

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: P331253-927

Luminaire Tested: **SA2XXDIP-C290D530U927-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331253-927
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-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP 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: 2446.3 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

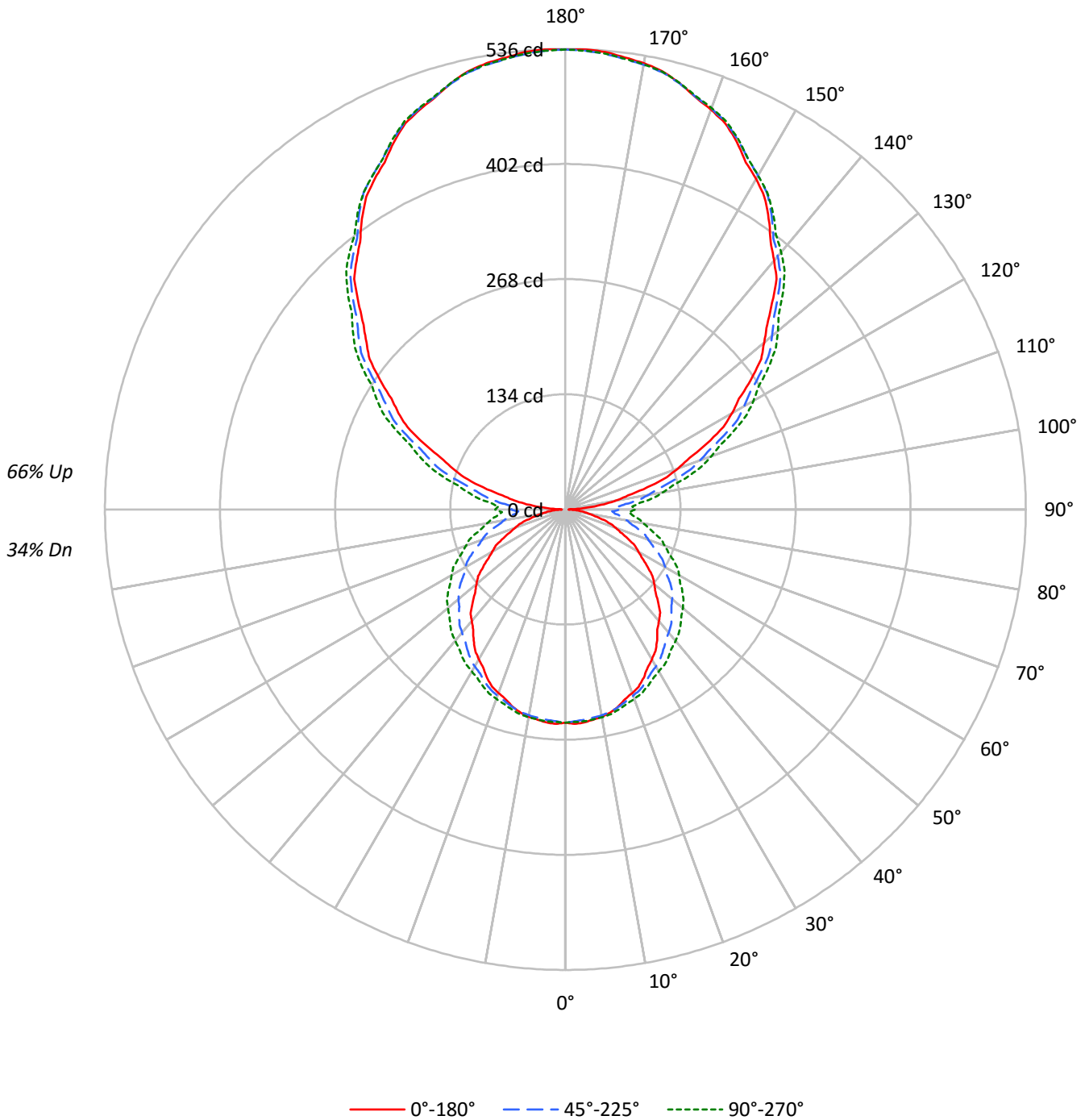
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331253-927

