IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L60-8TW-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-L60-8TW-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	3784
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	74
Total Luminaire Watts	51.1
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	136654	136654	136654
55	116640	116640	116640
65	99490	99490	99490
75	82271	82271	82271
85	50913	50913	50913

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CANDELA TABULATION

	0
0.0	1593.257
0.5	1592.973
1.0	1592.121
1.5	1591.269
2.0	1589.565
2.5	1587.861
3.0	1585.589
3.5	1583.317
4.0	1581.045
4.5	1578.773
5.0	1576.785
5.5	1574.513
6.0	1572.241
6.5	1569.969
7.0	1567.413
7.5	1564.573
8.0	1561.732
8.5	1558.892
9.0	1555.768
9.5	1552.644
10.0	1549.236
10.5	1545.828
11.0	1542.136
11.5	1538.160
12.0	1534.184
12.5	1529.924
13.0	1525.380
13.5	1520.552
14.0	1515.440
14.5	1510.044
15.0	1504.364
15.5	1498.684
16.0	1492.720
16.5	1487.040
17.0	1480.792
17.5	1474.544
18.0	1468.295
18.5	1462.047
19.0	1455.799
19.5	1449.551
20.0	1443.303
20.5	1437.055
21.0	1430.523
21.5	1423.707
22.0	1416.607
22.5	1408.655
23.0	1400.703
23.5	1391.899
24.0	1383.095
24.5	1373.722
25.0	1364.066
25.5	1354.410
26.0	1344.186
26.5	1333.962

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CANDELA TABULATION - (Cont.)

27.0	1323.454
27.5	1312.662
28.0	1301.870
28.5	1291.362
29.0	1280.854
29.5	1270.061
30.0	1259.553
30.5	1248.477
31.0	1237.117
31.5	1226.041
32.0	1214.681
32.5	1203.321
33.0	1191.677
33.5	1179.748
34.0	1168.104
34.5	1156.176
35.0	1144.248
35.5	1132.036
36.0	1119.824
36.5	1107.328
37.0	1094.832
37.5	1082.335
38.0	1069.555
38.5	1056.491
39.0	1043.995
39.5	1030.931
40.0	1017.867
40.5	1005.087
41.0	991.738
41.5	978.958
42.0	965.610
42.5	952.546
43.0	939.198
43.5	925.566
44.0	911.934
44.5	898.301
45.0	884.385
45.5	870.753
46.0	856.837
46.5	842.921
47.0	829.005
47.5	814.805
48.0	800.888
48.5	786.688
49.0	772.772
49.5	758.856
50.0	744.940
50.5	731.308
51.0	717.676
51.5	704.043
52.0	690.695
52.5	677.347
53.0	664.283
53.5	651.219
54.0	638.155
54.5	625.375

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CANDELA TABULATION - (Cont.)

55.0	612.310
55.5	599.530
56.0	587.886
56.5	575.390
57.0	563.462
57.5	551.534
58.0	539.606
58.5	527.678
59.0	516.317
59.5	504.957
60.0	493.597
60.5	482.805
61.0	471.729
61.5	460.369
62.0	449.293
62.5	438.217
63.0	427.425
63.5	416.632
64.0	405.840
64.5	395.332
65.0	384.824
65.5	374.316
66.0	363.808
66.5	353.584
67.0	343.644
67.5	333.704
68.0	323.763
68.5	314.107
69.0	304.451
69.5	294.795
70.0	285.139
70.5	275.767
71.0	266.452
71.5	257.193
72.0	248.048
72.5	239.045
73.0	230.071
73.5	221.182
74.0	212.377
74.5	203.573
75.0	194.883
75.5	186.306
76.0	177.729
76.5	169.237
77.0	160.859
77.5	152.510
78.0	144.274
78.5	136.179
79.0	128.142
79.5	120.190
80.0	112.437
80.5	104.797
81.0	97.243
81.5	89.745
82.0	82.389
82.5	75.147

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CANDELA TABULATION - (Cont.)

83.0	67.990
83.5	60.919
84.0	54.017
84.5	47.230
85.0	40.612
85.5	34.279
86.0	28.372
86.5	23.203
87.0	18.489
87.5	14.257
88.0	10.622
88.5	7.753
89.0	5.396
89.5	3.493
90.0	2.158
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
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121.5	0.000
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122.5	0.000
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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	573.65	N.A.	15.20
0-30	1200.31	N.A.	31.70
0-40	1914.74	N.A.	50.60
0-60	3145.19	N.A.	83.10
0-80	3734.11	N.A.	98.70
0-90	3784.31	N.A.	100.00
10-90	3634.65	N.A.	96.00
20-40	1341.09	N.A.	35.40
20-50	2022.17	N.A.	53.40
40-70	1612.58	N.A.	42.60
60-80	588.93	N.A.	15.60
70-80	206.79	N.A.	5.50
80-90	50.20	N.A.	1.30
90-110	0.06	N.A.	0.00
90-120	0.06	N.A.	0.00
90-130	0.06	N.A.	0.00
90-150	0.06	N.A.	0.00
90-180	0.06	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	3784.37	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	149.66
10-20	423.99
20-30	626.66
30-40	714.43
40-50	681.07
50-60	549.37
60-70	382.14
70-80	206.79
80-90	50.20
90-100	0.06
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	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

