

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: P165307

Luminaire Tested: **VST-E09-LED-E-U-SL3-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P165307
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-E09-LED-E-U-SL3-HSS
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND
HOUSE SIDE SHIELD
Light Source: (189) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15417.9 lumens
Efficiency: N/A
Efficacy: 68.3 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1.5' x L: 1' x H: 0.1')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B0 - U0 - G3

Input Watts (W): 225.7
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



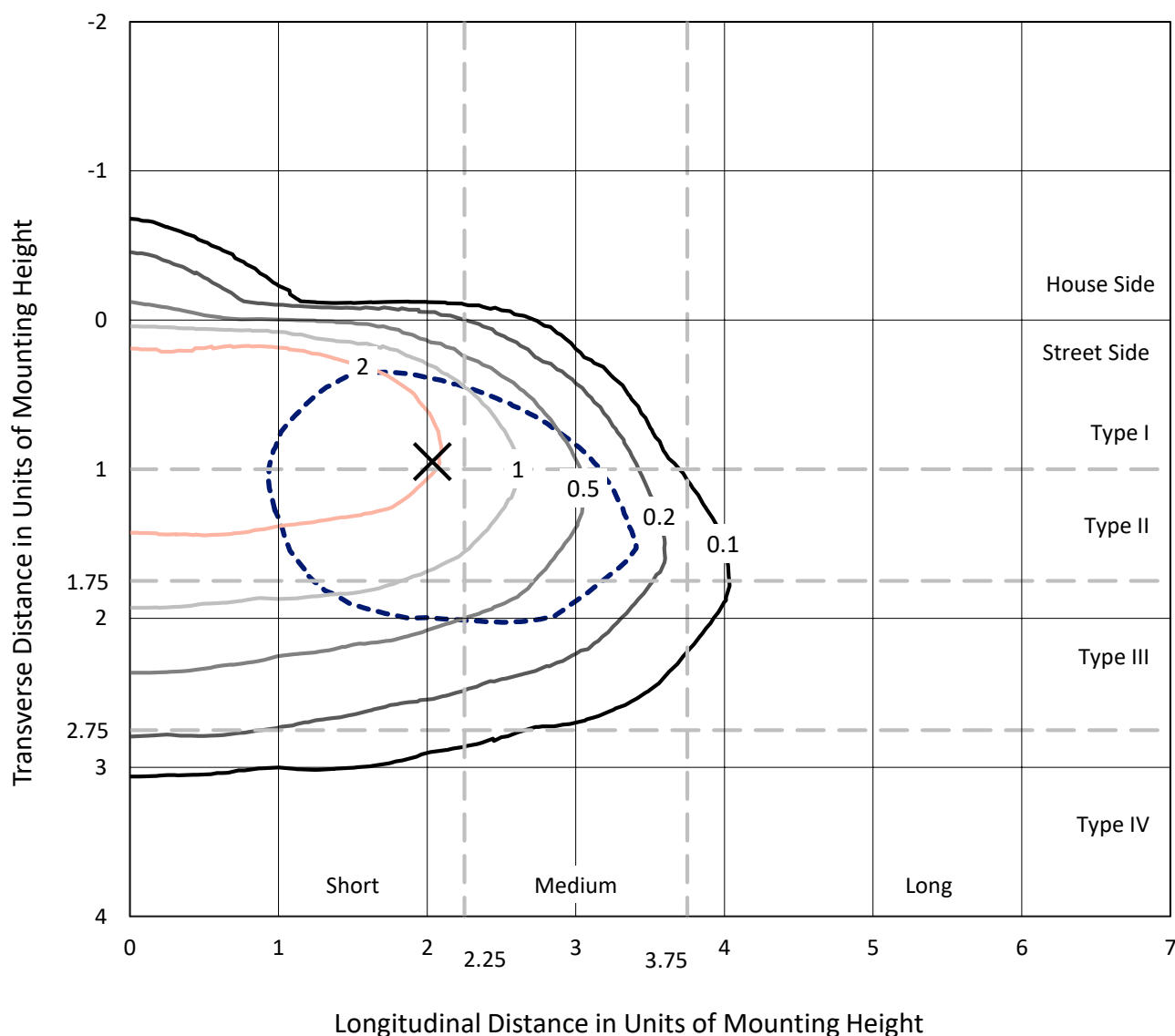
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

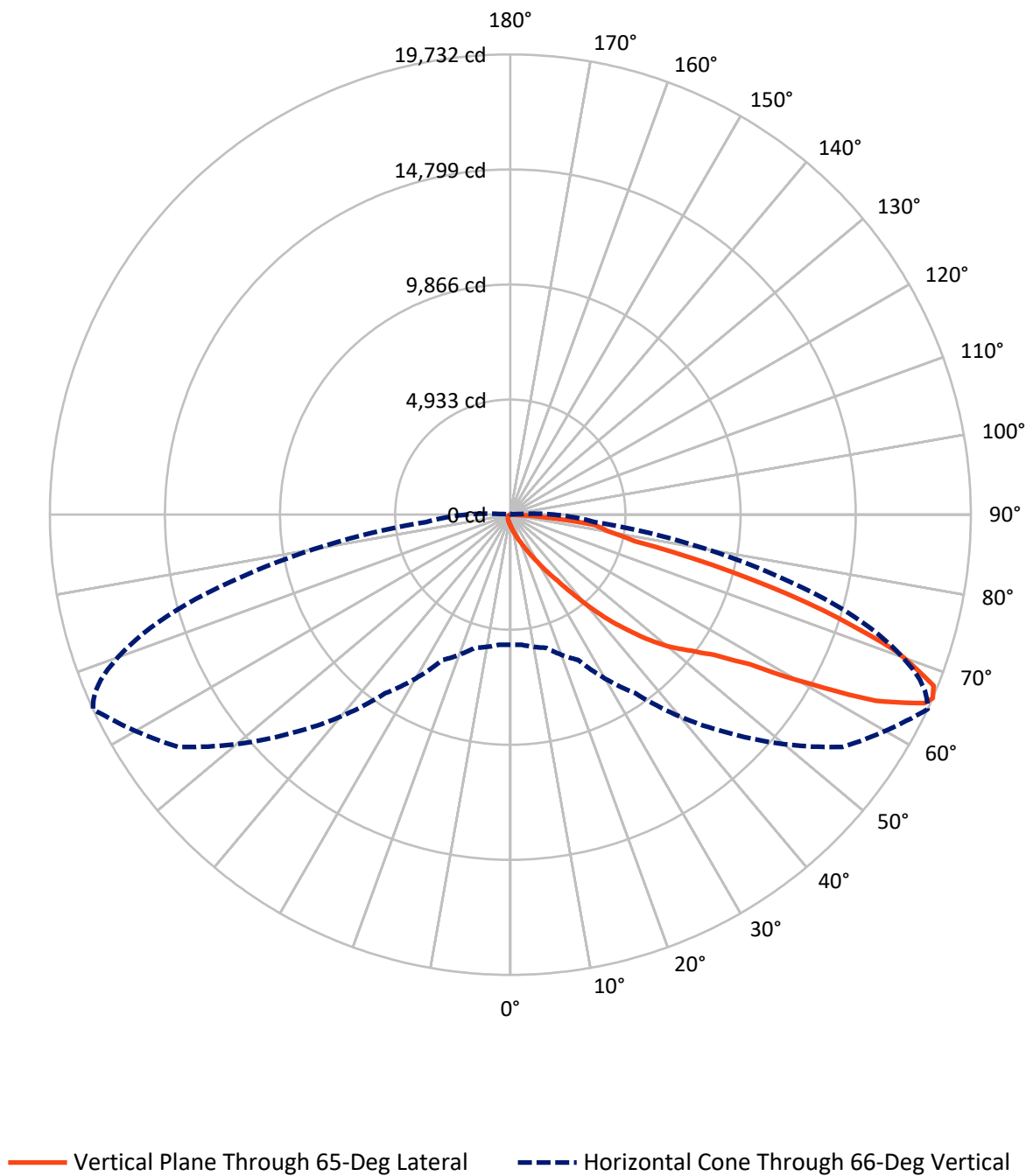


Based on 25 foot mounting height. Maximum calculated value = 4.1 fc
 Type III - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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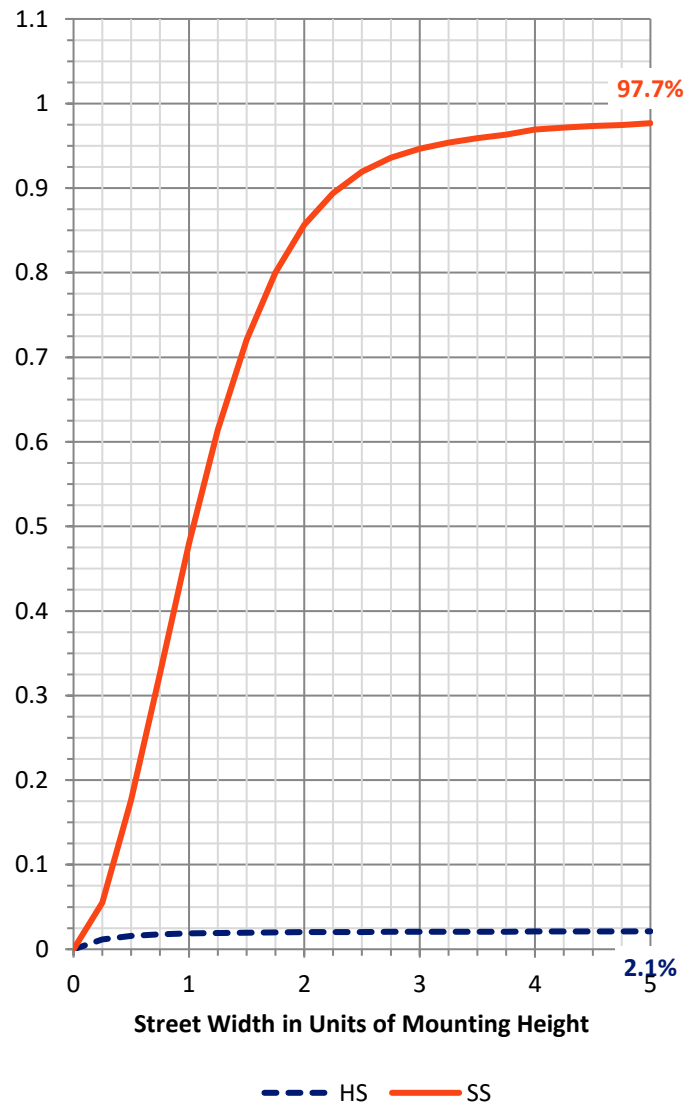
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	334.1	0.0	334.1
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	15083.8	0.0	15083.8
	% Fixture	97.8	0.0	97.8
Total	Lumens	15417.9	0.0	15417.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.1	0.3
10°-20°	220.9	1.4
20°-30°	476.4	3.1
30°-40°	1017.4	6.6
40°-50°	2250.1	14.6
50°-60°	3813.1	24.7
60°-70°	5088.3	33.0
70°-80°	2241.3	14.5
80°-90°	258.2	1.7
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°	15417.9	100.0
