

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: P165547

Luminaire Tested: **VST-E11-LED-E-U-SL4-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P165547
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-E11-LED-E-U-SL4-HSS
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (231) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22115.4 lumens
Efficiency: N/A
Efficacy: 82.0 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1.83' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G4

Input Watts (W): 269.7
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

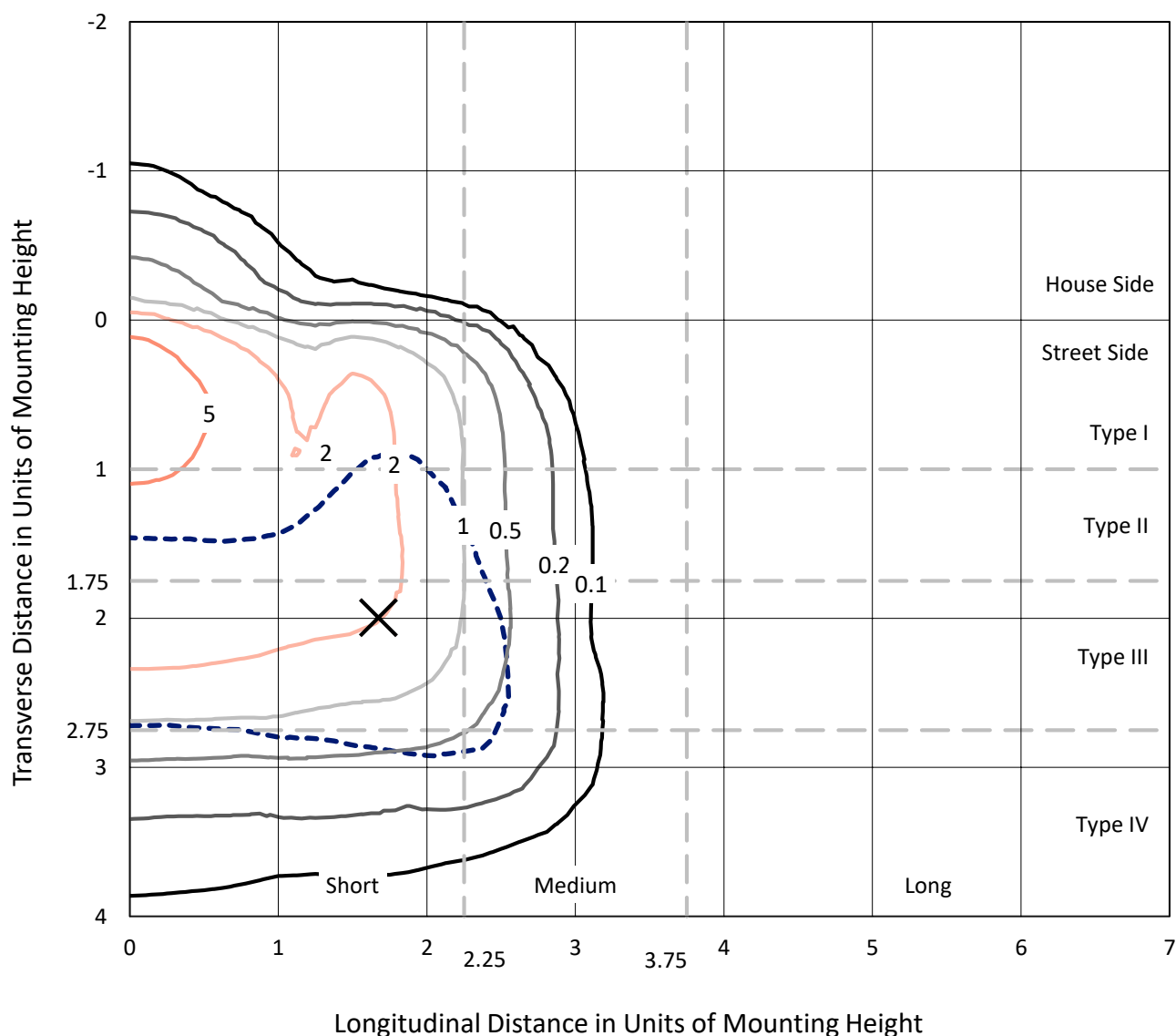


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

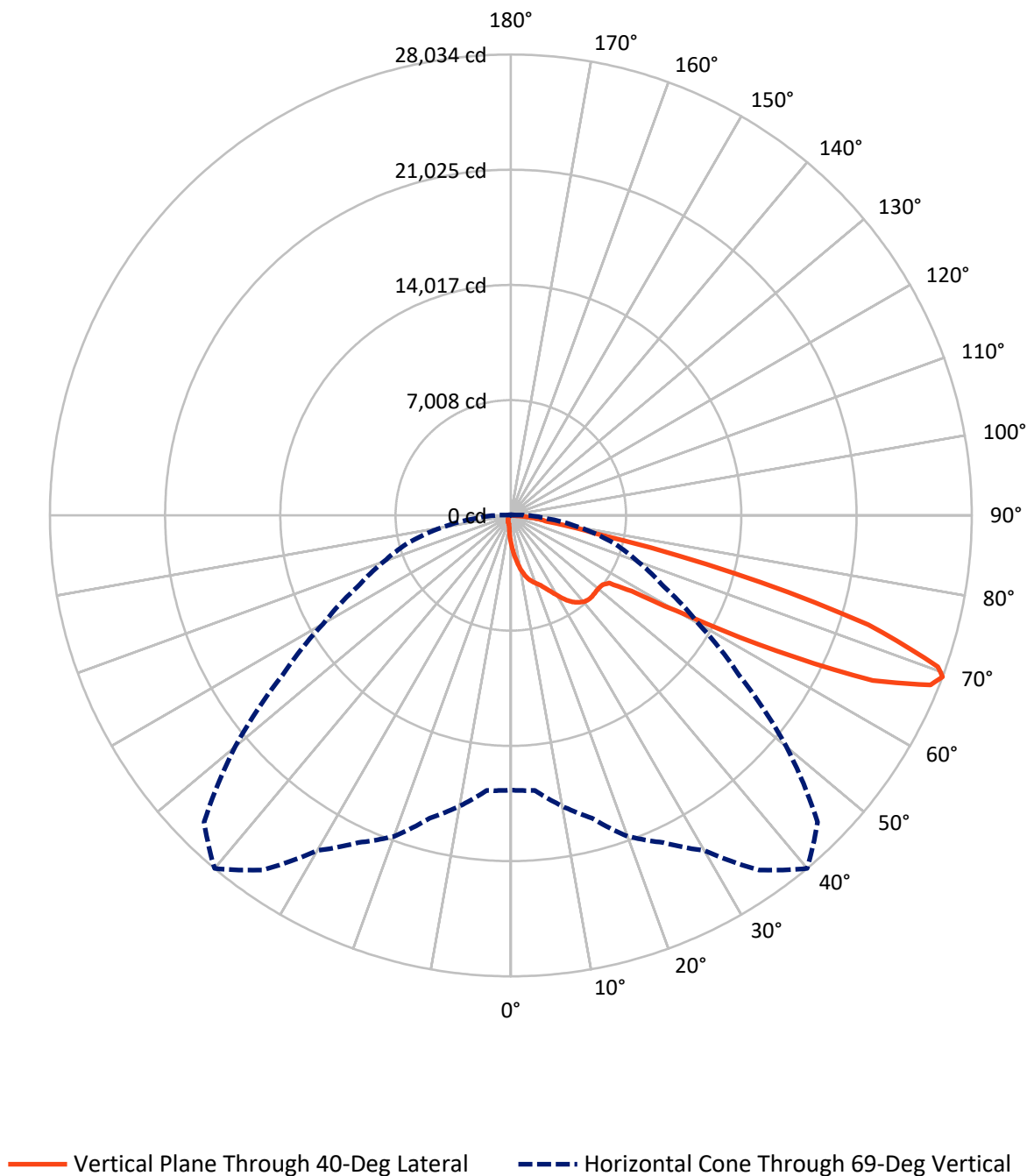


Based on 25 foot mounting height. Maximum calculated value = 7.9 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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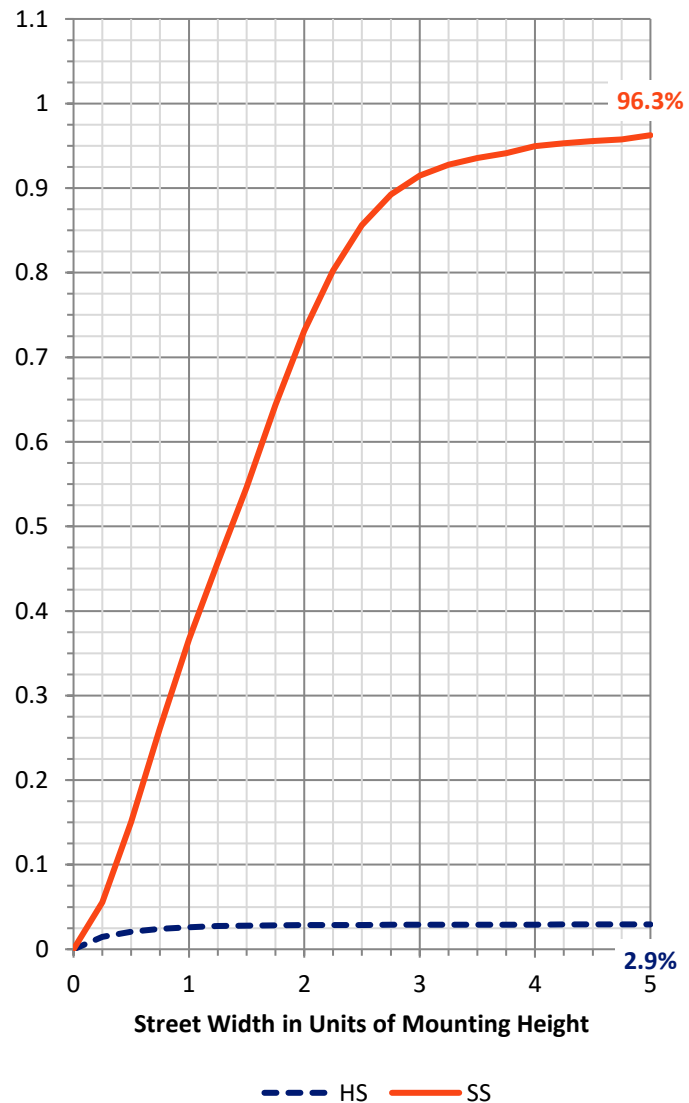
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	658.6	0.0	658.6
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	21456.8	0.0	21456.8
	% Fixture	97.0	0.0	97.0
Total	Lumens	22115.4	0.0	22115.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.7	0.8
10°-20°	591.9	2.7
20°-30°	1132.8	5.1
30°-40°	1883.9	8.5
40°-50°	2549.2	11.5
50°-60°	3986.6	18.0
60°-70°	8196.4	37.1
70°-80°	3298.1	14.9
80°-90°	305.1	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°	22115.4	100.0
0°-180°	22115.4	100.0

