

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: STREETWORKS

Report Number: P239167

Luminaire Tested: **ARCH-AF24-90-D-U-T2U-8027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P239167
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1802-616-1)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: ARCH-AF24-90-D-U-T2U-8027
Description: ARCHEON ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 2700K, 1180mA LIGHT ENGINE WITH 24 LEDS AND TYPE II U OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7643 lumens
Efficiency: N/A
Efficacy: 81.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

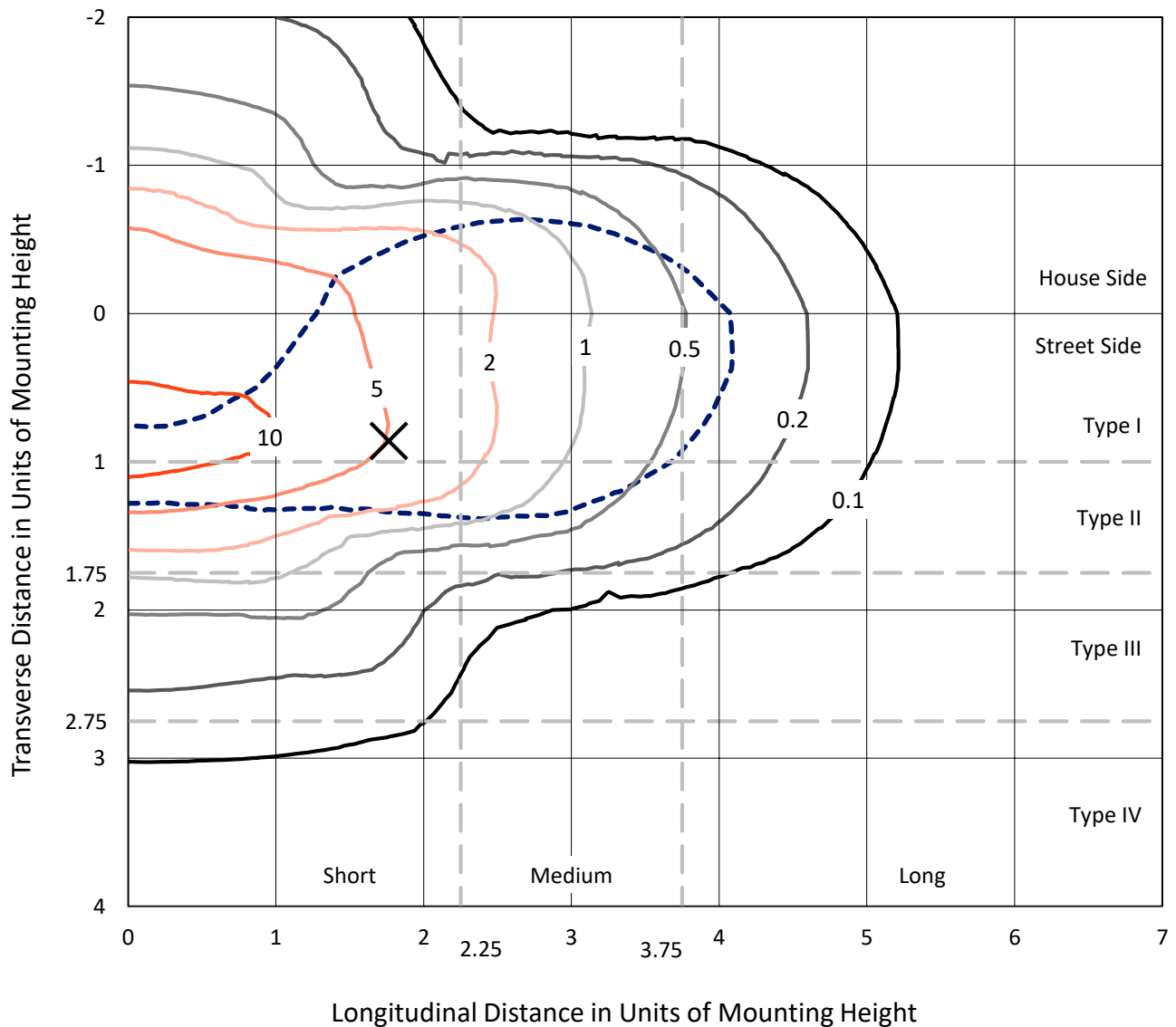
Input Watts (W): 94
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

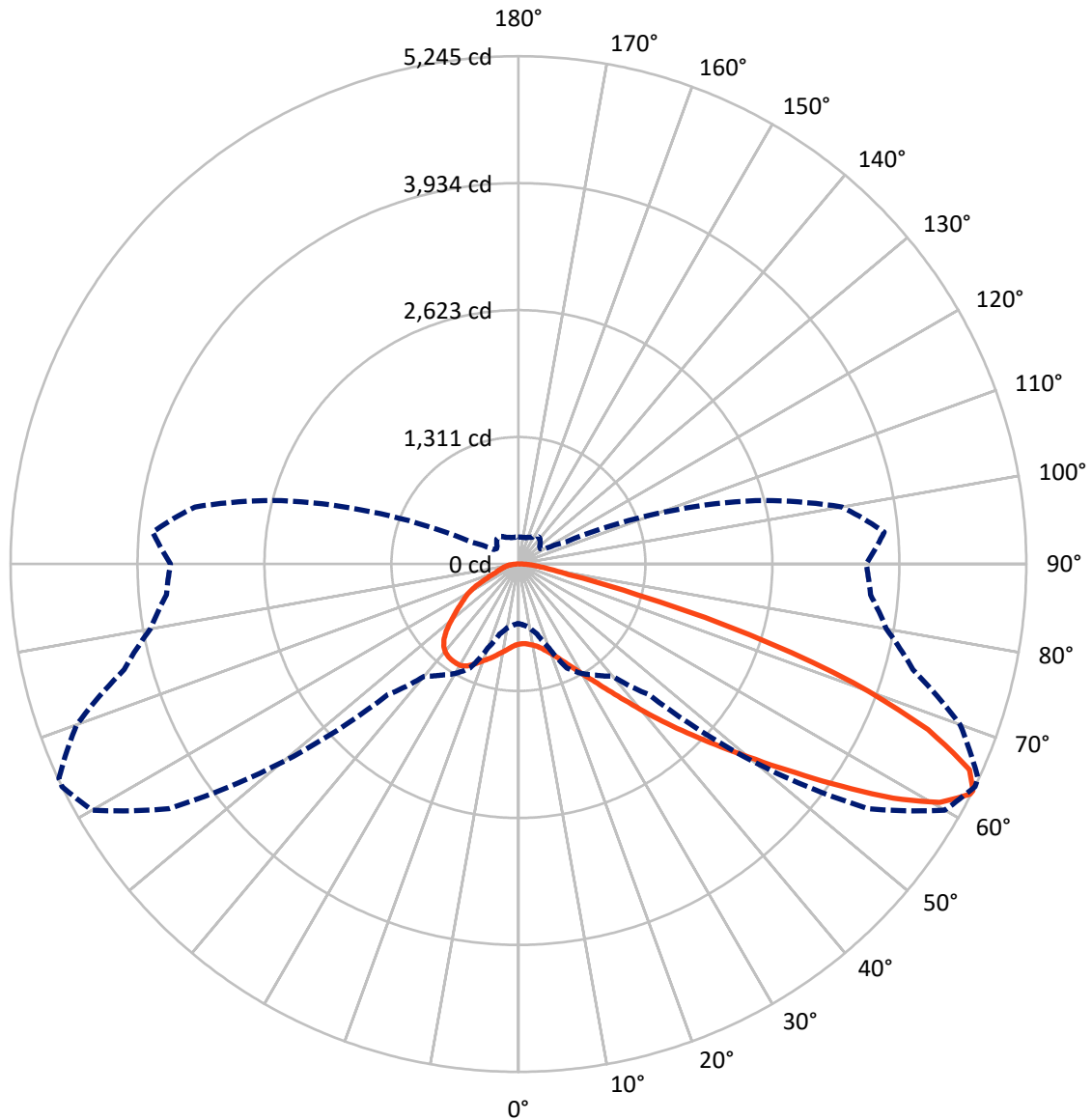
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.4 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral - - - Horizontal Cone Through 63-Deg Vertical



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2246.8	0.0	2246.8
	% Fixture	29.4	0.0	29.4
Street Side	Lumens	5396.2	0.0	5396.2
	% Fixture	70.6	0.0	70.6
Total	Lumens	7643.0	0.0	7643.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.6	1.1
10°-20°	275.3	3.6
20°-30°	516.7	6.8
30°-40°	866.0	11.3
40°-50°	1453.0	19.0
50°-60°	1842.0	24.1
60°-70°	1624.9	21.3
70°-80°	838.8	11.0
80°-90°	143.5	1.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	7643.0	100.0
0°-180°	7643.0	100.0



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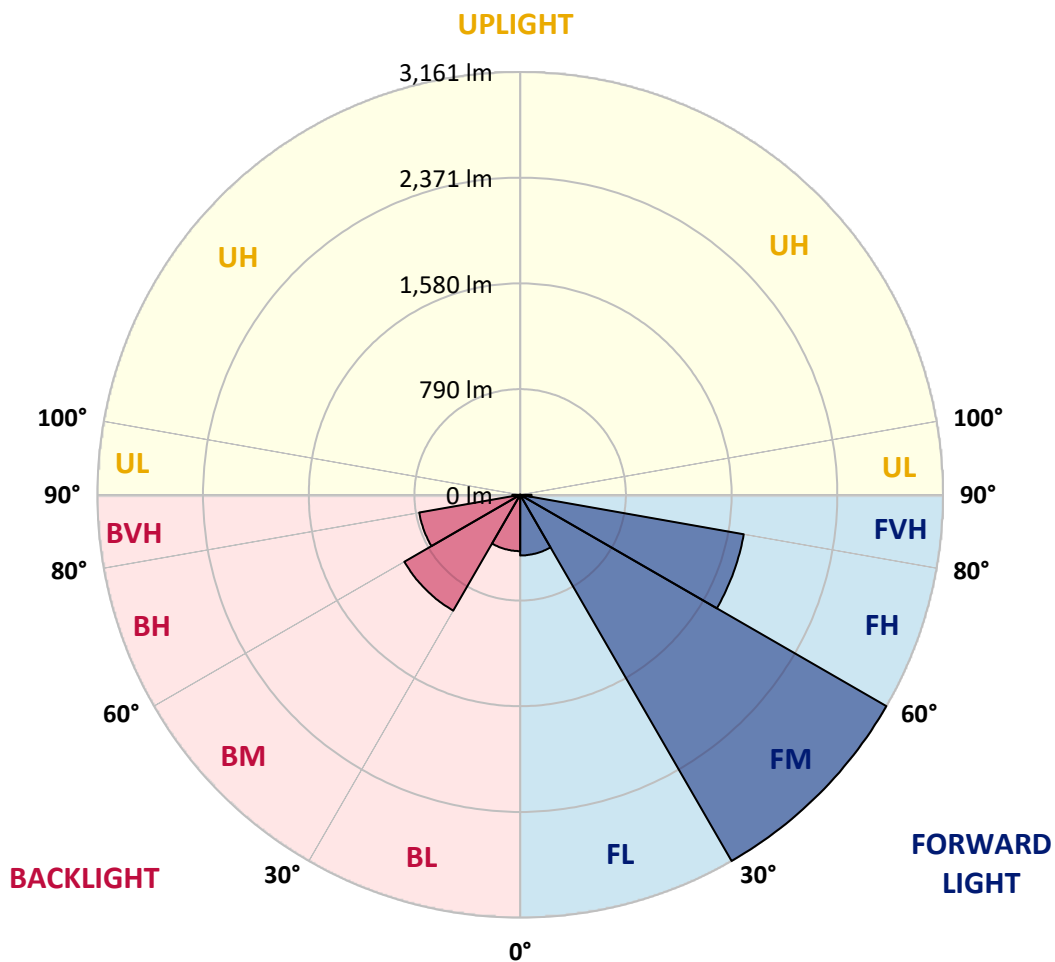
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	453.6	5.9			
FM (30°-60°)	3160.9	41.4			
FH (60°-80°)	1697.2	22.2			G1/1800
FVH (80°-90°)	84.5	1.1			G1/100
