

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: P331300-935

Luminaire Tested: **SA2XXDIP-C485D530U935-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331300-935  
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-C485D530U935-4F0-1E-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**

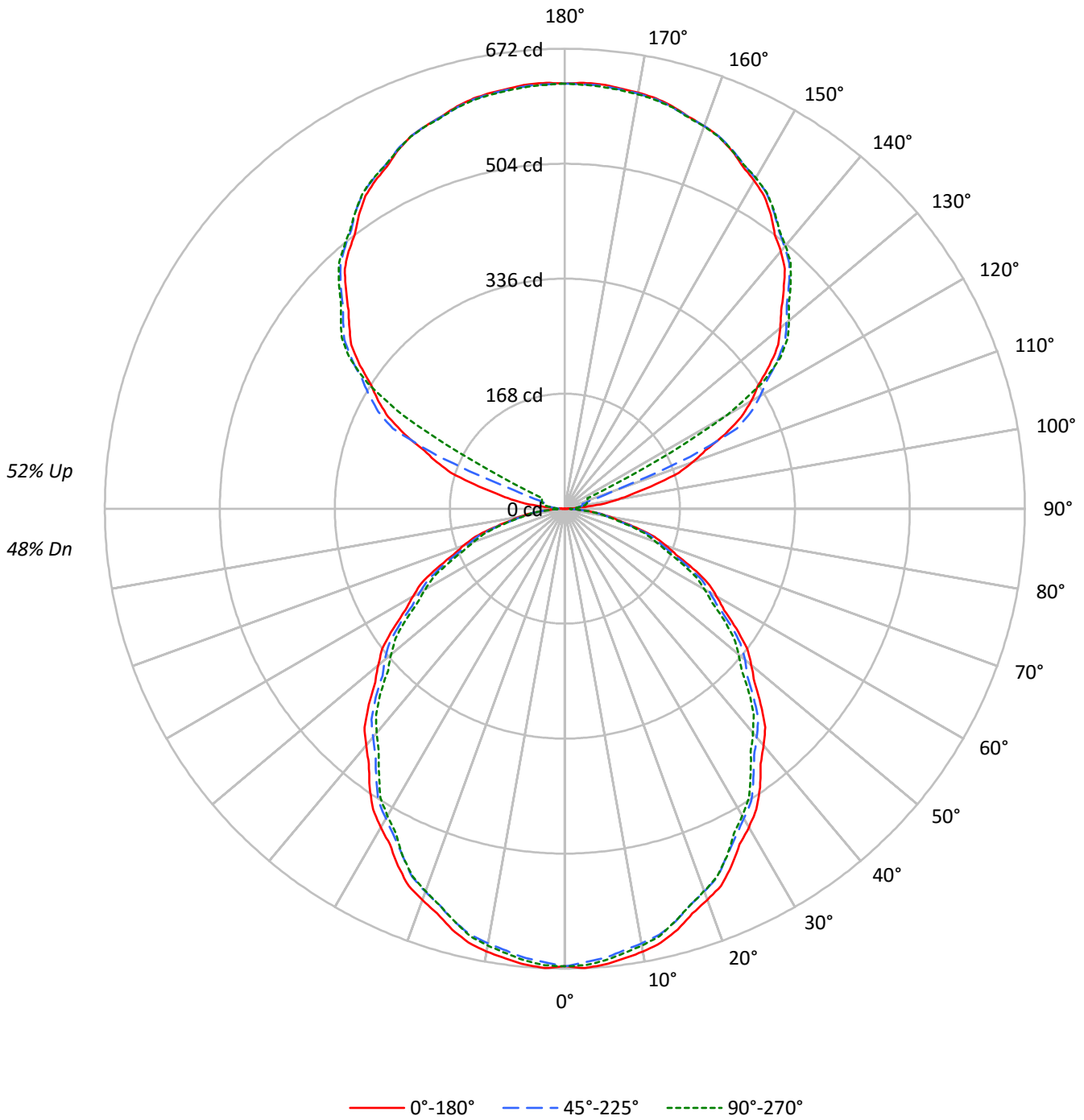
Lumens per Lamp: N/A  
Luminaire Lumens: 3522.7 lumens  
Efficiency: N/A  
Efficacy: 107.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

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



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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	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	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	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	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	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	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	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	12	12	12													

