

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: P257772

Luminaire Tested: **ARCH-M-AF48-80-D-U-T2U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P257772  
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-AF48-80-D-U-T2U  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 535mA LIGHT ENGINES WITH 24 LEDS AND TYPE II U OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11309.7 lumens  
Efficiency: N/A  
Efficacy: 136.3 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): 83  
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

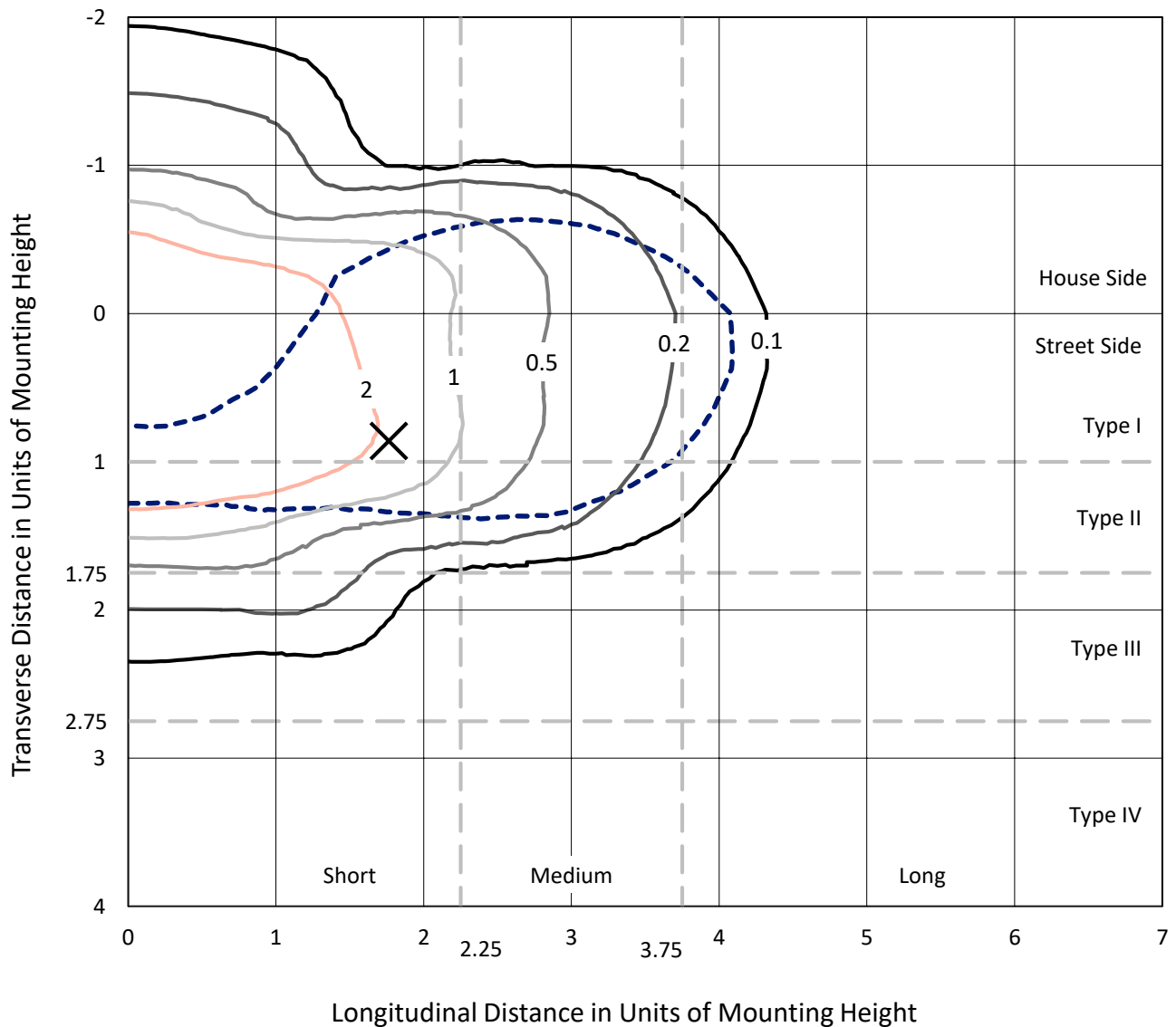


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

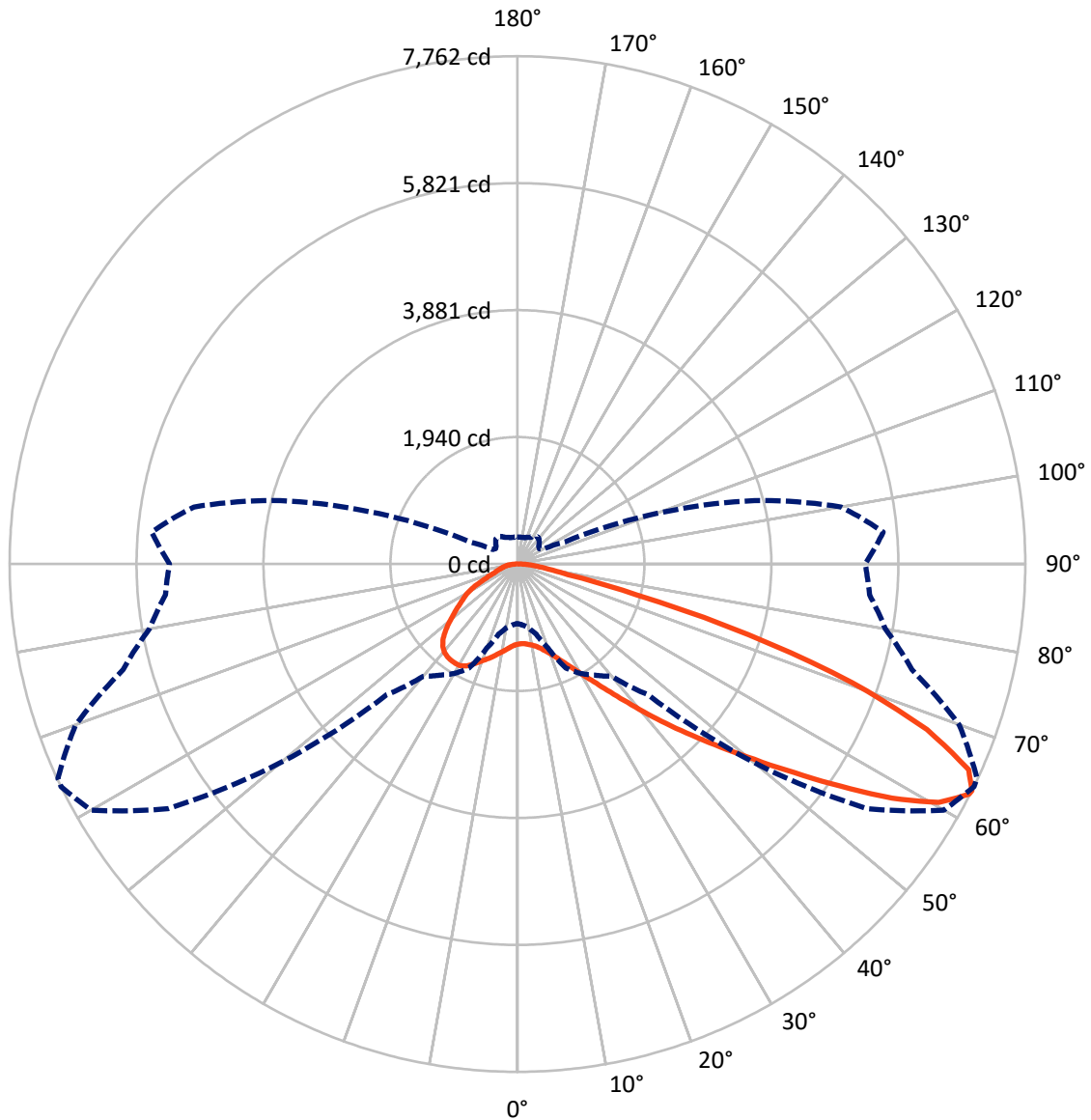


Based on 20 foot mounting height. Maximum calculated value = 5 fc  
 Type II - Short - Semi-Cutoff

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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	3324.7	0.0	3324.7
	% Fixture	29.4	0.0	29.4
<b>Street Side</b>	Lumens	7985.1	0.0	7985.1
	% Fixture	70.6	0.0	70.6
<b>Total</b>	Lumens	11309.7	0.0	11309.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.3	1.1
10°-20°	407.3	3.6
20°-30°	764.6	6.8
30°-40°	1281.5	11.3
40°-50°	2150.1	19.0
50°-60°	2725.7	24.1
60°-70°	2404.5	21.3
70°-80°	1241.3	11.0
80°-90°	212.4	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°	11309.7	100.0
0°-180°	11309.7	100.0



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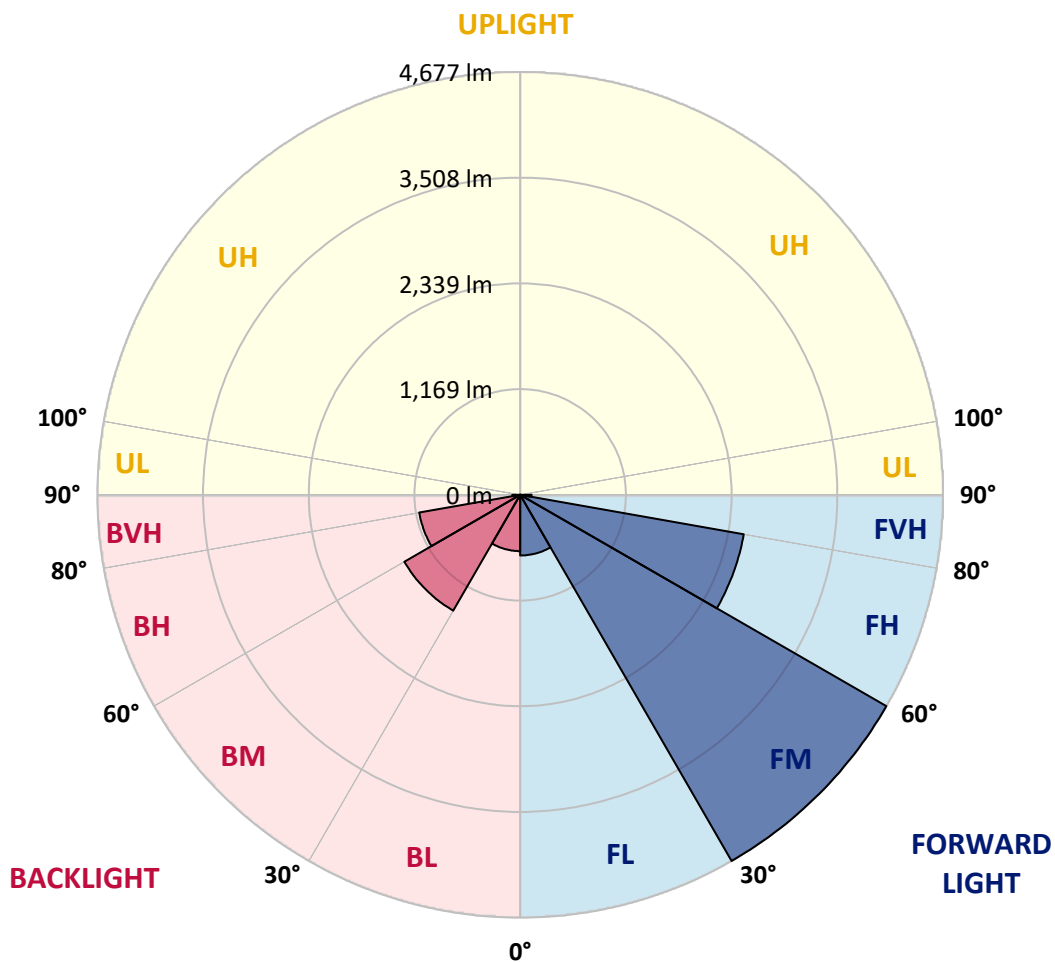
CATALOG NUMBER: ARCH-M-AF48-80-D-U-T2U

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	671.3	5.9			
FM (30°-60°)	4677.4	41.4			
FH (60°-80°)	2511.4	22.2			G2/5000
FVH (80°-90°)	125.0	1.1			G2/225
BL (0°-30°)	622.9	5.5	B2/1000		
BM (30°-60°)	1480.0	13.1	B2/2500		