0°-180°	15417.9	100.0

Coefficient of Utilization



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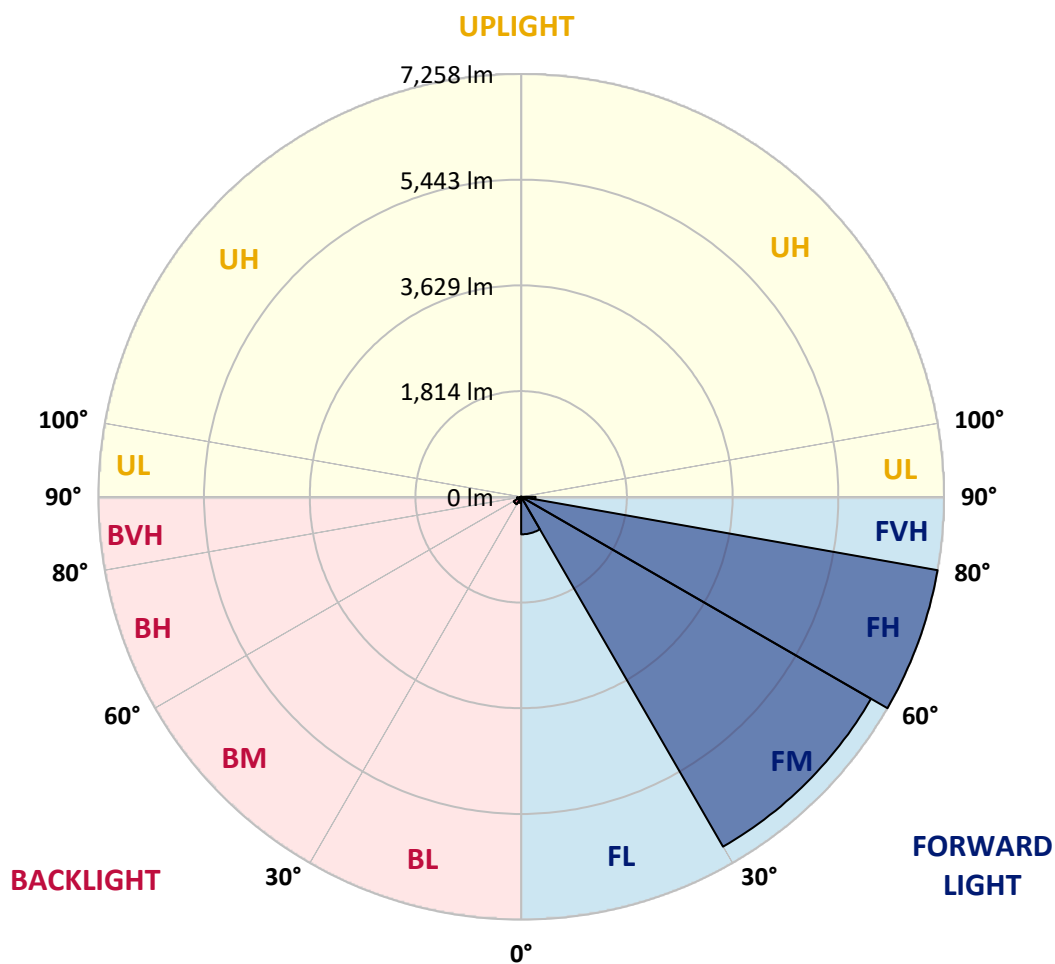
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	644.0	4.2			
FM	(30°-60°)	6933.9	45.0			
FH	(60°-80°)	7258.0	47.1			G3/7500
FVH	(80°-90°)	247.9	1.6			G3/500
BL	(0°-30°)	105.4	0.7	B0/110		
BM	(30°-60°)	146.7	1.0	B0/220		
BH	(60°-80°)	71.7	0.5	B0/110		G0/110
BVH	(80°-90°)	10.3	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	465.3	465.3	465.3	465.3	465.3	465.3	465.3	465.3	465.3	465.3	465.3
2.5°	587.0	583.9	572.0	572.0	554.2	542.5	527.6	512.8	512.8	509.8	506.9
5°	776.5	758.9	755.8	723.2	696.6	658.1	622.4	575.1	569.2	563.2	560.2
7.5°	987.1	984.1	957.4	918.9	865.6	794.3	723.2	646.2	634.3	628.4	616.5
10°	1259.8	1244.9	1209.4	1144.1	1064.2	969.3	853.7	732.1	717.3	705.4	699.5
12.5°	1520.6	1494.0	1473.1	1390.1	1289.3	1150.0	1010.7	835.9	824.0	809.3	785.5
15°	1763.6	1739.9	1704.4	1633.3	1520.6	1345.7	1182.8	969.3	939.6	918.9	901.1
17.5°	1953.4	1938.6	1897.0	1817.1	1695.4	1541.3	1345.7	1105.6	1082.0	1055.2	1022.6
20°	2134.3	2113.4	2048.2	1938.6	1808.1	1689.5	1538.5	1283.4	1250.8	1218.2	1182.8
22.5°	2306.2	2285.3	2178.7	1997.8	1858.5	1808.1	1754.8	1485.0	1434.6	1408.0	1372.3
25°	2546.3	2501.8	2335.7	2048.2	1861.6	1900.1	1991.9	1745.8	1698.5	1660.0	1603.6
27.5°	2869.4	2810.0	2549.2	2122.4	1873.3	2000.9	2264.6	2063.0	2012.6	1968.1	1906.0
30°	3233.9	3195.4	2884.1	2300.2	1959.3	2149.0	2569.9	2466.2	2407.0	2353.5	2279.5
