

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: P159775

Luminaire Tested: **VST-F05-LED-E-U-T4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159775
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33707)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-F05-LED-E-U-T4
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (35) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12285.3 lumens
Efficiency: N/A
Efficacy: 92.2 lumens/watt
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 133.3
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

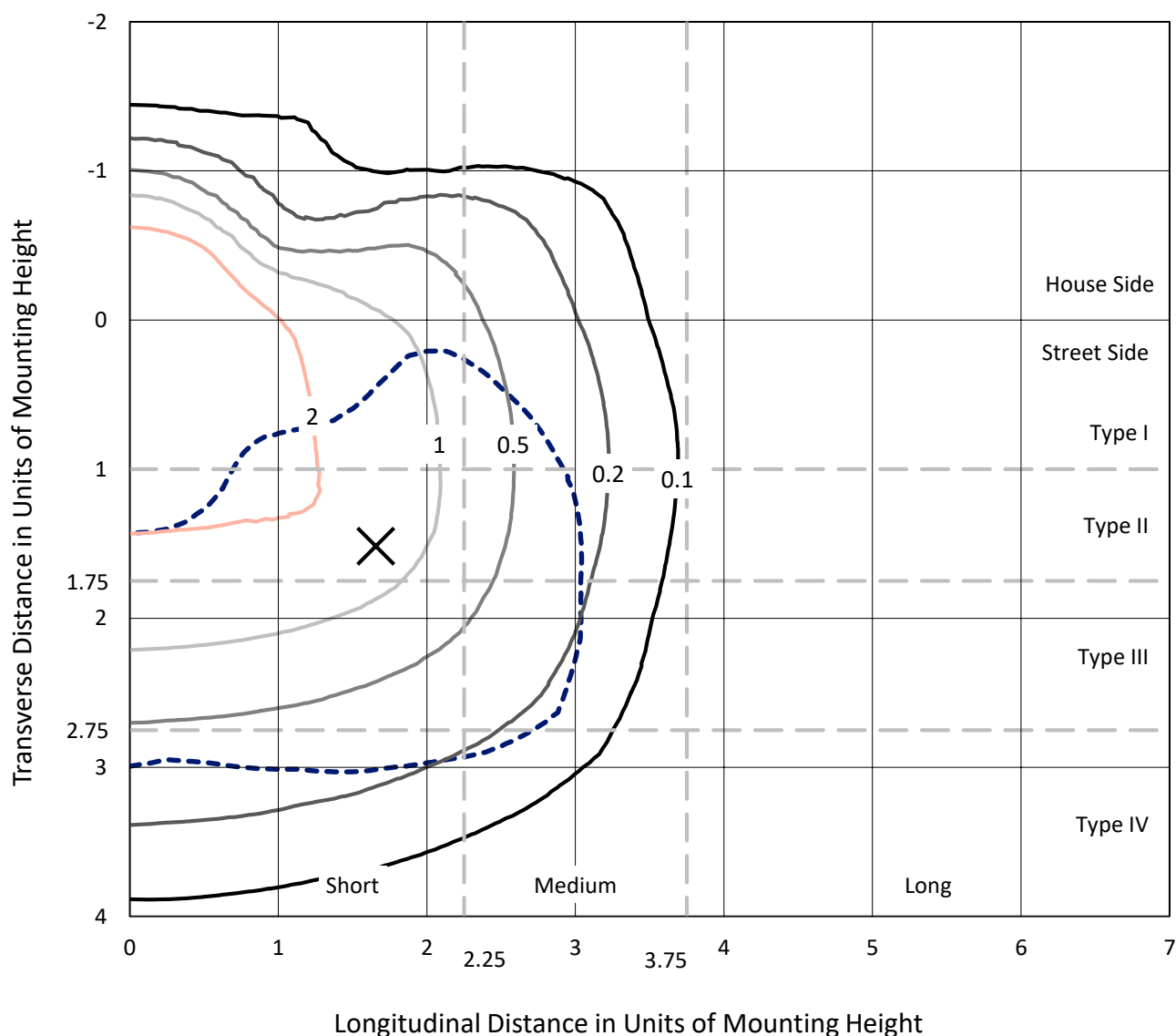


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

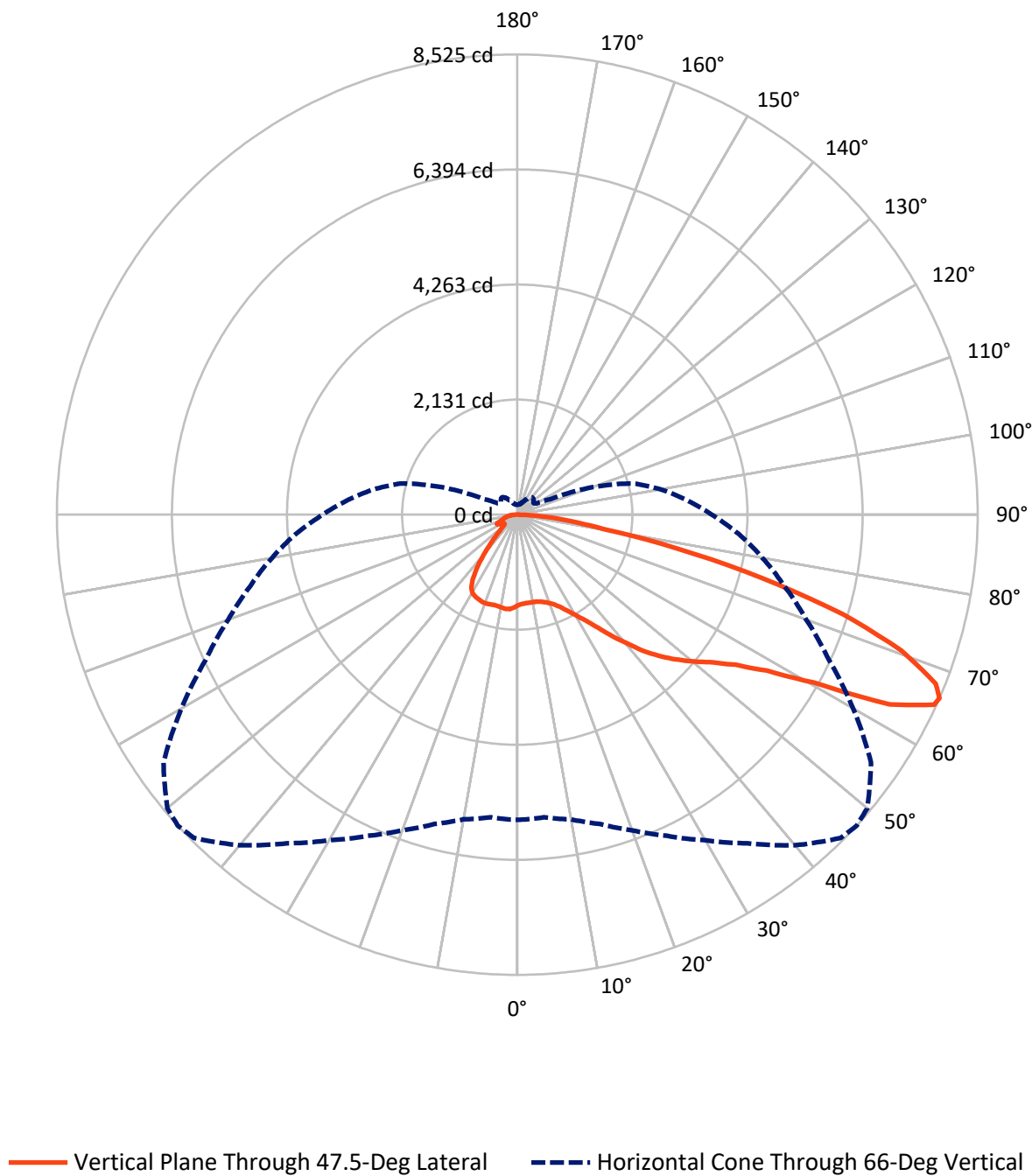


Based on 20 foot mounting height. Maximum calculated value = 4.3 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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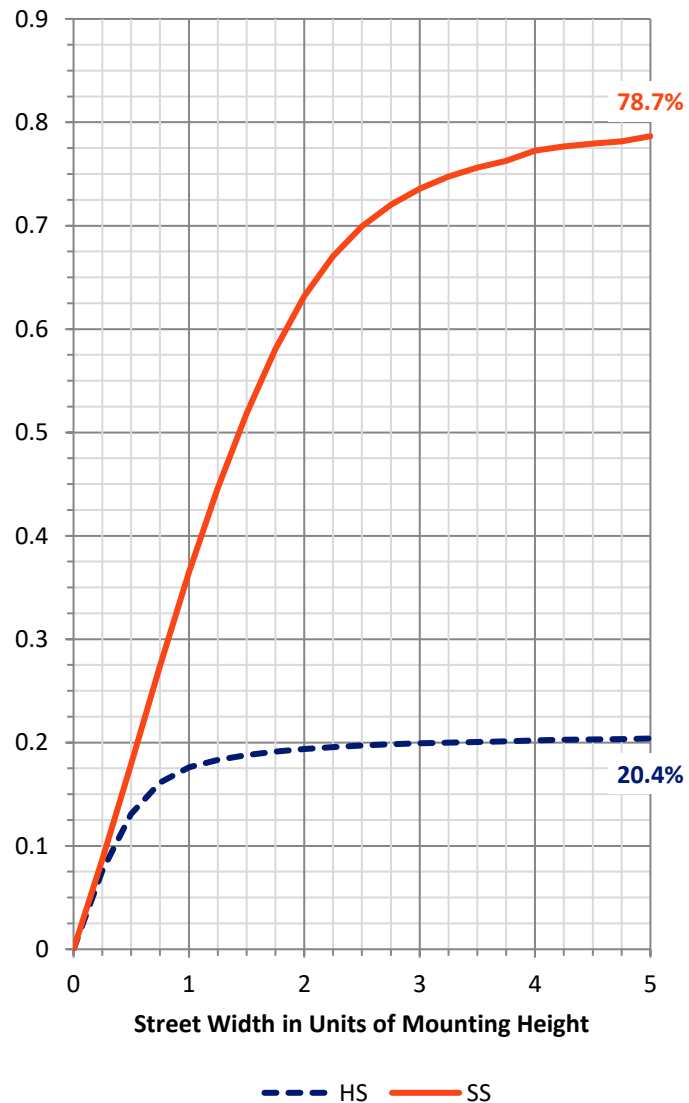
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2543.6	0.0	2543.6
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	9741.7	0.0	9741.7
	% Fixture	79.3	0.0	79.3
Total	Lumens	12285.3	0.0	12285.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.0	1.3
10°-20°	485.8	4.0
20°-30°	828.9	6.7
30°-40°	1251.1	10.2
40°-50°	1626.1	13.2
50°-60°	2230.9	18.2
60°-70°	3431.8	27.9
70°-80°	1983.8	16.1
80°-90°	285.0	2.3
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°	12285.3	100.0
0°-180°	12285.3	100.0

Coefficient of Utilization



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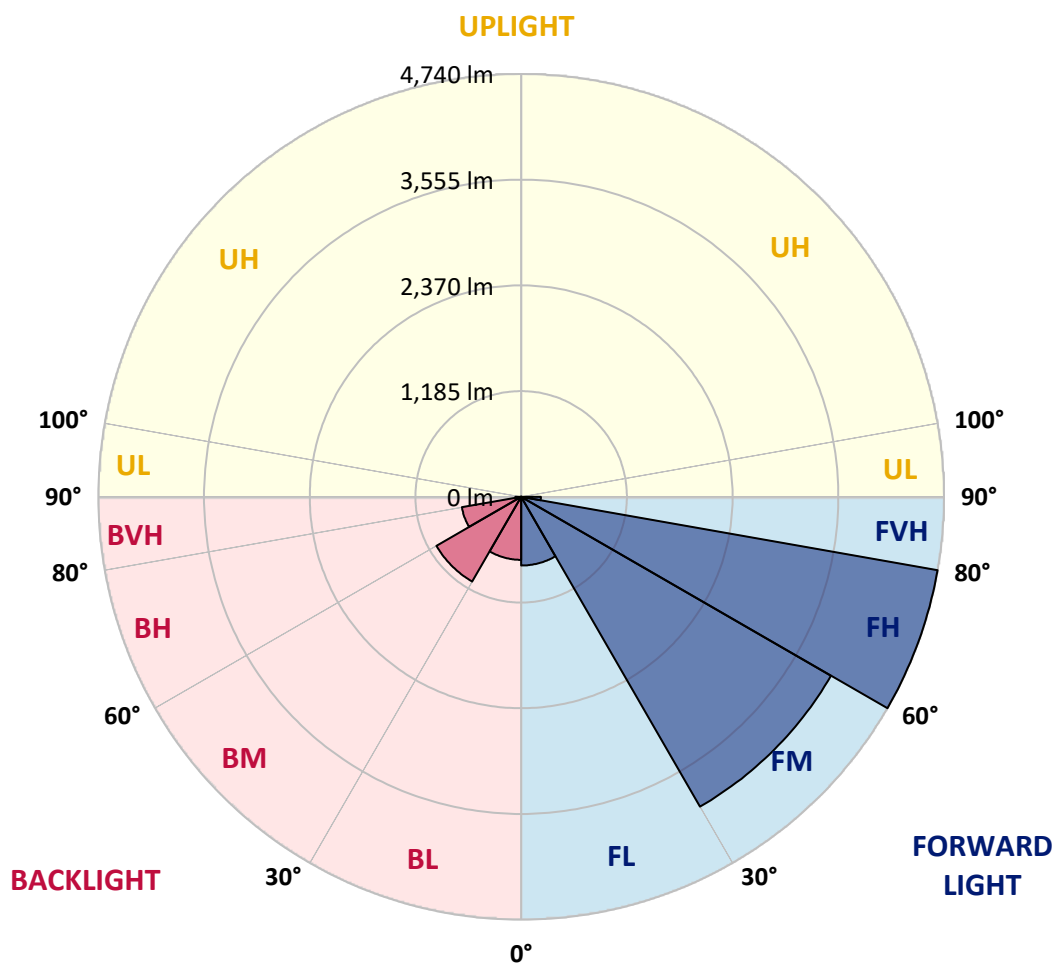
