

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: P331616-830

Luminaire Tested: **SA2XXRDIP-C290D330U830-4F0-1E-UDD-A1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331616-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C290D330U830-4F0-1E-UDD-A1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, ASYMMETRIC DIFFUSER, REGRESSED HOUSING
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

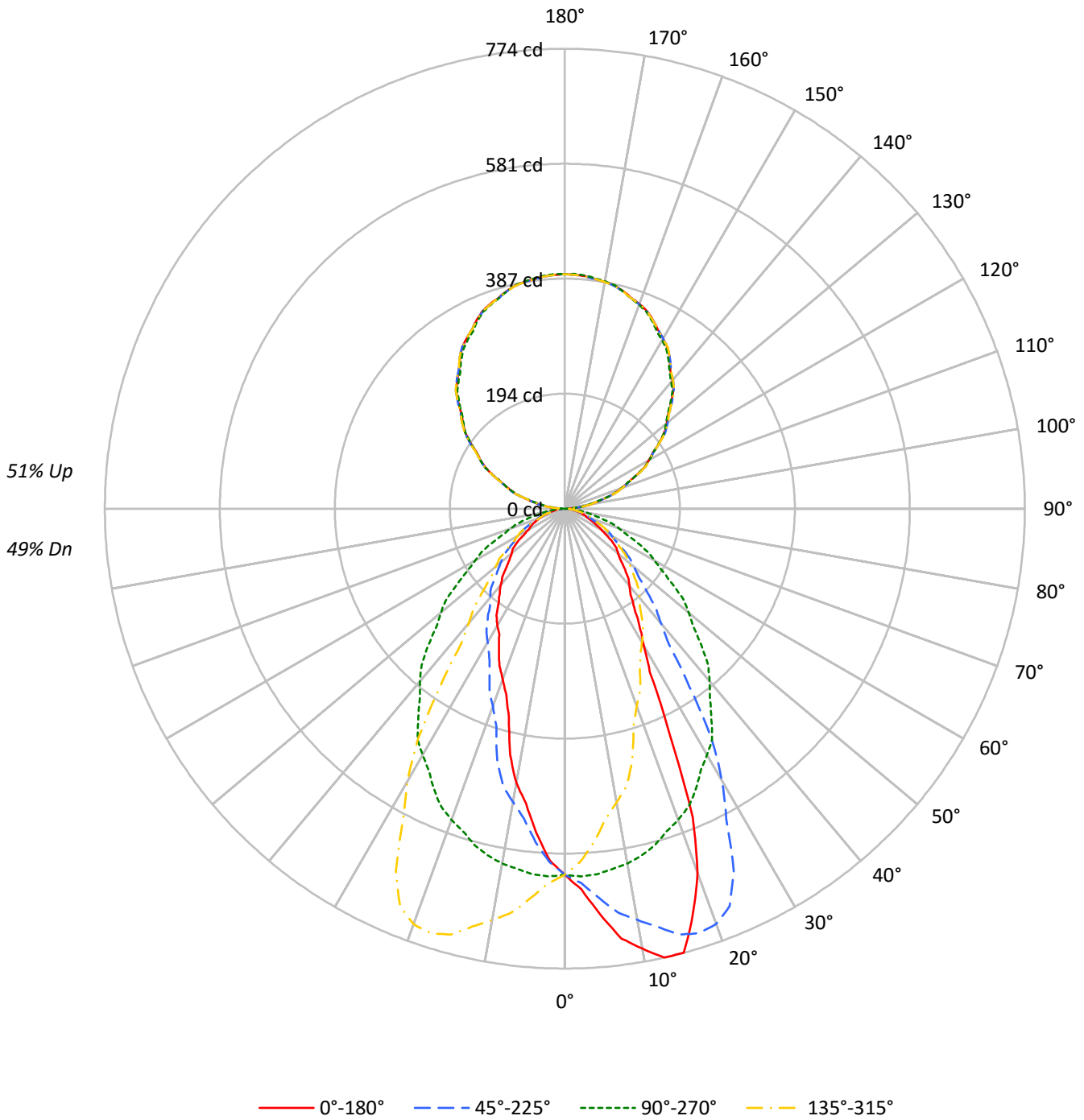
Lumens per Lamp: N/A
Luminaire Lumens: 2169.8 lumens
Efficiency: N/A
Efficacy: 106.9 lumens/watt
Spacing Criteria (0/90/45): 0.86 / 1.16 / 1.02
Luminous Opening: Rectangular (W 4' x L: 0.17' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 20.3
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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	55	55	55	49
1	98	94	91	87	91	87	84	81	74	72	70	61	60	59	50	49	48	43
2	90	83	78	73	83	77	72	68	66	62	59	55	52	50	45	43	42	37
3	83	74	67	62	76	69	63	58	59	54	50	49	46	43	41	38	37	33
4	76	66	59	53	70	61	55	50	53	48	44	45	41	38	37	34	32	29
5	70	59	52	46	65	55	48	43	48	42	38	40	37	34	34	31	29	26
6	65	54	46	40	60	50	43	38	43	38	34	37	33	30	31	28	26	23
7	60	49	41	36	56	46	39	34	40	34	30	34	30	27	29	26	23	21
8	56	44	37	32	52	42	35	30	36	31	27	31	27	24	26	23	21	19
9	53	41	34	29	49	38	32	27	33	28	25	29	25	22	25	22	19	17
10	49	38	31	26	46	35	29	25	31	26	23	27	23	20	23	20	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	9947	9947	9947	9947
5°	11110	10010	8877	10010
10°	12329	9940	7694	9940
15°	12933	9795	6063	9795
20°	11213	9579	5246	9579
25°	7352	9283	4684	9283
30°	4950	8925	4238	8925
35°	4009	8474	3824	8474
40°	3564	7982	3539	7982
45°	3226	7405	3158	7405
50°	2936	6835	2926	6835
55°	2759	6201	2725	6201
60°	2309	5622	2283	5622
65°	1948	5104	2208	5104
70°	1799	4556	2082	4556
75°	1684	3968	1921	3968
80°	1553	3273	1711	3273
85°	1426	2575	1501	2575



