

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: P331300-940

Luminaire Tested: **SA2XXDIP-C485D530U940-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331300-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C485D530U940-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

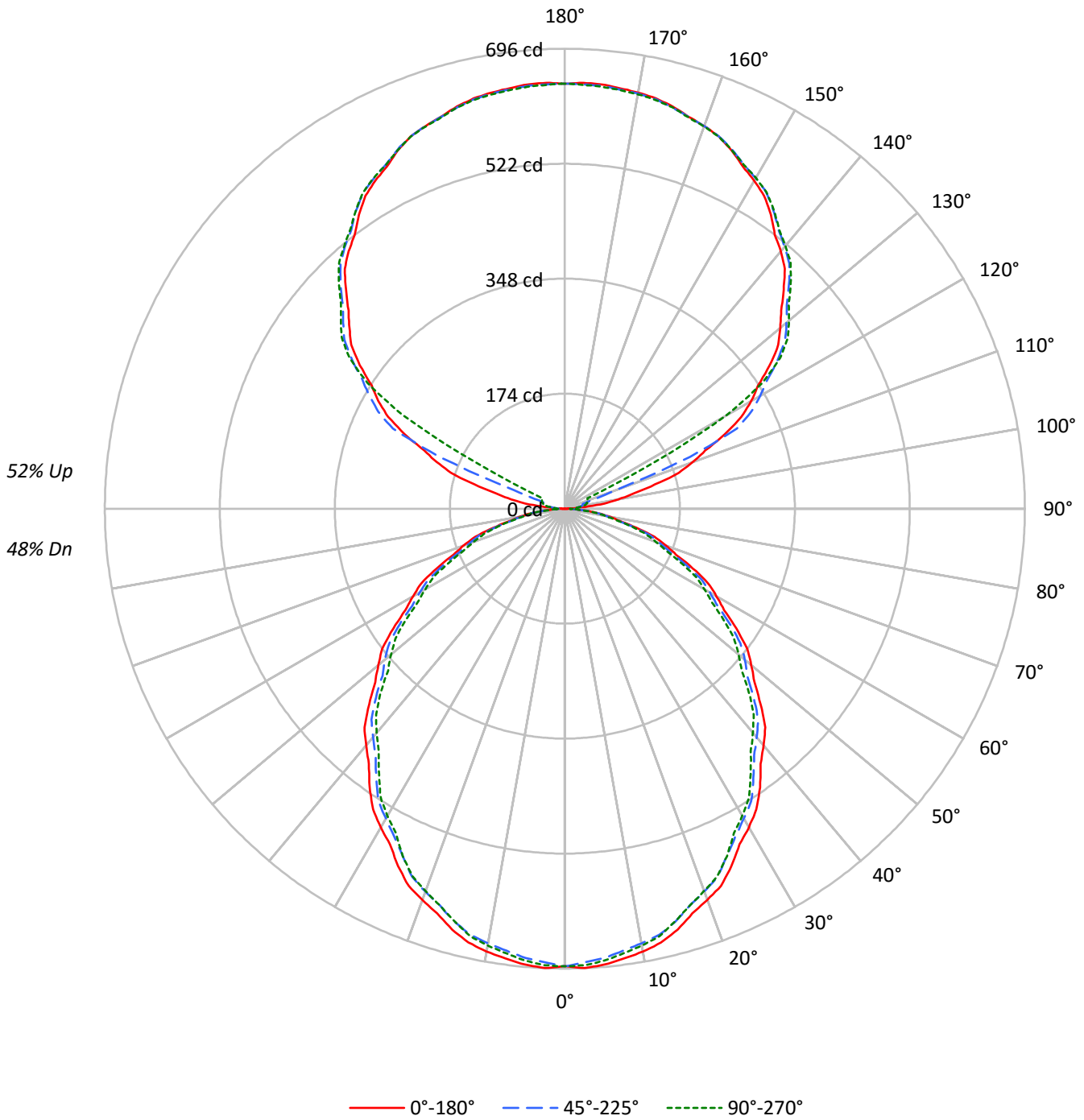
Lumens per Lamp: N/A
Luminaire Lumens: 3648.4 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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: P331300-940
CATALOG NUMBER: SA2XXDIP-C485D530U940-4F0-1E-UDD-F