CATALOG NUMBER: SA2XXDIP-C290D530U927-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P331253-927

CATALOG NUMBER: SA2XXDIP-C290D530U927-4F0-1E-UDD-D1

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	50	30	10	0	
RCR																						
0	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	34				34
1	93	89	84	81	84	80	76	73	64	61	59	49	47	46	35	34	33	27				27
2	84	77	70	65	76	69	64	59	55	51	48	42	40	37	30	29	27	22				22
3	77	67	60	54	69	61	54	49	48	44	40	37	34	31	27	24	23	18				18
4	70	59	51	45	63	53	46	41	43	38	34	33	29	26	24	21	19	15				15
5	64	52	44	38	57	47	40	35	38	33	29	29	25	23	21	19	17	13				13
6	59	47	39	33	53	42	35	30	34	29	25	26	22	20	19	16	14	11				11
7	54	42	34	28	49	38	31	26	31	25	22	24	20	17	17	15	13	10				10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	13	11	9				9
9	47	35	27	22	42	31	25	20	25	20	17	20	16	13	15	12	10	8				8
10	44	32	24	20	39	29	22	18	23	18	15	18	15	12	14	11	9	7				7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4009	4009	4009
5°	4030	3859	3845
10°	4004	3746	3703
15°	3948	3624	3554
20°	3878	3495	3410
25°	3809	3371	3279
30°	3712	3242	3150
35°	3615	3118	3059
40°	3511	3013	2965
45°	3413	2919	2886
50°	3309	2833	2810
55°	3196	2741	2731
60°	3061	2646	2648
65°	2922	2534	2548
70°	2764	2415	2440
75°	2564	2299	2342
80°	2245	2177	2240
85°	1945	2073	2163



TEST NUMBER: P331253-927

CATALOG NUMBER: SA2XXDIP-C290D530U927-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.5	1.0
10°-20°	67.5	2.8
20°-30°	102.2	4.2
30°-40°	124.5	5.1
40°-50°	134.0	5.5
50°-60°	130.1	5.3
60°-70°	113.6	4.6
70°-80°	87.5	3.6
80°-90°	60.8	2.5
90°-100°	74.4	3.0
100°-110°	134.9	5.5
110°-120°	199.6	8.2
120°-130°	247.7	10.1
130°-140°	270.4	11.1
140°-150°	261.4	10.7
150°-160°	218.6	8.9
160°-170°	145.0	5.9
170°-180°	50.7	2.1
0°-30°	193.2	7.9
0°-40°	317.8	13.0
0°-60°	581.9	23.8
0°-90°	843.7	34.5
90°-120°	408.8	16.7
90°-150°	1188.3	48.6
90°-180°	1603.0	65.5
0°-180°	2446.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	248	248	248	248	248	
5°	249	248	246	248	248	24
15°	238	238	238	241	241	67
25°	216	218	222	226	227	99
35°	186	192	199	207	210	116
45°	153	162	175	186	190	118
55°	117	130	149	161	166	105
65°	80	98	119	133	138	79
75°	44	65	88	102	108	47
85°	13	35	58	73	78	14
90°	4	31	63	76	82	4
95°	26	48	70	83	87	29
105°	99	111	130	143	148	105
115°	182	189	204	214	217	180
125°	264	268	278	286	289	236
135°	340	345	350	357	359	263
145°	413	416	419	421	421	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	



