

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P999512

Luminaire Tested: SA2XXRDIP-B290D330UB2750-4F0-XX-W2A-A_3000K

Issue Date: 5/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P999512
REPORT IS A COMBINATION OF REPORTS P988065 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-B290D330UB2750-4F0-XX-W2A-A_3000K
Description: Define 2 Regressed Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589}
{m-EER=0.647}
Light Source: -
Ballast/Driver: -

Summary

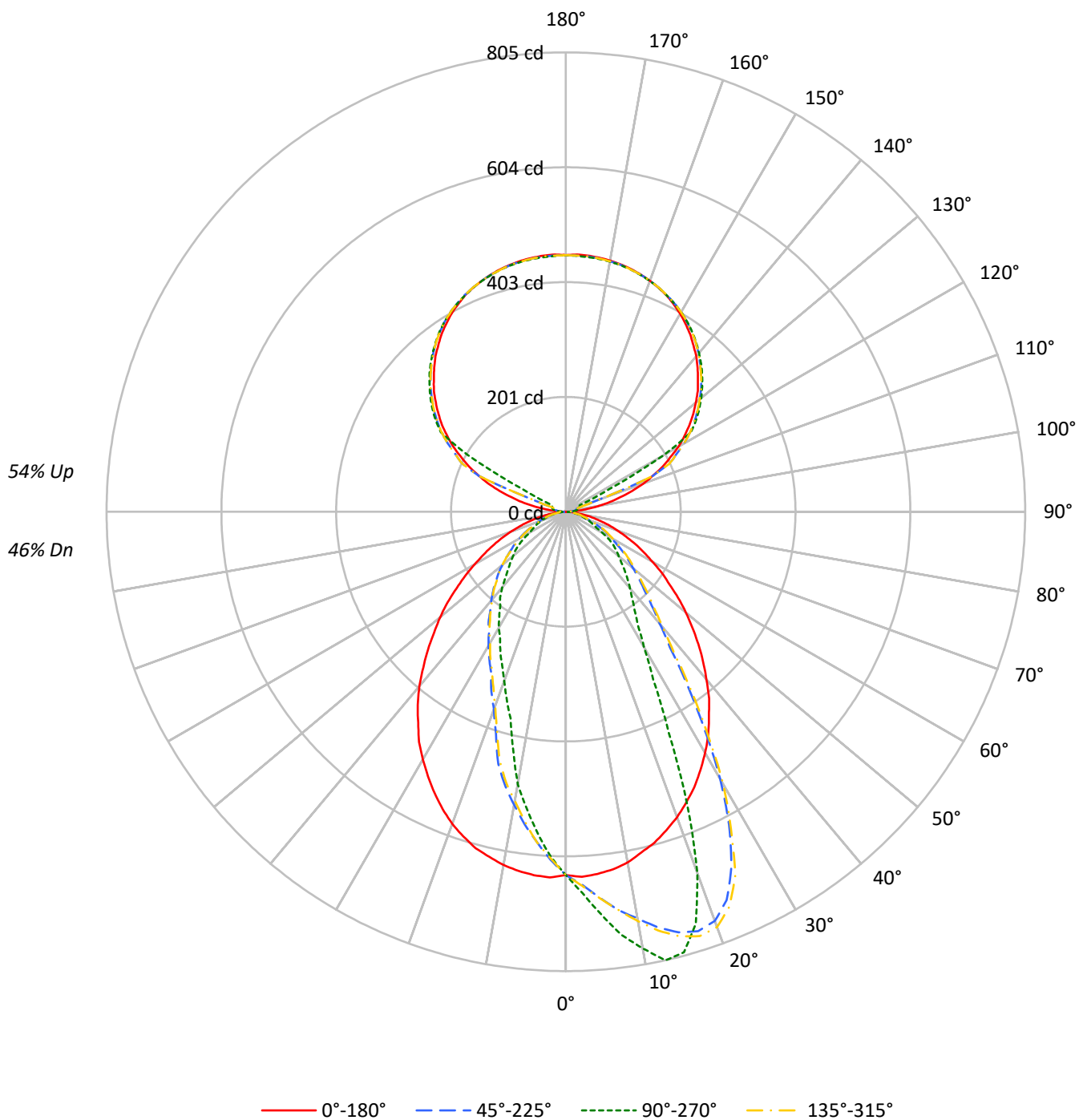
Lumens per Lamp: N/A
Luminaire Lumens: 2419.0 lumens
Efficiency: N/A
Efficacy: 108.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.85 / 1.01
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 22.3
Input Voltage (V):
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: 24 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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	46	46	46
1	97	93	90	87	89	86	83	80	72	70	68	59	57	56	47	46	45	40	40	40
2	89	82	77	72	82	76	71	67	64	60	57	53	50	48	42	41	39	34	34	34
3	82	73	66	61	75	68	62	57	57	53	49	47	44	42	38	36	34	30	30	30
4	75	65	58	52	69	60	54	49	51	46	43	43	39	36	35	32	30	27	27	27
5	70	59	51	45	64	54	48	43	46	41	37	39	35	32	32	29	27	24	24	24
6	64	53	45	40	59	49	42	37	42	37	33	35	31	29	29	26	24	21	21	21
7	60	48	40	35	55	45	38	33	38	33	29	32	28	26	27	24	22	19	19	19
8	56	44	36	31	51	41	34	30	35	30	26	30	26	23	25	22	20	18	18	18
9	52	40	33	28	48	38	31	27	32	27	24	28	24	21	23	20	18	16	16	16
10	49	37	30	26	45	35	28	24	30	25	22	26	22	19	22	19	17	15	15	15

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	10075	10075	10075	10075
5°	10100	10702	10135	8550
10°	9987	11313	10059	7060
15°	9772	11315	9936	5304
20°	9510	9353	9717	4376
25°	9195	5844	9394	3723
30°	8791	3743	9031	3205
35°	8299	2876	8569	2743
40°	7754	2417	8083	2399
45°	7168	2058	7467	2014
50°	6569	1749	6875	1742
55°	5905	1519	6225	1500
60°	5316	1159	5599	1145
65°	4764	871	5048	989
70°	4157	697	4482	807
75°	3513	534	3838	609
80°	2786	364	3002	399
85°	1935	188	2119	198

