

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: P159541

Luminaire Tested: **VST-E04-LED-E-U-T3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159541
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33706)
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-T3-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 AREA
Light Source: (84) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12552.8 lumens
Efficiency: N/A
Efficacy: 129.1 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

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



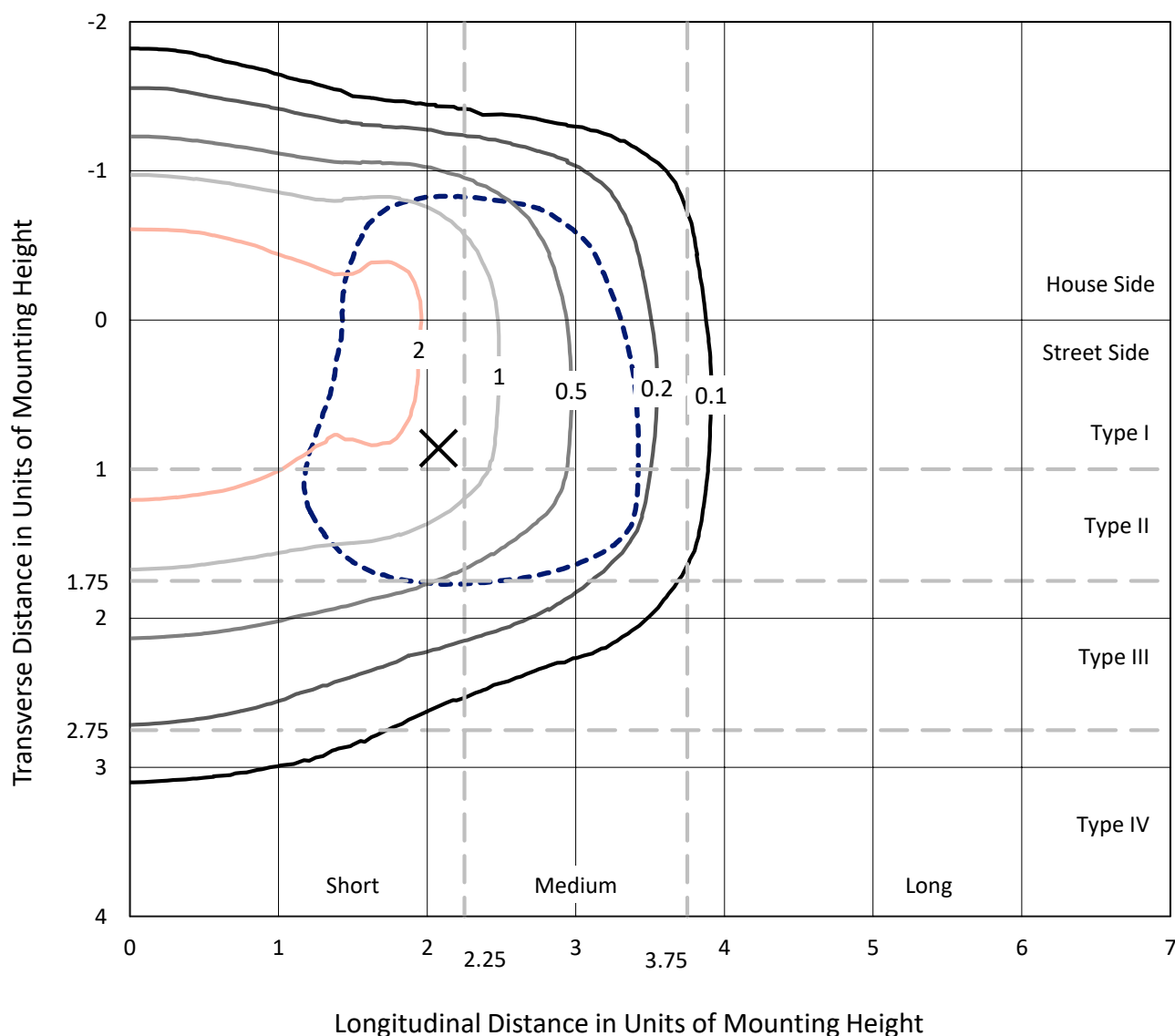
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

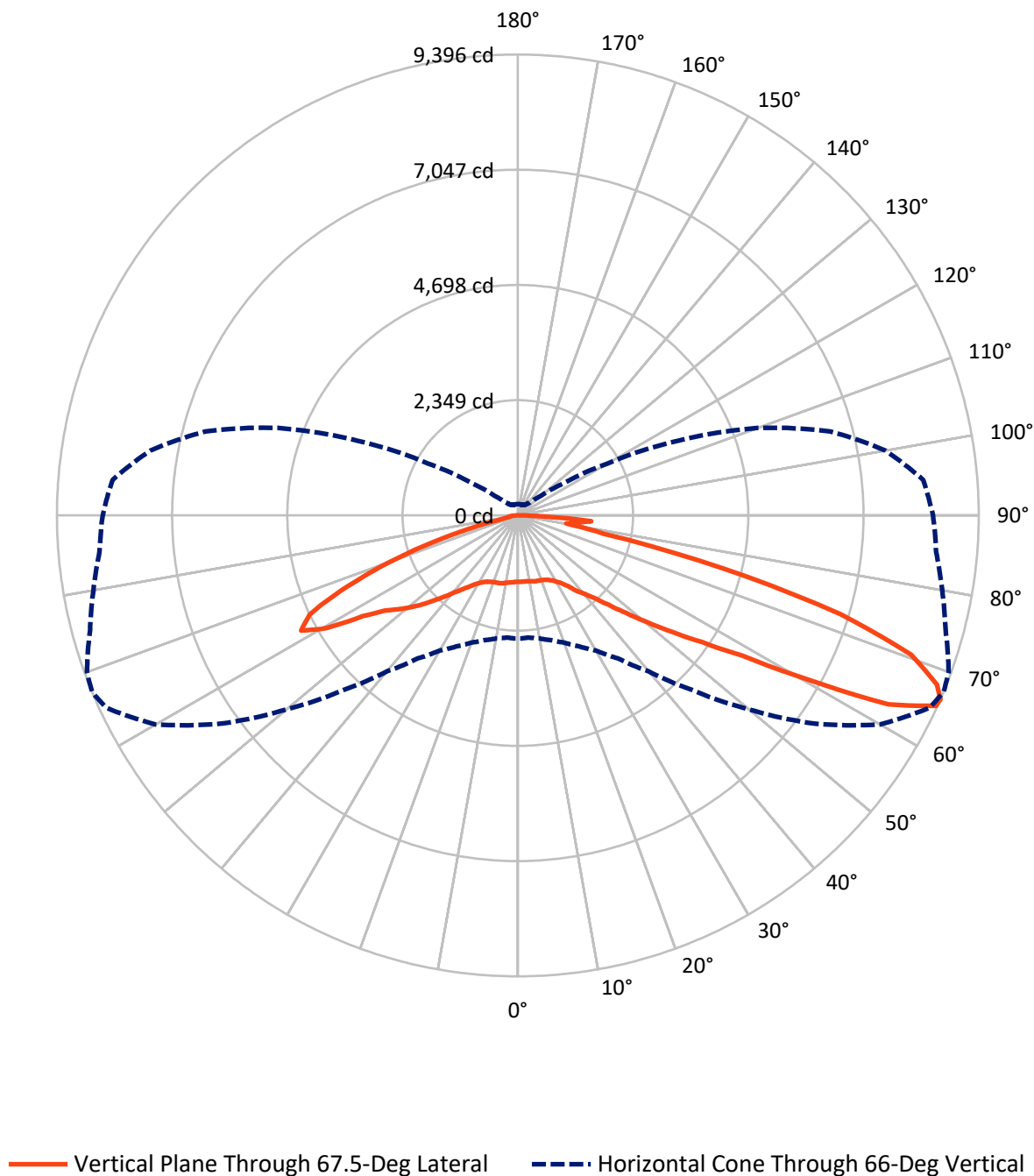


Based on 20 foot mounting height. Maximum calculated value = 3.4 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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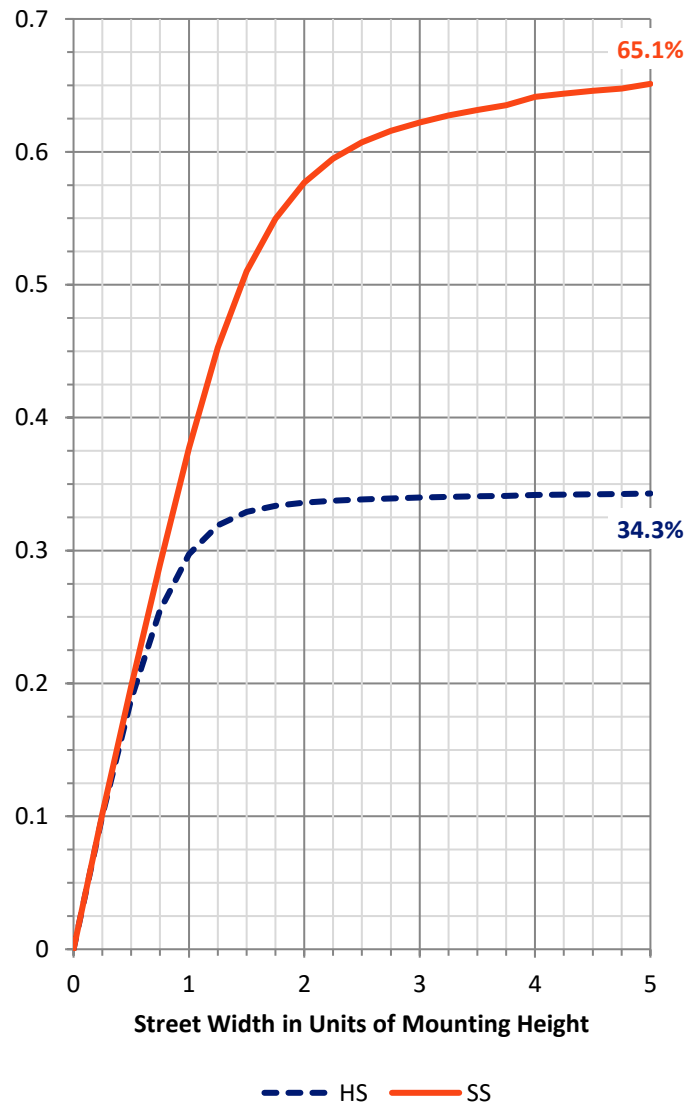
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4343.8	0.0	4343.8
	% Fixture	34.6	0.0	34.6
Street Side	Lumens	8209.0	0.0	8209.0
	% Fixture	65.4	0.0	65.4
Total	Lumens	12552.8	0.0	12552.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.0	1.0
10°-20°	384.9	3.1
20°-30°	661.6	5.3
30°-40°	1069.3	8.5
40°-50°	1772.0	14.1
50°-60°	2781.0	22.2
60°-70°	3802.2	30.3
70°-80°	1672.0	13.3
80°-90°	279.9	2.2
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°	12552.8	100.0
0°-180°	12552.8	100.0

Coefficient of Utilization



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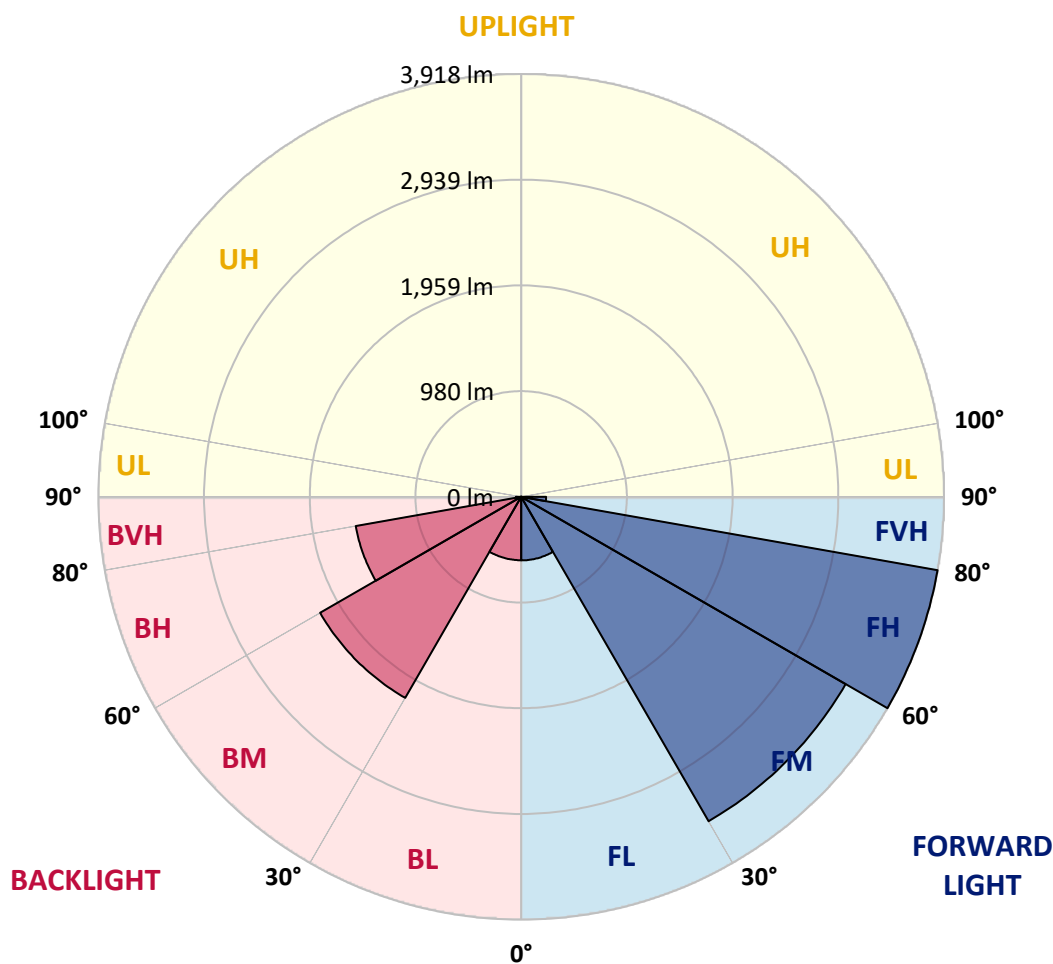