BH (60°-80°)	1134.3	10.0	B3/2500		G3/2500
BVH (80°-90°)	87.4	0.8			G1/100
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°	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9
2.5°	1217.3	1215.4	1215.4	1215.4	1215.4	1213.5	1215.4	1219.2	1217.3	1215.4	1219.2
5°	1221.1	1219.2	1219.2	1219.2	1221.1	1219.2	1221.1	1226.7	1222.9	1222.9	1226.7
7.5°	1230.5	1228.7	1230.5	1228.7	1228.7	1228.7	1230.5	1236.2	1234.3	1236.2	1241.9
10°	1241.9	1241.9	1241.9	1241.9	1241.9	1241.9	1245.6	1249.4	1251.4	1253.2	1260.8
12.5°	1275.9	1275.9	1275.9	1274.1	1274.1	1268.4	1275.9	1279.7	1283.5	1287.3	1293.0
15°	1347.9	1347.9	1346.0	1338.4	1338.4	1327.1	1328.9	1330.9	1330.9	1334.6	1338.4
17.5°	1442.6	1440.6	1436.8	1431.2	1423.6	1410.3	1406.6	1402.8	1397.1	1395.2	1395.2
20°	1575.0	1573.2	1565.6	1550.5	1541.0	1520.2	1505.1	1489.8	1484.2	1474.7	1472.8
22.5°	1764.4	1764.4	1749.2	1726.5	1719.0	1675.4	1631.8	1599.7	1588.3	1575.0	1575.0
25°	1993.4	1991.6	1970.7	1944.2	1912.0	1866.6	1813.6	1770.0	1741.7	1711.4	1700.0
27.5°	2268.0	2262.3	2233.8	2201.7	2141.1	2084.3	2021.9	1976.4	1927.1	1889.3	1855.2
30°	2589.8	2584.1	2534.9	2474.3	2411.8	2355.0	2264.2	2209.3	2131.6	2086.2	2048.4
32.5°	2962.7	2957.0	2868.0	2809.3	2743.1	2673.1	2565.2	2478.1	2379.6	2315.2	2262.3
35°	3437.9	3415.1	3288.4	3207.0	3102.8	3032.7	2919.2	2801.8	2686.3	2595.4	2517.8
37.5°	3950.9	3924.4	3812.7	3691.5	3589.3	3504.1	3343.2	3195.6	3059.2	2934.3	2837.8
40°	4486.7	4416.6	4297.3	4208.4	4138.3	4056.9	3888.4	3733.3	3519.3	3379.2	3233.4
42.5°	4857.7	4789.6	4706.3	4647.6	4613.5	4551.0	4456.4	4322.0	4130.8	4134.6	3750.2
45°	5102.0	5001.6	4944.8	4948.6	4961.8	4961.8	4944.8	4924.0	4840.7	4897.5	4575.7
47.5°	5014.8	4948.6	4912.6	4988.3	5083.0	5177.7	5287.4	5406.7	5543.1	5704.0	5308.3