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10797	10797	10797
5°	10838	10682	10746
10°	10775	10575	10627
15°	10641	10437	10425
20°	10452	10232	10220
25°	10265	9978	9978
30°	10023	9747	9661
35°	9798	9469	9329
40°	9514	9190	9012
45°	9236	8912	8690
50°	8932	8626	8317
55°	8617	8290	7983
60°	8263	7892	7598
65°	7885	7492	7148
70°	7407	7010	6680
75°	6744	6457	6301
80°	5979	5793	5504
85°	4872	4650	4168



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.9	1.8
10°-20°	176.9	5.0
20°-30°	260.1	7.4
30°-40°	302.1	8.6
40°-50°	301.8	8.6
50°-60°	263.2	7.5
60°-70°	194.6	5.5
70°-80°	110.2	3.1
80°-90°	31.2	0.9
90°-100°	20.7	0.6
100°-110°	76.0	2.2
110°-120°	203.0	5.8
120°-130°	335.2	9.5
130°-140°	356.5	10.1
140°-150°	331.3	9.4
150°-160°	266.4	7.6
160°-170°	171.7	4.9
170°-180°	59.1	1.7
0°-30°	499.9	14.2
0°-40°	802.0	22.8
0°-60°	1366.9	38.8
0°-90°	1702.9	48.3
90°-120°	299.7	8.5
90°-150°	1322.7	37.5
90°-180°	1820.0	51.7
0°-180°	3522.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	669	669	669	669	669	
5°	669	666	659	664	663	63
15°	637	632	624	627	624	179
25°	576	571	560	561	560	265
35°	497	490	480	476	473	310
45°	404	400	390	384	381	312
55°	306	302	294	287	284	274
65°	206	202	196	190	187	204
75°	108	107	104	100	101	115
85°	26	26	25	23	22	30
90°	0	5	9	11	12	3
95°	29	15	18	20	19	36
105°	137	143	27	32	34	146
115°	258	266	277	79	37	254
125°	365	371	380	383	384	326
135°	452	459	463	468	467	349
145°	524	524	532	534	532	328
155°	577	574	579	581	578	266
165°	608	606	607	610	607	172
175°	622	619	620	623	619	59
180°	621	621	621	621	621	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7
2.5°	671.8	671.2	670.7	670.1	669.5	668.7	667.4	666.2	664.9	663.6	664.8
5°	668.7	668.1	667.6	667.0	666.5	665.4	663.8	662.3	660.6	659.1	660.2
7.5°	662.8	661.9	661.1	660.1	659.3	658.1	656.4	654.9	653.2	651.6	652.8
10°	657.2	656.2	655.1	654.2	653.2	651.8	650.1	648.4	646.7	645.0	646.1
12.5°	649.5	648.6	647.6	646.8	645.9	644.6	642.9	641.2	639.5	637.7	638.5
15°	636.6	635.8	634.9	634.0	633.2	631.8	629.9	628.1	626.2	624.4	624.9
17.5°	620.1	619.3	618.5	617.6	616.7	615.4	613.5	611.6	609.7	607.8	608.5
20°	608.3	607.4	606.6	605.7	604.9	603.5	601.4	599.4	597.4	595.5	595.9
22.5°	596.5	595.3	594.1	592.9	591.7	590.1	588.2	586.3	584.4	582.6	582.6
25°	576.2	575.0	573.9	572.7	571.6	569.8	567.4	564.9	562.5	560.1	560.3
27.5°	553.0	552.0	551.0	549.9	548.9	547.4	545.5	543.5	541.7	539.8	539.3
30°	537.6	536.4	535.3	534.2	533.0	531.3	529.2	527.1	525.0	522.8	522.4
32.5°	521.1	520.2	519.3	518.3	517.5	515.8	513.6	511.3	509.1	506.9	506.1
35°	497.1	495.6	494.2	492.8	491.4	489.5	487.2	484.9	482.6	480.4	479.5
37.5°	469.9	468.6	467.4	466.1	464.9	463.1	460.8	458.6	456.2	454.0	452.9
40°	451.4	450.2	449.1	448.0	446.9	445.1	442.8	440.6	438.2	436.0	434.7
42.5°	433.4	432.2	431.1	430.0	428.9	427.1	424.8	422.6	420.3	417.9	416.6
45°	404.5	403.5	402.4	401.5	400.5	398.9	396.7	394.6	392.4	390.3	388.7
47.5°	375.7	374.7	373.8	372.8	371.9	370.3	368.1	365.8	363.6	361.4	359.7