BL (0°-30°)	421.0	5.5	B1/500		
BM (30°-60°)	1000.2	13.1	B2/2500		
BH (60°-80°)	766.6	10.0	B2/1000		G2/1000
BVH (80°-90°)	59.1	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	827.7	827.7	827.7	827.7	827.7	827.7	827.7	827.7	827.7	827.7	827.7
2.5°	822.6	821.3	821.3	821.3	821.3	820.1	821.3	823.9	822.6	821.3	823.9
5°	825.2	823.9	823.9	823.9	825.2	823.9	825.2	829.0	826.5	826.5	829.0
7.5°	831.6	830.3	831.6	830.3	830.3	830.3	831.6	835.4	834.1	835.4	839.2
10°	839.2	839.2	839.2	839.2	839.2	839.2	841.8	844.4	845.6	846.9	852.0
12.5°	862.3	862.3	862.3	861.0	861.0	857.2	862.3	864.8	867.4	870.0	873.8
15°	910.9	910.9	909.6	904.5	904.5	896.8	898.1	899.4	899.4	901.9	904.5
17.5°	974.9	973.6	971.0	967.2	962.1	953.1	950.6	948.0	944.2	942.9	942.9
20°	1064.4	1063.1	1058.0	1047.8	1041.4	1027.3	1017.1	1006.8	1003.0	996.6	995.3
22.5°	1192.3	1192.3	1182.1	1166.8	1161.6	1132.2	1102.8	1081.0	1073.4	1064.4	1064.4
25°	1347.1	1345.9	1331.8	1313.9	1292.1	1261.4	1225.6	1196.2	1177.0	1156.5	1148.8
27.5°	1532.7	1528.8	1509.6	1487.9	1446.9	1408.6	1366.3	1335.6	1302.4	1276.8	1253.8
30°	1750.1	1746.3	1713.0	1672.1	1629.9	1591.5	1530.1	1493.0	1440.5	1409.8	1384.2
32.5°	2002.2	1998.3	1938.2	1898.5	1853.8	1806.4	1733.5	1674.7	1608.1	1564.6	1528.8
35°	2323.3	2307.9	2222.2	2167.2	2096.8	2049.5	1972.7	1893.4	1815.4	1754.0	1701.5
37.5°	2670.0	2652.1	2576.6	2494.7	2425.6	2368.1	2259.3	2159.5	2067.4	1983.0	1917.7
40°	3032.0	2984.7	2904.1	2844.0	2796.6	2741.6	2627.8	2522.9	2378.3	2283.6	2185.1
42.5°	3282.8	3236.7	3180.4	3140.8	3117.8	3075.5	3011.6	2920.7	2791.5	2794.1	2534.4
45°	3447.8	3380.0	3341.6	3344.2	3353.2	3353.2	3341.6	3327.6	3271.3	3309.7	3092.2
47.5°	3389.0	3344.2	3319.9	3371.1	3435.0	3499.0	3573.2	3653.8	3745.9	3854.7	3587.3