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	588.8	4.7			
FM	(30°-60°)	3471.2	27.7			
FH	(60°-80°)	3918.0	31.2			G2/5000
FVH	(80°-90°)	230.9	1.8			G3/500
BL	(0°-30°)	587.6	4.7	B2/1000		
BM	(30°-60°)	2151.1	17.1	B2/2500		
BH	(60°-80°)	1556.2	12.4	B3/2500		G3/2500
BVH	(80°-90°)	49.0	0.4			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°	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5
2.5°	1352.0	1352.0	1352.8	1352.0	1352.0	1351.2	1354.5	1354.5	1354.5	1353.6	1356.1
5°	1348.7	1348.7	1349.5	1349.5	1350.4	1349.5	1352.0	1352.8	1352.8	1352.8	1355.3
7.5°	1340.5	1343.0	1341.3	1342.1	1343.0	1345.4	1348.7	1350.4	1352.0	1354.5	1355.3
10°	1323.3	1327.4	1326.5	1329.0	1329.8	1337.2	1339.7	1343.0	1348.7	1352.0	1354.5
12.5°	1299.5	1301.9	1302.7	1306.0	1309.3	1318.3	1324.9	1330.7	1338.9	1347.1	1355.3
15°	1280.6	1282.2	1282.2	1285.5	1290.4	1298.6	1306.8	1316.7	1329.0	1343.0	1356.1
17.5°	1286.3	1290.4	1287.1	1286.3	1288.0	1292.9	1300.3	1308.5	1323.3	1338.9	1354.5
20°	1324.1	1324.9	1323.3	1319.2	1315.9	1316.7	1316.7	1318.3	1327.4	1339.7	1352.0
22.5°	1355.3	1358.6	1357.7	1358.6	1357.7	1361.0	1359.4	1356.1	1352.8	1353.6	1359.4
25°	1382.4	1385.7	1385.7	1388.1	1392.2	1398.8	1403.7	1402.9	1398.0	1391.4	1388.9
27.5°	1426.7	1426.7	1426.7	1429.2	1434.9	1443.1	1451.3	1456.2	1460.4	1453.8	1439.8
30°	1496.5	1497.3	1494.8	1495.7	1499.8	1510.4	1520.3	1527.7	1535.9	1535.1	1517.0
32.5°	1572.8	1576.1	1575.3	1578.6	1584.3	1594.2	1604.8	1616.3	1627.0	1633.6	1622.1
