

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: McGRAW-EDISON

Report Number: P227680

Luminaire Tested: **ISS-AF-1200-LED-E1-T3-ULG**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P227680
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29759)-DOWNLIGHT AND
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: ISS-AF-1200-LED-E1-T3-ULG
Description: IMPACT ELITE LED QUATER SPHERE LUMINAIRE WITH UPLIGHT
LIGHT SQUARE WITH ACCULED OPTICS-TYPE III, WITH UPLIGHT GLOW
Light Source: (16) 4000K CCT, 70 CRI LEDs and (1) UPLIGHT LED
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8186.8 lumens
Efficiency: N/A
Efficacy: 99.0 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.54')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U5 - G2

Input Watts (W): 82.7
Input Voltage (V): 120
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: 25 FT

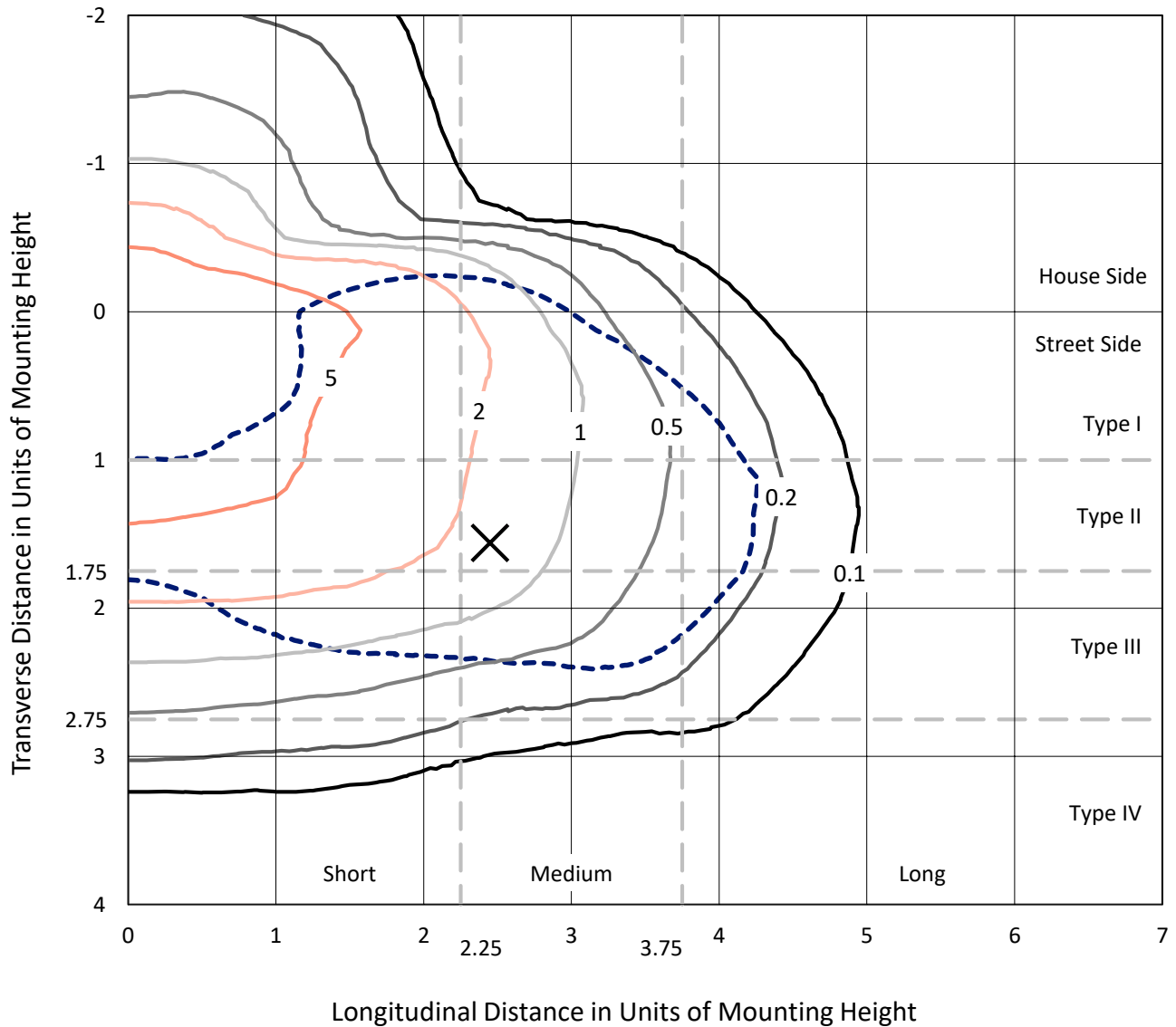


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Iso-Footcandle Lines of Horizontal Illumination