32.5°	3601.4	3548.2	3239.8	2638.1	2190.4	2436.5	2952.4	2934.5	2857.5	2807.1	2727.0
35°	3924.5	3897.9	3669.7	3192.3	2718.2	2940.5	3462.1	3482.8	3414.8	3361.3	3272.4
37.5°	4144.0	4144.0	4099.5	3788.1	3557.0	3722.9	4212.0	4215.1	4146.8	4025.3	3980.9
40°	4256.5	4289.0	4449.2	4508.5	4496.6	4710.1	5196.2	5142.8	5086.4	5024.2	4876.0
42.5°	4487.8	4517.3	4858.2	5267.3	5534.1	5815.6	6150.6	6132.8	6064.7	5952.1	5815.6
45°	4879.1	4917.6	5323.7	5972.8	6521.0	6921.4	7134.7	7051.7	6983.5	6876.9	6805.6
47.5°	5377.0	5451.1	5910.5	6713.8	7374.8	8035.7	8258.0	8038.8	7979.6	7896.4	7780.9
50°	5907.6	5978.7	6467.8	7386.7	8133.7	8922.1	9292.7	8922.1	8836.2	8809.4	8679.1
52.5°	6367.0	6426.4	6897.6	7905.4	8714.5	9639.4	10178.8	9689.8	9627.5	9538.6	9443.7
55°	6639.7	6687.2	7128.7	8154.4	9108.9	10285.6	11035.6	10605.8	10513.8	10478.3	10341.9
57.5°	6731.6	6779.0	7176.2	8186.9	9322.2	10875.4	12076.0	12090.8	11981.2	11853.7	11812.1
60°	6731.6	6784.9	7119.9	8107.0	9529.7	11503.8	13463.1	14699.2	14462.1	14438.3	14287.1
62.5°	6453.0	6503.4	6841.3	7861.0	9808.4	12351.6	15395.8	17577.4	17509.3	17355.1	17106.1
65°	5848.2	5877.9	6209.8	7232.6	9701.6	13131.2	17070.5	19492.2	19382.6	19080.2	18760.1
66°	5575.5	5599.3	5910.5	6873.8	9351.9	13237.9	17366.9	19732.3	19551.6	19296.5	18934.9
67.5°	5181.3	5222.9	5442.1	6206.9	8513.1	12867.3	17180.3	19563.5	19406.3	19098.0	18736.4
70°	3459.2	3429.5	4203.2	4763.3	6485.6	10484.3	15413.6	17565.5	17568.5	17423.3	17278.0
72.5°	1642.1	1660.0	1885.1	2931.5	4244.6	7004.3	12268.6	14020.4	14222.0	13961.2	13780.3