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.4	2.7
10°-20°	162.8	7.5
20°-30°	209.7	9.7
30°-40°	199.3	9.2
40°-50°	170.7	7.9
50°-60°	130.0	6.0
60°-70°	82.2	3.8
70°-80°	41.0	1.9
80°-90°	12.3	0.6
90°-100°	25.0	1.2
100°-110°	77.7	3.6
110°-120°	132.8	6.1
120°-130°	174.6	8.0
130°-140°	195.9	9.0
140°-150°	192.1	8.9
150°-160°	161.1	7.4
160°-170°	106.9	4.9
170°-180°	37.4	1.7
0°-30°	430.9	19.9
0°-40°	630.2	29.0
0°-60°	931.0	42.9
0°-90°	1066.5	49.1
90°-120°	235.4	10.8
90°-150°	798.0	36.8
90°-180°	1103.0	50.8
0°-180°	2169.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	616	616	616	616	616	
5°	686	618	548	618	686	68
15°	774	586	363	586	774	209
25°	413	521	263	521	413	196
35°	203	430	194	430	203	130
45°	141	324	138	324	141	109
55°	98	220	97	220	98	86
65°	51	134	58	134	51	52
75°	27	64	31	64	27	29
85°	8	14	8	14	8	9
90°	11	0	11	0	11	5
95°	21	17	21	17	21	23
105°	74	72	74	72	74	78
115°	133	133	133	133	133	132
125°	194	194	194	194	194	173
135°	254	251	254	251	254	195
145°	308	304	308	304	308	192
155°	351	348	351	348	351	161
165°	379	379	379	379	379	107
175°	393	394	393	394	393	37
180°	395	395	395	395	395	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1
2.5°	641.2	641.7	642.2	641.0	641.0	640.0	637.7	636.0	631.2	630.6	630.6
5°	685.5	685.1	686.0	683.2	679.4	678.4	674.4	669.0	663.5	657.3	656.0
7.5°	729.6	729.0	727.3	726.8	723.9	717.4	710.9	703.9	694.7	685.6	681.1
10°	752.0	759.0	754.7	747.2	748.7	738.7	733.3	724.1	716.3	702.9	699.9
12.5°	773.8	776.7	775.2	771.0	769.1	762.1	754.9	746.9	732.6	720.6	710.0
15°	773.7	777.8	778.9	777.6	778.6	778.3	774.4	767.8	755.4	742.1	730.5
17.5°	716.6	719.4	726.5	731.2	737.3	749.9	756.2	758.6	756.8	749.1	741.0
20°	652.6	647.9	667.6	677.6	686.2	707.6	726.0	733.1	744.4	744.2	742.1
22.5°	561.8	562.9	581.5	593.5	618.5	640.0	660.9	687.5	709.5	724.0	732.4
25°	412.7	420.9	439.5	455.8	483.6	523.5	559.7	601.6	641.2	672.5	702.3
27.5°	310.0	310.7	325.4	340.4	356.9	389.6	435.2	485.2	541.7	588.3	641.9
30°	265.5	264.2	270.4	279.7	293.8	319.1	353.3	402.5	458.8	529.0	591.5
32.5°	233.9	234.0	238.7	245.5	257.2	274.3	297.7	337.8	391.0	460.1	533.3
35°	203.4	203.2	206.6	211.5	216.4	227.3	243.5	264.4	301.0	365.4	440.4
37.5°	181.4	182.4	184.1	187.2	192.6	198.7	208.3	222.4	248.5	286.6	349.6
40°	169.1	169.6	171.9	174.5	177.7	182.4	190.3	201.7	220.7	251.1	297.2
42.5°	157.9	158.3	159.9	162.3	164.9	169.6	176.2	186.0	201.4	225.1	263.1
45°	141.3	141.3	142.8	143.8	146.7	150.9	156.3	164.5	175.1	192.7	217.9
47.5°	125.8	125.8	126.9	128.7	130.4	133.7	139.0	145.7	153.4	167.0	188.6
50°	116.9	117.2	117.7	119.2	120.4	123.3	127.4	133.2	141.3	151.8	169.8
52.5°	109.7	109.6	110.4	111.0	111.8	113.9	117.0	122.1	129.3	138.5	153.4
55°	98.0	97.2	98.5	99.5	100.2	101.0	102.7	105.9	112.2	119.9	131.0
57.5°	83.5	83.1	84.1	85.0	87.1	89.4	90.9	92.8	96.0	101.6	112.6
60°	71.5	71.5	73.4	74.1	76.4	79.5	82.5	84.2	87.4	91.0	99.2
62.5°	60.9	61.1	61.9	62.6	63.9	67.6	71.8	75.6	78.6	82.1	87.5
65°	51.0	51.4	51.4	51.8	52.7	53.5	55.2	58.2	63.6	68.5	72.6
67.5°	43.3	43.4	43.5	43.9	44.1	45.1	45.8	47.1	48.4	53.0	58.1
70°	38.1	38.7	38.5	38.9	39.2	39.6	40.4	41.1	43.1	44.1	47.1
72.5°	33.3	33.7	33.7	34.0	34.6	34.7	35.3	36.0	37.2	38.1	39.8
75°	27.0	26.8	27.0	27.4	27.6	27.8	27.8	28.7	29.3	30.2	31.3
77.5°	20.8	21.0	21.0	21.0	21.1	21.5	21.4	21.8	22.4	22.9	23.4
80°	16.7	16.9	16.7	16.9	17.2	17.3	17.2	17.3	18.0	18.4	18.4
82.5°	12.9	13.0	13.1	13.1	13.2	13.2	13.6	13.6	14.0	13.9	14.1
85°	7.7	7.5	7.5	7.5	7.7	7.9	7.7	7.7	7.9	7.9	7.9
87.5°	5.0	5.2	5.2	5.1	5.1	5.1	5.2	5.4	5.2	5.4	4.9
90°	11.3	11.2	11.2	11.1	11.0	11.0	11.2	11.4	11.5	11.7	10.0
92.5°	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.6	10.2
95°	20.6	20.8	20.9	21.1	21.2	21.3	21.3	21.3	21.3	21.3	21.2
97.5°	35.7	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.5
100°	45.6	45.7	45.8	45.8	45.9	46.0	46.0	46.0	46.0	46.0	45.7
102.5°	56.8	56.9	56.9	57.0	57.1	57.1	57.0	57.0	56.9	56.8	56.6
105°	73.9	73.9	73.9	73.9	73.9	73.9	73.7	73.5	73.4	73.2	73.1
107.5°	90.0	90.4	90.8	91.0	91.4	91.5	91.5	91.4	91.3	91.3	91.3
110°	102.5	102.8	103.0	103.2	103.5	103.6	103.6	103.6	103.6	103.6	103.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	114.5	114.7	114.9	115.1	115.2	115.4	115.6	115.7	115.9	116.1	116.1
115°	133.2	133.5	133.7	133.8	134.1	134.2	134.3	134.4	134.5	134.5	134.7
117.5°	151.0	151.2	151.5	151.7	151.8	152.0	152.2	152.4	152.6	152.8	153.2
120°	163.5	163.7	163.9	164.2	164.4	164.5	164.5	164.5	164.5	164.5	165.1
122.5°	175.8	175.9	176.1	176.3	176.4	176.5	176.7	176.9	177.1	177.3	177.7
125°	194.4	194.5	194.6	194.7	194.7	194.9	195.1	195.4	195.6	195.8	196.0
127.5°	211.5	211.8	212.0	212.3	212.4	212.7	213.0	213.3	213.5	213.8	214.1
130°	223.8	224.0	224.3	224.7	225.0	225.2	225.4	225.5	225.6	225.7	225.9
132.5°	235.5	235.7	236.0	236.2	236.5	236.8	237.0	237.3	237.7	238.0	238.0
135°	253.7	254.0	254.2	254.4	254.7	254.8	254.9	255.0	255.0	255.1	255.0
137.5°	270.2	270.6	270.9	271.2	271.5	271.6	271.6	271.7	271.8	271.8	271.6
140°	281.7	282.0	282.3	282.6	282.9	283.0	283.0	283.0	283.0	283.0	282.7
142.5°	292.1	292.4	292.7	293.0	293.3	293.4	293.3	293.3	293.2	293.1	292.9
145°	307.6	308.0	308.3	308.6	308.9	309.0	308.9	308.9	308.8	308.7	308.2
147.5°	321.6	321.9	322.2	322.4	322.7	322.8	322.6	322.4	322.3	322.2	321.9
150°	330.6	330.9	331.1	331.3	331.6	331.6	331.3	331.1	330.9	330.6	330.4
152.5°	339.2	339.5	339.8	340.1	340.4	340.4	340.1	339.8	339.5	339.2	338.8
155°	350.6	350.9	351.1	351.3	351.6	351.5	351.1	350.7	350.3	350.0	349.8
157.5°	360.5	360.9	361.2	361.6	361.9	361.8	361.4	360.8	360.3	359.9	359.7
160°	366.6	366.9	367.2	367.5	367.8	367.8	367.3	366.8	366.4	366.0	365.9
162.5°	371.9	372.3	372.7	373.1	373.3	373.3	372.8	372.3	371.8	371.3	371.3
165°	379.0	379.3	379.7	380.0	380.4	380.3	379.8	379.3	378.8	378.2	378.2
167.5°	384.7	385.0	385.4	385.9	386.3	386.2	385.6	385.1	384.6	384.1	384.1
170°	387.6	388.0	388.5	389.0	389.4	389.4	388.8	388.3	387.8	387.3	387.4
172.5°	390.0	390.5	390.9	391.3	391.8	391.7	391.2	390.7	390.2	389.6	389.7
175°	392.6	393.0	393.5	394.0	394.4	394.4	393.8	393.3	392.8	392.3	392.4
177.5°	393.8	394.2	394.5	394.8	395.2	395.2	394.8	394.5	394.2	393.8	393.9
180°	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1
2.5°	630.9	629.5	628.3	625.3	623.7	620.3	619.8	619.6	615.2	610.9	609.6
5°	652.6	649.1	644.0	638.0	631.8	625.4	621.1	617.6	609.1	601.0	596.3
7.5°	674.4	667.0	658.2	646.9	637.3	626.8	618.9	611.8	599.6	588.0	580.1
10°	690.7	678.7	666.9	651.3	639.0	627.1	616.0	606.3	592.7	577.2	566.3
12.5°	700.8	687.6	671.4	656.1	640.3	625.0	610.1	597.8	581.6	565.7	552.8
15°	714.4	700.3	680.6	658.7	638.5	618.5	601.4	586.0	565.1	545.9	530.1
17.5°	725.7	706.2	685.0	659.8	636.2	611.0	588.9	569.2	545.8	522.8	504.2
20°	729.2	709.9	685.5	660.3	632.4	602.7	578.9	557.5	532.4	507.4	486.0
22.5°	727.0	712.0	684.9	654.6	626.1	595.0	568.2	543.3	515.5	489.9	465.1
25°	711.9	706.7	681.1	648.1	615.6	579.4	548.3	521.1	489.5	462.0	435.1
27.5°	676.7	687.8	671.8	636.7	600.5	561.8	526.8	495.9	463.0	432.2	405.3
30°	642.7	668.2	661.4	628.8	588.3	550.3	511.0	478.7	443.7	411.9	385.4
32.5°	596.3	638.4	645.1	617.8	576.0	534.1	493.0	460.9	424.2	390.9	365.0
35°	522.4	585.3	614.3	596.9	555.0	509.7	467.4	429.9	393.0	360.1	334.4
37.5°	434.2	520.0	568.2	569.4	530.8	483.9	437.7	400.5	362.8	330.5	302.7
40°	377.0	470.0	532.7	546.6	514.1	463.4	416.6	378.7	342.0	310.2	278.3
42.5°	325.6	418.2	495.3	519.5	493.7	443.3	396.4	356.8	321.0	291.1	258.4
45°	263.3	344.3	429.2	472.5	458.2	411.5	362.0	324.3	290.8	264.9	233.6
47.5°	222.2	279.2	361.5	419.9	419.7	377.1	328.4	292.4	261.2	236.9	211.6
50°	198.7	248.4	317.9	384.3	389.8	354.1	307.8	272.1	243.0	217.5	197.2
52.5°	177.6	218.6	281.1	344.8	360.6	329.6	284.7	251.8	223.5	200.0	182.7
55°	150.1	181.8	229.3	288.8	312.8	291.0	251.1	220.3	197.4	177.7	162.7
57.5°	127.0	150.7	188.9	236.8	264.7	251.0	218.1	193.0	173.4	155.6	143.8
60°	112.4	131.9	164.2	204.2	235.1	225.5	197.4	174.1	157.4	141.9	130.8
62.5°	98.7	115.5	143.2	175.7	203.9	199.9	177.0	157.4	142.8	128.8	119.3
65°	79.5	91.6	113.3	138.7	161.5	163.3	146.8	133.6	120.6	109.4	101.0
67.5°	63.2	71.3	86.4	107.9	124.9	131.0	120.9	110.7	100.4	91.8	84.5
70°	53.3	59.8	70.9	88.2	103.9	110.3	104.4	96.5	87.6	80.5	74.3
72.5°	43.2	49.5	57.7	70.4	83.8	90.8	88.7	83.0	75.8	69.8	64.0
75°	32.5	34.5	40.1	48.6	59.1	65.1	66.5	63.6	57.8	53.3	49.9
77.5°	24.0	25.3	27.9	32.3	39.2	44.6	46.8	46.4	42.4	39.9	36.6
80°	19.2	19.9	21.2	23.1	28.3	33.6	35.2	35.2	32.3	31.3	28.1
82.5°	14.6	15.1	15.9	17.0	19.3	24.0	25.7	26.0	24.3	22.9	20.4
85°	8.4	8.1	8.6	9.2	9.6	10.9	13.5	13.9	13.5	11.8	11.1
87.5°	4.6	4.4	4.1	3.7	3.7	3.7	4.3	5.0	4.5	4.1	4.1
90°	8.4	6.8	5.2	3.9	3.0	2.1	1.2	0.4	1.2	2.1	3.0
92.5°	9.8	9.4	9.0	8.6	7.9	7.3	6.6	5.9	6.6	7.3	7.9
95°	21.0	20.8	20.7	20.3	19.5	18.8	18.1	17.3	18.1	18.8	19.5
97.5°	35.3	35.0	34.7	34.2	33.6	32.9	32.3	31.7	32.3	32.9	33.6
100°	45.5	45.2	45.1	44.7	44.1	43.5	42.9	42.3	42.9	43.5	44.1
102.5°	56.3	56.0	55.8	55.3	54.9	54.4	53.9	53.4	53.9	54.4	54.9
105°	73.0	72.9	72.7	72.5	72.3	72.0	71.8	71.6	71.8	72.0	72.3
107.5°	91.3	91.3	91.3	91.1	90.9	90.5	90.2	89.8	90.2	90.5	90.9
110°	103.6	103.6	103.6	103.3	102.9	102.5	102.0	101.6	102.0	102.5	102.9



