

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: P159761

Luminaire Tested: **VST-E04-LED-E-U-T4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159761
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-E04-LED-E-U-T4-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (84) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12216.2 lumens
Efficiency: N/A
Efficacy: 125.7 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 97.2
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

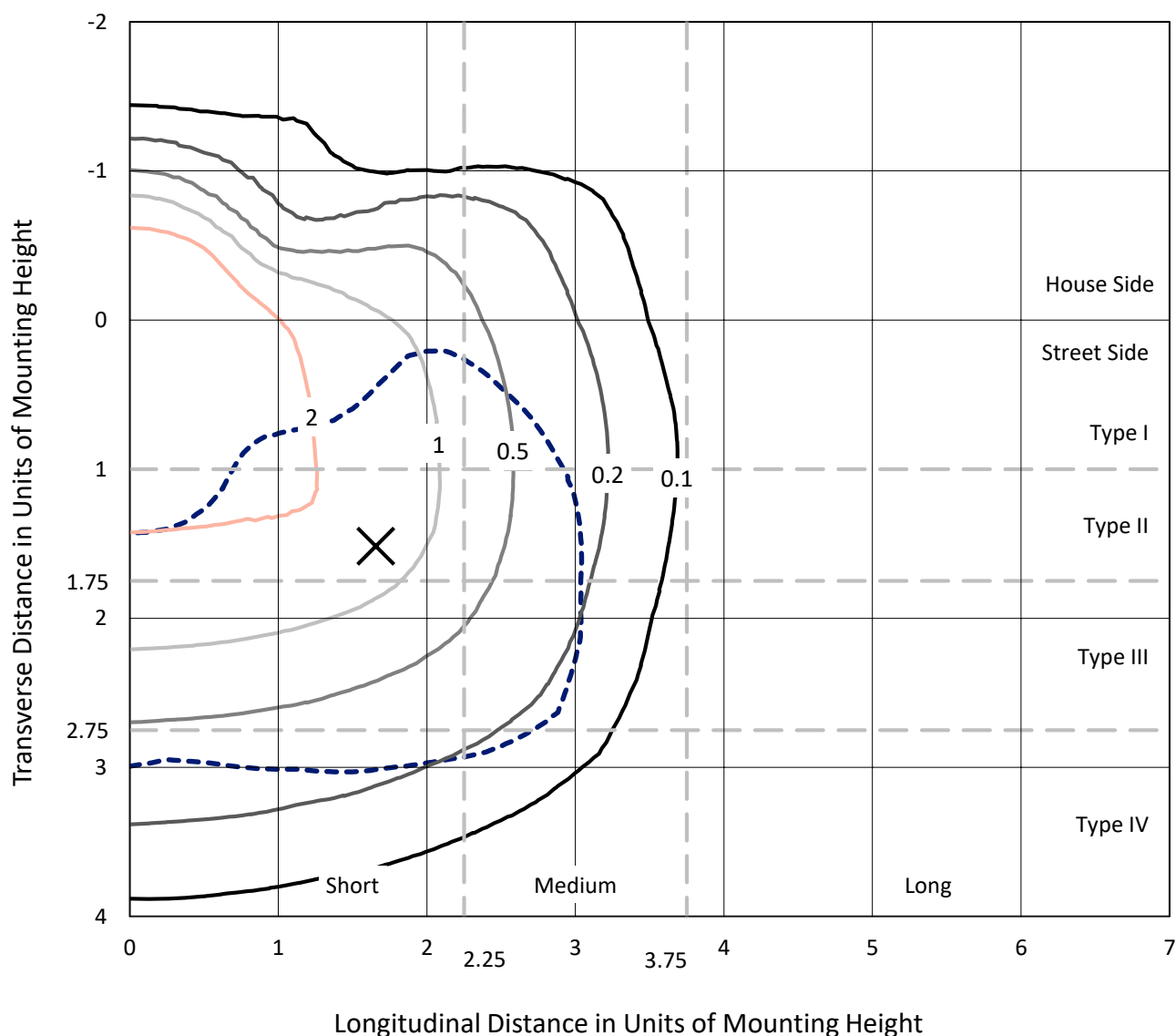


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

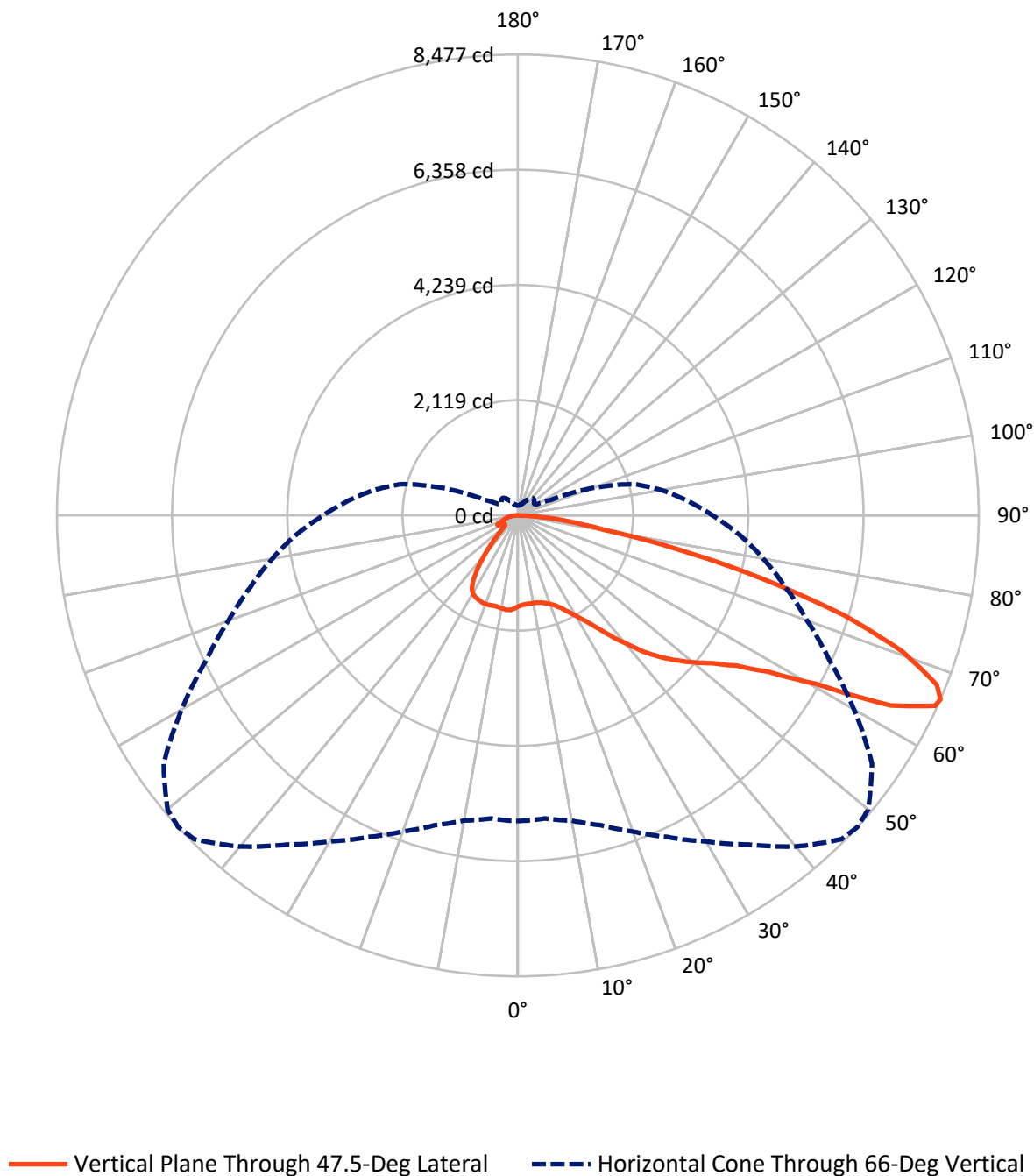


Based on 20 foot mounting height. Maximum calculated value = 4.3 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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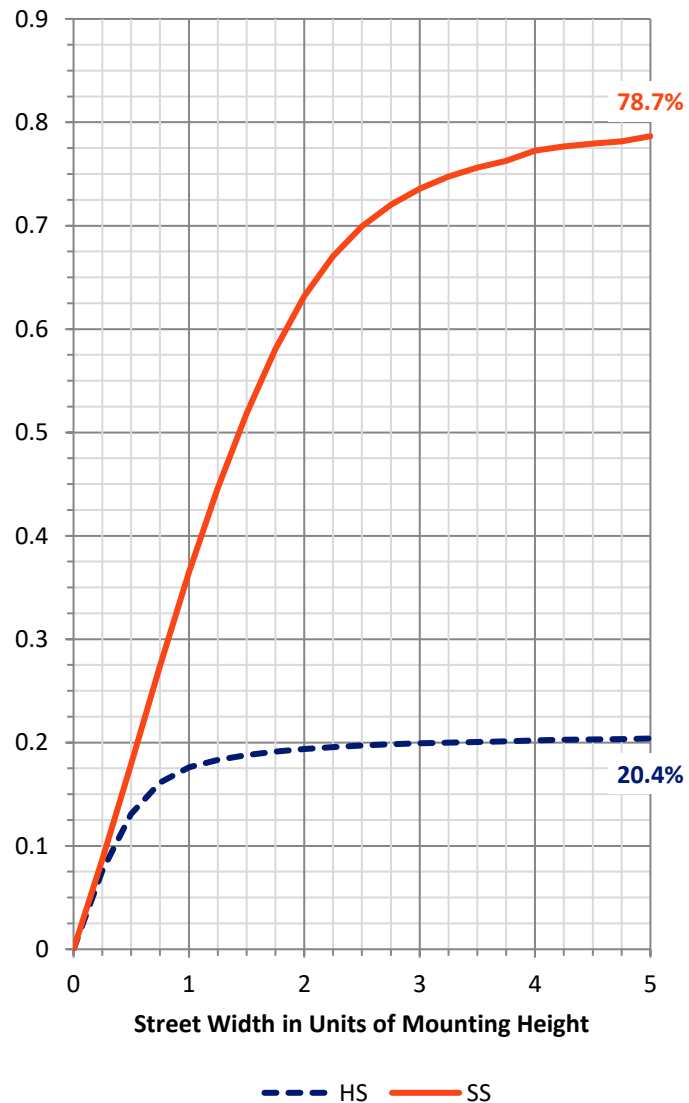
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2529.3	0.0	2529.3
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	9686.9	0.0	9686.9
	% Fixture	79.3	0.0	79.3
Total	Lumens	12216.2	0.0	12216.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.1	1.3
10°-20°	483.1	4.0
20°-30°	824.2	6.7
30°-40°	1244.0	10.2
40°-50°	1617.0	13.2
50°-60°	2218.3	18.2
60°-70°	3412.5	27.9
70°-80°	1972.6	16.1
80°-90°	283.4	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°	12216.2	100.0
0°-180°	12216.2	100.0

Coefficient of Utilization



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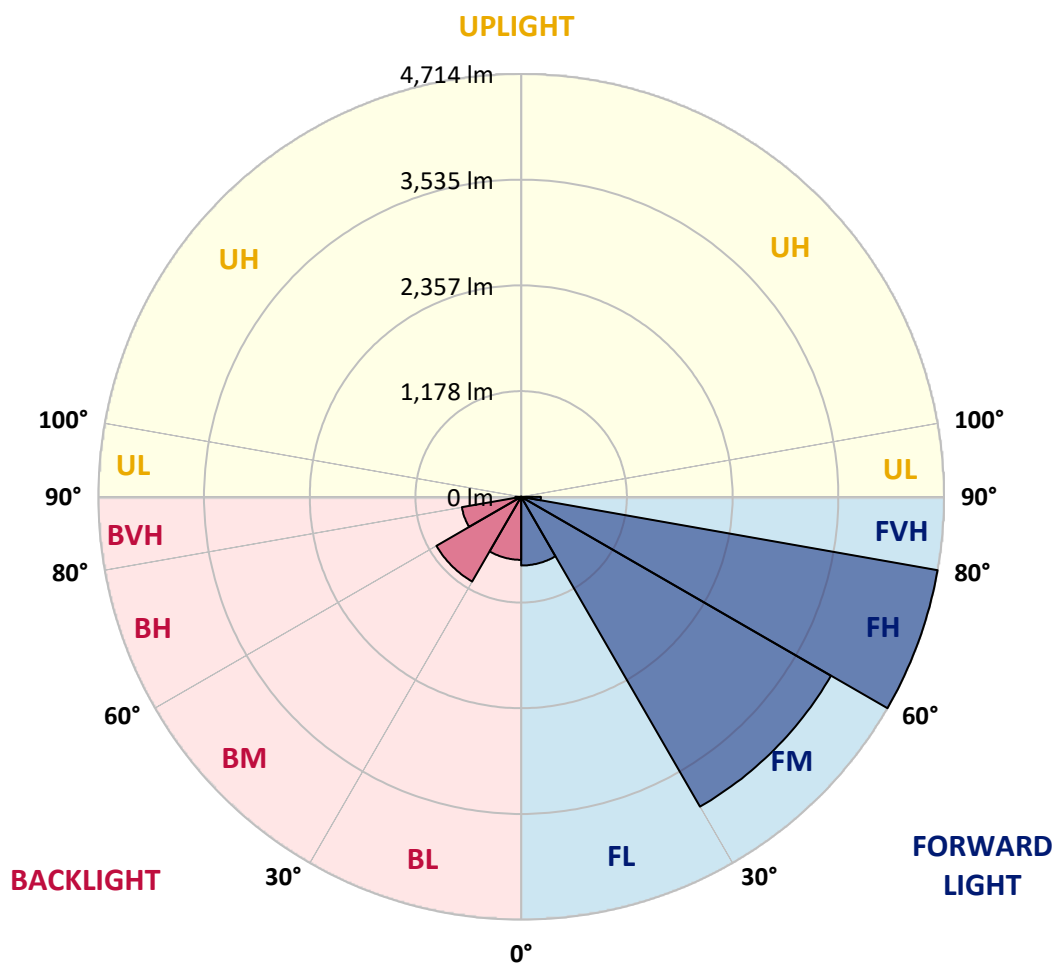