Coefficient of Utilization



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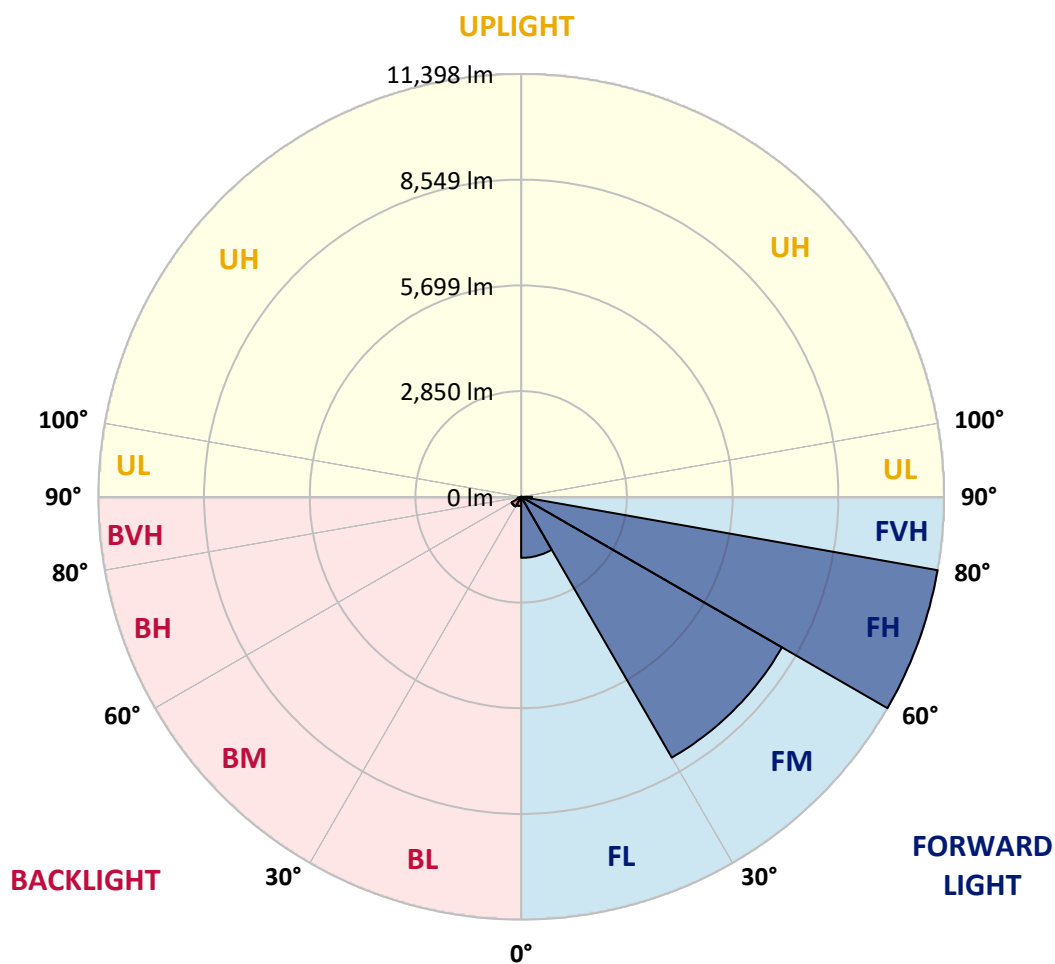
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1645.8	7.4			
FM	(30°-60°)	8118.9	36.7			
FH	(60°-80°)	11398.4	51.5			G4/12000
FVH	(80°-90°)	293.7	1.3			G3/500
BL	(0°-30°)	250.5	1.1	B1/500		
BM	(30°-60°)	300.7	1.4	B1/1000		
BH	(60°-80°)	96.1	0.4	B0/110		G0/110
BVH	(80°-90°)	11.3	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: 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°	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2
2.5°	2228.2	2202.6	2173.6	2173.6	2137.5	2137.5	2115.7	2057.9	2050.6	2017.8	1985.3
5°	2843.9	2822.2	2786.1	2753.3	2724.5	2673.7	2637.4	2568.5	2492.6	2420.0	2354.9
7.5°	3445.4	3434.4	3369.3	3358.3	3311.2	3228.1	3155.5	3054.0	2923.6	2822.2	2702.7
10°	4003.3	3977.8	3963.3	3901.7	3833.1	3742.4	3630.0	3507.0	3354.8	3195.3	3025.0
12.5°	4445.3	4430.8	4365.5	4340.2	4267.8	4177.1	4035.9	3876.4	3724.4	3517.8	3318.5
15°	4774.9	4749.6	4706.0	4666.2	4579.3	4499.7	4369.2	4195.2	4010.6	3786.0	3546.8
17.5°	5050.3	5003.2	4992.2	4930.6	4840.2	4745.8	4601.1	4441.6	4224.2	3999.6	3738.7
20°	5419.7	5354.6	5332.8	5242.2	5137.2	5006.8	4840.2	4640.9	4412.5	4166.4	3898.2
22.5°	5854.4	5807.3	5760.3	5680.6	5546.6	5361.8	5119.2	4901.8	4611.9	4340.2	4050.4
25°	6470.4	6430.6	6354.5	6245.8	6079.0	5858.2	5564.7	5245.9	4905.3	4557.5	4217.0
27.5°	7068.2	7031.9	6977.5	6894.4	6705.8	6463.2	6100.8	5695.1	5263.9	4843.7	4466.9
