

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: P158441

Luminaire Tested: **VST-E04-LED-E-U-SL3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158441
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33713)
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-SL3-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (84) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12382.5 lumens
Efficiency: N/A
Efficacy: 127.4 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

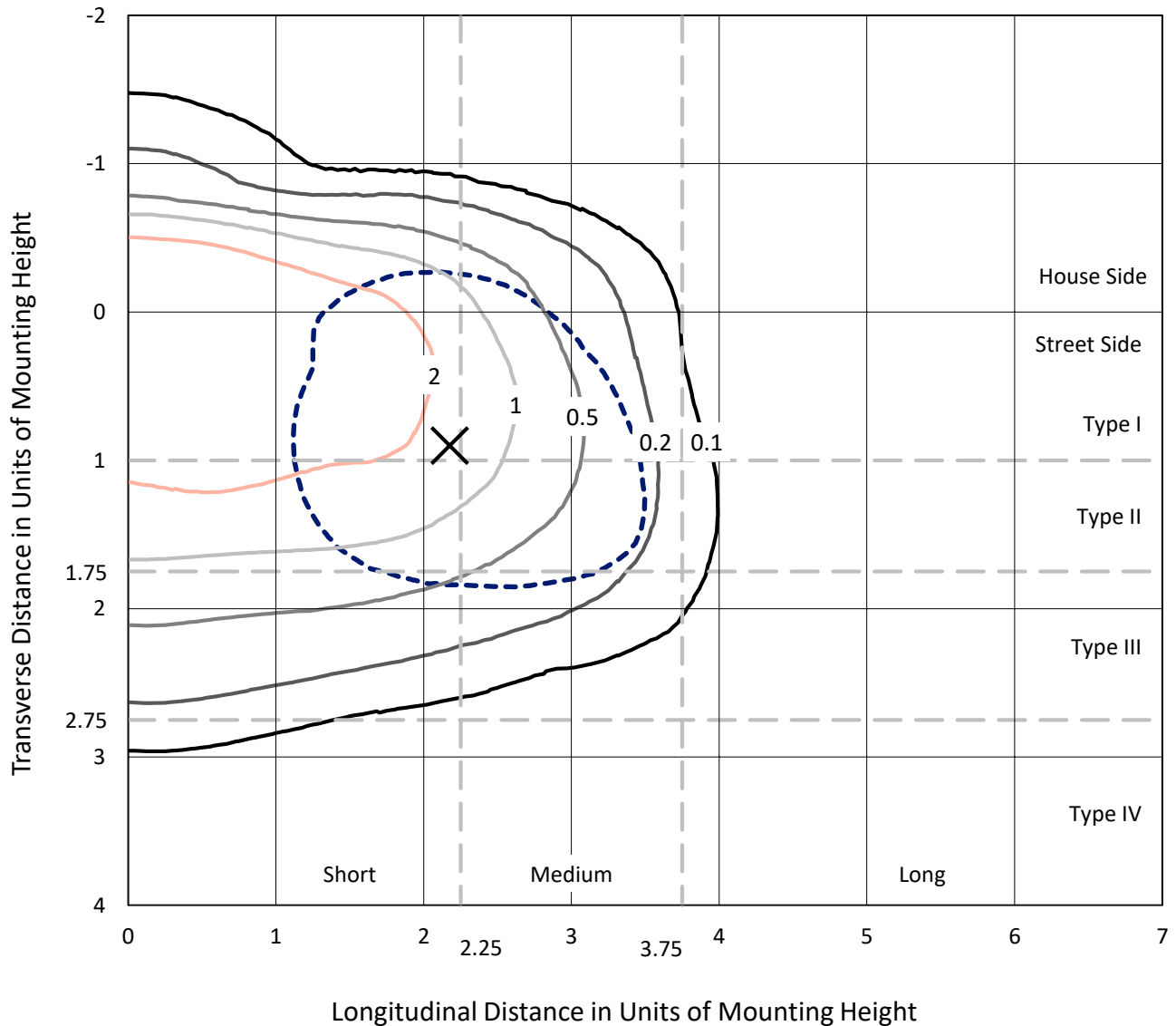
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

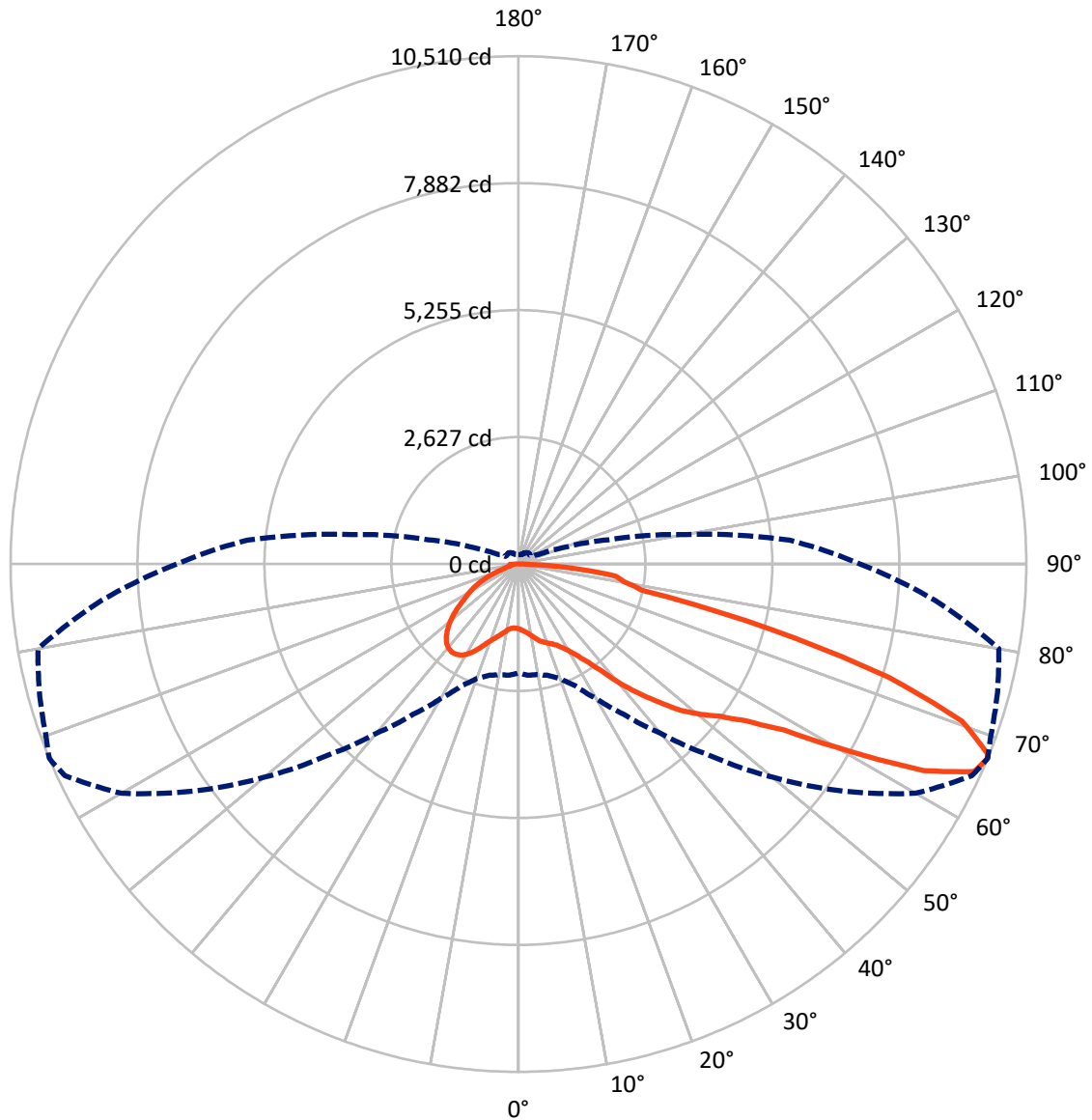
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.2 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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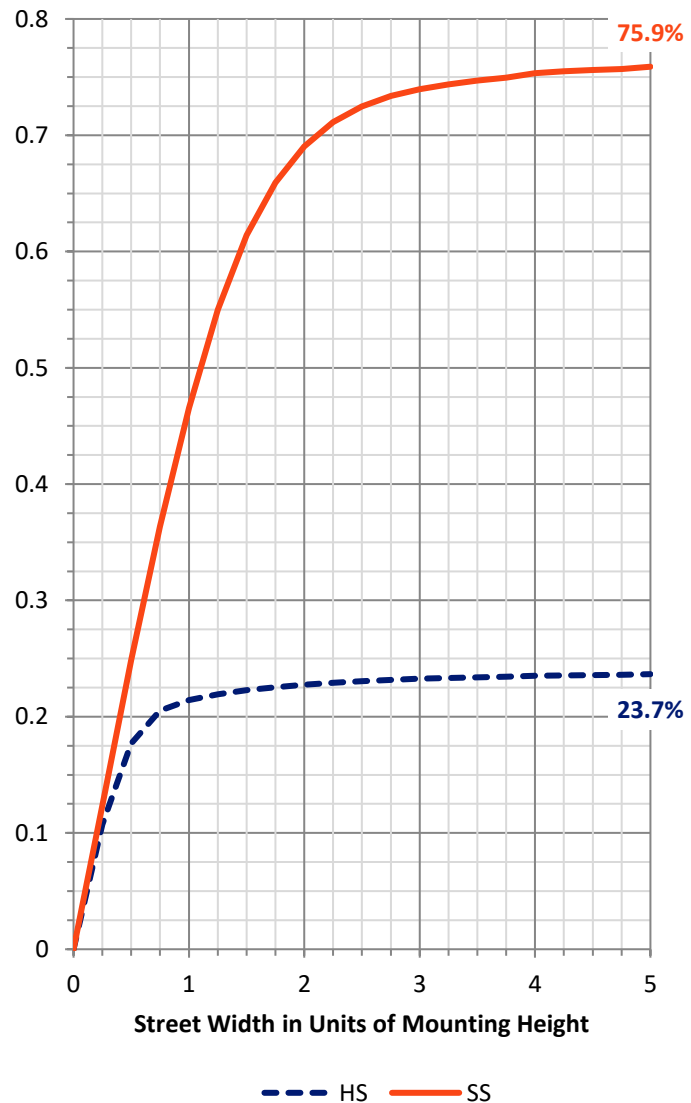
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2970.6	0.0	2970.6
	% Fixture	24.0	0.0	24.0
Street Side	Lumens	9411.9	0.0	9411.9
	% Fixture	76.0	0.0	76.0
Total	Lumens	12382.5	0.0	12382.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.4	1.1
10°-20°	454.5	3.7
20°-30°	811.4	6.6
30°-40°	1189.1	9.6
40°-50°	1837.4	14.8
50°-60°	2675.5	21.6
60°-70°	3485.3	28.1
70°-80°	1560.1	12.6
80°-90°	235.9	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°	12382.5	100.0
0°-180°	12382.5	100.0



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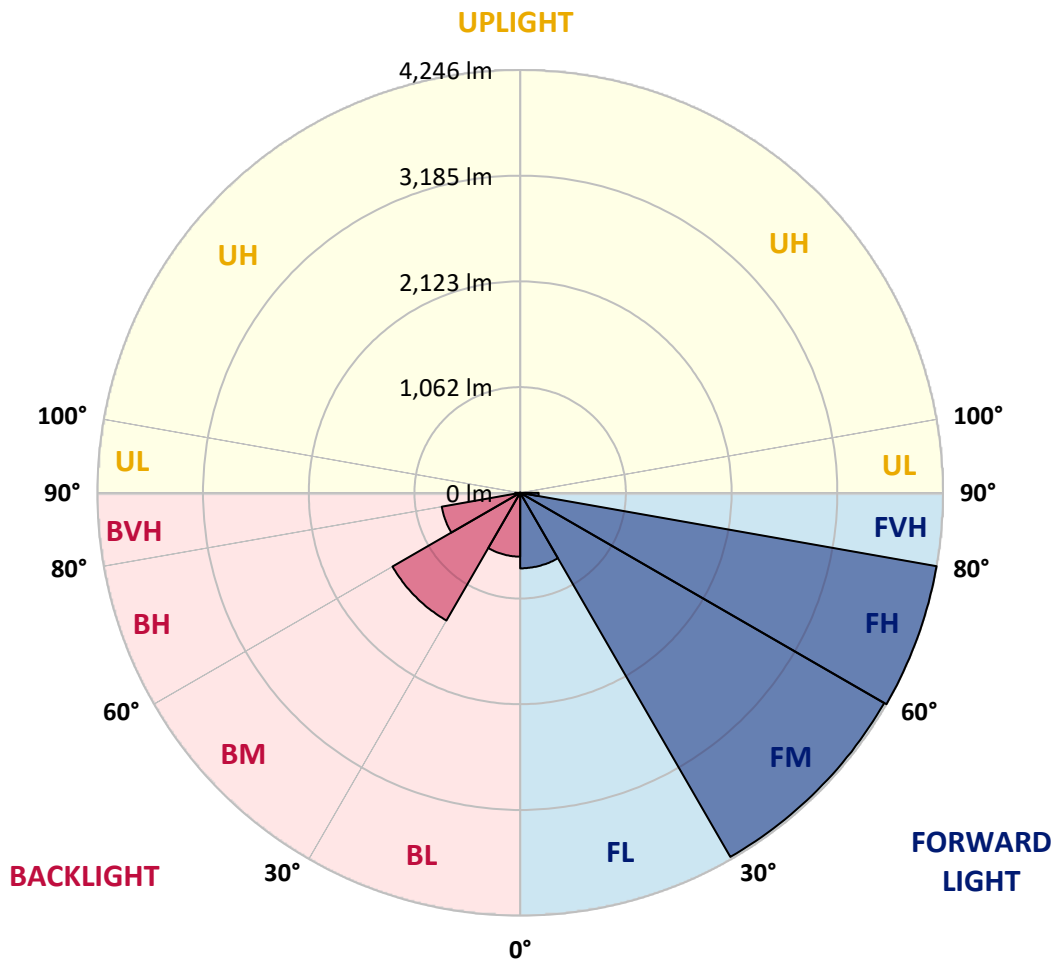
CATALOG NUMBER: VST-E04-LED-E-U-SL3-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	758.7	6.1			
