

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: P331256-927

Luminaire Tested: **SA2XXDIP-C290D530U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331256-927
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: SA2XXDIP-C290D530U927-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2451.1 lumens
Efficiency: N/A
Efficacy: 95.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

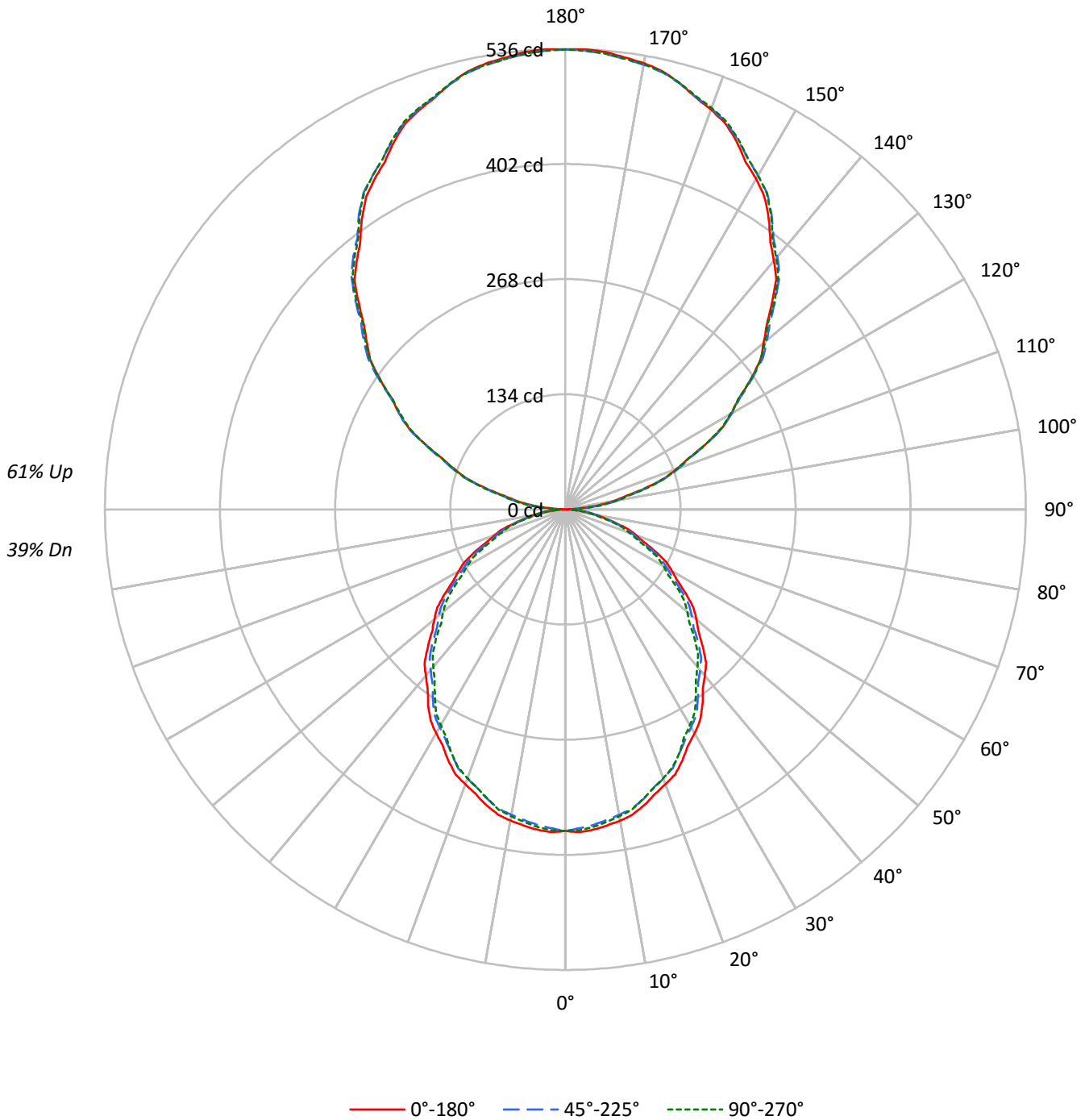
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331256-927