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 165°

Vertical Angle: 45°

Luminance: 9218 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.4	2.5
10°-20°	168.5	7.0
20°-30°	216.9	9.0
30°-40°	205.8	8.5
40°-50°	176.3	7.3
50°-60°	134.3	5.6
60°-70°	84.7	3.5
70°-80°	42.3	1.7
80°-90°	11.7	0.5
90°-100°	14.8	0.6
100°-110°	55.3	2.3
110°-120°	146.6	6.1
120°-130°	243.1	10.1
130°-140°	258.3	10.7
140°-150°	240.0	9.9
150°-160°	193.0	8.0
160°-170°	124.3	5.1
170°-180°	42.8	1.8
0°-30°	445.8	18.4
0°-40°	651.5	26.9
0°-60°	962.2	39.8
0°-90°	1100.8	45.5
90°-120°	216.7	9.0
90°-150°	958.1	39.6
90°-180°	1318.0	54.5
0°-180°	2419.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	636	636	636	636	636	
5°	637	708	639	566	637	60
15°	600	799	610	375	600	169
25°	533	426	544	272	533	245
35°	437	210	451	200	437	273
45°	328	146	342	143	328	253
55°	222	101	234	100	222	200
65°	134	53	142	60	134	133
75°	63	28	69	32	63	68
85°	14	8	15	8	14	16
90°	0	9	0	9	0	2
95°	21	14	21	14	21	25
105°	99	25	99	25	99	106
115°	187	27	187	27	187	184
125°	264	278	264	278	264	236
135°	327	338	327	338	327	253
145°	380	386	380	386	380	237
155°	418	418	418	418	418	193
165°	440	440	440	440	440	124
175°	451	448	451	448	451	43
180°	450	450	450	450	450	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5
2.5°	640.5	643.2	644.5	646.3	650.2	652.9	656.9	657.8	657.3	659.1	654.2
5°	637.0	642.7	648.0	652.5	659.5	664.0	668.8	674.6	675.9	682.5	678.6
7.5°	632.1	640.5	648.0	656.9	667.5	673.2	680.8	689.6	693.6	701.6	703.8
10°	624.1	636.1	648.9	658.2	672.8	683.0	690.1	704.2	713.5	725.4	723.7
12.5°	611.3	626.8	644.0	659.5	678.6	685.2	698.5	713.1	725.0	736.1	745.8
15°	600.3	618.0	637.0	656.0	677.7	690.1	703.3	722.3	735.2	754.6	763.0
17.5°	585.2	607.8	630.3	651.6	677.2	691.4	707.7	726.3	745.3	763.9	770.6
20°	569.7	594.1	618.4	647.1	676.3	690.1	706.9	729.9	748.4	763.0	763.0
22.5°	551.2	580.8	608.7	636.1	667.9	687.8	705.1	732.1	745.3	748.4	736.5
25°	532.6	562.2	592.7	626.8	663.1	680.8	700.2	725.4	729.9	717.5	686.5
27.5°	510.5	543.6	578.1	614.9	652.9	675.0	692.7	709.5	701.1	667.9	619.7
30°	487.9	523.7	562.7	597.6	643.6	664.0	679.0	683.9	657.3	603.4	541.0
32.5°	464.5	499.4	540.5	582.6	629.0	648.5	658.2	645.4	596.7	528.6	452.5
35°	437.0	476.4	519.3	563.1	609.1	623.7	629.5	598.0	535.7	447.6	372.0
37.5°	412.3	451.6	497.6	542.3	587.0	594.9	589.2	540.1	460.9	373.8	299.9
40°	383.1	425.1	470.2	520.2	556.9	559.1	545.0	481.3	383.1	301.2	255.7
42.5°	356.1	398.5	443.7	494.5	522.4	514.9	495.9	412.3	319.8	259.7	222.9
45°	328.2	368.5	417.1	462.2	482.2	464.5	435.7	346.8	268.5	223.4	195.1
47.5°	301.2	338.8	387.0	430.4	433.9	414.0	380.0	290.6	232.7	196.4	173.4
50°	274.7	312.3	357.4	393.2	389.7	362.3	323.8	252.6	202.1	173.4	154.4
52.5°	248.2	282.2	326.0	354.3	339.3	312.7	274.7	214.1	176.5	151.3	136.7
55°	221.6	253.5	291.1	314.5	290.6	260.1	233.1	183.6	153.0	132.7	121.6
57.5°	199.5	224.7	259.2	273.4	244.6	220.7	197.3	157.9	132.7	118.1	105.3
60°	175.2	198.2	226.5	234.9	205.2	185.8	165.9	133.6	113.7	100.9	92.4
62.5°	154.4	173.4	195.1	195.1	169.0	154.4	139.3	111.9	95.5	85.4	81.4
65°	134.0	147.7	163.2	161.5	139.3	126.5	114.6	92.4	80.1	73.0	69.0
67.5°	114.1	124.7	134.9	128.7	112.8	101.7	90.7	74.8	66.4	61.5	56.2
70°	96.0	104.4	109.7	104.0	88.0	78.7	70.8	60.2	53.5	47.3	44.2
72.5°	80.5	84.0	85.8	78.7	65.5	60.2	54.4	46.9	41.1	38.0	37.2
75°	62.8	65.9	64.6	59.3	48.2	44.2	39.8	34.5	33.2	31.4	30.5
77.5°	49.1	49.1	46.9	42.0	34.5	31.4	29.6	27.0	25.7	25.2	24.3
80°	34.9	34.5	33.2	27.9	23.4	21.7	21.7	19.9	19.5	18.6	18.6
82.5°	23.0	23.0	21.2	16.8	15.5	15.0	14.6	13.7	13.7	13.3	13.3
85°	13.7	12.8	10.6	9.3	8.8	8.8	8.4	8.0	8.4	8.0	8.0
87.5°	6.2	4.9	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
90°	0.3	1.1	1.9	2.7	3.5	3.9	4.2	4.8	5.3	5.9	6.5
92.5°	8.1	7.8	7.5	7.2	6.9	6.8	6.9	7.1	7.4	7.6	7.8
95°	21.1	18.7	16.3	14.0	11.6	10.4	10.7	11.2	11.7	12.2	12.7
97.5°	38.1	32.2	26.2	20.3	14.4	11.4	12.0	13.1	14.3	15.4	16.6
100°	57.6	47.7	37.8	27.9	18.0	13.0	13.6	14.8	16.1	17.3	18.5
102.5°	79.1	78.9	78.8	78.6	78.5	78.4	71.8	58.7	45.5	32.4	19.2
105°	98.9	101.1	103.3	105.4	107.6	108.7	98.8	79.1	59.3	39.6	19.8
107.5°	122.0	123.8	125.6	127.4	129.2	130.1	117.9	93.6	69.2	44.9	20.5
110°	144.1	145.6	147.2	148.7	150.2	151.0	140.5	119.6	98.7	77.8	56.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	165.0	166.3	167.6	168.9	170.2	170.8	170.2	169.0	167.7	166.5	165.3
115°	187.1	188.3	189.5	190.8	192.0	192.6	193.5	195.3	197.1	198.9	200.7
117.5°	206.3	207.7	209.2	210.6	212.1	212.8	213.4	214.6	215.9	217.1	218.3
120°	227.8	228.9	229.9	231.0	232.1	232.6	233.3	234.6	235.9	237.2	238.5
122.5°	246.0	247.2	248.3	249.5	250.6	251.2	251.9	253.4	254.8	256.3	257.7
125°	264.5	265.4	266.4	267.3	268.2	268.7	269.4	270.8	272.1	273.5	274.9
127.5°	281.4	282.4	283.4	284.5	285.5	286.0	286.5	287.6	288.7	289.8	290.9
130°	297.4	298.6	299.7	300.9	302.0	302.6	303.0	303.8	304.6	305.4	306.2
132.5°	313.6	314.6	315.5	316.5	317.4	317.9	318.3	319.1	319.9	320.7	321.5
135°	327.3	328.5	329.6	330.8	331.9	332.5	332.8	333.5	334.1	334.8	335.4
137.5°	341.6	342.5	343.3	344.2	345.1	345.5	345.9	346.6	347.3	348.1	348.8
140°	355.6	356.2	356.8	357.3	357.9	358.2	358.6	359.4	360.2	361.0	361.8
142.5°	367.3	367.8	368.3	368.8	369.3	369.6	370.1	371.0	371.9	372.9	373.8
145°	379.7	379.6	379.6	379.5	379.4	379.4	380.0	381.2	382.5	383.7	384.9
147.5°	390.4	390.2	390.0	389.8	389.6	389.5	390.1	391.3	392.6	393.8	395.0
150°	400.8	400.3	399.8	399.3	398.8	398.6	399.2	400.3	401.5	402.6	403.8
152.5°	409.6	409.0	408.4	407.9	407.3	407.0	407.5	408.6	409.7	410.8	411.9
155°	418.1	417.5	416.8	416.2	415.5	415.2	415.6	416.5	417.4	418.2	419.1
157.5°	424.9	424.3	423.7	423.2	422.6	422.3	422.6	423.3	423.9	424.6	425.2
160°	430.8	430.4	429.9	429.5	429.0	428.8	429.0	429.5	429.9	430.4	430.8
162.5°	436.0	435.6	435.1	434.7	434.2	434.0	434.2	434.6	434.9	435.3	435.7
165°	440.5	440.1	439.7	439.2	438.8	438.6	438.7	438.9	439.2	439.4	439.6
167.5°	444.1	443.7	443.3	442.8	442.4	442.2	442.3	442.5	442.7	442.9	443.1
170°	447.0	446.6	446.2	445.7	445.3	445.1	445.2	445.3	445.4	445.6	445.7
172.5°	449.0	448.6	448.1	447.7	447.2	447.0	447.1	447.2	447.4	447.5	447.7
175°	450.6	450.1	449.6	449.1	448.6	448.3	448.4	448.5	448.7	448.8	449.0
177.5°	451.3	450.8	450.3	449.8	449.3	449.0	449.0	449.1	449.2	449.2	449.3
180°	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6

