

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: P332547-940

Luminaire Tested: **SA4XXDIP-C575D590U940-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332547-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C575D590U940-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

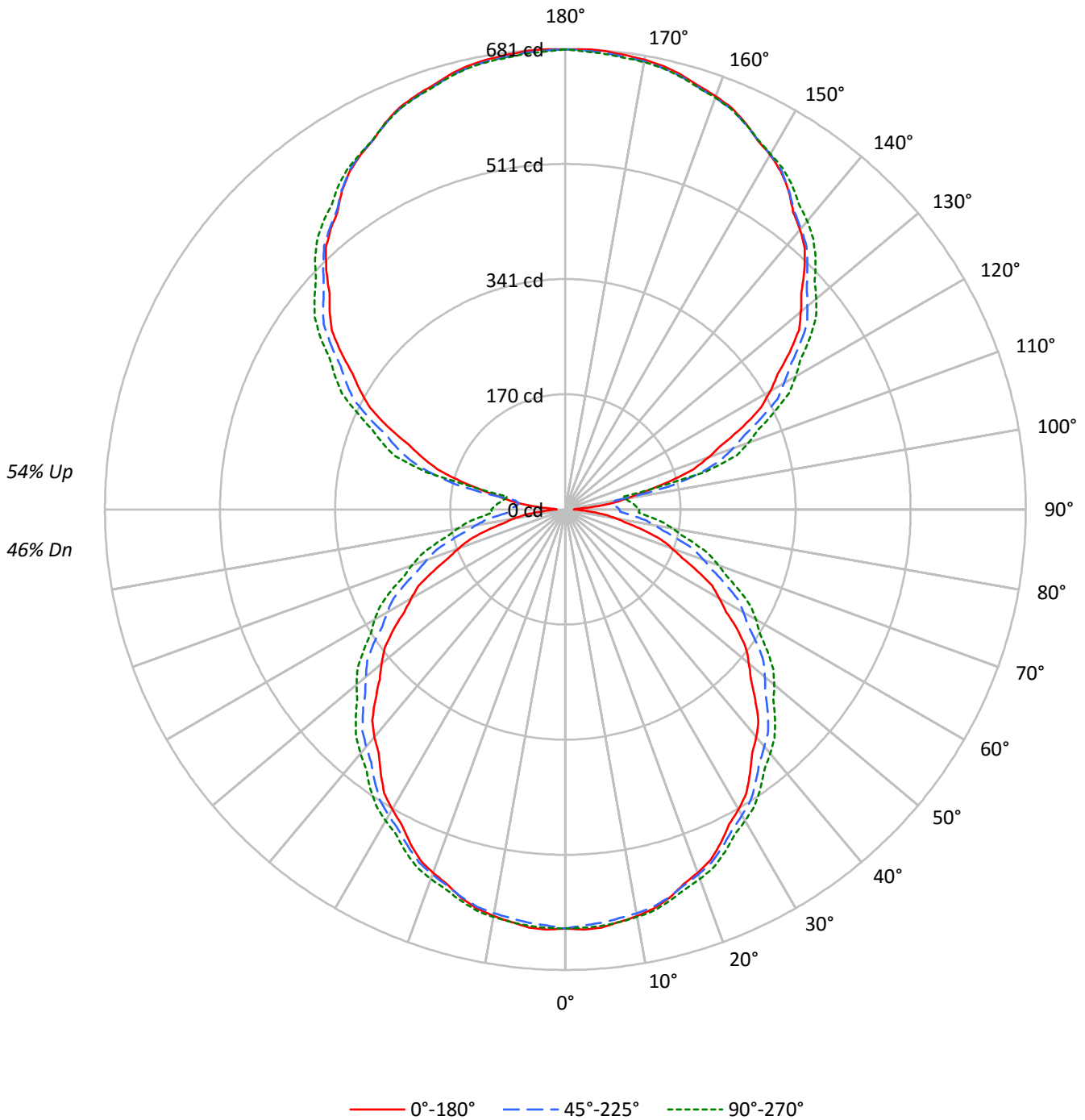
Lumens per Lamp: N/A
Luminaire Lumens: 4217.9 lumens
Efficiency: N/A
Efficacy: 128.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 32.8
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: P332547-940
CATALOG NUMBER: SA4XXDIP-C575D590U940-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P332547-940