50°	355.6	354.9	354.1	353.4	352.8	351.4	349.4	347.4	345.3	343.4	341.4
52.5°	336.0	335.1	334.2	333.2	332.3	330.9	329.0	327.1	325.2	323.3	321.7
55°	306.1	305.2	304.4	303.5	302.6	301.4	299.6	297.9	296.2	294.5	292.8
57.5°	276.0	275.3	274.6	274.0	273.3	272.0	270.1	268.2	266.3	264.4	262.7
60°	255.9	255.4	254.8	254.2	253.7	252.4	250.4	248.3	246.3	244.4	242.8
62.5°	236.3	235.5	234.5	233.6	232.7	231.5	230.0	228.4	226.9	225.3	223.9
65°	206.4	205.5	204.7	203.8	203.0	201.8	200.4	199.0	197.5	196.1	194.8
67.5°	175.9	175.2	174.5	173.8	173.1	172.2	170.9	169.6	168.3	167.0	166.1
70°	156.9	156.4	155.8	155.2	154.6	153.7	152.4	151.1	149.8	148.5	147.6
72.5°	137.3	136.8	136.2	135.6	135.1	134.4	133.5	132.7	131.9	131.0	130.0
75°	108.1	107.7	107.5	107.2	106.9	106.4	105.6	105.0	104.3	103.5	102.6
77.5°	81.8	81.3	80.8	80.3	79.8	79.5	79.2	78.9	78.6	78.4	77.9
80°	64.3	64.1	64.1	63.9	63.7	63.5	63.2	62.9	62.7	62.3	61.9
82.5°	47.9	47.8	47.8	47.8	47.7	47.6	47.4	47.3	47.1	46.9	46.4
85°	26.3	26.3	26.1	25.9	25.8	25.7	25.5	25.4	25.2	25.1	24.6
87.5°	9.4	9.3	9.3	9.3	9.3	9.3	9.2	9.1	9.0	9.0	8.8
90°	0.4	1.5	2.7	3.7	4.8	5.8	6.6	7.4	8.2	9.0	9.5
92.5°	9.0	9.0	8.9	8.8	8.7	8.9	9.2	9.6	10.0	10.4	10.7
95°	29.2	25.9	22.6	19.3	16.0	14.7	15.4	16.1	16.8	17.6	18.0
97.5°	57.9	48.6	39.4	30.1	20.8	17.0	18.6	20.2	21.9	23.4	23.8
100°	79.6	65.9	52.2	38.5	24.8	18.9	20.5	22.2	23.9	25.6	26.4
102.5°	103.2	100.4	97.5	94.5	91.7	83.1	69.0	54.8	40.6	26.3	27.4
105°	136.6	139.6	142.6	145.6	148.6	136.5	109.2	82.0	54.7	27.4	28.5
107.5°	174.6	177.0	179.4	181.8	184.3	169.1	136.5	103.8	71.0	38.4	37.3
110°	199.1	201.1	203.3	205.3	207.4	194.1	165.2	136.4	107.5	78.6	68.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	222.1	223.9	225.8	227.6	229.5	226.9	219.7	212.6	205.4	198.4	161.9
115°	258.4	260.0	261.7	263.5	265.2	267.3	269.8	272.2	274.7	277.2	231.0
117.5°	290.8	292.7	294.6	296.5	298.4	300.2	302.0	303.7	305.4	307.0	295.9
120°	314.5	316.0	317.5	319.0	320.6	322.2	324.0	325.8	327.5	329.3	330.5
122.5°	334.7	336.2	337.9	339.4	341.0	342.8	344.7	346.6	348.6	350.6	351.3
125°	365.3	366.6	367.9	369.2	370.5	372.1	374.0	375.9	377.8	379.7	380.4
127.5°	393.0	394.5	396.0	397.4	398.8	400.3	401.7	403.1	404.5	406.0	406.9
130°	410.7	412.2	413.9	415.5	417.1	418.4	419.6	420.6	421.7	422.8	424.0
132.5°	428.7	430.0	431.4	432.7	434.1	435.3	436.4	437.6	438.6	439.7	440.7
135°	452.0	453.7	455.2	456.8	458.4	459.7	460.5	461.5	462.4	463.2	464.3
137.5°	475.7	476.7	477.9	479.0	480.1	481.2	482.2	483.3	484.2	485.3	486.3
140°	491.1	491.9	492.8	493.5	494.3	495.2	496.4	497.5	498.5	499.6	500.6
142.5°	504.0	504.8	505.5	506.2	507.0	507.9	509.2	510.4	511.7	513.0	513.8
145°	524.3	524.3	524.2	524.1	524.0	524.8	526.5	528.1	529.9	531.6	532.3
147.5°	542.1	541.7	541.3	541.0	540.5	541.2	542.9	544.6	546.2	547.9	548.5
150°	553.5	552.8	552.2	551.5	550.8	551.2	552.8	554.4	556.0	557.6	558.2
152.5°	563.3	562.5	561.7	560.9	560.2	560.5	562.1	563.6	565.1	566.6	567.2
155°	577.4	576.5	575.6	574.7	573.8	573.9	575.1	576.4	577.6	578.8	579.4