50°	3043.6	3060.2	3071.7	3180.4	3317.3	3463.2	3633.3	3853.4	4110.5	4160.4	4031.2
52.5°	2492.2	2528.0	2566.4	2732.7	2913.1	3165.1	3463.2	3826.5	4171.9	4375.3	4362.6
55°	1935.6	1980.4	2062.3	2186.4	2329.7	2567.6	2936.1	3496.4	4035.0	4358.7	4555.7
57.5°	1377.9	1443.1	1550.6	1723.3	1849.9	1984.3	2256.8	2878.5	3468.3	4070.9	4523.8
60°	916.0	946.7	1017.1	1232.0	1445.7	1586.4	1779.6	2004.7	2487.0	3317.3	4193.7
62.5°	649.9	670.4	713.9	811.1	1004.3	1258.9	1375.3	1478.9	1633.7	2133.9	3367.2
63°	614.1	632.0	667.8	749.7	923.7	1187.2	1306.2	1400.9	1513.5	1908.8	3185.6
65°	509.2	516.9	536.0	575.7	669.1	887.9	1082.3	1139.9	1159.1	1226.9	1995.8
67.5°	429.9	435.0	441.4	452.9	490.0	591.1	807.3	880.2	858.4	812.4	986.4
70°	373.6	377.4	387.6	401.7	414.5	440.1	555.2	664.0	639.7	577.0	603.8
72.5°	298.1	304.5	316.0	340.3	365.9	399.2	427.3	495.1	479.8	419.6	426.0
75°	235.4	239.2	249.5	267.4	291.7	330.1	385.1	408.1	365.9	309.6	309.6
77.5°	186.8	190.6	199.6	213.6	229.0	255.9	294.2	354.4	328.8	232.8	231.6
80°	140.7	144.6	153.5	166.3	181.7	200.9	223.9	250.8	301.9	217.5	174.0
82.5°	103.6	104.9	120.3	129.2	134.3	149.7	168.9	184.2	207.3	200.9	154.8
85°	78.0	76.8	87.0	93.4	94.7	98.5	110.0	125.4	135.6	130.5	120.3
87.5°	43.5	38.4	44.8	51.2	51.2	52.5	55.0	64.0	72.9	70.4	64.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	64°	65°	70°	75°	80°	85°	90°	95°	100°
0°	827.7	827.7	827.7	827.7	827.7	827.7	827.7	827.7	827.7	827.7	827.7
2.5°	823.9	823.9	822.6	822.6	823.9	823.9	822.6	826.5	829.0	829.0	830.3
5°	827.7	829.0	827.7	827.7	829.0	829.0	830.3	834.1	838.0	840.5	844.4
7.5°	839.2	840.5	839.2	839.2	840.5	841.8	844.4	849.5	852.0	857.2	863.6