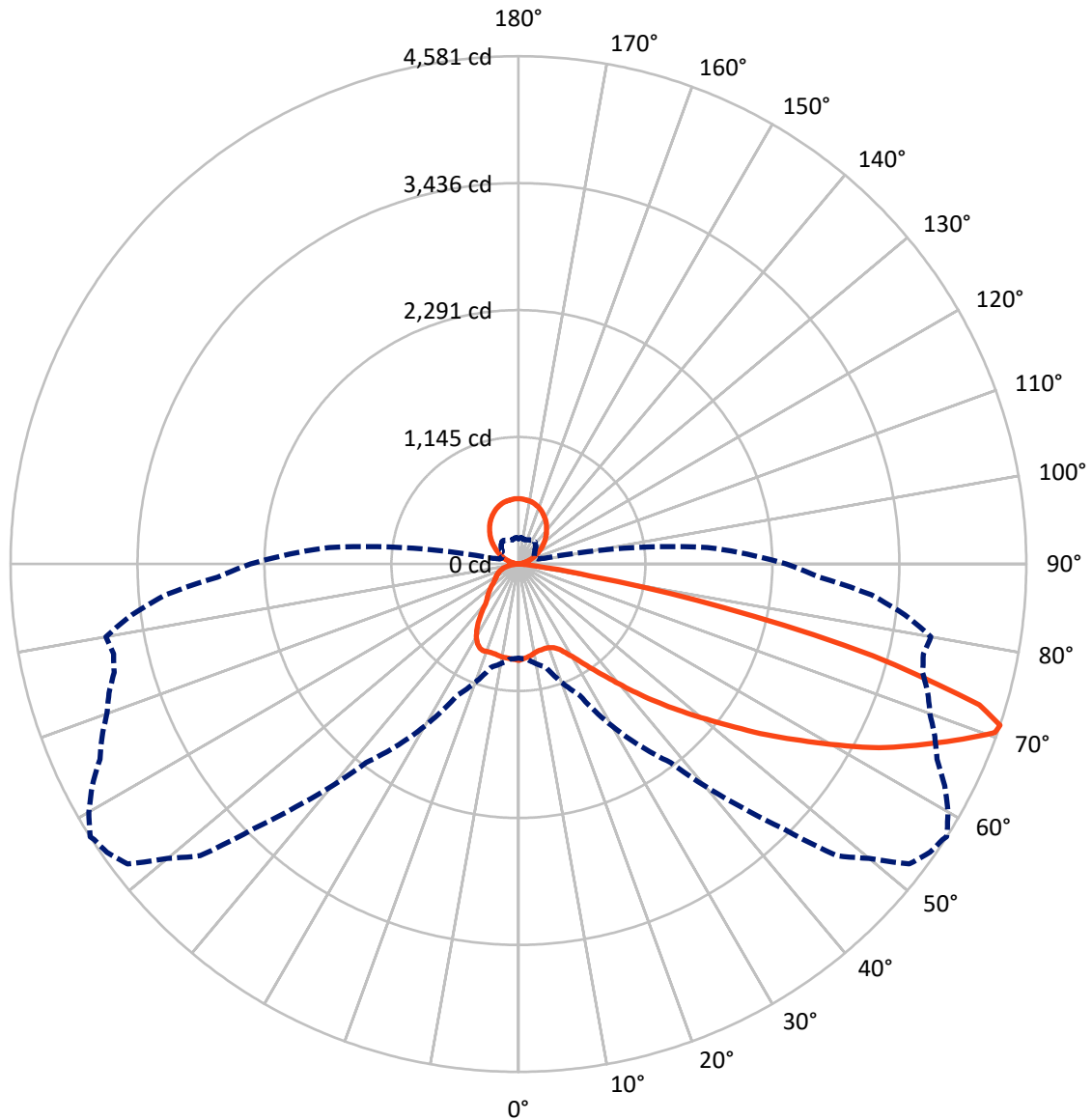
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.8 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57.5-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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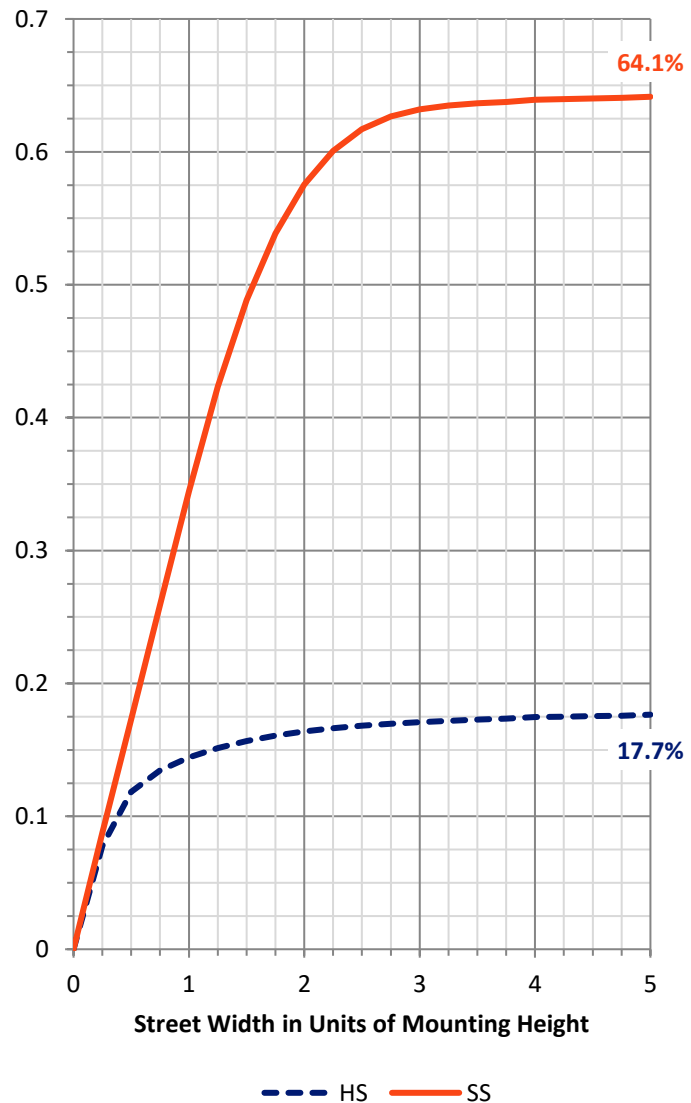
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1464.7	729.4	2194.1
	% Fixture	17.9	8.9	26.8
Street Side	Lumens	5263.2	729.4	5992.7
	% Fixture	64.3	8.9	73.2
Total	Lumens	6727.9	1458.9	8186.8
	% Fixture	82.2	17.8	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.8	1.0
10°-20°	235.7	2.9
20°-30°	391.3	4.8
30°-40°	622.9	7.6
40°-50°	1011.9	12.4
50°-60°	1517.2	18.5
60°-70°	1810.0	22.1
70°-80°	977.6	11.9
80°-90°	79.6	1.0
90°-100°	4.8	0.1
100°-110°	70.6	0.9
110°-120°	156.6	1.9
120°-130°	229.0	2.8
130°-140°	271.7	3.3
140°-150°	275.5	3.4
150°-160°	236.4	2.9
160°-170°	158.7	1.9
170°-180°	55.6	0.7
0°-90°	6727.9	82.2
0°-180°	8186.8	100.0



