

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: P165531

Luminaire Tested: **VST-F09-LED-E-U-SL4-HSS-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P165531
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-7030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND
HOUSE SIDE SHIELD
Light Source: (63) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13643.1 lumens
Efficiency: N/A
Efficacy: 58.1 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 - G3

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



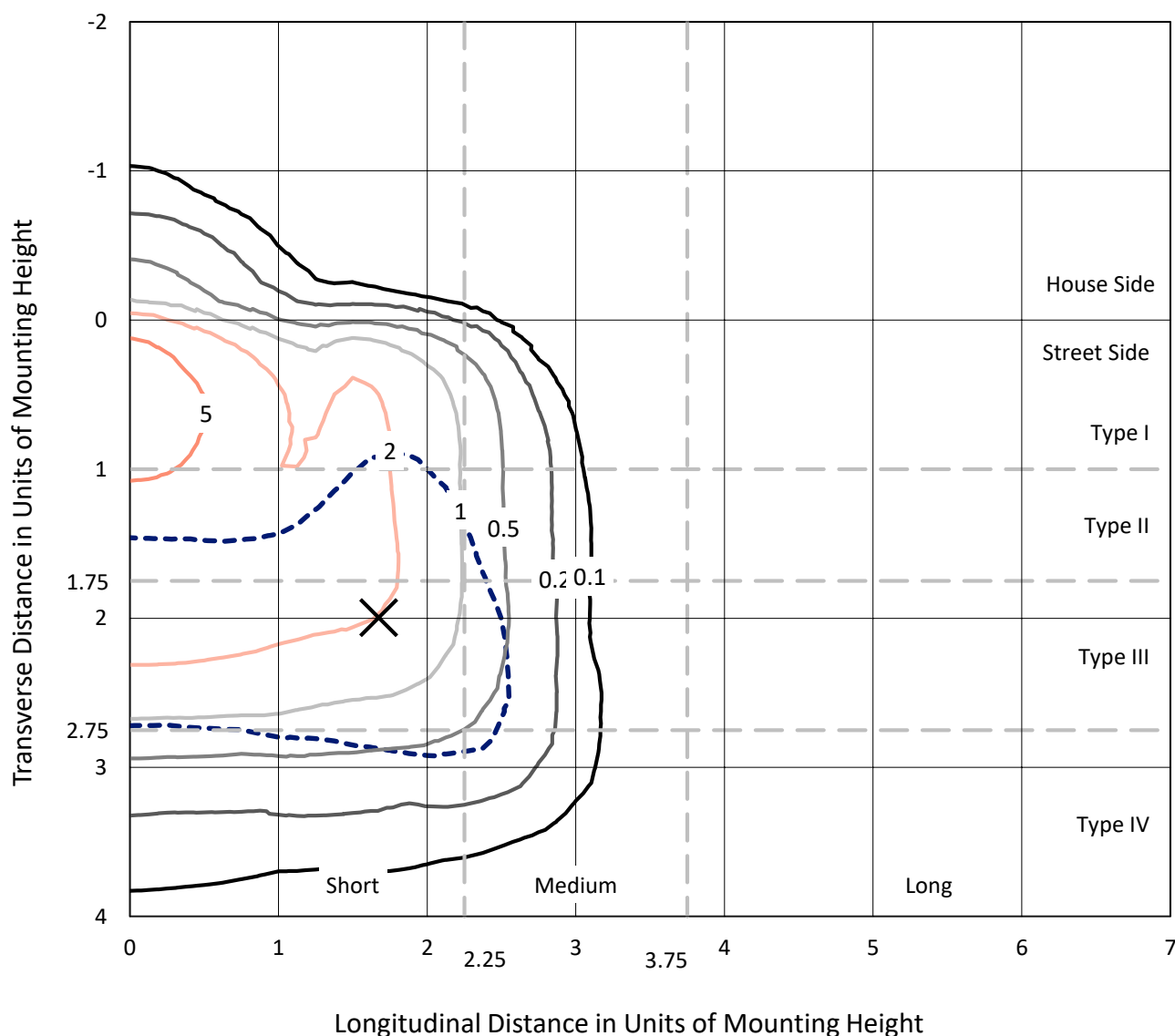
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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

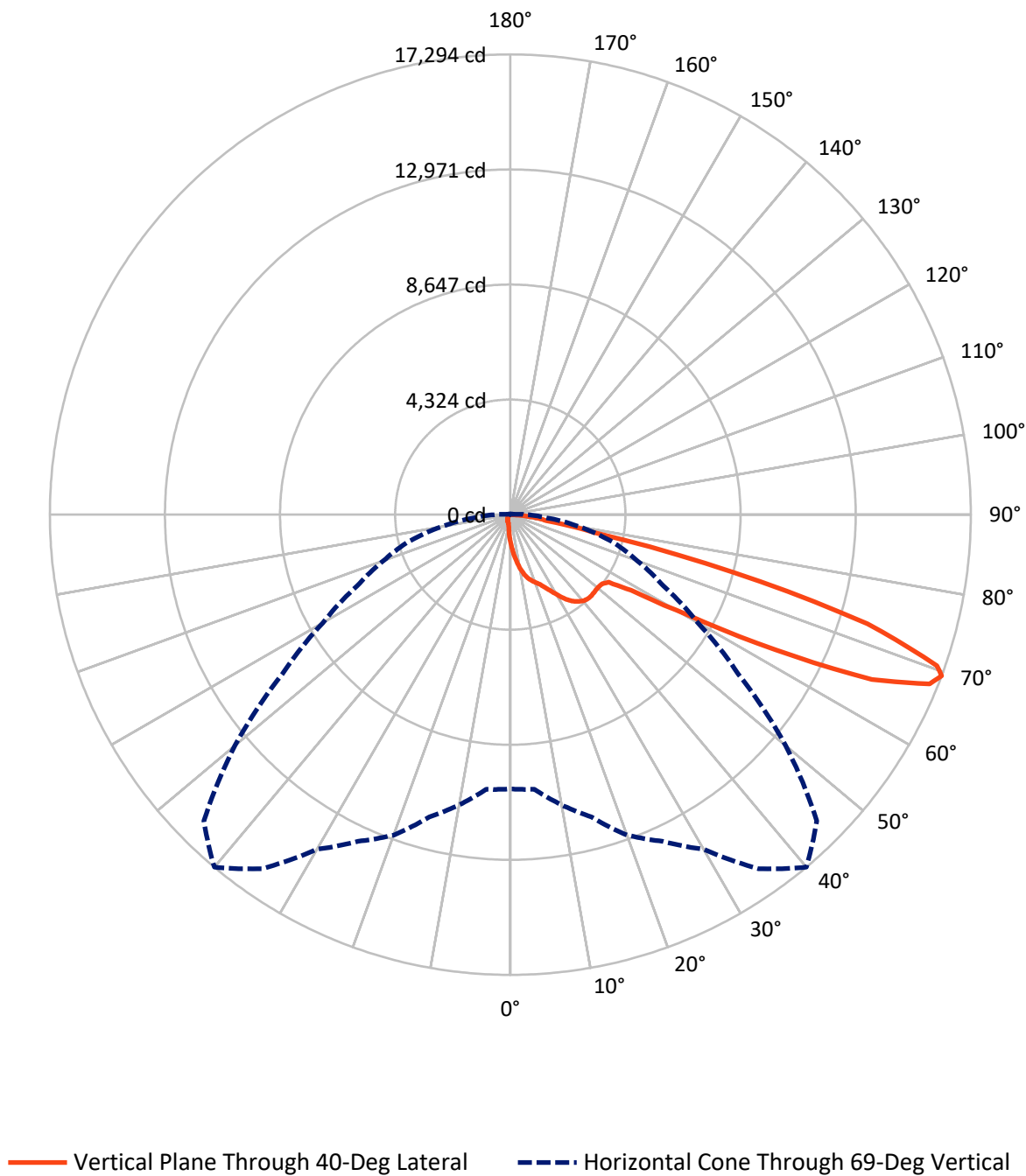


Based on 20 foot mounting height. Maximum calculated value = 7.6 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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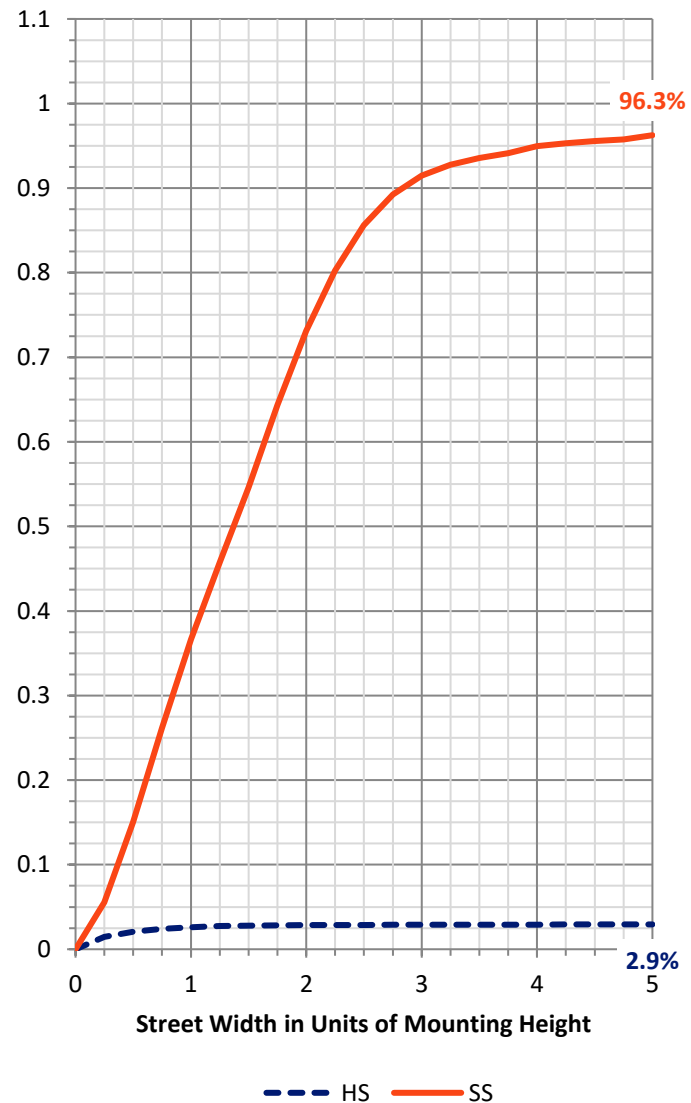
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	406.3	0.0	406.3
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	13236.8	0.0	13236.8
	% Fixture	97.0	0.0	97.0
Total	Lumens	13643.1	0.0	13643.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.9	0.8
10°-20°	365.1	2.7
20°-30°	698.8	5.1
30°-40°	1162.2	8.5
40°-50°	1572.6	11.5
50°-60°	2459.3	18.0
60°-70°	5056.4	37.1
70°-80°	2034.6	14.9
80°-90°	188.2	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°	13643.1	100.0
