IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L20-8TW-DIM-UNV-SW-OF-WH_5000K_.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_5000K_
[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	1177
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	65
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	42485	42485	42485
55	36263	36263	36263
65	30931	30931	30931
75	25577	25577	25577
85	15828	15828	15828

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CANDELA TABULATION

	0
0.0	495.338
0.5	495.250
1.0	494.985
1.5	494.720
2.0	494.190
2.5	493.661
3.0	492.954
3.5	492.248
4.0	491.541
4.5	490.835
5.0	490.217
5.5	489.511
6.0	488.804
6.5	488.098
7.0	487.303
7.5	486.420
8.0	485.537
8.5	484.654
9.0	483.683
9.5	482.712
10.0	481.652
10.5	480.593
11.0	479.445
11.5	478.209
12.0	476.973
12.5	475.648
13.0	474.235
13.5	472.734
14.0	471.145
14.5	469.468
15.0	467.702
15.5	465.936
16.0	464.082
16.5	462.316
17.0	460.373
17.5	458.431
18.0	456.488
18.5	454.546
19.0	452.603
19.5	450.661
20.0	448.718
20.5	446.776
21.0	444.745
21.5	442.626
22.0	440.418
22.5	437.946
23.0	435.474
23.5	432.737
24.0	429.999
24.5	427.086
25.0	424.084
25.5	421.082
26.0	417.903
26.5	414.724

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CANDELA TABULATION - (Cont.)

27.0	411.457
27.5	408.102
28.0	404.747
28.5	401.480
29.0	398.213
29.5	394.858
30.0	391.591
30.5	388.147
31.0	384.615
31.5	381.172
32.0	377.640
32.5	374.108
33.0	370.488
33.5	366.780
34.0	363.160
34.5	359.451
35.0	355.743
35.5	351.946
36.0	348.149
36.5	344.264
37.0	340.379
37.5	336.494
38.0	332.521
38.5	328.460
39.0	324.575
39.5	320.513
40.0	316.451
40.5	312.478
41.0	308.328
41.5	304.355
42.0	300.205
42.5	296.143
43.0	291.993
43.5	287.755
44.0	283.517
44.5	279.279
45.0	274.952
45.5	270.714
46.0	266.388
46.5	262.061
47.0	257.735
47.5	253.320
48.0	248.993
48.5	244.579
49.0	240.252
49.5	235.926
50.0	231.599
50.5	227.361
51.0	223.123
51.5	218.885
52.0	214.735
52.5	210.585
53.0	206.523
53.5	202.462
54.0	198.400
54.5	194.427

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CANDELA TABULATION - (Cont.)

55.0	190.365
55.5	186.392
56.0	182.772
56.5	178.887
57.0	175.178
57.5	171.470
58.0	167.762
58.5	164.053
59.0	160.521
59.5	156.990
60.0	153.458
60.5	150.102
61.0	146.659
61.5	143.127
62.0	139.684
62.5	136.240
63.0	132.885
63.5	129.530
64.0	126.174
64.5	122.907
65.0	119.640
65.5	116.374
66.0	113.107
66.5	109.928
67.0	106.838
67.5	103.747
68.0	100.657
68.5	97.655
69.0	94.653
69.5	91.651
70.0	88.649
70.5	85.735
71.0	82.839
71.5	79.960
72.0	77.117
72.5	74.318
73.0	71.528
73.5	68.765
74.0	66.027
74.5	63.290
75.0	60.588
75.5	57.922
76.0	55.255
76.5	52.615
77.0	50.011
77.5	47.415
78.0	44.854
78.5	42.338
79.0	39.839
79.5	37.367
80.0	34.956
80.5	32.581
81.0	30.232
81.5	27.901
82.0	25.615
82.5	23.363

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CANDELA TABULATION - (Cont.)

83.0	21.138
83.5	18.939
84.0	16.794
84.5	14.684
85.0	12.626
85.5	10.657
86.0	8.821
86.5	7.214
87.0	5.748
87.5	4.432
88.0	3.302
88.5	2.410
89.0	1.678
89.5	1.086
90.0	0.671
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
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

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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	178.35	N.A.	15.20
0-30	373.17	N.A.	31.70
0-40	595.29	N.A.	50.60
0-60	977.83	N.A.	83.10
0-80	1160.92	N.A.	98.70
0-90	1176.53	N.A.	100.00
10-90	1130.00	N.A.	96.00
20-40	416.94	N.A.	35.40
20-50	628.68	N.A.	53.40
40-70	501.35	N.A.	42.60
60-80	183.10	N.A.	15.60
70-80	64.29	N.A.	5.50
80-90	15.61	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	1176.55	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	46.53
10-20	131.82
20-30	194.83
30-40	222.11
40-50	211.74
50-60	170.80
60-70	118.81
70-80	64.29
80-90	15.61
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	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

