IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L20-8TW-DIM-UNV-SW-OF-WH_4000K_.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-L20-8TW-DIM-UNV-SW-OF-WH_4000K_
[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	1201
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	67
Total Luminaire Watts	18
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	43352	43352	43352
55	37003	37003	37003
65	31562	31562	31562
75	26100	26100	26100
85	16152	16152	16152

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-L20-8TW-DIM-UNV-SW-OF-WH_4000K_.IES

CANDELA TABULATION

	0
0.0	505.447
0.5	505.357
1.0	505.087
1.5	504.816
2.0	504.276
2.5	503.735
3.0	503.014
3.5	502.294
4.0	501.573
4.5	500.852
5.0	500.221
5.5	499.501
6.0	498.780
6.5	498.059
7.0	497.248
7.5	496.347
8.0	495.446
8.5	494.545
9.0	493.554
9.5	492.563
10.0	491.482
10.5	490.401
11.0	489.230
11.5	487.968
12.0	486.707
12.5	485.355
13.0	483.914
13.5	482.382
14.0	480.760
14.5	479.049
15.0	477.247
15.5	475.445
16.0	473.553
16.5	471.751
17.0	469.768
17.5	467.786
18.0	465.804
18.5	463.822
19.0	461.840
19.5	459.858
20.0	457.876
20.5	455.893
21.0	453.821
21.5	451.659
22.0	449.406
22.5	446.884
23.0	444.361
23.5	441.568
24.0	438.775
24.5	435.802
25.0	432.738
25.5	429.675
26.0	426.432
26.5	423.188

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	419.854
27.5	416.431
28.0	413.007
28.5	409.673
29.0	406.340
29.5	402.916
30.0	399.583
30.5	396.069
31.0	392.465
31.5	388.951
32.0	385.347
32.5	381.743
33.0	378.049
33.5	374.265
34.0	370.571
34.5	366.787
35.0	363.003
35.5	359.129
36.0	355.255
36.5	351.290
37.0	347.326
37.5	343.362
38.0	339.307
38.5	335.163
39.0	331.198
39.5	327.054
40.0	322.910
40.5	318.855
41.0	314.621
41.5	310.566
42.0	306.332
42.5	302.187
43.0	297.953
43.5	293.628
44.0	289.303
44.5	284.978
45.0	280.564
45.5	276.239
46.0	271.824
46.5	267.409
47.0	262.995
47.5	258.490
48.0	254.075
48.5	249.570
49.0	245.155
49.5	240.741
50.0	236.326
50.5	232.001
51.0	227.676
51.5	223.352
52.0	219.117
52.5	214.883
53.0	210.738
53.5	206.594
54.0	202.449
54.5	198.395

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	194.250
55.5	190.196
56.0	186.502
56.5	182.538
57.0	178.753
57.5	174.969
58.0	171.185
58.5	167.401
59.0	163.797
59.5	160.193
60.0	156.589
60.5	153.166
61.0	149.652
61.5	146.048
62.0	142.534
62.5	139.020
63.0	135.597
63.5	132.173
64.0	128.749
64.5	125.416
65.0	122.082
65.5	118.749
66.0	115.415
66.5	112.171
67.0	109.018
67.5	105.865
68.0	102.711
68.5	99.648
69.0	96.585
69.5	93.521
70.0	90.458
70.5	87.485
71.0	84.529
71.5	81.592
72.0	78.691
72.5	75.835
73.0	72.988
73.5	70.168
74.0	67.375
74.5	64.582
75.0	61.825
75.5	59.104
76.0	56.383
76.5	53.689
77.0	51.031
77.5	48.382
78.0	45.770
78.5	43.202
79.0	40.652
79.5	38.129
80.0	35.670
80.5	33.246
81.0	30.849
81.5	28.471
82.0	26.137
82.5	23.840

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	21.569
83.5	19.326
84.0	17.137
84.5	14.983
85.0	12.884
85.5	10.875
86.0	9.001
86.5	7.361
87.0	5.865
87.5	4.523
88.0	3.370
88.5	2.460
89.0	1.712
89.5	1.108
90.0	0.685
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-L20-8TW-DIM-UNV-SW-OF-WH_4000K_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	181.99	N.A.	15.20
0-30	380.79	N.A.	31.70
0-40	607.44	N.A.	50.60
0-60	997.78	N.A.	83.10
0-80	1184.62	N.A.	98.70
0-90	1200.54	N.A.	100.00
10-90	1153.06	N.A.	96.00
20-40	425.45	N.A.	35.40
20-50	641.51	N.A.	53.40
40-70	511.58	N.A.	42.60
60-80	186.83	N.A.	15.60
70-80	65.60	N.A.	5.50
80-90	15.93	N.A.	1.30
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	1200.56	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	47.48
10-20	134.51
20-30	198.80
30-40	226.65
40-50	216.07
50-60	174.28
60-70	121.23
70-80	65.60
80-90	15.93
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

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-L20-8TW-DIM-UNV-SW-OF-WH_4000K_.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	109	105	101	97	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	44	39	50	44	39	49	43	39	37
8	63	49	41	36	61	49	41	35	47	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-L20-8TW-DIM-UNV-SW-OF-WH_4000K_.IES