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	770.0	6.3			
FM	(30°-60°)	4010.6	32.6			
FH	(60°-80°)	4740.5	38.6			G2/5000
FVH	(80°-90°)	220.5	1.8			G2/225
BL	(0°-30°)	706.6	5.8	B2/1000		
BM	(30°-60°)	1097.4	8.9	B2/2500		
BH	(60°-80°)	675.1	5.5	B2/1000		G2/1000
BVH	(80°-90°)	64.4	0.5			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	47.5°
0°	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8
2.5°	1637.8	1638.7	1639.5	1639.5	1642.0	1642.0	1646.1	1648.6	1649.4	1654.4	1657.7
5°	1607.3	1606.5	1607.3	1608.9	1613.1	1616.4	1624.6	1630.4	1635.4	1643.6	1647.7
7.5°	1594.1	1595.7	1597.4	1598.2	1601.5	1609.8	1617.2	1623.0	1632.9	1642.8	1646.9
10°	1611.4	1613.9	1611.4	1613.1	1613.1	1620.5	1623.8	1627.9	1635.4	1644.4	1646.9
12.5°	1651.9	1656.8	1651.9	1647.7	1644.4	1651.0	1649.4	1646.1	1650.2	1652.7	1652.7
15°	1718.7	1718.7	1715.4	1709.7	1701.4	1702.2	1694.8	1687.4	1684.1	1678.3	1674.2
17.5°	1784.0	1782.3	1774.9	1767.4	1761.7	1759.2	1748.5	1738.6	1727.0	1717.9	1708.0
20°	1847.5	1854.1	1845.0	1834.3	1825.2	1819.5	1811.2	1791.4	1777.4	1762.5	1752.6
22.5°	1957.3	1951.5	1941.6	1925.9	1916.9	1907.0	1889.6	1868.2	1846.7	1828.5	1816.2
25°	2070.4	2064.6	2050.6	2039.0	2025.8	2017.6	1998.6	1972.2	1951.5	1923.5	1907.0
27.5°	2191.8	2186.8	2170.3	2161.2	2152.1	2142.2	2125.7	2098.5	2079.5	2047.3	2030.0
30°	2328.8	2328.0	2305.7	2304.0	2290.8	2280.1	2268.5	2245.4	2226.4	2194.2	2173.6
32.5°	2474.9	2471.6	2455.9	2451.0	2460.1	2452.6	2436.1	2412.2	2387.4	2368.4	2345.3
