

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: P257778

Luminaire Tested: **ARCH-M-AF48-140-D-U-T2U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P257778
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-M-AF48-140-D-U-T2U
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 905mA LIGHT ENGINES WITH 24 LEDS AND TYPE II U OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17277.6 lumens
Efficiency: N/A
Efficacy: 122.5 lumens/watt
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

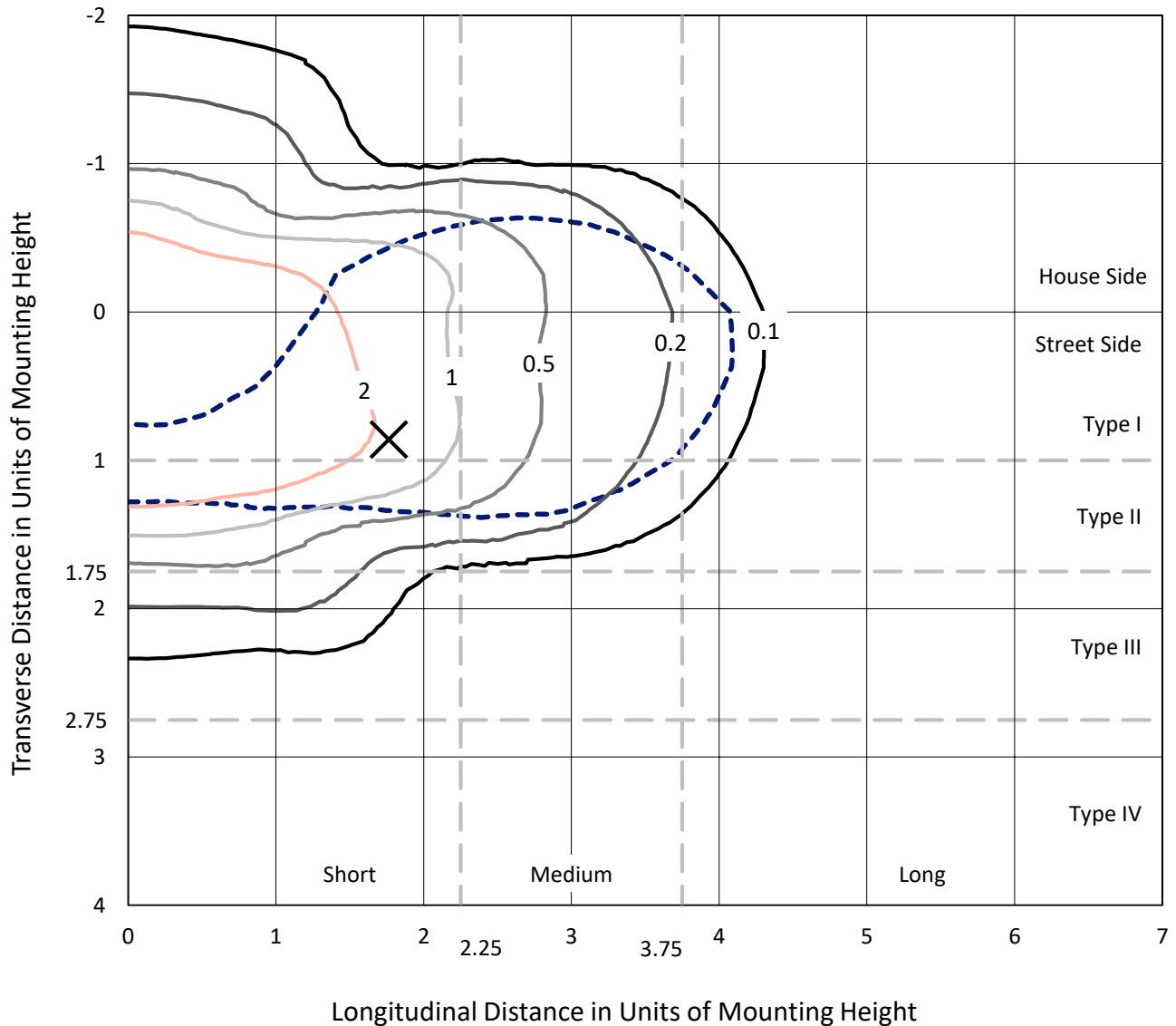
Input Watts (W): 141
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

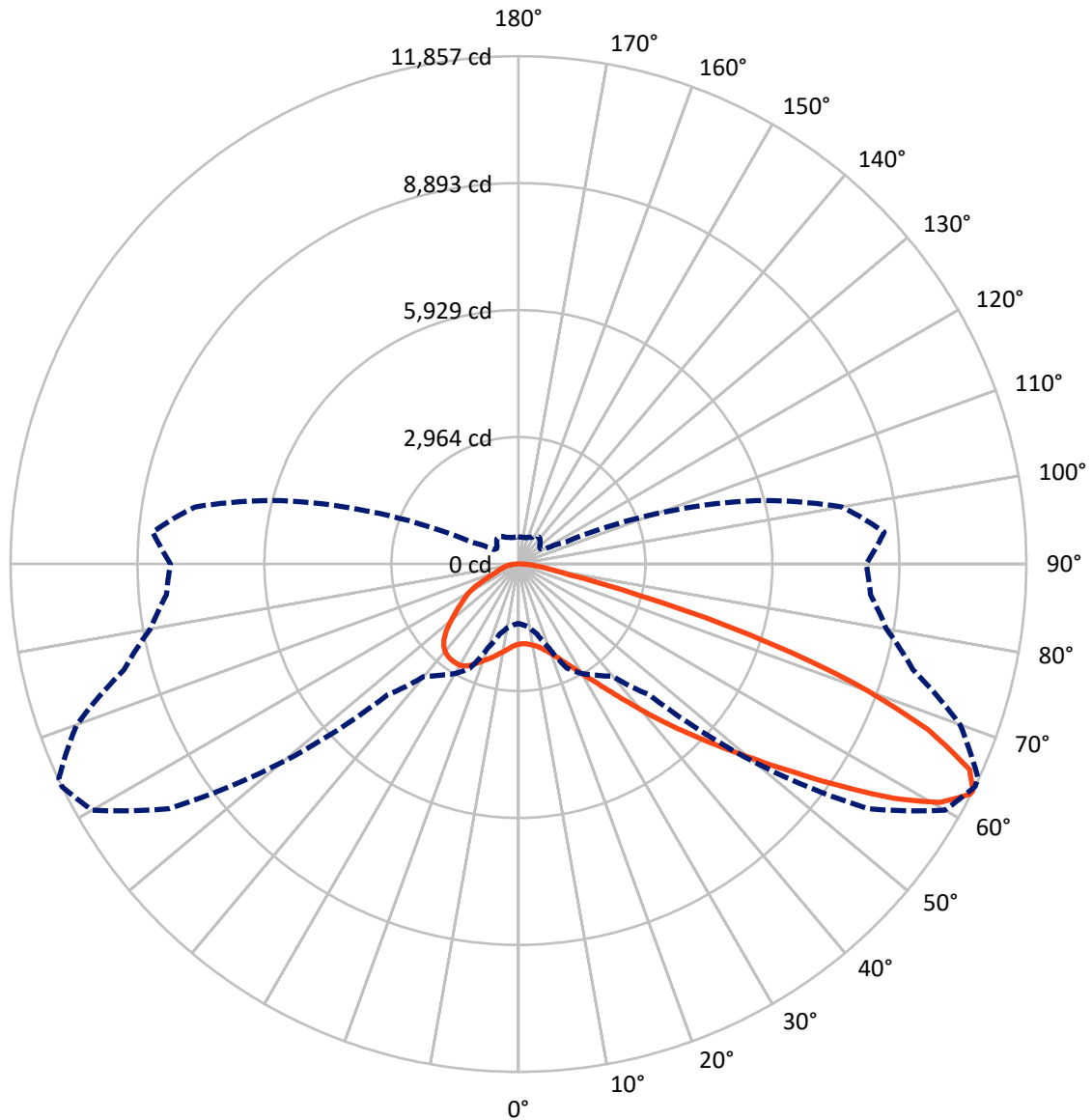


Based on 25 foot mounting height. Maximum calculated value = 4.9 fc
 Type II - Short - Semi-Cutoff

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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	5079.0	0.0	5079.0
	% Fixture	29.4	0.0	29.4
Street Side	Lumens	12198.6	0.0	12198.6
	% Fixture	70.6	0.0	70.6
Total	Lumens	17277.6	0.0	17277.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.8	1.1
10°-20°	622.3	3.6
20°-30°	1168.1	6.8
30°-40°	1957.8	11.3
40°-50°	3284.7	19.0
50°-60°	4164.0	24.1
60°-70°	3673.3	21.3
70°-80°	1896.2	11.0
80°-90°	324.5	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°	17277.6	100.0
0°-180°	17277.6	100.0



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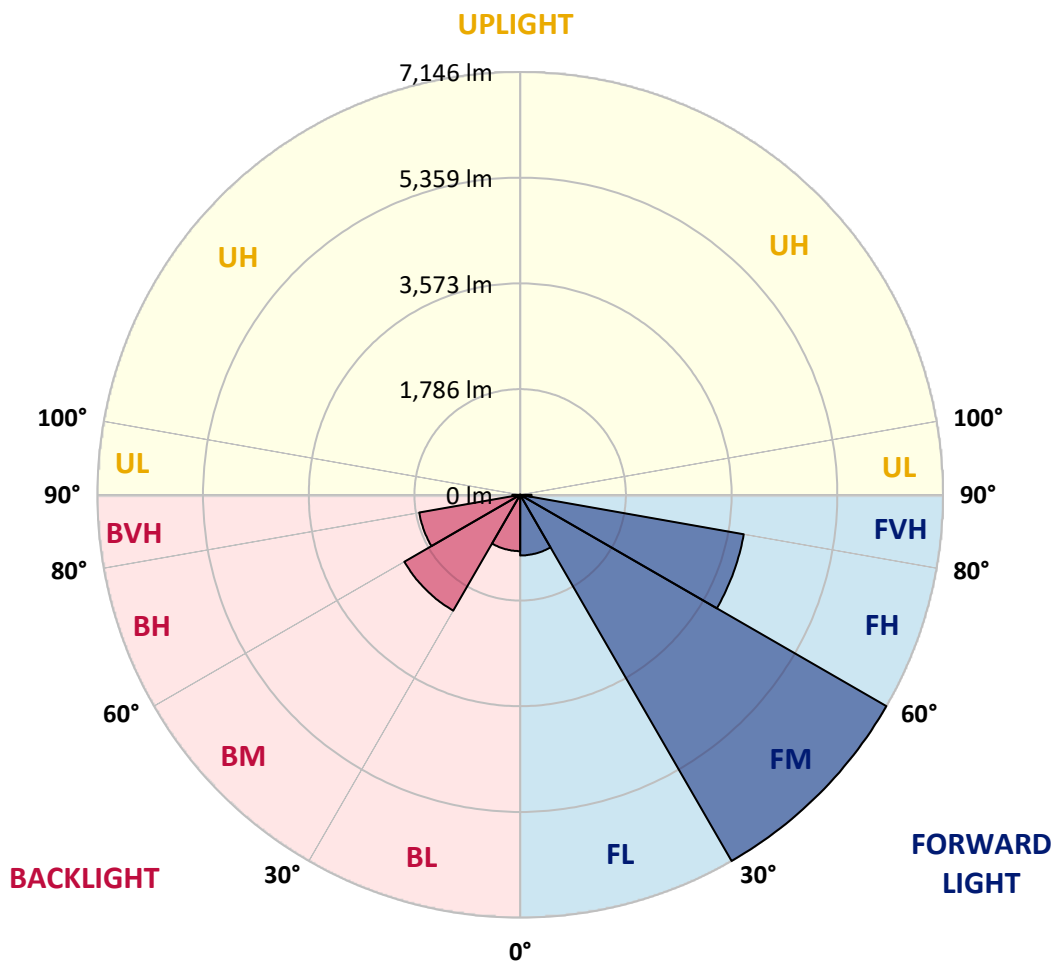
CATALOG NUMBER: ARCH-M-AF48-140-D-U-T2U

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1025.5	5.9			
FM (30°-60°)	7145.6	41.4			
FH (60°-80°)	3836.6	22.2			G2/5000
FVH (80°-90°)	191.0	1.1			G2/225
BL (0°-30°)	951.6	5.5	B2/1000		
BM (30°-60°)	2260.9	13.1	B2/2500		
BH (60°-80°)	1732.9	10.0	B3/2500		G3/2500
