

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: NEO-RAY

Report Number: P331278-830

Luminaire Tested: **SA2XXDIP-C290D1080U830-4F0-1E-UDD-A4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331278-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C290D1080U830-4F0-1E-UDD-A4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, ASYMMETRIC DIFFUSER
UPLIGHT 1080 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

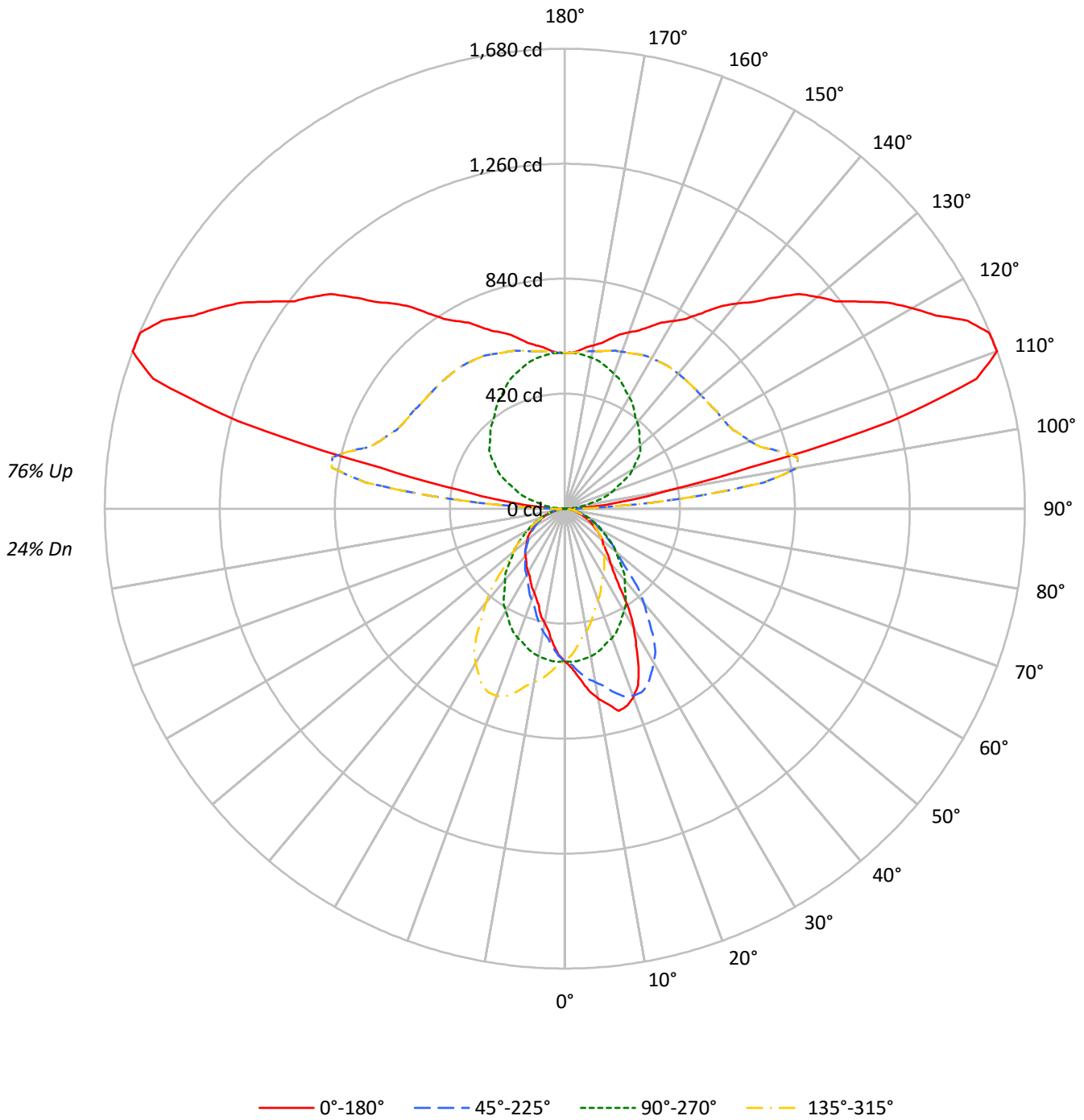
Lumens per Lamp: N/A
Luminaire Lumens: 5196.2 lumens
Efficiency: N/A
Efficacy: 123.1 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.16 / 1.23
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 42.2
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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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24
1	92	88	84	81	82	78	75	73	60	58	57	44	43	42	29	28	27	20
2	84	77	71	66	74	69	64	60	53	50	47	39	37	35	25	24	23	17
3	77	68	61	56	68	61	55	50	47	43	40	34	32	30	23	21	20	15
4	70	60	53	47	62	54	47	43	42	37	34	31	28	26	20	19	17	13
5	64	53	46	40	57	48	41	37	37	33	29	28	25	22	18	17	15	12
6	59	48	40	35	53	43	36	32	34	29	26	25	22	19	17	15	14	10
7	55	43	36	30	49	39	32	28	30	26	22	23	20	17	15	14	12	9
8	51	39	32	27	45	35	29	24	28	23	20	21	18	15	14	12	11	8
9	47	36	28	24	42	32	26	22	25	21	18	19	16	14	13	11	10	8
10	44	32	26	21	39	29	23	19	23	19	16	18	15	12	12	10	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	8995	8995	8995	8995
5°	10084	9054	8023	9054
10°	11555	8979	6943	8979
15°	12784	8816	6135	8816
20°	12589	8639	5593	8639
25°	11352	8402	5248	8402
30°	9380	8028	4998	8028
35°	6838	7634	4819	7634
40°	5461	7172	4719	7172
45°	4772	6635	4587	6635
50°	4486	6116	4496	6116
55°	4132	5588	4374	5588
60°	3788	5025	4191	5025
65°	3454	4523	4008	4523
70°	3135	4032	3744	4032
75°	2782	3487	3313	3487
80°	2390	2882	2669	2882
85°	2149	2149	1593	2149



