

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: P258174

Luminaire Tested: **ARCH-M-AF48-140-D-U-T2U-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P258174  
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-7030  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 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: 16335.4 lumens  
Efficiency: N/A  
Efficacy: 115.9 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

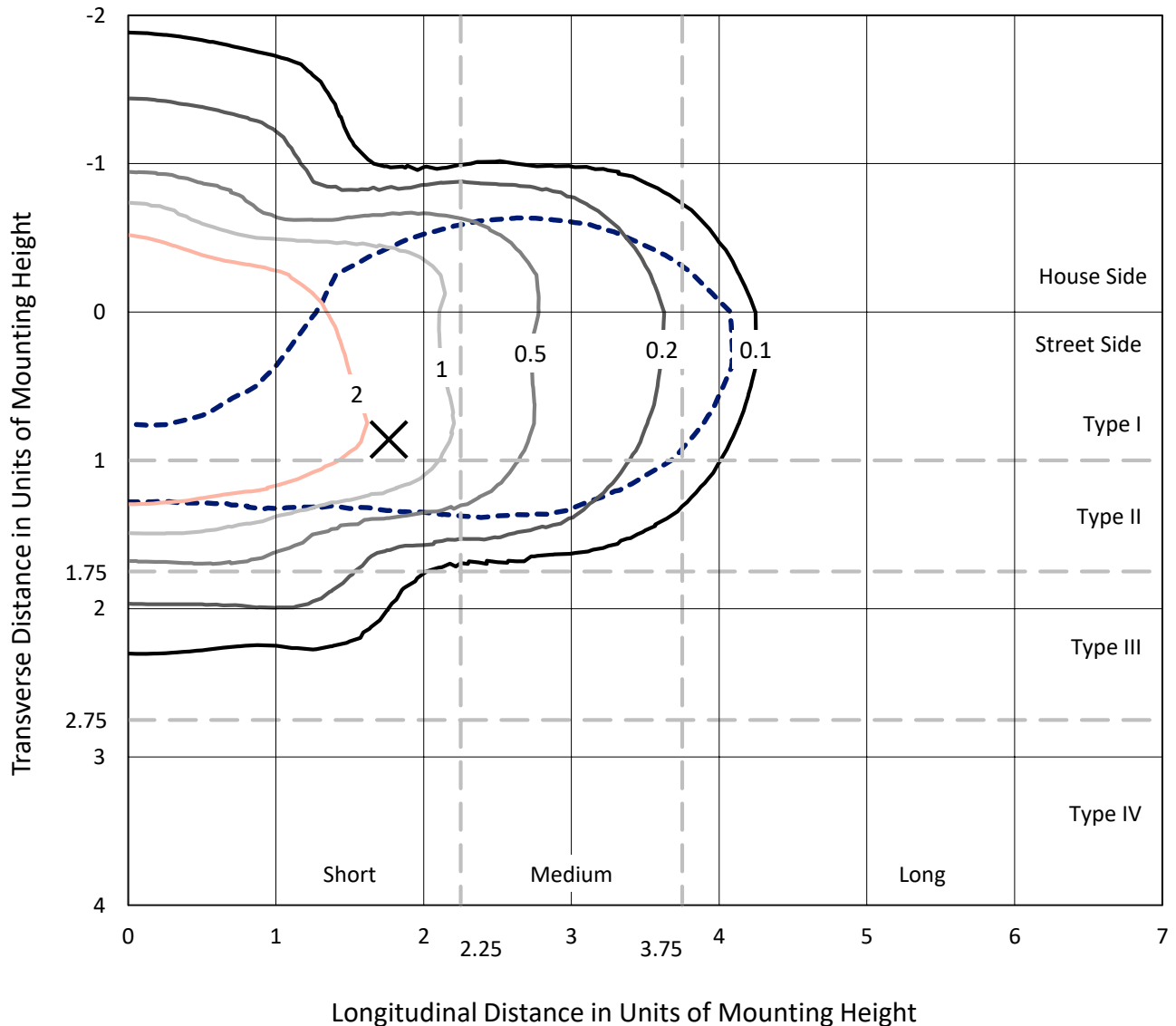


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

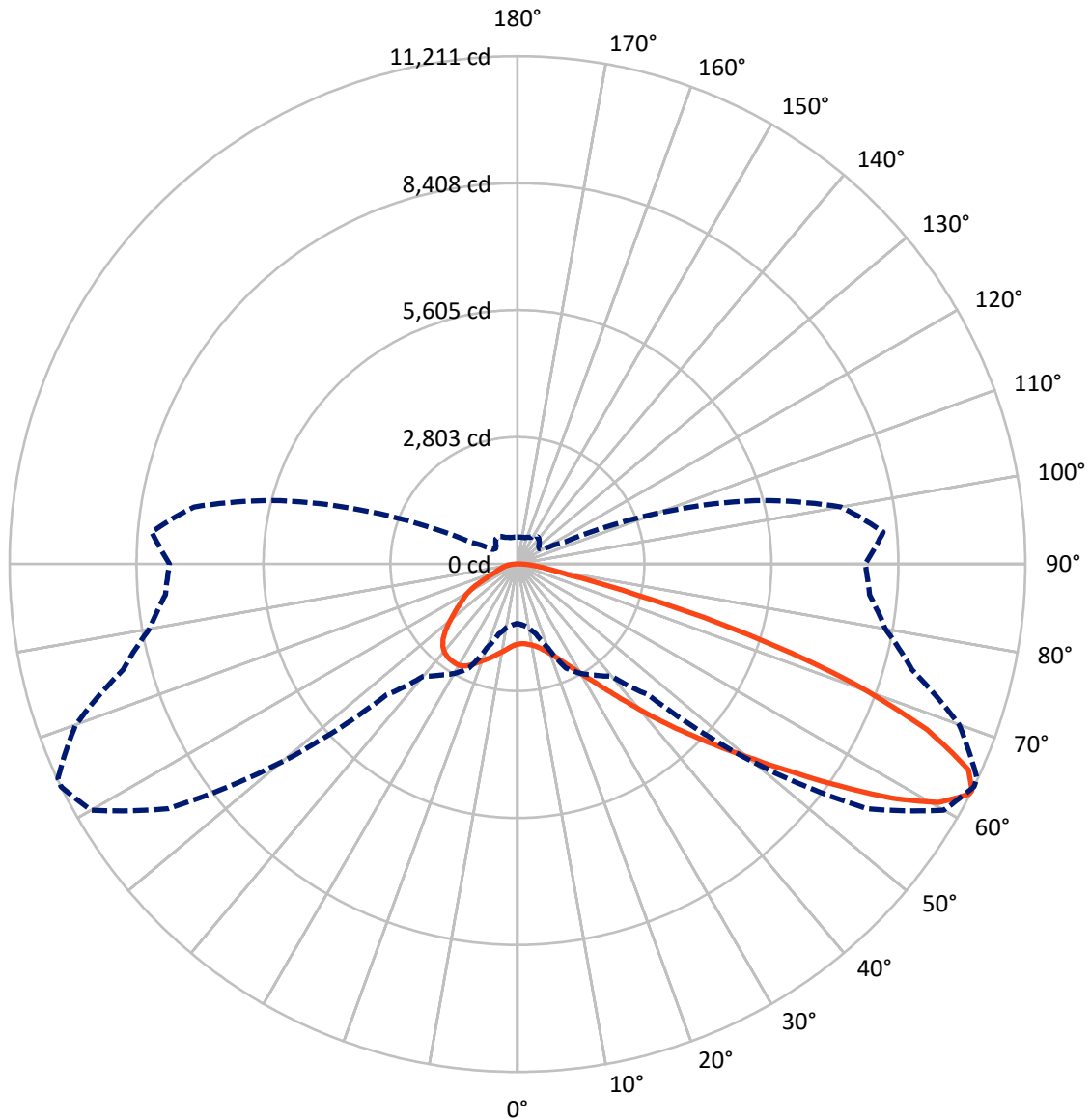


Based on 25 foot mounting height. Maximum calculated value = 4.6 fc  
 Type II - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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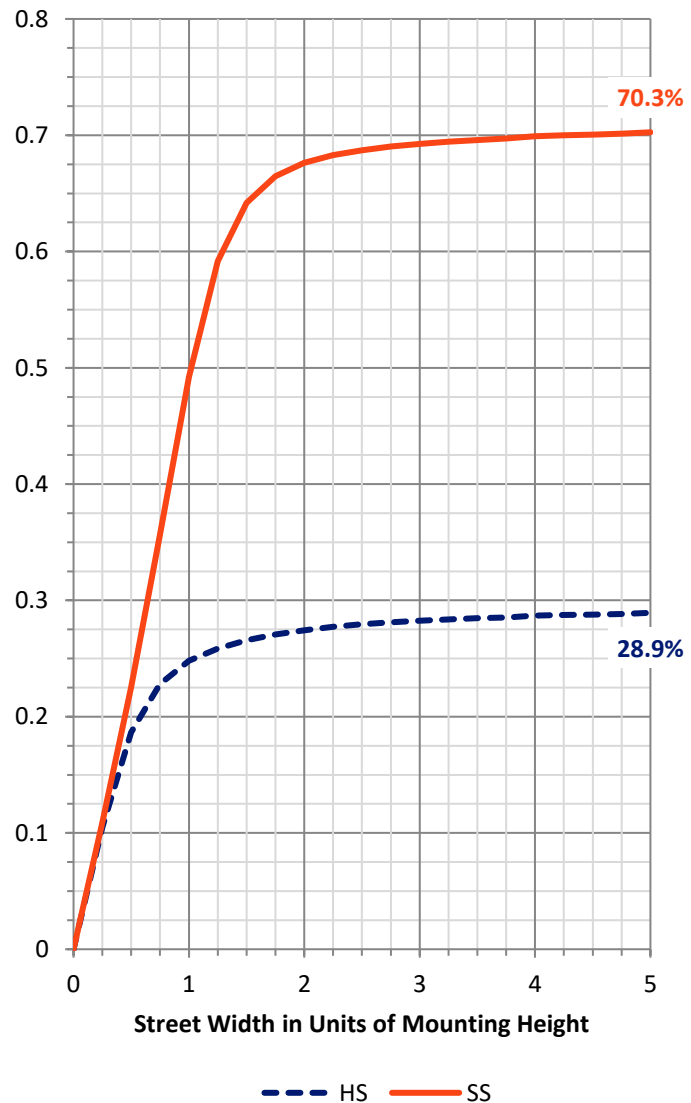
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4802.0	0.0	4802.0
	% Fixture	29.4	0.0	29.4
<b>Street Side</b>	Lumens	11533.4	0.0	11533.4
	% Fixture	70.6	0.0	70.6
<b>Total</b>	Lumens	16335.4	0.0	16335.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	176.6	1.1
10°-20°	588.3	3.6
20°-30°	1104.3	6.8
30°-40°	1851.0	11.3
40°-50°	3105.6	19.0
50°-60°	3936.9	24.1
60°-70°	3473.0	21.3
70°-80°	1792.8	11.0
80°-90°	306.8	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°	16335.4	100.0
0°-180°	16335.4	100.0



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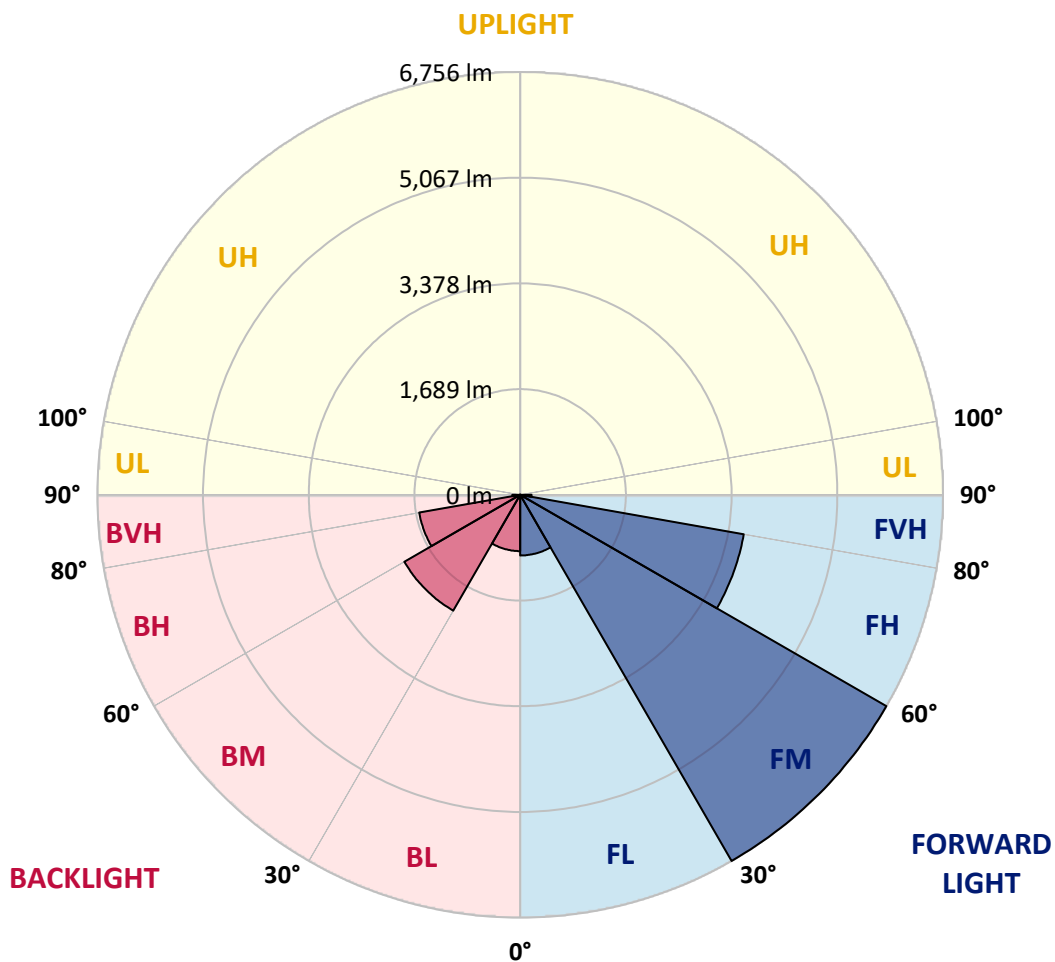
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	969.6	5.9			
FM	(30°-60°)	6755.9	41.4			