FM	(30°-60°)	4221.8	34.1			
FH	(60°-80°)	4246.2	34.3			G2/5000
FVH	(80°-90°)	185.2	1.5			G2/225
BL	(0°-30°)	640.6	5.2	B2/1000		
BM	(30°-60°)	1480.2	12.0	B2/2500		
BH	(60°-80°)	799.2	6.5	B2/1000		G2/1000
BVH	(80°-90°)	50.7	0.4			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1
2.5°	1394.7	1398.0	1398.8	1398.0	1398.8	1395.5	1394.7	1389.8	1392.2	1385.7	1384.0
5°	1470.2	1472.7	1474.3	1467.7	1469.4	1466.1	1462.0	1457.1	1450.5	1441.5	1435.7
7.5°	1544.1	1548.2	1547.4	1544.9	1539.2	1535.9	1527.7	1520.3	1508.8	1498.1	1490.7
10°	1643.4	1642.6	1642.6	1628.6	1620.4	1613.0	1598.3	1586.8	1575.3	1559.7	1551.5
12.5°	1758.3	1752.6	1750.1	1740.3	1723.0	1709.9	1688.6	1666.4	1645.9	1629.5	1616.3
15°	1869.2	1869.2	1862.6	1847.0	1830.6	1813.3	1783.0	1750.9	1717.3	1691.0	1677.9
17.5°	1970.1	1961.1	1955.3	1934.8	1917.6	1889.7	1856.0	1821.5	1779.7	1742.7	1717.3
20°	2044.0	2036.6	2024.3	1998.9	1969.3	1936.5	1897.1	1856.8	1811.7	1771.5	1742.7
22.5°	2086.7	2077.7	2058.8	2025.1	1984.9	1938.9	1893.0	1855.2	1814.2	1783.8	1760.0
25°	2108.9	2099.8	2074.4	2030.0	1975.9	1915.1	1862.6	1825.6	1801.8	1794.5	1791.2
27.5°	2108.0	2100.6	2073.6	2022.7	1952.9	1883.1	1826.5	1795.3	1792.8	1821.5	1842.9
30°	2086.7	2081.8	2057.1	2006.2	1933.2	1860.1	1807.6	1791.2	1816.6	1877.4	1929.9
32.5°	2065.3	2062.9	2045.6	1999.7	1937.3	1875.7	1839.6	1841.2	1893.8	1987.4	2071.9
35°	2067.8	2071.1	2068.6	2044.0	2004.6	1972.6	1955.3	1991.5	2073.6	2186.8	2300.1
37.5°	2089.2	2101.5	2117.1	2119.5	2120.3	2115.4	2151.5	2227.9	2347.7	2495.5	2672.8
