

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: P331667-935

Luminaire Tested: **SA2XXRDIP-C485D925U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331667-935  
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: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 925 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

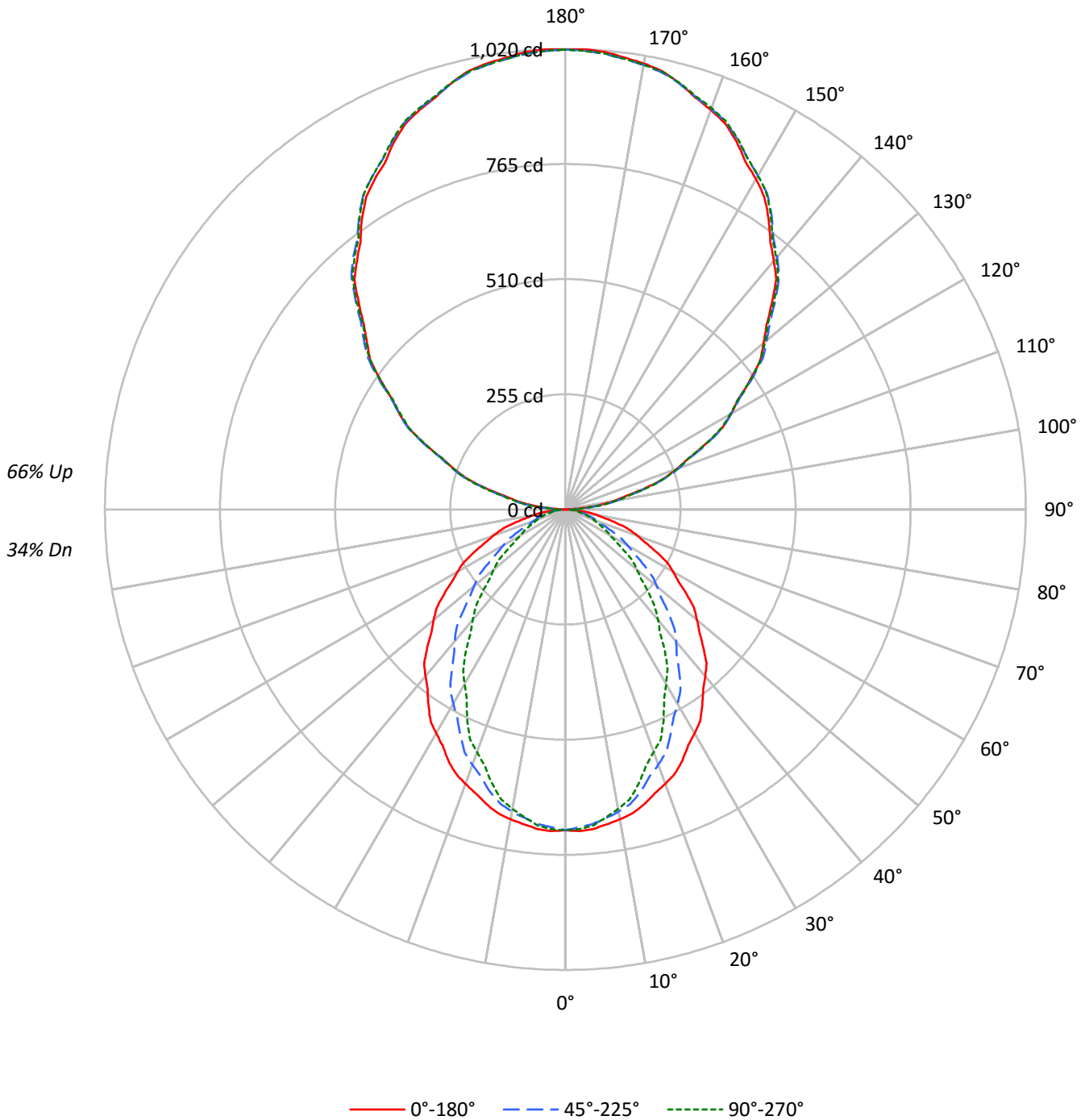
Lumens per Lamp: N/A  
Luminaire Lumens: 4312.6 lumens  
Efficiency: N/A  
Efficacy: 96.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 44.5  
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: P331667-935  
CATALOG NUMBER: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F1