0°-180°	13643.1	100.0

Coefficient of Utilization



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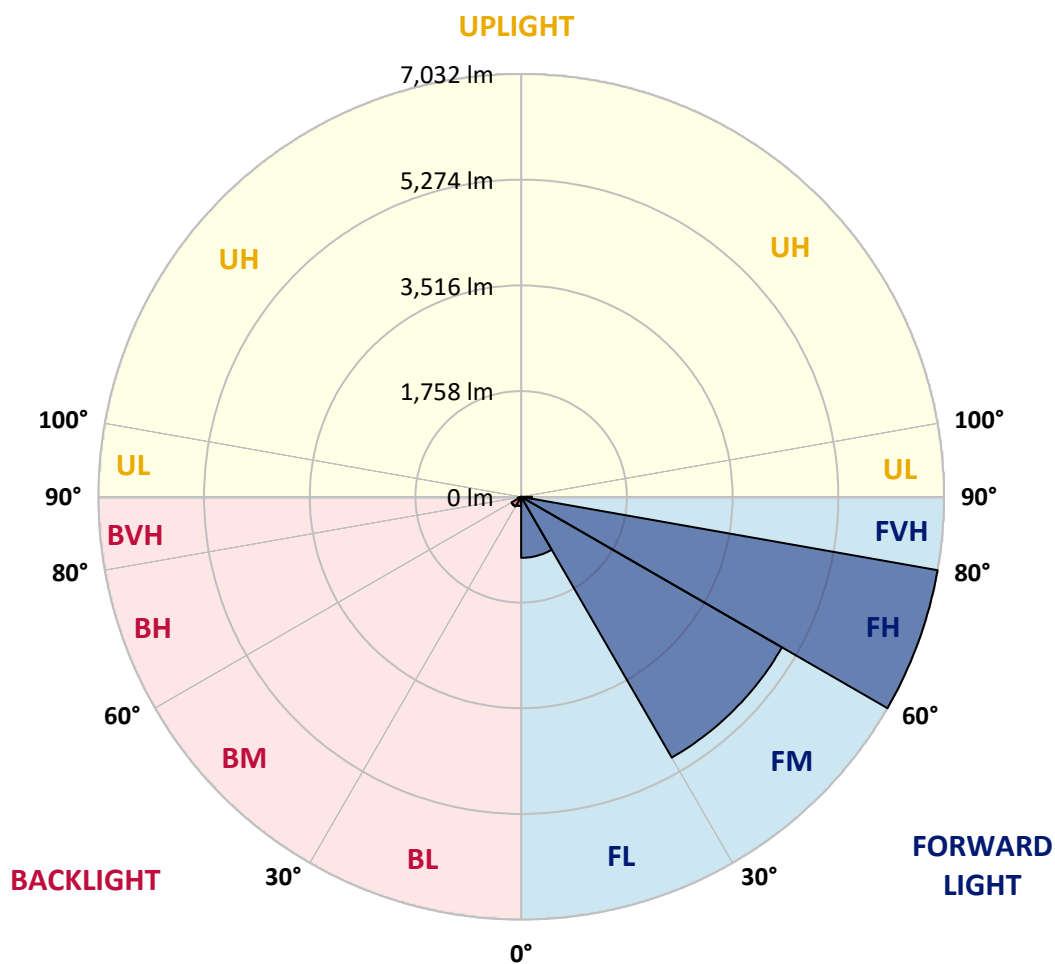
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1015.3	7.4			
FM	(30°-60°)	5008.6	36.7			
FH	(60°-80°)	7031.7	51.5			G3/7500
FVH	(80°-90°)	181.2	1.3			G2/225
BL	(0°-30°)	154.5	1.1	B1/500		
BM	(30°-60°)	185.5	1.4	B0/220		
BH	(60°-80°)	59.3	0.4	B0/110		G0/110
BVH	(80°-90°)	7.0	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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4
2.5°	1374.6	1358.8	1340.9	1340.9	1318.6	1318.6	1305.2	1269.5	1265.0	1244.8	1224.7
5°	1754.4	1741.0	1718.7	1698.5	1680.7	1649.4	1627.0	1584.5	1537.7	1492.9	1452.7
7.5°	2125.5	2118.7	2078.5	2071.7	2042.7	1991.4	1946.6	1884.0	1803.6	1741.0	1667.3
10°	2469.7	2453.9	2445.0	2407.0	2364.6	2308.7	2239.4	2163.5	2069.6	1971.2	1866.1
12.5°	2742.3	2733.4	2693.1	2677.5	2632.8	2576.9	2489.8	2391.4	2297.6	2170.1	2047.2
15°	2945.6	2930.0	2903.2	2878.6	2825.0	2775.9	2695.4	2588.0	2474.2	2335.6	2188.1
17.5°	3115.6	3086.5	3079.7	3041.7	2985.9	2927.7	2838.4	2740.0	2605.9	2467.4	2306.4
20°	3343.4	3303.3	3289.8	3233.9	3169.2	3088.7	2985.9	2863.0	2722.1	2570.2	2404.8
22.5°	3611.6	3582.6	3553.5	3504.4	3421.7	3307.7	3158.0	3024.0	2845.1	2677.5	2498.7
25°	3991.6	3967.1	3920.1	3853.1	3750.2	3613.9	3432.9	3236.2	3026.1	2811.6	2601.5