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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48	48	48	48	48	48	48	48	48	48	48	48																
	1	97	93	89	86	90	86	82	79	72	70	68	60	58	57	48	47	46	41	41	41	41	41	41	41	41	41	41	41	41																
	2	89	81	75	70	81	75	70	65	63	59	56	52	50	47	42	41	39	34	34	34	34	34	34	34	34	34	34	34	34																
	3	81	71	64	58	74	66	60	54	56	51	47	46	43	40	38	35	33	29	29	29	29	29	29	29	29	29	29	29	29																
	4	74	63	55	49	68	59	52	46	50	44	40	41	37	34	34	31	28	25	25	25	25	25	25	25	25	25	25	25	25																
	5	68	56	48	42	62	52	45	40	44	39	35	37	33	30	30	27	25	22	22	22	22	22	22	22	22	22	22	22	22																
	6	63	51	42	37	57	47	40	34	40	34	30	34	29	26	27	24	22	19	19	19	19	19	19	19	19	19	19	19	19																
	7	58	46	38	32	53	42	35	30	36	31	27	30	26	23	25	22	19	17	17	17	17	17	17	17	17	17	17	17	17																
	8	54	41	34	28	49	39	32	27	33	28	24	28	24	20	23	20	17	15	15	15	15	15	15	15	15	15	15	15	15																
	9	50	38	30	25	46	35	28	24	30	25	21	26	21	18	21	18	16	14	14	14	14	14	14	14	14	14	14	14	14																
	10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	12	12	12	12	12	12	12	12	12	12	12	12																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11183	11183	11183
5°	11225	11063	11128
10°	11158	10952	11006
15°	11020	10810	10798
20°	10825	10596	10584
25°	10630	10334	10334
30°	10381	10094	10006
35°	10147	9806	9662
40°	9853	9518	9333
45°	9565	9229	9001
50°	9251	8932	8616
55°	8923	8586	8267
60°	8557	8173	7869
65°	8164	7759	7404
70°	7671	7260	6916
75°	6981	6687	6525
80°	6192	6007	5700
85°	5057	4798	4316



TEST NUMBER: P331300-940

CATALOG NUMBER: SA2XXDIP-C485D530U940-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.1	1.8
10°-20°	183.3	5.0
20°-30°	269.4	7.4
30°-40°	312.9	8.6
40°-50°	312.5	8.6
50°-60°	272.6	7.5
60°-70°	201.5	5.5
70°-80°	114.1	3.1
80°-90°	32.3	0.9
90°-100°	21.5	0.6
100°-110°	78.7	2.2
110°-120°	210.3	5.8
120°-130°	347.1	9.5
130°-140°	369.2	10.1
140°-150°	343.1	9.4
150°-160°	275.9	7.6
160°-170°	177.8	4.9
170°-180°	61.2	1.7
0°-30°	517.7	14.2
0°-40°	830.6	22.8
0°-60°	1415.7	38.8
0°-90°	1763.6	48.3
90°-120°	310.4	8.5
90°-150°	1369.9	37.5
90°-180°	1885.0	51.7
0°-180°	3648.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	693	693	693	693	693	
5°	693	690	683	688	687	66
15°	659	655	647	649	646	186
25°	597	591	580	581	580	274
35°	515	508	498	494	490	321
45°	419	414	404	397	394	323
55°	317	313	305	297	294	283
65°	214	210	203	197	194	211
75°	112	110	107	104	105	120
85°	27	27	26	24	23	31
90°	0	6	9	12	13	3
95°	30	16	18	20	20	37
105°	141	148	28	33	35	151
115°	268	276	287	82	38	263
125°	378	385	393	396	398	337
135°	468	475	480	484	484	361
145°	543	543	550	553	551	340
155°	598	594	599	602	598	275
165°	630	628	629	632	629	178
175°	644	642	642	645	641	61
180°	643	643	643	643	643	