50°	4503.7	4528.3	4545.4	4706.3	4908.8	5124.7	5376.4	5702.0	6082.6	6156.4	5965.1
52.5°	3687.7	3740.8	3797.6	4043.7	4310.6	4683.6	5124.7	5662.2	6173.4	6474.5	6455.5
55°	2864.3	2930.5	3051.7	3235.3	3447.3	3799.4	4344.7	5173.9	5970.9	6449.8	6741.3
57.5°	2038.8	2135.4	2294.5	2550.0	2737.4	2936.2	3339.4	4259.5	5132.2	6023.9	6694.0
60°	1355.5	1400.9	1505.1	1823.1	2139.2	2347.5	2633.3	2966.5	3680.2	4908.8	6205.6
62.5°	961.7	992.0	1056.4	1200.2	1486.0	1862.8	2035.1	2188.4	2417.5	3157.7	4982.7
63°	908.7	935.2	988.2	1109.4	1366.9	1756.8	1932.9	2072.9	2239.5	2824.5	4713.9
65°	753.5	764.9	793.2	851.9	990.1	1313.8	1601.5	1686.7	1715.2	1815.5	2953.3
67.5°	636.1	643.6	653.2	670.1	725.1	874.6	1194.6	1302.4	1270.3	1202.2	1459.5
70°	552.8	558.4	573.6	594.4	613.4	651.2	821.6	982.5	946.5	853.8	893.5
72.5°	441.1	450.6	467.6	503.6	541.4	590.7	632.3	732.6	709.9	620.9	630.4
75°	348.3	354.0	369.2	395.7	431.6	488.5	569.8	604.0	541.4	458.2	458.2
77.5°	276.4	282.0	295.3	316.2	338.9	378.6	435.4	524.4	486.5	344.5	342.7
80°	208.3	213.9	227.2	246.1	268.8	297.2	331.3	371.0	446.7	321.8	257.5
82.5°	153.3	155.3	178.0	191.2	198.8	221.5	249.9	272.6	306.7	297.2	229.0
85°	115.5	113.5	128.7	138.2	140.0	145.8	162.9	185.6	200.7	193.1	178.0
87.5°	64.3	56.8	66.3	75.7	75.7	77.6	81.4	94.6	107.9	104.1	94.6
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°	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9
2.5°	1219.2	1219.2	1217.3	1217.3	1219.2	1219.2	1217.3	1222.9	1226.7	1226.7	1228.7
5°	1224.9	1226.7	1224.9	1224.9	1226.7	1226.7	1228.7	1234.3	1240.0	1243.8	1249.4
7.5°	1241.9	1243.8	1241.9	1241.9	1243.8	1245.6	1249.4	1257.0	1260.8	1268.4	1277.9
10°	1260.8	1262.7	1260.8	1262.7	1264.6	1266.5	1272.1	1277.9	1283.5	1291.1	1306.2