FH	(60°-80°)	3627.4	22.2			G2/5000
FVH	(80°-90°)	180.5	1.1			G2/225
BL	(0°-30°)	899.7	5.5	B2/1000		
BM	(30°-60°)	2137.6	13.1	B2/2500		
BH	(60°-80°)	1638.4	10.0	B3/2500		G3/2500
BVH	(80°-90°)	126.2	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°	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1
2.5°	1758.2	1755.5	1755.5	1755.5	1755.5	1752.7	1755.5	1760.9	1758.2	1755.5	1760.9
5°	1763.7	1760.9	1760.9	1760.9	1763.7	1760.9	1763.7	1771.8	1766.4	1766.4	1771.8
7.5°	1777.3	1774.6	1777.3	1774.6	1774.6	1774.6	1777.3	1785.6	1782.8	1785.6	1793.7
10°	1793.7	1793.7	1793.7	1793.7	1793.7	1793.7	1799.2	1804.6	1807.3	1810.1	1821.1
12.5°	1842.9	1842.9	1842.9	1840.3	1840.3	1832.0	1842.9	1848.4	1853.9	1859.4	1867.6
15°	1946.9	1946.9	1944.2	1933.2	1933.2	1916.7	1919.4	1922.2	1922.2	1927.7	1933.2
17.5°	2083.6	2080.9	2075.4	2067.1	2056.3	2037.0	2031.5	2026.1	2017.9	2015.2	2015.2
20°	2275.0	2272.3	2261.3	2239.4	2225.7	2195.7	2173.8	2152.0	2143.6	2130.0	2127.3
22.5°	2548.4	2548.4	2526.5	2493.8	2482.8	2419.9	2356.9	2310.5	2294.1	2275.0	2275.0
25°	2879.2	2876.5	2846.4	2808.2	2761.6	2696.1	2619.5	2556.5	2515.5	2471.9	2455.4
27.5°	3275.7	3267.5	3226.5	3180.0	3092.5	3010.5	2920.3	2854.6	2783.6	2728.9	2679.7
30°	3740.6	3732.4	3661.3	3573.8	3483.5	3401.5	3270.2	3190.9	3078.8	3013.3	2958.5
32.5°	4279.2	4271.1	4142.6	4057.8	3962.1	3860.9	3705.0	3579.3	3437.1	3344.1	3267.5
35°	4965.5	4932.7	4749.5	4631.9	4481.6	4380.4	4216.4	4046.9	3880.1	3748.8	3636.7
37.5°	5706.5	5668.3	5507.0	5332.0	5184.3	5061.2	4828.8	4615.5	4418.7	4238.1	4098.8