35°	1671.3	1674.6	1675.4	1680.4	1686.9	1701.7	1716.5	1731.2	1742.7	1747.7	1745.2
37.5°	1833.0	1833.9	1830.6	1823.2	1825.6	1837.1	1854.4	1878.2	1885.6	1890.5	1902.0
40°	2075.2	2072.7	2059.6	2053.0	2048.9	2053.9	2050.6	2069.4	2086.7	2087.5	2086.7
42.5°	2369.1	2361.7	2349.4	2347.7	2346.1	2344.4	2335.4	2336.2	2351.8	2355.9	2351.0
45°	2661.3	2652.3	2643.2	2651.5	2641.6	2667.1	2674.4	2694.1	2696.6	2704.8	2692.5
47.5°	2901.0	2901.8	2901.8	2913.3	2933.0	2981.5	3025.0	3062.7	3076.7	3096.4	3098.8
50°	3082.4	3087.3	3102.9	3139.9	3181.7	3263.0	3336.1	3404.2	3465.8	3488.8	3549.5
52.5°	3188.3	3201.4	3234.3	3295.9	3370.6	3475.6	3590.5	3706.3	3813.0	3903.3	3975.5
55°	3169.4	3179.3	3236.7	3332.8	3449.4	3590.5	3751.4	3918.9	4085.5	4238.2	4356.4
57.5°	3047.9	3054.5	3112.0	3220.3	3365.6	3555.3	3782.6	4031.4	4265.3	4511.6	4713.5
60°	2888.7	2898.5	2951.9	3037.3	3189.1	3391.1	3654.6	3992.0	4365.5	4752.9	5130.5
62.5°	2786.9	2784.4	2831.2	2907.6	3021.7	3204.7	3458.4	3858.2	4375.3	5030.4	5776.6
65°	2617.8	2610.4	2658.8	2745.9	2869.8	3047.1	3287.6	3671.8	4271.9	5135.5	6193.6
66°	2512.7	2498.0	2546.4	2634.2	2758.2	2947.0	3177.6	3556.9	4146.3	5032.8	6149.2
67.5°	2328.8	2321.5	2344.4	2413.4	2505.3	2682.7	2923.2	3304.9	3849.1	4724.2	5824.2
70°	1893.0	1876.5	1894.6	1925.8	1961.1	2004.6	2152.4	2455.3	2915.8	3763.8	4692.2
72.5°	1289.6	1281.4	1315.1	1362.7	1457.1	1501.4	1559.7	1608.9	1771.5	2372.4	3272.9
75°	981.0	985.9	1028.6	1107.4	1228.9	1360.2	1488.3	1535.1	1480.9	1434.1	1857.7
77.5°	550.0	578.7	630.4	730.6	859.5	1045.0	1268.3	1514.5	1637.7	1607.3	1503.0