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.1	1.0
10°-20°	154.2	3.0
20°-30°	223.9	4.3
30°-40°	236.2	4.5
40°-50°	209.2	4.0
50°-60°	166.9	3.2
60°-70°	113.4	2.2
70°-80°	58.2	1.1
80°-90°	19.1	0.4
90°-100°	227.7	4.4
100°-110°	772.5	14.9
110°-120°	820.7	15.8
120°-130°	675.6	13.0
130°-140°	542.5	10.4
140°-150°	410.0	7.9
150°-160°	288.1	5.5
160°-170°	169.6	3.3
170°-180°	55.2	1.1
0°-30°	431.2	8.3
0°-40°	667.4	12.8
0°-60°	1043.5	20.1
0°-90°	1234.2	23.8
90°-120°	1820.9	35.0
90°-150°	3449.0	66.4
90°-180°	3962.0	76.2
0°-180°	5196.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	557	557	557	557	557	
5°	622	559	495	559	622	62
15°	765	527	367	527	765	211
25°	637	472	295	472	637	288
35°	347	387	244	387	347	226
45°	209	291	201	291	209	164
55°	147	198	155	198	147	132
65°	90	118	105	118	90	90
75°	45	56	53	56	45	48
85°	12	12	9	12	12	14
90°	36	1	36	1	36	20
95°	125	38	125	38	125	162
105°	1234	134	1234	134	1234	1194
115°	1624	235	1624	235	1624	1590
125°	1317	328	1317	328	1317	1190
135°	1092	385	1092	385	1092	848
145°	872	440	872	440	872	554
155°	732	500	732	500	732	342
165°	643	545	643	545	643	184
175°	579	568	579	568	579	56
180°	569	569	569	569	569	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	582.8	583.0	583.3	580.6	580.2	580.2	577.9	575.8	573.3	570.1	570.5
5°	622.2	624.5	625.4	622.8	619.0	618.6	614.9	609.0	603.3	598.9	595.7
7.5°	669.2	670.1	668.1	664.7	661.9	656.7	649.9	643.3	634.0	625.5	619.2
10°	704.8	706.2	702.5	697.6	693.5	687.5	677.7	667.6	655.4	643.7	634.2
12.5°	731.9	735.1	730.4	729.8	722.8	714.5	702.9	697.8	680.6	664.2	654.0
15°	764.8	764.6	765.1	760.9	755.8	754.5	742.2	728.6	704.5	694.7	678.1
17.5°	755.3	758.6	760.1	760.0	759.9	759.0	755.1	746.6	734.4	718.8	699.6
20°	732.7	737.0	737.6	742.5	745.4	748.9	750.5	748.1	740.6	727.5	710.9
22.5°	697.8	699.0	701.0	708.6	714.6	723.8	728.5	736.5	733.6	727.2	713.2
25°	637.2	635.1	642.5	646.4	660.3	674.9	685.4	696.9	707.2	713.4	709.4
27.5°	564.5	561.3	572.5	582.8	594.0	609.8	626.1	645.5	661.5	681.6	688.5
30°	503.1	505.1	515.8	526.7	543.8	566.1	584.6	605.7	628.7	651.1	666.8
32.5°	437.1	444.4	451.2	468.0	483.1	507.8	534.9	561.4	589.9	615.5	639.7
35°	346.9	355.4	364.9	377.0	398.2	422.8	449.2	484.9	524.0	558.8	587.5
37.5°	292.0	290.6	296.0	304.8	322.0	341.9	372.2	407.5	453.4	494.4	534.9
40°	259.1	258.3	262.0	270.2	283.2	297.8	324.4	355.4	398.0	448.2	496.3
42.5°	236.5	237.0	239.1	244.9	253.8	265.8	285.7	312.1	351.1	398.3	450.1
45°	209.0	210.5	212.8	215.7	220.7	230.6	241.8	260.6	291.4	330.8	381.7
47.5°	189.2	189.3	191.6	194.1	197.1	202.6	211.8	223.6	245.3	277.4	321.2
50°	178.6	177.1	178.8	180.7	183.9	187.8	193.8	204.9	219.4	245.3	282.0
52.5°	165.5	165.6	167.1	167.9	170.7	174.6	180.0	187.8	201.0	221.2	251.3
55°	146.8	148.0	148.8	150.1	152.7	155.4	159.8	164.9	175.1	190.3	212.6
57.5°	129.3	129.7	130.5	133.0	134.6	137.1	141.2	145.9	152.6	163.8	180.6
60°	117.3	117.3	119.0	120.1	122.2	124.8	128.0	132.5	138.6	147.7	161.3
62.5°	106.4	106.2	106.9	108.7	110.3	112.6	115.8	119.7	125.4	133.6	144.6
65°	90.4	89.9	91.2	91.6	93.3	95.7	98.3	102.4	106.9	112.8	122.7
67.5°	74.9	75.5	76.2	76.9	77.9	80.4	82.1	84.9	88.8	93.8	100.4
70°	66.4	66.4	66.4	67.0	68.3	69.6	71.3	73.6	77.3	81.5	87.6
72.5°	56.7	57.5	58.2	57.8	59.4	60.1	62.2	63.5	67.0	69.7	75.0
75°	44.6	44.6	44.6	45.6	46.3	46.8	48.2	49.5	51.2	54.6	57.4
77.5°	33.3	33.2	33.4	33.6	34.3	35.1	35.4	36.6	38.2	39.8	42.1
80°	25.7	26.1	26.3	26.8	26.8	27.1	27.4	28.9	30.0	31.0	32.5
82.5°	19.9	20.0	20.0	20.1	20.3	20.5	21.1	21.6	22.0	22.8	23.9
85°	11.6	11.3	11.3	11.8	11.6	11.6	12.0	12.4	12.4	12.6	13.3
87.5°	11.7	11.7	11.9	11.7	11.7	11.6	11.2	11.5	11.9	12.3	12.2
90°	36.1	36.1	36.1	36.1	36.1	35.1	32.9	35.1	36.1	37.2	36.1
92.5°	60.7	62.4	61.5	65.0	65.9	72.7	81.9	95.5	120.3	142.3	140.3
95°	124.8	123.8	127.1	135.7	150.0	174.1	220.1	286.9	375.6	429.2	379.9
97.5°	245.7	254.9	270.9	297.8	350.2	429.2	547.7	669.4	768.6	732.7	551.9
100°	392.0	411.7	443.5	490.5	581.4	713.9	863.9	999.7	1022.7	865.0	595.6
102.5°	689.8	716.5	756.2	836.5	935.3	1075.6	1185.3	1216.1	1117.3	869.4	579.0
105°	1234.0	1249.3	1296.4	1364.2	1432.2	1468.3	1454.1	1330.3	1102.6	811.3	546.4
107.5°	1576.2	1596.6	1606.0	1609.8	1601.2	1548.2	1434.4	1248.0	1006.4	749.1	530.2
110°	1679.6	1680.7	1670.8	1650.0	1603.0	1513.2	1373.0	1177.0	946.0	719.3	526.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1677.8	1672.0	1653.3	1618.5	1553.0	1450.1	1300.3	1112.2	904.0	700.1	527.5
115°	1623.8	1613.9	1585.5	1535.1	1457.4	1344.5	1201.2	1032.6	851.9	678.8	532.2
117.5°	1527.2	1518.9	1488.8	1435.7	1356.4	1250.7	1120.6	972.5	819.0	668.5	540.0
120°	1465.0	1454.1	1422.3	1370.8	1294.2	1194.6	1078.5	942.7	801.4	662.4	545.3
122.5°	1400.1	1391.0	1362.7	1312.1	1243.4	1153.4	1043.5	919.1	786.6	658.9	551.4
125°	1317.2	1308.4	1281.1	1239.4	1175.9	1093.8	997.5	884.7	765.3	652.6	560.6
127.5°	1244.5	1237.5	1213.8	1174.9	1119.5	1043.7	952.8	850.7	745.6	648.8	570.0
130°	1203.3	1194.6	1172.7	1135.5	1081.8	1009.6	923.0	828.9	732.5	647.1	577.0
132.5°	1160.4	1152.5	1132.4	1095.1	1042.4	974.5	895.0	807.9	722.0	646.2	584.0
135°	1091.7	1087.2	1067.5	1031.4	984.3	923.0	850.7	778.4	707.3	644.9	592.4
137.5°	1024.2	1017.7	1000.3	969.2	926.3	872.9	815.5	755.1	697.0	644.7	599.8
140°	977.8	971.2	954.8	926.3	891.3	843.1	792.8	740.2	690.9	643.9	603.3
142.5°	931.3	930.0	915.4	889.5	856.2	816.0	772.6	727.9	684.8	643.9	606.0
145°	871.6	868.3	857.3	838.7	812.5	780.7	746.8	710.6	676.7	641.6	608.8
147.5°	821.4	819.4	812.0	797.1	775.4	752.2	725.8	697.3	668.4	637.7	609.6
150°	791.6	790.5	784.0	770.8	754.4	734.7	711.7	687.6	661.3	635.1	608.8
152.5°	766.2	766.0	761.2	749.8	736.9	719.8	700.3	678.0	655.2	630.7	607.0
155°	732.5	734.7	730.3	722.6	710.6	698.5	682.1	664.6	643.9	623.0	604.4
157.5°	703.8	703.8	701.8	695.5	686.9	677.5	663.7	649.0	633.1	615.1	599.4
160°	685.4	685.4	684.3	678.8	671.2	663.5	651.5	639.4	625.2	609.9	596.7
162.5°	667.9	668.7	667.7	663.9	656.3	650.4	640.1	629.8	618.2	605.5	594.1
165°	642.7	643.9	643.9	639.4	635.1	630.7	623.0	615.4	606.6	596.7	589.1
167.5°	619.5	620.9	621.0	618.6	616.7	612.7	607.5	601.5	595.2	589.1	584.0
170°	605.5	607.7	608.8	605.5	604.4	602.2	597.9	594.6	589.1	584.7	581.4
172.5°	594.1	595.4	596.5	595.0	593.9	592.6	589.1	586.6	583.0	579.5	577.9
175°	579.2	581.4	582.5	581.4	581.4	580.3	579.2	578.2	574.9	573.7	572.7
177.5°	570.2	572.0	572.9	572.9	572.9	572.9	572.0	572.0	570.2	569.4	570.2
180°	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	571.7	570.3	569.5	566.4	563.6	560.9	560.1	560.3	556.6	553.0	551.5
5°	594.0	589.7	585.6	579.9	573.0	565.4	561.7	558.6	551.1	543.0	538.3
7.5°	613.9	607.8	599.9	589.1	579.1	567.3	559.8	553.2	542.2	530.7	523.7
10°	626.0	617.7	607.7	594.4	582.2	567.8	557.8	547.7	534.9	521.1	512.6
12.5°	636.5	625.3	615.4	598.3	583.9	565.9	554.0	539.8	526.3	510.0	501.6
15°	661.4	640.6	621.8	602.5	584.8	559.7	546.4	527.4	509.6	489.5	479.8
17.5°	680.6	657.2	627.6	603.1	582.4	554.6	535.2	512.4	491.3	468.3	455.2
20°	691.5	664.8	632.9	603.8	579.0	547.2	526.0	502.8	478.2	452.2	438.1
22.5°	698.0	670.0	638.4	601.2	572.1	541.3	514.6	489.0	464.1	436.1	421.3
25°	700.1	674.5	641.0	599.1	563.5	528.7	496.5	471.6	441.5	415.4	393.8
27.5°	689.9	671.6	639.4	595.0	553.6	512.8	477.0	448.9	417.1	388.7	366.9
30°	677.4	666.8	635.5	591.0	545.7	501.9	462.5	430.6	398.9	370.2	347.9
32.5°	658.1	655.8	628.3	585.1	537.3	488.0	447.2	415.0	379.8	351.7	330.5
35°	620.1	630.4	613.0	572.1	521.6	468.3	424.1	387.3	350.9	324.0	304.1
37.5°	569.1	594.7	590.1	553.1	500.2	446.8	398.0	359.6	324.9	297.7	278.1
40°	534.0	566.6	571.3	538.5	485.2	430.2	378.5	340.3	306.4	281.5	261.8
42.5°	496.3	534.3	547.2	521.0	468.7	412.6	361.1	321.4	287.9	263.7	246.3
45°	433.2	483.4	506.8	491.8	441.3	383.9	330.8	290.6	260.1	237.4	223.9
47.5°	374.1	429.0	460.4	455.2	410.8	353.9	301.4	262.8	233.2	215.1	203.0
50°	332.3	388.8	426.7	428.5	388.8	332.5	279.8	243.5	216.2	199.3	189.5
52.5°	296.0	350.0	391.2	400.4	364.3	310.3	260.5	224.2	200.3	184.7	176.0
55°	248.5	294.2	340.0	356.8	327.8	276.4	230.4	198.5	176.0	165.3	157.6
57.5°	206.7	244.7	287.0	305.5	287.7	243.6	200.5	172.8	154.6	145.2	139.2
60°	184.5	214.5	252.2	274.3	258.8	219.7	182.0	155.6	140.6	132.3	126.8
62.5°	164.0	190.6	222.4	242.6	234.2	197.3	163.5	140.3	127.3	119.5	115.5
65°	135.3	156.3	181.0	199.5	194.0	166.0	138.3	118.4	108.1	101.9	98.7
67.5°	111.4	126.6	143.6	159.9	155.5	135.6	113.5	97.9	90.3	84.9	82.9
70°	96.3	107.9	123.1	136.2	132.5	116.3	98.7	85.4	78.8	74.3	72.4
72.5°	82.0	91.4	103.1	113.8	111.3	97.7	83.1	73.1	68.0	63.8	62.3
75°	61.9	69.2	76.3	83.3	82.7	72.2	63.6	55.9	51.8	48.6	48.0
77.5°	45.7	49.8	54.6	58.7	57.6	51.6	44.9	40.4	37.5	35.3	35.0
80°	34.9	37.2	40.7	43.6	42.2	39.6	34.2	31.0	28.9	26.8	25.9
82.5°	25.4	27.6	29.7	31.4	30.2	27.8	24.5	22.3	21.0	19.6	19.2
85°	13.3	14.5	15.5	15.8	15.5	13.9	12.4	11.6	10.5	9.8	9.6
87.5°	11.0	9.5	8.4	8.1	7.2	6.7	5.2	4.0	4.4	5.2	5.3
90°	29.6	21.9	16.4	13.1	10.9	8.8	4.3	1.1	4.3	8.8	10.9
92.5°	109.2	74.5	49.7	39.4	32.0	27.1	19.2	13.4	19.2	27.1	32.0
95°	252.9	157.7	107.3	81.1	63.5	53.6	42.7	38.4	42.7	53.6	63.5
97.5°	340.7	208.0	144.8	115.0	94.8	79.9	68.3	62.4	68.3	79.9	94.8
100°	359.1	225.6	167.5	136.9	115.0	97.5	87.6	84.3	87.6	97.5	115.0
102.5°	360.1	241.3	187.7	157.0	134.2	116.7	106.9	104.4	106.9	116.7	134.2
105°	365.7	268.2	216.8	186.2	162.0	145.6	138.0	133.6	138.0	145.6	162.0
107.5°	380.8	295.9	245.9	215.1	191.1	176.1	168.6	165.1	168.6	176.1	191.1
110°	393.0	314.2	266.1	234.3	211.3	197.1	190.5	186.2	190.5	197.1	211.3