TEST NUMBER: P331253-927

CATALOG NUMBER: SA2XXDIP-C290D530U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3
2.5°	249.8	249.5	249.4	249.1	249.0	248.7	248.2	247.8	247.3	246.8	247.2
5°	249.1	248.8	248.6	248.3	248.0	247.7	247.2	246.8	246.3	245.8	246.3
7.5°	246.8	246.6	246.4	246.3	246.1	245.9	245.5	245.2	244.8	244.4	245.0
10°	245.1	244.9	244.8	244.6	244.5	244.2	244.0	243.8	243.5	243.3	243.9
12.5°	242.2	242.2	242.2	242.3	242.3	242.2	242.1	241.9	241.7	241.5	242.2
15°	237.5	237.7	237.8	238.0	238.1	238.2	238.2	238.2	238.2	238.2	238.9
17.5°	231.5	231.8	232.1	232.5	232.8	233.1	233.4	233.6	233.9	234.2	234.9
20°	227.4	227.8	228.2	228.6	229.0	229.4	229.7	230.0	230.4	230.7	231.6
22.5°	223.2	223.6	224.0	224.5	225.0	225.5	225.9	226.3	226.8	227.2	228.1
25°	215.9	216.5	217.1	217.6	218.2	218.8	219.5	220.2	220.9	221.7	222.6
27.5°	207.3	208.2	209.1	210.0	211.0	211.8	212.6	213.5	214.4	215.2	216.4
30°	201.5	202.6	203.6	204.6	205.7	206.8	207.8	208.8	209.8	210.9	212.1
32.5°	195.2	196.4	197.5	198.7	199.9	201.1	202.3	203.5	204.8	206.0	207.5
35°	186.1	187.4	188.8	190.1	191.5	192.9	194.5	196.0	197.5	199.0	200.7
37.5°	176.1	177.7	179.3	180.9	182.4	184.2	186.2	188.1	190.0	192.0	194.0
40°	169.5	171.3	173.0	174.8	176.5	178.5	180.6	182.8	185.0	187.1	189.2
42.5°	163.2	164.9	166.7	168.4	170.2	172.3	174.8	177.3	179.7	182.2	184.5
45°	152.6	154.7	156.9	159.1	161.2	163.7	166.5	169.3	172.1	174.9	177.4
47.5°	142.1	144.5	146.9	149.2	151.5	154.4	157.6	160.9	164.2	167.5	170.1
50°	135.0	137.4	139.9	142.4	144.9	147.9	151.5	155.1	158.7	162.3	165.0
52.5°	128.0	130.6	133.2	135.9	138.5	141.6	145.4	149.2	153.0	156.9	159.6
55°	116.9	119.9	122.7	125.6	128.5	132.0	136.2	140.3	144.5	148.6	151.5
57.5°	106.0	109.2	112.5	115.7	119.0	122.7	127.0	131.2	135.5	139.7	142.8
60°	98.2	101.7	105.1	108.5	112.0	116.0	120.6	125.1	129.7	134.2	137.3
62.5°	91.3	94.9	98.5	102.0	105.6	109.6	114.2	118.7	123.3	127.9	131.1
65°	79.9	83.8	87.7	91.7	95.5	99.9	104.6	109.3	114.1	118.7	122.1
67.5°	69.4	73.5	77.6	81.7	85.8	90.2	95.1	99.9	104.7	109.6	112.9
70°	61.9	66.1	70.2	74.4	78.5	83.1	88.0	93.0	98.0	102.9	106.4
72.5°	55.0	59.3	63.5	67.8	72.2	76.8	81.8	86.8	91.9	96.9	100.3
75°	44.3	48.7	53.2	57.7	62.2	66.9	72.1	77.2	82.3	87.5	90.9
77.5°	33.9	38.6	43.3	47.9	52.7	57.6	62.8	68.0	73.2	78.3	81.8
80°	27.0	31.8	36.8	41.6	46.5	51.6	56.7	61.9	67.1	72.3	75.7
82.5°	21.2	26.1	30.9	35.6	40.5	45.6	50.8	56.1	61.3	66.5	69.9
85°	13.0	17.9	22.9	27.8	32.8	37.8	42.9	48.1	53.2	58.3	61.6
87.5°	7.1	12.1	17.2	22.2	27.2	32.5	38.0	43.6	49.1	54.7	57.9
90°	4.0	9.9	15.8	21.5	27.4	34.0	41.4	48.6	56.0	63.3	66.3
92.5°	11.3	16.6	21.8	26.9	32.2	37.5	42.9	48.4	53.9	59.3	62.4
95°	26.4	31.1	35.9	40.6	45.4	50.3	55.3	60.3	65.3	70.3	73.4
97.5°	45.5	49.7	53.9	58.1	62.3	66.9	71.9	76.9	81.9	86.9	89.8
100°	59.9	63.6	67.4	71.1	74.9	79.2	84.0	88.8	93.6	98.3	101.3
102.5°	74.8	78.1	81.4	84.8	88.2	92.2	97.0	101.6	106.4	111.1	114.1
105°	98.9	101.6	104.2	106.8	109.4	112.9	117.2	121.6	126.0	130.3	133.3
107.5°	123.6	125.9	128.2	130.5	132.8	135.9	139.9	143.9	147.9	151.9	154.6
110°	139.2	141.4	143.6	145.8	148.1	151.1	155.0	158.9	162.9	166.8	169.3