TEST NUMBER: P331300-940

CATALOG NUMBER: SA2XXDIP-C485D530U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	695.8	695.2	694.6	694.0	693.4	692.5	691.2	689.9	688.6	687.2	688.5
5°	692.6	692.0	691.4	690.8	690.3	689.1	687.5	685.9	684.2	682.6	683.8
7.5°	686.4	685.5	684.7	683.7	682.8	681.5	679.8	678.2	676.5	674.8	676.1
10°	680.6	679.6	678.5	677.5	676.5	675.0	673.2	671.5	669.8	668.0	669.1
12.5°	672.6	671.7	670.7	669.9	669.0	667.6	665.8	664.1	662.3	660.5	661.3
15°	659.3	658.4	657.5	656.7	655.8	654.3	652.4	650.5	648.5	646.7	647.2
17.5°	642.2	641.4	640.5	639.6	638.7	637.3	635.3	633.4	631.4	629.5	630.2
20°	630.0	629.1	628.2	627.3	626.4	625.0	622.9	620.8	618.8	616.7	617.2
22.5°	617.8	616.5	615.3	614.0	612.8	611.2	609.2	607.3	605.3	603.3	603.4
25°	596.7	595.5	594.3	593.2	592.0	590.1	587.6	585.1	582.6	580.1	580.3
27.5°	572.7	571.7	570.6	569.5	568.5	566.9	565.0	562.9	561.0	559.0	558.6
30°	556.8	555.5	554.4	553.2	552.0	550.3	548.0	545.9	543.7	541.4	541.0
32.5°	539.7	538.8	537.8	536.8	535.9	534.2	531.9	529.6	527.3	525.0	524.1
35°	514.8	513.3	511.8	510.3	508.9	506.9	504.6	502.2	499.8	497.5	496.6
37.5°	486.7	485.4	484.1	482.8	481.4	479.7	477.2	474.9	472.5	470.2	469.0
40°	467.5	466.3	465.1	464.0	462.8	461.0	458.6	456.3	453.9	451.6	450.2
42.5°	448.9	447.6	446.5	445.3	444.2	442.4	440.0	437.7	435.2	432.8	431.4
45°	418.9	417.9	416.8	415.8	414.7	413.1	410.9	408.7	406.4	404.2	402.6
47.5°	389.1	388.1	387.1	386.1	385.1	383.5	381.2	378.9	376.6	374.3	372.6
50°	368.3	367.6	366.8	366.0	365.3	363.9	361.9	359.8	357.7	355.6	353.6
52.5°	348.0	347.1	346.1	345.1	344.1	342.7	340.7	338.8	336.8	334.8	333.1
55°	317.0	316.1	315.2	314.3	313.4	312.1	310.3	308.5	306.7	305.0	303.3
57.5°	285.8	285.1	284.4	283.7	283.0	281.7	279.7	277.8	275.8	273.8	272.1
60°	265.0	264.5	263.9	263.2	262.7	261.4	259.3	257.2	255.1	253.1	251.5
62.5°	244.8	243.9	242.9	241.9	241.0	239.8	238.2	236.6	235.0	233.4	231.8
65°	213.7	212.9	212.0	211.1	210.3	209.0	207.6	206.1	204.6	203.1	201.8
67.5°	182.2	181.5	180.7	180.0	179.3	178.3	177.0	175.7	174.3	173.0	172.0
70°	162.5	161.9	161.3	160.7	160.2	159.2	157.8	156.5	155.2	153.8	152.8
72.5°	142.2	141.7	141.1	140.4	139.9	139.2	138.3	137.4	136.6	135.7	134.6
75°	111.9	111.6	111.3	111.0	110.7	110.2	109.4	108.7	108.0	107.2	106.3
77.5°	84.7	84.2	83.7	83.2	82.7	82.3	82.0	81.7	81.4	81.1	80.7
80°	66.6	66.4	66.3	66.2	66.0	65.8	65.5	65.2	64.9	64.6	64.1
82.5°	49.6	49.5	49.5	49.5	49.4	49.3	49.1	49.0	48.8	48.6	48.1
85°	27.3	27.2	27.0	26.8	26.8	26.6	26.4	26.3	26.1	25.9	25.5
87.5°	9.7	9.6	9.6	9.6	9.6	9.6	9.5	9.5	9.4	9.4	9.1
90°	0.4	1.6	2.8	3.8	5.0	6.0	6.9	7.7	8.5	9.3	9.8
92.5°	9.4	9.3	9.2	9.1	9.0	9.2	9.5	10.0	10.3	10.8	11.1
95°	30.2	26.8	23.5	20.0	16.6	15.2	16.0	16.7	17.4	18.2	18.6
97.5°	60.0	50.4	40.8	31.2	21.6	17.6	19.3	21.0	22.6	24.3	24.7
100°	82.4	68.2	54.0	39.9	25.7	19.5	21.2	23.0	24.8	26.5	27.4
102.5°	106.9	104.0	100.9	97.9	95.0	86.1	71.4	56.7	42.0	27.3	28.4
105°	141.4	144.5	147.7	150.8	153.9	141.3	113.1	84.9	56.6	28.4	29.5
107.5°	180.8	183.3	185.8	188.3	190.8	175.1	141.3	107.5	73.6	39.8	38.6
110°	206.2	208.3	210.5	212.7	214.8	201.0	171.1	141.2	111.3	81.4	71.1