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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5
2.5°	659.1	660.0	661.3	667.5	668.4	670.1	669.3	669.3	669.7	668.8	669.3
5°	687.4	688.7	695.4	702.9	704.6	702.9	705.1	708.2	708.2	708.2	707.3
7.5°	713.9	718.8	726.3	737.4	739.6	741.8	745.8	743.1	744.0	748.0	746.7
10°	739.6	746.7	755.1	764.4	769.2	772.3	774.1	778.1	787.4	776.8	780.7
12.5°	763.9	774.1	782.9	793.1	796.7	800.6	802.0	805.5	805.5	805.1	808.2
15°	779.8	789.1	797.1	803.7	804.6	803.7	802.8	803.3	804.6	799.3	802.4
17.5°	783.4	784.3	786.9	784.3	784.7	775.4	770.1	768.8	756.4	756.8	767.0
20°	766.1	751.1	747.1	732.5	723.7	699.8	698.9	692.3	666.2	674.1	672.4
22.5°	718.8	693.1	659.1	642.3	633.9	608.7	589.2	575.5	566.2	556.9	552.9
25°	656.4	614.9	566.6	533.5	528.6	505.2	469.3	452.5	432.6	426.4	437.0
27.5°	575.9	522.0	467.6	416.7	407.4	386.2	368.0	356.1	333.1	331.8	332.6
30°	466.7	412.3	366.7	333.5	310.5	300.8	288.8	280.0	270.7	274.3	275.1
32.5°	383.5	331.8	289.3	271.6	261.0	254.8	244.6	238.9	234.9	233.6	233.1
35°	304.8	270.3	251.2	234.0	227.8	223.4	215.9	213.2	209.7	210.1	210.1
37.5°	261.0	232.2	218.1	209.2	203.5	201.3	196.4	193.7	191.5	190.6	192.0
40°	225.2	205.2	196.4	188.4	183.6	182.7	180.0	176.9	174.3	174.7	176.1
42.5°	199.1	187.6	176.9	170.7	167.2	165.9	163.7	161.5	161.5	160.1	159.7
45°	178.3	169.0	160.1	154.4	152.2	150.4	147.7	147.3	145.5	146.0	146.4
47.5°	159.7	152.2	145.5	139.8	137.6	137.1	134.5	132.7	132.7	132.3	131.8
50°	142.9	135.4	129.6	126.5	123.4	122.5	122.1	121.6	120.8	120.8	121.2
52.5°	129.2	121.6	117.2	114.6	112.8	111.9	111.9	111.5	111.5	111.5	111.0
55°	114.1	107.9	104.4	103.5	102.6	102.2	101.7	100.9	100.4	101.3	100.4
57.5°	100.0	97.8	94.7	93.8	91.6	91.6	90.2	89.4	88.5	89.4	89.4
60°	88.9	85.8	84.0	81.4	79.6	77.9	75.6	75.2	74.3	73.9	73.4
62.5°	77.4	74.8	70.3	66.4	63.7	61.9	61.0	60.6	60.6	60.2	60.2
65°	64.6	58.4	56.2	54.9	54.4	54.0	53.1	52.6	53.1	52.6	53.1
67.5°	50.4	49.5	48.2	47.3	46.9	46.4	46.4	46.0	46.0	46.0	46.0
70°	43.8	41.6	41.1	40.3	40.3	39.8	39.8	39.8	39.8	39.4	40.3
72.5°	36.3	34.9	34.5	34.1	34.1	34.1	33.6	33.6	33.6	33.2	33.6
75°	29.6	29.2	28.3	28.3	27.9	28.3	27.9	27.9	27.4	27.9	27.9
77.5°	23.9	23.4	23.0	23.0	22.6	22.6	22.6	22.6	22.6	22.6	23.0
80°	18.1	17.7	17.3	17.7	17.3	17.7	17.3	17.3	17.7	17.3	17.3
82.5°	13.3	12.8	12.8	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
85°	8.0	7.5	7.5	8.0	7.5	8.0	7.5	7.5	7.5	8.0	8.0
87.5°	3.5	4.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.0
90°	6.9	7.2	7.6	7.9	8.1	8.2	8.3	8.5	8.6	8.8	8.6
92.5°	8.0	8.1	8.3	8.4	8.5	8.5	8.6	8.7	8.7	8.8	8.7
95°	13.1	13.4	13.8	14.1	14.3	14.3	14.2	14.1	14.1	14.0	14.1
97.5°	16.8	17.0	17.3	17.5	17.6	17.6	17.7	17.8	17.8	17.9	17.8
100°	19.1	19.7	20.2	20.8	21.1	21.2	21.3	21.5	21.6	21.8	21.6
102.5°	20.0	20.8	21.6	22.4	22.8	22.9	23.1	23.4	23.6	23.8	23.6
105°	20.6	21.4	22.2	23.0	23.4	23.5	23.8	24.1	24.4	24.7	24.4
107.5°	21.3	22.1	22.9	23.7	24.1	24.2	24.5	24.8	25.1	25.4	25.1
110°	49.7	42.5	35.2	28.0	24.4	24.5	24.8	25.1	25.4	25.7	25.4

TEST NUMBER: P999512

CATALOG NUMBER: SA2XXRDIP-B290D330UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	134.1	103.0	71.8	40.7	25.1	25.2	25.4	25.6	25.8	26.0	25.8
115°	167.2	133.8	100.3	66.8	50.1	47.5	42.3	37.1	31.9	26.7	31.9
117.5°	208.0	197.6	187.3	177.0	171.8	162.3	143.4	124.4	105.5	86.5	105.5
120°	239.4	240.2	241.1	242.0	242.4	237.5	227.8	218.0	208.3	198.5	208.3
122.5°	258.1	258.5	259.0	259.4	259.6	259.6	259.7	259.8	259.9	260.0	259.9
125°	275.4	275.9	276.4	276.9	277.2	277.3	277.5	277.8	278.0	278.2	278.0
127.5°	291.6	292.3	293.0	293.7	294.1	294.1	294.2	294.3	294.4	294.5	294.4
130°	307.0	307.8	308.5	309.3	309.7	309.7	309.6	309.5	309.5	309.4	309.5
132.5°	322.1	322.8	323.4	324.1	324.4	324.4	324.3	324.2	324.2	324.1	324.2
135°	336.1	336.9	337.6	338.3	338.7	338.6	338.5	338.3	338.2	338.0	338.2
137.5°	349.5	350.2	350.9	351.6	352.0	351.9	351.7	351.5	351.3	351.1	351.3
140°	362.4	363.1	363.7	364.4	364.7	364.5	364.2	363.8	363.5	363.1	363.5
142.5°	374.4	375.0	375.5	376.1	376.4	376.2	375.9	375.5	375.2	374.8	375.2
145°	385.4	385.9	386.4	386.9	387.2	387.0	386.7	386.3	386.0	385.6	386.0
147.5°	395.4	395.7	396.1	396.4	396.6	396.5	396.2	395.9	395.6	395.3	395.6
150°	404.2	404.6	405.1	405.5	405.7	405.5	405.2	404.8	404.5	404.1	404.5
152.5°	412.3	412.8	413.2	413.7	413.9	413.6	413.1	412.6	412.1	411.6	412.1
155°	419.5	419.9	420.4	420.8	421.0	420.7	420.1	419.6	419.0	418.4	419.0
157.5°	425.7	426.2	426.7	427.2	427.5	427.2	426.6	426.1	425.5	424.9	425.5
160°	431.2	431.6	432.1	432.5	432.7	432.5	432.0	431.5	431.0	430.5	431.0
162.5°	436.2	436.7	437.2	437.7	437.9	437.6	436.9	436.3	435.6	435.0	435.6
165°	440.1	440.6	441.1	441.6	441.8	441.6	441.1	440.6	440.1	439.6	440.1
167.5°	443.6	444.1	444.6	445.1	445.4	445.1	444.4	443.8	443.1	442.5	443.1
170°	446.2	446.7	447.2	447.7	448.0	447.7	447.0	446.4	445.7	445.1	445.7
172.5°	448.2	448.7	449.2	449.7	450.0	449.7	449.0	448.3	447.7	447.0	447.7
175°	449.5	450.0	450.5	451.0	451.3	450.9	450.2	449.5	448.7	448.0	448.7
177.5°	449.8	450.3	450.8	451.3	451.6	451.3	450.6	450.0	449.3	448.7	449.3
180°	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6