TEST NUMBER: P331278-830

CATALOG NUMBER: SA2XXDIP-C290D1080U830-4F0-1E-UDD-A4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	406.2	331.8	285.3	252.7	230.5	217.3	209.8	205.4	209.8	217.3	230.5
115°	425.9	359.1	312.1	282.5	260.6	247.4	240.9	235.4	240.9	247.4	260.6
117.5°	447.0	384.3	340.7	310.1	289.1	277.5	270.9	266.6	270.9	277.5	289.1
120°	461.0	401.8	359.1	328.5	306.6	296.7	290.1	285.8	290.1	296.7	306.6
122.5°	473.3	418.5	378.4	346.9	325.0	314.2	307.6	304.2	307.6	314.2	325.0
125°	492.8	443.5	404.1	373.3	351.5	338.4	331.8	328.5	331.8	338.4	351.5
127.5°	510.9	466.7	428.3	396.8	375.8	361.4	352.1	347.7	352.1	361.4	375.8
130°	522.3	480.7	442.3	411.7	389.8	374.5	363.5	359.1	363.5	374.5	389.8
132.5°	533.7	492.9	456.4	425.7	402.9	386.7	374.9	369.7	374.9	386.7	402.9
135°	548.6	510.2	475.2	444.5	419.3	402.9	389.8	385.4	389.8	402.9	419.3
137.5°	560.0	524.2	489.7	461.2	436.2	418.7	405.6	400.3	405.6	418.7	436.2
140°	566.1	532.2	499.3	470.8	446.8	429.2	416.0	411.7	416.0	429.2	446.8
142.5°	571.4	538.3	506.3	479.6	456.4	438.8	426.6	423.1	426.6	438.8	456.4
145°	578.2	547.4	517.9	493.8	471.9	455.5	444.5	440.2	444.5	455.5	471.9
147.5°	581.8	554.9	527.1	505.7	487.5	472.3	461.8	458.5	461.8	472.3	487.5
150°	583.6	558.5	533.2	513.5	497.1	482.9	474.1	470.8	474.1	482.9	497.1
152.5°	584.5	561.9	539.3	521.4	505.9	493.3	484.7	483.1	484.7	493.3	505.9
155°	585.8	567.1	548.6	532.2	520.1	508.0	501.4	500.4	501.4	508.0	520.1
157.5°	585.8	570.9	555.2	541.3	531.7	521.2	515.9	514.8	515.9	521.2	531.7
160°	585.8	572.7	559.5	547.4	538.7	529.9	525.6	524.4	525.6	529.9	538.7
162.5°	584.9	573.5	562.1	552.7	544.8	537.8	533.5	534.1	533.5	537.8	544.8
165°	582.5	574.9	565.0	558.5	552.9	546.4	544.2	545.3	544.2	546.4	552.9
167.5°	581.0	574.6	567.4	563.3	559.3	555.2	553.2	554.5	553.2	555.2	559.3
170°	579.2	573.7	568.3	565.0	562.8	559.5	558.5	560.6	558.5	559.5	562.8
172.5°	576.6	572.9	569.1	566.8	565.4	562.1	562.8	564.1	562.8	562.1	565.4
175°	573.7	571.6	569.4	568.3	568.3	566.1	567.1	568.3	567.1	566.1	568.3
177.5°	572.0	570.2	569.4	569.4	569.4	567.6	568.4	570.2	568.4	567.6	569.4
180°	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4