35°	2683.0	2677.2	2668.1	2672.2	2678.0	2698.6	2673.0	2652.4	2622.7	2597.9	2565.7
37.5°	2834.9	2826.6	2837.3	2860.4	2893.5	2909.1	2931.4	2932.3	2918.2	2885.2	2857.1
40°	2974.4	2971.1	2995.8	3028.0	3089.1	3133.7	3175.8	3196.4	3201.4	3179.9	3137.8
42.5°	3092.4	3102.3	3135.3	3184.9	3270.7	3338.4	3416.8	3465.6	3496.1	3484.5	3465.6
45°	3232.8	3237.7	3278.2	3340.9	3422.6	3534.9	3638.1	3720.6	3774.3	3773.5	3752.0
47.5°	3408.6	3409.4	3444.1	3517.6	3605.1	3719.0	3849.4	3959.2	4030.2	4033.5	4017.0
50°	3617.5	3615.8	3653.8	3723.1	3816.4	3926.2	4064.9	4201.9	4301.0	4301.0	4277.0
52.5°	3886.6	3883.3	3903.9	3965.0	4055.0	4170.6	4308.4	4466.9	4574.2	4597.3	4545.3
55°	4245.7	4250.6	4255.6	4309.2	4386.0	4477.6	4636.1	4782.3	4925.9	4939.1	4908.6
57.5°	4660.9	4644.4	4679.9	4767.4	4854.9	4969.7	5081.9	5254.5	5424.5	5453.4	5449.3
60°	5309.8	5288.3	5324.6	5436.1	5532.7	5713.5	5905.8	6128.7	6330.1	6389.6	6317.7
62.5°	5906.6	5933.0	5982.6	6112.2	6252.5	6493.6	6782.5	7164.7	7546.9	7755.0	7740.1
65°	5853.0	5828.2	5923.1	6099.8	6354.1	6661.2	7020.3	7480.9	8031.5	8449.2	8486.4
66°	5654.0	5628.4	5730.8	5933.0	6223.6	6565.4	6964.1	7433.0	7996.0	8468.2	8525.2
67.5°	5325.5	5299.9	5415.4	5599.5	5899.2	6329.3	6760.2	7272.9	7858.2	8310.6	8356.8
70°	4691.5	4656.8	4746.8	4954.8	5197.5	5613.6	6023.9	6567.1	7168.0	7529.6	7546.9
72.5°	3974.1	3893.2	3988.9	4149.1	4322.4	4666.7	5024.1	5395.6	5874.4	6208.8	6304.5
75°	2883.6	2925.7	2953.7	3059.4	3174.1	3458.9	3668.6	3979.9	4350.5	4592.4	4669.2
77.5°	1529.7	1593.3	1632.9	1738.6	1928.4	2145.5	2372.6	2564.9	2808.4	2943.8	3037.9
