

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: P165534

Luminaire Tested: **VST-F09-LED-E-U-SL4-HSS-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P165534
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-F09-LED-E-U-SL4-HSS-7060
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND
HOUSE SIDE SHIELD
Light Source: (63) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15327.3 lumens
Efficiency: N/A
Efficacy: 65.3 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1.5' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G4

Input Watts (W): 234.8
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

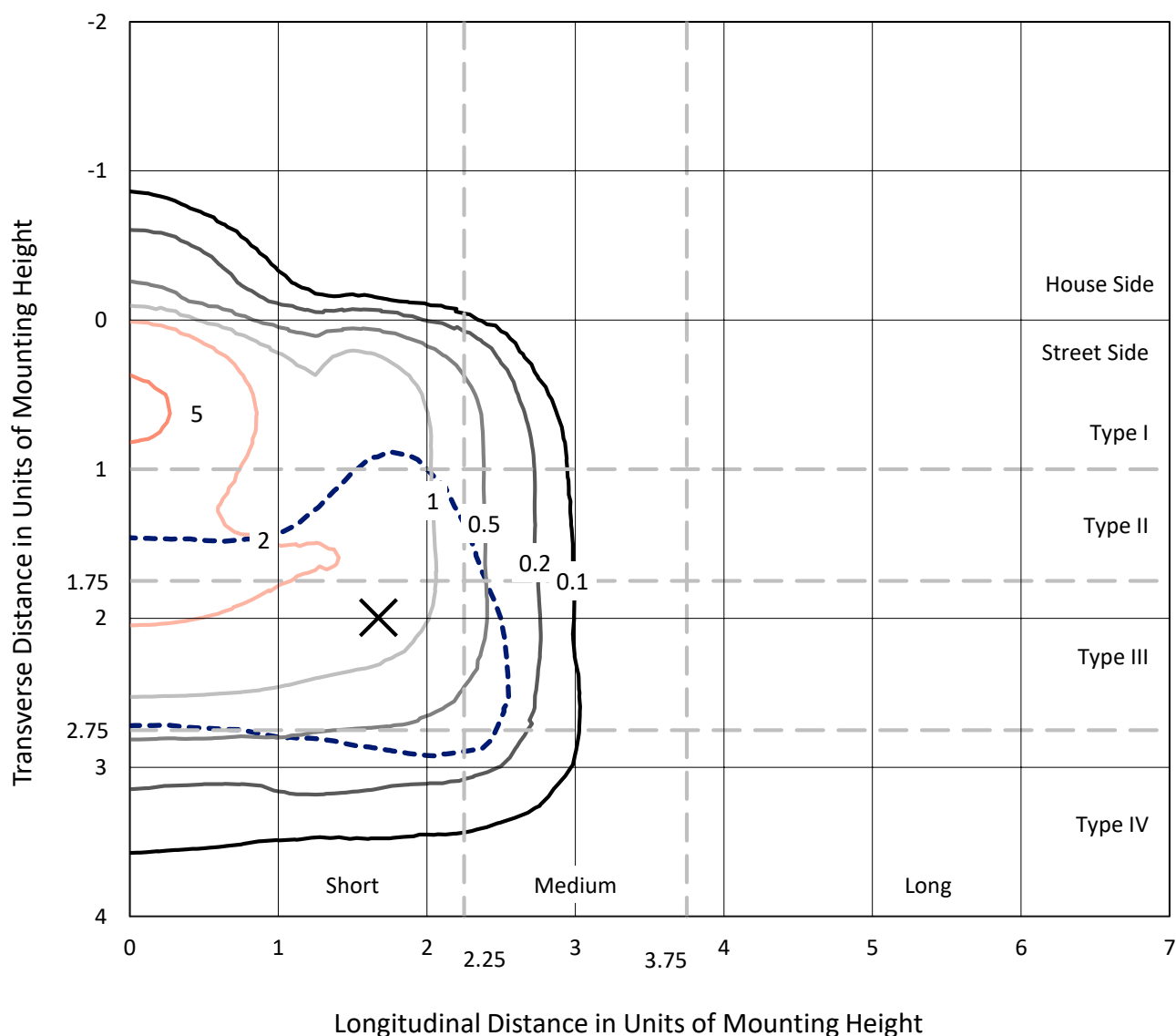


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

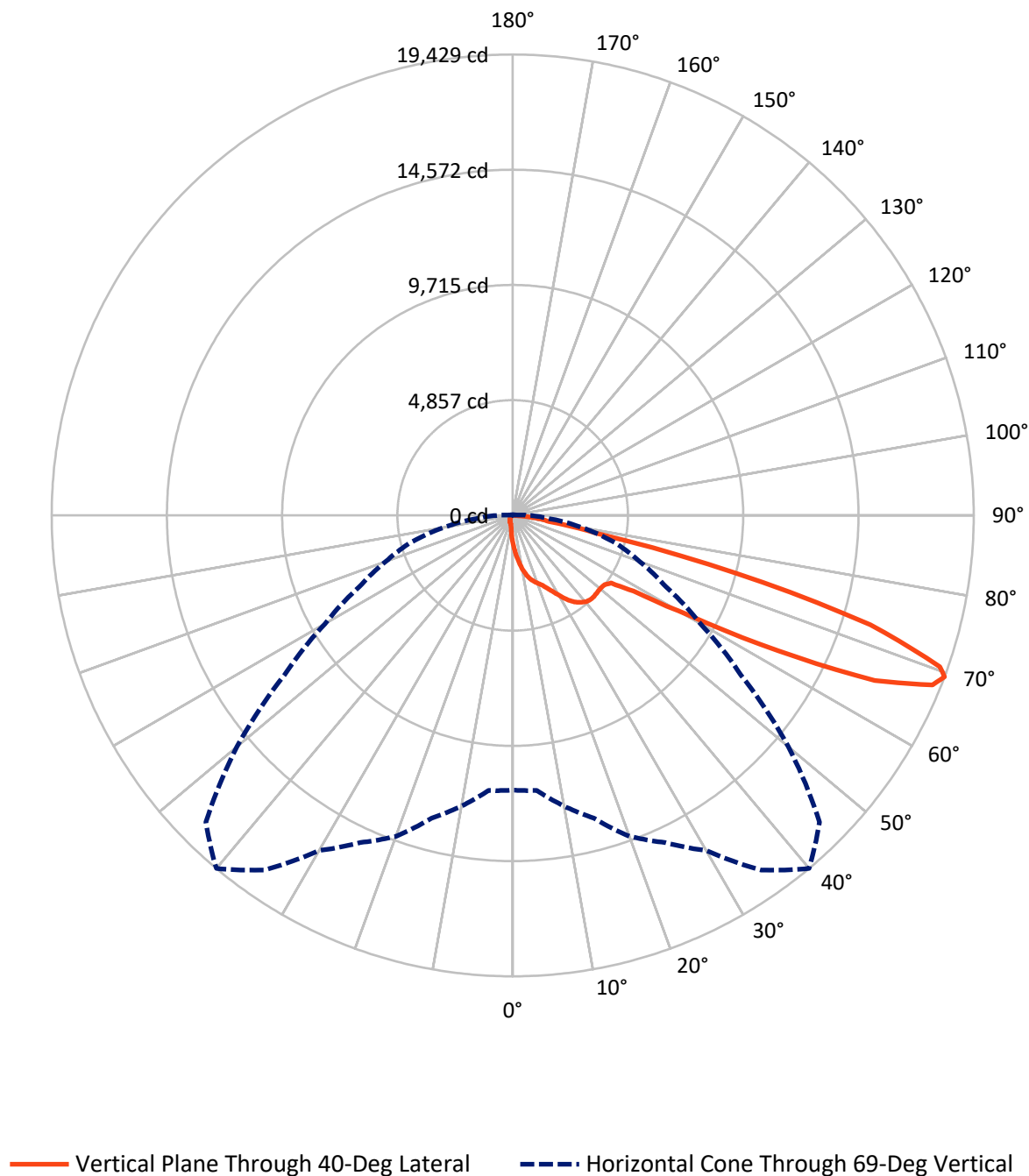


Based on 25 foot mounting height. Maximum calculated value = 5.5 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	456.4	0.0	456.4
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	14870.9	0.0	14870.9
	% Fixture	97.0	0.0	97.0
Total	Lumens	15327.3	0.0	15327.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.0	0.8
10°-20°	410.2	2.7
20°-30°	785.1	5.1
30°-40°	1305.6	8.5
40°-50°	1766.7	11.5
50°-60°	2763.0	18.0
60°-70°	5680.6	37.1
70°-80°	2285.8	14.9
80°-90°	211.4	1.4
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°	15327.3	100.0
0°-180°	15327.3	100.0

Coefficient of Utilization



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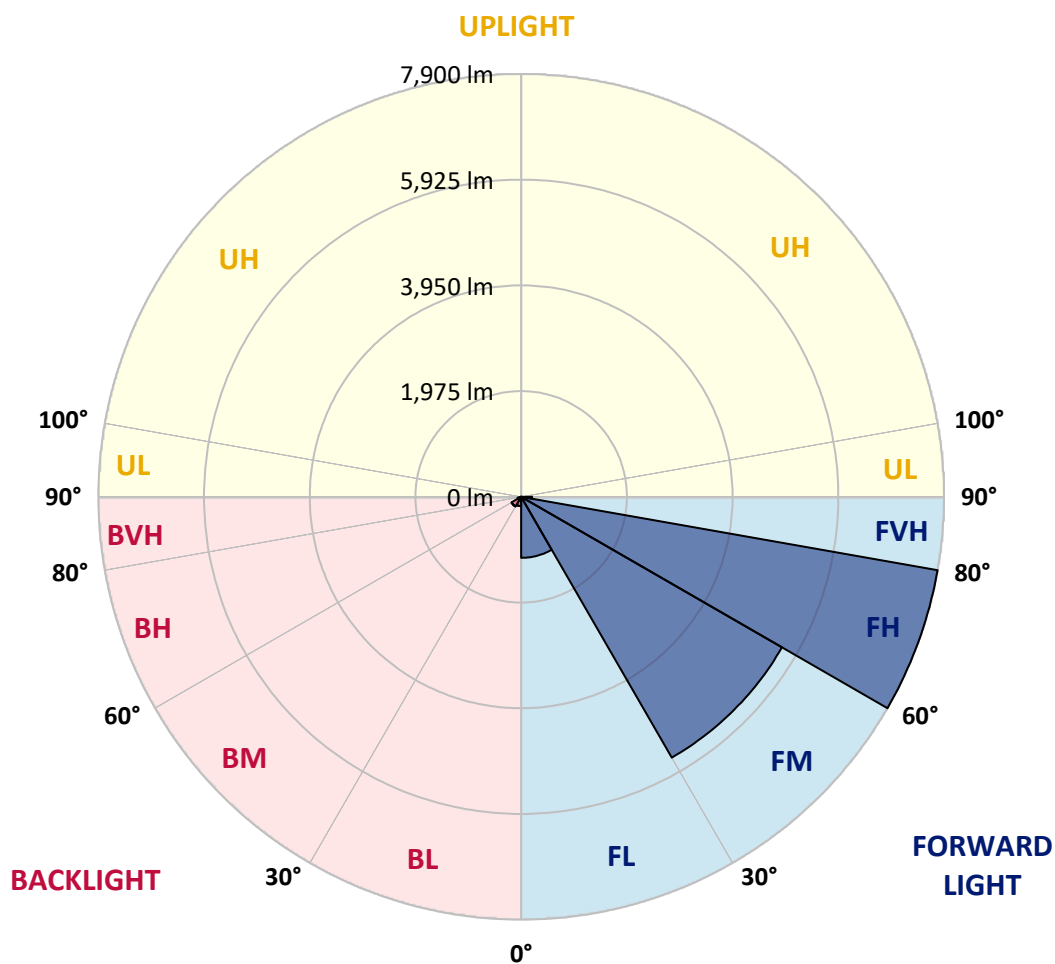
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1140.7	7.4			
FM	(30°-60°)	5626.9	36.7			
FH	(60°-80°)	7899.8	51.5			G4/12000