12.5°	1294.9	1296.8	1293.0	1294.9	1300.6	1300.6	1304.4	1308.1	1317.6	1327.1	1342.2
15°	1342.2	1342.2	1338.4	1340.3	1346.0	1346.0	1347.9	1351.7	1363.1	1374.4	1389.6
17.5°	1397.1	1400.9	1399.0	1400.9	1404.7	1406.6	1406.6	1410.3	1417.9	1425.5	1440.6
20°	1470.9	1472.8	1469.1	1472.8	1476.6	1472.8	1469.1	1467.1	1470.9	1474.7	1491.8
22.5°	1571.3	1569.4	1559.9	1559.9	1559.9	1552.3	1542.9	1531.6	1531.6	1525.8	1539.1
25°	1690.5	1684.9	1671.6	1673.5	1660.2	1648.9	1631.8	1614.8	1599.7	1594.0	1595.9
27.5°	1830.7	1819.3	1806.0	1802.2	1788.9	1768.2	1739.7	1707.6	1683.0	1664.0	1660.2
30°	2006.7	1982.1	1959.4	1955.6	1934.7	1900.6	1855.2	1811.7	1770.0	1737.9	1726.5
32.5°	2214.9	2177.0	2141.1	2137.4	2103.3	2057.8	2002.9	1942.4	1881.7	1830.7	1806.0
35°	2459.2	2402.4	2368.2	2358.8	2309.6	2252.8	2192.2	2114.6	2029.4	1957.5	1912.0
37.5°	2756.3	2697.7	2639.0	2640.8	2572.7	2506.4	2425.1	2330.4	2222.5	2122.2	2057.8
40°	3123.6	3040.3	2964.6	2947.5	2888.9	2796.1	2707.1	2597.4	2464.8	2332.3	2239.5
42.5°	3568.5	3432.2	3328.1	3312.9	3235.3	3121.7	3013.8	2868.0	2733.6	2572.7	2461.0
45°	4074.0	3856.2	3731.3	3708.6	3583.7	3468.2	3337.6	3182.3	3017.6	2835.8	2703.4
47.5°	4702.5	4392.0	4180.0	4142.1	3969.9	3818.4	3682.1	3509.8	3312.9	3110.4	2964.6
50°	5435.1	4977.0	4691.2	4632.4	4401.5	4223.6	4049.4	3833.5	3623.4	3411.3	3242.9
52.5°	6169.6	5677.5	5296.9	5224.9	4884.2	4645.7	4416.6	4200.8	3952.8	3742.7	3551.5
55°	6760.3	6432.8	5991.7	5891.4	5402.9	5079.3	4778.2	4532.1	4286.0	4119.4	3894.2
57.5°	7116.2	7099.2	6750.9	6612.7	5944.4	5465.4	5130.3	4850.1	4611.6	4541.6	4242.5
60°	7106.7	7547.8	7398.3	7294.2	6491.4	5861.1	5425.6	5122.7	4925.8	5005.4	4592.6
62.5°	6673.2	7566.8	7746.6	7718.2	7074.5	6179.1	5668.0	5355.6	5251.5	5488.1	4956.2