40°	6480.3	6379.2	6206.9	6078.4	5977.2	5859.7	5616.4	5392.1	5083.1	4880.8	4670.3
42.5°	7016.3	6917.9	6797.6	6712.8	6663.6	6573.4	6436.6	6242.5	5966.3	5971.8	5416.7
45°	7369.0	7224.1	7142.1	7147.5	7166.7	7166.7	7142.1	7112.0	6991.7	7073.7	6608.9
47.5°	7243.3	7147.5	7095.7	7205.0	7341.6	7478.4	7637.0	7809.2	8006.1	8238.5	7667.0
50°	6505.0	6540.5	6565.2	6797.6	7090.2	7401.9	7765.5	8235.9	8785.4	8892.1	8615.8
52.5°	5326.5	5403.1	5485.1	5840.6	6226.0	6764.8	7401.9	8178.4	8916.6	9351.4	9324.0
55°	4137.0	4232.7	4407.7	4673.0	4979.2	5487.8	6275.3	7472.9	8624.1	9315.9	9736.9
57.5°	2944.9	3084.3	3314.1	3683.1	3953.9	4240.9	4823.4	6152.3	7412.8	8700.7	9668.6
60°	1957.8	2023.4	2173.8	2633.1	3089.8	3390.6	3803.5	4284.7	5315.6	7090.2	8963.1
62.5°	1389.0	1432.8	1525.8	1733.6	2146.4	2690.6	2939.4	3160.9	3491.7	4560.8	7196.8
63°	1312.5	1350.8	1427.4	1602.3	1974.2	2537.4	2791.8	2994.1	3234.7	4079.6	6808.5
65°	1088.2	1104.7	1145.7	1230.5	1430.1	1897.7	2313.2	2436.3	2477.4	2622.2	4265.6
67.5°	918.8	929.7	943.4	967.9	1047.2	1263.2	1725.3	1881.2	1834.7	1736.3	2108.1
70°	798.4	806.7	828.5	858.6	885.9	940.6	1186.7	1419.2	1367.2	1233.2	1290.6
72.5°	637.1	650.7	675.3	727.3	782.0	853.1	913.3	1058.1	1025.4	896.9	910.5
75°	503.1	511.4	533.1	571.4	623.5	705.5	823.0	872.2	782.0	661.7	661.7
77.5°	399.3	407.4	426.5	456.6	489.5	546.9	628.9	757.3	702.7	497.6	495.0
80°	300.8	308.9	328.1	355.4	388.3	429.3	478.5	535.9	645.2	464.8	371.9
82.5°	221.5	224.2	257.0	276.2	287.2	319.9	360.9	393.8	442.9	429.3	330.8