75°	1179.7	1206.4	1342.8	1793.3	2531.3	4203.2	7952.8	9805.3	9811.3	9348.8	8937.0
77.5°	343.8	358.7	503.8	1105.6	1897.0	2836.6	4567.7	5451.1	5323.7	4991.6	4680.4
80°	142.2	142.2	148.1	352.8	761.8	1926.7	3195.4	4197.2	4182.5	4055.0	3871.3
82.5°	53.3	56.3	71.1	145.3	180.9	474.3	2131.2	3643.0	3634.0	3453.3	3322.8
85°	5.9	5.9	17.8	62.3	68.2	88.9	426.8	1606.5	1597.7	1606.5	1408.0
87.5°	0.0	0.0	2.9	5.9	8.8	11.9	17.8	62.3	68.2	65.2	59.2
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	465.3	465.3	465.3	465.3	465.3	465.3	465.3	465.3	465.3	465.3	465.3
2.5°	506.9	500.9	500.9	498.1	498.1	498.1	495.0	492.1	492.1	489.1	486.2
5°	554.2	548.3	545.4	539.5	536.6	533.5	527.6	524.7	518.8	515.7	512.8
7.5°	610.6	598.7	595.8	587.0	578.0	572.0	566.1	557.3	551.3	539.5	536.6
10°	681.8	666.9	655.0	643.1	634.3	619.6	610.6	598.7	587.0	578.0	569.2
12.5°	773.6	752.9	735.1	723.2	702.5	684.7	666.9	658.1	634.3	622.4	607.7
15°	874.4	850.7	830.0	806.2	791.5	761.8	738.0	711.4	699.5	678.8	655.0
17.5°	1004.8	966.2	933.7	910.1	880.4	850.7	824.0	797.4	761.8	738.0	708.5
20°	1144.1	1111.5	1067.0	1025.6	990.0	954.5	915.8	880.4	847.8	809.3	773.6
22.5°	1322.1	1274.6	1221.3	1179.7	1132.4	1093.9	1040.4	993.1	939.6	889.2	847.8
25°	1547.3	1485.0	1434.6	1375.4	1319.0	1259.8	1194.5	1135.3	1067.0	1019.7	948.6
27.5°	1825.9	1766.7	1698.5	1621.4	1565.1	1476.2	1390.1	1316.2	1236.1	1161.9	1082.0
30°	2181.6	2095.7	2024.5	1950.5	1837.8	1751.8	1651.0	1550.3	1440.5	1366.6	1244.9