TEST NUMBER: P331616-830
 CATALOG NUMBER: SA2XXRDIP-C290D330U830-4F0-1E-UDD-A1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	116.2	116.2	116.3	116.1	115.6	115.3	114.8	114.3	114.8	115.3	115.6
115°	134.8	135.0	135.2	135.0	134.5	134.1	133.7	133.2	133.7	134.1	134.5
117.5°	153.6	154.0	154.5	154.4	153.7	153.2	152.6	151.9	152.6	153.2	153.7
120°	165.7	166.3	166.8	166.8	166.3	165.7	165.1	164.5	165.1	165.7	166.3
122.5°	178.1	178.5	179.0	178.8	178.0	177.4	176.6	176.0	176.6	177.4	178.0
125°	196.2	196.4	196.7	196.4	195.8	195.1	194.4	193.8	194.4	195.1	195.8
127.5°	214.3	214.6	214.8	214.5	213.7	212.9	212.1	211.2	212.1	212.9	213.7
130°	226.1	226.2	226.4	225.9	225.0	224.0	223.1	222.2	223.1	224.0	225.0
132.5°	238.0	237.9	237.9	237.5	236.7	235.9	235.2	234.4	235.2	235.9	236.7
135°	254.8	254.7	254.5	254.0	253.2	252.4	251.6	250.7	251.6	252.4	253.2
137.5°	271.5	271.3	271.1	270.7	270.0	269.3	268.6	268.0	268.6	269.3	270.0
140°	282.3	281.9	281.5	281.1	280.4	279.7	279.1	278.4	279.1	279.7	280.4
142.5°	292.7	292.4	292.2	291.7	291.1	290.4	289.7	289.1	289.7	290.4	291.1
145°	307.8	307.4	306.9	306.4	305.9	305.4	304.9	304.3	304.9	305.4	305.9
147.5°	321.6	321.2	320.9	320.5	319.9	319.2	318.7	318.0	318.7	319.2	319.9
150°	330.1	329.8	329.5	329.1	328.7	328.2	327.8	327.3	327.8	328.2	328.7
152.5°	338.5	338.1	337.8	337.3	337.0	336.5	336.0	335.6	336.0	336.5	337.0
155°	349.5	349.3	349.1	348.8	348.6	348.5	348.2	348.0	348.2	348.5	348.6
157.5°	359.6	359.5	359.3	359.2	359.0	358.8	358.7	358.5	358.7	358.8	359.0
160°	365.8	365.7	365.7	365.5	365.4	365.2	365.1	365.0	365.1	365.2	365.4
162.5°	371.2	371.1	371.0	371.0	370.9	370.9	370.9	370.8	370.9	370.9	370.9
165°	378.2	378.2	378.2	378.3	378.4	378.4	378.5	378.6	378.5	378.4	378.4
167.5°	384.1	384.1	384.2	384.3	384.5	384.7	384.9	385.1	384.9	384.7	384.5
170°	387.4	387.5	387.6	387.8	388.0	388.1	388.4	388.6	388.4	388.1	388.0
172.5°	389.8	389.9	389.9	390.1	390.3	390.6	390.8	391.0	390.8	390.6	390.3
175°	392.6	392.8	392.9	393.0	393.2	393.5	393.7	394.0	393.7	393.5	393.2
177.5°	394.1	394.2	394.3	394.5	394.6	394.7	394.9	395.1	394.9	394.7	394.6
180°	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6