TEST NUMBER: P999512

CATALOG NUMBER: SA2XXRDIP-B290D330UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5
2.5°	671.0	667.9	667.0	667.9	667.0	667.5	664.4	652.9	656.0	651.1	653.8
5°	709.1	706.4	700.7	699.8	698.9	698.0	693.6	683.4	679.4	672.8	672.4
7.5°	745.3	745.3	740.9	737.8	733.8	730.7	725.0	710.0	703.8	695.8	691.4
10°	781.2	769.7	774.5	771.4	761.7	759.9	749.3	740.5	728.5	720.6	713.5
12.5°	806.8	803.3	798.9	796.2	793.6	787.8	780.7	758.2	752.0	736.1	728.1
15°	805.9	803.7	805.1	805.1	804.2	802.8	797.1	780.7	770.1	754.6	740.9
17.5°	762.6	768.3	774.1	778.1	786.9	790.9	796.2	786.5	779.8	766.6	752.0
20°	687.0	701.1	717.9	721.5	729.4	752.9	763.5	771.9	774.5	770.1	758.2
22.5°	581.7	593.6	634.3	633.4	644.9	672.8	703.8	729.0	748.9	759.9	755.5
25°	455.6	472.4	494.1	510.5	548.1	589.6	628.1	668.4	702.9	733.4	740.9
27.5°	344.6	366.7	384.0	405.6	424.6	473.7	523.3	586.1	626.4	684.3	714.4
30°	278.7	288.8	306.1	316.3	325.6	363.2	419.3	481.3	552.0	618.8	670.6
32.5°	238.0	245.1	257.9	262.3	272.0	297.3	332.6	389.3	462.2	543.2	611.3
35°	213.7	221.2	223.8	227.8	235.8	251.7	276.0	317.2	383.1	462.2	543.6
37.5°	192.9	196.8	204.4	207.0	209.7	221.6	238.0	266.7	310.5	375.5	465.8
40°	178.3	180.5	184.5	186.7	188.4	196.8	211.4	230.9	263.2	312.7	395.9
42.5°	162.8	165.4	168.1	170.7	173.0	179.6	188.4	207.0	228.7	266.3	326.4
45°	147.7	149.5	152.6	154.4	157.5	162.8	170.7	183.6	203.0	226.9	275.6
47.5°	134.0	136.2	137.6	139.8	142.0	147.7	155.3	163.7	179.6	203.0	238.4
50°	121.6	124.3	126.1	126.5	128.3	133.6	139.8	149.1	159.2	177.4	208.3
52.5°	112.8	113.2	114.6	116.3	115.9	119.0	124.7	131.8	142.4	157.0	179.6
55°	102.6	104.0	104.8	105.3	105.3	107.9	111.0	117.7	126.1	138.0	157.0
57.5°	89.8	91.1	93.8	94.7	96.0	97.3	98.6	103.1	110.1	121.6	137.1
60°	76.5	77.4	80.1	81.8	82.7	86.3	88.0	91.6	95.5	104.0	118.5
62.5°	61.5	62.4	63.7	65.5	67.2	72.5	77.0	80.5	83.6	89.4	101.3
65°	53.5	54.0	54.9	55.3	55.7	57.9	61.9	66.8	72.5	77.0	84.0
67.5°	46.4	46.9	47.3	48.2	48.7	49.1	50.9	52.2	57.9	64.1	69.4
70°	39.8	40.7	41.1	41.1	41.6	42.5	43.3	45.1	46.9	50.0	56.6
72.5°	33.6	34.1	34.9	34.9	34.9	35.8	36.7	37.6	38.5	40.3	42.9
75°	27.9	28.8	28.8	28.8	29.2	29.2	30.1	31.0	31.8	33.2	34.1
77.5°	23.0	23.0	23.0	23.0	23.4	23.4	23.9	24.8	25.2	25.7	26.5
80°	17.3	17.7	17.7	17.7	18.1	18.1	18.1	19.0	19.5	19.5	20.3
82.5°	12.8	12.8	12.8	13.3	12.8	13.3	13.3	13.7	13.3	13.7	14.2
85°	8.0	8.0	8.0	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.8
87.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.4	4.0	4.0
90°	8.5	8.3	8.2	8.1	7.9	7.6	7.2	6.9	6.5	5.9	5.3
92.5°	8.7	8.6	8.5	8.5	8.4	8.3	8.1	8.0	7.8	7.6	7.4
95°	14.1	14.2	14.3	14.3	14.1	13.8	13.4	13.1	12.7	12.2	11.7
97.5°	17.8	17.7	17.6	17.6	17.5	17.3	17.0	16.8	16.6	15.4	14.3
100°	21.5	21.3	21.2	21.1	20.8	20.2	19.7	19.1	18.5	17.3	16.1
102.5°	23.4	23.1	22.9	22.8	22.4	21.6	20.8	20.0	19.2	32.4	45.5
105°	24.1	23.8	23.5	23.4	23.0	22.2	21.4	20.6	19.8	39.6	59.3
107.5°	24.8	24.5	24.2	24.1	23.7	22.9	22.1	21.3	20.5	44.9	69.2
110°	25.1	24.8	24.5	24.4	28.0	35.2	42.5	49.7	56.9	77.8	98.7

TEST NUMBER: P999512

CATALOG NUMBER: SA2XXRDIP-B290D330UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	25.6	25.4	25.2	25.1	40.7	71.8	103.0	134.1	165.3	166.5	167.7
115°	37.1	42.3	47.5	50.1	66.8	100.3	133.8	167.2	200.7	198.9	197.1
117.5°	124.4	143.4	162.3	171.8	177.0	187.3	197.6	208.0	218.3	217.1	215.9
120°	218.0	227.8	237.5	242.4	242.0	241.1	240.2	239.4	238.5	237.2	235.9
122.5°	259.8	259.7	259.6	259.6	259.4	259.0	258.5	258.1	257.7	256.3	254.8
125°	277.8	277.5	277.3	277.2	276.9	276.4	275.9	275.4	274.9	273.5	272.1
127.5°	294.3	294.2	294.1	294.1	293.7	293.0	292.3	291.6	290.9	289.8	288.7
130°	309.5	309.6	309.7	309.7	309.3	308.5	307.8	307.0	306.2	305.4	304.6
132.5°	324.2	324.3	324.4	324.4	324.1	323.4	322.8	322.1	321.5	320.7	319.9
135°	338.3	338.5	338.6	338.7	338.3	337.6	336.9	336.1	335.4	334.8	334.1
137.5°	351.5	351.7	351.9	352.0	351.6	350.9	350.2	349.5	348.8	348.1	347.3
140°	363.8	364.2	364.5	364.7	364.4	363.7	363.1	362.4	361.8	361.0	360.2
142.5°	375.5	375.9	376.2	376.4	376.1	375.5	375.0	374.4	373.8	372.9	371.9
145°	386.3	386.7	387.0	387.2	386.9	386.4	385.9	385.4	384.9	383.7	382.5
147.5°	395.9	396.2	396.5	396.6	396.4	396.1	395.7	395.4	395.0	393.8	392.6
150°	404.8	405.2	405.5	405.7	405.5	405.1	404.6	404.2	403.8	402.6	401.5
152.5°	412.6	413.1	413.6	413.9	413.7	413.2	412.8	412.3	411.9	410.8	409.7
155°	419.6	420.1	420.7	421.0	420.8	420.4	419.9	419.5	419.1	418.2	417.4
157.5°	426.1	426.6	427.2	427.5	427.2	426.7	426.2	425.7	425.2	424.6	423.9
160°	431.5	432.0	432.5	432.7	432.5	432.1	431.6	431.2	430.8	430.4	429.9
162.5°	436.3	436.9	437.6	437.9	437.7	437.2	436.7	436.2	435.7	435.3	434.9
165°	440.6	441.1	441.6	441.8	441.6	441.1	440.6	440.1	439.6	439.4	439.2
167.5°	443.8	444.4	445.1	445.4	445.1	444.6	444.1	443.6	443.1	442.9	442.7
170°	446.4	447.0	447.7	448.0	447.7	447.2	446.7	446.2	445.7	445.6	445.4
172.5°	448.3	449.0	449.7	450.0	449.7	449.2	448.7	448.2	447.7	447.5	447.4
175°	449.5	450.2	450.9	451.3	451.0	450.5	450.0	449.5	449.0	448.8	448.7
177.5°	450.0	450.6	451.3	451.6	451.3	450.8	450.3	449.8	449.3	449.2	449.2
180°	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6