80°	226.6	222.5	247.9	302.9	347.2	499.1	763.4	1072.1	1418.5	1637.7	1603.2
82.5°	63.2	64.8	83.7	107.5	138.7	176.5	275.8	443.3	722.4	1123.8	1471.0
85°	19.7	19.7	27.1	40.2	47.6	55.0	69.8	114.9	196.2	391.6	793.8
87.5°	4.1	4.1	5.7	11.5	12.3	12.3	15.6	21.3	18.9	17.2	77.2
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°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5
2.5°	1353.6	1352.0	1352.8	1353.6	1352.8	1352.8	1352.0	1351.2	1352.0	1352.0	1354.5
5°	1352.8	1352.0	1352.8	1352.8	1352.8	1353.6	1353.6	1353.6	1356.1	1356.1	1360.2
7.5°	1354.5	1354.5	1356.1	1356.1	1356.1	1356.1	1356.9	1358.6	1362.7	1361.8	1369.2
10°	1357.7	1359.4	1363.5	1364.3	1364.3	1366.8	1368.4	1371.7	1375.8	1377.4	1384.0
12.5°	1361.8	1370.1	1377.4	1379.1	1381.5	1385.7	1388.1	1389.8	1397.1	1399.6	1407.8
15°	1366.8	1378.3	1387.3	1390.6	1393.9	1398.8	1402.1	1404.5	1411.1	1414.4	1424.2
17.5°	1367.6	1380.7	1391.4	1396.3	1400.4	1406.2	1411.1	1416.0	1423.4	1428.3	1438.2
20°	1366.8	1384.0	1400.4	1407.0	1411.1	1421.8	1429.2	1435.7	1444.8	1449.7	1459.5
22.5°	1375.8	1395.5	1417.7	1425.9	1432.4	1447.2	1457.1	1467.7	1479.2	1482.5	1489.9
25°	1397.1	1417.7	1445.6	1457.1	1468.6	1488.3	1502.2	1517.8	1529.3	1530.9	1533.4
27.5°	1433.3	1452.1	1485.8	1503.0	1521.9	1549.8	1570.4	1585.9	1602.4	1602.4	1600.7
30°	1506.3	1510.4	1545.7	1567.9	1595.8	1636.8	1667.2	1684.5	1696.8	1696.8	1682.8
32.5°	1600.7	1595.8	1627.8	1651.6	1690.2	1747.7	1788.7	1801.8	1815.0	1810.9	1787.1
35°	1737.0	1723.0	1741.1	1777.2	1820.7	1899.5	1942.2	1971.8	1980.0	1968.5	1930.7