### Luminous Intensity Polar Plot





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CATALOG NUMBER: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F1

**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	74	74	74	57	57	57	41	41	41	34				
1	94	90	87	83	85	82	79	76	66	63	62	51	49	48	37	36	36	29				
2	86	79	73	69	78	72	67	63	58	54	51	45	43	41	33	32	30	25				
3	79	70	63	57	71	63	58	53	51	47	44	40	37	35	29	28	26	22				
4	72	62	54	49	65	56	50	45	46	41	37	36	33	30	27	25	23	19				
5	66	55	48	42	60	50	44	39	41	36	32	32	29	26	24	22	20	17				
6	61	50	42	36	55	45	39	34	37	32	28	29	26	23	22	20	18	15				
7	57	45	37	32	51	41	34	30	34	29	25	27	23	20	20	18	16	13				
8	52	41	33	28	47	37	31	26	31	26	22	24	21	18	19	16	14	12				
9	49	37	30	25	44	34	28	23	28	23	20	22	19	16	17	15	13	11				
10	46	34	27	22	41	31	25	21	26	21	18	21	17	15	16	14	12	10				

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

	0°	45°	90°
0°	11472	11472	11472
5°	11515	11329	11391
10°	11429	11144	11049
15°	11296	10813	10502
20°	11115	10340	9821
25°	10929	9805	9164
30°	10670	9257	8321
35°	10419	8657	7579
40°	10163	8037	6721
45°	9866	7341	5948
50°	9560	6636	5184
55°	9250	5883	4453
60°	8887	5089	3694
65°	8478	4271	3366
70°	7983	3522	3097
75°	7380	3206	2888
80°	6518	2864	2631
85°	5113	2260	2260



TEST NUMBER: P331667-935

CATALOG NUMBER: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.5	1.5
10°-20°	182.6	4.2
20°-30°	256.4	5.9
30°-40°	279.6	6.5
40°-50°	257.1	6.0
50°-60°	201.9	4.7
60°-70°	131.7	3.1
70°-80°	67.9	1.6
80°-90°	21.7	0.5
90°-100°	64.5	1.5
100°-110°	200.4	4.6
110°-120°	342.5	7.9
120°-130°	450.4	10.4
130°-140°	505.6	11.7
140°-150°	495.7	11.5
150°-160°	415.8	9.6
160°-170°	275.8	6.4
170°-180°	96.4	2.2
0°-30°	505.6	11.7
0°-40°	785.2	18.2
0°-60°	1244.3	28.9
0°-90°	1465.5	34.0
90°-120°	607.4	14.1
90°-150°	2059.1	47.7
90°-180°	2847.0	66.0
0°-180°	4312.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	710	710	710	710	710	
5°	710	707	699	704	703	67
15°	676	668	647	635	628	190
25°	614	592	550	525	514	282
35°	529	494	439	400	384	331
45°	432	388	322	278	260	334
55°	329	277	209	172	158	293
65°	222	169	112	91	88	220
75°	118	75	51	47	46	125
85°	28	15	12	12	12	33
90°	1	12	30	28	29	3
95°	45	53	55	55	53	51
105°	185	187	189	191	191	195
115°	344	348	347	346	344	340
125°	500	507	505	503	502	447
135°	647	656	658	657	655	500
145°	785	791	796	797	794	490
155°	898	900	903	907	905	413
165°	977	976	976	982	978	275
175°	1016	1014	1012	1018	1013	97
180°	1018	1018	1018	1018	1018	



