IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L20-8TW-DIM-UNV-SW-OF-WH_2700K_.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_2700K_
[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	996
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	55
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	35983	35983	35983
55	30713	30713	30713
65	26197	26197	26197
75	21663	21663	21663
85	13406	13406	13406

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CANDELA TABULATION

	0
0.0	419.521
0.5	419.446
1.0	419.222
1.5	418.998
2.0	418.549
2.5	418.100
3.0	417.502
3.5	416.904
4.0	416.306
4.5	415.707
5.0	415.184
5.5	414.586
6.0	413.987
6.5	413.389
7.0	412.716
7.5	411.968
8.0	411.220
8.5	410.473
9.0	409.650
9.5	408.827
10.0	407.930
10.5	407.033
11.0	406.061
11.5	405.014
12.0	403.967
12.5	402.845
13.0	401.648
13.5	400.377
14.0	399.031
14.5	397.610
15.0	396.115
15.5	394.619
16.0	393.049
16.5	391.553
17.0	389.908
17.5	388.263
18.0	386.618
18.5	384.972
19.0	383.327
19.5	381.682
20.0	380.037
20.5	378.392
21.0	376.672
21.5	374.877
22.0	373.007
22.5	370.914
23.0	368.820
23.5	366.501
24.0	364.183
24.5	361.715
25.0	359.173
25.5	356.630
26.0	353.938
26.5	351.246

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CANDELA TABULATION - (Cont.)

27.0	348.479
27.5	345.638
28.0	342.796
28.5	340.029
29.0	337.262
29.5	334.420
30.0	331.654
30.5	328.737
31.0	325.746
31.5	322.829
32.0	319.838
32.5	316.847
33.0	313.781
33.5	310.640
34.0	307.574
34.5	304.433
35.0	301.292
35.5	298.077
36.0	294.861
36.5	291.571
37.0	288.281
37.5	284.990
38.0	281.625
38.5	278.185
39.0	274.895
39.5	271.455
40.0	268.015
40.5	264.650
41.0	261.135
41.5	257.770
42.0	254.255
42.5	250.815
43.0	247.301
43.5	243.711
44.0	240.122
44.5	236.532
45.0	232.868
45.5	229.278
46.0	225.614
46.5	221.950
47.0	218.286
47.5	214.547
48.0	210.882
48.5	207.143
49.0	203.479
49.5	199.815
50.0	196.150
50.5	192.561
51.0	188.971
51.5	185.382
52.0	181.867
52.5	178.353
53.0	174.913
53.5	171.473
54.0	168.033
54.5	164.668

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CANDELA TABULATION - (Cont.)

55.0	161.228
55.5	157.863
56.0	154.797
56.5	151.506
57.0	148.365
57.5	145.225
58.0	142.084
58.5	138.943
59.0	135.952
59.5	132.961
60.0	129.969
60.5	127.128
61.0	124.211
61.5	121.220
62.0	118.303
62.5	115.387
63.0	112.545
63.5	109.704
64.0	106.862
64.5	104.095
65.0	101.328
65.5	98.561
66.0	95.794
66.5	93.102
67.0	90.485
67.5	87.868
68.0	85.250
68.5	82.708
69.0	80.165
69.5	77.623
70.0	75.080
70.5	72.612
71.0	70.159
71.5	67.722
72.0	65.314
72.5	62.943
73.0	60.580
73.5	58.239
74.0	55.921
74.5	53.603
75.0	51.315
75.5	49.056
76.0	46.798
76.5	44.562
77.0	42.356
77.5	40.157
78.0	37.989
78.5	35.857
79.0	33.741
79.5	31.647
80.0	29.606
80.5	27.594
81.0	25.605
81.5	23.631
82.0	21.694
82.5	19.787

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CANDELA TABULATION - (Cont.)

83.0	17.903
83.5	16.041
84.0	14.223
84.5	12.436
85.0	10.694
85.5	9.026
86.0	7.471
86.5	6.110
87.0	4.868
87.5	3.754
88.0	2.797
88.5	2.042
89.0	1.421
89.5	0.920
90.0	0.568
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
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120.0	0.000
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125.0	0.000
125.5	0.000
126.0	0.000
126.5	0.000
127.0	0.000
127.5	0.000
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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

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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
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145.0	0.000
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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
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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	151.05	N.A.	15.20
0-30	316.05	N.A.	31.70
0-40	504.17	N.A.	50.60
0-60	828.16	N.A.	83.10
0-80	983.23	N.A.	98.70
0-90	996.45	N.A.	100.00
10-90	957.04	N.A.	96.00
20-40	353.12	N.A.	35.40
20-50	532.46	N.A.	53.40
40-70	424.61	N.A.	42.60
60-80	155.07	N.A.	15.60
70-80	54.45	N.A.	5.50
80-90	13.22	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	996.47	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	39.41
10-20	111.64
20-30	165.01
30-40	188.12
40-50	179.33
50-60	144.65
60-70	100.62
70-80	54.45
80-90	13.22
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	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	93	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	85	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	61	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	36	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