CATALOG NUMBER: SA4XXDIP-C575D590U940-4F0-1E-UDD-D

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	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46	46	46	46	46	46	46	46	46	46	46	46																
	1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37	37	37	37	37	37	37	37	37	37	37	37																
	2	87	79	73	67	79	73	67	62	61	56	53	49	46	44	39	37	35	30	30	30	30	30	30	30	30	30	30	30	30																
	3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	29	25	25	25	25	25	25	25	25	25	25	25	25																
	4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	28	25	21	21	21	21	21	21	21	21	21	21	21	21																
	5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18	18	18	18	18	18	18	18	18	18	18	18																
	6	61	48	40	34	56	45	37	32	38	32	28	31	27	23	25	21	19	16	16	16	16	16	16	16	16	16	16	16	16																
	7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	23	19	17	14	14	14	14	14	14	14	14	14	14	14	14																
	8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	12	12	12	12	12	12	12	12	12	12	12	12																
	9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11	11	11	11	11	11	11	11	11	11	11	11																
	10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10	10	10	10	10	10	10	10	10	10	10	10																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5002	5002	5002
5°	5018	4889	4903
10°	4987	4809	4805
15°	4943	4717	4690
20°	4875	4614	4579
25°	4799	4500	4456
30°	4717	4386	4330
35°	4624	4269	4220
40°	4550	4158	4105
45°	4439	4056	4005
50°	4344	3938	3901
55°	4249	3827	3778
60°	4098	3685	3667
65°	3933	3533	3529
70°	3733	3359	3369
75°	3453	3169	3224
80°	3143	2984	3082
85°	2746	2820	2999



TEST NUMBER: P332547-940

CATALOG NUMBER: SA4XXDIP-C575D590U940-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.7	1.4
10°-20°	168.1	4.0
20°-30°	254.2	6.0
30°-40°	307.6	7.3
40°-50°	325.2	7.7
50°-60°	306.0	7.3
60°-70°	253.9	6.0
70°-80°	178.3	4.2
80°-90°	102.8	2.4
90°-100°	83.1	2.0
100°-110°	192.6	4.6
110°-120°	313.4	7.4
120°-130°	376.9	8.9
130°-140°	392.6	9.3
140°-150°	361.8	8.6
150°-160°	290.6	6.9
160°-170°	187.4	4.4
170°-180°	64.6	1.5
0°-30°	481.0	11.4
0°-40°	788.6	18.7
0°-60°	1419.8	33.7
0°-90°	1954.8	46.3
90°-120°	589.2	14.0
90°-150°	1720.5	40.8
90°-180°	2263.0	53.7
0°-180°	4217.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	620	620	620	620	620	
5°	620	618	613	619	618	59
15°	595	595	593	599	599	167
25°	544	548	550	558	559	250
35°	476	484	491	501	503	298
45°	397	410	423	435	438	307
55°	311	326	346	360	364	277
65°	215	237	261	278	284	213
75°	119	145	174	193	200	127
85°	37	66	97	117	125	39
90°	13	46	80	102	110	9
95°	37	44	72	93	100	43
105°	159	177	204	224	214	167
115°	290	299	320	335	341	286
125°	405	407	422	436	442	361
135°	500	500	506	518	524	385
145°	576	576	576	581	585	360
155°	630	631	629	631	630	291
165°	665	662	662	666	662	188
175°	680	677	678	682	676	65
180°	680	680	680	680	680	