27.5°	4360.4	4338.0	4304.5	4253.2	4136.8	3987.1	3763.6	3513.4	3247.3	2988.1	2755.6
30°	4706.9	4686.6	4653.1	4601.8	4498.9	4351.4	4098.8	3830.7	3499.9	3198.2	2918.9
32.5°	5080.1	5073.3	5035.3	4961.6	4872.2	4673.3	4398.4	4110.1	3774.9	3426.2	3099.8
35°	5502.4	5451.0	5415.3	5341.5	5189.6	4977.2	4655.4	4340.3	3987.1	3629.5	3265.3
37.5°	5860.1	5810.9	5766.1	5672.4	5486.8	5216.4	4852.1	4505.6	4141.3	3777.1	3406.0
40°	6121.5	6096.9	6043.3	5920.3	5712.5	5390.8	4997.3	4619.6	4253.2	3886.6	3520.0
42.5°	6315.9	6277.9	6217.7	6090.2	5844.5	5477.9	5055.4	4666.6	4304.5	3953.6	3593.8
45°	6387.5	6356.3	6300.3	6161.8	5895.8	5502.4	5053.2	4653.1	4306.8	3973.7	3643.0
47.5°	6345.0	6313.8	6264.5	6134.9	5873.5	5473.4	5013.0	4615.1	4284.4	3980.5	3687.6
50°	6204.3	6186.3	6148.3	6038.8	5804.2	5417.5	4977.2	4595.0	4279.9	4014.0	3750.2
52.5°	6190.8	6179.7	6132.7	6023.2	5784.1	5399.6	4972.7	4606.3	4317.9	4056.5	3795.0
55°	7565.2	7406.6	7051.3	6749.6	6253.4	5663.4	5198.4	4787.2	4478.9	4224.1	4040.8
57.5°	10752.3	10515.5	10048.4	9474.0	8334.1	7214.4	6318.3	5670.1	5350.4	5234.3	5303.5
60°	12245.2	12202.9	12129.1	11856.4	11273.1	10309.9	9237.0	8077.2	7612.2	7572.0	7712.8
62.5°	12953.8	12926.9	12949.3	12915.8	12734.8	12453.2	12144.7	11644.1	11183.6	10886.4	10256.1
65°	13280.1	13298.0	13425.3	13525.9	13548.3	13622.0	13847.8	14471.3	14927.2	14160.6	12410.7
67.5°	12450.8	12555.9	12848.8	13215.2	13644.4	14060.1	14730.5	16044.7	16981.1	16080.5	13595.2