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	765.7	6.3			
FM	(30°-60°)	3988.1	32.6			
FH	(60°-80°)	4713.8	38.6			G2/5000
FVH	(80°-90°)	219.3	1.8			G2/225
BL	(0°-30°)	702.7	5.8	B2/1000		
BM	(30°-60°)	1091.3	8.9	B2/2500		
BH	(60°-80°)	671.3	5.5	B2/1000		G2/1000
BVH	(80°-90°)	64.1	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°	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3
2.5°	1628.6	1629.5	1630.3	1630.3	1632.7	1632.7	1636.8	1639.3	1640.1	1645.1	1648.3
5°	1598.3	1597.4	1598.3	1599.9	1604.0	1607.3	1615.5	1621.2	1626.2	1634.4	1638.5
7.5°	1585.1	1586.8	1588.4	1589.2	1592.5	1600.7	1608.1	1613.9	1623.7	1633.6	1637.7
10°	1602.4	1604.8	1602.4	1604.0	1604.0	1611.4	1614.7	1618.8	1626.2	1635.2	1637.7
12.5°	1642.6	1647.5	1642.6	1638.5	1635.2	1641.8	1640.1	1636.8	1640.9	1643.4	1643.4
15°	1709.1	1709.1	1705.8	1700.1	1691.8	1692.7	1685.3	1677.9	1674.6	1668.9	1664.8
17.5°	1773.9	1772.3	1764.9	1757.5	1751.8	1749.3	1738.6	1728.8	1717.3	1708.3	1698.4
20°	1837.1	1843.7	1834.7	1824.0	1815.0	1809.2	1801.0	1781.3	1767.4	1752.6	1742.7
22.5°	1946.3	1940.6	1930.7	1915.1	1906.1	1896.2	1879.0	1857.7	1836.3	1818.3	1805.9
25°	2058.8	2053.0	2039.1	2027.6	2014.5	2006.2	1987.4	1961.1	1940.6	1912.7	1896.2
27.5°	2179.4	2174.5	2158.1	2149.1	2140.0	2130.2	2113.8	2086.7	2067.8	2035.8	2018.6
30°	2315.7	2314.9	2292.7	2291.1	2278.0	2267.3	2255.8	2232.8	2213.9	2181.9	2161.4
32.5°	2461.0	2457.7	2442.1	2437.2	2446.2	2438.8	2422.4	2398.6	2374.0	2355.1	2332.1
35°	2667.9	2662.1	2653.1	2657.2	2662.9	2683.5	2658.0	2637.5	2607.9	2583.3	2551.3