63°	6516.1	7523.2	7761.7	7750.4	7186.2	6239.7	5709.6	5401.1	5315.9	5611.2	5022.4
65°	5507.1	7142.7	7578.1	7629.3	7426.6	6448.0	5806.2	5516.5	5507.1	5885.6	5179.5
67.5°	3356.5	6035.2	6750.9	6849.3	7087.8	6514.2	5751.2	5476.8	5613.0	5925.4	5132.2
70°	1435.0	3983.1	5425.6	5584.7	6167.8	6184.8	5594.1	5313.9	5588.5	5615.0	4795.3
72.5°	850.0	1877.9	3693.5	4039.9	4880.4	5321.5	5234.4	5030.0	5264.7	4931.5	4083.4
75°	602.0	878.4	1876.1	2245.3	3398.1	4062.6	4397.7	4492.4	4482.9	3911.2	3065.0
77.5°	431.6	564.2	791.4	933.3	1896.9	2608.7	3017.6	3294.0	3205.0	2618.1	1889.3
80°	301.1	389.9	484.7	515.0	880.2	1340.3	1590.2	1711.4	1658.4	1308.1	846.2
82.5°	217.7	255.5	312.4	331.3	442.9	619.1	736.4	649.4	622.9	482.7	365.4
85°	168.5	164.7	195.0	202.5	259.3	323.8	331.3	257.5	225.3	200.7	204.5
87.5°	119.3	102.2	104.1	107.9	134.4	172.3	168.5	106.0	90.8	96.6	109.8
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°	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9	1224.9
2.5°	1232.5	1234.3	1238.1	1240.0	1243.8	1243.8	1247.6	1249.4	1253.2	1257.0	1258.9
5°	1255.2	1260.8	1268.4	1272.1	1279.7	1285.4	1293.0	1296.8	1304.4	1310.0	1317.6
7.5°	1289.2	1298.6	1308.1	1319.5	1330.9	1340.3	1347.9	1357.4	1370.7	1380.1	1385.8
10°	1321.3	1334.6	1351.7	1364.9	1382.0	1395.2	1406.6	1423.6	1438.8	1452.0	1459.5
12.5°	1363.1	1380.1	1397.1	1417.9	1440.6	1457.7	1474.7	1497.5	1518.3	1533.4	1541.0
15°	1412.3	1433.1	1452.0	1476.6	1503.1	1525.8	1550.5	1575.0	1590.2	1590.2	1586.4
17.5°	1463.3	1480.4	1503.1	1531.6	1567.5	1595.9	1609.1	1612.9	1607.3	1594.0	1584.6
20°	1514.5	1529.6	1554.3	1588.3	1626.2	1631.8	1618.6	1601.5	1584.6	1561.8	1546.7
22.5°	1556.1	1577.0	1614.8	1654.6	1656.5	1624.2	1588.3	1559.9	1533.4	1506.9	1478.5