69°	10307.6	10359.0	11074.1	11764.8	12812.9	13546.1	14518.2	16241.3	17294.1	16277.2	13501.3
70°	8115.0	8162.0	8928.7	9867.3	11639.7	12582.8	13854.4	15908.4	17001.2	16015.6	13018.6
72.5°	3660.9	3593.8	3864.2	4367.0	6293.6	7791.1	10014.8	12888.9	14026.5	12830.9	9739.9
75°	2556.8	2527.8	2556.8	2559.0	2858.5	3687.6	4653.1	6986.4	8640.3	7455.8	4653.1
77.5°	1980.1	1960.1	1940.0	1917.6	1953.4	2188.1	2281.8	2478.5	3218.3	3044.0	1774.5
80°	1566.7	1548.8	1598.0	1582.3	1582.3	1609.2	1591.3	1517.5	1378.9	1278.3	1144.2
82.5°	728.5	733.0	733.0	795.6	958.9	1119.7	1171.1	1097.4	974.5	829.1	668.3
85°	69.2	78.2	131.9	203.4	404.6	455.9	458.2	379.9	379.9	299.5	241.3
87.5°	0.0	2.2	2.2	2.2	20.1	55.9	47.0	13.4	6.7	6.7	11.1
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4
2.5°	1189.0	1182.2	1155.5	1128.6	1104.1	1077.2	1052.6	1028.1	1001.2	981.1	956.5
5°	1390.2	1340.9	1285.1	1231.5	1177.8	1122.0	1063.9	1012.5	958.9	909.6	862.6
7.5°	1593.5	1497.4	1421.4	1325.3	1238.2	1151.0	1070.6	987.9	911.9	840.4	773.3
10°	1765.6	1649.4	1530.9	1408.1	1282.8	1166.6	1054.9	956.5	856.0	768.8	686.2
12.5°	1906.4	1758.9	1613.7	1459.4	1318.6	1171.1	1032.5	914.1	795.6	697.3	612.4
15°	2033.7	1864.0	1689.6	1510.8	1332.1	1164.5	1010.2	862.6	742.0	630.3	534.2
17.5°	2136.6	1942.1	1745.5	1544.3	1352.2	1155.5	981.1	826.9	686.2	569.9	476.1
20°	2226.1	2022.6	1810.4	1584.5	1365.6	1153.2	956.5	782.3	636.9	514.1	422.4