37.5°	2818.9	2810.7	2821.4	2844.4	2877.2	2892.8	2915.0	2915.8	2901.8	2869.0	2841.1
40°	2957.6	2954.4	2979.0	3011.0	3071.7	3116.1	3157.9	3178.5	3183.4	3162.0	3120.2
42.5°	3075.0	3084.9	3117.7	3167.0	3252.3	3319.7	3397.6	3446.1	3476.4	3465.0	3446.1
45°	3214.6	3219.5	3259.7	3322.1	3403.4	3515.0	3617.6	3699.7	3753.1	3752.3	3730.9
47.5°	3389.4	3390.3	3424.7	3497.8	3584.8	3698.1	3827.8	3937.0	4007.6	4010.8	3994.4
50°	3597.1	3595.5	3633.2	3702.2	3794.9	3904.1	4042.0	4178.3	4276.8	4276.8	4253.0
52.5°	3864.7	3861.4	3882.0	3942.7	4032.2	4147.1	4284.2	4441.8	4548.5	4571.5	4519.8
55°	4221.8	4226.7	4231.7	4285.0	4361.4	4452.5	4610.1	4755.4	4898.2	4911.4	4881.0
57.5°	4634.7	4618.3	4653.6	4740.6	4827.6	4941.7	5053.4	5224.9	5394.0	5422.8	5418.7
60°	5279.9	5258.6	5294.7	5405.5	5501.6	5681.3	5872.6	6094.2	6294.5	6353.6	6282.2
62.5°	5873.4	5899.7	5948.9	6077.8	6217.4	6457.1	6744.4	7124.5	7504.5	7711.4	7696.6
65°	5820.1	5795.4	5889.8	6065.5	6318.3	6623.7	6980.8	7438.9	7986.4	8401.8	8438.7
66°	5622.2	5596.8	5698.6	5899.7	6188.6	6528.5	6925.0	7391.2	7951.1	8420.6	8477.3
67.5°	5295.5	5270.1	5385.0	5568.1	5866.0	6293.7	6722.2	7232.0	7814.0	8263.8	8309.8
70°	4665.1	4630.6	4720.1	4926.9	5168.3	5582.0	5990.0	6530.1	7127.7	7487.3	7504.5
72.5°	3951.7	3871.3	3966.5	4125.8	4298.2	4640.5	4995.9	5365.3	5841.4	6173.9	6269.1
75°	2867.3	2909.2	2937.1	3042.2	3156.3	3439.5	3648.0	3957.5	4326.1	4566.6	4642.9
77.5°	1521.1	1584.3	1623.7	1728.8	1917.6	2133.5	2359.2	2550.5	2792.6	2927.3	3020.9