FVH	(80°-90°)	203.6	1.3			G2/225
BL	(0°-30°)	173.6	1.1	B1/500		
BM	(30°-60°)	208.4	1.4	B0/220		
BH	(60°-80°)	66.6	0.4	B0/110		G0/110
BVH	(80°-90°)	7.9	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6
2.5°	1544.3	1526.6	1506.4	1506.4	1481.4	1481.4	1466.3	1426.2	1421.2	1398.5	1375.9
5°	1971.0	1955.9	1930.9	1908.2	1888.2	1853.0	1827.9	1780.1	1727.5	1677.2	1632.1
7.5°	2387.9	2380.3	2335.1	2327.5	2294.9	2237.2	2186.9	2116.6	2026.2	1955.9	1873.1
10°	2774.6	2756.9	2746.8	2704.1	2656.5	2593.7	2515.8	2430.6	2325.1	2214.5	2096.5
12.5°	3080.9	3070.8	3025.5	3008.0	2957.8	2895.0	2797.1	2686.6	2581.2	2438.1	2299.9
15°	3309.3	3291.8	3261.6	3234.0	3173.7	3118.5	3028.1	2907.5	2779.6	2623.9	2458.2
17.5°	3500.2	3467.6	3459.9	3417.2	3354.6	3289.2	3188.8	3078.3	2927.6	2772.0	2591.1
20°	3756.2	3711.1	3696.0	3633.1	3560.4	3470.0	3354.6	3216.4	3058.2	2887.5	2701.7
22.5°	4057.5	4024.8	3992.2	3937.0	3844.2	3716.1	3547.9	3397.3	3196.3	3008.0	2807.2
25°	4484.4	4456.8	4404.0	4328.7	4213.2	4060.1	3856.7	3635.7	3399.7	3158.6	2922.6
27.5°	4898.7	4873.5	4835.9	4778.2	4647.5	4479.4	4228.2	3947.1	3648.2	3357.0	3095.8
30°	5287.9	5265.2	5227.6	5169.9	5054.3	4888.6	4604.9	4303.6	3932.0	3593.0	3279.2
32.5°	5707.2	5699.6	5656.9	5574.1	5473.7	5250.3	4941.4	4617.5	4240.9	3849.2	3482.5
35°	6181.7	6124.0	6083.8	6000.9	5830.3	5591.7	5230.1	4876.1	4479.4	4077.6	3668.4
37.5°	6583.5	6528.3	6478.0	6372.6	6164.2	5860.3	5451.1	5061.8	4652.6	4243.3	3826.5
40°	6877.2	6849.6	6789.3	6651.2	6417.8	6056.3	5614.2	5189.9	4778.2	4366.4	3954.6
42.5°	7095.7	7053.0	6985.3	6842.1	6566.0	6154.1	5679.5	5242.7	4835.9	4441.7	4037.5