80°	858.5	903.1	967.5	1050.9	1143.4	1310.1	1444.7	1543.7	1578.4	1602.3	1623.8
82.5°	472.2	585.3	681.1	738.8	793.3	860.2	940.3	1022.8	1049.2	1009.6	989.0
85°	73.5	108.1	329.4	402.0	437.5	488.7	546.5	607.6	608.4	523.4	571.3
87.5°	20.6	23.1	47.1	71.0	69.3	56.1	69.3	126.3	74.3	37.1	42.9
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8
2.5°	1659.3	1661.0	1665.1	1669.2	1673.3	1677.5	1679.9	1684.1	1687.4	1692.3	1698.1
5°	1652.7	1656.8	1664.3	1673.3	1681.6	1689.0	1694.8	1703.1	1710.5	1717.1	1727.0
7.5°	1652.7	1661.0	1673.3	1683.2	1690.7	1699.8	1708.8	1717.1	1725.3	1732.0	1738.6
10°	1653.5	1661.8	1674.2	1685.7	1694.0	1703.9	1711.3	1718.7	1727.8	1732.0	1740.2
12.5°	1656.8	1660.1	1669.2	1680.8	1690.7	1700.6	1708.0	1715.4	1725.3	1727.0	1732.8
15°	1673.3	1668.4	1670.9	1679.1	1689.8	1698.1	1706.4	1712.1	1718.7	1717.1	1722.0
17.5°	1703.9	1691.5	1686.5	1687.4	1692.3	1698.1	1701.4	1702.2	1703.1	1695.6	1696.5
20°	1745.2	1727.8	1716.3	1710.5	1703.9	1698.1	1689.0	1678.3	1668.4	1653.5	1651.9
22.5°	1807.1	1781.5	1769.1	1753.4	1733.6	1708.8	1686.5	1660.1	1638.7	1616.4	1608.1
25°	1897.1	1870.6	1857.4	1832.7	1797.2	1761.7	1729.5	1694.0	1662.6	1636.2	1623.8
27.5°	2017.6	1991.2	1977.1	1951.5	1907.8	1872.3	1827.7	1789.7	1751.8	1713.0	1697.3
30°	2163.7	2140.6	2124.9	2104.3	2066.3	2027.5	1975.5	1916.9	1856.6	1794.7	1764.1
32.5°	2336.2	2310.6	2299.1	2275.1	2235.5	2195.1	2137.3	2062.2	1961.4	1864.0	1802.9
35°	2551.7	2522.8	2509.6	2478.2	2432.0	2372.6	2310.6	2209.9	2073.7	1938.3	1838.4