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									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	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR	0	105	105	105	105	95	95	95	95	77	77	77	61	61	61	46	46	46	39	39	39	39	39	39	39	39	39	39	39	39																
	1	95	91	87	84	86	83	80	77	68	65	63	54	52	51	41	40	39	33	33	33	33	33	33	33	33	33	33	33	33																
	2	87	79	73	68	79	72	67	63	59	55	52	47	44	42	36	34	33	27	27	27	27	27	27	27	27	27	27	27	27																
	3	79	70	63	57	72	64	57	52	52	48	44	42	38	36	32	30	28	23	23	23	23	23	23	23	23	23	23	23	23																
	4	72	62	54	48	65	56	50	44	46	41	37	37	33	31	28	26	24	20	20	20	20	20	20	20	20	20	20	20	20																
	5	66	55	47	41	60	50	43	38	41	36	32	33	29	26	25	23	21	17	17	17	17	17	17	17	17	17	17	17	17																
	6	61	49	41	36	55	45	38	33	37	32	28	30	26	23	23	20	18	15	15	15	15	15	15	15	15	15	15	15	15																
	7	56	44	37	31	51	41	34	29	34	28	25	27	23	20	21	18	16	14	14	14	14	14	14	14	14	14	14	14	14																
	8	52	40	33	27	47	37	30	25	31	25	22	25	21	18	19	17	15	12	12	12	12	12	12	12	12	12	12	12	12																
	9	49	37	29	24	44	34	27	23	28	23	19	23	19	16	18	15	13	11	11	11	11	11	11	11	11	11	11	11	11																
	10	45	34	26	22	41	31	25	20	26	21	17	21	17	15	17	14	12	10	10	10	10	10	10	10	10	10	10	10	10																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6042	6042	6042
5°	6065	5977	6015
10°	6030	5917	5946
15°	5954	5840	5835
20°	5849	5727	5720
25°	5744	5585	5585
30°	5610	5455	5407
35°	5483	5298	5219
40°	5324	5143	5044
45°	5167	4987	4864
50°	4999	4828	4657
55°	4822	4642	4467
60°	4624	4414	4253
65°	4413	4195	4000
70°	4145	3923	3734
75°	3768	3612	3525
80°	3347	3245	3078
85°	2723	2594	2334