157.5°	588.4	587.7	586.9	586.2	585.4	585.5	586.3	587.1	588.0	588.8	589.4
160°	595.0	594.3	593.7	593.1	592.5	592.5	593.1	593.7	594.3	595.0	595.6
162.5°	600.6	600.0	599.4	598.8	598.3	598.2	598.7	599.3	599.8	600.3	601.0
165°	608.4	607.8	607.2	606.6	606.0	605.9	606.1	606.4	606.7	607.0	607.8
167.5°	614.2	613.5	612.9	612.3	611.7	611.6	611.8	612.2	612.4	612.7	613.4
170°	617.3	616.8	616.2	615.6	615.0	614.8	615.0	615.2	615.4	615.6	616.3
172.5°	619.6	619.0	618.4	617.8	617.2	616.9	617.2	617.3	617.5	617.8	618.5
175°	622.3	621.6	621.0	620.3	619.5	619.3	619.5	619.7	619.8	620.1	620.8
177.5°	622.8	622.2	621.6	621.1	620.5	620.3	620.4	620.4	620.5	620.6	621.2
180°	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7
2.5°	665.9	667.0	668.1	668.7	668.4	668.1	668.0	667.7
5°	661.4	662.5	663.7	664.1	663.8	663.5	663.2	663.0
7.5°	653.9	655.0	656.3	656.6	656.3	656.0	655.7	655.4
10°	647.2	648.4	649.5	649.9	649.5	649.0	648.6	648.2
12.5°	639.4	640.2	640.9	641.2	640.8	640.6	640.2	639.9
15°	625.5	626.1	626.6	626.5	625.9	625.2	624.5	623.7
17.5°	609.1	609.8	610.4	610.4	609.7	609.1	608.4	607.7
20°	596.3	596.8	597.2	597.1	596.5	595.9	595.4	594.8
22.5°	582.7	582.8	582.9	582.8	582.5	582.1	581.8	581.4
25°	560.7	560.9	561.2	561.2	560.9	560.7	560.3	560.1
27.5°	538.9	538.5	538.0	537.5	536.8	536.1	535.5	534.8
30°	521.9	521.5	521.1	520.6	520.0	519.4	518.8	518.2
32.5°	505.3	504.5	503.8	503.1	502.5	502.0	501.4	500.8
35°	478.6	477.8	476.9	476.1	475.4	474.7	474.0	473.3
37.5°	451.9	450.8	449.8	448.8	448.2	447.5	446.8	446.2
40°	433.4	432.1	430.8	429.9	429.3	428.8	428.2	427.6
42.5°	415.2	413.8	412.3	411.3	410.4	409.7	408.9	408.0
45°	387.2	385.6	384.0	383.0	382.4	381.9	381.3	380.6
47.5°	358.1	356.4	354.7	353.5	352.7	351.9	351.0	350.2
50°	339.4	337.3	335.4	334.0	333.3	332.6	331.8	331.1
52.5°	320.0	318.3	316.7	315.4	314.4	313.5	312.5	311.6
55°	291.1	289.4	287.7	286.5	285.7	285.0	284.3	283.6
57.5°	261.1	259.3	257.7	256.6	256.0	255.5	254.9	254.3
60°	241.2	239.6	238.1	237.0	236.6	236.2	235.7	235.3
62.5°	222.4	220.9	219.5	218.5	217.9	217.4	216.9	216.3
65°	193.6	192.3	191.0	189.9	189.2	188.6	187.9	187.1
67.5°	165.1	164.0	163.1	162.3	161.7	161.1	160.6	160.0
70°	146.5	145.5	144.6	143.8	143.2	142.6	142.1	141.5
72.5°	129.1	128.0	127.1	126.3	125.9	125.4	124.9	124.5
75°	101.8	101.0	100.1	99.8	100.1	100.4	100.7	101.0
77.5°	77.5	77.1	76.6	76.2	75.8	75.4	75.0	74.6
80°	61.5	61.0	60.7	60.3	60.0	59.8	59.4	59.2
82.5°	45.9	45.3	44.8	44.4	44.4	44.3	44.3	44.3
85°	24.2	23.8	23.3	23.1	22.9	22.8	22.6	22.5
87.5°	8.5	8.3	8.0	7.8	7.8	7.7	7.7	7.6
90°	10.0	10.5	11.0	11.4	11.5	11.7	12.0	12.1
92.5°	10.9	11.2	11.5	11.6	11.8	11.9	12.1	12.1
95°	18.5	19.0	19.5	19.7	19.6	19.5	19.5	19.3
97.5°	24.3	24.6	25.1	25.3	25.4	25.6	25.7	25.8
100°	27.2	28.0	28.8	29.3	29.5	29.7	29.9	30.1
102.5°	28.4	29.4	30.5	31.2	31.4	31.7	31.9	32.3
105°	29.6	30.7	31.8	32.5	33.0	33.3	33.8	34.2
107.5°	36.2	35.0	33.9	33.6	33.9	34.4	34.7	35.1
110°	58.6	48.6	38.7	33.9	34.3	34.7	35.1	35.5