37.5°	1908.6	1906.9	1915.9	1956.2	2004.6	2106.4	2149.9	2168.8	2162.2	2141.7	2075.2
40°	2090.0	2085.0	2079.3	2106.4	2160.6	2282.9	2360.0	2369.9	2360.9	2330.5	2246.8
42.5°	2332.1	2332.1	2305.0	2312.4	2357.6	2494.7	2585.8	2617.0	2617.8	2573.5	2461.8
45°	2665.4	2662.1	2614.5	2603.0	2637.5	2772.1	2889.5	2906.8	2906.8	2848.5	2726.2
47.5°	3066.0	3061.9	3015.1	2974.9	2981.5	3126.7	3224.4	3250.7	3227.7	3184.2	3038.9
50°	3517.5	3510.1	3462.5	3424.7	3408.3	3555.3	3638.2	3650.5	3616.8	3565.1	3407.5
52.5°	3975.5	3997.7	3969.8	3949.3	3955.0	4050.2	4135.6	4077.3	4060.1	4004.3	3845.8
55°	4452.5	4520.6	4582.2	4564.1	4585.5	4678.2	4694.6	4617.5	4586.3	4546.1	4369.6
57.5°	4932.7	5131.3	5333.3	5389.9	5442.5	5575.4	5556.6	5430.2	5454.0	5513.9	5315.2
60°	5603.4	6177.2	6689.4	6783.8	6947.1	7060.4	7085.9	7061.2	7172.1	7140.9	6965.2
62.5°	6633.6	7589.9	8302.4	8479.7	8643.9	8638.2	8552.0	8463.3	8572.5	8572.5	8113.6
65°	7369.1	8454.3	9216.9	9363.8	9357.3	9159.4	8955.8	8778.5	8762.9	8641.4	7970.8
66°	7403.6	8520.8	9267.8	9395.8	9346.6	9028.1	8784.3	8559.4	8463.3	8294.2	7607.1
67.5°	7093.3	8332.8	9102.0	9213.6	9083.9	8627.5	8291.8	7990.5	7850.9	7566.1	6919.2
70°	5818.4	7161.4	8280.3	8508.5	8361.5	7783.6	7323.9	6916.8	6650.0	6238.7	5772.5
72.5°	4247.3	5287.3	6498.9	6870.0	6847.0	6315.1	5944.8	5572.2	5221.6	4847.3	4506.7
75°	2760.6	3439.5	4115.1	4331.8	4227.6	3919.7	3654.6	3437.0	3104.6	2844.4	2781.2
77.5°	1576.1	1925.8	1821.5	1794.5	1663.9	1343.0	893.1	626.3	565.6	706.0	774.1
80°	1499.8	1359.4	1113.1	1003.9	922.7	628.8	330.0	232.3	203.6	208.5	224.1