TEST NUMBER: P331278-830

CATALOG NUMBER: SA2XXDIP-C290D1080U830-4F0-1E-UDD-A4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	549.8	548.7	545.2	543.3	540.2	537.2	535.4	536.2	536.9	536.6	536.0
5°	534.0	529.9	523.7	518.4	514.5	507.5	504.4	502.9	501.6	500.2	498.7
7.5°	515.2	508.8	499.9	492.3	485.1	476.3	471.3	468.3	465.2	461.8	458.8
10°	501.9	492.9	483.4	472.8	464.2	456.3	449.2	444.5	440.2	436.1	433.2
12.5°	487.9	477.5	465.8	451.2	441.8	430.4	429.3	421.0	414.3	411.8	408.3
15°	465.5	450.9	436.1	418.8	411.3	401.1	394.6	388.1	382.4	378.3	377.3
17.5°	440.1	421.2	406.5	394.1	381.8	371.3	365.3	360.2	355.4	350.1	349.3
20°	420.8	404.4	388.4	377.5	364.9	354.1	346.9	341.8	337.6	334.4	331.7
22.5°	402.4	384.6	369.9	358.0	345.5	336.9	331.1	326.1	322.7	319.2	316.6
25°	373.0	359.1	343.0	329.5	319.2	313.7	309.0	304.7	302.6	300.2	297.2
27.5°	347.2	331.8	316.8	306.3	297.3	292.4	289.0	286.1	284.1	282.7	281.0
30°	329.1	313.5	301.7	291.4	283.9	279.0	276.8	275.1	272.8	271.9	271.1
32.5°	311.6	297.6	287.5	278.5	271.5	268.2	266.3	264.7	262.9	262.0	260.2
35°	286.9	275.1	265.3	260.3	254.6	251.8	250.3	248.2	246.5	245.6	245.3
37.5°	263.6	253.4	246.9	240.6	238.2	236.5	234.4	233.0	232.4	232.3	232.1
40°	248.5	240.3	234.4	229.3	228.3	225.6	223.9	222.7	222.7	222.9	222.7
42.5°	234.9	227.3	222.3	217.8	216.6	215.1	213.3	213.3	213.6	214.3	213.6
45°	214.1	208.8	205.1	203.0	200.7	199.2	198.9	199.5	199.7	200.0	200.7
47.5°	195.0	191.4	188.1	185.8	184.7	184.5	184.3	185.4	186.4	186.8	187.8
50°	183.7	179.6	176.8	175.3	174.5	174.1	174.5	175.8	176.6	177.7	178.3
52.5°	171.1	168.1	166.3	165.0	164.8	165.0	165.0	166.5	167.9	168.3	168.6
55°	153.5	151.4	151.0	149.0	149.9	149.7	150.7	151.6	152.9	154.2	154.4
57.5°	136.0	134.3	133.2	133.4	133.7	134.6	135.4	137.0	138.3	139.7	139.8
60°	124.4	123.6	122.9	122.9	123.3	124.6	125.6	127.1	128.0	128.9	129.5
62.5°	113.8	112.9	112.3	112.6	113.8	114.5	115.7	116.6	117.4	118.3	118.6
65°	97.0	96.6	97.2	97.6	97.8	98.9	100.4	101.0	101.9	102.4	103.9
67.5°	81.5	81.6	81.5	82.1	83.4	83.6	85.0	86.5	86.7	87.6	88.5
70°	71.1	71.5	71.9	72.4	73.4	73.9	74.9	75.6	76.4	77.1	77.8
72.5°	61.5	61.5	62.0	61.9	62.9	63.7	64.7	65.3	66.2	67.0	67.6
75°	47.3	47.3	47.8	48.0	49.0	50.1	49.9	50.3	51.2	52.0	52.5
77.5°	34.6	34.1	34.6	34.8	35.2	36.0	36.2	36.8	37.8	37.5	38.0
80°	26.3	25.7	26.3	26.6	26.6	27.6	27.6	28.1	28.7	28.1	28.7
82.5°	18.8	18.5	18.9	19.0	19.3	19.4	19.7	19.8	20.5	20.2	20.5
85°	9.4	9.2	9.4	9.2	9.4	9.6	9.6	9.4	9.4	9.8	9.2
87.5°	5.6	6.0	7.0	8.5	9.6	9.7	9.2	9.0	8.7	8.8	9.0
90°	13.1	16.4	21.9	29.6	36.1	37.2	36.1	35.1	32.9	35.1	36.1
92.5°	39.4	49.7	74.5	109.2	140.3	142.3	120.3	95.5	81.9	72.7	65.9
95°	81.1	107.3	157.7	252.9	379.9	429.2	375.6	286.9	220.1	174.1	150.0
97.5°	115.0	144.8	208.0	340.7	551.9	732.7	768.6	669.4	547.7	429.2	350.2
100°	136.9	167.5	225.6	359.1	595.6	865.0	1022.7	999.7	863.9	713.9	581.4
102.5°	157.0	187.7	241.3	360.1	579.0	869.4	1117.3	1216.1	1185.3	1075.6	935.3
105°	186.2	216.8	268.2	365.7	546.4	811.3	1102.6	1330.3	1454.1	1468.3	1432.2
107.5°	215.1	245.9	295.9	380.8	530.2	749.1	1006.4	1248.0	1434.4	1548.2	1601.2
110°	234.3	266.1	314.2	393.0	526.7	719.3	946.0	1177.0	1373.0	1513.2	1603.0



TEST NUMBER: P331278-830

CATALOG NUMBER: SA2XXDIP-C290D1080U830-4F0-1E-UDD-A4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	252.7	285.3	331.8	406.2	527.5	700.1	904.0	1112.2	1300.3	1450.1	1553.0
115°	282.5	312.1	359.1	425.9	532.2	678.8	851.9	1032.6	1201.2	1344.5	1457.4
117.5°	310.1	340.7	384.3	447.0	540.0	668.5	819.0	972.5	1120.6	1250.7	1356.4
120°	328.5	359.1	401.8	461.0	545.3	662.4	801.4	942.7	1078.5	1194.6	1294.2
122.5°	346.9	378.4	418.5	473.3	551.4	658.9	786.6	919.1	1043.5	1153.4	1243.4
125°	373.3	404.1	443.5	492.8	560.6	652.6	765.3	884.7	997.5	1093.8	1175.9
127.5°	396.8	428.3	466.7	510.9	570.0	648.8	745.6	850.7	952.8	1043.7	1119.5
130°	411.7	442.3	480.7	522.3	577.0	647.1	732.5	828.9	923.0	1009.6	1081.8
132.5°	425.7	456.4	492.9	533.7	584.0	646.2	722.0	807.9	895.0	974.5	1042.4
135°	444.5	475.2	510.2	548.6	592.4	644.9	707.3	778.4	850.7	923.0	984.3
137.5°	461.2	489.7	524.2	560.0	599.8	644.7	697.0	755.1	815.5	872.9	926.3
140°	470.8	499.3	532.2	566.1	603.3	643.9	690.9	740.2	792.8	843.1	891.3
142.5°	479.6	506.3	538.3	571.4	606.0	643.9	684.8	727.9	772.6	816.0	856.2
145°	493.8	517.9	547.4	578.2	608.8	641.6	676.7	710.6	746.8	780.7	812.5
147.5°	505.7	527.1	554.9	581.8	609.6	637.7	668.4	697.3	725.8	752.2	775.4
150°	513.5	533.2	558.5	583.6	608.8	635.1	661.3	687.6	711.7	734.7	754.4
152.5°	521.4	539.3	561.9	584.5	607.0	630.7	655.2	678.0	700.3	719.8	736.9
155°	532.2	548.6	567.1	585.8	604.4	623.0	643.9	664.6	682.1	698.5	710.6
157.5°	541.3	555.2	570.9	585.8	599.4	615.1	633.1	649.0	663.7	677.5	686.9
160°	547.4	559.5	572.7	585.8	596.7	609.9	625.2	639.4	651.5	663.5	671.2
162.5°	552.7	562.1	573.5	584.9	594.1	605.5	618.2	629.8	640.1	650.4	656.3
165°	558.5	565.0	574.9	582.5	589.1	596.7	606.6	615.4	623.0	630.7	635.1
167.5°	563.3	567.4	574.6	581.0	584.0	589.1	595.2	601.5	607.5	612.7	616.7
170°	565.0	568.3	573.7	579.2	581.4	584.7	589.1	594.6	597.9	602.2	604.4
172.5°	566.8	569.1	572.9	576.6	577.9	579.5	583.0	586.6	589.1	592.6	593.9
175°	568.3	569.4	571.6	573.7	572.7	573.7	574.9	578.2	579.2	580.3	581.4
177.5°	569.4	569.4	570.2	572.0	570.2	569.4	570.2	572.0	572.0	572.9	572.9
180°	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4



