

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: P231303

Luminaire Tested: **ARCH-M-AF48-110-D-U-T4W-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231303
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29615)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: ARCH-M-AF48-110-D-U-T4W-7050
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5000K, 720mA LIGHT ENGINES WITH 24 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14171 lumens
Efficiency: N/A
Efficacy: 127.7 lumens/watt
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')
IES Classification: Type IV - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G3

Input Watts (W): 111
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

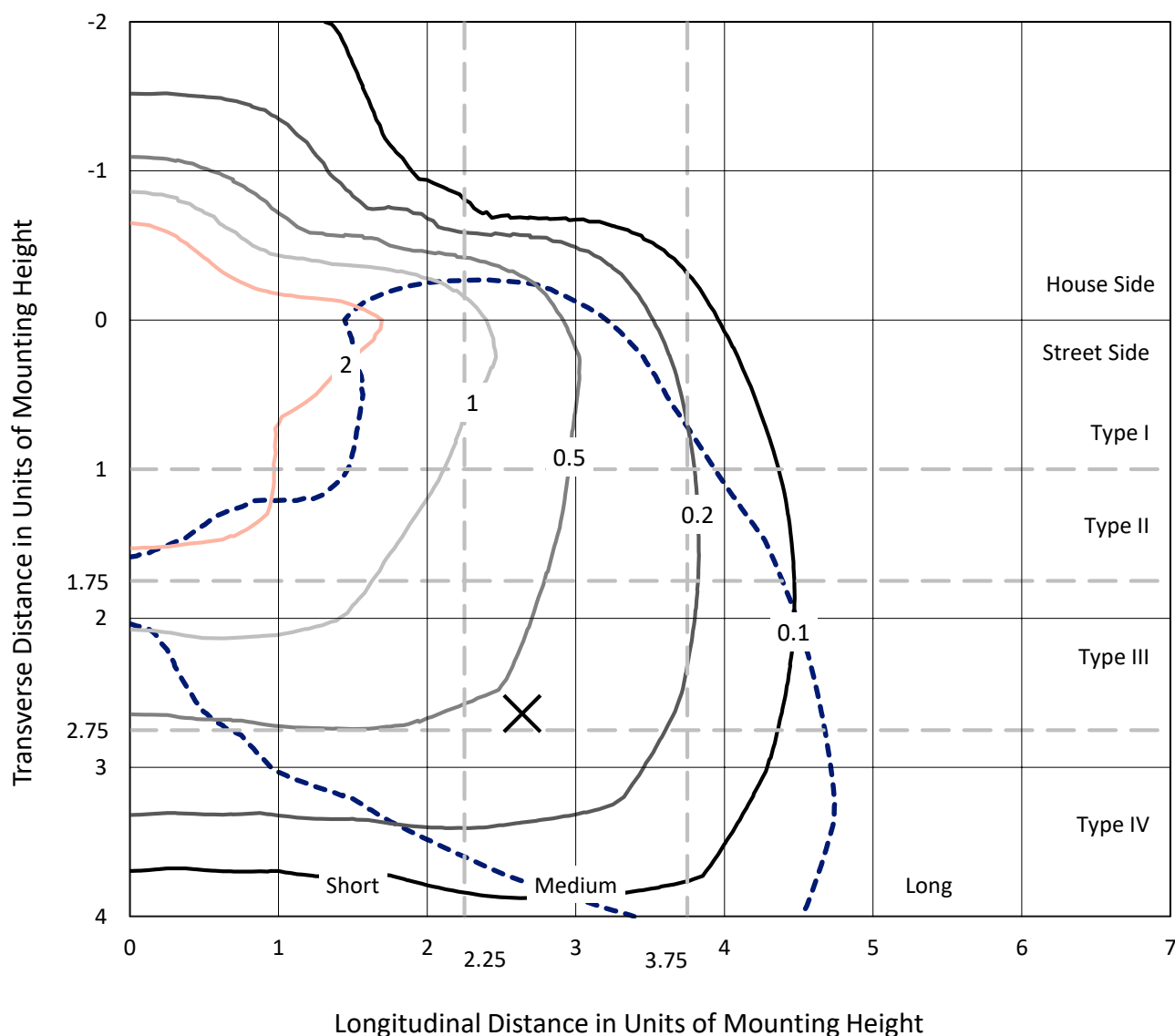


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

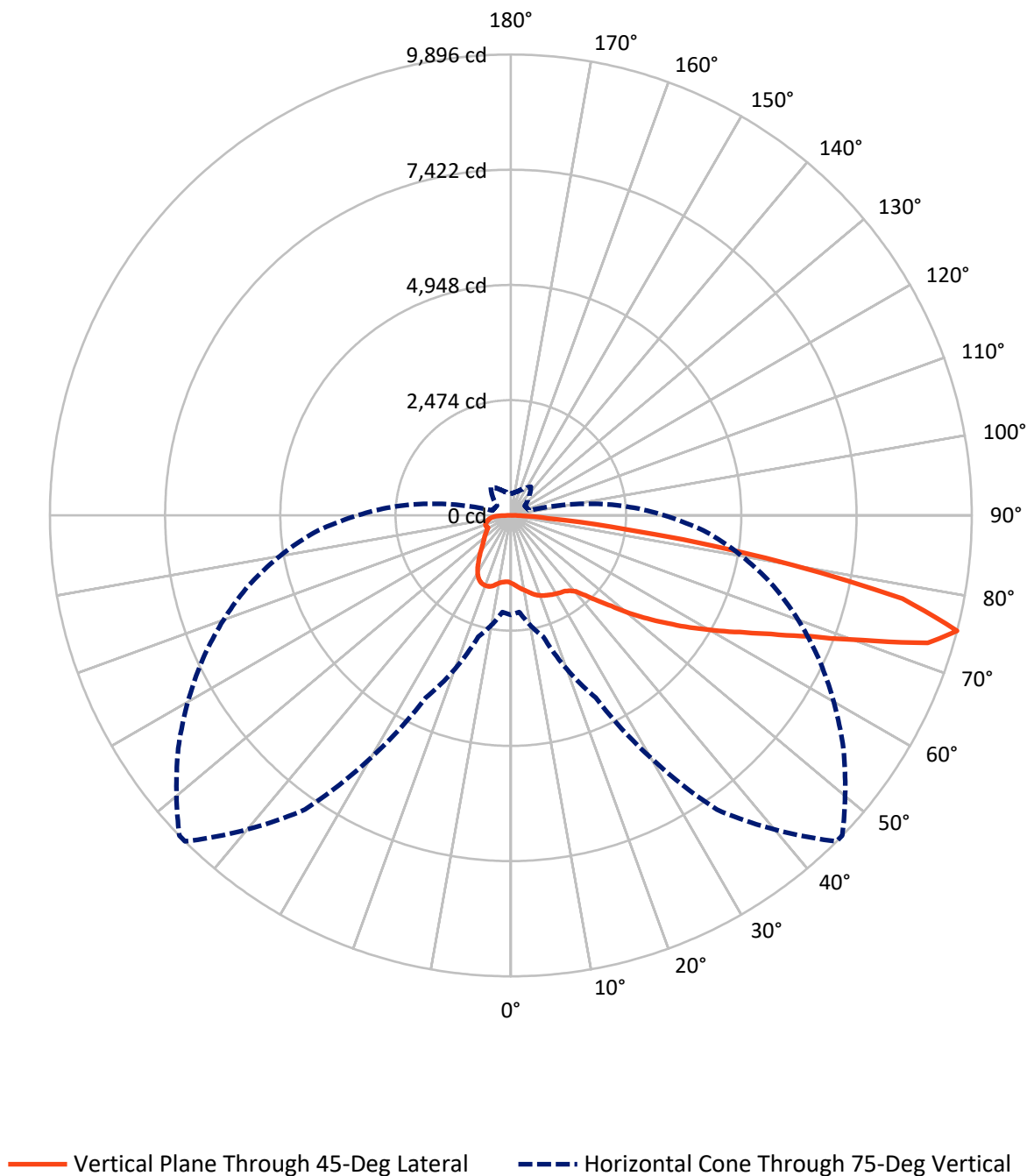


Based on 20 foot mounting height. Maximum calculated value = 4.2 fc
 Type IV - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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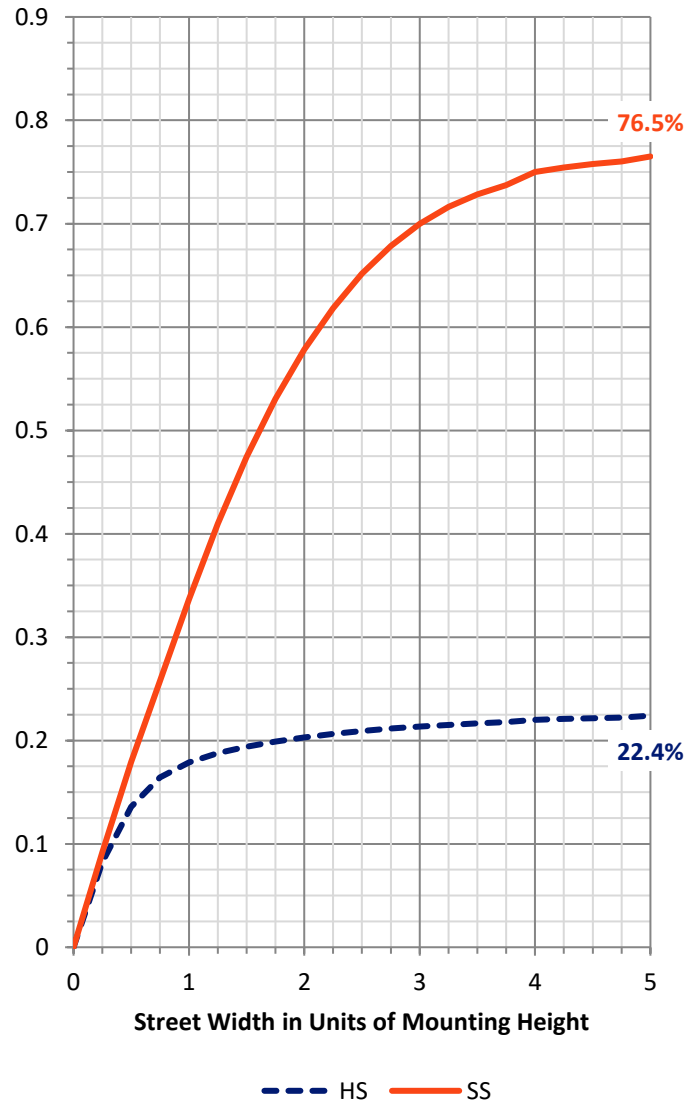
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3282.8	0.0	3282.8
	% Fixture	23.2	0.0	23.2
Street Side	Lumens	10888.2	0.0	10888.2
	% Fixture	76.8	0.0	76.8
Total	Lumens	14171.0	0.0	14171.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.0	1.0