82.5°	1691.0	1762.4	1441.5	1204.2	1048.3	765.1	417.8	194.5	142.0	168.3	188.8
85°	1267.4	1784.6	1769.0	1498.9	1229.7	881.6	494.2	148.6	85.4	118.2	154.3
87.5°	256.9	422.8	407.2	357.9	304.5	212.6	82.9	46.8	42.7	58.3	88.7
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5	1354.5
2.5°	1356.1	1356.1	1357.7	1360.2	1361.0	1361.0	1362.7	1361.0	1364.3	1365.1	1366.0
5°	1363.5	1366.0	1367.6	1371.7	1374.2	1375.8	1378.3	1376.6	1379.9	1380.7	1382.4
7.5°	1371.7	1375.8	1379.1	1380.7	1384.0	1384.0	1384.8	1383.2	1382.4	1379.9	1379.1
10°	1386.5	1388.9	1393.0	1391.4	1389.8	1384.0	1379.1	1371.7	1367.6	1360.2	1356.1
12.5°	1410.3	1411.9	1411.9	1404.5	1393.9	1380.7	1368.4	1356.1	1346.3	1338.0	1333.1
15°	1426.7	1430.0	1425.9	1415.2	1399.6	1381.5	1365.1	1348.7	1335.6	1324.9	1318.3
17.5°	1439.0	1438.2	1430.8	1416.0	1401.2	1385.7	1370.9	1353.6	1337.2	1321.6	1311.8
20°	1457.9	1449.7	1436.5	1421.0	1405.4	1392.2	1380.7	1364.3	1347.1	1325.7	1311.0
22.5°	1483.3	1468.6	1449.7	1433.3	1418.5	1406.2	1393.0	1379.1	1361.0	1337.2	1316.7
25°	1519.5	1494.0	1472.7	1456.2	1443.1	1429.2	1414.4	1396.3	1378.3	1353.6	1329.0
27.5°	1574.5	1536.7	1509.6	1494.8	1482.5	1463.6	1444.8	1423.4	1400.4	1375.0	1347.1
30°	1640.9	1595.8	1564.6	1551.5	1536.7	1515.4	1494.8	1465.3	1433.3	1402.9	1368.4
32.5°	1718.9	1673.0	1641.8	1631.9	1608.1	1583.5	1554.8	1515.4	1473.5	1428.3	1387.3
35°	1837.1	1778.9	1750.1	1727.1	1694.3	1664.8	1616.3	1564.6	1504.7	1444.8	1393.9
37.5°	1958.6	1899.5	1870.0	1838.0	1795.3	1741.1	1676.2	1602.4	1522.7	1448.9	1386.5