37.5°	2839.8	2775.4	2731.7	2659.8	2585.5	2502.2	2413.8	2310.6	2149.7	1982.1	1843.4
40°	3094.9	3029.7	2945.5	2842.3	2726.7	2612.0	2511.2	2394.0	2219.0	2013.5	1827.7
42.5°	3411.9	3296.3	3161.8	3022.2	2868.7	2727.5	2607.8	2470.0	2266.1	2021.7	1784.0
45°	3701.7	3563.8	3383.8	3198.1	3007.4	2829.9	2695.3	2541.8	2306.5	2021.7	1731.1
47.5°	3965.8	3800.7	3585.3	3354.1	3132.0	2938.0	2785.3	2615.3	2363.5	2047.3	1715.4
50°	4210.2	4020.3	3775.1	3506.8	3257.5	3050.3	2886.0	2709.4	2450.2	2113.3	1753.4
52.5°	4467.7	4266.3	3967.5	3682.7	3407.8	3185.7	3010.7	2825.8	2562.4	2217.4	1820.3
55°	4805.4	4569.3	4230.0	3916.3	3614.1	3369.0	3170.0	2965.3	2685.4	2334.6	1902.0
57.5°	5337.8	4995.3	4656.0	4248.2	3963.3	3640.6	3422.6	3187.4	2885.2	2487.3	2025.0
60°	6269.9	5848.8	5441.0	4972.1	4620.5	4282.8	3953.4	3646.3	3282.3	2832.4	2295.0
62.5°	7600.6	7173.0	6532.4	5958.6	5427.8	4980.4	4551.1	4160.6	3693.4	3201.4	2627.6
65°	8395.6	7906.1	7142.4	6371.4	5726.7	5171.9	4680.7	4202.7	3698.4	3218.7	2728.4
66°	8459.2	7996.0	7180.4	6365.6	5696.1	5120.7	4609.7	4115.2	3598.5	3139.5	2695.3
67.5°	8341.1	7942.4	7102.8	6253.4	5569.0	4947.4	4422.3	3903.9	3384.7	2959.5	2585.5
70°	7508.1	7220.0	6500.2	5704.4	5021.7	4473.5	3919.6	3421.0	2929.0	2571.5	2294.1
72.5°	6155.1	5790.2	5286.7	4751.7	4214.3	3728.1	3224.5	2800.2	2387.4	2127.4	1930.9
75°	4521.4	4192.8	3638.1	3304.6	2949.6	2644.2	2304.9	1902.8	1609.8	1479.3	1431.5
77.5°	2866.2	2509.6	2041.5	1673.3	1438.9	1236.6	974.9	775.2	620.8	646.4	715.7
80°	1448.0	1247.4	933.7	737.2	637.3	530.0	419.4	317.8	232.0	265.0	299.7