TEST NUMBER: P999512

CATALOG NUMBER: SA2XXRDIP-B290D330UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5
2.5°	649.8	647.6	647.6	646.3	646.3	639.2	639.2	641.4	638.7	635.6	631.2
5°	666.6	661.7	660.4	658.6	652.9	644.0	640.5	639.2	633.9	627.2	619.7
7.5°	682.5	674.6	670.6	666.6	659.1	646.7	639.6	634.8	626.8	616.6	606.9
10°	698.0	687.8	677.7	672.8	662.2	646.7	636.5	628.6	617.1	603.4	589.6
12.5°	712.2	690.9	689.2	679.4	664.0	646.3	630.8	619.3	604.7	588.8	572.8
15°	724.6	702.9	692.3	683.4	663.1	641.0	624.6	610.4	591.0	572.8	553.4
17.5°	730.7	707.3	700.2	685.6	664.8	636.1	614.0	596.7	575.5	553.8	531.7
20°	736.9	709.5	698.0	687.8	659.5	626.8	602.0	582.1	558.7	533.0	508.7
22.5°	740.0	709.5	695.8	681.6	654.2	616.6	587.4	564.0	536.6	510.5	481.3
25°	734.7	706.9	690.5	675.9	644.9	604.2	570.6	544.1	514.9	485.2	455.6
27.5°	721.5	700.7	681.6	666.6	632.1	588.3	552.9	522.8	492.8	459.6	429.5
30°	696.7	687.4	672.4	655.5	618.0	574.2	532.1	501.2	468.0	434.8	403.4
32.5°	658.2	666.2	656.4	641.8	601.1	554.7	510.0	478.6	442.3	406.5	377.8
35°	611.3	639.6	634.3	624.1	583.4	533.9	489.2	451.2	414.9	378.6	349.9
37.5°	560.0	602.9	607.3	601.1	563.1	512.7	463.6	426.4	389.3	352.5	323.4
40°	489.7	555.6	569.7	572.4	541.9	487.0	435.7	399.4	362.7	326.9	291.5
42.5°	425.1	508.2	525.9	537.0	514.9	461.8	410.0	369.8	333.5	301.2	265.8
45°	364.5	451.2	479.9	494.1	484.4	433.1	379.5	341.9	308.8	279.1	245.1
47.5°	302.1	389.3	429.5	452.1	452.1	403.9	350.3	313.2	281.3	256.1	226.0
50°	260.5	333.1	374.7	404.3	412.3	374.2	323.8	287.5	257.4	230.0	207.0
52.5°	222.1	287.1	321.6	352.5	375.5	342.4	294.2	261.4	231.8	206.1	188.0
55°	192.0	240.6	272.0	306.1	331.8	310.1	265.4	233.6	207.9	186.7	171.2
57.5°	163.2	205.7	231.3	261.4	288.8	272.5	236.7	209.2	186.7	168.1	154.4
60°	138.9	173.4	193.3	216.7	250.8	239.3	209.7	184.5	166.3	149.5	138.0
62.5°	118.1	145.5	162.3	179.1	210.1	204.8	181.8	162.3	146.9	132.7	123.0
65°	96.9	119.4	132.7	147.3	172.1	174.3	155.7	142.0	127.8	115.5	106.6
67.5°	78.3	96.0	107.9	120.3	140.2	146.4	133.6	122.1	110.1	100.0	92.0
70°	63.3	75.6	84.5	94.2	110.6	118.1	111.5	103.5	93.8	85.4	78.3
72.5°	50.0	57.9	63.3	70.8	84.0	91.6	91.1	84.0	77.0	71.2	65.5
75°	36.7	42.9	47.3	52.2	62.8	69.9	71.7	68.6	61.5	57.1	52.6
77.5°	27.9	31.4	33.6	37.2	44.7	50.9	53.5	52.6	47.8	44.2	41.1
80°	21.2	22.1	23.0	24.3	30.5	36.3	38.0	37.6	34.9	33.6	30.1
82.5°	15.0	15.5	15.9	16.4	18.6	23.4	25.2	26.1	23.9	22.6	19.5
85°	8.8	9.3	9.3	10.2	10.6	11.9	15.0	15.0	14.6	12.8	12.4
87.5°	4.4	4.4	4.0	4.0	4.4	4.9	5.8	6.6	5.8	5.3	4.9
90°	4.8	4.2	3.9	3.5	2.7	1.9	1.1	0.3	1.1	1.9	2.7
92.5°	7.1	6.9	6.8	6.9	7.2	7.5	7.8	8.1	7.8	7.5	7.2
95°	11.2	10.7	10.4	11.6	14.0	16.3	18.7	21.1	18.7	16.3	14.0
97.5°	13.1	12.0	11.4	14.4	20.3	26.2	32.2	38.1	32.2	26.2	20.3
100°	14.8	13.6	13.0	18.0	27.9	37.8	47.7	57.6	47.7	37.8	27.9
102.5°	58.7	71.8	78.4	78.5	78.6	78.8	78.9	79.1	78.9	78.8	78.6
105°	79.1	98.8	108.7	107.6	105.4	103.3	101.1	98.9	101.1	103.3	105.4
107.5°	93.6	117.9	130.1	129.2	127.4	125.6	123.8	122.0	123.8	125.6	127.4
110°	119.6	140.5	151.0	150.2	148.7	147.2	145.6	144.1	145.6	147.2	148.7

TEST NUMBER: P999512

CATALOG NUMBER: SA2XXRDIP-B290D330UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
112.5°	169.0	170.2	170.8	170.2	168.9	167.6	166.3	165.0	166.3	167.6	168.9
115°	195.3	193.5	192.6	192.0	190.8	189.5	188.3	187.1	188.3	189.5	190.8
117.5°	214.6	213.4	212.8	212.1	210.6	209.2	207.7	206.3	207.7	209.2	210.6
120°	234.6	233.3	232.6	232.1	231.0	229.9	228.9	227.8	228.9	229.9	231.0
122.5°	253.4	251.9	251.2	250.6	249.5	248.3	247.2	246.0	247.2	248.3	249.5
125°	270.8	269.4	268.7	268.2	267.3	266.4	265.4	264.5	265.4	266.4	267.3
127.5°	287.6	286.5	286.0	285.5	284.5	283.4	282.4	281.4	282.4	283.4	284.5
130°	303.8	303.0	302.6	302.0	300.9	299.7	298.6	297.4	298.6	299.7	300.9
132.5°	319.1	318.3	317.9	317.4	316.5	315.5	314.6	313.6	314.6	315.5	316.5
135°	333.5	332.8	332.5	331.9	330.8	329.6	328.5	327.3	328.5	329.6	330.8
137.5°	346.6	345.9	345.5	345.1	344.2	343.3	342.5	341.6	342.5	343.3	344.2
140°	359.4	358.6	358.2	357.9	357.3	356.8	356.2	355.6	356.2	356.8	357.3
142.5°	371.0	370.1	369.6	369.3	368.8	368.3	367.8	367.3	367.8	368.3	368.8
145°	381.2	380.0	379.4	379.4	379.5	379.6	379.6	379.7	379.6	379.6	379.5
147.5°	391.3	390.1	389.5	389.6	389.8	390.0	390.2	390.4	390.2	390.0	389.8
150°	400.3	399.2	398.6	398.8	399.3	399.8	400.3	400.8	400.3	399.8	399.3
152.5°	408.6	407.5	407.0	407.3	407.9	408.4	409.0	409.6	409.0	408.4	407.9
155°	416.5	415.6	415.2	415.5	416.2	416.8	417.5	418.1	417.5	416.8	416.2
157.5°	423.3	422.6	422.3	422.6	423.2	423.7	424.3	424.9	424.3	423.7	423.2
160°	429.5	429.0	428.8	429.0	429.5	429.9	430.4	430.8	430.4	429.9	429.5
162.5°	434.6	434.2	434.0	434.2	434.7	435.1	435.6	436.0	435.6	435.1	434.7
165°	438.9	438.7	438.6	438.8	439.2	439.7	440.1	440.5	440.1	439.7	439.2
167.5°	442.5	442.3	442.2	442.4	442.8	443.3	443.7	444.1	443.7	443.3	442.8
170°	445.3	445.2	445.1	445.3	445.7	446.2	446.6	447.0	446.6	446.2	445.7
172.5°	447.2	447.1	447.0	447.2	447.7	448.1	448.6	449.0	448.6	448.1	447.7
175°	448.5	448.4	448.3	448.6	449.1	449.6	450.1	450.6	450.1	449.6	449.1
177.5°	449.1	449.0	449.0	449.3	449.8	450.3	450.8	451.3	450.8	450.3	449.8
180°	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6

TEST NUMBER: P999512

CATALOG NUMBER: SA2XXRDIP-B290D330UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5
2.5°	629.5	629.9	631.2	627.2	621.0	618.4	610.4	609.1	607.8	607.8	609.1
5°	615.3	613.5	614.0	606.4	597.6	592.3	581.2	583.0	577.3	573.7	574.6
7.5°	599.8	594.9	594.5	584.8	573.7	564.0	552.5	549.8	544.5	538.3	535.7
10°	580.4	576.8	570.2	559.1	545.0	537.0	521.5	512.2	510.9	501.6	498.1
12.5°	560.4	554.3	547.6	532.1	516.2	503.4	491.9	481.7	474.6	466.7	461.4
15°	537.4	529.9	522.4	506.0	487.5	474.6	457.4	442.3	421.6	405.2	395.9
17.5°	512.2	503.8	493.7	475.5	457.4	439.7	407.8	390.1	375.5	365.8	360.1
20°	486.1	476.8	466.7	448.5	417.1	386.2	368.5	354.8	345.9	336.2	329.1
22.5°	458.7	449.0	437.9	409.6	376.4	354.8	341.0	328.2	315.4	310.1	306.5
25°	433.1	424.2	410.0	371.6	345.5	325.6	310.1	301.7	295.0	288.0	281.3
27.5°	406.5	390.1	370.2	337.9	321.6	301.2	290.2	284.0	272.5	267.6	264.5
30°	374.7	356.5	337.5	314.5	295.5	281.3	271.2	261.0	254.3	249.5	244.2
32.5°	342.4	325.1	313.2	289.3	275.1	260.5	250.8	244.6	234.9	231.8	229.6
35°	314.5	299.9	289.3	269.8	256.6	243.3	236.2	226.9	220.7	215.0	211.4
37.5°	287.1	279.1	268.1	251.7	237.5	226.9	217.2	214.1	205.7	202.6	199.1
40°	268.1	256.1	246.8	232.7	220.7	209.2	203.0	196.0	190.2	185.3	184.0
42.5°	245.1	236.2	230.9	215.4	203.0	196.4	188.9	180.9	176.5	172.5	167.6
45°	227.8	219.8	212.3	199.9	188.9	180.5	173.8	168.5	161.0	159.2	151.7
47.5°	209.7	201.7	196.0	183.6	173.4	165.4	160.6	153.5	147.3	143.3	139.8
50°	191.5	184.9	179.6	169.0	160.1	151.7	145.1	138.0	135.4	128.7	126.5
52.5°	174.3	169.9	164.1	153.9	145.1	138.0	130.9	125.2	121.2	117.7	115.0
55°	159.7	152.6	150.0	138.9	131.4	123.9	117.7	114.1	109.3	107.0	104.8
57.5°	143.3	139.3	134.9	126.5	118.1	111.0	106.6	101.3	98.6	96.0	94.2
60°	129.2	123.4	119.9	112.8	105.3	98.6	94.7	90.7	87.1	84.9	81.4
62.5°	112.8	108.4	106.2	98.6	92.4	86.3	82.7	78.7	76.1	72.1	67.7
65°	98.6	95.1	92.4	86.3	80.5	74.8	71.2	66.4	62.8	60.6	60.2
67.5°	86.3	83.6	79.6	73.9	68.1	63.7	59.7	55.7	55.3	54.4	54.4
70°	72.5	69.9	67.7	61.5	56.6	51.8	50.9	49.5	48.2	47.8	46.9
72.5°	60.6	58.4	55.7	50.4	45.6	44.2	43.3	42.5	41.1	40.7	40.3
75°	49.1	46.0	44.2	39.4	38.0	37.2	36.3	34.9	34.1	33.6	32.7
77.5°	37.6	34.5	34.5	31.8	31.0	29.6	28.8	27.9	27.4	26.5	26.5
80°	26.5	26.5	25.7	24.3	23.0	22.6	21.2	20.8	20.3	20.8	19.9
82.5°	19.5	17.7	17.7	16.8	15.9	15.5	14.6	14.6	14.2	14.2	14.2
85°	11.1	11.1	10.6	9.7	9.3	9.3	8.8	8.8	8.4	8.4	8.0
87.5°	4.4	4.0	4.4	4.0	4.0	3.5	3.5	3.5	3.1	3.5	3.1
90°	3.5	3.9	4.2	4.8	5.3	5.9	6.5	6.9	7.2	7.6	7.9
92.5°	6.9	6.8	6.9	7.1	7.4	7.6	7.8	8.0	8.1	8.3	8.4
95°	11.6	10.4	10.7	11.2	11.7	12.2	12.7	13.1	13.4	13.8	14.1
97.5°	14.4	11.4	12.0	13.1	14.3	15.4	16.6	16.8	17.0	17.3	17.5
100°	18.0	13.0	13.6	14.8	16.1	17.3	18.5	19.1	19.7	20.2	20.8
102.5°	78.5	78.4	71.8	58.7	45.5	32.4	19.2	20.0	20.8	21.6	22.4
105°	107.6	108.7	98.8	79.1	59.3	39.6	19.8	20.6	21.4	22.2	23.0
107.5°	129.2	130.1	117.9	93.6	69.2	44.9	20.5	21.3	22.1	22.9	23.7
110°	150.2	151.0	140.5	119.6	98.7	77.8	56.9	49.7	42.5	35.2	28.0