40°	2135.9	2149.9	2195.0	2234.4	2285.3	2346.1	2419.1	2525.0	2673.6	2855.9	3073.4
42.5°	2281.2	2300.9	2356.8	2429.8	2523.4	2618.6	2727.8	2872.3	3054.5	3246.6	3474.8
45°	2470.9	2511.9	2573.5	2654.7	2795.1	2928.9	3070.1	3231.8	3425.6	3666.1	3895.9
47.5°	2707.3	2748.3	2837.8	2924.8	3090.6	3257.3	3411.6	3580.7	3790.8	4037.1	4291.6
50°	2914.1	2960.9	3040.6	3157.9	3350.0	3554.4	3725.2	3908.2	4084.7	4344.1	4601.1
52.5°	3076.7	3110.3	3186.7	3294.2	3508.5	3732.6	3948.5	4152.0	4361.4	4620.8	4858.8
55°	3097.2	3128.4	3203.1	3326.2	3543.8	3792.5	4041.2	4282.6	4578.9	4862.1	5177.3
57.5°	3008.5	3034.0	3109.5	3219.5	3431.3	3714.5	4028.9	4338.4	4717.6	5100.2	5485.1
60°	2882.9	2908.4	2967.5	3055.3	3246.6	3552.0	3918.9	4342.5	4846.5	5399.0	5965.4
62.5°	2745.0	2767.2	2814.8	2877.2	3045.5	3327.0	3747.3	4315.4	4951.6	5696.1	6569.5
65°	2512.7	2566.1	2586.6	2650.6	2818.9	3084.9	3512.6	4132.3	4908.9	5828.3	6948.8
67°	2255.8	2310.0	2320.6	2385.5	2520.1	2775.4	3210.5	3793.3	4570.7	5600.1	6865.1
67.5°	2173.7	2219.7	2236.1	2300.9	2428.2	2668.7	3081.6	3671.0	4467.3	5475.3	6764.1
70°	1598.3	1649.2	1667.2	1694.3	1785.4	1985.7	2259.1	2770.5	3561.8	4468.1	5706.0
72.5°	855.4	896.4	913.6	953.9	1000.7	1109.8	1319.2	1686.1	2186.0	2989.7	4059.3
75°	578.7	595.1	607.5	635.4	683.8	770.8	862.7	991.6	1293.7	1686.9	2310.0
77.5°	330.0	337.4	339.0	344.0	382.5	465.4	616.5	834.8	1070.4	1222.3	1477.6
80°	142.8	157.6	169.1	161.7	159.3	176.5	220.8	329.2	645.2	1024.5	1215.7
82.5°	77.2	83.7	93.6	94.4	99.3	105.1	114.1	135.4	190.4	384.2	838.1