30°	7629.8	7597.0	7542.7	7459.5	7292.8	7053.6	6644.2	6209.5	5673.4	5184.3	4731.5
32.5°	8234.8	8223.8	8162.2	8042.8	7897.8	7575.5	7129.8	6662.5	6119.1	5553.9	5024.8
35°	8919.5	8836.1	8778.2	8658.5	8412.4	8068.1	7546.4	7035.6	6463.2	5883.5	5293.0
37.5°	9499.2	9419.5	9346.9	9194.9	8894.2	8455.7	7865.2	7303.6	6713.1	6122.6	5521.1
40°	9922.9	9883.1	9796.2	9596.8	9260.0	8738.4	8100.6	7488.4	6894.4	6300.1	5705.9
42.5°	10238.1	10176.5	10078.9	9872.3	9473.9	8879.6	8194.8	7564.5	6977.5	6408.8	5825.6
45°	10354.1	10303.5	10212.8	9988.2	9557.0	8919.5	8191.3	7542.7	6981.3	6441.4	5905.2
47.5°	10285.2	10234.6	10154.8	9944.7	9520.9	8872.4	8126.1	7481.1	6945.0	6452.4	5977.6
50°	10057.1	10028.0	9966.4	9788.9	9408.5	8781.7	8068.1	7448.5	6937.7	6506.7	6079.0
52.5°	10035.3	10017.3	9941.1	9763.6	9376.0	8752.7	8060.8	7466.8	6999.3	6575.6	6151.6
55°	12263.2	12006.1	11430.1	10941.0	10136.7	9180.4	8426.7	7760.1	7260.2	6847.3	6550.1
57.5°	17429.5	17045.6	16288.4	15357.3	13509.5	11694.5	10241.9	9191.2	8673.1	8484.7	8596.9
60°	19849.5	19780.9	19661.2	19219.2	18273.6	16712.3	14973.2	13093.1	12339.4	12274.2	12502.4
62.5°	20998.1	20954.6	20990.9	20936.5	20643.0	20186.5	19686.5	18875.1	18128.7	17646.9	16625.2
65°	21527.0	21556.0	21762.4	21925.4	21961.7	22081.2	22447.3	23457.9	24196.9	22954.4	20117.7
67.5°	20182.8	20353.1	20827.8	21421.8	22117.5	22791.3	23878.1	26008.4	27526.4	26066.5	22037.8