TEST NUMBER: P331616-830

CATALOG NUMBER: SA2XXRDIP-C290D330U830-4F0-1E-UDD-A1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1
2.5°	607.5	606.2	604.0	600.6	598.5	594.9	592.6	593.9	594.3	593.9	593.6
5°	591.2	586.6	580.4	574.4	568.8	562.9	559.4	558.0	555.0	553.3	552.3
7.5°	571.4	563.6	554.9	544.4	535.6	526.2	521.5	519.2	513.0	509.7	506.8
10°	556.7	544.4	535.6	522.0	513.6	501.4	493.0	493.3	484.9	480.2	476.8
12.5°	540.4	527.0	512.4	500.0	488.4	478.6	468.5	464.5	455.6	451.1	441.9
15°	513.4	497.8	482.4	465.7	453.9	438.7	424.1	406.3	392.0	379.6	376.2
17.5°	484.0	464.6	449.1	429.5	409.3	383.8	366.9	356.6	348.0	341.4	336.5
20°	463.7	444.0	427.5	398.0	370.8	353.5	341.1	333.1	324.1	317.1	313.2
22.5°	442.5	422.0	399.4	366.5	345.3	331.4	320.4	311.2	305.1	299.6	296.1
25°	412.4	389.8	352.8	330.2	313.0	298.4	290.8	285.2	278.8	271.3	267.9
27.5°	380.5	344.8	318.1	301.2	284.9	275.5	268.5	260.2	254.5	251.1	247.5
30°	356.7	320.9	300.2	281.7	270.2	259.7	251.6	246.9	241.3	235.5	233.2
32.5°	330.2	301.6	281.6	266.4	254.6	245.6	239.2	231.6	227.6	224.0	219.1
35°	297.2	275.5	257.3	245.0	233.8	226.5	219.0	214.5	207.3	204.2	202.4
37.5°	269.3	250.5	237.0	223.9	215.0	207.0	202.4	195.2	192.1	187.8	183.8
40°	253.4	235.1	222.1	211.3	201.4	195.5	189.7	183.9	179.2	177.3	172.4
42.5°	237.4	222.4	209.3	197.7	191.1	184.6	177.4	173.1	168.2	165.1	162.1
45°	215.2	201.9	190.8	181.2	173.8	167.2	162.5	155.4	152.7	146.5	143.8
47.5°	195.7	183.3	172.7	163.5	156.5	152.1	145.2	139.7	135.3	131.4	128.1
50°	181.8	171.4	161.2	153.1	146.7	140.4	133.4	130.6	123.8	121.8	119.9
52.5°	169.1	159.3	150.0	141.9	135.5	129.5	123.3	119.6	115.0	113.1	111.7
55°	151.4	141.9	133.0	125.9	119.5	113.3	109.4	104.9	102.7	101.2	99.5
57.5°	133.6	125.1	118.2	111.0	104.5	99.6	95.2	92.5	90.3	88.3	86.2
60°	122.2	114.1	107.9	101.2	94.6	90.6	87.2	83.9	81.3	78.3	77.5
62.5°	110.3	103.1	97.5	91.0	85.2	81.5	78.2	75.2	72.1	67.8	66.5
65°	93.8	88.2	82.2	76.8	71.7	68.1	63.3	59.9	58.6	58.2	58.1
67.5°	78.9	73.6	68.4	63.0	58.3	55.0	52.5	52.0	51.1	50.9	50.2
70°	68.9	64.0	58.9	53.7	49.2	48.6	47.8	46.8	45.8	45.4	45.0
72.5°	60.0	55.0	49.8	45.7	43.7	43.0	42.1	41.2	40.5	40.1	39.9
75°	46.0	41.3	37.9	36.4	35.3	34.7	33.4	32.8	32.3	31.7	31.5
77.5°	33.2	30.4	28.9	28.0	26.9	26.2	25.4	24.8	24.3	24.2	23.8
80°	25.3	23.9	22.9	21.6	21.2	20.4	20.2	19.5	19.7	19.0	19.0
82.5°	19.6	18.0	17.1	16.5	16.0	15.4	15.2	14.9	14.9	14.4	14.4
85°	10.1	9.6	9.2	8.8	8.8	8.1	8.4	8.1	8.1	7.7	7.5
87.5°	4.1	4.1	4.1	4.4	4.7	4.9	4.9	4.7	4.6	4.6	4.4
90°	3.9	5.2	6.8	8.4	10.0	11.7	11.5	11.4	11.2	11.0	11.0
92.5°	8.6	9.0	9.4	9.8	10.2	10.6	10.7	10.7	10.7	10.7	10.7
95°	20.3	20.7	20.8	21.0	21.2	21.3	21.3	21.3	21.3	21.3	21.2
97.5°	34.2	34.7	35.0	35.3	35.5	35.8	35.8	35.8	35.8	35.8	35.8
100°	44.7	45.1	45.2	45.5	45.7	46.0	46.0	46.0	46.0	46.0	45.9
102.5°	55.3	55.8	56.0	56.3	56.6	56.8	56.9	57.0	57.0	57.1	57.1
105°	72.5	72.7	72.9	73.0	73.1	73.2	73.4	73.5	73.7	73.9	73.9
107.5°	91.1	91.3	91.3	91.3	91.3	91.3	91.3	91.4	91.5	91.5	91.4
110°	103.3	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.5



TEST NUMBER: P331616-830
 CATALOG NUMBER: SA2XXRDIP-C290D330U830-4F0-1E-UDD-A1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	116.1	116.3	116.2	116.2	116.1	116.1	115.9	115.7	115.6	115.4	115.2
115°	135.0	135.2	135.0	134.8	134.7	134.5	134.5	134.4	134.3	134.2	134.1
117.5°	154.4	154.5	154.0	153.6	153.2	152.8	152.6	152.4	152.2	152.0	151.8
120°	166.8	166.8	166.3	165.7	165.1	164.5	164.5	164.5	164.5	164.5	164.4
122.5°	178.8	179.0	178.5	178.1	177.7	177.3	177.1	176.9	176.7	176.5	176.4
125°	196.4	196.7	196.4	196.2	196.0	195.8	195.6	195.4	195.1	194.9	194.7
127.5°	214.5	214.8	214.6	214.3	214.1	213.8	213.5	213.3	213.0	212.7	212.4
130°	225.9	226.4	226.2	226.1	225.9	225.7	225.6	225.5	225.4	225.2	225.0
132.5°	237.5	237.9	237.9	238.0	238.0	238.0	237.7	237.3	237.0	236.8	236.5
135°	254.0	254.5	254.7	254.8	255.0	255.1	255.0	255.0	254.9	254.8	254.7
137.5°	270.7	271.1	271.3	271.5	271.6	271.8	271.8	271.7	271.6	271.6	271.5
140°	281.1	281.5	281.9	282.3	282.7	283.0	283.0	283.0	283.0	283.0	282.9
142.5°	291.7	292.2	292.4	292.7	292.9	293.1	293.2	293.3	293.3	293.4	293.3
145°	306.4	306.9	307.4	307.8	308.2	308.7	308.8	308.9	308.9	309.0	308.9
147.5°	320.5	320.9	321.2	321.6	321.9	322.2	322.3	322.4	322.6	322.8	322.7
150°	329.1	329.5	329.8	330.1	330.4	330.6	330.9	331.1	331.3	331.6	331.6
152.5°	337.3	337.8	338.1	338.5	338.8	339.2	339.5	339.8	340.1	340.4	340.4
155°	348.8	349.1	349.3	349.5	349.8	350.0	350.3	350.7	351.1	351.5	351.6
157.5°	359.2	359.3	359.5	359.6	359.7	359.9	360.3	360.8	361.4	361.8	361.9
160°	365.5	365.7	365.7	365.8	365.9	366.0	366.4	366.8	367.3	367.8	367.8
162.5°	371.0	371.0	371.1	371.2	371.3	371.3	371.8	372.3	372.8	373.3	373.3
165°	378.3	378.2	378.2	378.2	378.2	378.2	378.8	379.3	379.8	380.3	380.4
167.5°	384.3	384.2	384.1	384.1	384.1	384.1	384.6	385.1	385.6	386.2	386.3
170°	387.8	387.6	387.5	387.4	387.4	387.3	387.8	388.3	388.8	389.4	389.4
172.5°	390.1	389.9	389.9	389.8	389.7	389.6	390.2	390.7	391.2	391.7	391.8
175°	393.0	392.9	392.8	392.6	392.4	392.3	392.8	393.3	393.8	394.4	394.4
177.5°	394.5	394.3	394.2	394.1	393.9	393.8	394.2	394.5	394.8	395.2	395.2
180°	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6