32.5°	2608.4	2516.6	2409.8	2303.1	2199.4	2077.9	1953.4	1828.8	1707.3	1571.0	1446.5
35°	3130.2	3020.4	2898.9	2783.3	2623.3	2492.8	2335.7	2163.8	2027.5	1870.4	1713.2
37.5°	3820.9	3640.0	3533.2	3411.7	3195.4	3017.5	2842.6	2670.7	2430.5	2264.6	2042.3
40°	4686.3	4579.6	4404.8	4209.1	4013.5	3779.3	3542.2	3314.0	3035.3	2804.0	2546.3
42.5°	5702.9	5546.0	5368.1	5086.4	4887.9	4612.1	4342.5	4040.1	3699.2	3402.9	3100.5
45°	6657.5	6470.8	6334.4	6052.9	5845.3	5519.2	5193.2	4873.1	4478.8	4096.4	3746.7
47.5°	7689.1	7534.8	7309.6	7081.4	6871.0	6503.4	6150.6	5762.3	5347.3	4893.8	4440.2
50°	8596.1	8474.6	8320.3	8044.7	7810.6	7502.2	7087.3	6663.4	6138.7	5688.2	5172.5
52.5°	9366.7	9271.8	9055.4	8859.8	8649.4	8358.8	7988.4	7582.3	7016.2	6521.0	5934.2
55°	10276.7	10208.5	10018.8	9897.3	9710.6	9432.0	9085.1	8708.8	8109.9	7570.4	6906.4
57.5°	11767.7	11714.4	11548.3	11497.9	11314.1	11071.1	10644.3	10241.1	9541.6	8871.7	8113.0
60°	14236.7	14130.2	13887.0	13762.6	13374.2	13048.2	12494.0	11939.6	11094.8	10241.1	9328.1
62.5°	16880.8	16581.4	16119.0	15721.9	15170.6	14604.3	13863.2	13015.6	12025.6	11011.9	9962.5
65°	18306.5	17796.8	17212.9	16581.4	15867.2	15034.1	14100.5	13083.8	12019.7	10949.6	9841.0
66°	18469.6	17894.5	17275.1	16572.6	15778.3	14891.9	13943.3	12876.3	11770.6	10727.3	9618.7
67.5°	18265.1	17663.4	17008.4	16228.8	15369.1	14450.2	13454.3	12345.7	11281.5	10223.3	9144.4
70°	16833.4	16234.6	15650.6	14829.7	13913.6	12989.0	12046.3	10807.4	9799.6	8827.2	7866.9
72.5°	13442.4	13036.3	12458.3	11755.8	10863.5	9778.7	8993.2	7884.7	7010.3	6067.6	5323.7
