

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: P332520

Luminaire Tested: **SA4XXDIP-C350D1035U835-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332520  
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-C350D1035U835-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1035 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

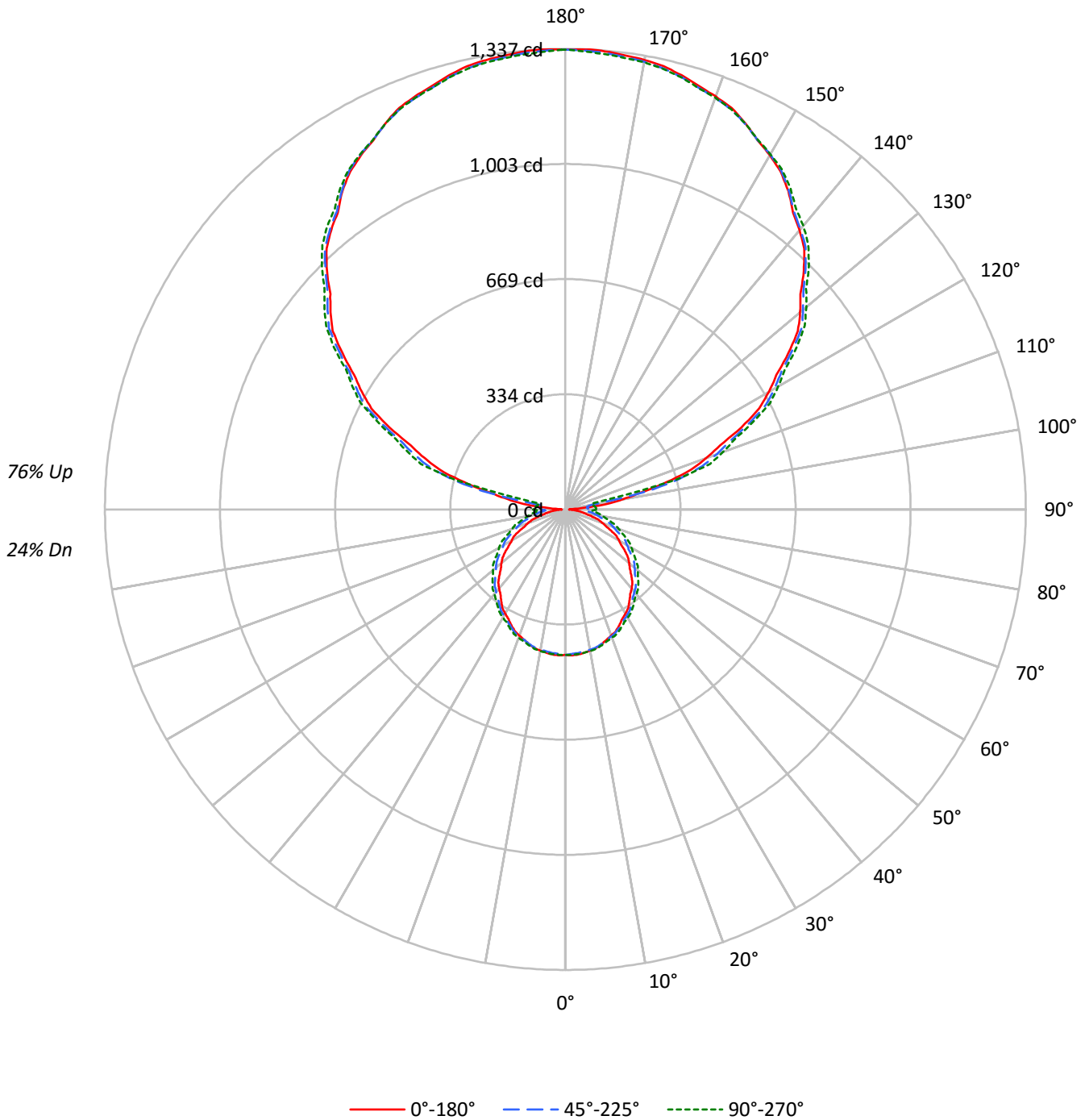
Lumens per Lamp: N/A  
Luminaire Lumens: 5573.3 lumens  
Efficiency: N/A  
Efficacy: 149.4 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

Input Watts (W): 37.3  
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: P332520  
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### Luminous Intensity Polar Plot





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**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	0
RCR																		
0	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24
1	91	87	83	80	81	77	74	71	59	57	55	43	42	40	28	27	26	19
2	83	76	70	65	73	67	62	58	52	48	45	37	35	33	24	23	22	16
3	76	66	59	53	67	59	53	48	45	41	38	33	30	28	21	19	18	13
4	69	58	51	45	61	52	46	40	40	36	32	29	26	24	19	17	15	11
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9
6	58	46	38	33	51	41	35	30	32	27	23	23	20	17	15	13	12	8
7	53	42	34	28	47	37	30	26	29	24	20	21	18	15	14	12	10	7
8	49	37	30	25	44	34	27	23	26	21	18	19	16	14	13	11	9	6
9	46	34	27	22	41	31	24	20	24	19	16	18	14	12	12	10	8	6
10	43	31	24	19	38	28	22	18	22	17	14	16	13	11	11	9	7	5