10°-20°	466.5	3.3
20°-30°	800.6	5.6
30°-40°	1119.7	7.9
40°-50°	1642.5	11.6
50°-60°	2558.5	18.1
60°-70°	3681.5	26.0
70°-80°	3207.0	22.6
80°-90°	550.8	3.9
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°	14171.0	100.0
0°-180°	14171.0	100.0

Coefficient of Utilization



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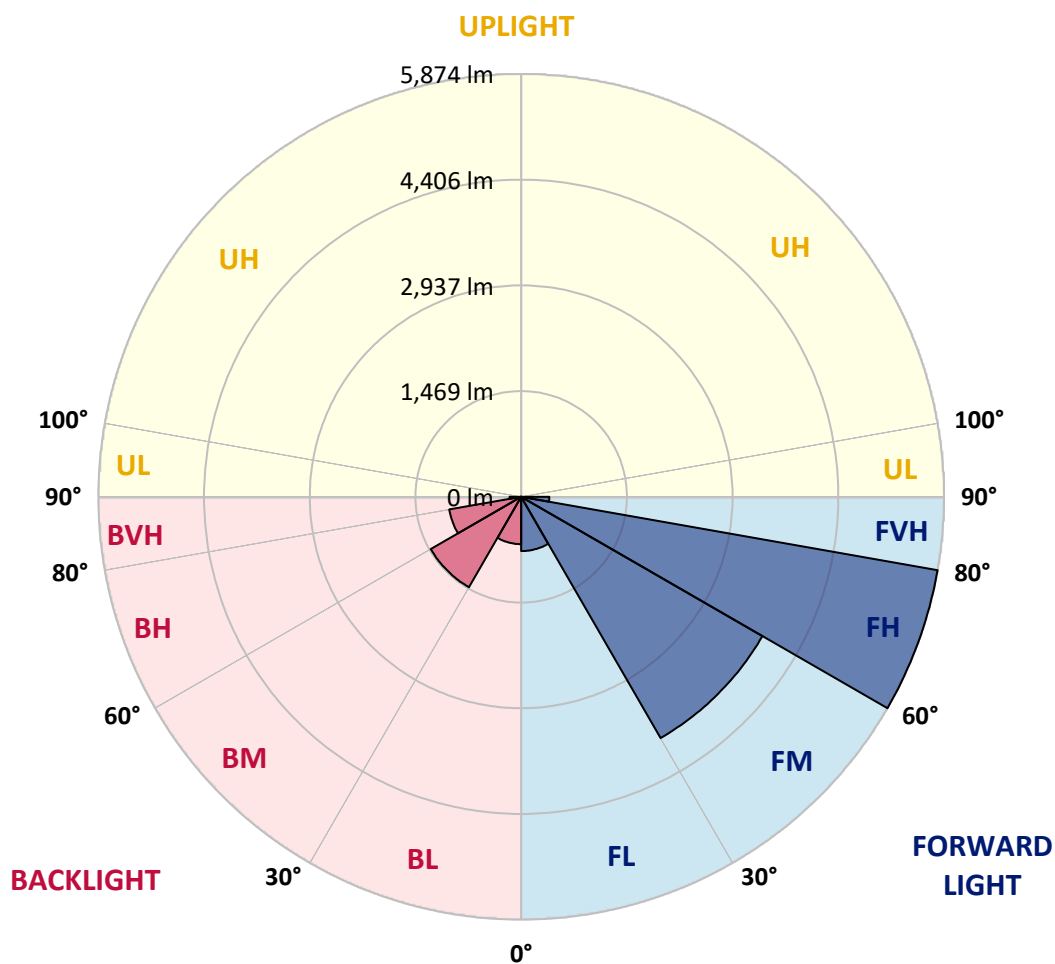
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	753.6	5.3			
FM	(30°-60°)	3869.8	27.3			
FH	(60°-80°)	5874.0	41.5			G3/7500
FVH	(80°-90°)	390.8	2.8			G3/500
BL	(0°-30°)	657.5	4.6	B2/1000		
BM	(30°-60°)	1450.8	10.2	B2/2500		
BH	(60°-80°)	1014.5	7.2	B3/2500		G3/2500
BVH	(80°-90°)	160.0	1.1			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 IV Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	1452.7	1452.7	1452.7	1452.7	1452.7	1452.7	1452.7	1452.7	1452.7	1452.7	1452.7
2.5°	1524.4	1513.4	1513.4	1505.1	1505.1	1491.3	1485.8	1483.1	1469.3	1461.0	1452.7
5°	1612.6	1598.8	1596.1	1576.8	1568.5	1538.2	1535.4	1516.1	1491.3	1466.5	1447.2
7.5°	1692.6	1684.3	1670.5	1651.2	1626.4	1587.8	1585.0	1554.7	1513.4	1480.3	1452.7
10°	1750.4	1744.9	1725.6	1700.8	1673.3	1634.7	1631.9	1598.8	1549.2	1510.6	1472.0
12.5°	1819.4	1811.1	1786.3	1753.2	1722.9	1687.0	1684.3	1656.7	1601.6	1552.0	1502.3