85°	40.2	41.9	55.8	64.0	68.1	71.4	73.1	81.3	93.6	119.0	208.5
87.5°	5.7	8.2	9.9	13.1	14.8	15.6	18.1	23.0	27.1	32.8	55.8
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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CATALOG NUMBER: VST-E04-LED-E-U-SL3-7050

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1
2.5°	1376.6	1375.0	1370.1	1366.8	1363.5	1360.2	1356.1	1352.8	1347.1	1343.0	1338.0
5°	1427.5	1417.7	1411.1	1402.1	1400.4	1389.8	1379.1	1374.2	1364.3	1356.1	1346.3
7.5°	1479.2	1467.7	1457.1	1449.7	1445.6	1430.8	1420.1	1407.8	1396.3	1385.7	1374.2
10°	1540.0	1528.5	1517.0	1512.1	1504.7	1490.7	1481.7	1466.1	1454.6	1441.5	1425.9
12.5°	1603.2	1595.0	1586.8	1580.2	1576.9	1570.4	1557.2	1544.1	1528.5	1515.4	1497.3
15°	1659.0	1653.3	1650.0	1648.3	1648.3	1644.2	1631.9	1619.6	1603.2	1588.4	1568.7
17.5°	1698.4	1695.9	1698.4	1700.9	1704.2	1700.9	1698.4	1684.5	1673.8	1655.7	1636.0
20°	1721.4	1726.3	1738.6	1746.8	1754.2	1760.0	1762.4	1750.9	1737.0	1723.9	1710.7
22.5°	1746.0	1760.0	1781.3	1793.6	1805.9	1826.5	1831.4	1823.2	1812.5	1804.3	1790.3
25°	1787.1	1807.6	1844.5	1864.2	1881.5	1911.8	1915.9	1917.6	1915.1	1908.6	1891.3
27.5°	1851.1	1891.3	1940.6	1966.0	1984.9	2024.3	2039.9	2039.9	2033.3	2040.7	2040.7
30°	1962.7	2016.1	2080.1	2094.9	2124.4	2158.9	2184.4	2187.7	2188.5	2204.1	2227.1
32.5°	2134.3	2185.2	2256.6	2273.0	2298.5	2331.3	2360.0	2356.8	2364.1	2397.8	2428.2
35°	2383.8	2435.6	2482.4	2504.5	2516.0	2545.6	2556.2	2574.3	2596.5	2638.3	2634.2