85°	166.8	164.1	186.0	199.6	202.3	210.6	235.1	268.0	289.9	278.9	257.0
87.5°	93.0	82.1	95.7	109.4	109.4	112.1	117.6	136.7	155.8	150.3	136.7
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°	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1
2.5°	1760.9	1760.9	1758.2	1758.2	1760.9	1760.9	1758.2	1766.4	1771.8	1771.8	1774.6
5°	1769.1	1771.8	1769.1	1769.1	1771.8	1771.8	1774.6	1782.8	1791.0	1796.4	1804.6
7.5°	1793.7	1796.4	1793.7	1793.7	1796.4	1799.2	1804.6	1815.6	1821.1	1832.0	1845.7
10°	1821.1	1823.7	1821.1	1823.7	1826.5	1829.2	1837.5	1845.7	1853.9	1864.8	1886.7
12.5°	1870.3	1873.0	1867.6	1870.3	1878.5	1878.5	1883.9	1889.4	1903.1	1916.7	1938.6
15°	1938.6	1938.6	1933.2	1935.8	1944.2	1944.2	1946.9	1952.4	1968.8	1985.1	2007.0
17.5°	2017.9	2023.4	2020.6	2023.4	2028.8	2031.5	2031.5	2037.0	2048.1	2059.0	2080.9
20°	2124.5	2127.3	2121.9	2127.3	2132.7	2127.3	2121.9	2119.1	2124.5	2130.0	2154.7
22.5°	2269.6	2266.8	2253.0	2253.0	2253.0	2242.1	2228.5	2212.1	2212.1	2203.9	2223.0
25°	2441.7	2433.5	2414.4	2417.2	2398.0	2381.7	2356.9	2332.3	2310.5	2302.3	2305.1
27.5°	2644.1	2627.6	2608.6	2603.1	2584.0	2553.8	2512.9	2466.4	2430.8	2403.4	2398.0
30°	2898.4	2862.8	2830.1	2824.6	2794.6	2745.2	2679.7	2616.8	2556.5	2510.1	2493.8
32.5°	3199.2	3144.5	3092.5	3087.0	3037.9	2972.2	2892.9	2805.4	2718.0	2644.1	2608.6
35°	3551.9	3469.8	3420.7	3406.9	3335.9	3253.8	3166.4	3054.3	2931.2	2827.3	2761.6
37.5°	3981.2	3896.4	3811.6	3814.3	3715.9	3620.3	3502.7	3366.0	3210.1	3065.2	2972.2