TEST NUMBER: P331616-830
 CATALOG NUMBER: SA2XXRDIP-C290D330U830-4F0-1E-UDD-A1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1
2.5°	591.7	592.0	591.5	591.8	591.5	592.0	591.7	593.6	593.9	594.3	593.9
5°	551.3	548.7	548.3	547.7	548.3	548.7	551.3	552.3	553.3	555.0	558.0
7.5°	503.1	502.8	501.6	500.1	501.6	502.8	503.1	506.8	509.7	513.0	519.2
10°	472.1	471.0	470.8	469.3	470.8	471.0	472.1	476.8	480.2	484.9	493.3
12.5°	435.7	428.9	428.2	424.4	428.2	428.9	435.7	441.9	451.1	455.6	464.5
15°	371.1	369.8	365.4	362.7	365.4	369.8	371.1	376.2	379.6	392.0	406.3
17.5°	334.0	329.8	328.5	327.9	328.5	329.8	334.0	336.5	341.4	348.0	356.6
20°	310.2	306.4	305.8	305.3	305.8	306.4	310.2	313.2	317.1	324.1	333.1
22.5°	293.8	289.7	288.1	286.8	288.1	289.7	293.8	296.1	299.6	305.1	311.2
25°	265.7	264.2	263.3	262.9	263.3	264.2	265.7	267.9	271.3	278.8	285.2
27.5°	243.7	240.4	239.8	238.7	239.8	240.4	243.7	247.5	251.1	254.5	260.2
30°	231.2	230.2	228.7	227.3	228.7	230.2	231.2	233.2	235.5	241.3	246.9
32.5°	216.5	215.6	214.2	213.7	214.2	215.6	216.5	219.1	224.0	227.6	231.6
35°	200.2	197.2	195.9	194.0	195.9	197.2	200.2	202.4	204.2	207.3	214.5
37.5°	182.9	181.3	179.6	180.2	179.6	181.3	182.9	183.8	187.8	192.1	195.2
40°	169.6	168.5	168.1	167.9	168.1	168.5	169.6	172.4	177.3	179.2	183.9
42.5°	158.9	156.0	154.9	154.9	154.9	156.0	158.9	162.1	165.1	168.2	173.1
45°	142.8	140.1	138.1	138.3	138.1	140.1	142.8	143.8	146.5	152.7	155.4
47.5°	126.3	126.2	125.0	125.4	125.0	126.2	126.3	128.1	131.4	135.3	139.7
50°	118.4	117.2	116.2	116.5	116.2	117.2	118.4	119.9	121.8	123.8	130.6
52.5°	110.8	109.7	109.1	110.0	109.1	109.7	110.8	111.7	113.1	115.0	119.6
55°	98.5	97.2	97.0	96.8	97.0	97.2	98.5	99.5	101.2	102.7	104.9
57.5°	84.6	83.8	82.5	82.0	82.5	83.8	84.6	86.2	88.3	90.3	92.5
60°	74.7	73.0	70.9	70.7	70.9	73.0	74.7	77.5	78.3	81.3	83.9
62.5°	65.6	65.3	64.8	64.8	64.8	65.3	65.6	66.5	67.8	72.1	75.2
65°	57.6	57.4	57.6	57.8	57.6	57.4	57.6	58.1	58.2	58.6	59.9
67.5°	50.1	49.8	49.4	49.6	49.4	49.8	50.1	50.2	50.9	51.1	52.0
70°	44.5	44.3	44.1	44.1	44.1	44.3	44.5	45.0	45.4	45.8	46.8
72.5°	39.0	39.0	38.8	38.6	38.8	39.0	39.0	39.9	40.1	40.5	41.2
75°	31.3	30.8	30.8	30.8	30.8	30.8	31.3	31.5	31.7	32.3	32.8
77.5°	23.8	23.6	23.4	23.2	23.4	23.6	23.8	23.8	24.2	24.3	24.8
80°	18.9	18.7	18.4	18.4	18.4	18.7	18.9	19.0	19.0	19.7	19.5
82.5°	14.4	14.1	14.1	13.9	14.1	14.1	14.4	14.4	14.4	14.9	14.9
85°	7.7	7.9	7.7	8.1	7.7	7.9	7.7	7.5	7.7	8.1	8.1
87.5°	4.4	4.3	4.4	4.3	4.4	4.3	4.4	4.4	4.6	4.6	4.7
90°	11.1	11.2	11.2	11.3	11.2	11.2	11.1	11.0	11.0	11.2	11.4
92.5°	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
95°	21.1	20.9	20.8	20.6	20.8	20.9	21.1	21.2	21.3	21.3	21.3
97.5°	35.8	35.8	35.8	35.7	35.8	35.8	35.8	35.8	35.8	35.8	35.8
100°	45.8	45.8	45.7	45.6	45.7	45.8	45.8	45.9	46.0	46.0	46.0
102.5°	57.0	56.9	56.9	56.8	56.9	56.9	57.0	57.1	57.1	57.0	57.0
105°	73.9	73.9	73.9	73.9	73.9	73.9	73.9	73.9	73.9	73.7	73.5
107.5°	91.0	90.8	90.4	90.0	90.4	90.8	91.0	91.4	91.5	91.5	91.4
110°	103.2	103.0	102.8	102.5	102.8	103.0	103.2	103.5	103.6	103.6	103.6



TEST NUMBER: P331616-830

CATALOG NUMBER: SA2XXRDIP-C290D330U830-4F0-1E-UDD-A1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	115.1	114.9	114.7	114.5	114.7	114.9	115.1	115.2	115.4	115.6	115.7
115°	133.8	133.7	133.5	133.2	133.5	133.7	133.8	134.1	134.2	134.3	134.4
117.5°	151.7	151.5	151.2	151.0	151.2	151.5	151.7	151.8	152.0	152.2	152.4
120°	164.2	163.9	163.7	163.5	163.7	163.9	164.2	164.4	164.5	164.5	164.5
122.5°	176.3	176.1	175.9	175.8	175.9	176.1	176.3	176.4	176.5	176.7	176.9
125°	194.7	194.6	194.5	194.4	194.5	194.6	194.7	194.7	194.9	195.1	195.4
127.5°	212.3	212.0	211.8	211.5	211.8	212.0	212.3	212.4	212.7	213.0	213.3
130°	224.7	224.3	224.0	223.8	224.0	224.3	224.7	225.0	225.2	225.4	225.5
132.5°	236.2	236.0	235.7	235.5	235.7	236.0	236.2	236.5	236.8	237.0	237.3
135°	254.4	254.2	254.0	253.7	254.0	254.2	254.4	254.7	254.8	254.9	255.0
137.5°	271.2	270.9	270.6	270.2	270.6	270.9	271.2	271.5	271.6	271.6	271.7
140°	282.6	282.3	282.0	281.7	282.0	282.3	282.6	282.9	283.0	283.0	283.0
142.5°	293.0	292.7	292.4	292.1	292.4	292.7	293.0	293.3	293.4	293.3	293.3
145°	308.6	308.3	308.0	307.6	308.0	308.3	308.6	308.9	309.0	308.9	308.9
147.5°	322.4	322.2	321.9	321.6	321.9	322.2	322.4	322.7	322.8	322.6	322.4
150°	331.3	331.1	330.9	330.6	330.9	331.1	331.3	331.6	331.6	331.3	331.1
152.5°	340.1	339.8	339.5	339.2	339.5	339.8	340.1	340.4	340.4	340.1	339.8
155°	351.3	351.1	350.9	350.6	350.9	351.1	351.3	351.6	351.5	351.1	350.7
157.5°	361.6	361.2	360.9	360.5	360.9	361.2	361.6	361.9	361.8	361.4	360.8
160°	367.5	367.2	366.9	366.6	366.9	367.2	367.5	367.8	367.8	367.3	366.8
162.5°	373.1	372.7	372.3	371.9	372.3	372.7	373.1	373.3	373.3	372.8	372.3
165°	380.0	379.7	379.3	379.0	379.3	379.7	380.0	380.4	380.3	379.8	379.3
167.5°	385.9	385.4	385.0	384.7	385.0	385.4	385.9	386.3	386.2	385.6	385.1
170°	389.0	388.5	388.0	387.6	388.0	388.5	389.0	389.4	389.4	388.8	388.3
172.5°	391.3	390.9	390.5	390.0	390.5	390.9	391.3	391.8	391.7	391.2	390.7
175°	394.0	393.5	393.0	392.6	393.0	393.5	394.0	394.4	394.4	393.8	393.3
177.5°	394.8	394.5	394.2	393.8	394.2	394.5	394.8	395.2	395.2	394.8	394.5
180°	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6