TEST NUMBER: P331253-927

CATALOG NUMBER: SA2XXDIP-C290D530U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	156.5	158.5	160.5	162.4	164.4	167.2	170.8	174.4	178.1	181.7	184.0
115°	182.1	183.6	185.1	186.6	188.1	190.5	193.9	197.3	200.7	204.1	206.4
117.5°	207.2	208.7	210.0	211.4	212.8	214.8	217.6	220.4	223.2	225.9	228.0
120°	224.3	225.4	226.5	227.6	228.7	230.5	232.9	235.3	237.7	240.1	242.3
122.5°	239.8	240.9	241.9	243.0	244.2	245.9	248.3	250.8	253.3	255.7	257.6
125°	263.6	264.5	265.5	266.3	267.3	268.8	271.1	273.3	275.6	277.8	279.7
127.5°	287.2	288.3	289.3	290.4	291.4	292.9	294.5	296.3	297.9	299.7	301.3
130°	302.1	303.2	304.5	305.7	306.9	308.3	309.7	311.2	312.8	314.2	315.9
132.5°	318.6	319.6	320.6	321.6	322.6	323.8	325.1	326.5	327.7	329.1	330.5
135°	340.5	341.6	342.7	343.8	344.9	346.0	347.0	348.0	349.0	350.0	351.6
137.5°	363.9	364.8	365.7	366.5	367.5	368.2	368.8	369.5	370.0	370.7	372.1
140°	378.0	378.8	379.7	380.5	381.3	382.1	382.7	383.3	384.0	384.7	386.0
142.5°	392.4	393.3	394.1	394.9	395.8	396.3	396.7	397.1	397.5	397.8	398.9
145°	412.9	413.6	414.3	415.0	415.7	416.4	416.9	417.6	418.2	418.7	419.3
147.5°	431.4	432.2	433.1	434.0	434.7	435.4	435.8	436.2	436.6	437.0	437.3
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: P331253-927