TEST NUMBER: P331667-935

CATALOG NUMBER: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5
2.5°	713.1	712.6	712.0	711.4	710.8	709.9	708.7	707.4	706.1	704.9	706.0
5°	710.5	709.8	709.1	708.4	707.7	706.4	704.6	702.7	700.9	699.0	700.3
7.5°	703.2	702.3	701.5	700.5	699.6	698.1	695.9	693.8	691.6	689.5	689.8
10°	697.1	696.0	695.0	694.1	693.0	691.1	688.3	685.4	682.5	679.7	679.2
12.5°	689.3	688.1	686.8	685.6	684.4	682.0	678.3	674.7	671.0	667.4	666.6
15°	675.8	674.2	672.7	671.1	669.5	666.3	661.4	656.6	651.8	646.9	644.2
17.5°	659.3	656.9	654.4	652.0	649.6	645.3	639.1	632.8	626.6	620.4	617.2
20°	646.9	644.0	641.2	638.3	635.4	630.4	623.3	616.1	609.0	601.8	598.3
22.5°	633.5	630.3	627.1	623.9	620.7	615.1	607.0	598.9	590.9	582.8	578.2
25°	613.5	608.9	604.3	599.7	595.1	588.1	578.7	569.3	559.8	550.4	544.6
27.5°	589.3	584.3	579.3	574.4	569.4	561.5	551.0	540.3	529.7	519.0	512.2
30°	572.3	566.9	561.5	556.0	550.6	542.2	530.7	519.3	507.8	496.5	489.1
32.5°	555.9	549.5	543.1	536.8	530.5	521.4	509.8	498.1	486.5	474.8	466.5
35°	528.6	521.2	514.0	506.7	499.4	489.5	476.9	464.3	451.8	439.2	430.2
37.5°	501.3	493.3	485.3	477.3	469.3	458.6	445.2	431.8	418.4	405.0	395.0
40°	482.2	473.7	465.1	456.6	448.0	436.8	422.9	409.1	395.2	381.3	371.2
42.5°	462.7	453.7	444.6	435.7	426.6	414.9	400.6	386.2	372.0	357.7	347.2
45°	432.1	422.6	412.9	403.4	393.8	381.5	366.5	351.5	336.5	321.5	311.3
47.5°	402.3	392.1	382.0	371.9	361.7	348.9	333.4	317.9	302.4	286.9	276.8
50°	380.6	370.5	360.4	350.3	340.1	327.2	311.4	295.8	280.0	264.2	254.4
52.5°	359.6	349.0	338.4	327.8	317.2	304.2	288.8	273.5	258.0	242.7	233.2
55°	328.6	317.5	306.3	295.2	284.0	270.7	255.3	239.9	224.4	209.0	200.4
57.5°	296.8	285.4	274.0	262.5	251.1	238.0	223.2	208.3	193.5	178.7	170.7
60°	275.2	263.8	252.4	240.9	229.5	216.5	201.7	187.0	172.3	157.6	150.2
62.5°	254.1	242.7	231.3	219.8	208.4	195.7	181.7	167.6	153.6	139.6	132.6
65°	221.9	210.3	198.7	187.1	175.6	163.3	150.5	137.6	124.8	111.8	107.0
67.5°	190.7	179.3	167.7	156.3	144.7	133.2	121.7	110.1	98.5	87.0	84.7
70°	169.1	158.0	146.8	135.7	124.5	114.0	104.2	94.3	84.5	74.6	73.2
72.5°	148.5	137.8	127.2	116.5	105.8	96.5	88.6	80.7	72.8	64.8	63.6
75°	118.3	108.3	98.3	88.3	78.3	70.9	66.0	61.1	56.3	51.4	50.5
77.5°	88.6	79.8	71.0	62.3	53.6	48.0	45.6	43.3	40.9	38.6	38.0
80°	70.1	62.8	55.5	48.2	40.9	36.6	35.1	33.8	32.3	30.8	30.3
82.5°	53.1	47.4	41.8	36.1	30.4	27.0	26.1	25.1	24.1	23.2	22.8
85°	27.6	24.6	21.6	18.7	15.7	13.9	13.5	13.1	12.7	12.2	12.2
87.5°	8.4	7.9	7.5	7.1	6.5	6.8	7.6	8.4	9.3	10.2	9.9
90°	0.9	3.2	5.4	7.7	10.0	13.3	17.5	21.7	25.8	30.0	29.7
92.5°	15.3	17.0	18.7	20.3	22.0	23.3	24.4	25.3	26.3	27.3	27.4
95°	44.7	46.6	48.5	50.4	52.3	53.5	53.8	54.2	54.6	55.0	55.0
97.5°	81.6	83.3	85.0	86.7	88.3	89.5	90.3	91.0	91.7	92.5	92.5
100°	109.1	110.6	112.2	113.7	115.2	116.3	116.8	117.4	118.0	118.6	118.6
102.5°	138.0	139.2	140.4	141.6	142.8	143.9	144.6	145.3	146.0	146.8	146.9
105°	184.8	185.3	185.9	186.5	187.0	187.5	187.9	188.3	188.6	189.0	189.4
107.5°	231.8	232.6	233.5	234.4	235.2	235.6	235.6	235.6	235.6	235.6	235.7
110°	262.1	263.2	264.3	265.5	266.7	267.3	267.3	267.3	267.3	267.3	267.3