22.5°	2308.7	2105.3	1877.4	1636.0	1385.7	1151.0	934.2	748.8	594.4	471.6	379.9
25°	2402.6	2188.1	1948.9	1689.6	1421.4	1160.0	920.9	721.9	556.4	431.3	346.4
27.5°	2507.7	2281.8	2033.7	1756.6	1468.3	1177.8	916.4	692.8	522.9	393.3	319.6
30°	2655.1	2393.7	2118.7	1823.7	1510.8	1198.0	911.9	674.9	489.4	364.3	292.7
32.5°	2784.8	2503.2	2212.6	1893.0	1557.8	1218.1	909.6	650.4	458.2	335.2	272.7
35°	2921.1	2603.8	2293.1	1960.1	1598.0	1240.3	907.4	632.4	429.1	306.2	252.6
37.5°	3039.6	2688.6	2355.7	2018.1	1642.7	1260.6	909.6	616.8	402.3	281.6	234.7
40°	3140.1	2775.9	2424.9	2071.7	1689.6	1291.8	911.9	601.2	375.5	259.2	219.1
42.5°	3229.6	2858.5	2498.7	2132.1	1743.3	1327.6	925.3	587.8	353.1	239.1	203.4
45°	3298.8	2934.5	2579.1	2217.1	1830.4	1385.7	949.9	578.8	330.7	221.2	190.0
47.5°	3370.3	3046.2	2715.5	2351.2	1957.9	1477.3	992.4	576.7	312.8	207.8	178.7
50°	3468.7	3158.0	2836.1	2487.5	2074.1	1571.2	1043.7	578.8	290.6	194.5	167.6
52.5°	3540.2	3271.9	2992.6	2724.4	2351.2	1857.2	1242.6	619.0	279.3	183.2	154.2
55°	3962.6	3915.6	3922.3	3967.1	3678.8	3160.2	2078.5	894.0	328.6	207.8	152.0
57.5°	5587.4	5752.7	5848.8	5846.6	5370.5	4454.3	2791.5	1148.7	366.6	241.3	181.0
60°	7724.0	7598.9	7422.3	6986.4	6353.9	5084.6	3122.2	1236.0	317.3	192.2	165.4
62.5°	9612.6	8879.4	8229.0	7522.9	6693.7	5303.5	3189.3	1229.2	277.1	145.2	116.2
65°	10790.3	9471.7	8421.4	7536.2	6559.6	5120.3	3017.2	1128.6	234.7	118.5	96.1