40°	2121.2	2057.1	2019.4	1970.1	1901.2	1816.6	1720.6	1619.6	1522.7	1430.8	1355.3
42.5°	2310.8	2251.7	2193.4	2112.1	2001.3	1878.2	1743.6	1613.9	1496.5	1390.6	1311.0
45°	2573.5	2472.5	2379.7	2249.2	2087.5	1914.3	1746.0	1586.8	1451.3	1333.9	1245.3
47.5°	2869.0	2738.5	2574.3	2369.9	2149.1	1928.3	1722.2	1535.9	1379.9	1252.7	1155.8
50°	3209.7	3009.4	2757.4	2465.9	2180.3	1909.4	1665.6	1450.5	1281.4	1135.3	1031.9
52.5°	3599.6	3294.2	2923.2	2534.1	2175.3	1851.9	1572.0	1338.0	1149.2	994.1	892.3
55°	4032.2	3604.5	3081.6	2577.6	2131.0	1740.3	1425.1	1179.6	985.1	832.4	742.9
57.5°	4794.8	4148.7	3383.7	2635.9	2038.3	1571.2	1238.7	979.3	803.6	673.9	588.6
60°	6211.6	5100.2	3955.8	2772.9	1898.7	1359.4	1003.9	768.3	621.4	527.0	463.8
62.5°	7088.3	5770.0	4234.9	2753.2	1672.1	1069.6	745.4	569.7	453.9	391.6	352.2
65°	6880.7	5507.3	3894.3	2365.0	1301.1	758.5	493.4	372.7	311.9	279.9	261.0
66°	6598.3	5213.4	3606.1	2117.9	1133.6	633.7	407.2	312.8	268.4	244.6	234.8
67.5°	6006.4	4676.6	3110.3	1695.9	849.6	472.0	300.4	245.4	218.4	206.0	199.5
70°	5027.1	3767.9	2200.0	1001.5	460.5	256.1	192.1	170.7	164.2	160.1	157.6
72.5°	3886.9	2727.8	1285.5	492.5	232.3	165.8	146.1	137.1	134.6	134.6	135.4
75°	2448.7	1567.9	575.4	237.2	157.6	133.8	124.8	120.7	121.5	122.3	121.5
77.5°	813.5	541.0	239.7	168.3	137.1	121.5	114.1	112.5	114.1	114.9	114.9
80°	234.0	204.4	173.2	148.6	125.6	113.3	106.7	105.9	110.0	110.8	109.2
82.5°	179.8	168.3	156.8	143.7	120.7	106.7	104.3	105.1	107.5	105.9	98.5
85°	165.0	163.4	117.4	116.6	105.1	101.8	99.3	100.1	97.7	88.7	80.4