75°	8400.4	7828.4	7114.0	6218.8	5537.0	4656.6	4197.2	3355.4	2857.5	2421.7	2000.9
77.5°	4295.0	3865.3	3364.4	2860.4	2377.3	1897.0	1467.2	1037.5	699.5	486.2	361.6
80°	3548.2	3168.7	2753.6	2294.3	1867.5	1449.5	1043.5	711.4	453.6	296.5	231.1
82.5°	2931.5	2611.4	2240.8	1814.0	1443.6	1138.3	791.5	515.7	320.0	207.5	163.1
85°	1247.9	1132.4	874.4	693.5	521.6	385.4	269.8	180.9	127.4	103.7	94.9
87.5°	53.3	59.2	56.3	44.5	32.6	32.6	29.7	23.8	23.8	23.8	23.8
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	465.3	465.3	465.3	465.3	465.3	465.3	465.3	465.3	465.3	465.3	465.3
2.5°	486.2	483.1	480.2	480.2	477.2	474.3	456.5	441.7	423.9	412.0	400.1
5°	506.9	503.8	498.1	495.0	489.1	486.2	447.7	414.9	388.3	367.6	352.8
7.5°	527.6	524.7	515.7	506.9	503.8	498.1	435.8	394.2	358.7	335.0	320.0
10°	554.2	545.4	536.6	524.7	515.7	506.9	423.9	370.4	331.9	311.2	296.5
12.5°	592.7	578.0	563.2	548.3	536.6	521.6	418.0	349.7	311.2	287.5	272.7
15°	637.4	616.5	598.7	581.0	560.2	545.4	406.1	331.9	293.4	269.8	252.0
17.5°	678.8	655.0	628.4	601.7	581.0	560.2	394.2	314.3	275.6	252.0	234.2
20°	738.0	702.5	670.0	637.4	607.7	581.0	376.4	296.5	260.8	234.2	216.4
22.5°	803.3	761.8	720.4	675.9	637.4	601.7	361.6	281.5	246.1	219.4	198.5
25°	886.3	835.9	779.6	723.2	678.8	631.4	346.9	266.8	231.1	204.5	183.8
27.5°	1001.9	930.8	868.5	797.4	729.2	675.9	335.0	254.9	216.4	189.7	169.0
30°	1159.0	1055.2	957.4	880.4	800.3	723.2	323.1	240.1	204.5	175.0	151.2
32.5°	1333.8	1212.3	1099.6	984.1	883.3	794.3	311.2	228.2	189.7	160.0	139.3