TEST NUMBER: P331278-830

CATALOG NUMBER: SA2XXDIP-C290D1080U830-4F0-1E-UDD-A4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	534.3	534.0	534.0	532.4	534.0	534.0	534.3	536.0	536.6	536.9	536.2
5°	495.7	495.0	494.0	495.0	494.0	495.0	495.7	498.7	500.2	501.6	502.9
7.5°	457.4	454.9	454.5	451.9	454.5	454.9	457.4	458.8	461.8	465.2	468.3
10°	429.5	427.8	427.5	423.5	427.5	427.8	429.5	433.2	436.1	440.2	444.5
12.5°	408.3	404.2	405.0	402.7	405.0	404.2	408.3	408.3	411.8	414.3	421.0
15°	371.5	371.5	370.6	367.0	370.6	371.5	371.5	377.3	378.3	382.4	388.1
17.5°	345.1	344.6	342.6	343.7	342.6	344.6	345.1	349.3	350.1	355.4	360.2
20°	329.3	328.0	325.5	325.5	325.5	328.0	329.3	331.7	334.4	337.6	341.8
22.5°	314.4	314.3	311.6	312.5	311.6	314.3	314.4	316.6	319.2	322.7	326.1
25°	297.0	295.3	294.0	294.6	294.0	295.3	297.0	297.2	300.2	302.6	304.7
27.5°	280.4	279.5	279.4	277.7	279.4	279.5	280.4	281.0	282.7	284.1	286.1
30°	270.9	268.7	269.1	268.1	269.1	268.7	270.9	271.1	271.9	272.8	275.1
32.5°	259.9	259.1	258.7	257.8	258.7	259.1	259.9	260.2	262.0	262.9	264.7
35°	245.0	245.2	244.1	244.5	244.1	245.2	245.0	245.3	245.6	246.5	248.2
37.5°	231.9	232.5	232.1	232.1	232.1	232.5	231.9	232.1	232.3	232.4	233.0
40°	223.3	223.3	223.3	223.9	223.3	223.3	223.3	222.7	222.9	222.7	222.7
42.5°	215.1	214.7	214.4	214.3	214.4	214.7	215.1	213.6	214.3	213.6	213.3
45°	201.0	201.7	201.9	200.9	201.9	201.7	201.0	200.7	200.0	199.7	199.5
47.5°	188.3	188.4	188.3	189.3	188.3	188.4	188.3	187.8	186.8	186.4	185.4
50°	179.5	179.0	179.5	179.0	179.5	179.0	179.5	178.3	177.7	176.6	175.8
52.5°	170.0	170.1	169.8	169.8	169.8	170.1	170.0	168.6	168.3	167.9	166.5
55°	155.2	155.6	155.4	155.4	155.4	155.6	155.2	154.4	154.2	152.9	151.6
57.5°	140.0	140.3	140.6	139.7	140.6	140.3	140.0	139.8	139.7	138.3	137.0
60°	129.3	130.4	130.2	129.8	130.2	130.4	129.3	129.5	128.9	128.0	127.1
62.5°	119.5	120.0	119.9	119.8	119.9	120.0	119.5	118.6	118.3	117.4	116.6
65°	104.5	104.9	104.2	104.9	104.2	104.9	104.5	103.9	102.4	101.9	101.0
67.5°	88.2	88.4	88.9	89.2	88.9	88.4	88.2	88.5	87.6	86.7	86.5
70°	78.1	77.9	78.6	79.3	78.6	77.9	78.1	77.8	77.1	76.4	75.6
72.5°	67.5	68.0	67.8	68.2	67.8	68.0	67.5	67.6	67.0	66.2	65.3
75°	52.0	52.7	52.5	53.1	52.5	52.7	52.0	52.5	52.0	51.2	50.3
77.5°	37.6	37.7	37.6	38.0	37.6	37.7	37.6	38.0	37.5	37.8	36.8
80°	28.7	28.3	27.8	28.7	27.8	28.3	28.7	28.7	28.1	28.7	28.1
82.5°	20.0	20.2	19.8	19.8	19.8	20.2	20.0	20.5	20.2	20.5	19.8
85°	9.2	9.0	8.6	8.6	8.6	9.0	9.2	9.2	9.8	9.4	9.4
87.5°	9.0	8.8	8.8	8.6	8.8	8.8	9.0	9.0	8.8	8.7	9.0
90°	36.1	36.1	36.1	36.1	36.1	36.1	36.1	36.1	35.1	32.9	35.1
92.5°	65.0	61.5	62.4	60.7	62.4	61.5	65.0	65.9	72.7	81.9	95.5
95°	135.7	127.1	123.8	124.8	123.8	127.1	135.7	150.0	174.1	220.1	286.9
97.5°	297.8	270.9	254.9	245.7	254.9	270.9	297.8	350.2	429.2	547.7	669.4
100°	490.5	443.5	411.7	392.0	411.7	443.5	490.5	581.4	713.9	863.9	999.7
102.5°	836.5	756.2	716.5	689.8	716.5	756.2	836.5	935.3	1075.6	1185.3	1216.1
105°	1364.2	1296.4	1249.3	1234.0	1249.3	1296.4	1364.2	1432.2	1468.3	1454.1	1330.3
107.5°	1609.8	1606.0	1596.6	1576.2	1596.6	1606.0	1609.8	1601.2	1548.2	1434.4	1248.0
110°	1650.0	1670.8	1680.7	1679.6	1680.7	1670.8	1650.0	1603.0	1513.2	1373.0	1177.0



TEST NUMBER: P331278-830

CATALOG NUMBER: SA2XXDIP-C290D1080U830-4F0-1E-UDD-A4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	1618.5	1653.3	1672.0	1677.8	1672.0	1653.3	1618.5	1553.0	1450.1	1300.3	1112.2
115°	1535.1	1585.5	1613.9	1623.8	1613.9	1585.5	1535.1	1457.4	1344.5	1201.2	1032.6
117.5°	1435.7	1488.8	1518.9	1527.2	1518.9	1488.8	1435.7	1356.4	1250.7	1120.6	972.5
120°	1370.8	1422.3	1454.1	1465.0	1454.1	1422.3	1370.8	1294.2	1194.6	1078.5	942.7
122.5°	1312.1	1362.7	1391.0	1400.1	1391.0	1362.7	1312.1	1243.4	1153.4	1043.5	919.1
125°	1239.4	1281.1	1308.4	1317.2	1308.4	1281.1	1239.4	1175.9	1093.8	997.5	884.7
127.5°	1174.9	1213.8	1237.5	1244.5	1237.5	1213.8	1174.9	1119.5	1043.7	952.8	850.7
130°	1135.5	1172.7	1194.6	1203.3	1194.6	1172.7	1135.5	1081.8	1009.6	923.0	828.9
132.5°	1095.1	1132.4	1152.5	1160.4	1152.5	1132.4	1095.1	1042.4	974.5	895.0	807.9
135°	1031.4	1067.5	1087.2	1091.7	1087.2	1067.5	1031.4	984.3	923.0	850.7	778.4
137.5°	969.2	1000.3	1017.7	1024.2	1017.7	1000.3	969.2	926.3	872.9	815.5	755.1
140°	926.3	954.8	971.2	977.8	971.2	954.8	926.3	891.3	843.1	792.8	740.2
142.5°	889.5	915.4	930.0	931.3	930.0	915.4	889.5	856.2	816.0	772.6	727.9
145°	838.7	857.3	868.3	871.6	868.3	857.3	838.7	812.5	780.7	746.8	710.6
147.5°	797.1	812.0	819.4	821.4	819.4	812.0	797.1	775.4	752.2	725.8	697.3
150°	770.8	784.0	790.5	791.6	790.5	784.0	770.8	754.4	734.7	711.7	687.6
152.5°	749.8	761.2	766.0	766.2	766.0	761.2	749.8	736.9	719.8	700.3	678.0
155°	722.6	730.3	734.7	732.5	734.7	730.3	722.6	710.6	698.5	682.1	664.6
157.5°	695.5	701.8	703.8	703.8	703.8	701.8	695.5	686.9	677.5	663.7	649.0
160°	678.8	684.3	685.4	685.4	685.4	684.3	678.8	671.2	663.5	651.5	639.4
162.5°	663.9	667.7	668.7	667.9	668.7	667.7	663.9	656.3	650.4	640.1	629.8
165°	639.4	643.9	643.9	642.7	643.9	643.9	639.4	635.1	630.7	623.0	615.4
167.5°	618.6	621.0	620.9	619.5	620.9	621.0	618.6	616.7	612.7	607.5	601.5
170°	605.5	608.8	607.7	605.5	607.7	608.8	605.5	604.4	602.2	597.9	594.6
172.5°	595.0	596.5	595.4	594.1	595.4	596.5	595.0	593.9	592.6	589.1	586.6
175°	581.4	582.5	581.4	579.2	581.4	582.5	581.4	581.4	580.3	579.2	578.2
177.5°	572.9	572.9	572.0	570.2	572.0	572.9	572.9	572.9	572.9	572.0	572.0
180°	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4