40°	4511.7	4391.3	4282.0	4257.4	4172.6	4038.7	3910.1	3751.5	3560.1	3368.7	3234.7
42.5°	5154.2	4957.3	4807.0	4785.1	4673.0	4508.9	4353.1	4142.6	3948.4	3715.9	3554.6
45°	5884.2	5569.8	5389.3	5356.6	5176.0	5009.3	4820.6	4596.4	4358.6	4096.0	3904.6
47.5°	6792.1	6343.6	6037.4	5982.7	5733.9	5515.2	5318.3	5069.4	4785.1	4492.5	4282.0
50°	7850.3	7188.6	6775.7	6690.9	6357.4	6100.3	5848.7	5537.0	5233.5	4927.3	4684.0
52.5°	8911.1	8200.2	7650.7	7546.7	7054.6	6710.0	6379.2	6067.5	5709.3	5405.8	5129.6
55°	9764.3	9291.3	8654.2	8509.2	7803.8	7336.2	6901.5	6545.9	6190.5	5949.9	5624.5
57.5°	10278.3	10253.8	9750.7	9551.0	8585.8	7894.0	7410.1	7005.3	6660.9	6559.7	6127.6
60°	10264.7	10901.8	10685.8	10535.4	9376.0	8465.5	7836.6	7399.1	7114.8	7229.5	6633.4
62.5°	9638.6	10929.1	11188.9	11147.8	10218.2	8924.9	8186.6	7735.4	7585.0	7926.9	7158.4
63°	9411.6	10866.3	11210.8	11194.3	10379.5	9012.4	8246.8	7801.0	7677.9	8104.6	7254.2
65°	7954.2	10316.6	10945.5	11019.4	10726.7	9313.1	8386.2	7967.8	7954.2	8501.0	7481.1
67.5°	4848.0	8717.0	9750.7	9892.8	10237.4	9408.9	8306.9	7910.4	8107.2	8558.5	7412.8
70°	2072.6	5753.0	7836.6	8066.3	8908.5	8933.0	8079.9	7675.3	8071.7	8110.0	6926.1
72.5°	1227.7	2712.5	5334.7	5835.1	7049.1	7686.2	7560.4	7265.0	7604.2	7122.9	5898.0
75°	869.4	1268.7	2709.7	3243.0	4908.2	5867.9	6351.9	6488.6	6474.9	5649.1	4426.8
77.5°	623.5	814.8	1143.0	1348.0	2739.7	3768.0	4358.6	4757.7	4629.2	3781.6	2728.9
80°	434.8	563.2	700.1	743.7	1271.4	1935.8	2296.8	2471.9	2395.3	1889.4	1222.3
82.5°	314.4	369.2	451.1	478.5	639.8	894.2	1063.6	937.9	899.6	697.3	527.7