TEST NUMBER: P999512

CATALOG NUMBER: SA2XXRDIP-B290D330UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
112.5°	170.2	170.8	170.2	169.0	167.7	166.5	165.3	134.1	103.0	71.8	40.7
115°	192.0	192.6	193.5	195.3	197.1	198.9	200.7	167.2	133.8	100.3	66.8
117.5°	212.1	212.8	213.4	214.6	215.9	217.1	218.3	208.0	197.6	187.3	177.0
120°	232.1	232.6	233.3	234.6	235.9	237.2	238.5	239.4	240.2	241.1	242.0
122.5°	250.6	251.2	251.9	253.4	254.8	256.3	257.7	258.1	258.5	259.0	259.4
125°	268.2	268.7	269.4	270.8	272.1	273.5	274.9	275.4	275.9	276.4	276.9
127.5°	285.5	286.0	286.5	287.6	288.7	289.8	290.9	291.6	292.3	293.0	293.7
130°	302.0	302.6	303.0	303.8	304.6	305.4	306.2	307.0	307.8	308.5	309.3
132.5°	317.4	317.9	318.3	319.1	319.9	320.7	321.5	322.1	322.8	323.4	324.1
135°	331.9	332.5	332.8	333.5	334.1	334.8	335.4	336.1	336.9	337.6	338.3
137.5°	345.1	345.5	345.9	346.6	347.3	348.1	348.8	349.5	350.2	350.9	351.6
140°	357.9	358.2	358.6	359.4	360.2	361.0	361.8	362.4	363.1	363.7	364.4
142.5°	369.3	369.6	370.1	371.0	371.9	372.9	373.8	374.4	375.0	375.5	376.1
145°	379.4	379.4	380.0	381.2	382.5	383.7	384.9	385.4	385.9	386.4	386.9
147.5°	389.6	389.5	390.1	391.3	392.6	393.8	395.0	395.4	395.7	396.1	396.4
150°	398.8	398.6	399.2	400.3	401.5	402.6	403.8	404.2	404.6	405.1	405.5
152.5°	407.3	407.0	407.5	408.6	409.7	410.8	411.9	412.3	412.8	413.2	413.7
155°	415.5	415.2	415.6	416.5	417.4	418.2	419.1	419.5	419.9	420.4	420.8
157.5°	422.6	422.3	422.6	423.3	423.9	424.6	425.2	425.7	426.2	426.7	427.2
160°	429.0	428.8	429.0	429.5	429.9	430.4	430.8	431.2	431.6	432.1	432.5
162.5°	434.2	434.0	434.2	434.6	434.9	435.3	435.7	436.2	436.7	437.2	437.7
165°	438.8	438.6	438.7	438.9	439.2	439.4	439.6	440.1	440.6	441.1	441.6
167.5°	442.4	442.2	442.3	442.5	442.7	442.9	443.1	443.6	444.1	444.6	445.1
170°	445.3	445.1	445.2	445.3	445.4	445.6	445.7	446.2	446.7	447.2	447.7
172.5°	447.2	447.0	447.1	447.2	447.4	447.5	447.7	448.2	448.7	449.2	449.7
175°	448.6	448.3	448.4	448.5	448.7	448.8	449.0	449.5	450.0	450.5	451.0
177.5°	449.3	449.0	449.0	449.1	449.2	449.2	449.3	449.8	450.3	450.8	451.3
180°	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6

TEST NUMBER: P999512

CATALOG NUMBER: SA2XXRDIP-B290D330UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5
2.5°	609.1	608.2	605.6	606.4	605.1	605.1	604.2	604.2	604.2	606.4	605.1
5°	575.9	572.8	569.7	568.4	567.1	565.8	565.8	565.3	569.3	568.4	571.9
7.5°	534.8	533.9	527.7	527.7	525.5	524.6	526.8	527.3	527.7	528.6	530.8
10°	498.1	495.9	487.0	487.9	486.6	484.8	486.1	485.2	488.3	489.2	488.3
12.5°	454.7	450.7	441.0	436.1	430.8	426.9	431.7	428.2	440.6	444.1	453.8
15°	397.2	389.7	383.1	383.1	378.2	374.7	376.9	380.9	383.5	387.5	389.3
17.5°	358.7	355.6	350.3	347.2	345.9	344.6	344.6	346.4	352.1	351.7	355.2
20°	326.0	324.2	321.6	317.6	316.3	315.4	315.4	315.4	319.4	322.9	325.1
22.5°	303.4	302.1	300.3	295.0	292.4	291.5	293.7	295.0	298.1	300.8	303.0
25°	280.9	277.8	274.7	272.9	271.6	271.6	272.5	272.9	274.3	275.6	278.2
27.5°	262.3	260.1	255.7	250.8	250.8	249.5	250.4	251.2	254.3	258.8	261.0
30°	241.5	241.1	239.3	237.5	235.8	234.9	236.7	238.0	238.4	240.6	240.6
32.5°	226.5	223.4	220.3	218.5	217.6	217.2	217.6	219.4	219.4	222.1	225.2
35°	211.4	209.7	206.6	203.5	202.6	200.4	202.1	203.9	207.0	208.3	209.7
37.5°	195.1	192.9	191.5	190.6	188.9	189.3	188.0	190.6	193.3	192.9	193.7
40°	182.7	178.7	174.7	174.3	173.8	173.4	173.4	173.8	175.6	177.4	180.0
42.5°	166.8	165.4	161.9	158.4	157.5	156.6	155.7	157.5	161.0	164.1	165.4
45°	150.4	148.6	147.7	145.1	143.3	142.9	142.0	144.2	147.3	148.6	149.5
47.5°	135.4	134.9	132.3	132.7	131.4	131.8	131.4	132.7	132.7	134.0	134.9
50°	125.2	123.9	122.5	121.6	120.3	120.3	119.9	120.3	122.1	123.9	123.4
52.5°	115.0	112.8	112.4	111.9	111.0	111.9	110.6	111.0	112.8	113.7	113.2
55°	103.1	102.6	101.7	100.9	100.4	100.0	100.0	100.0	101.7	103.1	103.5
57.5°	93.8	91.6	89.8	89.8	88.0	87.6	88.5	88.9	90.2	91.1	92.0
60°	80.9	80.1	77.4	76.1	73.4	73.0	73.0	74.8	77.0	80.1	80.9
62.5°	67.2	65.9	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.9	65.9
65°	59.7	60.2	59.7	59.3	59.7	59.7	59.3	59.3	59.3	59.7	60.2
67.5°	53.5	53.1	53.5	53.1	52.6	52.6	52.2	52.6	53.1	53.5	53.5
70°	46.4	46.4	46.0	46.4	46.0	45.6	45.1	45.1	46.0	46.4	46.4
72.5°	39.8	39.8	39.4	39.4	38.5	38.5	38.9	38.5	38.5	39.8	39.8
75°	33.2	32.7	32.3	32.3	31.8	31.8	31.8	31.4	32.3	32.3	32.7
77.5°	26.1	26.1	26.1	25.7	25.7	25.2	25.2	25.7	25.7	25.7	26.1
80°	19.9	19.9	19.9	19.5	19.0	19.0	19.0	19.0	19.0	19.5	19.0
82.5°	13.7	13.7	13.7	13.7	13.7	13.3	13.3	13.3	13.7	13.7	13.3
85°	8.4	8.0	8.4	8.4	8.0	8.4	8.0	8.0	7.5	7.5	8.0
87.5°	3.5	3.1	2.7	2.7	3.1	2.7	2.7	2.7	3.1	2.7	2.7
90°	8.1	8.2	8.3	8.5	8.6	8.8	8.6	8.5	8.3	8.2	8.1
92.5°	8.5	8.5	8.6	8.7	8.7	8.8	8.7	8.7	8.6	8.5	8.5
95°	14.3	14.3	14.2	14.1	14.1	14.0	14.1	14.1	14.2	14.3	14.3
97.5°	17.6	17.6	17.7	17.8	17.8	17.9	17.8	17.8	17.7	17.6	17.6
100°	21.1	21.2	21.3	21.5	21.6	21.8	21.6	21.5	21.3	21.2	21.1
102.5°	22.8	22.9	23.1	23.4	23.6	23.8	23.6	23.4	23.1	22.9	22.8
105°	23.4	23.5	23.8	24.1	24.4	24.7	24.4	24.1	23.8	23.5	23.4
107.5°	24.1	24.2	24.5	24.8	25.1	25.4	25.1	24.8	24.5	24.2	24.1
110°	24.4	24.5	24.8	25.1	25.4	25.7	25.4	25.1	24.8	24.5	24.4