TEST NUMBER: P331278-830

CATALOG NUMBER: SA2XXDIP-C290D1080U830-4F0-1E-UDD-A4

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	535.4	537.2	540.2	543.3	545.2	548.7	549.8	551.5	553.0	556.6	560.3
5°	504.4	507.5	514.5	518.4	523.7	529.9	534.0	538.3	543.0	551.1	558.6
7.5°	471.3	476.3	485.1	492.3	499.9	508.8	515.2	523.7	530.7	542.2	553.2
10°	449.2	456.3	464.2	472.8	483.4	492.9	501.9	512.6	521.1	534.9	547.7
12.5°	429.3	430.4	441.8	451.2	465.8	477.5	487.9	501.6	510.0	526.3	539.8
15°	394.6	401.1	411.3	418.8	436.1	450.9	465.5	479.8	489.5	509.6	527.4
17.5°	365.3	371.3	381.8	394.1	406.5	421.2	440.1	455.2	468.3	491.3	512.4
20°	346.9	354.1	364.9	377.5	388.4	404.4	420.8	438.1	452.2	478.2	502.8
22.5°	331.1	336.9	345.5	358.0	369.9	384.6	402.4	421.3	436.1	464.1	489.0
25°	309.0	313.7	319.2	329.5	343.0	359.1	373.0	393.8	415.4	441.5	471.6
27.5°	289.0	292.4	297.3	306.3	316.8	331.8	347.2	366.9	388.7	417.1	448.9
30°	276.8	279.0	283.9	291.4	301.7	313.5	329.1	347.9	370.2	398.9	430.6
32.5°	266.3	268.2	271.5	278.5	287.5	297.6	311.6	330.5	351.7	379.8	415.0
35°	250.3	251.8	254.6	260.3	265.3	275.1	286.9	304.1	324.0	350.9	387.3
37.5°	234.4	236.5	238.2	240.6	246.9	253.4	263.6	278.1	297.7	324.9	359.6
40°	223.9	225.6	228.3	229.3	234.4	240.3	248.5	261.8	281.5	306.4	340.3
42.5°	213.3	215.1	216.6	217.8	222.3	227.3	234.9	246.3	263.7	287.9	321.4
45°	198.9	199.2	200.7	203.0	205.1	208.8	214.1	223.9	237.4	260.1	290.6
47.5°	184.3	184.5	184.7	185.8	188.1	191.4	195.0	203.0	215.1	233.2	262.8
50°	174.5	174.1	174.5	175.3	176.8	179.6	183.7	189.5	199.3	216.2	243.5
52.5°	165.0	165.0	164.8	165.0	166.3	168.1	171.1	176.0	184.7	200.3	224.2
55°	150.7	149.7	149.9	149.0	151.0	151.4	153.5	157.6	165.3	176.0	198.5
57.5°	135.4	134.6	133.7	133.4	133.2	134.3	136.0	139.2	145.2	154.6	172.8
60°	125.6	124.6	123.3	122.9	122.9	123.6	124.4	126.8	132.3	140.6	155.6
62.5°	115.7	114.5	113.8	112.6	112.3	112.9	113.8	115.5	119.5	127.3	140.3
65°	100.4	98.9	97.8	97.6	97.2	96.6	97.0	98.7	101.9	108.1	118.4
67.5°	85.0	83.6	83.4	82.1	81.5	81.6	81.5	82.9	84.9	90.3	97.9
70°	74.9	73.9	73.4	72.4	71.9	71.5	71.1	72.4	74.3	78.8	85.4
72.5°	64.7	63.7	62.9	61.9	62.0	61.5	61.5	62.3	63.8	68.0	73.1
75°	49.9	50.1	49.0	48.0	47.8	47.3	47.3	48.0	48.6	51.8	55.9
77.5°	36.2	36.0	35.2	34.8	34.6	34.1	34.6	35.0	35.3	37.5	40.4
80°	27.6	27.6	26.6	26.6	26.3	25.7	26.3	25.9	26.8	28.9	31.0
82.5°	19.7	19.4	19.3	19.0	18.9	18.5	18.8	19.2	19.6	21.0	22.3
85°	9.6	9.6	9.4	9.2	9.4	9.2	9.4	9.6	9.8	10.5	11.6
87.5°	9.2	9.7	9.6	8.5	7.0	6.0	5.6	5.3	5.2	4.4	4.0
90°	36.1	37.2	36.1	29.6	21.9	16.4	13.1	10.9	8.8	4.3	1.1
92.5°	120.3	142.3	140.3	109.2	74.5	49.7	39.4	32.0	27.1	19.2	13.4
95°	375.6	429.2	379.9	252.9	157.7	107.3	81.1	63.5	53.6	42.7	38.4
97.5°	768.6	732.7	551.9	340.7	208.0	144.8	115.0	94.8	79.9	68.3	62.4
100°	1022.7	865.0	595.6	359.1	225.6	167.5	136.9	115.0	97.5	87.6	84.3
102.5°	1117.3	869.4	579.0	360.1	241.3	187.7	157.0	134.2	116.7	106.9	104.4
105°	1102.6	811.3	546.4	365.7	268.2	216.8	186.2	162.0	145.6	138.0	133.6
107.5°	1006.4	749.1	530.2	380.8	295.9	245.9	215.1	191.1	176.1	168.6	165.1
110°	946.0	719.3	526.7	393.0	314.2	266.1	234.3	211.3	197.1	190.5	186.2