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.2	1.4
10°-20°	99.0	4.0
20°-30°	145.6	5.9
30°-40°	169.1	6.9
40°-50°	168.9	6.9
50°-60°	147.3	6.0
60°-70°	108.9	4.4
70°-80°	61.7	2.5
80°-90°	18.7	0.8
90°-100°	33.9	1.4
100°-110°	105.4	4.3
110°-120°	180.1	7.3
120°-130°	236.8	9.7
130°-140°	265.8	10.8
140°-150°	260.6	10.6
150°-160°	218.6	8.9
160°-170°	145.0	5.9
170°-180°	50.7	2.1
0°-30°	279.8	11.4
0°-40°	448.8	18.3
0°-60°	765.0	31.2
0°-90°	954.3	38.9
90°-120°	319.4	13.0
90°-150°	1082.6	44.2
90°-180°	1497.0	61.1
0°-180°	2451.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	374	374	374	374	374	
5°	374	373	369	372	371	35
15°	356	354	349	351	349	100
25°	322	319	314	314	314	148
35°	278	274	269	267	265	174
45°	226	224	218	215	213	175
55°	171	169	165	161	159	153
65°	116	113	110	107	105	114
75°	60	60	58	56	56	65
85°	15	14	14	13	13	17
90°	0	6	16	15	15	2
95°	24	28	29	29	28	27
105°	97	98	99	100	100	103
115°	181	183	182	182	181	179
125°	263	267	266	264	264	235
135°	340	345	346	346	344	263
145°	413	416	419	419	417	258
155°	472	473	475	477	476	217
165°	514	513	513	516	514	145
175°	534	533	532	535	533	51
180°	535	535	535	535	535	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	374.2	374.2	374.2	374.2	374.2	374.2	374.2	374.2	374.2	374.2	374.2
2.5°	376.0	375.7	375.3	375.0	374.7	374.2	373.5	372.8	372.1	371.4	372.0
5°	374.2	373.9	373.6	373.3	373.0	372.4	371.5	370.7	369.7	368.8	369.5
7.5°	371.0	370.4	369.9	369.5	369.0	368.3	367.4	366.5	365.6	364.7	365.4
10°	367.8	367.3	366.7	366.1	365.5	364.8	363.8	362.9	361.9	360.9	361.6
12.5°	363.5	363.0	362.5	361.9	361.5	360.8	359.8	358.9	357.9	357.0	357.4
15°	356.2	355.8	355.3	354.8	354.3	353.6	352.5	351.5	350.5	349.4	349.7
17.5°	347.1	346.6	346.1	345.6	345.2	344.4	343.3	342.2	341.2	340.2	340.5
20°	340.4	339.9	339.5	339.0	338.5	337.7	336.6	335.5	334.4	333.3	333.5
22.5°	333.8	333.1	332.5	331.8	331.1	330.3	329.2	328.1	327.1	326.1	326.1
25°	322.4	321.8	321.2	320.5	319.9	318.9	317.5	316.2	314.8	313.5	313.6
27.5°	309.5	309.0	308.3	307.8	307.2	306.3	305.3	304.2	303.2	302.1	301.8
30°	300.9	300.2	299.6	299.0	298.3	297.4	296.2	295.0	293.7	292.6	292.3
32.5°	291.6	291.1	290.7	290.1	289.6	288.7	287.4	286.2	284.9	283.7	283.2
35°	278.2	277.3	276.6	275.8	275.0	273.9	272.7	271.4	270.1	268.8	268.3
37.5°	263.0	262.3	261.6	260.9	260.2	259.2	257.9	256.7	255.3	254.1	253.5
40°	252.6	252.0	251.4	250.7	250.1	249.1	247.8	246.5	245.3	244.0	243.3
42.5°	242.6	241.9	241.3	240.7	240.0	239.0	237.7	236.5	235.2	233.9	233.1
45°	226.3	225.8	225.2	224.7	224.1	223.2	222.0	220.9	219.7	218.4	217.5
47.5°	210.2	209.7	209.2	208.7	208.1	207.2	206.0	204.8	203.5	202.2	201.3
50°	199.0	198.6	198.2	197.8	197.4	196.6	195.5	194.4	193.3	192.2	191.1
52.5°	188.1	187.5	187.0	186.5	185.9	185.1	184.1	183.1	182.0	180.9	180.0
55°	171.3	170.8	170.3	169.8	169.4	168.7	167.7	166.8	165.8	164.9	163.8
57.5°	154.5	154.1	153.7	153.3	152.9	152.2	151.1	150.1	149.0	148.0	147.0
60°	143.2	142.9	142.6	142.3	142.0	141.2	140.1	139.0	137.8	136.7	135.9
62.5°	132.3	131.7	131.3	130.8	130.2	129.5	128.7	127.9	127.0	126.1	125.2
65°	115.5	115.0	114.5	114.1	113.6	113.0	112.2	111.4	110.6	109.8	109.0
67.5°	98.5	98.1	97.7	97.3	97.0	96.4	95.6	94.9	94.2	93.5	92.9
70°	87.8	87.5	87.1	86.8	86.5	86.0	85.3	84.6	83.8	83.1	82.5
72.5°	76.8	76.5	76.2	75.9	75.6	75.2	74.7	74.3	73.8	73.4	72.8
75°	60.4	60.3	60.1	60.0	59.8	59.6	59.2	58.7	58.3	57.9	57.4
77.5°	45.8	45.5	45.2	45.0	44.7	44.4	44.3	44.1	44.0	43.8	43.6
80°	36.0	35.9	35.8	35.7	35.6	35.6	35.4	35.3	35.1	34.9	34.7
82.5°	26.8	26.8	26.8	26.7	26.7	26.6	26.5	26.5	26.4	26.3	26.0
85°	14.7	14.7	14.6	14.5	14.4	14.3	14.3	14.2	14.1	14.0	13.8
87.5°	5.3	5.4	5.5	5.6	5.7	5.9	6.3	6.6	6.9	7.2	7.0
90°	0.5	1.7	2.9	4.0	5.3	7.0	9.2	11.4	13.6	15.8	15.6
92.5°	8.1	9.0	9.8	10.7	11.6	12.3	12.8	13.3	13.9	14.3	14.4
95°	23.5	24.5	25.5	26.5	27.5	28.1	28.3	28.5	28.7	28.9	28.9
97.5°	42.9	43.8	44.7	45.6	46.4	47.1	47.5	47.8	48.2	48.6	48.6
100°	57.4	58.1	58.9	59.8	60.6	61.2	61.5	61.7	62.0	62.3	62.3
102.5°	72.6	73.2	73.8	74.5	75.1	75.7	76.0	76.4	76.8	77.2	77.2
105°	97.1	97.4	97.8	98.0	98.3	98.5	98.8	98.9	99.2	99.4	99.6
107.5°	121.9	122.3	122.8	123.2	123.7	123.9	123.9	123.9	123.9	123.9	124.0
110°	137.8	138.4	138.9	139.6	140.2	140.5	140.5	140.5	140.5	140.5	140.5