10°	852.0	853.3	852.0	853.3	854.6	855.9	859.7	863.6	867.4	872.5	882.7
12.5°	875.1	876.3	873.8	875.1	878.9	878.9	881.5	884.0	890.4	896.8	907.1
15°	907.1	907.1	904.5	905.8	909.6	909.6	910.9	913.4	921.1	928.8	939.0
17.5°	944.2	946.7	945.4	946.7	949.3	950.6	950.6	953.1	958.2	963.3	973.6
20°	994.0	995.3	992.8	995.3	997.9	995.3	992.8	991.5	994.0	996.6	1008.1
22.5°	1061.9	1060.6	1054.2	1054.2	1054.2	1049.1	1042.7	1035.0	1035.0	1031.1	1040.1
25°	1142.5	1138.6	1129.7	1130.9	1122.0	1114.3	1102.8	1091.3	1081.0	1077.2	1078.5
27.5°	1237.1	1229.4	1220.5	1217.9	1209.0	1194.9	1175.7	1154.0	1137.3	1124.5	1122.0
30°	1356.1	1339.5	1324.1	1321.6	1307.5	1284.5	1253.8	1224.3	1196.2	1174.4	1166.8
32.5°	1496.8	1471.2	1446.9	1444.4	1421.3	1390.6	1353.5	1312.6	1271.7	1237.1	1220.5
35°	1661.9	1623.5	1600.5	1594.1	1560.8	1522.4	1481.5	1429.0	1371.5	1322.8	1292.1
37.5°	1862.7	1823.1	1783.4	1784.7	1738.6	1693.8	1638.8	1574.9	1501.9	1434.1	1390.6
40°	2110.9	2054.6	2003.4	1991.9	1952.3	1889.6	1829.5	1755.3	1665.7	1576.1	1513.5
42.5°	2411.6	2319.4	2249.1	2238.8	2186.4	2109.6	2036.7	1938.2	1847.4	1738.6	1663.1
45°	2753.1	2606.0	2521.6	2506.2	2421.8	2343.8	2255.5	2150.6	2039.3	1916.5	1826.9
47.5°	3177.9	2968.1	2824.8	2799.2	2682.8	2580.4	2488.3	2371.9	2238.8	2102.0	2003.4
50°	3673.0	3363.4	3170.2	3130.5	2974.5	2854.2	2736.5	2590.7	2448.7	2305.4	2191.5
52.5°	4169.4	3836.7	3579.6	3531.0	3300.7	3139.5	2984.7	2838.9	2671.3	2529.3	2400.0
55°	4568.5	4347.2	4049.1	3981.3	3651.2	3432.5	3229.1	3062.7	2896.4	2783.8	2631.6
57.5°	4809.0	4797.5	4562.1	4468.7	4017.1	3693.5	3467.0	3277.7	3116.5	3069.1	2867.0
60°	4802.6	5100.7	4999.7	4929.3	4386.9	3960.8	3666.6	3461.9	3328.8	3382.6	3103.7