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UGR TABLE - CORRECTED

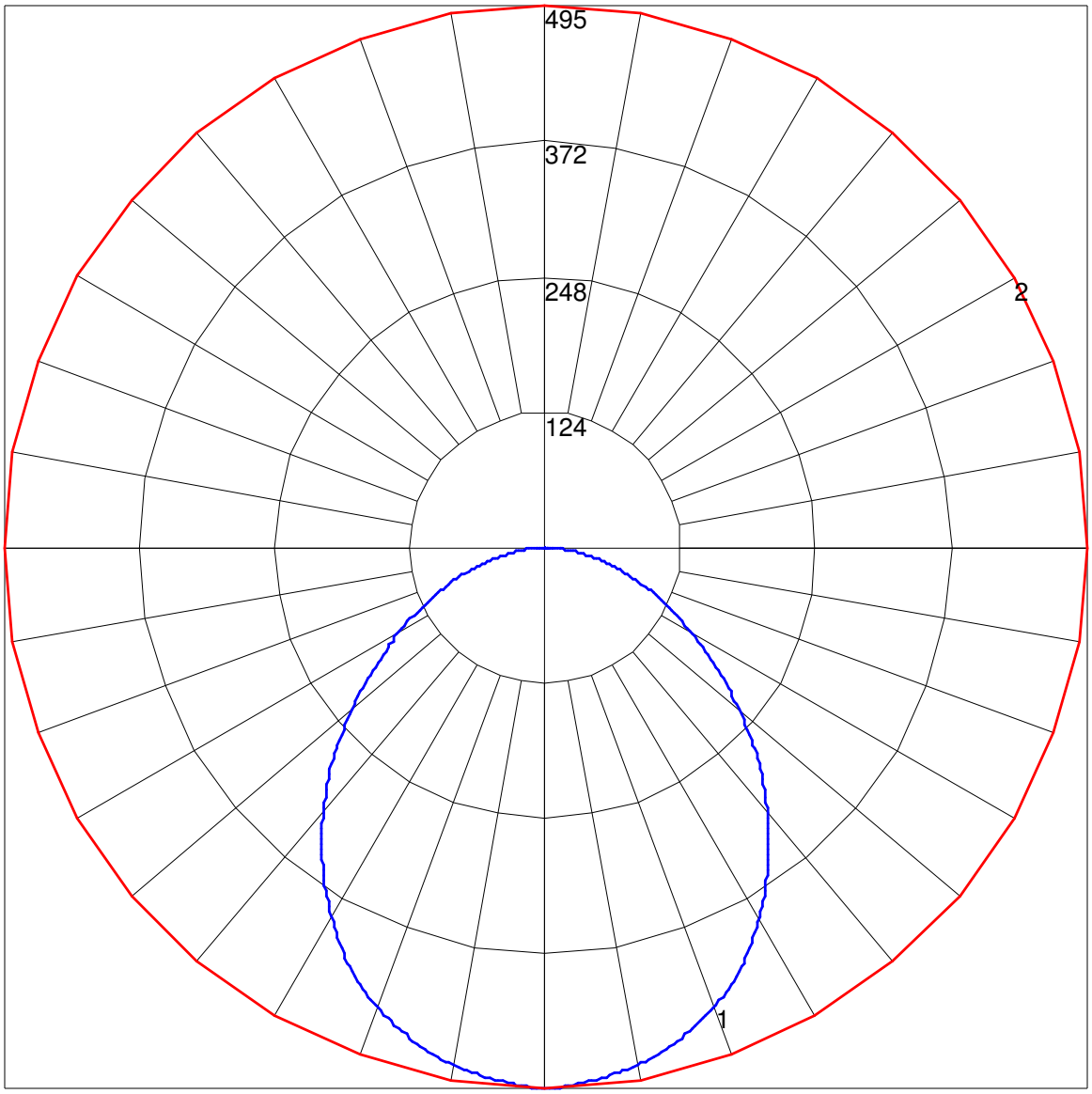
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	23.3	24.9	23.7	25.2	25.5	23.3	24.9	23.7	25.2	25.5
	3H	24.9	26.3	25.3	26.7	27.0	24.9	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

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POLAR GRAPH



Maximum Candela = 495.338 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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