TEST NUMBER: P332547-940

CATALOG NUMBER: SA4XXDIP-C575D590U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	621.9	621.5	621.2	620.7	620.4	619.7	618.8	617.8	616.7	615.7	616.6
5°	620.4	619.9	619.4	618.9	618.5	617.7	616.6	615.5	614.5	613.4	614.7
7.5°	615.1	614.7	614.5	614.2	613.9	613.4	612.5	611.6	610.6	609.8	611.2
10°	610.6	610.5	610.3	610.2	610.0	609.6	608.8	608.0	607.3	606.5	607.9
12.5°	604.5	604.5	604.5	604.4	604.4	604.1	603.6	603.1	602.5	602.0	603.2
15°	594.7	594.9	594.9	595.1	595.3	595.1	594.7	594.2	593.7	593.3	594.7
17.5°	581.2	581.7	582.1	582.6	583.1	583.3	583.2	583.1	583.0	582.9	584.2
20°	571.8	572.2	572.7	573.2	573.6	573.9	574.1	574.3	574.4	574.5	576.0
22.5°	561.2	561.8	562.4	562.9	563.6	564.0	564.3	564.5	564.8	565.1	566.7
25°	544.0	544.9	545.9	546.8	547.7	548.4	548.8	549.3	549.8	550.3	552.0
27.5°	524.9	526.2	527.5	529.0	530.3	531.3	532.0	532.7	533.4	534.1	535.7
30°	512.1	513.4	514.5	515.8	517.0	518.2	519.2	520.3	521.4	522.5	524.2
32.5°	498.2	499.7	501.1	502.7	504.2	505.5	506.7	507.9	509.1	510.3	512.2
35°	476.0	477.9	479.7	481.5	483.4	485.1	486.6	488.2	489.7	491.2	493.5
37.5°	453.7	455.8	457.9	460.0	462.2	464.2	466.1	468.1	469.9	471.8	474.0
40°	439.3	441.2	443.3	445.2	447.3	449.3	451.5	453.6	455.8	458.0	460.3
42.5°	422.6	424.8	427.0	429.4	431.6	434.0	436.5	439.0	441.6	444.1	446.7
45°	396.9	399.8	402.8	405.7	408.6	411.5	414.5	417.4	420.4	423.3	425.9
47.5°	372.4	375.3	378.4	381.4	384.4	387.6	391.0	394.4	397.8	401.2	403.9
50°	354.5	357.9	361.3	364.8	368.2	371.6	375.0	378.4	381.7	385.1	388.2
52.5°	336.8	340.2	343.6	347.0	350.4	354.0	357.9	361.8	365.7	369.5	372.6
55°	310.9	314.1	317.4	320.6	323.8	327.7	332.3	337.0	341.6	346.3	349.4
57.5°	281.9	285.9	289.9	293.9	297.9	302.2	306.7	311.4	316.0	320.6	324.2
60°	263.0	267.0	271.0	275.0	279.0	283.6	288.6	293.7	298.8	303.9	307.5
62.5°	244.7	249.1	253.4	257.8	262.2	266.9	272.0	277.1	282.2	287.3	290.8
65°	215.1	220.1	225.0	229.9	234.9	240.0	245.1	250.4	255.7	260.9	264.7
67.5°	186.6	191.9	197.2	202.4	207.6	213.0	218.6	224.3	229.9	235.5	239.4
70°	167.2	172.5	177.7	183.0	188.2	193.8	199.6	205.5	211.3	217.2	221.3
72.5°	148.4	153.7	159.1	164.4	169.8	175.6	181.8	188.1	194.3	200.5	204.6
75°	119.3	125.0	130.7	136.4	142.1	148.3	154.7	161.2	167.7	174.2	178.5
77.5°	92.3	98.4	104.4	110.4	116.5	122.9	129.7	136.4	143.2	150.0	154.4
80°	75.6	81.8	88.0	94.2	100.3	106.7	113.6	120.4	127.2	133.9	138.6
82.5°	58.9	65.4	71.8	78.2	84.6	91.2	98.0	104.8	111.6	118.4	123.1
85°	36.7	43.2	49.8	56.2	62.7	69.4	76.3	83.3	90.2	97.1	101.7
87.5°	20.9	27.4	33.9	40.5	47.0	53.8	60.6	67.6	74.5	81.5	86.1
90°	12.7	20.1	27.5	34.9	42.3	49.8	57.2	64.8	72.3	79.9	85.1
92.5°	16.9	22.6	28.2	33.8	39.4	46.0	53.5	61.1	68.6	76.2	81.1
95°	37.0	38.3	39.5	40.8	42.0	45.8	52.3	58.7	65.1	71.5	76.4
97.5°	67.6	74.4	81.1	87.9	94.7	94.9	88.5	82.2	75.9	69.5	73.6
100°	91.0	97.1	103.2	109.1	115.2	113.4	103.9	94.3	84.7	75.1	77.4
102.5°	117.9	122.9	128.0	133.0	137.9	142.4	146.2	150.1	153.9	157.8	141.1
105°	159.3	163.1	166.8	170.7	174.4	179.4	185.7	192.0	198.2	204.5	209.4
107.5°	199.0	201.9	204.7	207.6	210.4	215.0	221.1	227.3	233.4	239.6	244.0
110°	225.2	227.8	230.3	232.8	235.3	239.6	245.7	251.7	257.8	263.9	267.6