69°	16708.6	16791.9	17951.1	19070.7	20769.8	21958.2	23534.1	26327.2	28033.7	26385.3	21885.6
70°	13154.5	13230.6	14473.4	15994.9	18867.9	20396.6	22458.0	25787.5	27559.0	25961.3	21103.1
72.5°	5934.3	5825.6	6263.8	7078.9	10201.8	12629.3	16234.0	20893.0	22737.0	20798.8	15788.3
75°	4144.6	4097.5	4144.6	4148.1	4633.6	5977.6	7542.7	11324.9	14005.9	12085.9	7542.7
77.5°	3209.8	3177.2	3144.7	3108.4	3166.5	3546.8	3698.9	4017.6	5216.9	4934.4	2876.5
80°	2539.7	2510.6	2590.3	2565.0	2565.0	2608.5	2579.5	2459.8	2235.2	2072.2	1854.8
82.5°	1181.0	1188.2	1188.2	1289.6	1554.3	1815.0	1898.4	1778.9	1579.6	1344.0	1083.3
85°	112.2	126.7	213.8	329.8	655.8	739.0	742.7	615.8	615.8	485.5	391.2
87.5°	0.0	3.5	3.5	3.5	32.6	90.6	76.1	21.8	10.8	10.8	18.0
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2
2.5°	1927.4	1916.4	1873.1	1829.5	1789.7	1746.1	1706.3	1666.5	1622.9	1590.4	1550.6
5°	2253.5	2173.6	2083.2	1996.3	1909.2	1818.7	1724.6	1641.2	1554.3	1474.4	1398.3
7.5°	2583.0	2427.3	2304.1	2148.3	2007.1	1865.8	1735.4	1601.4	1478.2	1362.2	1253.6
10°	2862.0	2673.7	2481.6	2282.5	2079.4	1891.1	1710.1	1550.6	1387.5	1246.3	1112.3
12.5°	3090.3	2851.2	2615.8	2365.7	2137.5	1898.4	1673.8	1481.7	1289.6	1130.4	992.6
15°	3296.7	3021.5	2738.8	2449.0	2159.3	1887.6	1637.5	1398.3	1202.7	1021.7	865.9
17.5°	3463.5	3148.2	2829.4	2503.4	2191.9	1873.1	1590.4	1340.5	1112.3	923.8	771.8
20°	3608.4	3278.7	2934.6	2568.5	2213.6	1869.3	1550.6	1268.1	1032.5	833.4	684.6