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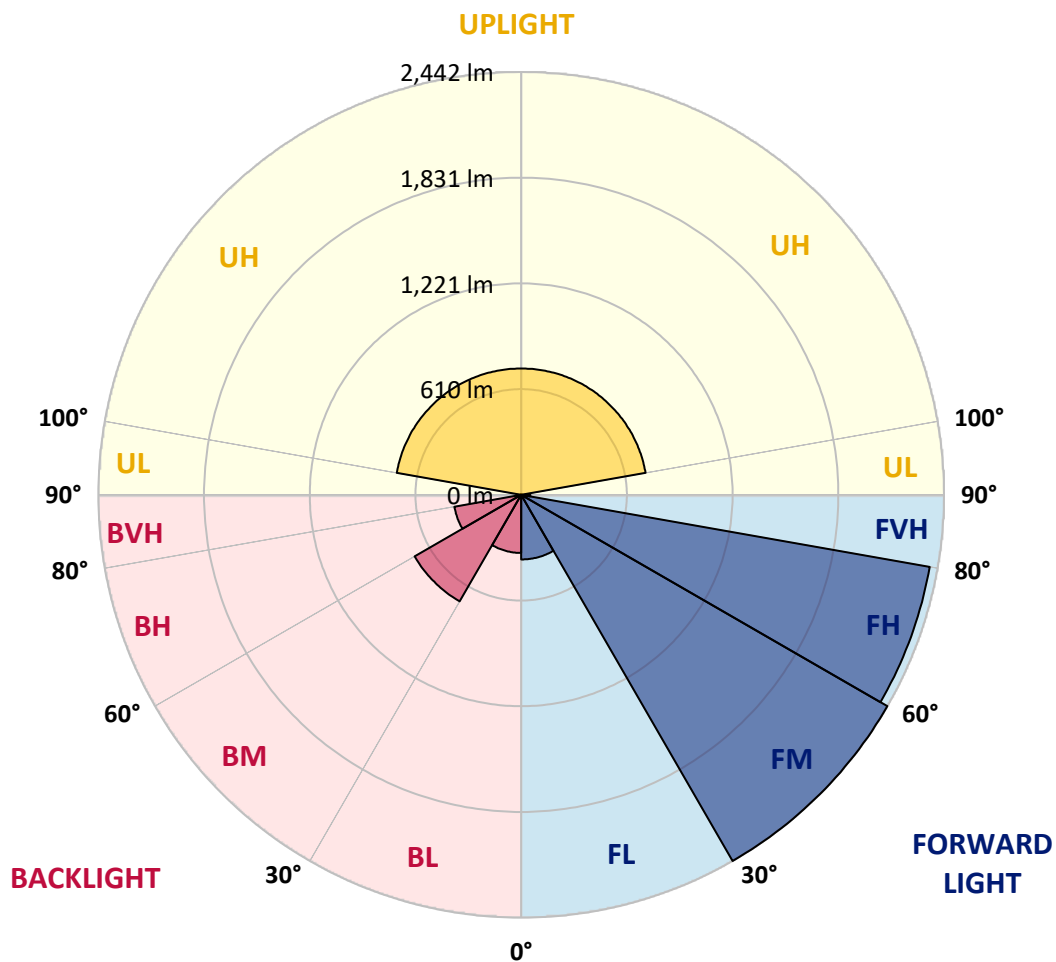
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	373.3	4.6			
FM	(30°-60°)	2441.8	29.8			
FH	(60°-80°)	2395.8	29.3			G2/5000
FVH	(80°-90°)	52.4	0.6			G1/100
BL	(0°-30°)	335.5	4.1	B1/500		
BM	(30°-60°)	710.2	8.7	B1/1000		
BH	(60°-80°)	391.8	4.8	B1/500		G1/500
BVH	(80°-90°)	27.1	0.3			G1/100
UL	(90°-100°)	4.8	0.1		U1/10	
UH	(100°-180°)	729.4	8.9		U4/1000	

BUG Rating: B1-U5-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47.5°	50°
0°	869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1
2.5°	869.1	867.0	864.7	864.7	864.7	862.4	855.8	858.1	864.7	860.3	867.0
5°	867.0	862.4	860.3	860.3	860.3	853.6	851.4	849.2	862.4	851.4	860.3
7.5°	842.5	842.5	838.0	842.5	846.9	840.3	835.9	838.0	849.2	838.0	849.2
10°	824.7	820.2	818.1	818.1	822.5	813.6	809.2	813.6	827.0	813.6	829.1
12.5°	818.1	820.2	813.6	813.6	811.4	800.3	800.3	800.3	811.4	800.3	813.6
15°	829.1	827.0	820.2	815.8	809.2	800.3	798.0	800.3	809.2	795.8	811.4
17.5°	844.7	844.7	833.6	822.5	815.8	806.9	806.9	802.5	809.2	800.3	811.4
20°	884.8	878.0	862.4	844.7	827.0	822.5	813.6	813.6	818.1	809.2	815.8
22.5°	953.6	946.9	920.2	886.9	858.1	846.9	842.5	840.3	835.9	831.4	831.4
25°	1044.7	1033.7	1002.5	962.5	913.6	904.7	895.8	889.1	873.6	873.6	862.4
27.5°	1142.5	1131.5	1098.1	1053.6	993.6	980.3	969.1	960.2	933.6	933.6	913.6
30°	1253.7	1240.3	1200.3	1151.4	1082.6	1078.1	1062.5	1049.2	1013.6	1011.4	984.7
32.5°	1382.6	1364.8	1324.8	1260.4	1187.0	1189.3	1164.8	1155.9	1109.2	1111.4	1075.8
35°	1529.3	1509.4	1469.4	1384.9	1309.3	1315.9	1293.7	1278.2	1220.4	1220.4	1182.5
37.5°	1684.9	1684.9	1633.9	1536.1	1444.9	1460.5	1433.8	1418.2	1360.4	1369.3	1309.3
40°	1858.3	1869.4	1813.9	1702.7	1609.4	1616.1	1596.0	1578.2	1509.4	1524.9	1460.5
42.5°	2040.6	2060.6	2011.7	1896.1	1791.7	1813.9	1780.5	1762.7	1689.4	1722.8	1647.2
45°	2305.1	2309.6	2218.5	2107.3	2020.6	2040.6	1993.9	1987.3	1896.1	1931.7	1856.1
47.5°	2471.9	2460.7	2394.0	2327.3	2276.3	2316.3	2274.0	2262.9	2158.4	2182.9	2076.2
50°	2585.2	2591.9	2540.8	2534.1	2543.0	2618.5	2611.9	2589.7	2465.2	2447.4	2314.0
52.5°	2687.5	2658.5	2649.6	2711.9	2807.5	2896.4	2932.0	2903.1	2767.5	2718.6	2589.7
55°	2669.7	2627.4	2674.1	2825.3	3014.2	3152.0	3156.5	3136.5	3014.2	2994.3	2854.2
57.5°	2549.6	2558.5	2654.1	2869.8	3189.9	3332.1	3356.6	3332.1	3232.1	3249.8	3134.3
60°	2383.0	2400.8	2551.9	2829.7	3329.9	3452.2	3463.3	3492.1	3425.5	3472.1	3392.1
62.5°	2134.0	2158.4	2351.8	2729.7	3232.1	3414.4	3516.6	3583.3	3570.0	3676.7	3634.4
65°	1960.6	1960.6	2149.5	2614.2	3136.5	3376.6	3529.9	3654.4	3672.2	3841.2	3825.6
67.5°	1638.3	1649.4	1811.6	2291.8	3020.9	3292.1	3523.2	3734.5	3841.2	4107.9	4121.3
70°	1133.6	1142.5	1249.2	1636.0	2440.8	2671.9	3012.0	3356.6	3676.7	4079.0	4287.9
71°	849.2	860.3	964.7	1304.9	2067.3	2258.5	2611.9	2969.7	3372.2	3894.5	4130.2
72.5°	415.7	422.4	524.6	838.0	1438.2	1682.8	1887.2	2229.5	2656.4	3254.3	3587.7
75°	193.4	195.6	217.9	302.3	549.0	653.6	744.7	964.7	1229.3	1753.8	2158.4
77.5°	142.3	142.3	155.6	197.8	284.5	289.0	284.5	291.2	351.2	502.4	755.8
80°	104.4	104.4	113.3	133.4	188.9	188.9	182.3	184.5	177.8	184.5	209.0
82.5°	68.9	68.9	73.3	80.0	115.6	115.6	111.2	111.2	106.7	104.4	113.3
85°	40.0	42.2	44.5	37.7	48.9	46.6	42.2	46.6	44.5	40.0	48.9
87.5°	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	2.3	0.0	2.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	2.0	2.0	2.0	3.1	4.1	5.3	6.6	8.0	9.2	10.2	11.3
100°	8.2	8.2	10.2	14.3	22.5	24.6	26.6	28.6	30.7	31.2	31.7
102.5°	28.6	28.6	32.7	38.9	46.0	47.3	48.6	49.9	51.1	51.4	51.7
105°	55.2	55.2	57.3	62.4	67.5	68.5	69.6	70.6	71.6	71.8	72.1
107.5°	79.8	78.8	81.8	85.9	90.0	90.8	91.6	92.3	93.1	93.6	94.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	37.5°	40°	42.5°	45°	47.5°	50°
110°	103.3	104.3	105.4	108.4	112.5	113.0	113.5	114.1	114.6	115.1	115.6
112.5°	126.8	126.8	128.9	132.0	135.0	135.5	136.1	136.6	137.1	137.6	138.1
115°	149.4	150.4	152.4	154.5	157.5	158.0	158.6	159.1	159.6	160.1	160.6
117.5°	172.9	173.9	175.9	178.0	181.1	181.6	182.1	182.6	183.1	183.3	183.6
120°	197.4	199.5	200.5	202.5	205.6	205.8	206.1	206.4	206.6	207.1	207.7
122.5°	224.0	225.0	226.1	228.1	231.2	231.4	231.7	232.0	232.2	232.4	232.7
125°	249.6	251.6	252.7	253.7	256.8	257.0	257.3	257.6	257.8	258.0	258.3
127.5°	273.1	275.2	276.2	278.2	280.3	280.8	281.3	281.8	282.3	282.8	283.4
130°	296.7	298.7	299.7	300.7	304.8	305.0	305.4	305.7	305.9	306.4	306.9
132.5°	320.2	321.2	324.3	325.3	328.4	328.6	328.9	329.2	329.4	330.2	330.9
135°	343.7	344.7	346.8	348.8	352.9	352.9	352.9	352.9	352.9	353.7	354.5
137.5°	367.2	368.3	371.3	372.4	375.4	375.4	375.4	375.4	375.4	375.9	376.4
140°	390.8	391.8	393.8	394.9	396.9	397.1	397.4	397.7	397.9	398.1	398.4
142.5°	413.3	415.3	417.4	416.3	419.4	419.4	419.4	419.4	419.4	419.9	420.4
145°	434.8	435.8	437.8	437.8	440.9	441.1	441.4	441.7	441.9	442.4	442.9
147.5°	454.2	454.2	457.3	458.3	462.4	462.6	462.9	463.2	463.4	463.6	463.9
150°	471.6	472.6	474.6	475.7	479.8	480.0	480.3	480.6	480.8	481.0	481.3
152.5°	490.0	491.0	494.1	493.1	496.1	496.3	496.6	496.9	497.2	497.4	497.7
155°	510.5	511.5	513.5	512.5	514.5	514.5	514.5	514.5	514.5	514.7	515.1
157.5°	524.8	526.8	528.9	527.8	530.9	530.9	530.9	530.9	530.9	530.9	530.9
160°	537.0	539.1	541.1	541.1	544.2	544.2	544.2	544.2	544.2	544.2	544.2
162.5°	547.3	548.3	551.4	550.3	553.4	553.4	553.4	553.4	553.4	553.6	553.9
165°	558.5	559.6	561.6	560.6	564.7	564.7	564.7	564.7	564.7	564.9	565.2
167.5°	567.7	568.8	571.8	570.8	573.9	573.7	573.4	573.1	572.9	572.9	572.9
170°	574.9	575.9	579.0	578.0	580.0	579.8	579.5	579.2	579.0	578.8	578.5
172.5°	578.0	579.0	582.1	580.0	582.1	581.9	581.5	581.2	581.0	581.2	581.5
175°	580.0	582.1	583.1	582.1	585.1	585.1	585.1	585.1	585.1	585.3	585.6
177.5°	585.1	586.2	588.2	587.2	591.3	591.1	590.8	590.4	590.2	590.2	590.2
180°	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2