BVH (80°-90°)	133.5	0.8			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2
2.5°	1859.6	1856.7	1856.7	1856.7	1856.7	1853.8	1856.7	1862.5	1859.6	1856.7	1862.5
5°	1865.4	1862.5	1862.5	1862.5	1865.4	1862.5	1865.4	1874.0	1868.3	1868.3	1874.0
7.5°	1879.9	1876.9	1879.9	1876.9	1876.9	1876.9	1879.9	1888.5	1885.6	1888.5	1897.2
10°	1897.2	1897.2	1897.2	1897.2	1897.2	1897.2	1903.0	1908.7	1911.7	1914.6	1926.1
12.5°	1949.2	1949.2	1949.2	1946.4	1946.4	1937.7	1949.2	1955.1	1960.8	1966.6	1975.3
15°	2059.1	2059.1	2056.2	2044.7	2044.7	2027.3	2030.3	2033.1	2033.1	2038.9	2044.7
17.5°	2203.7	2200.9	2195.0	2186.4	2174.8	2154.5	2148.8	2143.0	2134.4	2131.4	2131.4
20°	2406.2	2403.3	2391.8	2368.6	2354.1	2322.3	2299.2	2276.1	2267.4	2252.9	2250.0
22.5°	2695.4	2695.4	2672.3	2637.6	2626.0	2559.4	2492.9	2443.8	2426.4	2406.2	2406.2
25°	3045.3	3042.5	3010.6	2970.1	2920.9	2851.6	2770.6	2704.1	2660.7	2614.5	2597.1
27.5°	3464.7	3456.0	3412.7	3363.5	3270.9	3184.1	3088.7	3019.3	2944.2	2886.3	2834.2
30°	3956.4	3947.7	3872.5	3779.9	3684.5	3597.7	3458.9	3375.0	3256.5	3187.0	3129.2
32.5°	4526.0	4517.4	4381.5	4291.8	4190.6	4083.6	3918.7	3785.7	3635.4	3537.0	3456.0
35°	5251.9	5217.3	5023.5	4899.1	4740.0	4633.0	4459.6	4280.2	4103.9	3965.1	3846.4
37.5°	6035.7	5995.2	5824.6	5639.5	5483.3	5353.2	5107.4	4881.8	4673.6	4482.7	4335.2
40°	6854.2	6747.2	6565.0	6429.0	6322.0	6197.6	5940.3	5703.2	5376.3	5162.3	4939.6
42.5°	7421.0	7316.9	7189.6	7100.0	7047.9	6952.5	6807.9	6602.5	6310.5	6316.2	5729.1
45°	7794.1	7640.8	7554.1	7559.8	7580.1	7580.1	7554.1	7522.3	7395.0	7481.8	6990.1
47.5°	7661.1	7559.8	7504.9	7620.6	7765.2	7909.8	8077.5	8259.7	8468.0	8713.8	8109.3
50°	6880.2	6917.8	6943.8	7189.6	7499.2	7828.8	8213.5	8710.8	9292.2	9405.0	9112.9