22.5°	3742.4	3412.6	3043.3	2651.9	2246.2	1865.8	1514.3	1213.7	963.6	764.5	615.8
25°	3894.7	3546.8	3159.2	2738.8	2304.1	1880.3	1492.7	1170.2	902.0	699.2	561.4
27.5°	4064.9	3698.9	3296.7	2847.5	2380.2	1909.2	1485.4	1123.1	847.7	637.6	518.1
30°	4303.9	3880.1	3434.4	2956.1	2449.0	1941.9	1478.2	1094.1	793.3	590.5	474.5
32.5°	4514.2	4057.7	3586.7	3068.6	2525.2	1974.5	1474.4	1054.2	742.7	543.4	442.0
35°	4735.1	4220.7	3717.1	3177.2	2590.3	2010.6	1470.9	1025.2	695.6	496.3	409.4
37.5°	4927.1	4358.2	3818.5	3271.4	2662.9	2043.4	1474.4	999.9	652.1	456.5	380.4
40°	5090.1	4499.7	3930.7	3358.3	2738.8	2094.0	1478.2	974.6	608.7	420.2	355.1
42.5°	5235.1	4633.6	4050.4	3456.2	2825.9	2152.0	1500.0	952.8	572.4	387.6	329.8
45°	5347.3	4756.8	4180.7	3593.9	2967.1	2246.2	1539.8	938.3	536.1	358.6	308.0
47.5°	5463.3	4937.9	4401.8	3811.3	3173.7	2394.7	1608.6	934.8	507.1	336.8	289.7
50°	5622.8	5119.2	4597.3	4032.2	3362.0	2546.9	1691.8	938.3	471.0	315.3	271.7
52.5°	5738.7	5303.8	4851.0	4416.3	3811.3	3010.5	2014.3	1003.4	452.8	297.0	249.9
55°	6423.3	6347.2	6358.0	6430.6	5963.3	5122.7	3369.3	1449.1	532.6	336.8	246.4
57.5°	9057.2	9325.1	9480.9	9477.4	8705.6	7220.4	4525.0	1862.1	594.2	391.2	293.5
60°	12520.6	12317.8	12031.6	11324.9	10299.7	8242.1	5061.1	2003.5	514.4	311.5	268.2
62.5°	15581.9	14393.5	13339.3	12194.6	10850.4	8596.9	5169.8	1992.5	449.2	235.4	188.3
65°	17491.1	15353.6	13651.0	12216.2	10633.0	8299.9	4890.8	1829.5	380.4	192.1	155.8
67.5°	17947.6	14835.5	12426.5	10596.7	8883.2	6459.6	3590.2	1376.8	297.0	159.5	137.7