TEST NUMBER: P331300-940

CATALOG NUMBER: SA2XXDIP-C485D530U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	230.0	231.9	233.8	235.8	237.6	235.0	227.6	220.2	212.8	205.5	167.6
115°	267.6	269.3	271.1	272.9	274.6	276.8	279.4	282.0	284.5	287.1	239.2
117.5°	301.2	303.2	305.1	307.1	309.1	310.9	312.7	314.5	316.3	318.0	306.5
120°	325.7	327.3	328.9	330.4	332.0	333.7	335.6	337.4	339.2	341.1	342.3
122.5°	346.6	348.2	349.9	351.5	353.1	355.0	357.0	359.0	361.1	363.1	363.8
125°	378.4	379.7	381.0	382.4	383.7	385.4	387.4	389.3	391.3	393.2	394.0
127.5°	407.1	408.6	410.1	411.5	413.0	414.6	416.0	417.5	418.9	420.4	421.4
130°	425.3	427.0	428.6	430.3	431.9	433.4	434.5	435.6	436.8	437.9	439.1
132.5°	444.0	445.3	446.7	448.2	449.6	450.8	452.0	453.2	454.2	455.4	456.4
135°	468.1	469.8	471.4	473.1	474.7	476.1	477.0	478.0	478.8	479.7	480.8
137.5°	492.7	493.7	494.9	496.1	497.2	498.4	499.4	500.5	501.5	502.6	503.6
140°	508.6	509.4	510.3	511.1	511.9	512.9	514.1	515.2	516.3	517.5	518.4
142.5°	522.0	522.8	523.5	524.2	525.0	526.0	527.4	528.6	529.9	531.3	532.1
145°	543.1	543.0	542.9	542.8	542.7	543.5	545.3	547.0	548.8	550.5	551.3
147.5°	561.4	561.0	560.6	560.3	559.8	560.5	562.2	564.0	565.7	567.5	568.0
150°	573.3	572.6	571.9	571.1	570.4	570.9	572.6	574.2	575.9	577.5	578.1
152.5°	583.4	582.6	581.8	580.9	580.1	580.5	582.1	583.7	585.2	586.8	587.5
155°	598.0	597.1	596.1	595.2	594.2	594.4	595.7	596.9	598.2	599.4	600.0
157.5°	609.4	608.7	607.9	607.1	606.3	606.4	607.2	608.1	608.9	609.8	610.5
160°	616.2	615.5	614.9	614.3	613.7	613.7	614.3	614.9	615.5	616.2	616.8
162.5°	622.1	621.4	620.8	620.2	619.6	619.6	620.1	620.6	621.2	621.7	622.4
165°	630.1	629.5	628.8	628.2	627.6	627.5	627.8	628.0	628.4	628.7	629.5
167.5°	636.1	635.4	634.8	634.2	633.6	633.4	633.6	634.0	634.3	634.5	635.3
170°	639.4	638.8	638.2	637.6	636.9	636.7	636.9	637.1	637.3	637.6	638.3
172.5°	641.7	641.1	640.4	639.8	639.2	638.9	639.2	639.4	639.5	639.8	640.5
175°	644.5	643.8	643.1	642.4	641.6	641.4	641.6	641.8	641.9	642.2	642.9
177.5°	645.0	644.4	643.8	643.3	642.7	642.4	642.5	642.6	642.7	642.7	643.4
180°	643.1	643.1	643.1	643.1	643.1	643.1	643.1	643.1	643.1	643.1	643.1