37.5°	2753.2	2799.2	2805.8	2819.7	2805.8	2811.5	2819.7	2841.1	2900.2	2937.9	2877.2
40°	3198.2	3274.5	3267.1	3250.7	3219.5	3177.6	3192.4	3225.3	3289.3	3256.4	3093.1
42.5°	3617.6	3696.4	3681.7	3662.8	3593.8	3578.2	3576.6	3603.7	3638.2	3544.6	3262.2
45°	4030.5	4111.0	4085.5	4074.9	4028.9	3995.2	4023.2	4024.8	4015.8	3815.5	3410.0
47.5°	4456.6	4530.5	4514.0	4523.1	4475.5	4453.3	4455.8	4444.3	4359.7	4045.3	3524.9
50°	4800.5	4899.9	4909.7	4889.2	4863.7	4830.1	4916.3	4885.1	4697.1	4268.6	3635.7
52.5°	5068.1	5201.9	5252.8	5239.7	5219.2	5223.3	5385.0	5420.3	5109.2	4550.2	3758.0
55°	5385.0	5596.0	5678.9	5728.1	5706.8	5788.9	6159.1	6177.2	5682.2	4917.9	3917.3
57.5°	5842.2	6144.3	6406.2	6476.0	6543.3	6810.1	7410.9	7227.9	6425.9	5474.5	4119.2
60°	6537.5	7199.2	7624.4	7847.7	8005.3	8377.9	8949.3	8485.5	7352.7	6136.9	4372.9
62.5°	7511.1	8478.1	9189.0	9413.1	9477.9	9692.2	10105.9	9218.5	7857.5	6434.1	4395.0
65°	8235.9	9395.8	10247.1	10362.0	10284.9	10289.0	10397.3	9179.9	7669.5	6174.7	4014.1
67°	8188.3	9487.0	10358.7	10509.8	10403.1	10262.7	10093.6	8657.0	7065.4	5631.3	3515.0
67.5°	8115.3	9399.1	10310.3	10469.6	10371.9	10211.8	9964.7	8454.3	6877.4	5462.2	3413.2
70°	7015.3	8290.1	9517.3	9741.4	9782.5	9636.4	8942.7	7128.6	5583.7	4443.4	2650.6
72.5°	5460.5	6595.8	7809.9	8004.4	8162.1	7740.9	6508.8	4923.7	4069.9	3202.3	1919.2
75°	3605.3	4760.3	5372.7	5401.4	5200.3	4420.5	3180.1	2465.9	2269.7	1882.3	1187.8
77.5°	1929.1	2799.2	2816.5	2607.9	2512.7	1873.3	760.1	419.5	467.1	530.3	472.8
80°	1439.0	1783.0	2066.2	2221.3	2267.3	1606.5	393.2	222.5	194.5	177.3	174.8