69°	16951.2	13187.2	10296.2	8220.3	6463.2	4285.8	2220.9	869.4	228.1	145.0	126.7
70°	15592.7	11469.9	8386.8	6597.1	4785.9	3010.5	1554.3	612.3	184.8	134.0	115.9
72.5°	10031.8	6024.7	4122.8	2869.2	1974.5	1199.2	608.7	275.4	141.2	112.2	94.2
75°	3890.9	2228.2	1615.9	1228.0	960.1	666.6	369.6	177.5	119.5	94.2	72.4
77.5°	1916.4	1467.2	1199.2	822.4	478.3	297.0	199.3	137.7	97.9	68.9	47.1
80°	1514.3	1007.2	601.5	373.1	282.5	213.8	152.2	112.2	72.4	43.6	32.6
82.5°	775.3	423.9	311.5	253.7	210.1	166.8	123.2	79.6	47.1	29.0	25.3
85°	242.7	177.5	159.5	155.8	145.0	119.5	86.9	50.8	29.0	18.0	18.0
87.5°	18.0	25.3	32.6	25.3	29.0	25.3	32.6	21.8	14.5	14.5	10.8
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2	1670.2
2.5°	1521.5	1478.2	1438.4	1412.8	1365.8	1347.7	1329.7	1322.4	1289.6	1296.9	1268.1
5°	1329.7	1253.6	1195.5	1137.6	1083.3	1043.5	1010.7	970.9	938.3	923.8	894.7
7.5°	1155.7	1058.0	981.9	920.3	854.9	804.3	760.8	731.7	702.9	673.9	659.3
10°	1003.4	898.5	811.6	750.0	688.4	644.8	612.3	590.5	572.4	561.4	557.9
12.5°	862.2	760.8	681.1	626.8	579.7	557.9	543.4	532.6	528.9	525.4	525.4
15°	753.5	652.1	590.5	550.7	528.9	518.1	514.4	507.1	500.1	496.3	496.3
17.5°	652.1	576.0	532.6	510.8	500.1	492.8	485.5	478.3	471.0	467.3	467.3
20°	583.2	521.6	500.1	485.5	474.5	467.3	456.5	449.2	445.7	442.0	438.5
22.5°	528.9	489.1	474.5	463.8	449.2	438.5	431.2	423.9	416.7	412.9	409.4
25°	489.1	463.8	452.8	438.5	423.9	412.9	402.2	391.2	384.1	380.4	373.1