35°	1550.3	1396.1	1244.9	1111.5	990.0	871.4	299.3	216.4	177.8	145.3	124.6
37.5°	1861.6	1668.8	1470.2	1298.3	1141.2	984.1	290.5	204.5	163.1	130.5	109.6
40°	2288.3	2039.4	1796.2	1562.0	1357.6	1161.9	278.6	192.6	151.2	118.6	97.7
42.5°	2750.8	2448.4	2128.3	1864.4	1582.9	1336.9	266.8	180.9	139.3	106.7	86.0
45°	3325.9	2949.3	2561.0	2202.3	1858.5	1541.3	254.9	169.0	124.6	94.9	74.2
47.5°	3954.2	3474.0	3035.3	2584.8	2175.7	1796.2	240.1	160.0	112.7	83.0	65.2
50°	4600.4	4093.6	3539.2	3026.3	2540.3	2051.3	225.4	145.3	100.8	74.2	53.3
52.5°	5296.9	4698.2	4132.1	3494.7	2928.6	2386.1	210.4	133.4	91.8	65.2	44.5
55°	6183.2	5513.4	4849.4	4135.0	3453.3	2774.5	195.7	118.6	80.1	56.3	35.6
57.5°	7297.7	6503.4	5688.2	4882.0	4055.0	3284.3	183.8	103.7	68.2	47.3	29.7
60°	8350.0	7422.3	6435.2	5507.5	4573.6	3675.6	166.0	91.8	59.2	38.5	29.7
62.5°	8895.4	7837.2	6773.0	5750.5	4754.5	3814.9	148.1	77.0	50.4	32.6	26.6
65°	8762.0	7683.1	6651.5	5620.0	4644.9	3726.0	130.5	68.2	44.5	29.7	26.6
66°	8569.4	7502.2	6464.9	5483.7	4552.9	3631.1	121.5	65.2	41.6	29.7	23.8
67.5°	8148.4	7116.8	6126.8	5213.9	4300.9	3450.2	109.6	59.2	38.5	26.6	23.8
70°	6959.9	6023.2	5231.7	4419.5	3675.6	2907.9	88.9	50.4	32.6	23.8	23.8
72.5°	4606.2	3969.0	3441.4	2961.2	2475.0	1920.8	74.2	41.6	26.6	23.8	20.7
75°	1737.0	1571.0	1348.7	1212.3	1058.2	927.7	59.2	26.6	20.7	20.7	20.7
77.5°	308.3	284.6	252.0	231.1	213.5	195.7	47.3	17.8	17.8	20.7	20.7
80°	207.5	192.6	175.0	160.0	148.1	133.4	32.6	14.8	17.8	17.8	20.7