TEST NUMBER: P331667-935

CATALOG NUMBER: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	295.1	296.2	297.4	298.5	299.6	300.1	300.0	299.8	299.7	299.5	299.1
115°	343.7	344.8	345.9	347.2	348.3	348.6	348.3	347.9	347.5	347.2	347.0
117.5°	392.2	393.6	395.2	396.7	398.3	398.5	397.4	396.3	395.3	394.3	393.7
120°	424.5	426.0	427.5	429.0	430.6	430.6	429.0	427.5	426.0	424.5	424.5
122.5°	454.0	455.8	457.7	459.5	461.3	461.8	460.6	459.6	458.6	457.4	457.0
125°	500.1	501.8	503.5	505.2	507.0	507.6	507.0	506.4	505.8	505.2	504.6
127.5°	544.9	547.1	549.3	551.5	553.6	554.4	553.7	553.0	552.3	551.6	551.0
130°	573.1	575.6	578.1	580.6	583.1	584.1	583.7	583.3	583.0	582.6	582.2
132.5°	604.8	606.7	608.8	610.8	612.9	613.9	614.0	614.1	614.1	614.2	613.4
135°	647.0	649.1	651.2	653.3	655.4	656.7	657.0	657.4	657.8	658.1	658.0
137.5°	691.6	693.2	694.9	696.6	698.4	699.5	700.0	700.5	701.0	701.5	701.4
140°	718.3	720.1	721.8	723.5	725.2	726.5	727.5	728.4	729.4	730.4	730.4
142.5°	745.8	747.5	749.2	751.0	752.7	753.9	754.5	755.2	755.8	756.5	756.6
145°	785.3	786.7	788.0	789.4	790.7	791.9	793.1	794.2	795.4	796.5	796.7
147.5°	820.5	822.2	823.8	825.4	827.0	828.2	829.0	829.7	830.4	831.2	831.6
150°	844.6	845.8	846.9	848.1	849.2	850.2	850.9	851.7	852.5	853.3	853.8
152.5°	865.9	867.1	868.2	869.4	870.6	871.6	872.5	873.4	874.3	875.2	876.0
155°	897.9	898.5	899.1	899.7	900.2	900.8	901.4	901.9	902.5	903.0	904.0
157.5°	925.2	925.6	926.0	926.3	926.8	927.1	927.5	927.8	928.2	928.5	929.8
160°	941.8	942.1	942.5	942.9	943.2	943.6	943.7	943.9	944.1	944.3	945.5
162.5°	956.8	956.9	957.0	957.1	957.2	957.3	957.5	957.7	957.9	958.0	959.3
165°	977.0	976.8	976.5	976.4	976.2	976.1	976.1	976.1	976.1	976.1	977.4
167.5°	993.8	993.2	992.6	992.0	991.5	991.2	991.2	991.1	991.1	991.0	992.4
170°	1002.7	1002.1	1001.6	1001.0	1000.4	1000.1	999.9	999.7	999.4	999.3	1000.7
172.5°	1008.9	1008.3	1007.8	1007.2	1006.6	1006.3	1006.1	1005.8	1005.6	1005.5	1006.9
175°	1016.5	1015.9	1015.3	1014.8	1014.2	1013.7	1013.3	1013.0	1012.5	1012.2	1013.5
177.5°	1019.6	1019.1	1018.6	1018.2	1017.7	1017.4	1017.0	1016.8	1016.4	1016.2	1017.0
180°	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2