TEST NUMBER: P331616-830

CATALOG NUMBER: SA2XXRDIP-C290D330U830-4F0-1E-UDD-A1

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1
2.5°	592.6	594.9	598.5	600.6	604.0	606.2	607.5	609.6	610.9	615.2	619.6
5°	559.4	562.9	568.8	574.4	580.4	586.6	591.2	596.3	601.0	609.1	617.6
7.5°	521.5	526.2	535.6	544.4	554.9	563.6	571.4	580.1	588.0	599.6	611.8
10°	493.0	501.4	513.6	522.0	535.6	544.4	556.7	566.3	577.2	592.7	606.3
12.5°	468.5	478.6	488.4	500.0	512.4	527.0	540.4	552.8	565.7	581.6	597.8
15°	424.1	438.7	453.9	465.7	482.4	497.8	513.4	530.1	545.9	565.1	586.0
17.5°	366.9	383.8	409.3	429.5	449.1	464.6	484.0	504.2	522.8	545.8	569.2
20°	341.1	353.5	370.8	398.0	427.5	444.0	463.7	486.0	507.4	532.4	557.5
22.5°	320.4	331.4	345.3	366.5	399.4	422.0	442.5	465.1	489.9	515.5	543.3
25°	290.8	298.4	313.0	330.2	352.8	389.8	412.4	435.1	462.0	489.5	521.1
27.5°	268.5	275.5	284.9	301.2	318.1	344.8	380.5	405.3	432.2	463.0	495.9
30°	251.6	259.7	270.2	281.7	300.2	320.9	356.7	385.4	411.9	443.7	478.7
32.5°	239.2	245.6	254.6	266.4	281.6	301.6	330.2	365.0	390.9	424.2	460.9
35°	219.0	226.5	233.8	245.0	257.3	275.5	297.2	334.4	360.1	393.0	429.9
37.5°	202.4	207.0	215.0	223.9	237.0	250.5	269.3	302.7	330.5	362.8	400.5
40°	189.7	195.5	201.4	211.3	222.1	235.1	253.4	278.3	310.2	342.0	378.7
42.5°	177.4	184.6	191.1	197.7	209.3	222.4	237.4	258.4	291.1	321.0	356.8
45°	162.5	167.2	173.8	181.2	190.8	201.9	215.2	233.6	264.9	290.8	324.3
47.5°	145.2	152.1	156.5	163.5	172.7	183.3	195.7	211.6	236.9	261.2	292.4
50°	133.4	140.4	146.7	153.1	161.2	171.4	181.8	197.2	217.5	243.0	272.1
52.5°	123.3	129.5	135.5	141.9	150.0	159.3	169.1	182.7	200.0	223.5	251.8
55°	109.4	113.3	119.5	125.9	133.0	141.9	151.4	162.7	177.7	197.4	220.3
57.5°	95.2	99.6	104.5	111.0	118.2	125.1	133.6	143.8	155.6	173.4	193.0
60°	87.2	90.6	94.6	101.2	107.9	114.1	122.2	130.8	141.9	157.4	174.1
62.5°	78.2	81.5	85.2	91.0	97.5	103.1	110.3	119.3	128.8	142.8	157.4
65°	63.3	68.1	71.7	76.8	82.2	88.2	93.8	101.0	109.4	120.6	133.6
67.5°	52.5	55.0	58.3	63.0	68.4	73.6	78.9	84.5	91.8	100.4	110.7
70°	47.8	48.6	49.2	53.7	58.9	64.0	68.9	74.3	80.5	87.6	96.5
72.5°	42.1	43.0	43.7	45.7	49.8	55.0	60.0	64.0	69.8	75.8	83.0
75°	33.4	34.7	35.3	36.4	37.9	41.3	46.0	49.9	53.3	57.8	63.6
77.5°	25.4	26.2	26.9	28.0	28.9	30.4	33.2	36.6	39.9	42.4	46.4
80°	20.2	20.4	21.2	21.6	22.9	23.9	25.3	28.1	31.3	32.3	35.2
82.5°	15.2	15.4	16.0	16.5	17.1	18.0	19.6	20.4	22.9	24.3	26.0
85°	8.4	8.1	8.8	8.8	9.2	9.6	10.1	11.1	11.8	13.5	13.9
87.5°	4.9	4.9	4.7	4.4	4.1	4.1	4.1	4.1	4.1	4.5	5.0
90°	11.5	11.7	10.0	8.4	6.8	5.2	3.9	3.0	2.1	1.2	0.4
92.5°	10.7	10.6	10.2	9.8	9.4	9.0	8.6	7.9	7.3	6.6	5.9
95°	21.3	21.3	21.2	21.0	20.8	20.7	20.3	19.5	18.8	18.1	17.3
97.5°	35.8	35.8	35.5	35.3	35.0	34.7	34.2	33.6	32.9	32.3	31.7
100°	46.0	46.0	45.7	45.5	45.2	45.1	44.7	44.1	43.5	42.9	42.3
102.5°	56.9	56.8	56.6	56.3	56.0	55.8	55.3	54.9	54.4	53.9	53.4
105°	73.4	73.2	73.1	73.0	72.9	72.7	72.5	72.3	72.0	71.8	71.6
107.5°	91.3	91.3	91.3	91.3	91.3	91.3	91.1	90.9	90.5	90.2	89.8
110°	103.6	103.6	103.6	103.6	103.6	103.6	103.3	102.9	102.5	102.0	101.6