45°	7176.0	7140.9	7078.1	6922.5	6623.6	6181.7	5677.0	5227.6	4838.4	4464.3	4092.7
47.5°	7128.3	7093.2	7037.9	6892.3	6598.6	6149.1	5631.9	5184.9	4813.3	4471.9	4142.9
50°	6970.2	6950.1	6907.4	6784.3	6520.7	6086.3	5591.7	5162.3	4808.3	4509.6	4213.2
52.5°	6955.1	6942.6	6889.8	6766.8	6498.1	6066.2	5586.6	5175.0	4850.9	4557.3	4263.5
55°	8499.2	8320.9	7921.8	7582.8	7025.4	6362.6	5840.2	5378.2	5031.8	4745.6	4539.6
57.5°	12079.7	11813.7	11288.8	10643.6	9362.9	8105.0	7098.3	6370.0	6011.0	5880.4	5958.2
60°	13756.9	13709.4	13626.4	13320.1	12664.8	11582.7	10377.4	9074.3	8551.9	8506.8	8664.9
62.5°	14553.0	14522.8	14548.0	14510.3	14306.9	13990.5	13643.9	13081.6	12564.3	12230.4	11522.3
65°	14919.5	14939.7	15082.7	15195.7	15220.8	15303.6	15557.3	16257.8	16770.0	15908.8	13942.8
67.5°	13987.9	14105.9	14435.0	14846.7	15328.8	15795.8	16549.0	18025.4	19077.5	18065.7	15273.6
69°	11580.1	11637.9	12441.2	13217.2	14394.7	15218.4	16310.6	18246.4	19429.1	18286.6	15168.1
70°	9116.9	9169.6	10030.9	11085.4	13076.6	14136.1	15564.8	17872.3	19100.1	17992.8	14625.7
72.5°	4112.8	4037.5	4341.2	4906.1	7070.5	8752.9	11251.2	14480.1	15758.1	14414.9	10942.3
75°	2872.5	2839.8	2872.5	2874.9	3211.4	4142.9	5227.6	7848.9	9706.9	8376.3	5227.6
77.5°	2224.6	2202.0	2179.5	2154.3	2194.6	2458.2	2563.5	2784.5	3615.6	3419.8	1993.6
80°	1760.2	1740.0	1795.2	1777.7	1777.7	1807.9	1787.8	1704.8	1549.1	1436.1	1285.5
82.5°	818.5	823.5	823.5	893.8	1077.2	1257.9	1315.7	1232.9	1094.8	931.5	750.8
85°	77.8	87.8	148.2	228.6	454.5	512.2	514.8	426.8	426.8	336.5	271.1
87.5°	0.0	2.4	2.4	2.4	22.6	62.8	52.8	15.1	7.5	7.5	12.5