80°	853.7	898.0	962.1	1045.0	1136.9	1302.7	1436.5	1535.1	1569.5	1593.3	1614.7
82.5°	469.5	582.0	677.2	734.7	788.9	855.4	935.0	1017.1	1043.3	1003.9	983.4
85°	73.1	107.5	327.5	399.8	435.1	486.0	543.4	604.2	605.0	520.4	568.1
87.5°	20.5	23.0	46.8	70.6	69.0	55.8	69.0	125.6	73.9	36.9	42.7
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3
2.5°	1650.0	1651.6	1655.7	1659.8	1663.9	1668.0	1670.5	1674.6	1677.9	1682.8	1688.6
5°	1643.4	1647.5	1654.9	1663.9	1672.1	1679.5	1685.3	1693.5	1700.9	1707.4	1717.3
7.5°	1643.4	1651.6	1663.9	1673.8	1681.2	1690.2	1699.2	1707.4	1715.6	1722.2	1728.8
10°	1644.2	1652.4	1664.8	1676.2	1684.5	1694.3	1701.7	1709.1	1718.1	1722.2	1730.4
12.5°	1647.5	1650.8	1659.8	1671.3	1681.2	1691.0	1698.4	1705.8	1715.6	1717.3	1723.0
15°	1663.9	1659.0	1661.5	1669.7	1680.4	1688.6	1696.8	1702.5	1709.1	1707.4	1712.4
17.5°	1694.3	1682.0	1677.1	1677.9	1682.8	1688.6	1691.8	1692.7	1693.5	1686.1	1686.9
20°	1735.3	1718.1	1706.6	1700.9	1694.3	1688.6	1679.5	1668.9	1659.0	1644.2	1642.6
22.5°	1796.9	1771.5	1759.2	1743.6	1723.9	1699.2	1677.1	1650.8	1629.5	1607.3	1599.1
25°	1886.4	1860.1	1847.0	1822.4	1787.1	1751.8	1719.8	1684.5	1653.3	1627.0	1614.7
27.5°	2006.2	1980.0	1966.0	1940.6	1897.1	1861.8	1817.4	1779.7	1741.9	1703.3	1687.7
30°	2151.5	2128.6	2113.0	2092.4	2054.7	2016.1	1964.4	1906.1	1846.2	1784.6	1754.2
32.5°	2323.1	2297.7	2286.2	2262.4	2223.0	2182.7	2125.3	2050.6	1950.4	1853.6	1792.8
35°	2537.4	2508.6	2495.5	2464.3	2418.3	2359.2	2297.7	2197.5	2062.1	1927.4	1828.1