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UGR TABLE - CORRECTED

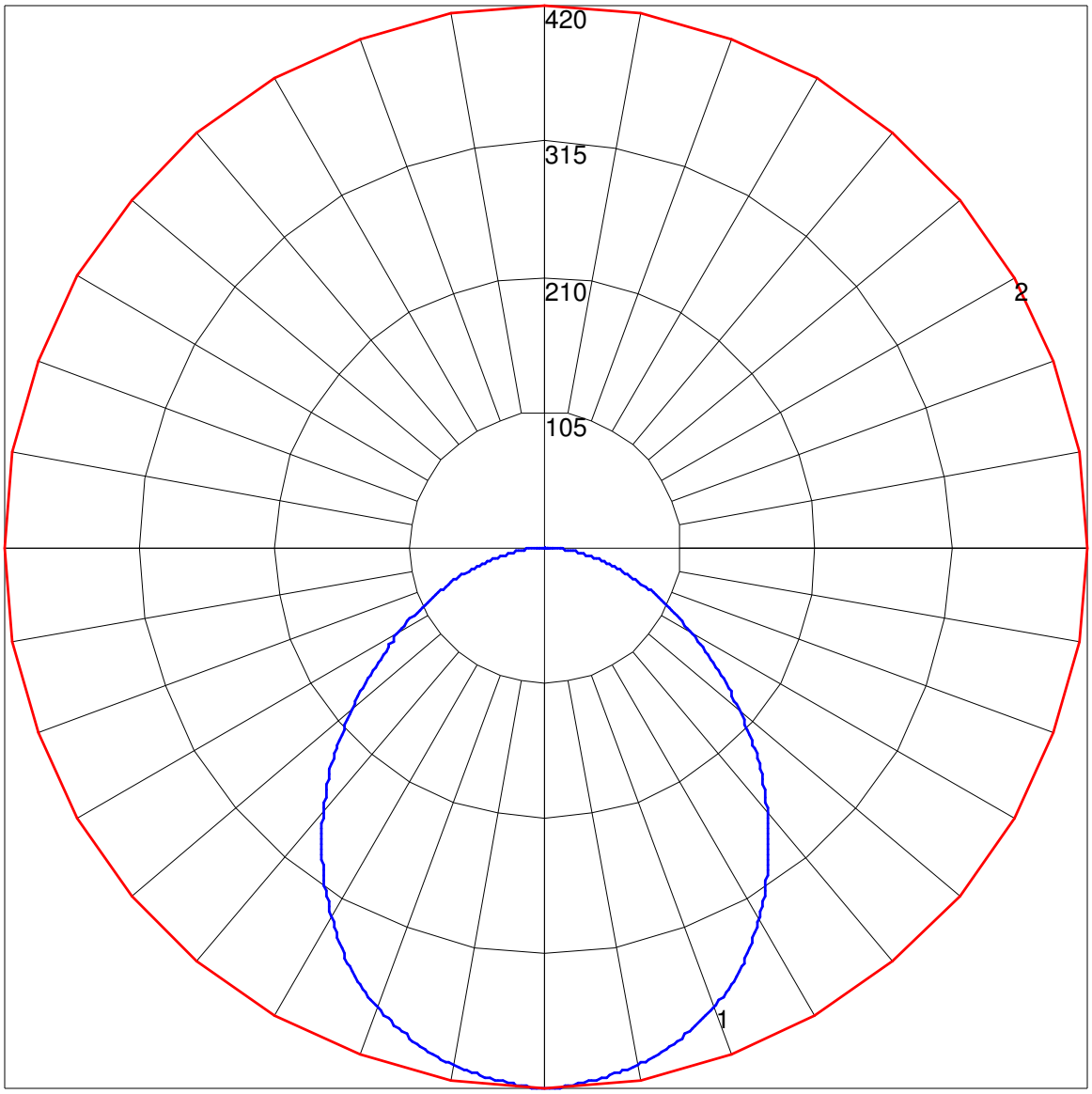
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	22.7	24.3	23.1	24.6	24.9	22.7	24.3	23.1	24.6	24.9
	3H	24.3	25.7	24.7	26.1	26.4	24.3	25.7	24.7	26.1	26.4
	4H	24.9	26.2	25.3	26.6	26.9	24.9	26.2	25.3	26.6	26.9
	6H	25.3	26.5	25.7	26.9	27.3	25.3	26.5	25.7	26.9	27.3
	8H	25.4	26.6	25.8	27.0	27.4	25.4	26.6	25.8	27.0	27.4
	12H	25.5	26.6	25.9	27.0	27.4	25.5	26.6	25.9	27.0	27.4
4H	2H	23.3	24.6	23.7	25.0	25.3	23.3	24.6	23.7	25.0	25.3
	3H	25.1	26.2	25.5	26.6	27.0	25.1	26.2	25.5	26.6	27.0
	4H	25.8	26.8	26.2	27.2	27.6	25.8	26.8	26.2	27.2	27.6
	6H	26.3	27.2	26.8	27.6	28.1	26.3	27.2	26.8	27.6	28.1
	8H	26.4	27.3	26.9	27.7	28.2	26.4	27.3	26.9	27.7	28.2
	12H	26.5	27.3	27.0	27.7	28.2	26.5	27.3	27.0	27.7	28.2
8H	4H	26.0	26.8	26.5	27.3	27.8	26.0	26.8	26.5	27.3	27.8
	6H	26.7	27.3	27.1	27.8	28.3	26.7	27.3	27.1	27.8	28.3
	8H	26.9	27.5	27.4	28.0	28.5	26.9	27.5	27.4	28.0	28.5
	12H	27.0	27.5	27.5	28.0	28.6	27.0	27.5	27.5	28.0	28.6
12H	4H	26.1	26.8	26.5	27.3	27.7	26.1	26.8	26.5	27.3	27.7
	6H	26.7	27.3	27.2	27.8	28.3	26.7	27.3	27.2	27.8	28.3
	8H	27.0	27.5	27.5	28.0	28.5	27.0	27.5	27.5	28.0	28.5

Maximum UGR = 28.6

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POLAR GRAPH



Maximum Candela = 419.521 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.)

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