TEST NUMBER: P331616-830

CATALOG NUMBER: SA2XXRDIP-C290D330U830-4F0-1E-UDD-A1

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	115.9	116.1	116.1	116.2	116.2	116.3	116.1	115.6	115.3	114.8	114.3
115°	134.5	134.5	134.7	134.8	135.0	135.2	135.0	134.5	134.1	133.7	133.2
117.5°	152.6	152.8	153.2	153.6	154.0	154.5	154.4	153.7	153.2	152.6	151.9
120°	164.5	164.5	165.1	165.7	166.3	166.8	166.8	166.3	165.7	165.1	164.5
122.5°	177.1	177.3	177.7	178.1	178.5	179.0	178.8	178.0	177.4	176.6	176.0
125°	195.6	195.8	196.0	196.2	196.4	196.7	196.4	195.8	195.1	194.4	193.8
127.5°	213.5	213.8	214.1	214.3	214.6	214.8	214.5	213.7	212.9	212.1	211.2
130°	225.6	225.7	225.9	226.1	226.2	226.4	225.9	225.0	224.0	223.1	222.2
132.5°	237.7	238.0	238.0	238.0	237.9	237.9	237.5	236.7	235.9	235.2	234.4
135°	255.0	255.1	255.0	254.8	254.7	254.5	254.0	253.2	252.4	251.6	250.7
137.5°	271.8	271.8	271.6	271.5	271.3	271.1	270.7	270.0	269.3	268.6	268.0
140°	283.0	283.0	282.7	282.3	281.9	281.5	281.1	280.4	279.7	279.1	278.4
142.5°	293.2	293.1	292.9	292.7	292.4	292.2	291.7	291.1	290.4	289.7	289.1
145°	308.8	308.7	308.2	307.8	307.4	306.9	306.4	305.9	305.4	304.9	304.3
147.5°	322.3	322.2	321.9	321.6	321.2	320.9	320.5	319.9	319.2	318.7	318.0
150°	330.9	330.6	330.4	330.1	329.8	329.5	329.1	328.7	328.2	327.8	327.3
152.5°	339.5	339.2	338.8	338.5	338.1	337.8	337.3	337.0	336.5	336.0	335.6
155°	350.3	350.0	349.8	349.5	349.3	349.1	348.8	348.6	348.5	348.2	348.0
157.5°	360.3	359.9	359.7	359.6	359.5	359.3	359.2	359.0	358.8	358.7	358.5
160°	366.4	366.0	365.9	365.8	365.7	365.7	365.5	365.4	365.2	365.1	365.0
162.5°	371.8	371.3	371.3	371.2	371.1	371.0	371.0	370.9	370.9	370.9	370.8
165°	378.8	378.2	378.2	378.2	378.2	378.2	378.3	378.4	378.4	378.5	378.6
167.5°	384.6	384.1	384.1	384.1	384.1	384.2	384.3	384.5	384.7	384.9	385.1
170°	387.8	387.3	387.4	387.4	387.5	387.6	387.8	388.0	388.1	388.4	388.6
172.5°	390.2	389.6	389.7	389.8	389.9	389.9	390.1	390.3	390.6	390.8	391.0
175°	392.8	392.3	392.4	392.6	392.8	392.9	393.0	393.2	393.5	393.7	394.0
177.5°	394.2	393.8	393.9	394.1	394.2	394.3	394.5	394.6	394.7	394.9	395.1
180°	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6



TEST NUMBER: P331616-830

CATALOG NUMBER: SA2XXRDIP-C290D330U830-4F0-1E-UDD-A1

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1
2.5°	619.8	620.3	623.7	625.3	628.3	629.5	630.9	630.6	630.6	631.2	636.0
5°	621.1	625.4	631.8	638.0	644.0	649.1	652.6	656.0	657.3	663.5	669.0
7.5°	618.9	626.8	637.3	646.9	658.2	667.0	674.4	681.1	685.6	694.7	703.9
10°	616.0	627.1	639.0	651.3	666.9	678.7	690.7	699.9	702.9	716.3	724.1
12.5°	610.1	625.0	640.3	656.1	671.4	687.6	700.8	710.0	720.6	732.6	746.9
15°	601.4	618.5	638.5	658.7	680.6	700.3	714.4	730.5	742.1	755.4	767.8
17.5°	588.9	611.0	636.2	659.8	685.0	706.2	725.7	741.0	749.1	756.8	758.6
20°	578.9	602.7	632.4	660.3	685.5	709.9	729.2	742.1	744.2	744.4	733.1
22.5°	568.2	595.0	626.1	654.6	684.9	712.0	727.0	732.4	724.0	709.5	687.5
25°	548.3	579.4	615.6	648.1	681.1	706.7	711.9	702.3	672.5	641.2	601.6
27.5°	526.8	561.8	600.5	636.7	671.8	687.8	676.7	641.9	588.3	541.7	485.2
30°	511.0	550.3	588.3	628.8	661.4	668.2	642.7	591.5	529.0	458.8	402.5
32.5°	493.0	534.1	576.0	617.8	645.1	638.4	596.3	533.3	460.1	391.0	337.8
35°	467.4	509.7	555.0	596.9	614.3	585.3	522.4	440.4	365.4	301.0	264.4
37.5°	437.7	483.9	530.8	569.4	568.2	520.0	434.2	349.6	286.6	248.5	222.4
40°	416.6	463.4	514.1	546.6	532.7	470.0	377.0	297.2	251.1	220.7	201.7
42.5°	396.4	443.3	493.7	519.5	495.3	418.2	325.6	263.1	225.1	201.4	186.0
45°	362.0	411.5	458.2	472.5	429.2	344.3	263.3	217.9	192.7	175.1	164.5
47.5°	328.4	377.1	419.7	419.9	361.5	279.2	222.2	188.6	167.0	153.4	145.7
50°	307.8	354.1	389.8	384.3	317.9	248.4	198.7	169.8	151.8	141.3	133.2
52.5°	284.7	329.6	360.6	344.8	281.1	218.6	177.6	153.4	138.5	129.3	122.1
55°	251.1	291.0	312.8	288.8	229.3	181.8	150.1	131.0	119.9	112.2	105.9
57.5°	218.1	251.0	264.7	236.8	188.9	150.7	127.0	112.6	101.6	96.0	92.8
60°	197.4	225.5	235.1	204.2	164.2	131.9	112.4	99.2	91.0	87.4	84.2
62.5°	177.0	199.9	203.9	175.7	143.2	115.5	98.7	87.5	82.1	78.6	75.6
65°	146.8	163.3	161.5	138.7	113.3	91.6	79.5	72.6	68.5	63.6	58.2
67.5°	120.9	131.0	124.9	107.9	86.4	71.3	63.2	58.1	53.0	48.4	47.1
70°	104.4	110.3	103.9	88.2	70.9	59.8	53.3	47.1	44.1	43.1	41.1
72.5°	88.7	90.8	83.8	70.4	57.7	49.5	43.2	39.8	38.1	37.2	36.0
75°	66.5	65.1	59.1	48.6	40.1	34.5	32.5	31.3	30.2	29.3	28.7
77.5°	46.8	44.6	39.2	32.3	27.9	25.3	24.0	23.4	22.9	22.4	21.8
80°	35.2	33.6	28.3	23.1	21.2	19.9	19.2	18.4	18.4	18.0	17.3
82.5°	25.7	24.0	19.3	17.0	15.9	15.1	14.6	14.1	13.9	14.0	13.6
85°	13.5	10.9	9.6	9.2	8.6	8.1	8.4	7.9	7.9	7.9	7.7
87.5°	4.3	3.7	3.7	3.7	4.1	4.4	4.6	4.9	5.4	5.2	5.4
90°	1.2	2.1	3.0	3.9	5.2	6.8	8.4	10.0	11.7	11.5	11.4
92.5°	6.6	7.3	7.9	8.6	9.0	9.4	9.8	10.2	10.6	10.7	10.7
95°	18.1	18.8	19.5	20.3	20.7	20.8	21.0	21.2	21.3	21.3	21.3
97.5°	32.3	32.9	33.6	34.2	34.7	35.0	35.3	35.5	35.8	35.8	35.8
100°	42.9	43.5	44.1	44.7	45.1	45.2	45.5	45.7	46.0	46.0	46.0
102.5°	53.9	54.4	54.9	55.3	55.8	56.0	56.3	56.6	56.8	56.9	57.0
105°	71.8	72.0	72.3	72.5	72.7	72.9	73.0	73.1	73.2	73.4	73.5
107.5°	90.2	90.5	90.9	91.1	91.3	91.3	91.3	91.3	91.3	91.3	91.4
110°	102.0	102.5	102.9	103.3	103.6	103.6	103.6	103.6	103.6	103.6	103.6