TEST NUMBER: P331256-927

CATALOG NUMBER: SA2XXDIP-C290D530U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	155.1	155.7	156.3	156.9	157.6	157.8	157.7	157.6	157.6	157.5	157.2
115°	180.7	181.3	181.9	182.5	183.1	183.3	183.1	182.9	182.7	182.5	182.4
117.5°	206.2	207.0	207.8	208.6	209.4	209.5	209.0	208.3	207.8	207.2	207.0
120°	223.2	223.9	224.7	225.5	226.4	226.4	225.5	224.7	223.9	223.2	223.2
122.5°	238.7	239.6	240.7	241.6	242.6	242.7	242.2	241.6	241.1	240.5	240.3
125°	262.9	263.8	264.7	265.6	266.5	266.8	266.5	266.3	265.9	265.6	265.3
127.5°	286.5	287.6	288.8	289.9	291.0	291.4	291.1	290.7	290.4	290.0	289.6
130°	301.3	302.6	303.9	305.2	306.5	307.0	306.9	306.7	306.5	306.3	306.1
132.5°	317.9	319.0	320.0	321.2	322.2	322.7	322.8	322.8	322.9	322.9	322.5
135°	340.2	341.3	342.4	343.5	344.6	345.2	345.4	345.6	345.9	346.0	345.9
137.5°	363.5	364.5	365.4	366.3	367.2	367.7	368.0	368.3	368.5	368.8	368.7
140°	377.6	378.6	379.5	380.3	381.3	382.0	382.5	382.9	383.5	384.0	384.0
142.5°	392.1	393.0	394.0	394.8	395.7	396.3	396.7	397.0	397.4	397.7	397.8
145°	412.9	413.6	414.3	415.0	415.7	416.4	416.9	417.6	418.2	418.7	418.8
147.5°	431.4	432.2	433.1	434.0	434.7	435.4	435.8	436.2	436.6	437.0	437.2
150°	444.1	444.7	445.3	445.8	446.5	446.9	447.3	447.7	448.1	448.6	448.9
152.5°	455.3	455.9	456.5	457.1	457.6	458.2	458.7	459.1	459.6	460.2	460.5
155°	472.1	472.4	472.7	472.9	473.2	473.6	473.9	474.2	474.4	474.8	475.3
157.5°	486.4	486.6	486.8	487.0	487.3	487.4	487.6	487.8	488.0	488.1	488.9
160°	495.1	495.3	495.5	495.7	495.9	496.1	496.1	496.2	496.4	496.5	497.1
162.5°	503.0	503.1	503.1	503.2	503.2	503.3	503.4	503.5	503.6	503.7	504.4
165°	513.7	513.5	513.4	513.3	513.3	513.2	513.2	513.2	513.2	513.2	513.9
167.5°	522.4	522.2	521.9	521.6	521.3	521.1	521.1	521.1	521.0	521.0	521.7
170°	527.2	526.9	526.6	526.2	526.0	525.8	525.7	525.5	525.5	525.4	526.1
172.5°	530.4	530.1	529.8	529.5	529.3	529.0	528.9	528.9	528.7	528.6	529.3
175°	534.4	534.1	533.8	533.5	533.2	533.0	532.7	532.6	532.3	532.1	532.8
177.5°	536.1	535.8	535.5	535.3	535.0	534.9	534.7	534.6	534.4	534.2	534.7
180°	535.3	535.3	535.3	535.3	535.3	535.3	535.3	535.3	535.3	535.3	535.3