52.5°	5633.7	5714.7	5801.5	6177.4	6585.2	7154.9	7828.8	8650.2	9431.0	9890.8	9862.0
55°	4375.7	4476.9	4662.0	4942.5	5266.5	5804.3	6637.3	7904.0	9121.6	9853.3	10298.7
57.5°	3114.8	3262.2	3505.1	3895.6	4181.9	4485.5	5101.6	6507.1	7840.4	9202.6	10226.3
60°	2070.8	2140.1	2299.2	2785.1	3268.0	3586.2	4022.9	4531.9	5622.1	7499.2	9480.2
62.5°	1469.2	1515.4	1613.8	1833.5	2270.2	2845.7	3109.0	3343.2	3693.2	4823.9	7611.9
63°	1388.1	1428.7	1509.7	1694.7	2088.0	2683.8	2952.7	3166.9	3421.3	4314.9	7201.3
65°	1151.0	1168.4	1211.8	1301.4	1512.5	2007.1	2446.7	2576.8	2620.2	2773.5	4511.6
67.5°	971.7	983.3	997.8	1023.8	1107.7	1336.2	1824.8	1989.7	1940.5	1836.5	2229.7
70°	844.4	853.1	876.3	908.1	937.0	994.8	1255.2	1501.0	1446.0	1304.4	1365.0
72.5°	673.8	688.3	714.3	769.3	827.2	902.3	966.0	1119.2	1084.5	948.6	963.0
75°	532.1	540.8	564.0	604.5	659.4	746.1	870.5	922.6	827.2	699.9	699.9
77.5°	422.3	430.9	451.1	482.9	517.7	578.4	665.1	801.1	743.3	526.3	523.4
80°	318.1	326.8	347.1	375.9	410.7	454.1	506.2	566.8	682.5	491.6	393.3
82.5°	234.3	237.1	271.9	292.1	303.7	338.4	381.8	416.4	468.5	454.1	350.0
85°	176.5	173.5	196.6	211.1	214.0	222.7	248.7	283.5	306.6	295.0	271.9
87.5°	98.3	86.7	101.3	115.7	115.7	118.6	124.4	144.6	164.8	159.1	144.6
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°	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2
2.5°	1862.5	1862.5	1859.6	1859.6	1862.5	1862.5	1859.6	1868.3	1874.0	1874.0	1876.9
5°	1871.2	1874.0	1871.2	1871.2	1874.0	1874.0	1876.9	1885.6	1894.3	1900.1	1908.7
7.5°	1897.2	1900.1	1897.2	1897.2	1900.1	1903.0	1908.7	1920.3	1926.1	1937.7	1952.1
10°	1926.1	1929.0	1926.1	1929.0	1931.9	1934.8	1943.5	1952.1	1960.8	1972.4	1995.5
12.5°	1978.2	1981.0	1975.3	1978.2	1986.9	1986.9	1992.6	1998.4	2012.9	2027.3	2050.5