TEST NUMBER: P331616-830
 CATALOG NUMBER: SA2XXRDIP-C290D330U830-4F0-1E-UDD-A1

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	114.8	115.3	115.6	116.1	116.3	116.2	116.2	116.1	116.1	115.9	115.7
115°	133.7	134.1	134.5	135.0	135.2	135.0	134.8	134.7	134.5	134.5	134.4
117.5°	152.6	153.2	153.7	154.4	154.5	154.0	153.6	153.2	152.8	152.6	152.4
120°	165.1	165.7	166.3	166.8	166.8	166.3	165.7	165.1	164.5	164.5	164.5
122.5°	176.6	177.4	178.0	178.8	179.0	178.5	178.1	177.7	177.3	177.1	176.9
125°	194.4	195.1	195.8	196.4	196.7	196.4	196.2	196.0	195.8	195.6	195.4
127.5°	212.1	212.9	213.7	214.5	214.8	214.6	214.3	214.1	213.8	213.5	213.3
130°	223.1	224.0	225.0	225.9	226.4	226.2	226.1	225.9	225.7	225.6	225.5
132.5°	235.2	235.9	236.7	237.5	237.9	237.9	238.0	238.0	238.0	237.7	237.3
135°	251.6	252.4	253.2	254.0	254.5	254.7	254.8	255.0	255.1	255.0	255.0
137.5°	268.6	269.3	270.0	270.7	271.1	271.3	271.5	271.6	271.8	271.8	271.7
140°	279.1	279.7	280.4	281.1	281.5	281.9	282.3	282.7	283.0	283.0	283.0
142.5°	289.7	290.4	291.1	291.7	292.2	292.4	292.7	292.9	293.1	293.2	293.3
145°	304.9	305.4	305.9	306.4	306.9	307.4	307.8	308.2	308.7	308.8	308.9
147.5°	318.7	319.2	319.9	320.5	320.9	321.2	321.6	321.9	322.2	322.3	322.4
150°	327.8	328.2	328.7	329.1	329.5	329.8	330.1	330.4	330.6	330.9	331.1
152.5°	336.0	336.5	337.0	337.3	337.8	338.1	338.5	338.8	339.2	339.5	339.8
155°	348.2	348.5	348.6	348.8	349.1	349.3	349.5	349.8	350.0	350.3	350.7
157.5°	358.7	358.8	359.0	359.2	359.3	359.5	359.6	359.7	359.9	360.3	360.8
160°	365.1	365.2	365.4	365.5	365.7	365.7	365.8	365.9	366.0	366.4	366.8
162.5°	370.9	370.9	370.9	371.0	371.0	371.1	371.2	371.3	371.3	371.8	372.3
165°	378.5	378.4	378.4	378.3	378.2	378.2	378.2	378.2	378.2	378.8	379.3
167.5°	384.9	384.7	384.5	384.3	384.2	384.1	384.1	384.1	384.1	384.6	385.1
170°	388.4	388.1	388.0	387.8	387.6	387.5	387.4	387.4	387.3	387.8	388.3
172.5°	390.8	390.6	390.3	390.1	389.9	389.9	389.8	389.7	389.6	390.2	390.7
175°	393.7	393.5	393.2	393.0	392.9	392.8	392.6	392.4	392.3	392.8	393.3
177.5°	394.9	394.7	394.6	394.5	394.3	394.2	394.1	393.9	393.8	394.2	394.5
180°	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6	394.6



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CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	616.1	616.1	616.1	616.1	616.1	616.1	616.1
2.5°	637.7	640.0	641.0	641.0	642.2	641.7	641.2
5°	674.4	678.4	679.4	683.2	686.0	685.1	685.5
7.5°	710.9	717.4	723.9	726.8	727.3	729.0	729.6
10°	733.3	738.7	748.7	747.2	754.7	759.0	752.0
12.5°	754.9	762.1	769.1	771.0	775.2	776.7	773.8
15°	774.4	778.3	778.6	777.6	778.9	777.8	773.7
17.5°	756.2	749.9	737.3	731.2	726.5	719.4	716.6
20°	726.0	707.6	686.2	677.6	667.6	647.9	652.6
22.5°	660.9	640.0	618.5	593.5	581.5	562.9	561.8
25°	559.7	523.5	483.6	455.8	439.5	420.9	412.7
27.5°	435.2	389.6	356.9	340.4	325.4	310.7	310.0
30°	353.3	319.1	293.8	279.7	270.4	264.2	265.5
32.5°	297.7	274.3	257.2	245.5	238.7	234.0	233.9
35°	243.5	227.3	216.4	211.5	206.6	203.2	203.4
37.5°	208.3	198.7	192.6	187.2	184.1	182.4	181.4
40°	190.3	182.4	177.7	174.5	171.9	169.6	169.1
42.5°	176.2	169.6	164.9	162.3	159.9	158.3	157.9
45°	156.3	150.9	146.7	143.8	142.8	141.3	141.3
47.5°	139.0	133.7	130.4	128.7	126.9	125.8	125.8
50°	127.4	123.3	120.4	119.2	117.7	117.2	116.9
52.5°	117.0	113.9	111.8	111.0	110.4	109.6	109.7
55°	102.7	101.0	100.2	99.5	98.5	97.2	98.0
57.5°	90.9	89.4	87.1	85.0	84.1	83.1	83.5
60°	82.5	79.5	76.4	74.1	73.4	71.5	71.5
62.5°	71.8	67.6	63.9	62.6	61.9	61.1	60.9
65°	55.2	53.5	52.7	51.8	51.4	51.4	51.0
67.5°	45.8	45.1	44.1	43.9	43.5	43.4	43.3
70°	40.4	39.6	39.2	38.9	38.5	38.7	38.1
72.5°	35.3	34.7	34.6	34.0	33.7	33.7	33.3
75°	27.8	27.8	27.6	27.4	27.0	26.8	27.0
77.5°	21.4	21.5	21.1	21.0	21.0	21.0	20.8
80°	17.2	17.3	17.2	16.9	16.7	16.9	16.7
82.5°	13.6	13.2	13.2	13.1	13.1	13.0	12.9
85°	7.7	7.9	7.7	7.5	7.5	7.5	7.7
87.5°	5.2	5.1	5.1	5.1	5.2	5.2	5.0
90°	11.2	11.0	11.0	11.1	11.2	11.2	11.3
92.5°	10.7	10.7	10.7	10.7	10.7	10.7	10.7
95°	21.3	21.3	21.2	21.1	20.9	20.8	20.6
97.5°	35.8	35.8	35.8	35.8	35.8	35.8	35.7
100°	46.0	46.0	45.9	45.8	45.8	45.7	45.6
102.5°	57.0	57.1	57.1	57.0	56.9	56.9	56.8
105°	73.7	73.9	73.9	73.9	73.9	73.9	73.9
107.5°	91.5	91.5	91.4	91.0	90.8	90.4	90.0
110°	103.6	103.6	103.5	103.2	103.0	102.8	102.5



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CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	115.6	115.4	115.2	115.1	114.9	114.7	114.5
115°	134.3	134.2	134.1	133.8	133.7	133.5	133.2
117.5°	152.2	152.0	151.8	151.7	151.5	151.2	151.0
120°	164.5	164.5	164.4	164.2	163.9	163.7	163.5
122.5°	176.7	176.5	176.4	176.3	176.1	175.9	175.8
125°	195.1	194.9	194.7	194.7	194.6	194.5	194.4
127.5°	213.0	212.7	212.4	212.3	212.0	211.8	211.5
130°	225.4	225.2	225.0	224.7	224.3	224.0	223.8
132.5°	237.0	236.8	236.5	236.2	236.0	235.7	235.5
135°	254.9	254.8	254.7	254.4	254.2	254.0	253.7
137.5°	271.6	271.6	271.5	271.2	270.9	270.6	270.2
140°	283.0	283.0	282.9	282.6	282.3	282.0	281.7
142.5°	293.3	293.4	293.3	293.0	292.7	292.4	292.1
145°	308.9	309.0	308.9	308.6	308.3	308.0	307.6
147.5°	322.6	322.8	322.7	322.4	322.2	321.9	321.6
150°	331.3	331.6	331.6	331.3	331.1	330.9	330.6
152.5°	340.1	340.4	340.4	340.1	339.8	339.5	339.2
155°	351.1	351.5	351.6	351.3	351.1	350.9	350.6
157.5°	361.4	361.8	361.9	361.6	361.2	360.9	360.5
160°	367.3	367.8	367.8	367.5	367.2	366.9	366.6
162.5°	372.8	373.3	373.3	373.1	372.7	372.3	371.9
165°	379.8	380.3	380.4	380.0	379.7	379.3	379.0
167.5°	385.6	386.2	386.3	385.9	385.4	385.0	384.7
170°	388.8	389.4	389.4	389.0	388.5	388.0	387.6
172.5°	391.2	391.7	391.8	391.3	390.9	390.5	390.0
175°	393.8	394.4	394.4	394.0	393.5	393.0	392.6
177.5°	394.8	395.2	395.2	394.8	394.5	394.2	393.8
180°	394.6	394.6	394.6	394.6	394.6	394.6	394.6

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