TEST NUMBER: P331278-830
 CATALOG NUMBER: SA2XXDIP-C290D1080U830-4F0-1E-UDD-A4

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	904.0	700.1	527.5	406.2	331.8	285.3	252.7	230.5	217.3	209.8	205.4
115°	851.9	678.8	532.2	425.9	359.1	312.1	282.5	260.6	247.4	240.9	235.4
117.5°	819.0	668.5	540.0	447.0	384.3	340.7	310.1	289.1	277.5	270.9	266.6
120°	801.4	662.4	545.3	461.0	401.8	359.1	328.5	306.6	296.7	290.1	285.8
122.5°	786.6	658.9	551.4	473.3	418.5	378.4	346.9	325.0	314.2	307.6	304.2
125°	765.3	652.6	560.6	492.8	443.5	404.1	373.3	351.5	338.4	331.8	328.5
127.5°	745.6	648.8	570.0	510.9	466.7	428.3	396.8	375.8	361.4	352.1	347.7
130°	732.5	647.1	577.0	522.3	480.7	442.3	411.7	389.8	374.5	363.5	359.1
132.5°	722.0	646.2	584.0	533.7	492.9	456.4	425.7	402.9	386.7	374.9	369.7
135°	707.3	644.9	592.4	548.6	510.2	475.2	444.5	419.3	402.9	389.8	385.4
137.5°	697.0	644.7	599.8	560.0	524.2	489.7	461.2	436.2	418.7	405.6	400.3
140°	690.9	643.9	603.3	566.1	532.2	499.3	470.8	446.8	429.2	416.0	411.7
142.5°	684.8	643.9	606.0	571.4	538.3	506.3	479.6	456.4	438.8	426.6	423.1
145°	676.7	641.6	608.8	578.2	547.4	517.9	493.8	471.9	455.5	444.5	440.2
147.5°	668.4	637.7	609.6	581.8	554.9	527.1	505.7	487.5	472.3	461.8	458.5
150°	661.3	635.1	608.8	583.6	558.5	533.2	513.5	497.1	482.9	474.1	470.8
152.5°	655.2	630.7	607.0	584.5	561.9	539.3	521.4	505.9	493.3	484.7	483.1
155°	643.9	623.0	604.4	585.8	567.1	548.6	532.2	520.1	508.0	501.4	500.4
157.5°	633.1	615.1	599.4	585.8	570.9	555.2	541.3	531.7	521.2	515.9	514.8
160°	625.2	609.9	596.7	585.8	572.7	559.5	547.4	538.7	529.9	525.6	524.4
162.5°	618.2	605.5	594.1	584.9	573.5	562.1	552.7	544.8	537.8	533.5	534.1
165°	606.6	596.7	589.1	582.5	574.9	565.0	558.5	552.9	546.4	544.2	545.3
167.5°	595.2	589.1	584.0	581.0	574.6	567.4	563.3	559.3	555.2	553.2	554.5
170°	589.1	584.7	581.4	579.2	573.7	568.3	565.0	562.8	559.5	558.5	560.6
172.5°	583.0	579.5	577.9	576.6	572.9	569.1	566.8	565.4	562.1	562.8	564.1
175°	574.9	573.7	572.7	573.7	571.6	569.4	568.3	568.3	566.1	567.1	568.3
177.5°	570.2	569.4	570.2	572.0	570.2	569.4	569.4	569.4	567.6	568.4	570.2
180°	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4



TEST NUMBER: P331278-830
 CATALOG NUMBER: SA2XXDIP-C290D1080U830-4F0-1E-UDD-A4

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	560.1	560.9	563.6	566.4	569.5	570.3	571.7	570.5	570.1	573.3	575.8
5°	561.7	565.4	573.0	579.9	585.6	589.7	594.0	595.7	598.9	603.3	609.0
7.5°	559.8	567.3	579.1	589.1	599.9	607.8	613.9	619.2	625.5	634.0	643.3
10°	557.8	567.8	582.2	594.4	607.7	617.7	626.0	634.2	643.7	655.4	667.6
12.5°	554.0	565.9	583.9	598.3	615.4	625.3	636.5	654.0	664.2	680.6	697.8
15°	546.4	559.7	584.8	602.5	621.8	640.6	661.4	678.1	694.7	704.5	728.6
17.5°	535.2	554.6	582.4	603.1	627.6	657.2	680.6	699.6	718.8	734.4	746.6
20°	526.0	547.2	579.0	603.8	632.9	664.8	691.5	710.9	727.5	740.6	748.1
22.5°	514.6	541.3	572.1	601.2	638.4	670.0	698.0	713.2	727.2	733.6	736.5
25°	496.5	528.7	563.5	599.1	641.0	674.5	700.1	709.4	713.4	707.2	696.9
27.5°	477.0	512.8	553.6	595.0	639.4	671.6	689.9	688.5	681.6	661.5	645.5
30°	462.5	501.9	545.7	591.0	635.5	666.8	677.4	666.8	651.1	628.7	605.7
32.5°	447.2	488.0	537.3	585.1	628.3	655.8	658.1	639.7	615.5	589.9	561.4
35°	424.1	468.3	521.6	572.1	613.0	630.4	620.1	587.5	558.8	524.0	484.9
37.5°	398.0	446.8	500.2	553.1	590.1	594.7	569.1	534.9	494.4	453.4	407.5
40°	378.5	430.2	485.2	538.5	571.3	566.6	534.0	496.3	448.2	398.0	355.4
42.5°	361.1	412.6	468.7	521.0	547.2	534.3	496.3	450.1	398.3	351.1	312.1
45°	330.8	383.9	441.3	491.8	506.8	483.4	433.2	381.7	330.8	291.4	260.6
47.5°	301.4	353.9	410.8	455.2	460.4	429.0	374.1	321.2	277.4	245.3	223.6
50°	279.8	332.5	388.8	428.5	426.7	388.8	332.3	282.0	245.3	219.4	204.9
52.5°	260.5	310.3	364.3	400.4	391.2	350.0	296.0	251.3	221.2	201.0	187.8
55°	230.4	276.4	327.8	356.8	340.0	294.2	248.5	212.6	190.3	175.1	164.9
57.5°	200.5	243.6	287.7	305.5	287.0	244.7	206.7	180.6	163.8	152.6	145.9
60°	182.0	219.7	258.8	274.3	252.2	214.5	184.5	161.3	147.7	138.6	132.5
62.5°	163.5	197.3	234.2	242.6	222.4	190.6	164.0	144.6	133.6	125.4	119.7
65°	138.3	166.0	194.0	199.5	181.0	156.3	135.3	122.7	112.8	106.9	102.4
67.5°	113.5	135.6	155.5	159.9	143.6	126.6	111.4	100.4	93.8	88.8	84.9
70°	98.7	116.3	132.5	136.2	123.1	107.9	96.3	87.6	81.5	77.3	73.6
72.5°	83.1	97.7	111.3	113.8	103.1	91.4	82.0	75.0	69.7	67.0	63.5
75°	63.6	72.2	82.7	83.3	76.3	69.2	61.9	57.4	54.6	51.2	49.5
77.5°	44.9	51.6	57.6	58.7	54.6	49.8	45.7	42.1	39.8	38.2	36.6
80°	34.2	39.6	42.2	43.6	40.7	37.2	34.9	32.5	31.0	30.0	28.9
82.5°	24.5	27.8	30.2	31.4	29.7	27.6	25.4	23.9	22.8	22.0	21.6
85°	12.4	13.9	15.5	15.8	15.5	14.5	13.3	13.3	12.6	12.4	12.4
87.5°	5.2	6.7	7.2	8.1	8.4	9.5	11.0	12.2	12.3	11.9	11.5
90°	4.3	8.8	10.9	13.1	16.4	21.9	29.6	36.1	37.2	36.1	35.1
92.5°	19.2	27.1	32.0	39.4	49.7	74.5	109.2	140.3	142.3	120.3	95.5
95°	42.7	53.6	63.5	81.1	107.3	157.7	252.9	379.9	429.2	375.6	286.9
97.5°	68.3	79.9	94.8	115.0	144.8	208.0	340.7	551.9	732.7	768.6	669.4
100°	87.6	97.5	115.0	136.9	167.5	225.6	359.1	595.6	865.0	1022.7	999.7
102.5°	106.9	116.7	134.2	157.0	187.7	241.3	360.1	579.0	869.4	1117.3	1216.1
105°	138.0	145.6	162.0	186.2	216.8	268.2	365.7	546.4	811.3	1102.6	1330.3
107.5°	168.6	176.1	191.1	215.1	245.9	295.9	380.8	530.2	749.1	1006.4	1248.0
110°	190.5	197.1	211.3	234.3	266.1	314.2	393.0	526.7	719.3	946.0	1177.0