15°	2050.5	2050.5	2044.7	2047.5	2056.2	2056.2	2059.1	2064.9	2082.3	2099.6	2122.7
17.5°	2134.4	2140.1	2137.3	2140.1	2145.9	2148.8	2148.8	2154.5	2166.2	2177.8	2200.9
20°	2247.1	2250.0	2244.3	2250.0	2255.8	2250.0	2244.3	2241.4	2247.1	2252.9	2278.9
22.5°	2400.5	2397.5	2383.1	2383.1	2383.1	2371.5	2357.0	2339.7	2339.7	2331.0	2351.3
25°	2582.6	2573.9	2553.7	2556.6	2536.3	2519.0	2492.9	2466.9	2443.8	2435.1	2438.0
27.5°	2796.6	2779.3	2759.0	2753.3	2733.0	2701.2	2657.8	2608.6	2571.1	2542.1	2536.3
30°	3065.6	3027.9	2993.3	2987.5	2955.7	2903.6	2834.2	2767.7	2704.1	2654.9	2637.6
32.5°	3383.7	3325.8	3270.9	3265.2	3213.1	3143.6	3059.7	2967.3	2874.7	2796.6	2759.0
35°	3756.8	3670.0	3618.0	3603.5	3528.3	3441.5	3349.0	3230.5	3100.3	2990.4	2920.9
37.5°	4210.9	4121.2	4031.6	4034.4	3930.3	3829.1	3704.7	3560.1	3395.3	3242.0	3143.6
40°	4771.9	4644.6	4529.0	4502.9	4413.3	4271.5	4135.7	3967.9	3765.5	3563.0	3421.3
42.5°	5451.5	5243.3	5084.3	5061.2	4942.5	4769.0	4604.2	4381.5	4176.1	3930.3	3759.7
45°	6223.7	5891.1	5700.3	5665.5	5474.6	5298.3	5098.7	4861.6	4609.9	4332.3	4129.9
47.5°	7183.9	6709.5	6385.7	6327.9	6064.7	5833.3	5625.0	5361.9	5061.2	4751.6	4529.0
50°	8303.1	7603.2	7166.5	7076.9	6724.1	6452.2	6186.1	5856.4	5535.4	5211.5	4954.0
52.5°	9425.3	8673.3	8092.0	7982.1	7461.5	7097.1	6747.2	6417.5	6038.6	5717.6	5425.5
55°	10327.5	9827.2	9153.4	9000.1	8253.9	7759.4	7299.6	6923.5	6547.6	6293.1	5949.0
57.5°	10871.2	10845.2	10313.1	10101.9	9081.0	8349.3	7837.4	7409.4	7045.1	6938.1	6481.1
60°	10856.8	11530.6	11302.2	11143.1	9916.9	8953.8	8288.7	7825.9	7525.1	7646.6	7016.1
62.5°	10194.5	11559.5	11834.3	11790.9	10807.6	9439.7	8658.9	8181.7	8022.6	8384.1	7571.4
63°	9954.4	11493.1	11857.4	11840.0	10978.2	9532.3	8722.4	8251.0	8120.9	8572.0	7672.6