82.5°	1297.8	1722.2	1930.7	2015.3	1993.9	1321.6	220.8	149.4	124.0	134.6	153.5
85°	508.9	919.4	1209.2	1170.6	983.4	492.5	120.7	80.4	80.4	116.6	151.0
87.5°	104.3	188.8	256.1	244.6	220.0	95.2	59.1	48.4	49.3	94.4	142.8
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°	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1	1342.1
2.5°	1333.1	1328.2	1324.9	1321.6	1318.3	1316.7	1314.2	1314.2	1309.3	1307.7	1306.0
5°	1338.9	1330.7	1324.9	1317.5	1311.8	1306.8	1300.3	1298.6	1292.9	1288.8	1287.1
7.5°	1363.5	1351.2	1338.9	1329.8	1321.6	1311.0	1303.6	1297.0	1291.3	1287.1	1282.2
10°	1410.3	1397.1	1379.9	1363.5	1352.8	1336.4	1324.9	1313.4	1306.8	1301.9	1295.4
12.5°	1479.2	1460.4	1439.8	1420.1	1402.1	1380.7	1369.2	1355.3	1347.1	1343.0	1338.0
15°	1549.8	1529.3	1503.9	1485.0	1464.5	1448.0	1437.4	1425.1	1418.5	1413.6	1410.3
17.5°	1622.1	1598.3	1580.2	1561.3	1551.5	1539.2	1525.2	1509.6	1490.7	1479.2	1463.6
20°	1695.9	1677.9	1667.2	1656.5	1645.1	1627.8	1599.9	1567.9	1532.6	1498.9	1466.9
22.5°	1782.1	1771.5	1769.8	1760.0	1736.2	1695.1	1643.4	1583.5	1523.6	1467.7	1424.2
25°	1903.6	1903.6	1895.4	1855.2	1799.4	1725.5	1638.5	1552.3	1472.7	1396.3	1338.9
27.5°	2056.3	2050.6	2010.3	1927.4	1827.3	1712.4	1595.8	1486.6	1384.8	1301.1	1227.2
30°	2224.6	2184.4	2098.2	1967.7	1817.4	1669.7	1526.8	1400.4	1280.6	1178.0	1091.0
32.5°	2399.4	2301.8	2146.6	1967.7	1783.0	1605.6	1440.7	1285.5	1148.4	1033.5	930.1
35°	2557.9	2379.7	2158.1	1935.6	1715.6	1511.2	1320.0	1144.3	980.1	856.2	742.9