TEST NUMBER: P332547-940

CATALOG NUMBER: SA4XXDIP-C575D590U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	250.7	253.3	255.8	258.3	260.8	264.8	270.4	275.8	281.2	286.7	290.1
115°	290.0	291.8	293.5	295.2	296.9	300.2	305.1	309.9	314.7	319.5	323.2
117.5°	326.0	327.3	328.6	329.8	331.2	334.2	339.0	343.9	348.7	353.6	356.8
120°	349.9	350.8	351.7	352.6	353.6	356.1	360.5	364.9	369.3	373.6	376.9
122.5°	372.6	373.0	373.4	373.7	374.1	376.5	380.8	385.2	389.6	394.0	397.3
125°	404.6	404.9	405.2	405.6	405.8	407.8	411.4	415.0	418.7	422.3	425.5
127.5°	435.4	435.3	435.3	435.2	435.2	436.9	440.4	443.9	447.4	450.8	453.6
130°	454.8	454.8	454.7	454.7	454.6	456.0	458.8	461.6	464.4	467.3	470.1
132.5°	473.1	473.1	473.2	473.2	473.3	474.5	476.9	479.3	481.7	484.1	486.9
135°	499.9	499.7	499.6	499.5	499.4	500.2	501.7	503.2	504.7	506.2	509.0
137.5°	524.1	524.1	524.0	523.9	523.8	524.2	525.2	526.3	527.3	528.2	530.7
140°	540.0	540.1	540.2	540.3	540.4	540.6	540.9	541.4	541.7	542.1	544.4
142.5°	553.8	554.1	554.5	554.9	555.3	555.4	555.5	555.5	555.6	555.6	557.7
145°	575.5	575.7	575.9	576.0	576.2	576.3	576.3	576.3	576.3	576.3	577.4
147.5°	592.9	593.3	593.8	594.3	594.8	594.9	594.9	594.8	594.6	594.5	594.8
150°	605.5	605.7	606.1	606.4	606.7	606.8	606.6	606.5	606.5	606.3	606.3
152.5°	615.5	615.8	616.2	616.5	616.8	616.9	616.7	616.5	616.3	616.1	616.3
155°	630.3	630.4	630.4	630.5	630.7	630.5	630.3	629.9	629.5	629.2	629.6
157.5°	642.7	642.7	642.6	642.6	642.5	642.2	641.9	641.5	641.1	640.7	641.3
160°	650.1	649.7	649.3	649.1	648.7	648.5	648.4	648.3	648.1	648.0	648.7
162.5°	656.6	656.1	655.7	655.3	654.9	654.6	654.4	654.3	654.2	654.2	654.8
165°	664.8	664.2	663.7	663.1	662.5	662.3	662.3	662.3	662.3	662.3	663.2
167.5°	671.3	670.7	670.1	669.6	669.0	668.6	668.6	668.5	668.4	668.3	669.4
170°	675.0	674.3	673.6	673.0	672.3	672.0	672.1	672.2	672.3	672.4	673.3
172.5°	677.4	676.7	676.1	675.4	674.8	674.4	674.6	674.7	674.8	674.8	675.8
175°	680.1	679.4	678.7	678.1	677.3	677.1	677.2	677.3	677.4	677.5	678.5
177.5°	681.3	680.6	680.0	679.4	678.8	678.5	678.7	678.9	679.0	679.2	680.0
180°	680.1	680.1	680.1	680.1	680.1	680.1	680.1	680.1	680.1	680.1	680.1