15°	1885.5	1874.5	1844.2	1811.1	1778.0	1747.7	1747.7	1717.4	1659.5	1601.6	1543.7
17.5°	1918.6	1913.1	1882.8	1846.9	1819.4	1797.3	1794.5	1767.0	1709.1	1648.4	1585.0
20°	1929.6	1932.4	1904.8	1866.2	1846.9	1835.9	1833.1	1813.8	1750.4	1692.6	1631.9
22.5°	1926.9	1935.1	1913.1	1871.7	1866.2	1866.2	1866.2	1844.2	1794.5	1736.7	1676.0
25°	1937.9	1948.9	1932.4	1882.8	1882.8	1893.8	1893.8	1882.8	1838.7	1789.0	1728.4
27.5°	1976.5	1984.8	1971.0	1902.1	1904.8	1921.4	1918.6	1921.4	1893.8	1846.9	1786.3
30°	2023.3	2034.4	2017.8	1932.4	1929.6	1946.2	1946.2	1959.9	1940.6	1891.0	1841.4
32.5°	2150.1	2147.4	2095.0	1965.5	1957.2	1973.7	1973.7	1987.5	1976.5	1937.9	1891.0
35°	2527.8	2486.5	2370.7	2073.0	1990.3	1998.5	1998.5	2023.3	2028.9	1998.5	1957.2
37.5°	2913.7	2899.9	2811.7	2359.7	2111.6	2050.9	2048.2	2084.0	2108.8	2084.0	2056.4
40°	3302.4	3291.4	3272.1	2742.8	2365.2	2144.6	2136.4	2166.7	2210.8	2194.3	2177.7
42.5°	3663.5	3658.0	3677.3	3120.5	2687.7	2345.9	2321.1	2285.2	2348.6	2343.1	2343.1
45°	3947.5	3961.2	3972.3	3473.3	3037.8	2605.0	2574.7	2453.4	2538.8	2560.9	2577.4
47.5°	4107.3	4118.4	4157.0	3817.9	3387.9	2905.5	2883.4	2684.9	2797.9	2864.1	2911.0
50°	4336.1	4305.8	4338.9	4154.2	3809.6	3296.9	3236.2	2996.4	3139.8	3255.5	3365.8
52.5°	4556.7	4507.0	4534.6	4542.9	4289.3	3680.1	3616.7	3363.1	3542.2	3724.2	3919.9