82.5°	929.5	776.0	618.3	487.1	411.1	362.4	289.8	210.5	156.8	176.7	216.3
85°	559.7	473.0	377.3	308.7	268.3	223.7	164.3	116.4	115.6	123.8	152.7
87.5°	85.0	121.4	70.2	75.1	79.3	85.0	75.1	63.6	55.3	71.8	90.8
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°	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8	1680.8
2.5°	1703.9	1705.5	1708.8	1713.0	1712.1	1717.9	1721.2	1717.9	1725.3	1725.3	1729.5
5°	1735.3	1737.7	1743.5	1747.6	1749.3	1754.2	1755.9	1755.1	1756.7	1757.5	1759.2
7.5°	1744.3	1750.9	1753.4	1755.9	1756.7	1758.4	1758.4	1756.7	1756.7	1755.9	1757.5
10°	1741.9	1744.3	1746.0	1745.2	1745.2	1743.5	1742.7	1741.9	1741.9	1740.2	1742.7
12.5°	1733.6	1733.6	1733.6	1732.0	1732.0	1731.1	1731.1	1731.1	1732.8	1733.6	1737.7
15°	1717.1	1717.1	1718.7	1717.9	1720.4	1724.5	1729.5	1732.8	1736.9	1737.7	1740.2
17.5°	1691.5	1692.3	1697.3	1708.0	1718.7	1731.1	1740.2	1742.7	1739.4	1731.1	1725.3
20°	1646.9	1657.7	1677.5	1703.1	1727.0	1742.7	1746.8	1736.9	1721.2	1699.8	1688.2
22.5°	1607.3	1628.8	1664.3	1706.4	1736.1	1746.8	1734.4	1711.3	1683.2	1658.5	1641.1
25°	1623.0	1647.7	1684.9	1721.2	1740.2	1734.4	1709.7	1676.6	1646.9	1618.0	1590.0
27.5°	1689.0	1713.8	1740.2	1750.9	1744.3	1722.9	1688.2	1652.7	1613.1	1571.8	1537.1
30°	1751.8	1765.8	1767.4	1756.7	1732.8	1698.1	1657.7	1616.4	1566.0	1516.5	1472.7
32.5°	1771.6	1755.1	1725.3	1694.8	1661.8	1626.3	1579.2	1524.7	1471.1	1414.9	1366.2
35°	1765.8	1698.9	1625.5	1560.2	1520.6	1480.2	1437.2	1364.6	1304.3	1256.4	1225.1