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6
2.5°	1335.8	1328.2	1298.2	1268.0	1240.4	1210.2	1182.6	1155.0	1124.8	1102.2	1074.6
5°	1561.8	1506.4	1443.8	1383.5	1323.2	1260.5	1195.2	1137.5	1077.2	1021.9	969.1
7.5°	1790.2	1682.2	1596.9	1488.9	1391.0	1293.1	1202.7	1109.9	1024.5	944.1	868.8
10°	1983.5	1853.0	1719.9	1581.9	1441.2	1310.7	1185.2	1074.6	961.7	863.8	770.9
12.5°	2141.8	1976.1	1812.9	1639.5	1481.4	1315.7	1160.0	1026.9	893.8	783.4	688.0
15°	2284.8	2094.1	1898.1	1697.3	1496.5	1308.2	1134.9	969.1	833.6	708.1	600.1
17.5°	2400.4	2181.9	1961.0	1735.0	1519.1	1298.2	1102.2	929.0	770.9	640.2	534.9
20°	2500.9	2272.3	2033.8	1780.1	1534.2	1295.6	1074.6	878.9	715.6	577.6	474.5
22.5°	2593.7	2365.2	2109.2	1837.9	1556.8	1293.1	1049.5	841.2	667.8	529.8	426.8
25°	2699.2	2458.2	2189.5	1898.1	1596.9	1303.2	1034.5	811.0	625.1	484.6	389.1
27.5°	2817.3	2563.5	2284.8	1973.5	1649.6	1323.2	1029.5	778.4	587.5	441.9	359.1
30°	2982.8	2689.2	2380.3	2048.8	1697.3	1345.9	1024.5	758.3	549.8	409.2	328.9
32.5°	3128.6	2812.2	2485.8	2126.7	1750.1	1368.5	1021.9	730.7	514.8	376.6	306.3
35°	3281.7	2925.2	2576.2	2202.0	1795.2	1393.5	1019.4	710.5	482.1	344.0	283.8
37.5°	3414.8	3020.5	2646.5	2267.3	1845.5	1416.2	1021.9	693.0	451.9	316.4	263.6
40°	3527.8	3118.5	2724.2	2327.5	1898.1	1451.2	1024.5	675.5	421.9	291.2	246.1
42.5°	3628.3	3211.4	2807.2	2395.4	1958.5	1491.5	1039.6	660.4	396.7	268.7	228.6
45°	3706.0	3296.8	2897.5	2490.8	2056.4	1556.8	1067.2	650.3	371.6	248.5	213.5
47.5°	3786.4	3422.3	3050.7	2641.5	2199.6	1659.7	1114.9	647.9	351.5	233.4	200.8
50°	3896.9	3547.9	3186.2	2794.5	2330.1	1765.2	1172.5	650.3	326.4	218.5	188.3