TEST NUMBER: P331667-935

CATALOG NUMBER: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5
2.5°	707.1	708.3	709.5	709.9	709.7	709.5	709.2	709.0
5°	701.5	702.8	704.1	704.6	704.1	703.7	703.3	702.8
7.5°	690.2	690.5	691.0	690.8	690.0	689.2	688.5	687.8
10°	678.8	678.4	678.0	677.3	676.5	675.6	674.8	673.9
12.5°	665.8	665.0	664.3	663.1	661.7	660.3	658.8	657.5
15°	641.4	638.8	636.0	634.0	632.5	631.1	629.6	628.3
17.5°	613.9	610.7	607.4	604.6	602.2	599.7	597.3	594.8
20°	594.7	591.2	587.5	584.2	581.1	577.9	574.8	571.6
22.5°	573.6	569.0	564.5	560.9	558.6	556.3	554.0	551.6
25°	538.7	532.9	527.0	523.0	520.8	518.7	516.6	514.4
27.5°	505.4	498.5	491.7	486.6	483.2	479.8	476.4	473.0
30°	481.8	474.6	467.3	461.7	457.8	454.0	450.1	446.3
32.5°	458.1	449.9	441.5	435.6	432.0	428.3	424.6	421.0
35°	421.2	412.2	403.2	397.1	394.0	390.8	387.7	384.5
37.5°	385.1	375.2	365.3	358.5	355.0	351.4	347.8	344.1
40°	361.0	350.9	340.7	333.8	330.1	326.4	322.6	318.9
42.5°	336.7	326.1	315.7	308.7	305.1	301.4	297.8	294.2
45°	301.2	291.1	280.9	274.1	270.7	267.3	263.8	260.5
47.5°	266.7	256.7	246.6	240.0	236.9	233.8	230.6	227.5
50°	244.5	234.7	224.8	218.4	215.4	212.4	209.4	206.4
52.5°	223.6	214.1	204.6	198.5	195.7	193.0	190.1	187.4
55°	191.8	183.2	174.7	169.0	166.3	163.6	160.9	158.2
57.5°	162.9	155.1	147.2	142.2	139.8	137.6	135.3	132.9
60°	142.9	135.7	128.4	123.6	121.3	119.0	116.8	114.4
62.5°	125.6	118.7	111.8	107.6	106.2	104.9	103.5	102.1
65°	102.2	97.3	92.5	89.8	89.4	88.9	88.5	88.1
67.5°	82.5	80.2	78.0	76.7	76.2	75.8	75.3	74.8
70°	71.7	70.3	68.9	67.8	67.3	66.7	66.1	65.6
72.5°	62.4	61.2	60.0	59.2	58.9	58.5	58.2	57.9
75°	49.4	48.5	47.4	46.8	46.8	46.6	46.4	46.3
77.5°	37.5	36.9	36.3	35.9	35.6	35.5	35.2	35.0
80°	29.7	29.2	28.6	28.3	28.3	28.3	28.3	28.3
82.5°	22.5	22.1	21.8	21.6	21.6	21.6	21.6	21.6
85°	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
87.5°	9.7	9.6	9.4	9.3	9.3	9.4	9.4	9.5
90°	29.3	28.9	28.6	28.4	28.7	28.8	29.0	29.2
92.5°	27.5	27.6	27.6	27.7	27.7	27.7	27.8	27.8
95°	55.0	55.0	55.0	54.8	54.4	54.1	53.6	53.3
97.5°	92.5	92.5	92.5	92.5	92.4	92.4	92.3	92.3
100°	118.6	118.6	118.6	118.5	118.3	118.1	117.9	117.7
102.5°	147.1	147.2	147.4	147.3	147.1	147.0	146.8	146.6
105°	189.8	190.2	190.5	190.7	190.7	190.7	190.7	190.7
107.5°	235.9	236.1	236.2	235.8	235.0	234.1	233.2	232.3
110°	267.3	267.3	267.3	266.9	266.4	265.8	265.2	264.7