37.5°	2823.8	2759.8	2716.3	2644.9	2571.0	2488.1	2400.3	2297.7	2137.6	1970.9	1833.0
40°	3077.5	3012.6	2928.9	2826.3	2711.4	2597.3	2497.1	2380.6	2206.5	2002.1	1817.4
42.5°	3392.7	3277.8	3144.0	3005.3	2852.6	2712.2	2593.2	2456.1	2253.3	2010.3	1773.9
45°	3680.8	3543.8	3364.8	3180.1	2990.5	2814.0	2680.2	2527.5	2293.6	2010.3	1721.4
47.5°	3943.5	3779.4	3565.1	3335.3	3114.4	2921.5	2769.7	2600.6	2350.2	2035.8	1705.8
50°	4186.5	3997.7	3753.9	3487.1	3239.2	3033.2	2869.8	2694.1	2436.4	2101.5	1743.6
52.5°	4442.6	4242.3	3945.2	3662.0	3388.6	3167.8	2993.8	2809.9	2548.0	2204.9	1810.0
55°	4778.4	4543.6	4206.2	3894.3	3593.8	3350.0	3152.2	2948.6	2670.3	2321.5	1891.3
57.5°	5307.8	4967.2	4629.8	4224.3	3941.1	3620.1	3403.4	3169.4	2869.0	2473.3	2013.6
60°	6234.6	5816.0	5410.4	4944.2	4594.5	4258.7	3931.2	3625.8	3263.8	2816.5	2282.1
62.5°	7557.9	7132.7	6495.7	5925.1	5397.3	4952.4	4525.5	4137.3	3672.6	3183.4	2612.9
65°	8348.4	7861.6	7102.3	6335.6	5694.5	5142.8	4654.4	4179.1	3677.6	3200.6	2713.0
66°	8411.6	7951.1	7140.1	6329.8	5664.1	5091.9	4583.8	4092.1	3578.2	3121.8	2680.2
67.5°	8294.2	7897.7	7062.9	6218.2	5537.7	4919.6	4397.5	3882.0	3365.6	2942.9	2571.0
70°	7465.9	7179.5	6463.6	5672.3	4993.4	4448.4	3897.6	3401.7	2912.5	2557.1	2281.2
72.5°	6120.5	5757.7	5256.9	4725.0	4190.6	3707.1	3206.4	2784.4	2374.0	2115.4	1920.0
75°	4496.0	4169.3	3617.6	3286.0	2933.0	2629.3	2291.9	1892.1	1600.7	1471.0	1423.4
77.5°	2850.1	2495.5	2030.0	1663.9	1430.8	1229.7	969.5	770.8	617.3	642.8	711.7
80°	1439.8	1240.4	928.4	733.0	633.7	527.0	417.0	316.0	230.7	263.5	298.0