52.5°	3977.3	3675.8	3362.0	3060.8	2641.5	2086.4	1396.0	695.4	313.8	205.8	173.2
55°	4451.8	4399.0	4406.5	4456.8	4132.9	3550.3	2335.1	1004.3	369.1	233.4	170.8
57.5°	6277.2	6462.9	6570.9	6568.4	6033.5	5004.2	3136.1	1290.5	411.8	271.1	203.4
60°	8677.6	8537.0	8338.6	7848.9	7138.4	5712.3	3507.7	1388.6	356.5	215.9	185.9
62.5°	10799.2	9975.6	9244.9	8451.6	7520.0	5958.2	3583.0	1381.0	311.4	163.1	130.5
65°	12122.4	10641.0	9461.0	8466.6	7369.4	5752.4	3389.6	1268.0	263.6	133.1	108.0
67.5°	12438.8	10281.9	8612.3	7344.2	6156.6	4476.9	2488.2	954.2	205.8	110.5	95.4
69°	11748.2	9139.6	7135.9	5697.2	4479.4	2970.3	1539.2	602.6	158.1	100.5	87.8
70°	10806.7	7949.4	5812.6	4572.2	3316.9	2086.4	1077.2	424.3	128.1	92.9	80.4
72.5°	6952.6	4175.5	2857.4	1988.6	1368.5	831.1	421.9	190.9	97.9	77.8	65.3
75°	2696.6	1544.3	1119.9	851.1	665.4	462.0	256.2	123.0	82.8	65.3	50.2
77.5°	1328.2	1016.8	831.1	569.9	331.5	205.8	138.1	95.4	67.9	47.7	32.6
80°	1049.5	698.0	416.9	258.6	195.8	148.2	105.5	77.8	50.2	30.2	22.6
82.5°	537.3	293.8	215.9	175.8	145.6	115.6	85.4	55.2	32.6	20.1	17.5
85°	168.2	123.0	110.5	108.0	100.5	82.8	60.2	35.2	20.1	12.5	12.5
87.5°	12.5	17.5	22.6	17.5	20.1	17.5	22.6	15.1	10.1	10.1	7.5
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6	1157.6
2.5°	1054.5	1024.5	996.9	979.2	946.6	934.1	921.6	916.5	893.8	898.8	878.9
5°	921.6	868.8	828.5	788.4	750.8	723.2	700.5	672.9	650.3	640.2	620.1
7.5°	800.9	733.2	680.5	637.8	592.5	557.4	527.3	507.1	487.2	467.0	457.0
10°	695.4	622.7	562.5	519.8	477.1	446.9	424.3	409.2	396.7	389.1	386.7
12.5°	597.5	527.3	472.1	434.4	401.8	386.7	376.6	369.1	366.5	364.1	364.1