62.5°	4509.7	5113.5	5235.1	5215.9	4780.9	4175.8	3830.3	3619.3	3548.9	3708.8	3349.3
63°	4403.5	5084.1	5245.3	5237.6	4856.4	4216.7	3858.5	3650.0	3592.4	3792.0	3394.1
65°	3721.6	4827.0	5121.2	5155.7	5018.9	4357.4	3923.7	3728.0	3721.6	3977.5	3500.3
67.5°	2268.3	4078.5	4562.1	4628.7	4789.9	4402.2	3886.6	3701.1	3793.2	4004.3	3468.3
70°	969.7	2691.7	3666.6	3774.1	4168.1	4179.6	3780.5	3591.1	3776.6	3794.5	3240.6
72.5°	574.4	1269.1	2496.0	2730.1	3298.1	3596.2	3537.4	3399.2	3557.8	3332.7	2759.5
75°	406.8	593.6	1267.8	1517.3	2296.4	2745.5	2971.9	3035.9	3029.5	2643.1	2071.3
77.5°	291.7	381.2	534.8	630.7	1281.9	1762.9	2039.3	2226.1	2165.9	1769.3	1276.8
80°	203.4	263.5	327.5	348.0	594.9	905.8	1074.6	1156.5	1120.7	884.0	571.9
82.5°	147.1	172.7	211.1	223.9	299.4	418.3	497.7	438.8	420.9	326.2	246.9
85°	113.9	111.3	131.8	136.9	175.3	218.8	223.9	174.0	152.2	135.6	138.2
87.5°	80.6	69.1	70.4	72.9	90.8	116.4	113.9	71.6	61.4	65.2	74.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	827.7	827.7	827.7	827.7	827.7	827.7	827.7	827.7	827.7	827.7	827.7
2.5°	832.9	834.1	836.7	838.0	840.5	840.5	843.1	844.4	846.9	849.5	850.8
5°	848.2	852.0	857.2	859.7	864.8	868.7	873.8	876.3	881.5	885.3	890.4
7.5°	871.2	877.6	884.0	891.7	899.4	905.8	910.9	917.3	926.2	932.6	936.5
10°	893.0	901.9	913.4	922.4	933.9	942.9	950.6	962.1	972.3	981.3	986.4
12.5°	921.1	932.6	944.2	958.2	973.6	985.1	996.6	1012.0	1026.0	1036.3	1041.4
15°	954.4	968.5	981.3	997.9	1015.8	1031.1	1047.8	1064.4	1074.6	1074.6	1072.1
17.5°	988.9	1000.4	1015.8	1035.0	1059.3	1078.5	1087.4	1090.0	1086.2	1077.2	1070.8
20°	1023.5	1033.7	1050.3	1073.4	1099.0	1102.8	1093.8	1082.3	1070.8	1055.5	1045.2
22.5°	1051.6	1065.7	1091.3	1118.1	1119.4	1097.7	1073.4	1054.2	1036.3	1018.4	999.2