TEST NUMBER: P331667-935

CATALOG NUMBER: SA2XXRDIP-C485D925U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	298.6	298.2	297.7	297.2	296.9	296.4	296.0	295.6
115°	346.7	346.6	346.4	345.9	345.4	344.8	344.2	343.7
117.5°	393.3	392.9	392.4	391.8	391.3	390.7	390.1	389.6
120°	424.5	424.5	424.5	424.2	423.6	423.0	422.5	421.9
122.5°	456.5	456.1	455.6	455.2	454.8	454.3	453.9	453.5
125°	504.1	503.5	502.9	502.6	502.4	502.1	502.0	501.8
127.5°	550.3	549.6	548.9	548.2	547.6	547.0	546.4	545.8
130°	581.8	581.4	581.0	580.5	579.7	578.9	578.2	577.4
132.5°	612.5	611.7	610.8	610.1	609.5	608.9	608.3	607.7
135°	657.8	657.6	657.4	657.0	656.4	655.9	655.3	654.7
137.5°	701.2	701.0	700.9	700.4	699.6	698.9	698.1	697.3
140°	730.4	730.4	730.4	730.0	729.2	728.4	727.7	726.9
142.5°	756.8	756.9	757.1	756.8	756.0	755.3	754.5	753.7
145°	796.9	797.1	797.3	797.0	796.3	795.5	794.7	793.9
147.5°	832.1	832.5	832.9	832.8	832.1	831.3	830.6	829.8
150°	854.4	855.0	855.5	855.5	855.0	854.4	853.8	853.3
152.5°	876.7	877.4	878.1	878.1	877.4	876.7	876.0	875.2
155°	905.0	905.9	906.9	907.1	906.5	905.9	905.3	904.7
157.5°	931.1	932.4	933.7	933.8	933.0	932.0	931.1	930.2
160°	946.6	947.7	948.9	949.1	948.3	947.5	946.8	946.0
162.5°	960.6	961.9	963.2	963.5	962.5	961.6	960.7	959.8
165°	978.8	980.1	981.5	981.6	980.7	979.7	978.8	977.8
167.5°	993.7	995.1	996.3	996.5	995.6	994.5	993.6	992.6
170°	1001.9	1003.3	1004.6	1004.7	1003.6	1002.5	1001.3	1000.1
172.5°	1008.1	1009.5	1010.8	1010.9	1009.8	1008.7	1007.5	1006.3
175°	1014.9	1016.2	1017.5	1017.6	1016.5	1015.3	1014.2	1013.1
177.5°	1018.0	1018.9	1019.8	1019.8	1018.9	1018.0	1017.0	1016.2
180°	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2

(END OF REPORT)