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CANDELA DISTRIBUTION (continued):

	52.5°	55°	57°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°
0°	869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1
2.5°	858.1	864.7	864.7	855.8	862.4	855.8	860.3	853.6	860.3	849.2	862.4
5°	851.4	858.1	858.1	844.7	858.1	844.7	855.8	840.3	855.8	838.0	855.8
7.5°	833.6	849.2	849.2	831.4	846.9	833.6	846.9	831.4	844.7	824.7	846.9
10°	813.6	829.1	831.4	813.6	831.4	815.8	835.9	815.8	835.9	813.6	838.0
12.5°	800.3	818.1	822.5	802.5	824.7	804.7	829.1	806.9	829.1	804.7	833.6
15°	798.0	813.6	818.1	800.3	820.2	798.0	827.0	800.3	829.1	802.5	835.9
17.5°	800.3	813.6	818.1	798.0	818.1	800.3	824.7	802.5	829.1	804.7	835.9
20°	806.9	815.8	815.8	804.7	820.2	804.7	824.7	802.5	831.4	809.2	838.0
22.5°	827.0	829.1	829.1	820.2	829.1	818.1	833.6	818.1	838.0	820.2	846.9
25°	860.3	858.1	853.6	851.4	853.6	846.9	855.8	844.7	864.7	849.2	875.9
27.5°	918.1	909.2	904.7	904.7	902.4	904.7	904.7	900.3	909.2	904.7	922.5
30°	989.2	973.6	967.0	973.6	964.7	973.6	971.4	969.1	978.0	973.6	989.2
32.5°	1082.6	1055.9	1051.4	1064.8	1047.0	1062.5	1049.2	1055.9	1062.5	1066.9	1075.8
35°	1191.4	1160.3	1155.9	1169.2	1149.2	1171.5	1155.9	1164.8	1169.2	1180.4	1187.0
37.5°	1320.4	1282.6	1275.9	1293.7	1267.0	1291.5	1269.3	1296.0	1289.2	1304.9	1311.5
40°	1476.0	1431.5	1416.0	1440.4	1409.3	1429.3	1407.1	1436.0	1429.3	1460.5	1467.1
42.5°	1667.2	1602.7	1587.1	1611.6	1564.9	1571.6	1553.8	1587.1	1582.7	1625.0	1631.6
45°	1865.0	1787.2	1765.0	1789.4	1736.0	1749.5	1722.8	1758.4	1756.1	1789.4	1816.1
47.5°	2085.1	1989.4	1960.6	1987.3	1922.8	1938.4	1911.7	1949.4	1951.7	1989.4	2016.1
50°	2314.0	2214.0	2176.2	2200.7	2140.6	2151.8	2125.1	2171.7	2169.6	2220.6	2240.7
52.5°	2563.0	2460.7	2431.9	2442.9	2371.8	2385.1	2362.9	2420.7	2407.4	2438.5	2478.5
55°	2838.6	2720.8	2687.5	2720.8	2636.3	2654.1	2625.2	2678.6	2656.4	2696.4	2707.4
57.5°	3120.9	3005.3	2978.6	3003.1	2923.1	2936.5	2898.6	2943.1	2925.3	2952.0	2969.7
60°	3421.1	3316.5	3289.9	3316.5	3238.8	3241.0	3176.5	3223.2	3196.5	3229.9	3223.2
62.5°	3707.8	3618.9	3612.1	3650.0	3552.2	3541.0	3463.3	3496.7	3458.8	3481.0	3454.4
65°	3952.3	3901.1	3910.0	3941.2	3854.5	3827.8	3738.9	3756.7	3701.1	3701.1	3667.8
67.5°	4272.4	4216.8	4216.8	4243.5	4134.6	4065.6	3943.4	3927.8	3836.7	3818.9	3741.1
70°	4539.1	4554.7	4536.9	4559.2	4430.2	4290.2	4127.9	4050.1	3930.1	3872.3	3781.1
71°	4443.6	4532.5	4563.6	4581.4	4474.7	4334.7	4165.7	4065.6	3950.0	3872.3	3774.5
72.5°	4010.1	4225.7	4348.0	4348.0	4361.4	4272.4	4110.1	4001.2	3870.0	3767.8	3676.7
75°	2809.7	3160.9	3318.8	3301.0	3416.6	3456.6	3470.0	3423.2	3349.9	3203.2	3138.7
77.5°	1251.5	1649.4	1887.2	1889.5	2014.0	2122.8	2209.6	2300.7	2267.4	2196.2	2191.8
80°	284.5	515.7	660.2	666.9	780.2	880.2	940.3	1031.4	1042.5	940.3	882.5
82.5°	122.2	144.4	164.5	162.2	200.1	240.1	284.5	308.9	297.9	246.7	233.4
85°	51.1	66.7	71.1	66.7	82.2	91.1	106.7	108.9	126.7	113.3	120.0
87.5°	0.0	2.3	2.3	0.0	4.4	0.0	4.4	2.3	11.2	4.4	13.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	12.3	13.3	12.1	11.8	10.2	8.7	7.2	6.6	6.1	5.6	5.1
100°	32.2	32.7	32.3	32.2	31.7	31.2	30.7	29.9	29.2	28.4	27.6
102.5°	52.0	52.2	52.0	52.0	51.7	51.4	51.1	50.6	50.1	49.6	49.1
105°	72.4	72.6	72.6	72.6	72.6	72.6	72.6	72.1	71.6	71.1	70.6
107.5°	94.6	95.1	94.9	94.9	94.6	94.3	94.1	93.9	93.6	93.3	93.1