37.5°	2701.5	2431.5	2145.8	1873.3	1618.0	1378.3	1154.2	960.4	774.9	655.1	558.2
40°	2795.1	2442.1	2094.9	1775.6	1478.4	1198.5	950.6	733.9	586.9	477.8	412.9
42.5°	2853.4	2421.6	2012.8	1641.8	1290.4	972.7	713.3	526.2	417.0	356.3	331.6
45°	2886.2	2368.3	1891.3	1458.7	1063.0	739.6	506.5	380.1	321.0	299.6	291.4
47.5°	2884.6	2282.1	1739.5	1246.9	811.9	515.5	358.7	296.3	279.9	273.4	271.7
50°	2867.3	2176.2	1561.3	1017.1	586.1	359.5	284.0	266.0	261.9	257.8	256.1
52.5°	2843.5	2044.8	1364.3	793.0	416.2	287.3	257.8	252.8	249.5	245.4	243.8
55°	2799.2	1883.1	1150.9	596.8	325.9	259.4	248.7	247.1	243.0	237.2	234.0
57.5°	2745.0	1718.9	946.5	466.3	288.1	252.8	247.1	244.6	238.9	232.3	225.7
60°	2725.3	1583.5	786.4	393.2	279.1	255.3	251.2	247.9	239.7	229.8	222.5
62.5°	2602.2	1430.8	671.5	364.5	284.0	266.0	264.3	259.4	247.1	235.6	224.1
65°	2283.7	1210.0	568.9	344.8	293.9	284.0	285.7	278.3	266.0	250.4	229.8
67°	1931.5	986.7	473.7	325.9	301.3	302.9	308.7	302.9	287.3	265.1	237.2
67.5°	1838.0	930.1	449.8	320.1	302.9	307.8	314.4	310.3	294.7	269.3	240.5
70°	1366.0	655.1	335.7	289.8	302.9	322.6	337.4	341.5	324.2	289.0	247.1
72.5°	962.1	422.8	257.8	251.2	275.0	301.3	329.2	343.1	323.4	284.8	238.1
75°	577.9	264.3	209.3	213.4	231.5	258.6	280.7	286.5	261.9	237.2	206.0
77.5°	267.6	175.7	164.2	169.9	187.2	199.5	199.5	188.0	169.1	154.3	147.8
80°	157.6	143.7	142.8	153.5	165.0	156.0	142.0	126.4	116.6	111.6	109.2
82.5°	147.8	153.5	163.4	165.8	156.8	134.6	117.4	101.8	96.9	94.4	91.9
85°	174.0	186.3	169.9	156.8	138.7	113.3	91.9	78.8	76.3	73.9	70.6