67.5°	11071.9	9152.1	7665.9	6537.2	5480.1	3985.0	2214.8	849.3	183.2	98.4	85.0
69°	10457.3	8135.3	6351.8	5071.1	3987.1	2643.9	1370.1	536.4	140.7	89.4	78.2
70°	9619.2	7075.8	5173.9	4069.8	2952.4	1857.2	958.9	377.7	114.0	82.7	71.5
72.5°	6188.6	3716.7	2543.4	1770.0	1218.1	739.8	375.5	169.9	87.1	69.2	58.1
75°	2400.3	1374.6	996.9	757.6	592.3	411.2	228.0	109.5	73.7	58.1	44.7
77.5°	1182.2	905.1	739.8	507.3	295.1	183.2	123.0	85.0	60.4	42.5	29.0
80°	934.2	621.3	371.1	230.2	174.3	131.9	93.9	69.2	44.7	26.9	20.1
82.5°	478.3	261.5	192.2	156.5	129.6	102.9	76.0	49.1	29.0	17.9	15.6
85°	149.7	109.5	98.4	96.1	89.4	73.7	53.6	31.4	17.9	11.1	11.1
87.5°	11.1	15.6	20.1	15.6	17.9	15.6	20.1	13.4	9.0	9.0	6.7
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4	1030.4
2.5°	938.6	911.9	887.3	871.6	842.5	831.4	820.3	815.8	795.6	800.1	782.3
5°	820.3	773.3	737.5	701.8	668.3	643.7	623.5	598.9	578.8	569.9	552.0
7.5°	712.9	652.7	605.7	567.7	527.4	496.2	469.3	451.4	433.6	415.7	406.7
10°	619.0	554.3	500.7	462.7	424.7	397.8	377.7	364.3	353.1	346.4	344.2
12.5°	531.9	469.3	420.2	386.7	357.6	344.2	335.2	328.6	326.3	324.1	324.1
15°	464.8	402.3	364.3	339.7	326.3	319.6	317.3	312.8	308.5	306.2	306.2
17.5°	402.3	355.3	328.6	315.1	308.5	304.0	299.5	295.1	290.6	288.3	288.3
20°	359.8	321.8	308.5	299.5	292.7	288.3	281.6	277.1	275.0	272.7	270.5
22.5°	326.3	301.7	292.7	286.1	277.1	270.5	266.0	261.5	257.1	254.7	252.6
25°	301.7	286.1	279.3	270.5	261.5	254.7	248.1	241.3	237.0	234.7	230.2