85°	243.3	237.8	281.7	292.6	374.6	467.5	478.5	371.9	325.4	289.9	295.3
87.5°	172.3	147.6	150.3	155.8	194.2	248.8	243.3	153.1	131.2	139.5	158.7
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°	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1	1769.1
2.5°	1780.1	1782.8	1788.2	1791.0	1796.4	1796.4	1801.9	1804.6	1810.1	1815.6	1818.3
5°	1812.8	1821.1	1832.0	1837.5	1848.4	1856.7	1867.6	1873.0	1883.9	1892.2	1903.1
7.5°	1862.1	1875.8	1889.4	1905.8	1922.2	1935.8	1946.9	1960.5	1979.7	1993.3	2001.5
10°	1908.5	1927.7	1952.4	1971.5	1996.0	2015.2	2031.5	2056.3	2078.1	2097.2	2108.1
12.5°	1968.8	1993.3	2017.9	2048.1	2080.9	2105.4	2130.0	2162.9	2193.0	2214.8	2225.7
15°	2039.8	2069.9	2097.2	2132.7	2171.1	2203.9	2239.4	2275.0	2296.8	2296.8	2291.3
17.5°	2113.6	2138.2	2171.1	2212.1	2264.1	2305.1	2324.2	2329.6	2321.4	2302.3	2288.7
20°	2187.5	2209.3	2244.8	2294.1	2348.7	2356.9	2337.8	2313.2	2288.7	2255.8	2234.0
22.5°	2247.6	2277.7	2332.3	2389.8	2392.6	2346.1	2294.1	2253.0	2214.8	2176.6	2135.5
25°	2318.7	2359.8	2433.5	2455.4	2384.4	2296.8	2223.0	2162.9	2100.0	2037.0	1990.6
27.5°	2406.2	2466.4	2540.2	2477.4	2337.8	2214.8	2113.6	2023.4	1941.4	1853.9	1801.9
30°	2499.2	2592.1	2608.6	2444.4	2258.6	2100.0	1963.3	1826.5	1722.6	1643.4	1613.2
32.5°	2611.3	2731.6	2633.1	2387.1	2152.0	1944.2	1760.9	1596.9	1509.3	1460.1	1446.5
35°	2780.8	2879.2	2646.8	2326.9	2028.8	1758.2	1528.5	1397.2	1342.6	1309.7	1293.3
37.5°	3024.2	3021.4	2644.1	2253.0	1886.7	1555.9	1342.6	1249.6	1205.7	1178.5	1148.5