65°	8413.0	10911.7	11576.9	11655.0	11345.5	9850.3	8869.9	8427.5	8413.0	8991.4	7912.6
67.5°	5127.6	9219.9	10313.1	10463.5	10827.8	9951.6	8786.0	8366.7	8575.0	9052.1	7840.4
70°	2192.2	6084.9	8288.7	8531.6	9422.3	9448.4	8546.0	8118.0	8537.3	8577.9	7325.6
72.5°	1298.5	2869.0	5642.4	6171.7	7455.7	8129.6	7996.5	7684.2	8042.8	7533.8	6238.2
75°	919.6	1341.9	2866.0	3430.0	5191.3	6206.3	6718.2	6862.9	6848.3	5975.0	4682.3
77.5°	659.4	861.8	1208.9	1425.8	2897.8	3985.2	4609.9	5032.2	4896.3	3999.7	2886.3
80°	459.8	595.8	740.4	786.6	1344.8	2047.5	2429.3	2614.5	2533.4	1998.4	1292.7
82.5°	332.6	390.5	477.2	506.2	676.8	945.7	1125.0	992.0	951.4	737.4	558.1
85°	257.4	251.6	297.9	309.4	396.2	494.5	506.2	393.3	344.1	306.6	312.3
87.5°	182.2	156.2	159.1	164.8	205.3	263.2	257.4	161.9	138.8	147.5	167.8
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°	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2	1871.2
2.5°	1882.7	1885.6	1891.4	1894.3	1900.1	1900.1	1905.9	1908.7	1914.6	1920.3	1923.2
5°	1917.4	1926.1	1937.7	1943.5	1955.1	1963.7	1975.3	1981.0	1992.6	2001.3	2012.9
7.5°	1969.5	1983.9	1998.4	2015.7	2033.1	2047.5	2059.1	2073.6	2093.9	2108.3	2117.0
10°	2018.7	2038.9	2064.9	2085.2	2111.2	2131.4	2148.8	2174.8	2198.0	2218.2	2229.7
12.5°	2082.3	2108.3	2134.4	2166.2	2200.9	2226.9	2252.9	2287.6	2319.4	2342.6	2354.1
15°	2157.5	2189.3	2218.2	2255.8	2296.3	2331.0	2368.6	2406.2	2429.3	2429.3	2423.6
17.5°	2235.6	2261.5	2296.3	2339.7	2394.6	2438.0	2458.3	2464.1	2455.4	2435.1	2420.6
20°	2313.6	2336.8	2374.4	2426.4	2484.2	2492.9	2472.7	2446.7	2420.6	2385.9	2362.8
22.5°	2377.2	2409.0	2466.9	2527.6	2530.6	2481.4	2426.4	2383.1	2342.6	2302.0	2258.7
25°	2452.4	2495.8	2573.9	2597.1	2521.9	2429.3	2351.3	2287.6	2221.1	2154.5	2105.4