37.5°	1713.8	1591.6	1478.5	1383.6	1321.7	1273.8	1210.2	1150.0	1097.9	1076.5	1050.9
40°	1641.1	1454.6	1297.7	1164.8	1100.4	1039.3	968.3	922.1	907.3	887.4	888.3
42.5°	1537.1	1294.4	1092.2	939.4	869.3	802.4	752.1	724.8	725.6	709.1	712.4
45°	1427.3	1133.4	879.2	727.3	657.9	601.0	572.9	564.7	565.5	566.3	561.4
47.5°	1360.5	1008.0	705.0	551.5	490.4	458.2	443.3	439.2	440.0	440.8	435.1
50°	1350.6	942.7	588.6	421.8	382.2	364.1	356.6	352.5	352.5	349.2	344.2
52.5°	1378.6	926.2	531.6	365.7	327.7	311.2	305.4	302.1	297.2	290.6	281.5
55°	1423.2	941.1	514.3	346.7	309.6	293.1	285.6	284.0	275.7	263.3	248.5
57.5°	1505.8	994.8	525.9	351.7	312.9	298.0	293.1	291.4	279.9	260.9	241.9
60°	1742.7	1150.8	583.6	379.7	336.8	324.4	324.4	322.0	306.3	279.0	251.8
62.5°	2069.6	1379.5	662.1	418.5	369.8	368.2	382.2	383.0	355.0	311.2	268.3
65°	2227.3	1486.8	689.3	426.8	378.9	397.9	426.0	426.0	386.3	326.1	270.8
66°	2228.1	1484.3	681.1	416.9	369.0	393.8	422.7	422.7	381.4	322.0	266.6
67.5°	2171.1	1438.1	653.8	398.7	346.7	369.8	395.4	394.6	357.5	305.4	255.1
70°	1947.4	1272.1	576.2	369.0	320.3	321.1	330.2	324.4	299.7	264.2	232.0
72.5°	1679.1	1064.1	499.4	350.0	299.7	284.0	276.6	271.6	255.9	234.4	214.6
75°	1287.8	826.4	435.1	332.7	281.5	254.3	244.4	240.2	229.5	217.1	201.4
77.5°	789.2	566.3	369.0	304.6	260.9	236.1	225.4	217.1	206.4	194.8	184.1
80°	340.1	341.8	295.5	258.4	227.0	198.1	184.1	174.2	168.4	164.3	158.5
82.5°	237.8	245.2	225.4	200.6	173.4	152.7	140.3	137.9	138.7	138.7	137.0
85°	178.3	175.0	157.7	143.6	131.3	118.1	108.1	107.3	110.6	110.6	108.1