55°	4755.1	4752.4	4779.9	4920.5	4752.4	4090.8	4019.1	3768.3	4027.4	4223.1	4553.9
57.5°	4915.0	4942.6	5063.9	5358.8	5287.2	4537.4	4457.4	4239.7	4545.6	4741.4	5289.9
60°	5102.5	5146.6	5347.8	5731.0	5775.1	5006.0	4923.3	4766.2	5077.7	5276.1	6141.7
62.5°	5165.9	5229.3	5642.8	6122.4	6285.0	5518.7	5444.3	5339.5	5637.2	5816.4	6990.7
65°	4744.1	4865.4	5805.4	6323.6	6833.6	6136.2	6072.8	5981.8	6194.1	6312.6	7566.9
67.5°	4628.3	4683.5	5488.4	6613.1	7349.1	6930.1	6866.7	6709.6	6715.1	6665.5	7754.3
70°	4465.7	4526.3	5163.1	6830.9	8087.9	8016.2	7939.0	7475.9	7192.0	6891.5	7384.9
72.5°	3804.1	3784.8	4449.2	6243.7	8443.5	9361.4	9270.4	8300.1	7544.8	6695.8	6232.7
75°	2136.4	2081.2	2698.7	4319.6	7710.2	9896.2	9893.4	8716.4	7296.7	5833.0	4242.4
77.5°	620.2	603.7	890.4	1811.1	5190.7	8597.8	8702.6	7861.8	6089.3	4190.0	2329.3
80°	292.2	297.7	383.2	598.2	2216.3	5549.0	5849.5	5176.9	3638.7	1932.4	962.1
82.5°	184.7	187.4	261.9	385.9	937.2	2519.5	2767.6	2329.3	1441.7	835.3	424.5
85°	115.8	115.8	173.7	253.6	559.6	804.9	873.8	793.9	617.5	454.8	231.6
87.5°	63.4	63.4	104.8	146.1	306.0	259.1	267.4	317.0	385.9	278.4	115.8
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1452.7	1452.7	1452.7	1452.7	1452.7	1452.7	1452.7	1452.7	1452.7	1452.7	1452.7
2.5°	1450.0	1444.5	1436.2	1433.4	1430.7	1427.9	1430.7	1436.2	1430.7	1430.7	1433.4