87.5°	160.9	153.5	133.8	114.9	95.2	69.0	50.1	45.1	48.4	47.6	46.0
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°	1342.1	1342.1	1342.1	1342.1	1342.1
2.5°	1306.8	1306.8	1303.6	1301.9	1306.0
5°	1283.9	1284.7	1282.2	1281.4	1282.2
7.5°	1278.9	1278.1	1276.5	1274.8	1276.5
10°	1293.7	1292.9	1290.4	1292.1	1289.6
12.5°	1338.0	1343.0	1342.1	1343.8	1347.1
15°	1410.3	1409.5	1407.0	1408.6	1411.1
17.5°	1451.3	1444.8	1439.0	1436.5	1436.5
20°	1441.5	1422.6	1412.7	1407.0	1405.4
22.5°	1383.2	1356.1	1335.6	1330.7	1326.5
25°	1288.0	1254.3	1228.0	1222.3	1211.6
27.5°	1177.1	1132.0	1100.8	1094.2	1088.5
30°	1031.9	980.1	944.0	921.0	928.4
32.5°	854.5	805.3	763.4	726.5	720.7
35°	660.0	605.8	568.9	552.5	541.8
37.5°	492.5	447.4	422.8	407.2	408.0
40°	376.8	353.0	339.8	329.2	330.0
42.5°	314.4	303.7	300.4	295.5	293.1
45°	284.8	281.6	282.4	277.5	275.8
47.5°	268.4	266.0	266.8	263.5	262.7
50°	255.3	253.7	254.5	252.0	251.2
52.5°	242.2	243.0	242.2	240.5	240.5
55°	230.7	229.8	231.5	229.0	229.0
57.5°	221.6	220.8	220.8	220.0	220.0
60°	216.7	213.4	212.6	212.6	213.4
62.5°	214.3	208.5	207.7	207.7	208.5
65°	215.1	206.0	202.8	201.9	201.1
67°	215.9	202.8	196.2	192.9	192.1
67.5°	216.7	201.1	193.7	190.4	188.8
70°	211.8	189.6	179.0	173.2	171.6
72.5°	199.5	175.7	162.5	155.1	153.5
75°	177.3	159.3	147.8	139.6	136.3
77.5°	137.1	128.9	124.8	119.8	118.2
80°	106.7	102.6	101.0	97.7	96.9
82.5°	88.7	84.6	82.1	78.0	75.5
85°	69.0	64.0	62.4	59.1	57.5
87.5°	45.1	42.7	41.9	37.8	36.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)