15°	522.2	451.9	409.2	381.6	366.5	359.1	356.5	351.5	346.6	344.0	344.0
17.5°	451.9	399.2	369.1	354.0	346.6	341.5	336.5	331.5	326.4	323.9	323.9
20°	404.2	361.5	346.6	336.5	328.9	323.9	316.4	311.4	308.9	306.3	303.9
22.5°	366.5	338.9	328.9	321.4	311.4	303.9	298.8	293.8	288.8	286.2	283.8
25°	338.9	321.4	313.8	303.9	293.8	286.2	278.7	271.1	266.2	263.6	258.6
27.5°	318.8	306.3	296.3	283.8	273.7	266.2	258.6	251.1	246.1	241.1	238.5
30°	301.3	288.8	276.1	266.2	253.6	246.1	236.0	228.6	226.0	220.9	215.9
32.5°	283.8	271.1	258.6	246.1	233.4	223.5	218.5	208.4	203.4	200.8	195.8
35°	263.6	251.1	236.0	226.0	213.5	203.4	195.8	188.3	183.3	178.2	175.8
37.5°	246.1	231.0	215.9	203.4	193.3	183.3	175.8	168.2	163.1	158.1	155.7
40°	226.0	210.9	195.8	183.3	173.2	165.7	158.1	150.6	145.6	143.2	143.2
42.5°	208.4	190.9	175.8	165.7	158.1	148.2	140.6	133.1	130.5	128.1	130.5
45°	190.9	173.2	160.7	150.6	143.2	133.1	125.5	120.5	118.0	120.5	123.0
47.5°	175.8	158.1	145.6	138.1	130.5	123.0	115.6	110.5	110.5	115.6	120.5
50°	160.7	143.2	133.1	128.1	120.5	113.0	102.9	100.5	102.9	108.0	113.0
52.5°	145.6	125.5	118.0	115.6	108.0	100.5	92.9	90.4	92.9	97.9	95.4
55°	130.5	110.5	108.0	105.5	97.9	87.8	80.4	80.4	80.4	77.8	72.9
57.5°	125.5	97.9	95.4	92.9	85.4	75.3	70.3	65.3	62.8	55.2	52.8
60°	130.5	87.8	87.8	82.8	75.3	65.3	57.8	50.2	45.1	40.1	40.1
62.5°	105.5	80.4	77.8	72.9	62.8	52.8	45.1	37.7	35.2	32.6	32.6
65°	85.4	72.9	67.9	60.2	52.8	42.7	35.2	30.2	27.6	27.6	30.2
67.5°	77.8	65.3	57.8	50.2	42.7	32.6	27.6	25.2	25.2	27.6	27.6
69°	72.9	60.2	52.8	45.1	37.7	30.2	25.2	25.2	25.2	25.2	27.6