27.5°	460.0	442.0	427.5	409.4	394.9	384.1	373.1	362.3	355.1	347.8	344.1
30°	434.7	416.7	398.4	384.1	365.9	355.1	340.6	329.8	326.0	318.8	311.5
32.5°	409.4	391.2	373.1	355.1	336.8	322.5	315.3	300.7	293.5	289.7	282.5
35°	380.4	362.3	340.6	326.0	308.0	293.5	282.5	271.7	264.4	257.2	253.7
37.5°	355.1	333.3	311.5	293.5	279.0	264.4	253.7	242.7	235.4	228.1	224.6
40°	326.0	304.3	282.5	264.4	249.9	239.1	228.1	217.4	210.1	206.6	206.6
42.5°	300.7	275.4	253.7	239.1	228.1	213.8	202.8	192.1	188.3	184.8	188.3
45°	275.4	249.9	231.9	217.4	206.6	192.1	181.1	173.8	170.3	173.8	177.5
47.5°	253.7	228.1	210.1	199.3	188.3	177.5	166.8	159.5	159.5	166.8	173.8
50°	231.9	206.6	192.1	184.8	173.8	163.0	148.5	145.0	148.5	155.8	163.0
52.5°	210.1	181.1	170.3	166.8	155.8	145.0	134.0	130.5	134.0	141.2	137.7
55°	188.3	159.5	155.8	152.2	141.2	126.7	115.9	115.9	115.9	112.2	105.2
57.5°	181.1	141.2	137.7	134.0	123.2	108.7	101.4	94.2	90.6	79.6	76.1
60°	188.3	126.7	126.7	119.5	108.7	94.2	83.4	72.4	65.1	57.9	57.9
62.5°	152.2	115.9	112.2	105.2	90.6	76.1	65.1	54.3	50.8	47.1	47.1
65°	123.2	105.2	97.9	86.9	76.1	61.6	50.8	43.6	39.8	39.8	43.6
67.5°	112.2	94.2	83.4	72.4	61.6	47.1	39.8	36.3	36.3	39.8	39.8
69°	105.2	86.9	76.1	65.1	54.3	43.6	36.3	36.3	36.3	36.3	39.8
70°	97.9	83.4	72.4	61.6	47.1	36.3	32.6	32.6	36.3	36.3	39.8
72.5°	76.1	65.1	61.6	50.8	36.3	32.6	29.0	32.6	32.6	36.3	36.3
75°	57.9	47.1	47.1	39.8	29.0	25.3	25.3	29.0	29.0	32.6	32.6