25°	1084.9	1104.1	1138.6	1148.8	1115.6	1074.6	1040.1	1012.0	982.5	953.1	931.4
27.5°	1125.8	1154.0	1188.5	1159.1	1093.8	1036.3	988.9	946.7	908.3	867.4	843.1
30°	1169.3	1212.8	1220.5	1143.7	1056.7	982.5	918.6	854.6	806.0	768.9	754.8
32.5°	1221.8	1278.1	1232.0	1116.9	1006.8	909.6	823.9	747.1	706.2	683.2	676.8
35°	1301.1	1347.1	1238.4	1088.7	949.3	822.6	715.2	653.7	628.2	612.8	605.1
37.5°	1415.0	1413.7	1237.1	1054.2	882.7	727.9	628.2	584.7	564.2	551.4	537.3
40°	1548.0	1464.8	1229.4	1004.3	793.2	637.1	568.0	527.1	507.9	492.5	475.9
42.5°	1679.8	1499.4	1207.7	930.1	681.9	571.9	524.5	487.4	467.0	450.3	427.3
45°	1793.6	1513.5	1165.5	827.7	582.1	520.7	496.4	464.4	440.1	414.5	396.6
47.5°	1883.2	1510.9	1097.7	707.5	515.6	484.9	473.4	451.6	422.2	390.2	367.2
50°	1958.7	1491.7	1005.6	601.3	470.8	452.9	449.0	442.7	395.3	368.5	354.4
52.5°	2027.8	1463.6	907.1	529.6	432.4	417.1	424.7	418.3	385.1	362.1	348.0
55°	2122.4	1444.4	809.8	474.6	387.6	383.8	390.2	399.2	378.7	356.9	341.6
57.5°	2233.7	1454.6	735.6	413.2	345.4	348.0	369.7	382.5	372.3	349.3	333.9
60°	2361.7	1485.3	670.4	354.4	310.9	317.3	349.3	367.2	365.9	339.0	321.1
62.5°	2504.9	1517.3	566.7	309.6	281.5	291.7	325.0	348.0	351.8	328.8	307.0
63°	2533.1	1519.9	539.9	300.6	276.3	287.9	318.6	342.9	348.0	326.2	304.5
65°	2602.2	1496.8	435.0	276.3	255.9	268.7	299.4	321.1	331.3	312.2	294.2
67.5°	2544.6	1308.8	327.5	246.9	239.2	248.2	275.1	295.5	304.5	295.5	277.6
70°	2327.1	951.8	255.9	220.0	221.3	227.7	248.2	267.4	277.6	275.1	258.4
72.5°	1874.2	539.9	213.6	197.0	200.9	208.5	222.6	240.5	249.5	248.2	236.7
75°	1234.6	276.3	180.4	176.5	179.1	185.5	195.7	209.8	220.0	218.8	213.6
77.5°	611.5	191.9	154.8	156.1	157.4	162.5	170.2	182.9	189.3	190.6	189.3