TEST NUMBER: P332547-940

CATALOG NUMBER: SA4XXDIP-C575D590U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	617.5	618.3	619.2	619.6	619.5	619.3	619.2	619.1
5°	615.9	617.1	618.3	618.8	618.8	618.6	618.4	618.2
7.5°	612.6	613.9	615.4	616.0	615.8	615.6	615.5	615.4
10°	609.2	610.6	612.0	612.6	612.5	612.3	612.2	612.0
12.5°	604.6	605.8	607.1	607.7	607.7	607.6	607.6	607.6
15°	596.0	597.4	598.8	599.4	599.3	599.1	599.0	598.8
17.5°	585.7	587.1	588.5	589.2	589.1	589.0	588.8	588.7
20°	577.7	579.2	580.7	581.5	581.5	581.5	581.5	581.5
22.5°	568.2	569.7	571.2	572.2	572.4	572.7	572.9	573.2
25°	553.7	555.4	557.1	557.9	558.1	558.3	558.4	558.6
27.5°	537.3	538.9	540.5	541.4	541.5	541.7	541.9	542.1
30°	525.9	527.6	529.3	530.3	530.6	530.9	531.2	531.5
32.5°	514.2	516.1	518.1	519.2	519.5	519.8	520.1	520.4
35°	495.6	497.8	499.9	501.2	501.7	502.1	502.6	503.1
37.5°	476.3	478.4	480.6	482.0	482.4	483.0	483.4	483.9
40°	462.6	464.9	467.3	468.7	469.3	469.9	470.6	471.2
42.5°	449.2	451.7	454.3	455.8	456.4	456.8	457.4	457.8
45°	428.6	431.1	433.7	435.4	436.2	437.0	437.7	438.5
47.5°	406.6	409.4	412.1	413.8	414.8	415.7	416.7	417.6
50°	391.3	394.4	397.4	399.5	400.4	401.3	402.3	403.1
52.5°	375.8	378.8	381.9	383.9	384.9	385.8	386.6	387.6
55°	352.4	355.5	358.6	360.6	361.5	362.5	363.4	364.3
57.5°	327.9	331.6	335.3	337.5	338.4	339.2	340.1	341.0
60°	311.0	314.6	318.1	320.5	321.7	323.0	324.2	325.5
62.5°	294.4	297.9	301.5	303.8	305.1	306.3	307.6	308.8
65°	268.6	272.5	276.3	278.8	280.1	281.3	282.6	283.8
67.5°	243.3	247.3	251.2	253.7	254.9	256.1	257.3	258.5
70°	225.5	229.7	233.8	236.5	237.6	238.6	239.7	240.8
72.5°	208.6	212.7	216.7	219.3	220.5	221.7	222.9	224.1
75°	182.8	187.1	191.5	194.3	195.6	197.1	198.5	199.8
77.5°	158.8	163.2	167.6	170.5	171.9	173.4	174.9	176.4
80°	143.2	147.8	152.4	155.3	156.6	157.8	159.1	160.3
82.5°	127.9	132.6	137.4	140.4	141.8	143.1	144.5	145.9
85°	106.4	111.0	115.7	118.8	120.3	121.8	123.3	124.9
87.5°	90.7	95.3	99.9	102.9	104.3	105.8	107.1	108.5
90°	90.2	95.3	100.5	103.8	105.2	106.7	108.2	109.6
92.5°	86.2	91.2	96.2	99.4	100.7	101.9	103.3	104.5
95°	81.2	86.1	91.0	94.1	95.6	97.1	98.6	100.1
97.5°	77.7	81.9	86.0	88.7	90.2	91.6	93.0	94.4
100°	79.6	81.9	84.1	85.8	87.0	88.2	89.3	90.6
102.5°	124.4	107.7	91.0	83.3	84.5	85.8	86.9	88.2
105°	214.3	219.1	224.0	225.0	222.1	219.4	216.5	213.7
107.5°	248.3	252.5	256.8	259.8	261.3	262.8	264.3	265.9
110°	271.4	275.2	278.9	281.6	283.2	284.8	286.3	287.9