5°	1441.7	1436.2	1425.2	1425.2	1427.9	1430.7	1444.5	1452.7	1455.5	1455.5	1455.5
7.5°	1441.7	1433.4	1425.2	1427.9	1433.4	1444.5	1466.5	1480.3	1491.3	1494.1	1494.1
10°	1455.5	1444.5	1438.9	1444.5	1461.0	1469.3	1491.3	1513.4	1527.2	1532.7	1532.7
12.5°	1480.3	1469.3	1469.3	1480.3	1502.3	1513.4	1532.7	1549.2	1565.7	1574.0	1574.0
15°	1521.6	1507.9	1510.6	1529.9	1554.7	1565.7	1579.5	1585.0	1598.8	1609.9	1609.9
17.5°	1560.2	1546.5	1552.0	1574.0	1590.6	1596.1	1604.3	1601.6	1607.1	1615.4	1618.1
20°	1604.3	1590.6	1593.3	1607.1	1609.9	1604.3	1604.3	1596.1	1593.3	1607.1	1612.6
22.5°	1648.4	1634.7	1631.9	1623.6	1609.9	1596.1	1587.8	1579.5	1574.0	1587.8	1593.3
25°	1700.8	1681.5	1667.7	1631.9	1596.1	1571.3	1560.2	1554.7	1552.0	1565.7	1571.3
27.5°	1758.7	1739.4	1698.1	1620.9	1563.0	1521.6	1513.4	1513.4	1518.9	1527.2	1532.7
30°	1813.8	1794.5	1720.1	1596.1	1505.1	1444.5	1436.2	1444.5	1458.2	1466.5	1474.8
32.5°	1869.0	1849.7	1733.9	1557.5	1419.6	1342.5	1337.0	1350.7	1372.8	1378.3	1383.8
35°	1943.4	1924.1	1750.4	1502.3	1312.1	1229.4	1223.9	1232.2	1251.5	1259.8	1268.0
37.5°	2048.2	2037.1	1775.3	1441.7	1212.9	1121.9	1105.4	1099.9	1110.9	1108.2	1119.2
40°	2186.0	2194.3	1819.4	1361.8	1116.4	1022.7	986.9	970.3	959.3	937.2	948.3
42.5°	2387.2	2392.7	1869.0	1270.8	1033.7	929.0	882.1	851.8	829.7	793.9	799.4
45°	2682.2	2635.3	1926.9	1174.3	959.3	854.5	799.4	763.6	733.3	702.9	705.7