27.5°	2545.0	2608.6	2686.7	2620.2	2472.7	2342.6	2235.6	2140.1	2053.4	1960.8	1905.9
30°	2643.3	2741.7	2759.0	2585.5	2388.8	2221.1	2076.5	1931.9	1822.0	1738.1	1706.3
32.5°	2761.9	2889.1	2785.1	2524.7	2276.1	2056.2	1862.5	1689.0	1596.4	1544.3	1529.9
35°	2941.2	3045.3	2799.5	2461.1	2145.9	1859.6	1616.7	1477.9	1420.0	1385.3	1368.0
37.5°	3198.7	3195.7	2796.6	2383.1	1995.5	1645.6	1420.0	1321.7	1275.4	1246.5	1214.7
40°	3499.4	3311.4	2779.3	2270.2	1793.0	1440.2	1284.1	1191.5	1148.2	1113.5	1075.8
42.5°	3797.3	3389.4	2730.1	2102.6	1541.5	1292.7	1185.7	1101.9	1055.6	1018.0	966.0
45°	4054.7	3421.3	2634.7	1871.2	1315.9	1177.1	1122.1	1049.9	994.8	937.0	896.5
47.5°	4257.1	3415.5	2481.4	1599.3	1165.6	1096.1	1070.1	1020.9	954.4	882.1	830.0
50°	4427.7	3372.2	2273.2	1359.3	1064.3	1023.8	1015.1	1000.7	893.6	832.9	801.1
52.5°	4583.9	3308.5	2050.5	1197.3	977.5	942.9	960.1	945.7	870.5	818.5	786.6
55°	4797.9	3265.2	1830.7	1073.0	876.3	867.7	882.1	902.3	856.0	806.9	772.2
57.5°	5049.5	3288.3	1662.9	934.2	780.8	786.6	835.9	864.7	841.6	789.5	754.8
60°	5338.8	3357.6	1515.4	801.1	702.8	717.2	789.5	830.0	827.2	766.4	725.9
62.5°	5662.6	3430.0	1281.1	699.9	636.3	659.4	734.6	786.6	795.3	743.3	694.1
63°	5726.3	3435.8	1220.5	679.6	624.7	650.7	720.2	775.1	786.6	737.4	688.3
65°	5882.5	3383.7	983.3	624.7	578.4	607.3	676.8	725.9	749.0	705.6	665.1
67.5°	5752.3	2958.6	740.4	558.1	540.8	561.1	621.7	668.1	688.3	668.1	627.6
70°	5260.6	2151.7	578.4	497.5	500.3	514.7	561.1	604.5	627.6	621.7	584.2
72.5°	4236.9	1220.5	482.9	445.4	454.1	471.4	503.2	543.7	564.0	561.1	535.0
75°	2790.8	624.7	407.7	399.1	404.9	419.3	442.5	474.3	497.5	494.5	482.9
77.5°	1382.4	433.8	350.0	352.8	355.7	367.3	384.6	413.6	428.0	430.9	428.0