82.5°	924.3	771.6	614.8	484.3	408.8	360.4	288.1	209.3	156.0	175.7	215.1
85°	556.6	470.4	375.1	307.0	266.8	222.5	163.4	115.7	114.9	123.1	151.9
87.5°	84.6	120.7	69.8	74.7	78.8	84.6	74.7	63.2	55.0	71.4	90.3
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3	1671.3
2.5°	1694.3	1695.9	1699.2	1703.3	1702.5	1708.3	1711.5	1708.3	1715.6	1715.6	1719.8
5°	1725.5	1728.0	1733.7	1737.8	1739.5	1744.4	1746.0	1745.2	1746.8	1747.7	1749.3
7.5°	1734.5	1741.1	1743.6	1746.0	1746.8	1748.5	1748.5	1746.8	1746.8	1746.0	1747.7
10°	1732.1	1734.5	1736.2	1735.3	1735.3	1733.7	1732.9	1732.1	1732.1	1730.4	1732.9
12.5°	1723.9	1723.9	1723.9	1722.2	1722.2	1721.4	1721.4	1721.4	1723.0	1723.9	1728.0
15°	1707.4	1707.4	1709.1	1708.3	1710.7	1714.8	1719.8	1723.0	1727.1	1728.0	1730.4
17.5°	1682.0	1682.8	1687.7	1698.4	1709.1	1721.4	1730.4	1732.9	1729.6	1721.4	1715.6
20°	1637.7	1648.3	1668.0	1693.5	1717.3	1732.9	1737.0	1727.1	1711.5	1690.2	1678.7
22.5°	1598.3	1619.6	1654.9	1696.8	1726.3	1737.0	1724.7	1701.7	1673.8	1649.2	1631.9
25°	1613.9	1638.5	1675.4	1711.5	1730.4	1724.7	1700.1	1667.2	1637.7	1608.9	1581.0
27.5°	1679.5	1704.2	1730.4	1741.1	1734.5	1713.2	1678.7	1643.4	1604.0	1563.0	1528.5
30°	1741.9	1755.9	1757.5	1746.8	1723.0	1688.6	1648.3	1607.3	1557.2	1508.0	1464.5
32.5°	1761.6	1745.2	1715.6	1685.3	1652.4	1617.1	1570.4	1516.2	1462.8	1407.0	1358.6
35°	1755.9	1689.4	1616.3	1551.5	1512.1	1471.8	1429.2	1356.9	1297.0	1249.4	1218.2
37.5°	1704.2	1582.7	1470.2	1375.8	1314.2	1266.6	1203.4	1143.5	1091.8	1070.4	1045.0