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CANDELA DISTRIBUTION (continued):

	52.5°	55°	57°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°
110°	116.1	116.6	116.6	116.6	116.6	116.6	116.6	116.4	116.1	115.8	115.6
112.5°	138.6	139.1	139.1	139.1	139.1	139.1	139.1	138.9	138.6	138.3	138.1
115°	161.1	161.6	161.6	161.6	161.6	161.6	161.6	161.6	161.6	161.6	161.6
117.5°	183.9	184.1	184.3	184.3	184.6	184.9	185.2	184.9	184.6	184.3	184.1
120°	208.2	208.7	208.7	208.7	208.7	208.7	208.7	208.7	208.7	208.7	208.7
122.5°	233.0	233.2	233.2	233.2	233.2	233.2	233.2	233.4	233.7	234.1	234.3
125°	258.6	258.8	259.0	259.0	259.3	259.6	259.8	259.8	259.8	259.8	259.8
127.5°	283.9	284.4	284.2	284.2	283.9	283.6	283.4	283.6	283.9	284.2	284.4
130°	307.4	307.9	307.9	307.9	307.9	307.9	307.9	308.1	308.4	308.7	308.9
132.5°	331.6	332.5	332.5	332.5	332.5	332.5	332.5	332.7	333.0	333.3	333.5
135°	355.2	356.0	356.0	356.0	356.0	356.0	356.0	356.2	356.5	356.8	357.0
137.5°	377.0	377.5	377.5	377.5	377.5	377.5	377.5	377.7	378.0	378.3	378.5
140°	398.7	399.0	399.0	399.0	399.0	399.0	399.0	399.5	400.0	400.5	401.0
142.5°	420.9	421.5	421.5	421.5	421.5	421.5	421.5	421.7	422.0	422.3	422.5
145°	443.4	444.0	443.8	443.8	443.4	443.1	442.9	443.1	443.4	443.8	444.0
147.5°	464.2	464.4	464.0	463.9	463.4	462.9	462.4	462.6	462.9	463.2	463.4
150°	481.6	481.8	481.4	481.3	480.8	480.3	479.8	479.8	479.8	479.8	479.8
152.5°	498.0	498.2	498.0	498.0	497.7	497.4	497.2	497.2	497.2	497.2	497.2
155°	515.4	515.6	515.4	515.4	515.1	514.7	514.5	514.7	515.1	515.4	515.6
157.5°	530.9	530.9	530.5	530.4	529.9	529.4	528.9	529.1	529.4	529.7	529.9
160°	544.2	544.2	543.8	543.7	543.2	542.7	542.2	542.2	542.2	542.2	542.2
162.5°	554.2	554.4	554.0	553.9	553.4	552.9	552.4	551.9	551.4	550.9	550.3
165°	565.5	565.7	565.1	564.9	564.2	563.4	562.6	562.1	561.6	561.1	560.6
167.5°	572.9	572.9	572.4	572.3	571.8	571.3	570.8	571.0	571.3	571.6	571.8
170°	578.2	578.0	577.8	577.8	577.5	577.1	576.9	577.5	578.0	578.5	579.0
172.5°	581.9	582.1	581.6	581.5	581.0	580.5	580.0	580.2	580.5	580.8	581.0
175°	585.9	586.2	585.5	585.3	584.6	583.9	583.1	582.6	582.1	581.5	581.0
177.5°	590.2	590.2	589.6	589.4	588.7	588.0	587.2	587.2	587.2	587.2	587.2
180°	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2



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CANDELA DISTRIBUTION (continued):

