IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L40-8TW-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-L40-8TW-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	2312
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	67
Total Luminaire Watts	34.4
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	83479	83479	83479
55	71253	71253	71253
65	60777	60777	60777
75	50257	50257	50257
85	31101	31101	31101

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CANDELA TABULATION

	0
0.0	973.287
0.5	973.113
1.0	972.593
1.5	972.072
2.0	971.031
2.5	969.990
3.0	968.602
3.5	967.215
4.0	965.827
4.5	964.439
5.0	963.224
5.5	961.836
6.0	960.448
6.5	959.060
7.0	957.499
7.5	955.764
8.0	954.029
8.5	952.294
9.0	950.386
9.5	948.477
10.0	946.396
10.5	944.314
11.0	942.058
11.5	939.629
12.0	937.201
12.5	934.598
13.0	931.822
13.5	928.873
14.0	925.750
14.5	922.454
15.0	918.984
15.5	915.514
16.0	911.871
16.5	908.401
17.0	904.584
17.5	900.767
18.0	896.951
18.5	893.134
19.0	889.317
19.5	885.500
20.0	881.683
20.5	877.866
21.0	873.876
21.5	869.712
22.0	865.375
22.5	860.517
23.0	855.660
23.5	850.281
24.0	844.903
24.5	839.178
25.0	833.279
25.5	827.380
26.0	821.135
26.5	814.889

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CANDELA TABULATION - (Cont.)

27.0	808.470
27.5	801.877
28.0	795.285
28.5	788.865
29.0	782.446
29.5	775.854
30.0	769.434
30.5	762.668
31.0	755.729
31.5	748.962
32.0	742.023
32.5	735.083
33.0	727.970
33.5	720.683
34.0	713.570
34.5	706.283
35.0	698.997
35.5	691.537
36.0	684.077
36.5	676.443
37.0	668.809
37.5	661.176
38.0	653.369
38.5	645.388
39.0	637.754
39.5	629.774
40.0	621.793
40.5	613.986
41.0	605.832
41.5	598.025
42.0	589.871
42.5	581.890
43.0	573.736
43.5	565.408
44.0	557.081
44.5	548.753
45.0	540.252
45.5	531.925
46.0	523.424
46.5	514.922
47.0	506.421
47.5	497.747
48.0	489.246
48.5	480.571
49.0	472.070
49.5	463.569
50.0	455.068
50.5	446.740
51.0	438.413
51.5	430.085
52.0	421.931
52.5	413.777
53.0	405.796
53.5	397.816
54.0	389.835
54.5	382.028

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CANDELA TABULATION - (Cont.)

55.0	374.047
55.5	366.240
56.0	359.127
56.5	351.494
57.0	344.207
57.5	336.920
58.0	329.634
58.5	322.347
59.0	315.407
59.5	308.468
60.0	301.528
60.5	294.935
61.0	288.169
61.5	281.230
62.0	274.463
62.5	267.697
63.0	261.105
63.5	254.512
64.0	247.919
64.5	241.500
65.0	235.081
65.5	228.662
66.0	222.242
66.5	215.997
67.0	209.925
67.5	203.852
68.0	197.780
68.5	191.881
69.0	185.983
69.5	180.084
70.0	174.185
70.5	168.460
71.0	162.770
71.5	157.114
72.0	151.527
72.5	146.028
73.0	140.545
73.5	135.115
74.0	129.737
74.5	124.359
75.0	119.050
75.5	113.810
76.0	108.571
76.5	103.384
77.0	98.266
77.5	93.165
78.0	88.134
78.5	83.189
79.0	78.279
79.5	73.422
80.0	68.685
80.5	64.018
81.0	59.403
81.5	54.823
82.0	50.330
82.5	45.906

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CANDELA TABULATION - (Cont.)

83.0	41.534
83.5	37.214
84.0	32.998
84.5	28.852
85.0	24.809
85.5	20.940
86.0	17.332
86.5	14.174
87.0	11.294
87.5	8.709
88.0	6.489
88.5	4.736
89.0	3.296
89.5	2.134
90.0	1.319
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
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121.5	0.000
122.0	0.000
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124.0	0.000
124.5	0.000
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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
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149.0	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
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	350.43	N.A.	15.20
0-30	733.24	N.A.	31.70
0-40	1169.68	N.A.	50.60
0-60	1921.33	N.A.	83.10
0-80	2281.09	N.A.	98.70
0-90	2311.76	N.A.	100.00
10-90	2220.33	N.A.	96.00
20-40	819.24	N.A.	35.40
20-50	1235.3	N.A.	53.40
40-70	985.09	N.A.	42.60
60-80	359.76	N.A.	15.60
70-80	126.32	N.A.	5.50
80-90	30.67	N.A.	1.30
90-110	0.04	N.A.	0.00
90-120	0.04	N.A.	0.00
90-130	0.04	N.A.	0.00
90-150	0.04	N.A.	0.00
90-180	0.04	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	2311.79	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	91.43
10-20	259.01
20-30	382.81
30-40	436.43
40-50	416.05
50-60	335.60
60-70	233.44
70-80	126.32
80-90	30.67
90-100	0.04
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	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	49	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