40°	3308.6	3130.9	2627.6	2146.4	1695.2	1361.7	1214.1	1126.6	1085.5	1052.7	1017.2
42.5°	3590.2	3204.7	2581.2	1987.9	1457.4	1222.3	1121.1	1041.8	998.1	962.5	913.3
45°	3833.6	3234.7	2491.0	1769.1	1244.1	1113.0	1060.9	992.5	940.6	885.9	847.7
47.5°	4024.9	3229.2	2346.1	1512.0	1102.0	1036.4	1011.7	965.2	902.4	833.9	784.7
50°	4186.3	3188.1	2149.1	1285.1	1006.3	967.9	959.8	946.0	844.9	787.5	757.3
52.5°	4333.9	3128.1	1938.6	1132.0	924.3	891.4	907.8	894.2	823.0	773.8	743.7
55°	4536.2	3087.0	1730.8	1014.5	828.5	820.3	833.9	853.1	809.4	762.8	730.1
57.5°	4774.2	3109.0	1572.2	883.2	738.3	743.7	790.3	817.6	795.7	746.5	713.7
60°	5047.6	3174.5	1432.8	757.3	664.4	678.1	746.5	784.7	782.0	724.6	686.3
62.5°	5353.8	3243.0	1211.3	661.7	601.6	623.5	694.6	743.7	751.9	702.7	656.2
63°	5414.1	3248.4	1153.9	642.6	590.6	615.2	680.8	732.8	743.7	697.3	650.7
65°	5561.7	3199.2	929.7	590.6	546.9	574.1	639.8	686.3	708.2	667.1	628.9
67.5°	5438.6	2797.2	700.1	527.7	511.4	530.5	588.0	631.6	650.7	631.6	593.4
70°	4973.7	2034.3	546.9	470.3	473.1	486.7	530.5	571.4	593.4	588.0	552.3
72.5°	4005.8	1153.9	456.6	421.0	429.3	445.7	475.9	514.1	533.1	530.5	505.9
75°	2638.6	590.6	385.5	377.4	382.9	396.5	418.4	448.4	470.3	467.5	456.6
77.5°	1307.0	410.2	330.8	333.6	336.3	347.2	363.7	391.0	404.7	407.4	404.7
80°	538.6	319.9	284.4	287.2	289.9	298.1	308.9	333.6	341.8	347.2	349.9
82.5°	322.7	243.3	226.9	232.4	235.1	243.3	251.6	273.4	281.7	289.9	289.9
85°	213.3	169.6	164.1	169.6	175.1	180.5	183.2	196.8	210.6	221.5	226.9