TEST NUMBER: P331300-940

CATALOG NUMBER: SA2XXDIP-C485D530U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	689.6	690.8	692.0	692.5	692.2	692.0	691.8	691.5
5°	685.0	686.2	687.3	687.8	687.5	687.2	686.9	686.6
7.5°	677.3	678.4	679.7	680.0	679.8	679.4	679.0	678.8
10°	670.3	671.5	672.7	673.1	672.6	672.2	671.7	671.3
12.5°	662.2	663.0	663.8	664.1	663.7	663.4	663.1	662.7
15°	647.8	648.5	649.0	648.9	648.2	647.5	646.8	646.0
17.5°	630.8	631.5	632.2	632.1	631.4	630.8	630.1	629.4
20°	617.6	618.0	618.5	618.4	617.8	617.2	616.6	616.0
22.5°	603.5	603.6	603.7	603.6	603.2	602.9	602.5	602.2
25°	580.7	580.9	581.2	581.2	580.9	580.7	580.3	580.1
27.5°	558.1	557.7	557.2	556.7	556.0	555.3	554.6	553.8
30°	540.6	540.1	539.7	539.1	538.5	538.0	537.3	536.7
32.5°	523.3	522.5	521.7	521.0	520.4	519.9	519.2	518.6
35°	495.7	494.8	493.9	493.1	492.4	491.6	490.9	490.2
37.5°	468.0	466.9	465.8	464.8	464.1	463.4	462.7	462.1
40°	448.9	447.5	446.2	445.2	444.6	444.1	443.4	442.8
42.5°	430.0	428.6	427.0	426.0	425.1	424.3	423.5	422.6
45°	401.0	399.4	397.7	396.6	396.0	395.5	394.8	394.2
47.5°	370.9	369.1	367.4	366.1	365.2	364.4	363.6	362.7
50°	351.5	349.4	347.3	345.9	345.2	344.5	343.7	343.0
52.5°	331.4	329.7	328.0	326.6	325.7	324.7	323.7	322.7
55°	301.5	299.7	297.9	296.7	295.9	295.2	294.4	293.7
57.5°	270.4	268.6	266.9	265.7	265.1	264.6	264.0	263.4
60°	249.8	248.2	246.6	245.5	245.0	244.6	244.2	243.7
62.5°	230.3	228.8	227.3	226.3	225.7	225.2	224.6	224.0
65°	200.5	199.1	197.8	196.7	196.0	195.3	194.6	193.8
67.5°	170.9	169.9	168.9	168.1	167.5	166.8	166.3	165.7
70°	151.8	150.7	149.7	148.9	148.3	147.7	147.1	146.5
72.5°	133.7	132.6	131.6	130.8	130.4	129.8	129.4	128.9
75°	105.4	104.6	103.7	103.3	103.7	104.0	104.2	104.6
77.5°	80.3	79.8	79.4	78.9	78.5	78.1	77.7	77.2
80°	63.7	63.2	62.9	62.4	62.2	61.9	61.5	61.3
82.5°	47.5	46.9	46.4	46.0	46.0	45.9	45.8	45.8
85°	25.1	24.6	24.2	23.9	23.7	23.6	23.5	23.3
87.5°	8.8	8.6	8.3	8.1	8.1	8.0	7.9	7.8
90°	10.3	10.9	11.4	11.8	11.9	12.1	12.4	12.6
92.5°	11.3	11.6	11.9	12.0	12.2	12.3	12.5	12.6
95°	19.2	19.7	20.2	20.4	20.3	20.2	20.2	20.0
97.5°	25.1	25.5	25.9	26.2	26.3	26.5	26.6	26.8
100°	28.2	29.0	29.9	30.3	30.6	30.8	30.9	31.2
102.5°	29.4	30.5	31.6	32.3	32.5	32.8	33.1	33.4
105°	30.7	31.8	32.9	33.7	34.2	34.5	35.0	35.4
107.5°	37.5	36.3	35.1	34.8	35.1	35.6	35.9	36.4
110°	60.7	50.4	40.0	35.1	35.5	35.9	36.4	36.7