82.5°	148.1	139.3	130.5	118.6	109.6	97.7	20.7	14.8	17.8	17.8	17.8
85°	88.9	83.0	77.0	71.1	62.3	59.2	14.8	14.8	14.8	17.8	17.8
87.5°	23.8	20.7	23.8	23.8	17.8	20.7	11.9	11.9	11.9	14.8	14.8
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):

	145°	155°	165°	175°	180°
0°	465.3	465.3	465.3	465.3	465.3
2.5°	394.2	394.2	388.3	397.3	397.3
5°	340.9	340.9	337.9	340.9	340.9
7.5°	311.2	308.3	308.3	308.3	311.2
10°	284.6	281.5	281.5	281.5	281.5
12.5°	260.8	257.9	254.9	257.9	257.9
15°	240.1	234.2	234.2	234.2	234.2
17.5°	222.3	216.4	213.5	213.5	213.5
20°	204.5	195.7	195.7	195.7	195.7
22.5°	186.7	177.8	177.8	177.8	177.8
25°	169.0	160.0	160.0	160.0	160.0
27.5°	154.1	145.3	145.3	145.3	145.3
30°	136.4	130.5	130.5	133.4	130.5
32.5°	124.6	115.6	115.6	118.6	118.6
35°	109.6	103.7	103.7	103.7	103.7
37.5°	94.9	88.9	88.9	88.9	88.9
40°	83.0	77.0	74.2	77.0	77.0
42.5°	71.1	65.2	62.3	62.3	62.3
45°	62.3	53.3	50.4	53.3	53.3
47.5°	50.4	44.5	44.5	47.3	47.3
50°	38.5	38.5	41.6	47.3	47.3
52.5°	35.6	35.6	41.6	47.3	47.3
55°	32.6	35.6	41.6	44.5	47.3
57.5°	29.7	35.6	41.6	44.5	44.5
60°	29.7	32.6	38.5	44.5	44.5
62.5°	26.6	29.7	35.6	41.6	41.6
65°	26.6	29.7	35.6	41.6	41.6
66°	26.6	29.7	35.6	41.6	41.6
67.5°	26.6	29.7	35.6	41.6	41.6
70°	26.6	29.7	35.6	38.5	38.5
72.5°	23.8	26.6	32.6	38.5	38.5
75°	23.8	26.6	32.6	38.5	38.5
77.5°	23.8	26.6	32.6	38.5	38.5
80°	23.8	26.6	32.6	35.6	38.5
82.5°	20.7	26.6	29.7	35.6	35.6
85°	20.7	23.8	29.7	32.6	35.6
87.5°	17.8	20.7	23.8	29.7	29.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)