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UGR TABLE - CORRECTED

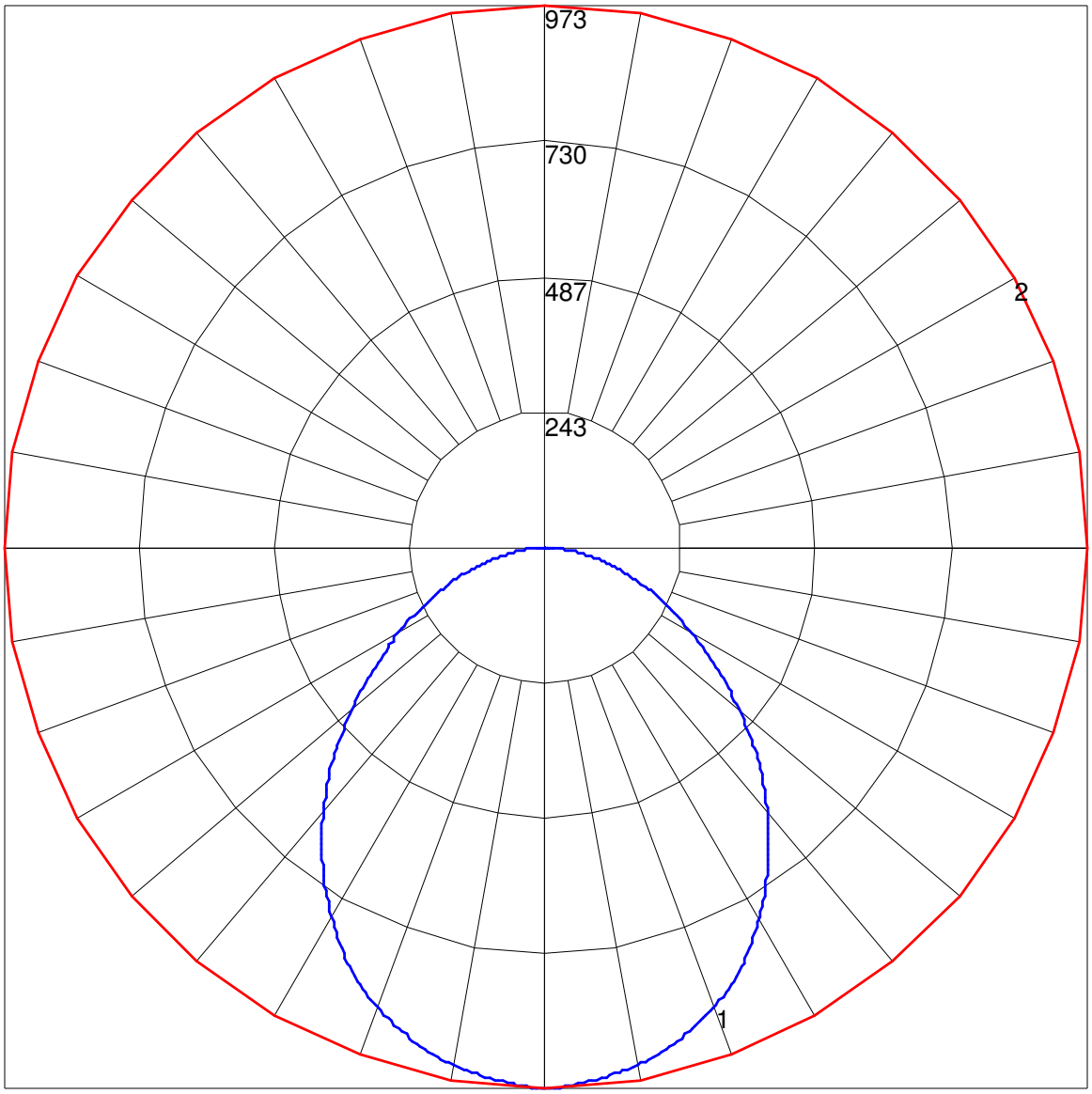
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	25.6	27.2	26.0	27.5	27.8	25.6	27.2	26.0	27.5	27.8
	3H	27.2	28.6	27.6	29.0	29.3	27.2	28.6	27.6	29.0	29.3
	4H	27.8	29.1	28.2	29.5	29.8	27.8	29.1	28.2	29.5	29.8
	6H	28.2	29.4	28.6	29.8	30.2	28.2	29.4	28.6	29.8	30.2
	8H	28.3	29.5	28.7	29.9	30.3	28.3	29.5	28.7	29.9	30.3
	12H	28.4	29.5	28.8	29.9	30.3	28.4	29.5	28.8	29.9	30.3
4H	2H	26.2	27.5	26.6	27.9	28.2	26.2	27.5	26.6	27.9	28.2
	3H	28.0	29.1	28.4	29.5	29.9	28.0	29.1	28.4	29.5	29.9
	4H	28.7	29.7	29.1	30.1	30.5	28.7	29.7	29.1	30.1	30.5
	6H	29.2	30.1	29.7	30.5	31.0	29.2	30.1	29.7	30.5	31.0
	8H	29.3	30.2	29.8	30.6	31.1	29.3	30.2	29.8	30.6	31.1
	12H	29.4	30.2	29.9	30.6	31.1	29.4	30.2	29.9	30.6	31.1
8H	4H	28.9	29.7	29.4	30.2	30.7	28.9	29.7	29.4	30.2	30.7
	6H	29.5	30.2	30.0	30.7	31.2	29.5	30.2	30.0	30.7	31.2
	8H	29.8	30.4	30.3	30.9	31.4	29.8	30.4	30.3	30.9	31.4
	12H	29.9	30.4	30.4	30.9	31.5	29.9	30.4	30.4	30.9	31.5
12H	4H	29.0	29.7	29.4	30.2	30.6	29.0	29.7	29.4	30.2	30.6
	6H	29.6	30.2	30.1	30.7	31.2	29.6	30.2	30.1	30.7	31.2
	8H	29.8	30.4	30.4	30.9	31.4	29.8	30.4	30.4	30.9	31.4

Maximum UGR = 31.5

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POLAR GRAPH



Maximum Candela = 973.287 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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