	77.5°	80°	82.5°	85°	87.5°	90°	95°	100°	102.5°	105°	107.5°
0°	869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1
2.5°	853.6	864.7	853.6	864.7	858.1	864.7	862.4	864.7	853.6	864.7	851.4
5°	838.0	855.8	840.3	853.6	840.3	855.8	855.8	855.8	840.3	858.1	842.5
7.5°	824.7	844.7	824.7	844.7	831.4	846.9	846.9	853.6	835.9	855.8	833.6
10°	811.4	835.9	811.4	840.3	818.1	842.5	844.7	849.2	824.7	851.4	829.1
12.5°	804.7	835.9	806.9	835.9	809.2	842.5	844.7	849.2	822.5	855.8	827.0
15°	804.7	838.0	806.9	838.0	809.2	842.5	846.9	851.4	822.5	858.1	827.0
17.5°	804.7	838.0	811.4	840.3	813.6	844.7	849.2	853.6	827.0	858.1	831.4
20°	811.4	842.5	815.8	846.9	820.2	851.4	853.6	860.3	831.4	860.3	835.9
22.5°	827.0	853.6	831.4	860.3	840.3	864.7	867.0	873.6	851.4	875.9	855.8
25°	853.6	882.5	864.7	886.9	875.9	895.8	900.3	900.3	891.4	906.9	900.3
27.5°	909.2	931.4	918.1	938.0	931.4	946.9	946.9	949.2	955.8	960.2	967.0
30°	980.3	995.8	991.4	1002.5	1004.7	1013.6	1013.6	1026.9	1053.6	1026.9	1024.8
32.5°	1075.8	1084.7	1087.0	1091.5	1100.3	1107.0	1115.9	1131.5	1153.7	1091.5	1071.4
35°	1193.7	1195.9	1202.6	1209.2	1224.8	1229.3	1258.1	1247.1	1247.1	1149.2	1107.0
37.5°	1322.6	1322.6	1340.4	1340.4	1378.2	1380.4	1409.3	1351.5	1318.2	1191.4	1129.2
40°	1484.9	1482.7	1502.7	1507.1	1558.3	1560.5	1556.0	1429.3	1358.2	1202.6	1118.1
42.5°	1656.1	1662.7	1689.4	1698.3	1736.0	1749.5	1693.8	1482.7	1376.0	1195.9	1080.3
45°	1842.7	1856.1	1889.5	1913.9	1953.9	1938.4	1805.0	1507.1	1355.9	1155.9	1007.0
47.5°	2047.2	2060.6	2087.3	2134.0	2151.8	2134.0	1896.1	1516.0	1324.8	1093.6	900.3
50°	2254.0	2276.3	2314.0	2380.7	2389.6	2345.1	2007.2	1549.4	1300.4	1029.2	778.1
52.5°	2487.4	2509.6	2554.1	2665.2	2643.0	2551.9	2138.4	1611.6	1307.0	989.2	673.5
55°	2734.1	2765.2	2852.0	2960.9	2911.9	2769.7	2282.9	1702.7	1333.7	946.9	557.9
57.5°	2994.3	3027.5	3141.0	3269.9	3174.3	2983.1	2429.6	1773.9	1347.0	860.3	431.3
60°	3252.1	3298.8	3445.5	3552.2	3403.3	3165.4	2560.8	1820.5	1311.5	695.8	333.5
62.5°	3487.8	3563.2	3727.7	3785.5	3547.7	3281.0	2631.8	1787.2	1167.0	480.2	268.9
65°	3654.4	3752.2	3859.0	3852.2	3521.1	3243.2	2578.6	1633.9	869.1	317.8	228.9
67.5°	3725.6	3816.7	3841.2	3727.7	3329.9	3076.5	2387.4	1315.9	500.1	237.8	200.1
70°	3752.2	3830.0	3692.2	3418.8	2956.4	2667.4	1951.7	838.0	273.4	193.4	173.4
71°	3741.1	3778.9	3516.6	3196.5	2718.6	2416.3	1711.6	638.0	233.4	180.0	164.5
72.5°	3589.9	3536.6	3132.1	2776.4	2305.1	1998.3	1331.5	402.3	191.2	162.2	153.3
75°	2934.2	2694.1	2305.1	1969.5	1569.3	1256.0	722.4	206.7	153.3	140.0	133.4
77.5°	1918.3	1709.4	1389.3	1129.2	858.1	651.3	295.6	142.3	122.2	117.8	115.6
80°	684.7	549.0	415.7	364.6	275.7	226.7	144.4	108.9	95.5	97.8	95.5
82.5°	193.4	177.8	153.3	142.3	124.5	122.2	93.4	82.2	75.6	80.0	77.8
85°	95.5	82.2	60.0	57.8	44.5	51.1	46.6	55.5	48.9	51.1	46.6
87.5°	6.6	8.9	2.3	6.6	0.0	6.6	8.9	11.2	2.3	8.9	6.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
97.5°	4.9	4.6	4.3	4.1	4.1	4.1	4.1	4.6	4.9	5.1	5.6
100°	27.4	27.1	26.8	26.6	26.1	25.6	26.6	27.1	27.4	27.6	28.4
102.5°	49.3	49.6	49.9	50.1	49.6	49.1	50.1	49.6	49.3	49.1	49.6
105°	71.1	71.6	72.1	72.6	71.6	70.6	72.6	71.6	71.1	70.6	71.1
107.5°	93.3	93.6	93.9	94.1	93.6	93.1	94.1	93.6	93.3	93.1	93.3



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REPORT N
 CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	77.5°	80°	82.5°	85°	87.5°	90°	95°	100°	102.5°	105°	107.5°	
110°	115.8	116.1	116.4	116.6	116.1	115.6	116.6	116.1	115.8	115.6	115.8	0°
112.5°	138.6	139.1	139.6	140.1	139.1	138.1	140.1	139.1	138.6	138.1	138.3	2.5°
115°	162.1	162.6	163.2	163.7	163.2	162.6	163.7	162.6	162.1	161.6	161.6	5°
117.5°	184.6	185.2	185.7	186.2	185.2	184.1	186.2	185.2	184.6	184.1	184.3	7.5°
120°	209.2	209.7	210.2	210.7	209.7	208.7	210.7	209.7	209.2	208.7	208.7	10°
122.5°	235.3	236.3	237.3	238.3	237.8	237.3	238.3	236.3	235.3	234.3	234.1	12.5°
125°	260.6	261.4	262.1	262.9	262.4	261.9	262.9	261.4	260.6	259.8	259.8	15°
127.5°	285.2	285.9	286.6	287.4	285.9	284.4	287.4	285.9	285.2	284.4	284.2	17.5°
130°	309.7	310.5	311.2	312.0	311.0	310.0	312.0	310.5	309.7	308.9	308.7	20°
132.5°	334.3	335.0	335.7	336.6	335.5	334.5	336.6	335.0	334.3	333.5	333.3	22.5°
135°	357.5	358.0	358.5	359.1	358.5	358.0	359.1	358.0	357.5	357.0	356.8	25°
137.5°	379.5	380.5	381.6	382.6	381.6	380.5	382.6	380.5	379.5	378.5	378.3	27.5°
140°	402.0	403.0	404.1	405.1	404.1	403.0	405.1	403.0	402.0	401.0	400.5	30°
142.5°	423.3	424.0	424.7	425.5	425.0	424.5	425.5	424.0	423.3	422.5	422.3	32.5°
145°	444.8	445.5	446.2	447.0	446.0	445.0	447.0	445.5	444.8	444.0	443.8	35°
147.5°	464.2	464.9	465.6	466.5	464.9	463.4	466.5	464.9	464.2	463.4	463.2	37.5°
150°	480.8	481.8	482.8	483.9	482.3	480.8	483.9	481.8	480.8	479.8	479.8	40°
152.5°	498.0	498.7	499.4	500.2	498.7	497.2	500.2	498.7	498.0	497.2	497.2	42.5°
155°	516.4	517.1	517.8	518.6	517.6	516.6	518.6	517.1	516.4	515.6	515.4	45°
157.5°	531.1	532.4	533.8	535.0	533.5	531.9	535.0	532.4	531.1	529.9	529.7	47.5°
160°	543.0	543.7	544.4	545.2	544.2	543.2	545.2	543.7	543.0	542.2	542.2	50°
162.5°	550.9	551.4	551.9	552.4	550.9	549.3	552.4	551.4	550.9	550.3	550.9	52.5°
165°	561.1	561.6	562.1	562.6	561.6	560.6	562.6	561.6	561.1	560.6	561.1	55°
167.5°	572.9	573.9	574.9	575.9	574.9	573.9	575.9	573.9	572.9	571.8	571.6	57.5°
170°	580.2	581.5	582.9	584.1	583.1	582.1	584.1	581.5	580.2	579.0	578.5	60°
172.5°	581.9	582.6	583.3	584.1	582.6	581.0	584.1	582.6	581.9	581.0	580.8	62.5°
175°	581.9	582.6	583.3	584.1	582.6	581.0	584.1	582.6	581.9	581.0	581.5	65°
177.5°	588.0	588.7	589.4	590.2	588.7	587.2	590.2	588.7	588.0	587.2	587.2	67.5°
180°	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	70°
												71°
												72.5°
												75°
												77.5°
												80°
												82.5°
												85°
												87.5°
												90°
												92.5°
												95°
												97.5°
												100°
												102.5°
												105°
												107.5°

