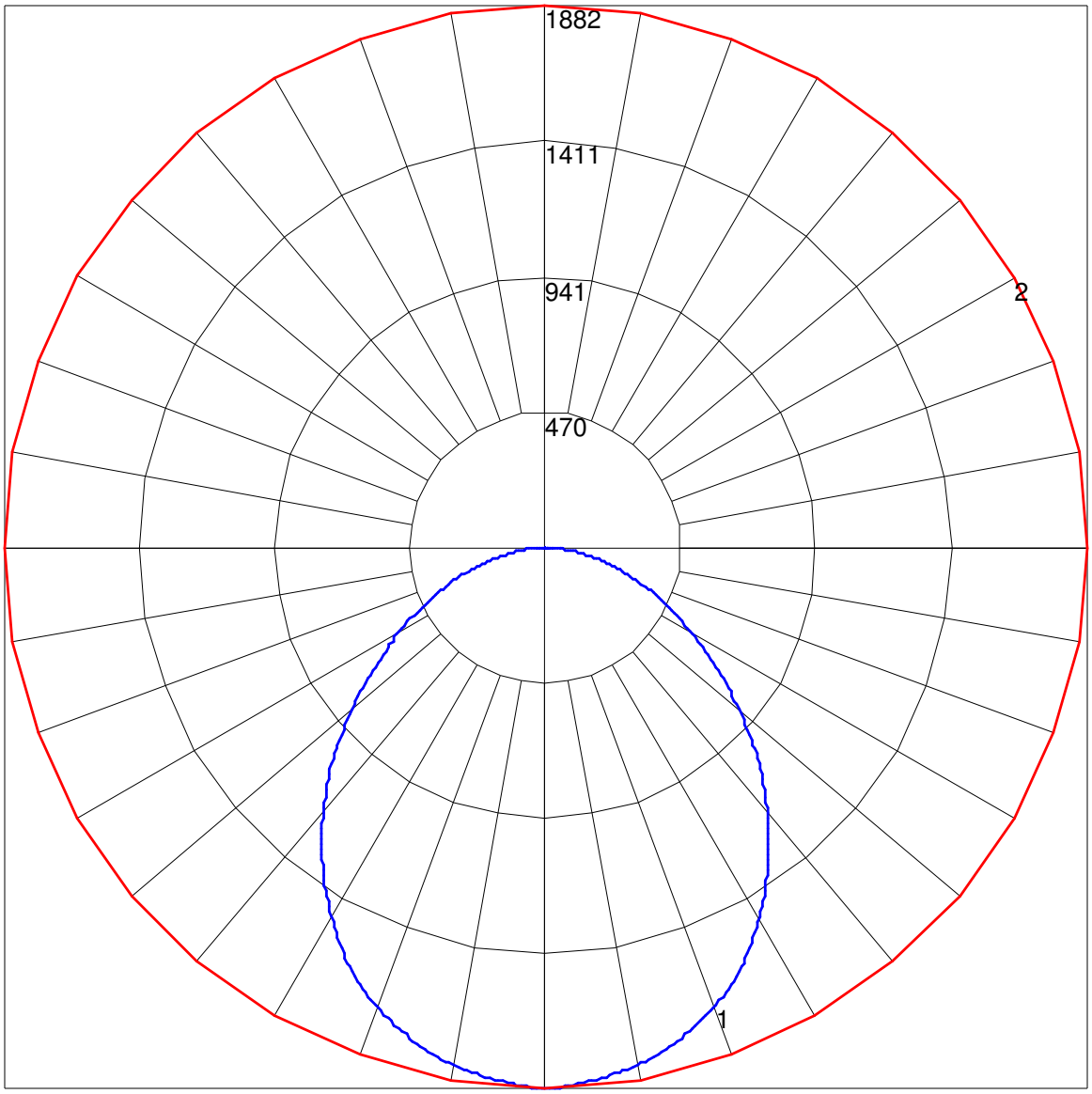
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	27.9	29.5	28.3	29.8	30.1	27.9	29.5	28.3	29.8	30.1
	3H	29.5	30.9	29.9	31.3	31.6	29.5	30.9	29.9	31.3	31.6
	4H	30.1	31.4	30.5	31.8	32.1	30.1	31.4	30.5	31.8	32.1
	6H	30.5	31.7	30.9	32.1	32.5	30.5	31.7	30.9	32.1	32.5
	8H	30.6	31.8	31.0	32.2	32.6	30.6	31.8	31.0	32.2	32.6
	12H	30.7	31.8	31.1	32.2	32.6	30.7	31.8	31.1	32.2	32.6
4H	2H	28.5	29.8	28.9	30.2	30.5	28.5	29.8	28.9	30.2	30.5
	3H	30.3	31.4	30.7	31.8	32.2	30.3	31.4	30.7	31.8	32.2
	4H	31.0	32.0	31.4	32.4	32.8	31.0	32.0	31.4	32.4	32.8
	6H	31.5	32.4	32.0	32.8	33.3	31.5	32.4	32.0	32.8	33.3
	8H	31.6	32.5	32.1	32.9	33.4	31.6	32.5	32.1	32.9	33.4
	12H	31.7	32.5	32.2	32.9	33.4	31.7	32.5	32.2	32.9	33.4
8H	4H	31.2	32.0	31.7	32.5	33.0	31.2	32.0	31.7	32.5	33.0
	6H	31.8	32.5	32.3	33.0	33.5	31.8	32.5	32.3	33.0	33.5
	8H	32.1	32.7	32.6	33.2	33.7	32.1	32.7	32.6	33.2	33.7
	12H	32.2	32.7	32.7	33.2	33.8	32.2	32.7	32.7	33.2	33.8
12H	4H	31.3	32.0	31.7	32.5	32.9	31.3	32.0	31.7	32.5	32.9
	6H	31.9	32.5	32.4	33.0	33.5	31.9	32.5	32.4	33.0	33.5
	8H	32.1	32.7	32.7	33.2	33.7	32.1	32.7	32.7	33.2	33.7

Maximum UGR = 33.8

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L70-8TW-DIM-UNV-SW-OF-WH_3500K_.IES

POLAR GRAPH



Maximum Candela = 1881.993 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.)

Photometric Toolbox (R) Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.