70°	67.9	57.8	50.2	42.7	32.6	25.2	22.6	22.6	25.2	25.2	27.6
72.5°	52.8	45.1	42.7	35.2	25.2	22.6	20.1	22.6	22.6	25.2	25.2
75°	40.1	32.6	32.6	27.6	20.1	17.5	17.5	20.1	20.1	22.6	22.6
77.5°	27.6	22.6	22.6	20.1	17.5	15.1	15.1	17.5	20.1	20.1	22.6
80°	20.1	17.5	15.1	17.5	15.1	12.5	15.1	17.5	17.5	20.1	20.1
82.5°	15.1	15.1	15.1	15.1	12.5	12.5	15.1	15.1	17.5	20.1	20.1
85°	12.5	12.5	12.5	12.5	12.5	12.5	12.5	15.1	15.1	17.5	17.5
87.5°	7.5	7.5	7.5	10.1	10.1	12.5	12.5	12.5	12.5	15.1	15.1
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):

	165°	170°	175°	180°
0°	1157.6	1157.6	1157.6	1157.6
2.5°	873.8	871.2	861.2	863.8
5°	612.6	597.5	607.6	605.2
7.5°	449.5	446.9	444.5	449.5
10°	384.2	384.2	381.6	384.2
12.5°	361.5	361.5	361.5	361.5
15°	344.0	344.0	341.5	341.5
17.5°	323.9	323.9	323.9	321.4
20°	303.9	301.3	301.3	301.3
22.5°	281.2	278.7	278.7	278.7
25°	258.6	256.2	256.2	256.2
27.5°	236.0	233.4	231.0	231.0
30°	213.5	210.9	208.4	208.4
32.5°	190.9	188.3	185.9	185.9
35°	170.8	170.8	168.2	165.7
37.5°	153.2	153.2	153.2	153.2
40°	140.6	143.2	143.2	143.2
42.5°	133.1	135.5	138.1	140.6
45°	128.1	133.1	135.5	135.5
47.5°	125.5	128.1	130.5	130.5
50°	115.6	113.0	113.0	113.0
52.5°	92.9	87.8	85.4	82.8
55°	67.9	65.3	60.2	60.2
57.5°	47.7	47.7	45.1	45.1
60°	37.7	37.7	35.2	37.7
62.5°	32.6	32.6	32.6	32.6
65°	30.2	30.2	30.2	30.2
67.5°	30.2	30.2	30.2	30.2
69°	27.6	27.6	27.6	27.6
70°	27.6	27.6	27.6	27.6
72.5°	25.2	25.2	25.2	25.2
75°	22.6	25.2	25.2	25.2
77.5°	22.6	22.6	22.6	22.6
80°	20.1	20.1	22.6	22.6
82.5°	20.1	20.1	20.1	20.1
85°	17.5	17.5	20.1	20.1
87.5°	15.1	15.1	17.5	17.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)