CATALOG NUMBER: SA2XXDIP-C290D530U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3
2.5°	247.5	247.8	248.1	248.3	248.1	248.0	247.9	247.7
5°	246.8	247.2	247.7	247.9	247.8	247.7	247.6	247.6
7.5°	245.6	246.1	246.8	247.0	246.9	246.8	246.8	246.7
10°	244.5	245.2	245.8	246.1	246.1	246.0	245.9	245.8
12.5°	242.8	243.4	244.1	244.4	244.3	244.2	244.2	244.1
15°	239.6	240.4	241.1	241.5	241.4	241.3	241.2	241.1
17.5°	235.7	236.4	237.1	237.5	237.5	237.5	237.5	237.5
20°	232.4	233.3	234.2	234.6	234.6	234.6	234.6	234.6
22.5°	229.0	229.9	230.8	231.2	231.4	231.5	231.6	231.8
25°	223.6	224.6	225.5	226.1	226.3	226.6	226.8	227.0
27.5°	217.6	218.9	220.1	220.8	220.9	221.1	221.3	221.5
30°	213.4	214.8	216.0	216.7	217.0	217.2	217.5	217.7
32.5°	208.9	210.4	211.9	212.9	213.3	213.7	214.1	214.5
35°	202.6	204.3	206.0	207.2	207.8	208.3	208.9	209.5
37.5°	195.9	197.9	199.9	201.1	201.7	202.3	202.9	203.4
40°	191.3	193.4	195.4	196.9	197.6	198.3	199.0	199.7
42.5°	186.8	189.0	191.3	192.8	193.5	194.2	195.0	195.7
45°	179.8	182.4	184.8	186.5	187.3	188.1	188.9	189.6
47.5°	172.7	175.2	177.8	179.6	180.5	181.3	182.2	183.1
50°	167.7	170.5	173.2	175.0	175.9	176.7	177.6	178.5
52.5°	162.4	165.2	167.9	169.8	170.8	171.7	172.7	173.6
55°	154.4	157.2	160.2	162.1	163.1	164.2	165.2	166.3
57.5°	145.9	149.0	152.1	154.2	155.3	156.3	157.3	158.4
60°	140.3	143.4	146.4	148.5	149.6	150.7	151.9	153.0
62.5°	134.4	137.6	140.9	143.0	144.0	145.0	146.2	147.2
65°	125.3	128.6	131.9	134.0	135.1	136.1	137.1	138.2
67.5°	116.1	119.5	122.8	125.0	126.0	127.1	128.3	129.4
70°	109.8	113.2	116.7	118.9	119.9	120.8	121.8	122.7
72.5°	103.6	107.0	110.4	112.6	113.8	114.9	116.1	117.2
75°	94.3	97.8	101.2	103.5	104.5	105.5	106.5	107.6
77.5°	85.2	88.6	92.1	94.3	95.5	96.6	97.7	98.8
80°	79.1	82.4	85.8	88.0	89.1	90.2	91.3	92.4
82.5°	73.3	76.7	80.0	82.2	83.3	84.4	85.4	86.4
85°	65.0	68.4	71.8	74.0	75.1	76.2	77.3	78.4
87.5°	61.2	64.3	67.6	69.7	70.7	71.8	72.9	73.9
90°	69.3	72.3	75.3	77.3	78.4	79.5	80.5	81.6
92.5°	65.6	68.8	72.0	74.1	75.0	76.0	77.0	78.0
95°	76.4	79.4	82.5	84.4	85.1	85.9	86.7	87.4
97.5°	92.8	95.8	98.7	100.7	101.6	102.5	103.5	104.3
100°	104.3	107.2	110.2	112.0	112.8	113.6	114.4	115.2
102.5°	117.1	120.0	123.0	124.9	125.7	126.4	127.2	128.0
105°	136.3	139.3	142.4	144.3	145.1	146.0	146.9	147.8
107.5°	157.4	160.2	163.0	164.5	164.9	165.3	165.8	166.2
110°	171.9	174.4	177.0	178.6	179.1	179.7	180.3	180.9



TEST NUMBER: P331253-927

CATALOG NUMBER: SA2XXDIP-C290D530U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	186.4	188.7	191.0	192.5	193.1	193.8	194.5	195.1
115°	208.7	211.0	213.3	214.8	215.3	215.9	216.4	217.1
117.5°	230.1	232.3	234.4	235.8	236.2	236.8	237.3	237.8
120°	244.5	246.8	249.1	250.4	251.0	251.6	252.2	252.8
122.5°	259.6	261.5	263.4	264.7	265.2	265.7	266.3	266.8
125°	281.5	283.4	285.3	286.5	287.2	287.8	288.4	289.0
127.5°	302.9	304.5	306.2	307.1	307.5	307.9	308.3	308.7
130°	317.7	319.3	321.1	322.0	322.3	322.5	322.7	323.0
132.5°	331.9	333.4	334.8	335.6	336.0	336.3	336.6	336.9
135°	353.2	354.7	356.3	357.3	357.6	357.9	358.3	358.6
137.5°	373.4	374.9	376.2	377.0	377.2	377.3	377.4	377.6
140°	387.2	388.6	389.8	390.5	390.5	390.6	390.7	390.8
142.5°	400.1	401.2	402.3	402.8	402.8	402.8	402.9	402.9
145°	419.9	420.5	421.0	421.4	421.4	421.4	421.4	421.4
147.5°	437.6	437.8	438.2	438.2	438.0	437.8	437.6	437.4
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)