TEST NUMBER: P331256-927

CATALOG NUMBER: SA2XXDIP-C290D530U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	374.2	374.2	374.2	374.2	374.2	374.2	374.2	374.2
2.5°	372.6	373.3	373.9	374.2	374.1	373.9	373.8	373.7
5°	370.2	370.8	371.5	371.7	371.5	371.4	371.2	371.1
7.5°	366.0	366.6	367.3	367.5	367.3	367.1	366.9	366.8
10°	362.3	362.9	363.5	363.7	363.5	363.2	363.0	362.7
12.5°	357.8	358.2	358.7	358.9	358.7	358.5	358.3	358.1
15°	350.1	350.4	350.7	350.7	350.3	349.9	349.5	349.1
17.5°	340.9	341.3	341.6	341.6	341.2	340.9	340.5	340.1
20°	333.7	334.0	334.2	334.1	333.8	333.5	333.2	332.9
22.5°	326.1	326.2	326.2	326.1	326.0	325.7	325.6	325.4
25°	313.8	313.9	314.1	314.1	313.9	313.8	313.6	313.5
27.5°	301.6	301.3	301.1	300.8	300.4	300.0	299.7	299.3
30°	292.1	291.8	291.6	291.4	291.0	290.7	290.4	290.0
32.5°	282.8	282.3	281.9	281.5	281.2	280.9	280.6	280.3
35°	267.8	267.4	266.9	266.5	266.1	265.7	265.3	264.8
37.5°	252.9	252.3	251.7	251.2	250.8	250.4	250.1	249.7
40°	242.6	241.9	241.1	240.6	240.3	240.0	239.6	239.3
42.5°	232.3	231.6	230.8	230.1	229.7	229.3	228.9	228.4
45°	216.7	215.8	214.9	214.3	214.0	213.7	213.3	213.0
47.5°	200.4	199.5	198.5	197.8	197.4	196.9	196.5	196.0
50°	190.0	188.8	187.7	187.0	186.6	186.2	185.8	185.4
52.5°	179.1	178.2	177.2	176.5	175.9	175.5	174.9	174.4
55°	162.9	161.9	161.0	160.3	159.9	159.5	159.1	158.7
57.5°	146.1	145.1	144.2	143.5	143.3	143.0	142.7	142.4
60°	135.0	134.1	133.2	132.7	132.5	132.2	132.0	131.7
62.5°	124.5	123.7	122.9	122.3	122.0	121.7	121.4	121.0
65°	108.3	107.6	106.9	106.3	105.9	105.5	105.1	104.7
67.5°	92.4	91.8	91.3	90.8	90.5	90.2	89.8	89.5
70°	82.0	81.4	80.9	80.5	80.2	79.8	79.5	79.1
72.5°	72.2	71.7	71.1	70.7	70.4	70.2	69.9	69.6
75°	57.0	56.5	56.0	55.8	56.0	56.2	56.3	56.5
77.5°	43.3	43.1	42.9	42.6	42.4	42.2	42.0	41.7
80°	34.5	34.2	34.0	33.7	33.6	33.4	33.3	33.1
82.5°	25.7	25.3	25.0	24.9	24.9	24.8	24.8	24.8
85°	13.5	13.3	13.1	12.9	12.8	12.8	12.7	12.6
87.5°	6.7	6.5	6.3	6.1	6.1	6.0	6.0	5.9
90°	15.4	15.2	15.0	15.0	15.1	15.1	15.3	15.4
92.5°	14.4	14.5	14.5	14.6	14.6	14.6	14.7	14.7
95°	28.9	28.9	28.9	28.8	28.6	28.4	28.2	28.0
97.5°	48.6	48.6	48.6	48.6	48.6	48.6	48.6	48.5
100°	62.3	62.3	62.3	62.3	62.2	62.1	62.0	61.9
102.5°	77.3	77.4	77.5	77.5	77.4	77.2	77.2	77.1
105°	99.8	100.0	100.2	100.3	100.3	100.3	100.3	100.3
107.5°	124.1	124.1	124.2	124.0	123.5	123.1	122.6	122.2
110°	140.5	140.5	140.5	140.4	140.1	139.7	139.4	139.1