TEST NUMBER: P332547-940

CATALOG NUMBER: SA4XXDIP-C575D590U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	293.5	296.9	300.2	302.7	304.4	306.1	307.7	309.4
115°	326.7	330.4	333.9	336.4	337.4	338.5	339.6	340.6
117.5°	359.9	363.1	366.2	368.4	369.6	370.8	371.9	373.2
120°	380.2	383.5	386.8	389.0	390.0	391.0	392.0	393.1
122.5°	400.5	403.7	406.9	408.9	409.8	410.7	411.6	412.5
125°	428.8	432.1	435.3	437.5	438.5	439.6	440.6	441.7
127.5°	456.3	459.0	461.7	463.5	464.5	465.5	466.5	467.3
130°	473.0	475.9	478.8	480.7	481.6	482.5	483.5	484.4
132.5°	489.6	492.4	495.2	497.0	497.8	498.6	499.5	500.3
135°	511.7	514.3	517.0	519.0	520.1	521.3	522.4	523.5
137.5°	533.3	535.8	538.3	539.9	540.6	541.3	542.0	542.7
140°	546.8	549.1	551.4	553.0	553.9	554.8	555.7	556.6
142.5°	559.6	561.7	563.7	565.0	565.7	566.3	567.0	567.7
145°	578.4	579.4	580.4	581.4	582.2	583.1	583.9	584.8
147.5°	594.9	595.1	595.4	595.8	596.4	597.0	597.6	598.2
150°	606.3	606.3	606.3	606.4	606.5	606.6	606.7	606.8
152.5°	616.4	616.6	616.8	616.9	616.8	616.7	616.6	616.6
155°	630.1	630.5	631.0	631.1	630.7	630.4	630.1	629.7
157.5°	641.9	642.5	643.0	643.0	642.5	641.9	641.3	640.7
160°	649.3	650.1	650.8	650.8	650.1	649.3	648.7	648.0
162.5°	655.5	656.1	656.8	656.8	656.0	655.2	654.5	653.7
165°	664.1	664.9	665.9	665.8	664.8	663.8	662.8	661.7
167.5°	670.4	671.4	672.3	672.3	671.2	670.0	668.9	667.8
170°	674.2	675.1	676.1	675.9	674.8	673.7	672.5	671.5
172.5°	676.7	677.6	678.5	678.3	677.2	675.9	674.7	673.4
175°	679.6	680.6	681.6	681.4	680.1	678.7	677.3	676.0
177.5°	680.7	681.4	682.2	682.0	680.9	679.8	678.7	677.6
180°	680.1	680.1	680.1	680.1	680.1	680.1	680.1	680.1

(END OF REPORT)