27.5°	283.8	272.7	263.7	252.6	243.6	237.0	230.2	223.5	219.1	214.6	212.3
30°	268.2	257.1	245.8	237.0	225.7	219.1	210.1	203.4	201.1	196.7	192.2
32.5°	252.6	241.3	230.2	219.1	207.8	199.0	194.5	185.5	181.0	178.7	174.3
35°	234.7	223.5	210.1	201.1	190.0	181.0	174.3	167.6	163.1	158.7	156.5
37.5°	219.1	205.6	192.2	181.0	172.1	163.1	156.5	149.7	145.2	140.7	138.6
40°	201.1	187.7	174.3	163.1	154.2	147.5	140.7	134.1	129.6	127.4	127.4
42.5°	185.5	169.9	156.5	147.5	140.7	131.9	125.1	118.5	116.2	114.0	116.2
45°	169.9	154.2	143.0	134.1	127.4	118.5	111.7	107.2	105.0	107.2	109.5
47.5°	156.5	140.7	129.6	123.0	116.2	109.5	102.9	98.4	98.4	102.9	107.2
50°	143.0	127.4	118.5	114.0	107.2	100.6	91.6	89.4	91.6	96.1	100.6
52.5°	129.6	111.7	105.0	102.9	96.1	89.4	82.7	80.5	82.7	87.1	85.0
55°	116.2	98.4	96.1	93.9	87.1	78.2	71.5	71.5	71.5	69.2	64.9
57.5°	111.7	87.1	85.0	82.7	76.0	67.0	62.6	58.1	55.9	49.1	47.0
60°	116.2	78.2	78.2	73.7	67.0	58.1	51.4	44.7	40.2	35.7	35.7
62.5°	93.9	71.5	69.2	64.9	55.9	47.0	40.2	33.5	31.4	29.0	29.0
65°	76.0	64.9	60.4	53.6	47.0	38.0	31.4	26.9	24.6	24.6	26.9
67.5°	69.2	58.1	51.4	44.7	38.0	29.0	24.6	22.4	22.4	24.6	24.6
69°	64.9	53.6	47.0	40.2	33.5	26.9	22.4	22.4	22.4	22.4	24.6
70°	60.4	51.4	44.7	38.0	29.0	22.4	20.1	20.1	22.4	22.4	24.6
72.5°	47.0	40.2	38.0	31.4	22.4	20.1	17.9	20.1	20.1	22.4	22.4
75°	35.7	29.0	29.0	24.6	17.9	15.6	15.6	17.9	17.9	20.1	20.1