80°	252.0	149.7	133.1	134.3	135.6	139.4	144.6	156.1	159.9	162.5	163.8
82.5°	151.0	113.9	106.2	108.7	110.0	113.9	117.7	127.9	131.8	135.6	135.6
85°	99.8	79.3	76.8	79.3	81.9	84.4	85.7	92.1	98.5	103.6	106.2
87.5°	53.7	47.3	46.1	47.3	47.3	49.9	52.5	58.8	66.5	71.6	74.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	827.7	827.7	827.7	827.7	827.7
2.5°	848.2	849.5	848.2	849.5	850.8
5°	890.4	893.0	891.7	891.7	896.8
7.5°	939.0	944.2	944.2	946.7	949.3
10°	991.5	996.6	1000.4	1000.4	1004.3
12.5°	1043.9	1046.5	1050.3	1050.3	1050.3
15°	1070.8	1069.5	1068.2	1067.0	1067.0
17.5°	1067.0	1061.9	1059.3	1056.7	1058.0
20°	1038.8	1029.9	1027.3	1023.5	1026.0
22.5°	990.2	977.4	972.3	965.9	968.5
25°	917.3	901.9	899.4	891.7	895.5
27.5°	832.9	825.2	823.9	822.6	829.0
30°	753.5	756.1	757.4	759.9	766.3
32.5°	680.6	685.7	687.0	688.3	697.2
35°	609.0	602.6	609.0	606.4	614.1
37.5°	530.9	525.8	520.7	514.3	519.4
40°	465.7	456.7	441.4	433.7	435.0
42.5°	414.5	403.0	390.2	382.5	382.5
45°	381.2	367.2	355.7	350.5	350.5
47.5°	355.7	349.3	342.9	339.0	339.0
50°	345.4	337.7	333.9	331.3	331.3
52.5°	337.7	330.1	326.2	323.7	321.1
55°	331.3	319.8	316.0	314.7	314.7
57.5°	322.4	312.2	307.0	305.8	305.8
60°	308.3	300.6	295.5	294.2	294.2
62.5°	294.2	286.6	281.5	281.5	281.5
63°	291.7	282.7	278.9	278.9	278.9
65°	280.2	271.2	267.4	267.4	266.1
67.5°	264.8	255.9	253.3	253.3	250.8
70°	246.9	239.2	236.7	238.0	232.8
72.5°	229.0	221.3	217.5	217.5	212.4
75°	208.5	200.9	195.7	194.5	189.3
77.5°	185.5	179.1	174.0	168.9	166.3
80°	161.2	156.1	149.7	145.8	142.0
82.5°	135.6	130.5	126.7	131.8	112.6
85°	106.2	101.1	96.0	103.6	80.6
87.5°	78.0	75.5	70.4	61.4	53.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)