80°	569.8	338.4	300.7	303.7	306.6	315.3	326.8	352.8	361.5	367.3	370.2
82.5°	341.3	257.4	240.1	245.8	248.7	257.4	266.1	289.2	297.9	306.6	306.6
85°	225.6	179.3	173.5	179.3	185.1	190.9	193.7	208.3	222.7	234.3	240.1
87.5°	121.4	107.0	104.1	107.0	107.0	112.8	118.6	133.0	150.4	161.9	167.8
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°	1871.2	1871.2	1871.2	1871.2	1871.2
2.5°	1917.4	1920.3	1917.4	1920.3	1923.2
5°	2012.9	2018.7	2015.7	2015.7	2027.3
7.5°	2122.7	2134.4	2134.4	2140.1	2145.9
10°	2241.4	2252.9	2261.5	2261.5	2270.2
12.5°	2359.9	2365.7	2374.4	2374.4	2374.4
15°	2420.6	2417.7	2414.9	2412.0	2412.0
17.5°	2412.0	2400.5	2394.6	2388.8	2391.8
20°	2348.4	2328.1	2322.3	2313.6	2319.4
22.5°	2238.4	2209.6	2198.0	2183.5	2189.3
25°	2073.6	2038.9	2033.1	2015.7	2024.4
27.5°	1882.7	1865.4	1862.5	1859.6	1874.0
30°	1703.4	1709.2	1712.1	1717.8	1732.4
32.5°	1538.6	1550.2	1553.0	1555.9	1576.2
35°	1376.6	1362.2	1376.6	1370.9	1388.1
37.5°	1200.2	1188.7	1177.1	1162.6	1174.1
40°	1052.7	1032.5	997.8	980.4	983.3
42.5°	937.0	911.0	882.1	864.7	864.7
45°	861.8	830.0	804.0	792.4	792.4
47.5°	804.0	789.5	775.1	766.4	766.4
50°	780.8	763.5	754.8	749.0	749.0
52.5°	763.5	746.1	737.4	731.7	725.9
55°	749.0	723.0	714.3	711.5	711.5
57.5°	728.8	705.6	694.1	691.2	691.2
60°	696.9	679.6	668.1	665.1	665.1
62.5°	665.1	647.8	636.3	636.3	636.3
63°	659.4	639.1	630.4	630.4	630.4
65°	633.4	613.2	604.5	604.5	601.6
67.5°	598.6	578.4	572.6	572.6	566.8
70°	558.1	540.8	535.0	538.0	526.3
72.5°	517.7	500.3	491.6	491.6	480.1
75°	471.4	454.1	442.5	439.6	428.0
77.5°	419.3	404.9	393.3	381.8	375.9
80°	364.4	352.8	338.4	329.7	321.0
82.5°	306.6	295.0	286.3	297.9	254.5
85°	240.1	228.4	216.9	234.3	182.2
87.5°	176.5	170.6	159.1	138.8	121.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)