87.5°	103.2	104.0	89.2	83.4	86.7	74.3	67.7	68.5	76.8	75.9	74.3
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°	1680.8	1680.8	1680.8	1680.8	1680.8
2.5°	1729.5	1732.0	1731.1	1733.6	1731.1
5°	1761.7	1760.8	1760.0	1763.3	1759.2
7.5°	1756.7	1757.5	1757.5	1757.5	1756.7
10°	1744.3	1747.6	1749.3	1752.6	1751.8
12.5°	1740.2	1745.2	1750.1	1755.1	1755.9
15°	1741.0	1744.3	1746.8	1749.3	1750.1
17.5°	1719.6	1718.7	1716.3	1714.6	1713.0
20°	1675.8	1671.7	1667.6	1661.0	1664.3
22.5°	1621.3	1609.8	1596.6	1585.8	1585.0
25°	1557.8	1536.3	1514.8	1500.8	1495.9
27.5°	1501.6	1476.0	1453.7	1441.4	1438.1
30°	1434.8	1411.6	1391.8	1381.1	1374.5
32.5°	1335.7	1317.5	1292.8	1284.5	1283.7
35°	1197.8	1183.8	1166.5	1163.2	1159.0
37.5°	1041.8	1036.9	1028.6	1018.7	1017.0
40°	875.1	878.4	875.9	870.1	861.0
42.5°	714.1	719.9	720.7	724.8	728.9
45°	568.8	573.7	573.7	577.9	582.8
47.5°	436.7	433.4	435.9	440.0	442.5
50°	330.2	327.7	323.6	320.3	317.0
52.5°	265.8	260.9	249.3	246.0	242.7
55°	234.4	225.4	217.1	213.8	213.8
57.5°	225.4	213.8	204.7	200.6	199.0
60°	227.0	210.5	199.0	192.3	189.9
62.5°	234.4	211.3	195.6	188.2	185.7
65°	233.6	209.7	194.8	186.6	184.1
66°	229.5	207.2	193.2	185.7	184.1
67.5°	222.9	203.9	191.5	184.9	182.4
70°	209.7	197.3	188.2	182.4	180.0
72.5°	199.0	190.7	182.4	175.8	174.2
75°	189.0	180.8	173.4	170.1	167.6
77.5°	174.2	166.8	162.6	159.3	157.7
80°	154.4	149.4	144.5	141.2	138.7
82.5°	134.6	128.0	123.0	120.5	118.9
85°	109.8	105.7	98.2	93.3	92.5
87.5°	73.5	69.3	66.9	62.7	58.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)