UGR TABLE - CORRECTED

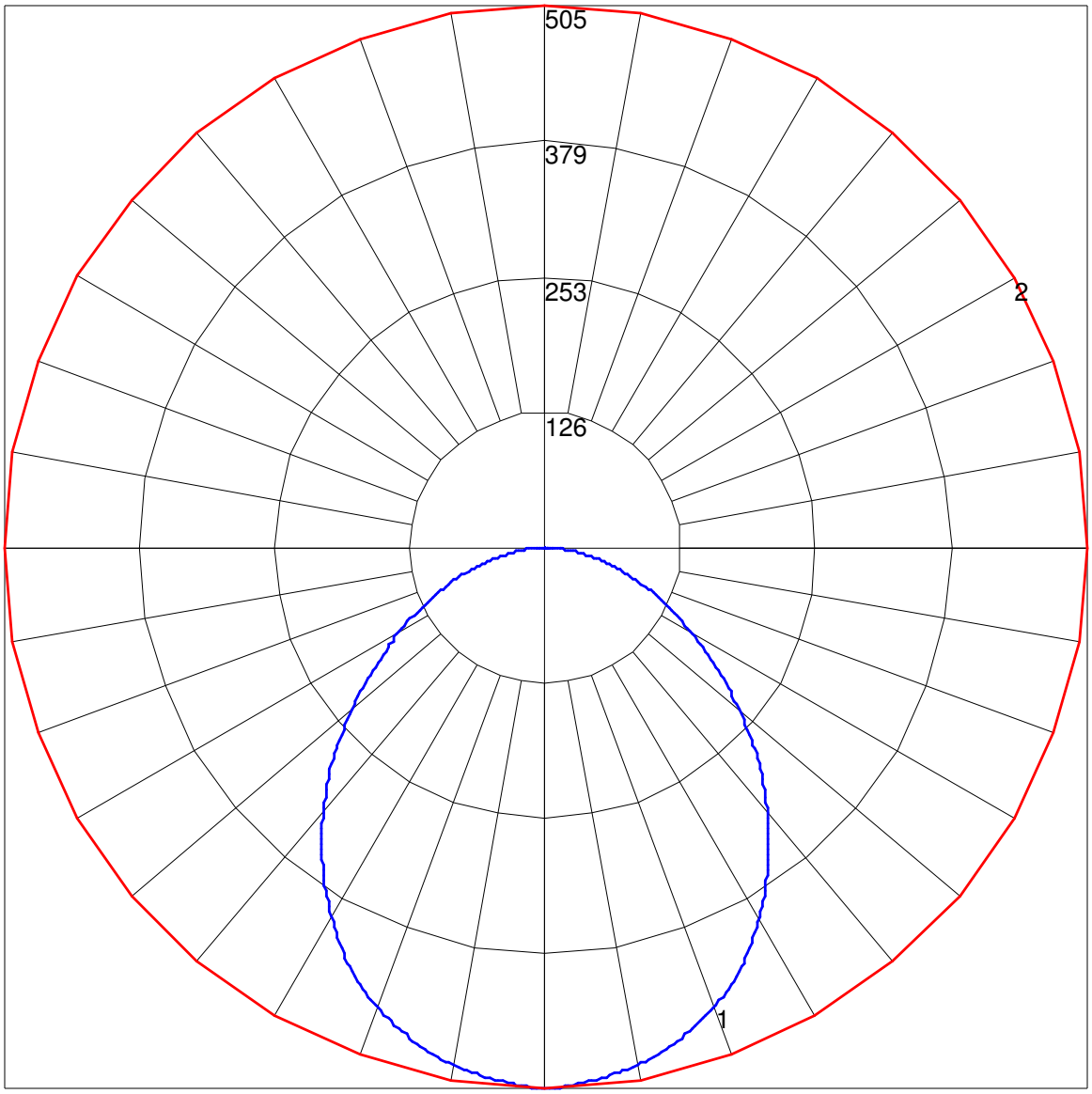
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	23.3	24.9	23.7	25.2	25.5	23.3	24.9	23.7	25.2	25.5
	3H	24.9	26.3	25.3	26.7	27.0	24.9	26.3	25.3	26.7	27.0
	4H	25.5	26.8	25.9	27.2	27.5	25.5	26.8	25.9	27.2	27.5
	6H	25.9	27.1	26.3	27.5	27.9	25.9	27.1	26.3	27.5	27.9
	8H	26.0	27.2	26.4	27.6	28.0	26.0	27.2	26.4	27.6	28.0
	12H	26.1	27.2	26.5	27.6	28.0	26.1	27.2	26.5	27.6	28.0
4H	2H	23.9	25.2	24.3	25.6	25.9	23.9	25.2	24.3	25.6	25.9
	3H	25.7	26.8	26.1	27.2	27.6	25.7	26.8	26.1	27.2	27.6
	4H	26.4	27.4	26.8	27.8	28.2	26.4	27.4	26.8	27.8	28.2
	6H	26.9	27.8	27.4	28.2	28.7	26.9	27.8	27.4	28.2	28.7
	8H	27.0	27.9	27.5	28.3	28.8	27.0	27.9	27.5	28.3	28.8
	12H	27.1	27.9	27.6	28.3	28.8	27.1	27.9	27.6	28.3	28.8
8H	4H	26.6	27.4	27.1	27.9	28.4	26.6	27.4	27.1	27.9	28.4
	6H	27.2	27.9	27.7	28.4	28.9	27.2	27.9	27.7	28.4	28.9
	8H	27.5	28.1	28.0	28.6	29.1	27.5	28.1	28.0	28.6	29.1
	12H	27.6	28.1	28.1	28.6	29.2	27.6	28.1	28.1	28.6	29.2
12H	4H	26.7	27.4	27.1	27.9	28.3	26.7	27.4	27.1	27.9	28.3
	6H	27.3	27.9	27.8	28.4	28.9	27.3	27.9	27.8	28.4	28.9
	8H	27.5	28.1	28.1	28.6	29.1	27.5	28.1	28.1	28.6	29.1

Maximum UGR = 29.2

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-L20-8TW-DIM-UNV-SW-OF-WH_4000K_.IES

POLAR GRAPH



Maximum Candela = 505.447 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.