TEST NUMBER: P331300-940

CATALOG NUMBER: SA2XXDIP-C485D530U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	129.9	92.2	54.5	35.8	36.1	36.5	36.8	37.1
115°	191.4	143.5	95.6	67.9	60.5	53.1	45.6	38.2
117.5°	294.9	283.3	271.7	253.7	229.2	204.7	180.3	155.8
120°	343.6	344.8	346.1	339.7	325.7	311.8	297.8	283.8
122.5°	364.5	365.3	366.0	365.1	362.4	359.6	357.0	354.2
125°	394.7	395.4	396.1	396.6	397.0	397.3	397.6	397.9
127.5°	422.5	423.6	424.6	425.2	425.3	425.3	425.3	425.4
130°	440.1	441.3	442.5	443.0	442.8	442.7	442.6	442.6
132.5°	457.4	458.3	459.3	459.7	459.6	459.5	459.4	459.3
135°	481.9	482.9	483.9	484.4	484.1	483.9	483.8	483.5
137.5°	504.6	505.6	506.7	506.9	506.6	506.2	506.0	505.6
140°	519.3	520.2	521.2	521.4	520.8	520.4	519.9	519.3
142.5°	533.0	533.8	534.7	534.8	534.3	533.8	533.2	532.7
145°	552.0	552.7	553.4	553.5	553.0	552.5	552.0	551.4
147.5°	568.6	569.1	569.6	569.6	569.3	568.8	568.4	567.9
150°	578.7	579.3	580.0	580.1	579.5	579.0	578.5	578.0
152.5°	588.1	588.7	589.3	589.2	588.6	587.9	587.2	586.6
155°	600.7	601.3	601.9	601.7	600.9	600.1	599.3	598.4
157.5°	611.2	611.9	612.6	612.6	611.7	610.9	610.1	609.3
160°	617.3	618.0	618.6	618.6	617.9	617.2	616.4	615.6
162.5°	623.1	623.8	624.6	624.5	623.6	622.7	621.8	620.9
165°	630.2	630.9	631.6	631.6	630.9	630.2	629.5	628.7
167.5°	636.0	636.8	637.5	637.4	636.4	635.5	634.5	633.6
170°	639.0	639.7	640.4	640.3	639.4	638.5	637.6	636.6
172.5°	641.2	641.9	642.7	642.6	641.7	640.7	639.8	638.8
175°	643.6	644.4	645.1	645.0	643.9	642.8	641.9	640.8
177.5°	643.9	644.5	645.1	645.0	644.3	643.5	642.7	642.0
180°	643.1	643.1	643.1	643.1	643.1	643.1	643.1	643.1

(END OF REPORT)