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REPORT NUMBER: P
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DISTRIBUTION (continued):

CANDELA DISTRIBUTION

110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	135°	145°	110°	110°
869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1	869.1	110°	116.1
867.0	858.1	869.1	858.1	869.1	862.4	869.1	862.4	869.1	873.6	873.6	112.5°	138.6
862.4	846.9	867.0	855.8	869.1	858.1	867.0	860.3	871.3	875.9	880.2	115°	161.6
860.3	844.7	864.7	849.2	869.1	853.6	867.0	858.1	871.3	875.9	884.8	117.5°	184.6
858.1	838.0	864.7	842.5	867.0	851.4	867.0	853.6	869.1	873.6	875.9	120°	208.7
858.1	835.9	864.7	840.3	867.0	844.7	864.7	844.7	867.0	864.7	858.1	122.5°	233.7
860.3	831.4	864.7	835.9	864.7	838.0	862.4	835.9	858.1	851.4	846.9	125°	259.8
860.3	831.4	862.4	833.6	860.3	835.9	855.8	831.4	851.4	849.2	842.5	127.5°	283.9
864.7	835.9	862.4	842.5	862.4	838.0	853.6	831.4	846.9	833.6	806.9	130°	308.4
878.0	858.1	878.0	858.1	867.0	844.7	851.4	824.7	822.5	800.3	758.0	132.5°	333.0
909.2	900.3	895.8	871.3	864.7	835.9	827.0	795.8	784.7	751.4	693.6	135°	356.5
949.2	929.1	902.4	873.6	844.7	809.2	784.7	760.3	735.8	693.6	620.2	137.5°	378.0
975.9	946.9	891.4	851.4	798.0	769.2	726.9	700.2	664.6	611.3	540.1	140°	400.0
993.6	949.2	864.7	818.1	746.9	709.1	653.6	624.6	573.5	522.4	471.3	142.5°	422.0
998.1	940.3	829.1	778.1	684.7	642.4	569.1	538.0	489.1	453.5	433.4	145°	443.4
980.3	909.2	773.6	706.9	604.7	555.8	486.8	464.6	435.7	422.4	413.5	147.5°	462.9
944.7	849.2	686.9	609.1	504.6	466.8	431.3	431.3	415.7	409.0	393.4	150°	479.8
880.2	760.3	575.7	500.1	429.0	422.4	402.3	411.2	400.1	395.7	373.5	152.5°	497.2
780.2	633.5	464.6	420.1	386.8	391.3	377.9	386.8	380.1	377.9	351.2	155°	515.1
651.3	504.6	391.3	375.6	353.4	360.1	349.0	360.1	353.4	355.7	335.6	157.5°	529.4
520.2	409.0	346.8	337.9	322.3	326.7	320.1	331.2	329.0	337.9	326.7	160°	542.2
415.7	349.0	308.9	302.3	293.4	295.6	293.4	304.5	306.8	324.6	324.6	162.5°	551.4
344.5	300.1	277.8	275.7	266.8	268.9	271.2	282.3	291.2	313.4	324.6	165°	561.6
295.6	268.9	253.4	251.2	246.7	249.0	253.4	266.8	275.7	304.5	329.0	167.5°	571.3
260.0	244.5	233.4	233.4	228.9	233.4	237.8	251.2	262.3	295.6	320.1	170°	578.0
233.4	222.3	215.6	217.9	215.6	220.0	224.5	237.8	251.2	282.3	306.8	172.5°	580.5
209.0	202.2	197.8	200.1	200.1	206.7	211.1	224.5	235.6	264.5	295.6	175°	582.1
188.9	184.5	182.3	184.5	186.7	193.4	200.1	209.0	217.9	244.5	280.1	177.5°	587.2
173.4	168.9	168.9	168.9	171.1	177.8	186.7	191.2	200.1	228.9	262.3	180°	589.2
164.5	162.2	162.2	162.2	164.5	171.1	180.0	184.5	193.4	222.3	253.4		
153.3	153.3	155.6	153.3	157.8	160.1	168.9	173.4	184.5	213.4	242.3		
135.6	135.6	137.8	137.8	142.3	142.3	148.9	153.3	166.7	191.2	217.9		
120.0	120.0	124.5	122.2	122.2	117.8	126.7	131.1	142.3	166.7	193.4		
102.3	100.0	104.4	97.8	95.5	91.1	97.8	104.4	122.2	137.8	142.3		
80.0	73.3	75.6	68.9	68.9	64.4	71.1	73.3	84.5	100.0	108.9		
48.9	40.0	44.5	37.7	42.2	37.7	40.0	42.2	51.1	62.2	60.0		
11.2	6.6	8.9	2.3	6.6	0.0	6.6	2.3	6.6	2.3	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
6.1	6.6	7.2	8.7	10.2	11.8	13.3	12.3	11.3	9.2	4.1		
29.2	29.9	30.7	31.2	31.7	32.2	32.7	32.2	31.7	30.7	22.5		
50.1	50.6	51.1	51.4	51.7	52.0	52.2	52.0	51.7	51.1	46.0		
71.6	72.1	72.6	72.6	72.6	72.6	72.6	72.4	72.1	71.6	67.5		
93.6	93.9	94.1	94.3	94.6	94.9	95.1	94.6	94.1	93.1	90.0		