TEST NUMBER: P331278-830

CATALOG NUMBER: SA2XXDIP-C290D1080U830-4F0-1E-UDD-A4

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	209.8	217.3	230.5	252.7	285.3	331.8	406.2	527.5	700.1	904.0	1112.2
115°	240.9	247.4	260.6	282.5	312.1	359.1	425.9	532.2	678.8	851.9	1032.6
117.5°	270.9	277.5	289.1	310.1	340.7	384.3	447.0	540.0	668.5	819.0	972.5
120°	290.1	296.7	306.6	328.5	359.1	401.8	461.0	545.3	662.4	801.4	942.7
122.5°	307.6	314.2	325.0	346.9	378.4	418.5	473.3	551.4	658.9	786.6	919.1
125°	331.8	338.4	351.5	373.3	404.1	443.5	492.8	560.6	652.6	765.3	884.7
127.5°	352.1	361.4	375.8	396.8	428.3	466.7	510.9	570.0	648.8	745.6	850.7
130°	363.5	374.5	389.8	411.7	442.3	480.7	522.3	577.0	647.1	732.5	828.9
132.5°	374.9	386.7	402.9	425.7	456.4	492.9	533.7	584.0	646.2	722.0	807.9
135°	389.8	402.9	419.3	444.5	475.2	510.2	548.6	592.4	644.9	707.3	778.4
137.5°	405.6	418.7	436.2	461.2	489.7	524.2	560.0	599.8	644.7	697.0	755.1
140°	416.0	429.2	446.8	470.8	499.3	532.2	566.1	603.3	643.9	690.9	740.2
142.5°	426.6	438.8	456.4	479.6	506.3	538.3	571.4	606.0	643.9	684.8	727.9
145°	444.5	455.5	471.9	493.8	517.9	547.4	578.2	608.8	641.6	676.7	710.6
147.5°	461.8	472.3	487.5	505.7	527.1	554.9	581.8	609.6	637.7	668.4	697.3
150°	474.1	482.9	497.1	513.5	533.2	558.5	583.6	608.8	635.1	661.3	687.6
152.5°	484.7	493.3	505.9	521.4	539.3	561.9	584.5	607.0	630.7	655.2	678.0
155°	501.4	508.0	520.1	532.2	548.6	567.1	585.8	604.4	623.0	643.9	664.6
157.5°	515.9	521.2	531.7	541.3	555.2	570.9	585.8	599.4	615.1	633.1	649.0
160°	525.6	529.9	538.7	547.4	559.5	572.7	585.8	596.7	609.9	625.2	639.4
162.5°	533.5	537.8	544.8	552.7	562.1	573.5	584.9	594.1	605.5	618.2	629.8
165°	544.2	546.4	552.9	558.5	565.0	574.9	582.5	589.1	596.7	606.6	615.4
167.5°	553.2	555.2	559.3	563.3	567.4	574.6	581.0	584.0	589.1	595.2	601.5
170°	558.5	559.5	562.8	565.0	568.3	573.7	579.2	581.4	584.7	589.1	594.6
172.5°	562.8	562.1	565.4	566.8	569.1	572.9	576.6	577.9	579.5	583.0	586.6
175°	567.1	566.1	568.3	568.3	569.4	571.6	573.7	572.7	573.7	574.9	578.2
177.5°	568.4	567.6	569.4	569.4	569.4	570.2	572.0	570.2	569.4	570.2	572.0
180°	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4	569.4



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CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	577.9	580.2	580.2	580.6	583.3	583.0	582.8
5°	614.9	618.6	619.0	622.8	625.4	624.5	622.2
7.5°	649.9	656.7	661.9	664.7	668.1	670.1	669.2
10°	677.7	687.5	693.5	697.6	702.5	706.2	704.8
12.5°	702.9	714.5	722.8	729.8	730.4	735.1	731.9
15°	742.2	754.5	755.8	760.9	765.1	764.6	764.8
17.5°	755.1	759.0	759.9	760.0	760.1	758.6	755.3
20°	750.5	748.9	745.4	742.5	737.6	737.0	732.7
22.5°	728.5	723.8	714.6	708.6	701.0	699.0	697.8
25°	685.4	674.9	660.3	646.4	642.5	635.1	637.2
27.5°	626.1	609.8	594.0	582.8	572.5	561.3	564.5
30°	584.6	566.1	543.8	526.7	515.8	505.1	503.1
32.5°	534.9	507.8	483.1	468.0	451.2	444.4	437.1
35°	449.2	422.8	398.2	377.0	364.9	355.4	346.9
37.5°	372.2	341.9	322.0	304.8	296.0	290.6	292.0
40°	324.4	297.8	283.2	270.2	262.0	258.3	259.1
42.5°	285.7	265.8	253.8	244.9	239.1	237.0	236.5
45°	241.8	230.6	220.7	215.7	212.8	210.5	209.0
47.5°	211.8	202.6	197.1	194.1	191.6	189.3	189.2
50°	193.8	187.8	183.9	180.7	178.8	177.1	178.6
52.5°	180.0	174.6	170.7	167.9	167.1	165.6	165.5
55°	159.8	155.4	152.7	150.1	148.8	148.0	146.8
57.5°	141.2	137.1	134.6	133.0	130.5	129.7	129.3
60°	128.0	124.8	122.2	120.1	119.0	117.3	117.3
62.5°	115.8	112.6	110.3	108.7	106.9	106.2	106.4
65°	98.3	95.7	93.3	91.6	91.2	89.9	90.4
67.5°	82.1	80.4	77.9	76.9	76.2	75.5	74.9
70°	71.3	69.6	68.3	67.0	66.4	66.4	66.4
72.5°	62.2	60.1	59.4	57.8	58.2	57.5	56.7
75°	48.2	46.8	46.3	45.6	44.6	44.6	44.6
77.5°	35.4	35.1	34.3	33.6	33.4	33.2	33.3
80°	27.4	27.1	26.8	26.8	26.3	26.1	25.7
82.5°	21.1	20.5	20.3	20.1	20.0	20.0	19.9
85°	12.0	11.6	11.6	11.8	11.3	11.3	11.6
87.5°	11.2	11.6	11.7	11.7	11.9	11.7	11.7
90°	32.9	35.1	36.1	36.1	36.1	36.1	36.1
92.5°	81.9	72.7	65.9	65.0	61.5	62.4	60.7
95°	220.1	174.1	150.0	135.7	127.1	123.8	124.8
97.5°	547.7	429.2	350.2	297.8	270.9	254.9	245.7
100°	863.9	713.9	581.4	490.5	443.5	411.7	392.0
102.5°	1185.3	1075.6	935.3	836.5	756.2	716.5	689.8
105°	1454.1	1468.3	1432.2	1364.2	1296.4	1249.3	1234.0
107.5°	1434.4	1548.2	1601.2	1609.8	1606.0	1596.6	1576.2
110°	1373.0	1513.2	1603.0	1650.0	1670.8	1680.7	1679.6



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CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	1300.3	1450.1	1553.0	1618.5	1653.3	1672.0	1677.8
115°	1201.2	1344.5	1457.4	1535.1	1585.5	1613.9	1623.8
117.5°	1120.6	1250.7	1356.4	1435.7	1488.8	1518.9	1527.2
120°	1078.5	1194.6	1294.2	1370.8	1422.3	1454.1	1465.0
122.5°	1043.5	1153.4	1243.4	1312.1	1362.7	1391.0	1400.1
125°	997.5	1093.8	1175.9	1239.4	1281.1	1308.4	1317.2
127.5°	952.8	1043.7	1119.5	1174.9	1213.8	1237.5	1244.5
130°	923.0	1009.6	1081.8	1135.5	1172.7	1194.6	1203.3
132.5°	895.0	974.5	1042.4	1095.1	1132.4	1152.5	1160.4
135°	850.7	923.0	984.3	1031.4	1067.5	1087.2	1091.7
137.5°	815.5	872.9	926.3	969.2	1000.3	1017.7	1024.2
140°	792.8	843.1	891.3	926.3	954.8	971.2	977.8
142.5°	772.6	816.0	856.2	889.5	915.4	930.0	931.3
145°	746.8	780.7	812.5	838.7	857.3	868.3	871.6
147.5°	725.8	752.2	775.4	797.1	812.0	819.4	821.4
150°	711.7	734.7	754.4	770.8	784.0	790.5	791.6
152.5°	700.3	719.8	736.9	749.8	761.2	766.0	766.2
155°	682.1	698.5	710.6	722.6	730.3	734.7	732.5
157.5°	663.7	677.5	686.9	695.5	701.8	703.8	703.8
160°	651.5	663.5	671.2	678.8	684.3	685.4	685.4
162.5°	640.1	650.4	656.3	663.9	667.7	668.7	667.9
165°	623.0	630.7	635.1	639.4	643.9	643.9	642.7
167.5°	607.5	612.7	616.7	618.6	621.0	620.9	619.5
170°	597.9	602.2	604.4	605.5	608.8	607.7	605.5
172.5°	589.1	592.6	593.9	595.0	596.5	595.4	594.1
175°	579.2	580.3	581.4	581.4	582.5	581.4	579.2
177.5°	572.0	572.9	572.9	572.9	572.9	572.0	570.2
180°	569.4	569.4	569.4	569.4	569.4	569.4	569.4

(END OF REPORT)