40°	1631.9	1446.4	1290.4	1158.3	1094.2	1033.5	962.9	916.9	902.2	882.5	883.3
42.5°	1528.5	1287.1	1086.0	934.2	864.4	797.9	747.8	720.7	721.6	705.1	708.4
45°	1419.3	1127.1	874.2	723.2	654.2	597.6	569.7	561.5	562.3	563.1	558.2
47.5°	1352.8	1002.3	701.0	548.4	487.6	455.6	440.8	436.7	437.5	438.4	432.6
50°	1343.0	937.4	585.3	419.5	380.1	362.0	354.6	350.5	350.5	347.2	342.3
52.5°	1370.9	921.0	528.6	363.7	325.9	309.5	303.7	300.4	295.5	289.0	279.9
55°	1415.2	935.8	511.4	344.8	307.8	291.4	284.0	282.4	274.2	261.9	247.1
57.5°	1497.3	989.2	522.9	349.7	311.1	296.3	291.4	289.8	278.3	259.4	240.5
60°	1732.9	1144.3	580.4	377.6	334.9	322.6	322.6	320.1	304.5	277.5	250.4
62.5°	2058.0	1371.7	658.3	416.2	367.8	366.1	380.1	380.9	353.0	309.5	266.8
65°	2214.7	1478.4	685.4	424.4	376.8	395.7	423.6	423.6	384.2	324.2	269.3
66°	2215.6	1476.0	677.2	414.5	366.9	391.6	420.3	420.3	379.2	320.1	265.1
67.5°	2158.9	1430.0	650.1	396.5	344.8	367.8	393.2	392.4	355.4	303.7	253.7
70°	1936.5	1265.0	573.0	366.9	318.5	319.3	328.4	322.6	298.0	262.7	230.7
72.5°	1669.7	1058.1	496.6	348.1	298.0	282.4	275.0	270.1	254.5	233.1	213.4
75°	1280.6	821.7	432.6	330.8	279.9	252.8	243.0	238.9	228.2	215.9	200.3
77.5°	784.8	563.1	366.9	302.9	259.4	234.8	224.1	215.9	205.2	193.7	183.1
80°	338.2	339.8	293.9	256.9	225.7	197.0	183.1	173.2	167.5	163.4	157.6
82.5°	236.4	243.8	224.1	199.5	172.4	151.9	139.6	137.1	137.9	137.9	136.3
85°	177.3	174.0	156.8	142.8	130.5	117.4	107.5	106.7	110.0	110.0	107.5
87.5°	102.6	103.4	88.7	82.9	86.2	73.9	67.3	68.1	76.3	75.5	73.9