77.5°	24.6	20.1	20.1	17.9	15.6	13.4	13.4	15.6	17.9	17.9	20.1
80°	17.9	15.6	13.4	15.6	13.4	11.1	13.4	15.6	15.6	17.9	17.9
82.5°	13.4	13.4	13.4	13.4	11.1	11.1	13.4	13.4	15.6	17.9	17.9
85°	11.1	11.1	11.1	11.1	11.1	11.1	11.1	13.4	13.4	15.6	15.6
87.5°	6.7	6.7	6.7	9.0	9.0	11.1	11.1	11.1	11.1	13.4	13.4
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°	1030.4	1030.4	1030.4	1030.4
2.5°	777.8	775.5	766.5	768.8
5°	545.3	531.9	540.8	538.7
7.5°	400.1	397.8	395.6	400.1
10°	342.0	342.0	339.7	342.0
12.5°	321.8	321.8	321.8	321.8
15°	306.2	306.2	304.0	304.0
17.5°	288.3	288.3	288.3	286.1
20°	270.5	268.2	268.2	268.2
22.5°	250.3	248.1	248.1	248.1
25°	230.2	228.0	228.0	228.0
27.5°	210.1	207.8	205.6	205.6
30°	190.0	187.7	185.5	185.5
32.5°	169.9	167.6	165.4	165.4
35°	152.0	152.0	149.7	147.5
37.5°	136.4	136.4	136.4	136.4
40°	125.1	127.4	127.4	127.4
42.5°	118.5	120.7	123.0	125.1
45°	114.0	118.5	120.7	120.7
47.5°	111.7	114.0	116.2	116.2
50°	102.9	100.6	100.6	100.6
52.5°	82.7	78.2	76.0	73.7
55°	60.4	58.1	53.6	53.6
57.5°	42.5	42.5	40.2	40.2
60°	33.5	33.5	31.4	33.5
62.5°	29.0	29.0	29.0	29.0
65°	26.9	26.9	26.9	26.9
67.5°	26.9	26.9	26.9	26.9
69°	24.6	24.6	24.6	24.6
70°	24.6	24.6	24.6	24.6
72.5°	22.4	22.4	22.4	22.4
75°	20.1	22.4	22.4	22.4
77.5°	20.1	20.1	20.1	20.1
80°	17.9	17.9	20.1	20.1
82.5°	17.9	17.9	17.9	17.9
85°	15.6	15.6	17.9	17.9
87.5°	13.4	13.4	15.6	15.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)