TEST NUMBER: P999512

CATALOG NUMBER: SA2XXRDIP-B290D330UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
112.5°	25.1	25.2	25.4	25.6	25.8	26.0	25.8	25.6	25.4	25.2	25.1
115°	50.1	47.5	42.3	37.1	31.9	26.7	31.9	37.1	42.3	47.5	50.1
117.5°	171.8	162.3	143.4	124.4	105.5	86.5	105.5	124.4	143.4	162.3	171.8
120°	242.4	237.5	227.8	218.0	208.3	198.5	208.3	218.0	227.8	237.5	242.4
122.5°	259.6	259.6	259.7	259.8	259.9	260.0	259.9	259.8	259.7	259.6	259.6
125°	277.2	277.3	277.5	277.8	278.0	278.2	278.0	277.8	277.5	277.3	277.2
127.5°	294.1	294.1	294.2	294.3	294.4	294.5	294.4	294.3	294.2	294.1	294.1
130°	309.7	309.7	309.6	309.5	309.5	309.4	309.5	309.5	309.6	309.7	309.7
132.5°	324.4	324.4	324.3	324.2	324.2	324.1	324.2	324.2	324.3	324.4	324.4
135°	338.7	338.6	338.5	338.3	338.2	338.0	338.2	338.3	338.5	338.6	338.7
137.5°	352.0	351.9	351.7	351.5	351.3	351.1	351.3	351.5	351.7	351.9	352.0
140°	364.7	364.5	364.2	363.8	363.5	363.1	363.5	363.8	364.2	364.5	364.7
142.5°	376.4	376.2	375.9	375.5	375.2	374.8	375.2	375.5	375.9	376.2	376.4
145°	387.2	387.0	386.7	386.3	386.0	385.6	386.0	386.3	386.7	387.0	387.2
147.5°	396.6	396.5	396.2	395.9	395.6	395.3	395.6	395.9	396.2	396.5	396.6
150°	405.7	405.5	405.2	404.8	404.5	404.1	404.5	404.8	405.2	405.5	405.7
152.5°	413.9	413.6	413.1	412.6	412.1	411.6	412.1	412.6	413.1	413.6	413.9
155°	421.0	420.7	420.1	419.6	419.0	418.4	419.0	419.6	420.1	420.7	421.0
157.5°	427.5	427.2	426.6	426.1	425.5	424.9	425.5	426.1	426.6	427.2	427.5
160°	432.7	432.5	432.0	431.5	431.0	430.5	431.0	431.5	432.0	432.5	432.7
162.5°	437.9	437.6	436.9	436.3	435.6	435.0	435.6	436.3	436.9	437.6	437.9
165°	441.8	441.6	441.1	440.6	440.1	439.6	440.1	440.6	441.1	441.6	441.8
167.5°	445.4	445.1	444.4	443.8	443.1	442.5	443.1	443.8	444.4	445.1	445.4
170°	448.0	447.7	447.0	446.4	445.7	445.1	445.7	446.4	447.0	447.7	448.0
172.5°	450.0	449.7	449.0	448.3	447.7	447.0	447.7	448.3	449.0	449.7	450.0
175°	451.3	450.9	450.2	449.5	448.7	448.0	448.7	449.5	450.2	450.9	451.3
177.5°	451.6	451.3	450.6	450.0	449.3	448.7	449.3	450.0	450.6	451.3	451.6
180°	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6

TEST NUMBER: P999512

CATALOG NUMBER: SA2XXRDIP-B290D330UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5	636.5
2.5°	606.4	608.7	607.8	602.9	607.8	609.1	611.8	614.4	616.2	618.8	621.0
5°	568.4	572.8	575.5	572.8	581.7	583.0	589.2	592.7	598.0	602.5	606.0
7.5°	532.6	536.1	541.4	542.3	547.6	553.8	562.7	571.5	579.9	584.3	588.3
10°	494.1	500.3	508.2	506.5	514.4	524.2	533.5	547.6	554.7	562.7	569.7
12.5°	455.6	459.6	470.2	473.7	485.2	492.8	505.6	514.4	532.1	541.4	547.6
15°	388.4	404.7	418.0	433.9	449.0	463.1	474.6	490.6	506.0	513.1	523.3
17.5°	357.9	365.4	373.3	381.3	400.8	426.0	446.3	463.6	476.8	486.1	498.1
20°	326.0	333.5	342.4	349.9	361.8	380.0	405.2	434.8	450.7	460.5	472.0
22.5°	303.4	310.5	316.3	322.9	332.2	345.5	364.5	401.2	422.4	434.4	444.6
25°	279.1	288.0	294.2	299.0	306.5	321.1	336.6	357.4	395.5	404.7	418.9
27.5°	262.3	265.0	272.0	279.6	287.1	295.0	311.0	328.7	354.3	374.7	391.9
30°	242.4	249.0	255.7	258.8	265.4	276.9	286.6	305.7	325.6	341.5	362.3
32.5°	227.4	231.3	235.8	243.3	249.5	257.4	267.2	283.1	299.9	310.1	326.0
35°	210.6	213.2	222.5	225.6	231.8	239.7	249.5	261.9	280.0	288.0	299.5
37.5°	194.6	200.8	203.5	210.6	216.3	224.3	231.3	245.5	257.4	266.7	277.3
40°	182.2	184.9	189.8	196.0	200.8	207.0	215.9	226.0	238.9	246.4	255.7
42.5°	167.2	169.4	175.6	179.1	187.1	192.9	198.2	210.6	222.1	227.8	237.1
45°	150.8	156.1	160.1	167.2	171.6	178.7	185.3	194.2	204.8	211.4	216.7
47.5°	136.7	142.0	146.0	152.6	159.7	162.8	169.9	179.1	188.9	194.2	201.7
50°	125.2	127.0	134.5	137.6	145.1	151.3	156.1	164.1	174.7	177.8	184.0
52.5°	114.1	115.5	120.3	124.3	130.9	136.2	142.4	150.0	158.8	163.7	168.5
55°	104.4	105.3	107.5	111.9	116.3	123.0	128.7	135.8	143.3	148.6	153.0
57.5°	93.3	95.1	96.9	99.5	104.0	110.1	116.3	123.0	129.2	132.7	138.5
60°	80.5	83.2	86.3	89.4	92.4	96.9	104.0	110.1	115.9	119.0	123.4
62.5°	66.8	72.1	74.8	78.3	80.9	84.9	90.2	97.3	101.3	105.3	108.8
65°	60.2	60.6	61.0	64.6	69.4	73.4	78.3	83.6	89.8	92.4	95.1
67.5°	53.5	54.0	54.9	55.3	57.1	61.5	66.8	72.5	77.4	79.2	81.8
70°	46.9	46.9	48.7	49.1	49.5	50.0	54.4	60.2	64.6	66.8	69.9
72.5°	39.8	40.3	41.1	41.6	42.5	43.3	44.7	47.8	53.1	55.3	58.8
75°	32.7	33.2	33.6	34.1	35.4	35.8	37.2	38.9	41.1	43.8	46.0
77.5°	26.1	26.1	26.5	27.4	28.3	28.8	30.1	31.0	31.8	33.2	34.9
80°	19.5	19.9	19.9	20.8	20.8	21.2	21.7	23.0	23.9	24.8	25.7
82.5°	13.3	14.2	14.2	14.2	14.6	15.0	15.5	15.5	16.4	16.8	18.1
85°	8.0	8.4	8.4	8.4	8.0	8.8	8.8	9.3	9.3	9.3	9.7
87.5°	3.1	2.7	3.1	3.1	3.1	3.5	3.1	3.1	3.5	4.0	4.0
90°	7.9	7.6	7.2	6.9	6.5	5.9	5.3	4.8	4.2	3.9	3.5
92.5°	8.4	8.3	8.1	8.0	7.8	7.6	7.4	7.1	6.9	6.8	6.9
95°	14.1	13.8	13.4	13.1	12.7	12.2	11.7	11.2	10.7	10.4	11.6
97.5°	17.5	17.3	17.0	16.8	16.6	15.4	14.3	13.1	12.0	11.4	14.4
100°	20.8	20.2	19.7	19.1	18.5	17.3	16.1	14.8	13.6	13.0	18.0
102.5°	22.4	21.6	20.8	20.0	19.2	32.4	45.5	58.7	71.8	78.4	78.5
105°	23.0	22.2	21.4	20.6	19.8	39.6	59.3	79.1	98.8	108.7	107.6
107.5°	23.7	22.9	22.1	21.3	20.5	44.9	69.2	93.6	117.9	130.1	129.2
110°	28.0	35.2	42.5	49.7	56.9	77.8	98.7	119.6	140.5	151.0	150.2