87.5°	92.8	86.2	66.5	67.3	78.0	80.4	66.5	70.6	65.7	57.5	52.5
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°	1354.5	1354.5	1354.5	1354.5	1354.5
2.5°	1367.6	1366.8	1366.8	1369.2	1366.0
5°	1383.2	1382.4	1382.4	1384.8	1382.4
7.5°	1375.8	1373.3	1371.7	1370.9	1370.9
10°	1351.2	1348.7	1343.8	1342.1	1340.5
12.5°	1325.7	1323.3	1317.5	1317.5	1315.9
15°	1310.1	1306.8	1302.7	1300.3	1298.6
17.5°	1301.9	1297.0	1292.1	1289.6	1288.0
20°	1298.6	1292.1	1286.3	1282.2	1282.2
22.5°	1299.5	1291.3	1284.7	1279.8	1278.1
25°	1307.7	1295.4	1287.1	1282.2	1280.6
27.5°	1319.2	1304.4	1293.7	1287.1	1284.7
30°	1334.8	1314.2	1299.5	1291.3	1288.0
32.5°	1345.4	1316.7	1297.8	1286.3	1282.2
35°	1344.6	1307.7	1284.7	1269.9	1265.0
37.5°	1329.8	1286.3	1256.0	1237.9	1229.7
40°	1297.0	1246.9	1214.9	1197.7	1187.8
42.5°	1249.4	1195.2	1166.5	1147.6	1136.9
45°	1174.7	1121.3	1086.0	1071.3	1057.3
47.5°	1071.3	1017.1	986.7	965.4	956.3
50°	949.8	895.6	863.6	846.3	838.1
52.5°	816.8	765.1	742.1	725.7	714.2
55°	678.9	631.3	621.4	603.4	592.7
57.5°	549.2	521.3	512.2	494.2	485.1
60°	429.3	420.3	410.4	398.9	394.0
62.5°	332.5	324.2	321.8	314.4	313.6
65°	253.7	254.5	252.8	251.2	249.5
66°	230.7	229.8	230.7	229.0	228.2
67.5°	196.2	199.5	201.9	201.1	201.1
70°	159.3	161.7	165.0	164.2	164.2
72.5°	136.3	140.4	142.0	141.2	141.2
75°	123.1	127.2	127.2	125.6	124.8
77.5°	114.9	116.6	114.9	113.3	111.6
80°	106.7	105.1	102.6	100.1	98.5
82.5°	92.8	88.7	86.2	82.1	82.1
85°	74.7	71.4	65.7	61.6	57.5
87.5°	48.4	46.8	42.7	32.0	25.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)