TEST NUMBER: P331256-927

CATALOG NUMBER: SA2XXDIP-C290D530U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	157.0	156.8	156.5	156.3	156.1	155.8	155.6	155.4
115°	182.3	182.2	182.1	181.9	181.6	181.3	181.0	180.7
117.5°	206.8	206.5	206.3	206.0	205.7	205.4	205.1	204.8
120°	223.2	223.2	223.2	223.0	222.7	222.4	222.1	221.8
122.5°	240.0	239.8	239.6	239.3	239.1	238.8	238.7	238.4
125°	265.0	264.7	264.4	264.2	264.1	264.0	263.9	263.8
127.5°	289.3	288.9	288.6	288.2	287.9	287.6	287.2	286.9
130°	305.9	305.7	305.5	305.1	304.8	304.4	304.0	303.6
132.5°	322.0	321.5	321.2	320.8	320.4	320.1	319.8	319.5
135°	345.9	345.7	345.6	345.4	345.2	344.8	344.5	344.2
137.5°	368.6	368.5	368.4	368.2	367.8	367.4	367.0	366.6
140°	384.0	384.0	384.0	383.8	383.3	382.9	382.5	382.1
142.5°	397.8	397.9	398.0	397.8	397.4	397.0	396.6	396.2
145°	419.0	419.1	419.1	419.0	418.6	418.2	417.8	417.4
147.5°	437.4	437.7	437.9	437.8	437.4	437.0	436.7	436.3
150°	449.2	449.5	449.8	449.8	449.5	449.2	448.9	448.6
152.5°	460.9	461.3	461.7	461.7	461.3	460.9	460.5	460.2
155°	475.8	476.3	476.8	476.9	476.6	476.3	475.9	475.7
157.5°	489.5	490.2	490.9	491.0	490.5	490.0	489.6	489.0
160°	497.6	498.3	498.8	499.0	498.6	498.2	497.7	497.3
162.5°	505.0	505.7	506.4	506.5	506.0	505.6	505.1	504.6
165°	514.6	515.3	515.9	516.1	515.6	515.1	514.6	514.0
167.5°	522.4	523.2	523.9	523.9	523.4	522.9	522.4	521.8
170°	526.8	527.5	528.1	528.2	527.6	527.0	526.4	525.9
172.5°	530.0	530.8	531.4	531.5	530.9	530.3	529.7	529.1
175°	533.5	534.2	535.0	535.0	534.4	533.8	533.2	532.6
177.5°	535.2	535.7	536.1	536.1	535.7	535.2	534.7	534.2
180°	535.3	535.3	535.3	535.3	535.3	535.3	535.3	535.3

(END OF REPORT)