25°	1605.3	1633.8	1684.9	1700.0	1650.8	1590.2	1539.1	1497.5	1453.9	1410.3	1378.2
27.5°	1666.0	1707.6	1758.7	1715.2	1618.6	1533.4	1463.3	1400.9	1344.2	1283.5	1247.6
30°	1730.3	1794.7	1806.0	1692.5	1563.7	1453.9	1359.3	1264.6	1192.7	1137.7	1117.0
32.5°	1808.0	1891.2	1823.1	1652.7	1489.8	1346.0	1219.2	1105.6	1044.9	1010.9	1001.5
35°	1925.3	1993.4	1832.5	1611.0	1404.7	1217.3	1058.2	967.4	929.6	906.8	895.4
37.5°	2093.8	2091.9	1830.7	1559.9	1306.2	1077.2	929.6	865.1	834.8	815.9	795.1
40°	2290.7	2167.6	1819.3	1486.0	1173.7	942.8	840.6	780.0	751.6	728.9	704.2
42.5°	2485.7	2218.7	1787.1	1376.3	1009.0	846.2	776.2	721.3	691.0	666.4	632.3
45°	2654.1	2239.5	1724.6	1224.9	861.3	770.5	734.5	687.2	651.2	613.4	586.9
47.5°	2786.6	2235.8	1624.2	1046.9	762.9	717.5	700.4	668.3	624.7	577.4	543.3
50°	2898.3	2207.3	1488.0	889.8	696.6	670.1	664.5	655.0	584.9	545.2	524.4
52.5°	3000.6	2165.7	1342.2	783.8	639.9	617.1	628.5	619.1	569.8	535.7	515.0
55°	3140.7	2137.4	1198.4	702.4	573.6	567.9	577.4	590.7	560.4	528.1	505.4
57.5°	3305.4	2152.5	1088.5	611.5	511.2	515.0	547.1	566.0	550.9	516.8	494.1
60°	3494.7	2197.9	992.0	524.4	460.0	469.5	516.8	543.3	541.4	501.7	475.2
62.5°	3706.7	2245.3	838.6	458.2	416.4	431.6	480.9	515.0	520.6	486.5	454.4
63°	3748.4	2249.1	798.9	444.9	408.9	426.0	471.4	507.4	515.0	482.7	450.6
65°	3850.6	2214.9	643.6	408.9	378.6	397.5	442.9	475.2	490.3	462.0	435.4
67.5°	3765.4	1936.7	484.7	365.4	354.0	367.2	407.0	437.3	450.6	437.3	410.8
70°	3443.6	1408.5	378.6	325.6	327.5	337.0	367.2	395.7	410.8	407.0	382.4
72.5°	2773.4	798.9	316.2	291.5	297.2	308.6	329.4	355.9	369.2	367.2	350.3
75°	1826.9	408.9	266.9	261.3	265.0	274.5	289.6	310.5	325.6	323.8	316.2
77.5°	904.9	284.0	229.0	231.0	232.8	240.4	251.7	270.7	280.2	282.0	280.2