TEST NUMBER: P999512

CATALOG NUMBER: SA2XXRDIP-B290D330UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
112.5°	40.7	71.8	103.0	134.1	165.3	166.5	167.7	169.0	170.2	170.8	170.2
115°	66.8	100.3	133.8	167.2	200.7	198.9	197.1	195.3	193.5	192.6	192.0
117.5°	177.0	187.3	197.6	208.0	218.3	217.1	215.9	214.6	213.4	212.8	212.1
120°	242.0	241.1	240.2	239.4	238.5	237.2	235.9	234.6	233.3	232.6	232.1
122.5°	259.4	259.0	258.5	258.1	257.7	256.3	254.8	253.4	251.9	251.2	250.6
125°	276.9	276.4	275.9	275.4	274.9	273.5	272.1	270.8	269.4	268.7	268.2
127.5°	293.7	293.0	292.3	291.6	290.9	289.8	288.7	287.6	286.5	286.0	285.5
130°	309.3	308.5	307.8	307.0	306.2	305.4	304.6	303.8	303.0	302.6	302.0
132.5°	324.1	323.4	322.8	322.1	321.5	320.7	319.9	319.1	318.3	317.9	317.4
135°	338.3	337.6	336.9	336.1	335.4	334.8	334.1	333.5	332.8	332.5	331.9
137.5°	351.6	350.9	350.2	349.5	348.8	348.1	347.3	346.6	345.9	345.5	345.1
140°	364.4	363.7	363.1	362.4	361.8	361.0	360.2	359.4	358.6	358.2	357.9
142.5°	376.1	375.5	375.0	374.4	373.8	372.9	371.9	371.0	370.1	369.6	369.3
145°	386.9	386.4	385.9	385.4	384.9	383.7	382.5	381.2	380.0	379.4	379.4
147.5°	396.4	396.1	395.7	395.4	395.0	393.8	392.6	391.3	390.1	389.5	389.6
150°	405.5	405.1	404.6	404.2	403.8	402.6	401.5	400.3	399.2	398.6	398.8
152.5°	413.7	413.2	412.8	412.3	411.9	410.8	409.7	408.6	407.5	407.0	407.3
155°	420.8	420.4	419.9	419.5	419.1	418.2	417.4	416.5	415.6	415.2	415.5
157.5°	427.2	426.7	426.2	425.7	425.2	424.6	423.9	423.3	422.6	422.3	422.6
160°	432.5	432.1	431.6	431.2	430.8	430.4	429.9	429.5	429.0	428.8	429.0
162.5°	437.7	437.2	436.7	436.2	435.7	435.3	434.9	434.6	434.2	434.0	434.2
165°	441.6	441.1	440.6	440.1	439.6	439.4	439.2	438.9	438.7	438.6	438.8
167.5°	445.1	444.6	444.1	443.6	443.1	442.9	442.7	442.5	442.3	442.2	442.4
170°	447.7	447.2	446.7	446.2	445.7	445.6	445.4	445.3	445.2	445.1	445.3
172.5°	449.7	449.2	448.7	448.2	447.7	447.5	447.4	447.2	447.1	447.0	447.2
175°	451.0	450.5	450.0	449.5	449.0	448.8	448.7	448.5	448.4	448.3	448.6
177.5°	451.3	450.8	450.3	449.8	449.3	449.2	449.2	449.1	449.0	449.0	449.3
180°	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6	449.6

TEST NUMBER: P999512

CATALOG NUMBER: SA2XXRDIP-B290D330UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	636.5	636.5	636.5	636.5
2.5°	625.0	623.7	631.7	640.5
5°	612.2	614.4	624.6	637.0
7.5°	598.9	603.8	615.7	632.1
10°	580.4	589.2	607.3	624.1
12.5°	562.2	574.2	591.4	611.3
15°	541.9	555.1	576.4	600.3
17.5°	519.3	534.3	559.1	585.2
20°	495.4	515.3	541.4	569.7
22.5°	468.9	492.8	519.8	551.2
25°	443.2	469.3	496.3	532.6
27.5°	418.0	443.7	473.7	510.5
30°	392.8	416.2	448.5	487.9
32.5°	365.8	390.1	424.2	464.5
35°	341.0	365.4	397.2	437.0
37.5°	314.5	340.6	371.1	412.3
40°	283.5	314.1	343.7	383.1
42.5°	257.9	290.2	318.9	356.1
45°	237.5	268.1	291.9	328.2
47.5°	218.5	243.3	267.6	301.2
50°	200.4	219.4	244.6	274.7
52.5°	181.8	198.2	219.8	248.2
55°	165.0	180.5	199.9	221.6
57.5°	149.5	160.6	180.0	199.5
60°	132.3	143.8	158.8	175.2
62.5°	117.7	126.5	140.7	154.4
65°	102.2	110.6	121.2	134.0
67.5°	88.0	95.5	104.0	114.1
70°	75.2	80.9	87.1	96.0
72.5°	61.5	67.7	73.4	80.5
75°	50.4	53.1	57.9	62.8
77.5°	38.9	42.5	45.1	49.1
80°	27.9	31.0	31.8	34.9
82.5°	18.6	20.3	22.1	23.0
85°	10.6	11.5	13.3	13.7
87.5°	4.0	4.4	5.3	6.2
90°	2.7	1.9	1.1	0.3
92.5°	7.2	7.5	7.8	8.1
95°	14.0	16.3	18.7	21.1
97.5°	20.3	26.2	32.2	38.1
100°	27.9	37.8	47.7	57.6
102.5°	78.6	78.8	78.9	79.1
105°	105.4	103.3	101.1	98.9
107.5°	127.4	125.6	123.8	122.0
110°	148.7	147.2	145.6	144.1

TEST NUMBER: P999512

CATALOG NUMBER: SA2XXRDIP-B290D330UB2750-4F0-XX-W2A-A_3000K

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
112.5°	168.9	167.6	166.3	165.0
115°	190.8	189.5	188.3	187.1
117.5°	210.6	209.2	207.7	206.3
120°	231.0	229.9	228.9	227.8
122.5°	249.5	248.3	247.2	246.0
125°	267.3	266.4	265.4	264.5
127.5°	284.5	283.4	282.4	281.4
130°	300.9	299.7	298.6	297.4
132.5°	316.5	315.5	314.6	313.6
135°	330.8	329.6	328.5	327.3
137.5°	344.2	343.3	342.5	341.6
140°	357.3	356.8	356.2	355.6
142.5°	368.8	368.3	367.8	367.3
145°	379.5	379.6	379.6	379.7
147.5°	389.8	390.0	390.2	390.4
150°	399.3	399.8	400.3	400.8
152.5°	407.9	408.4	409.0	409.6
155°	416.2	416.8	417.5	418.1
157.5°	423.2	423.7	424.3	424.9
160°	429.5	429.9	430.4	430.8
162.5°	434.7	435.1	435.6	436.0
165°	439.2	439.7	440.1	440.5
167.5°	442.8	443.3	443.7	444.1
170°	445.7	446.2	446.6	447.0
172.5°	447.7	448.1	448.6	449.0
175°	449.1	449.6	450.1	450.6
177.5°	449.8	450.3	450.8	451.3
180°	449.6	449.6	449.6	449.6

(END OF REPORT)