TEST NUMBER: P331300-935

CATALOG NUMBER: SA2XXDIP-C485D530U935-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	125.4	89.0	52.6	34.6	34.9	35.2	35.6	35.8
115°	184.8	138.5	92.3	65.6	58.4	51.2	44.0	36.9
117.5°	284.7	273.5	262.3	245.0	221.3	197.7	174.1	150.4
120°	331.7	332.9	334.2	328.0	314.5	301.1	287.6	274.1
122.5°	352.0	352.8	353.4	352.5	349.9	347.2	344.7	342.0
125°	381.1	381.8	382.5	383.0	383.3	383.6	383.9	384.2
127.5°	407.9	409.0	410.0	410.5	410.6	410.7	410.7	410.8
130°	425.0	426.1	427.2	427.7	427.6	427.5	427.4	427.3
132.5°	441.6	442.6	443.5	443.8	443.8	443.7	443.6	443.5
135°	465.3	466.2	467.3	467.7	467.4	467.3	467.1	466.8
137.5°	487.2	488.2	489.2	489.5	489.1	488.8	488.5	488.2
140°	501.4	502.3	503.3	503.4	502.9	502.5	502.0	501.4
142.5°	514.6	515.4	516.3	516.4	515.9	515.4	514.9	514.4
145°	533.0	533.6	534.3	534.4	534.0	533.5	533.0	532.4
147.5°	549.0	549.5	550.0	550.0	549.7	549.2	548.8	548.4
150°	558.8	559.4	560.0	560.1	559.6	559.0	558.5	558.1
152.5°	567.8	568.4	569.0	568.9	568.3	567.7	567.0	566.4
155°	580.0	580.6	581.2	581.0	580.2	579.5	578.7	577.8
157.5°	590.1	590.8	591.5	591.5	590.6	589.9	589.1	588.3
160°	596.1	596.7	597.3	597.3	596.6	595.9	595.1	594.4
162.5°	601.7	602.4	603.0	603.0	602.1	601.2	600.4	599.5
165°	608.5	609.2	609.8	609.8	609.2	608.5	607.8	607.0
167.5°	614.1	614.8	615.5	615.4	614.5	613.6	612.7	611.8
170°	617.0	617.7	618.4	618.3	617.3	616.5	615.6	614.7
172.5°	619.1	619.8	620.5	620.4	619.6	618.6	617.8	616.8
175°	621.5	622.2	622.8	622.8	621.7	620.7	619.7	618.7
177.5°	621.7	622.3	622.8	622.8	622.1	621.3	620.6	619.9
180°	621.0	621.0	621.0	621.0	621.0	621.0	621.0	621.0

(END OF REPORT)