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UGR TABLE - CORRECTED

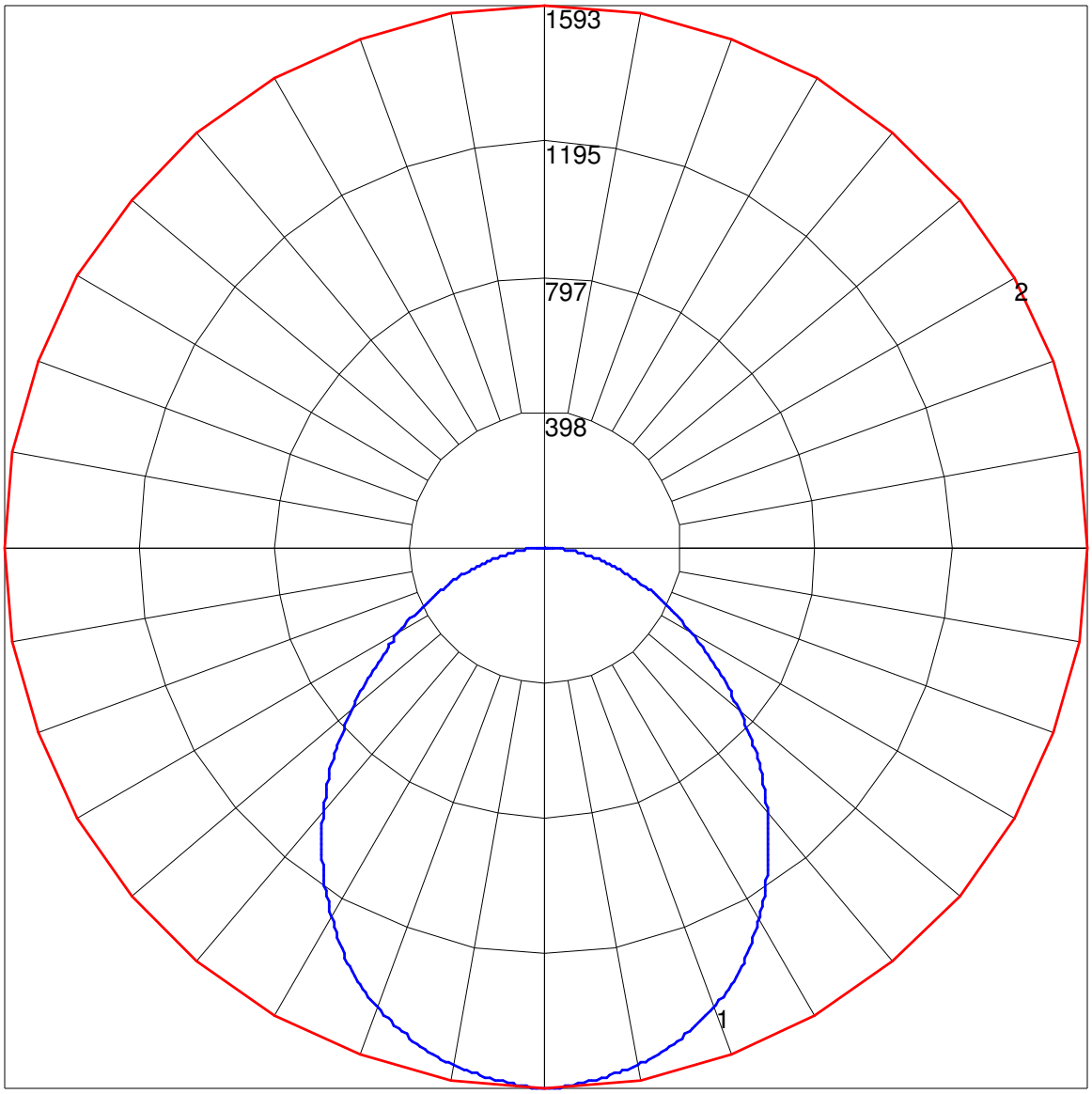
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	27.3	28.9	27.7	29.2	29.5	27.3	28.9	27.7	29.2	29.5
	3H	28.9	30.3	29.3	30.7	31.0	28.9	30.3	29.3	30.7	31.0
	4H	29.5	30.8	29.9	31.2	31.5	29.5	30.8	29.9	31.2	31.5
	6H	29.9	31.1	30.3	31.5	31.9	29.9	31.1	30.3	31.5	31.9
	8H	30.0	31.2	30.4	31.6	32.0	30.0	31.2	30.4	31.6	32.0
	12H	30.1	31.2	30.5	31.6	32.0	30.1	31.2	30.5	31.6	32.0
4H	2H	27.9	29.2	28.3	29.6	29.9	27.9	29.2	28.3	29.6	29.9
	3H	29.7	30.8	30.1	31.2	31.6	29.7	30.8	30.1	31.2	31.6
	4H	30.4	31.4	30.8	31.8	32.2	30.4	31.4	30.8	31.8	32.2
	6H	30.9	31.8	31.4	32.2	32.7	30.9	31.8	31.4	32.2	32.7
	8H	31.0	31.9	31.5	32.3	32.8	31.0	31.9	31.5	32.3	32.8
	12H	31.1	31.9	31.6	32.3	32.8	31.1	31.9	31.6	32.3	32.8
8H	4H	30.6	31.4	31.1	31.9	32.4	30.6	31.4	31.1	31.9	32.4
	6H	31.2	31.9	31.7	32.4	32.9	31.2	31.9	31.7	32.4	32.9
	8H	31.5	32.1	32.0	32.6	33.1	31.5	32.1	32.0	32.6	33.1
	12H	31.6	32.1	32.1	32.6	33.2	31.6	32.1	32.1	32.6	33.2
12H	4H	30.7	31.4	31.1	31.9	32.3	30.7	31.4	31.1	31.9	32.3
	6H	31.3	31.9	31.8	32.4	32.9	31.3	31.9	31.8	32.4	32.9
	8H	31.5	32.1	32.1	32.6	33.1	31.5	32.1	32.1	32.6	33.1

Maximum UGR = 33.2

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POLAR GRAPH



Maximum Candela = 1593.257 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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