47.5°	3073.6	2930.3	1990.3	1094.4	884.9	793.9	744.3	702.9	667.1	642.3	645.0
50°	3556.0	3296.9	2053.7	1019.9	810.4	747.0	702.9	658.8	623.0	598.2	595.4
52.5°	4192.8	3738.0	2095.0	937.2	736.0	705.7	667.1	625.7	581.6	551.3	548.6
55°	4854.4	4250.7	2130.9	838.0	664.3	658.8	639.5	592.7	540.3	501.7	496.2
57.5°	5582.1	4799.2	2158.4	741.5	609.2	620.2	614.7	559.6	501.7	465.9	463.1
60°	6243.7	5367.1	2070.2	656.1	559.6	581.6	587.2	540.3	510.0	518.2	521.0
62.5°	6910.8	5805.4	1733.9	592.7	526.5	556.8	603.7	600.9	587.2	600.9	603.7
65°	7150.6	5896.4	1229.4	540.3	493.4	567.9	656.1	650.6	587.2	562.3	556.8
67.5°	7015.5	5626.2	827.0	498.9	468.6	581.6	711.2	650.6	565.1	532.0	521.0
70°	6373.3	4961.9	606.5	457.6	446.6	578.9	741.5	647.8	554.1	518.2	504.5
72.5°	5083.2	3828.9	487.9	419.0	413.5	565.1	758.1	642.3	543.1	504.5	487.9
75°	3291.4	2381.7	410.7	380.4	363.9	543.1	749.8	625.7	529.3	479.6	468.6
77.5°	1527.2	1025.5	350.1	336.3	317.0	510.0	725.0	592.7	498.9	452.1	438.3
80°	711.2	485.2	295.0	292.2	283.9	482.4	691.9	554.1	463.1	424.5	402.5
82.5°	380.4	292.2	239.8	239.8	248.1	449.3	650.6	507.2	416.2	397.0	339.1
85°	201.2	168.2	173.7	187.4	212.3	397.0	595.4	457.6	363.9	303.2	295.0
87.5°	102.0	107.5	107.5	126.8	162.6	322.5	490.7	377.7	308.7	248.1	242.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)