80°	373.0	221.5	196.9	198.8	200.7	206.3	213.9	231.0	236.6	240.4	242.3
82.5°	223.4	168.5	157.1	160.9	162.9	168.5	174.2	189.3	195.0	200.7	200.7
85°	147.6	117.3	113.5	117.3	121.1	124.9	126.8	136.3	145.8	153.3	157.1
87.5°	79.5	70.1	68.1	70.1	70.1	73.9	77.6	87.1	98.4	106.0	109.8
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°	1224.9	1224.9	1224.9	1224.9	1224.9
2.5°	1255.2	1257.0	1255.2	1257.0	1258.9
5°	1317.6	1321.3	1319.5	1319.5	1327.1
7.5°	1389.6	1397.1	1397.1	1400.9	1404.7
10°	1467.1	1474.7	1480.4	1480.4	1486.0
12.5°	1544.8	1548.5	1554.3	1554.3	1554.3
15°	1584.6	1582.6	1580.8	1578.8	1578.8
17.5°	1578.8	1571.3	1567.5	1563.7	1565.6
20°	1537.2	1524.0	1520.2	1514.5	1518.3
22.5°	1465.3	1446.4	1438.8	1429.3	1433.1
25°	1357.4	1334.6	1330.9	1319.5	1325.1
27.5°	1232.5	1221.1	1219.2	1217.3	1226.7
30°	1115.0	1118.8	1120.7	1124.5	1133.9
32.5°	1007.1	1014.7	1016.6	1018.4	1031.7
35°	901.1	891.6	901.1	897.3	908.7
37.5°	785.6	778.1	770.5	761.1	768.6
40°	689.1	675.9	653.2	641.8	643.6
42.5°	613.4	596.3	577.4	566.0	566.0
45°	564.2	543.3	526.3	518.7	518.7
47.5°	526.3	516.8	507.4	501.7	501.7
50°	511.2	499.8	494.1	490.3	490.3
52.5°	499.8	488.5	482.7	478.9	475.2
55°	490.3	473.3	467.6	465.7	465.7
57.5°	477.1	462.0	454.4	452.5	452.5
60°	456.2	444.9	437.3	435.4	435.4
62.5°	435.4	424.0	416.4	416.4	416.4
63°	431.6	418.4	412.7	412.7	412.7
65°	414.6	401.3	395.7	395.7	393.7
67.5°	391.9	378.6	374.8	374.8	371.0
70°	365.4	354.0	350.3	352.1	344.5
72.5°	338.9	327.5	321.8	321.8	314.3
75°	308.6	297.2	289.6	287.8	280.2
77.5°	274.5	265.0	257.5	249.9	246.1
80°	238.6	231.0	221.5	215.8	210.1
82.5°	200.7	193.1	187.4	195.0	166.6
85°	157.1	149.6	142.0	153.3	119.3
87.5°	115.5	111.7	104.1	90.8	79.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)