77.5°	39.8	32.6	32.6	29.0	25.3	21.8	21.8	25.3	29.0	29.0	32.6
80°	29.0	25.3	21.8	25.3	21.8	18.0	21.8	25.3	25.3	29.0	29.0
82.5°	21.8	21.8	21.8	21.8	18.0	18.0	21.8	21.8	25.3	29.0	29.0
85°	18.0	18.0	18.0	18.0	18.0	18.0	18.0	21.8	21.8	25.3	25.3
87.5°	10.8	10.8	10.8	14.5	14.5	18.0	18.0	18.0	18.0	21.8	21.8
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):

	165°	170°	175°	180°
0°	1670.2	1670.2	1670.2	1670.2
2.5°	1260.8	1257.1	1242.6	1246.3
5°	884.0	862.2	876.7	873.2
7.5°	648.6	644.8	641.3	648.6
10°	554.4	554.4	550.7	554.4
12.5°	521.6	521.6	521.6	521.6
15°	496.3	496.3	492.8	492.8
17.5°	467.3	467.3	467.3	463.8
20°	438.5	434.7	434.7	434.7
22.5°	405.7	402.2	402.2	402.2
25°	373.1	369.6	369.6	369.6
27.5°	340.6	336.8	333.3	333.3
30°	308.0	304.3	300.7	300.7
32.5°	275.4	271.7	268.2	268.2
35°	246.4	246.4	242.7	239.1
37.5°	221.1	221.1	221.1	221.1
40°	202.8	206.6	206.6	206.6
42.5°	192.1	195.6	199.3	202.8
45°	184.8	192.1	195.6	195.6
47.5°	181.1	184.8	188.3	188.3
50°	166.8	163.0	163.0	163.0
52.5°	134.0	126.7	123.2	119.5
55°	97.9	94.2	86.9	86.9
57.5°	68.9	68.9	65.1	65.1
60°	54.3	54.3	50.8	54.3
62.5°	47.1	47.1	47.1	47.1
65°	43.6	43.6	43.6	43.6
67.5°	43.6	43.6	43.6	43.6
69°	39.8	39.8	39.8	39.8
70°	39.8	39.8	39.8	39.8
72.5°	36.3	36.3	36.3	36.3
75°	32.6	36.3	36.3	36.3
77.5°	32.6	32.6	32.6	32.6
80°	29.0	29.0	32.6	32.6
82.5°	29.0	29.0	29.0	29.0
85°	25.3	25.3	29.0	29.0
87.5°	21.8	21.8	25.3	25.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)