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REPORT NUMBER: P227680
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TION (continued):

CANDELA DISTRIBUTION (con

112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	135°	145°		155°	165°
116.4	116.6	116.6	116.6	116.6	116.6	116.1	115.6	114.6	112.5	0°	869.1	869.1
138.9	139.1	139.1	139.1	139.1	139.1	138.6	138.1	137.1	135.0	2.5°	878.0	875.9
161.6	161.6	161.6	161.6	161.6	161.6	161.1	160.6	159.6	157.5	5°	889.1	889.1
184.9	185.2	184.9	184.6	184.3	184.1	183.9	183.6	183.1	181.1	7.5°	891.4	895.8
208.7	208.7	208.7	208.7	208.7	208.7	208.2	207.7	206.6	205.6	10°	875.9	871.3
233.4	233.2	233.2	233.2	233.2	233.2	233.0	232.7	232.2	231.2	12.5°	851.4	846.9
259.8	259.8	259.6	259.3	259.0	258.8	258.6	258.3	257.8	256.8	15°	849.2	846.9
283.6	283.4	283.6	283.9	284.2	284.4	283.9	283.4	282.3	280.3	17.5°	833.6	822.5
308.1	307.9	307.9	307.9	307.9	307.9	307.4	306.9	305.9	304.8	20°	789.1	769.2
332.7	332.5	332.5	332.5	332.5	332.5	331.6	330.9	329.4	328.4	22.5°	726.9	698.0
356.2	356.0	356.0	356.0	356.0	356.0	355.2	354.5	352.9	352.9	25°	651.3	611.3
377.7	377.5	377.5	377.5	377.5	377.5	377.0	376.4	375.4	375.4	27.5°	569.1	529.1
399.5	399.0	399.0	399.0	399.0	399.0	398.7	398.4	397.9	396.9	30°	504.6	473.5
421.7	421.5	421.5	421.5	421.5	421.5	420.9	420.4	419.4	419.4	32.5°	457.9	440.2
443.1	442.9	443.1	443.4	443.8	444.0	443.4	442.9	441.9	440.9	35°	420.1	409.0
462.6	462.4	462.9	463.4	463.9	464.4	464.2	463.9	463.4	462.4	37.5°	395.7	377.9
479.8	479.8	480.3	480.8	481.3	481.8	481.6	481.3	480.8	479.8	40°	371.2	349.0
497.2	497.2	497.4	497.7	498.0	498.2	498.0	497.7	497.2	496.1	42.5°	349.0	326.7
514.7	514.5	514.7	515.1	515.4	515.6	515.4	515.1	514.5	514.5	45°	326.7	311.2
529.1	528.9	529.4	529.9	530.4	530.9	530.9	530.9	530.9	530.9	47.5°	315.7	302.3
542.2	542.2	542.7	543.2	543.7	544.2	544.2	544.2	544.2	544.2	50°	311.2	297.9
551.9	552.4	552.9	553.4	553.9	554.4	554.2	553.9	553.4	553.4	52.5°	315.7	304.5
562.1	562.6	563.4	564.2	564.9	565.7	565.5	565.2	564.7	564.7	55°	324.6	317.8
571.0	570.8	571.3	571.8	572.3	572.9	572.9	572.9	572.9	573.9	57.5°	315.7	304.5
577.5	576.9	577.1	577.5	577.8	578.0	578.2	578.5	579.0	580.0	60°	295.6	277.8
580.2	580.0	580.5	581.0	581.5	582.1	581.9	581.5	581.0	582.1	62.5°	282.3	264.5
582.6	583.1	583.9	584.6	585.3	586.2	585.9	585.6	585.1	585.1	65°	271.2	257.9
587.2	587.2	588.0	588.7	589.4	590.2	590.2	590.2	590.2	591.3	67.5°	260.0	246.7
589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2	70°	246.7	233.4
										71°	240.1	224.5
										72.5°	228.9	211.1
										75°	206.7	188.9
										77.5°	171.1	151.2
										80°	131.1	117.8
										82.5°	97.8	86.6
										85°	51.1	40.0
										87.5°	0.0	0.0
										90°	0.0	0.0
										92.5°	0.0	0.0
										95°	1.0	1.0
										97.5°	3.1	2.0
										100°	14.3	10.2
										102.5°	38.9	32.7
										105°	62.4	57.3
										107.5°	85.9	81.8



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175°	180°
869.1	869.1
878.0	875.9
891.4	893.6
900.3	898.0
875.9	871.3
851.4	851.4
849.2	849.2
818.1	815.8
764.7	758.0
689.1	682.4
595.8	586.9
513.5	513.5
457.9	457.9
429.0	431.3
402.3	404.6
362.3	362.3
329.0	329.0
313.4	311.2
300.1	297.9
291.2	289.0
282.3	282.3
275.7	275.7
275.7	271.2
277.8	271.2
273.4	268.9
273.4	271.2
277.8	273.4
277.8	268.9
253.4	237.8
240.1	226.7
215.6	206.7
184.5	182.3
144.4	142.3
117.8	111.2
84.5	73.3
33.3	33.3
0.0	0.0
0.0	0.0
0.0	0.0
1.0	1.0
2.0	2.0
8.2	8.2
28.6	28.6
55.2	55.2
78.8	79.8

CANDELA DISTRIBUTION (continued):

	155°	165°	175°
110°	108.4	105.4	104.3
112.5°	132.0	128.9	126.8
115°	154.5	152.4	150.4
117.5°	178.0	175.9	173.9
120°	202.5	200.5	199.5
122.5°	228.1	226.1	225.0
125°	253.7	252.7	251.6
127.5°	278.2	276.2	275.2
130°	300.7	299.7	298.7
132.5°	325.3	324.3	321.2
135°	348.8	346.8	344.7
137.5°	372.4	371.3	368.3
140°	394.9	393.8	391.8
142.5°	416.3	417.4	415.3
145°	437.8	437.8	435.8
147.5°	458.3	457.3	454.2
150°	475.7	474.6	472.6
152.5°	493.1	494.1	491.0
155°	512.5	513.5	511.5
157.5°	527.8	528.9	526.8
160°	541.1	541.1	539.1
162.5°	550.3	551.4	548.3
165°	560.6	561.6	559.6
167.5°	570.8	571.8	568.8
170°	578.0	579.0	575.9
172.5°	580.0	582.1	579.0
175°	582.1	583.1	582.1
177.5°	587.2	588.2	586.2
180°	589.2	589.2	589.2

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180°

103.3
126.8
149.4
172.9
197.4
224.0
249.6
273.1
296.7
320.2
343.7
367.2
390.8
413.3
434.8
454.2
471.6
490.0
510.5
524.8
537.0
547.3
558.5
567.7
574.9
578.0
580.0
585.1
589.2

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