87.5°	114.8	101.2	98.5	101.2	101.2	106.6	112.1	125.7	142.1	153.1	158.7
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°	1769.1	1769.1	1769.1	1769.1	1769.1
2.5°	1812.8	1815.6	1812.8	1815.6	1818.3
5°	1903.1	1908.5	1905.8	1905.8	1916.7
7.5°	2007.0	2017.9	2017.9	2023.4	2028.8
10°	2119.1	2130.0	2138.2	2138.2	2146.4
12.5°	2231.2	2236.6	2244.8	2244.8	2244.8
15°	2288.7	2285.9	2283.2	2280.5	2280.5
17.5°	2280.5	2269.6	2264.1	2258.6	2261.3
20°	2220.2	2201.1	2195.7	2187.5	2193.0
22.5°	2116.4	2089.0	2078.1	2064.5	2069.9
25°	1960.5	1927.7	1922.2	1905.8	1914.0
27.5°	1780.1	1763.7	1760.9	1758.2	1771.8
30°	1610.5	1616.0	1618.6	1624.1	1637.9
32.5°	1454.7	1465.6	1468.3	1471.0	1490.2
35°	1301.5	1287.8	1301.5	1296.1	1312.5
37.5°	1134.7	1123.8	1113.0	1099.1	1110.2
40°	995.3	976.1	943.4	926.9	929.7
42.5°	885.9	861.3	833.9	817.6	817.6
45°	814.8	784.7	760.1	749.2	749.2
47.5°	760.1	746.5	732.8	724.6	724.6
50°	738.3	721.8	713.7	708.2	708.2
52.5°	721.8	705.5	697.3	691.8	686.3
55°	708.2	683.6	675.3	672.6	672.6
57.5°	689.1	667.1	656.2	653.5	653.5
60°	659.0	642.6	631.6	628.9	628.9
62.5°	628.9	612.5	601.6	601.6	601.6
63°	623.5	604.3	596.1	596.1	596.1
65°	598.8	579.7	571.4	571.4	568.7
67.5°	566.0	546.9	541.4	541.4	535.9
70°	527.7	511.4	505.9	508.6	497.6
72.5°	489.5	473.1	464.8	464.8	453.9
75°	445.7	429.3	418.4	415.6	404.7
77.5°	396.5	382.9	371.9	360.9	355.4
80°	344.5	333.6	319.9	311.7	303.5
82.5°	289.9	278.9	270.8	281.7	240.6
85°	226.9	216.0	205.1	221.5	172.3
87.5°	166.8	161.3	150.3	131.2	114.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)