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):

	160°	165°	170°	175°	180°
0°	1671.3	1671.3	1671.3	1671.3	1671.3
2.5°	1719.8	1722.2	1721.4	1723.9	1721.4
5°	1751.8	1750.9	1750.1	1753.4	1749.3
7.5°	1746.8	1747.7	1747.7	1747.7	1746.8
10°	1734.5	1737.8	1739.5	1742.7	1741.9
12.5°	1730.4	1735.3	1740.3	1745.2	1746.0
15°	1731.2	1734.5	1737.0	1739.5	1740.3
17.5°	1709.9	1709.1	1706.6	1705.0	1703.3
20°	1666.4	1662.3	1658.2	1651.6	1654.9
22.5°	1612.2	1600.7	1587.6	1576.9	1576.1
25°	1549.0	1527.7	1506.3	1492.4	1487.4
27.5°	1493.2	1467.7	1445.6	1433.3	1430.0
30°	1426.7	1403.7	1384.0	1373.3	1366.8
32.5°	1328.2	1310.1	1285.5	1277.3	1276.5
35°	1191.1	1177.1	1159.9	1156.6	1152.5
37.5°	1036.0	1031.0	1022.8	1013.0	1011.3
40°	870.1	873.4	871.0	865.2	856.2
42.5°	710.1	715.8	716.6	720.7	724.8
45°	565.6	570.5	570.5	574.6	579.5
47.5°	434.2	431.0	433.4	437.5	440.0
50°	328.4	325.9	321.8	318.5	315.2
52.5°	264.3	259.4	247.9	244.6	241.3
55°	233.1	224.1	215.9	212.6	212.6
57.5°	224.1	212.6	203.6	199.5	197.8
60°	225.7	209.3	197.8	191.3	188.8
62.5°	233.1	210.1	194.5	187.2	184.7
65°	232.3	208.5	193.7	185.5	183.1
66°	228.2	206.0	192.1	184.7	183.1
67.5°	221.6	202.8	190.4	183.9	181.4
70°	208.5	196.2	187.2	181.4	179.0
72.5°	197.8	189.6	181.4	174.8	173.2
75°	188.0	179.8	172.4	169.1	166.6
77.5°	173.2	165.8	161.7	158.4	156.8
80°	153.5	148.6	143.7	140.4	137.9
82.5°	133.8	127.2	122.3	119.8	118.2
85°	109.2	105.1	97.7	92.8	91.9
87.5°	73.1	69.0	66.5	62.4	58.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)