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

	0°	45°	90°
0°	3412	3412	3412
5°	3423	3335	3344
10°	3402	3281	3278
15°	3371	3217	3200
20°	3325	3147	3124
25°	3274	3070	3039
30°	3217	2992	2954
35°	3154	2912	2878
40°	3103	2836	2800
45°	3027	2766	2732
50°	2964	2686	2661
55°	2899	2610	2577
60°	2796	2513	2501
65°	2682	2410	2407
70°	2547	2292	2298
75°	2356	2161	2199
80°	2145	2037	2102
85°	1878	1926	2046



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.0	0.7
10°-20°	114.7	2.1
20°-30°	173.4	3.1
30°-40°	209.8	3.8
40°-50°	221.8	4.0
50°-60°	208.8	3.7
60°-70°	173.2	3.1
70°-80°	121.7	2.2
80°-90°	72.6	1.3
90°-100°	86.5	1.6
100°-110°	321.3	5.8
110°-120°	577.1	10.4
120°-130°	718.3	12.9
130°-140°	761.2	13.7
140°-150°	708.2	12.7
150°-160°	570.3	10.2
160°-170°	367.8	6.6
170°-180°	126.8	2.3
0°-30°	328.1	5.9
0°-40°	537.9	9.7
0°-60°	968.5	17.4
0°-90°	1336.0	24.0
90°-120°	984.9	17.7
90°-150°	3172.5	56.9
90°-180°	4237.0	76.0
0°-180°	5573.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	423	423	423	423	423	
5°	423	422	418	422	422	40
15°	406	406	405	409	408	114
25°	371	374	375	380	381	171
35°	325	330	335	341	343	203
45°	271	280	289	296	299	209
55°	212	222	236	245	248	189
65°	147	162	178	189	194	145
75°	81	99	119	132	136	87
85°	25	45	66	80	85	27
90°	11	40	69	88	94	8
95°	61	45	63	81	87	75
105°	305	321	343	361	331	319
115°	564	572	585	597	601	555
125°	790	794	804	815	820	706
135°	979	979	986	995	1000	754
145°	1128	1131	1131	1135	1139	705
155°	1237	1238	1235	1238	1236	570
165°	1305	1300	1300	1307	1299	369
175°	1335	1329	1330	1338	1327	127
180°	1335	1335	1335	1335	1335	



TEST NUMBER: P332520

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7
2.5°	424.2	423.9	423.7	423.4	423.2	422.7	422.1	421.4	420.7	420.0	420.6
5°	423.2	422.8	422.5	422.2	421.9	421.4	420.6	419.9	419.2	418.4	419.3
7.5°	419.6	419.4	419.2	419.0	418.8	418.4	417.8	417.2	416.6	416.0	416.9
10°	416.5	416.4	416.3	416.2	416.1	415.8	415.3	414.7	414.2	413.7	414.6
12.5°	412.4	412.3	412.3	412.3	412.3	412.1	411.7	411.4	411.0	410.7	411.5
15°	405.6	405.8	405.9	406.0	406.1	406.0	405.6	405.3	405.0	404.7	405.6
17.5°	396.5	396.8	397.1	397.4	397.7	397.9	397.8	397.7	397.7	397.6	398.6
20°	390.0	390.3	390.7	391.0	391.3	391.5	391.6	391.7	391.8	391.9	393.0
22.5°	382.8	383.2	383.6	384.0	384.4	384.7	384.9	385.1	385.3	385.5	386.5
25°	371.1	371.7	372.4	373.0	373.6	374.1	374.4	374.7	375.0	375.4	376.5
27.5°	358.0	359.0	359.9	360.8	361.7	362.4	362.9	363.4	363.9	364.4	365.4
30°	349.3	350.2	351.0	351.8	352.7	353.5	354.2	354.9	355.7	356.4	357.6
32.5°	339.9	340.9	341.9	342.9	343.9	344.8	345.6	346.4	347.3	348.1	349.4
35°	324.7	326.0	327.2	328.5	329.8	330.9	332.0	333.0	334.1	335.1	336.6
37.5°	309.5	310.9	312.4	313.8	315.3	316.6	318.0	319.3	320.6	321.9	323.4
40°	299.6	301.0	302.4	303.7	305.1	306.5	308.0	309.5	310.9	312.4	314.0
42.5°	288.3	289.8	291.3	292.9	294.4	296.0	297.8	299.5	301.2	302.9	304.7
45°	270.7	272.7	274.7	276.7	278.7	280.7	282.7	284.7	286.7	288.7	290.5
47.5°	254.0	256.1	258.1	260.2	262.2	264.4	266.7	269.1	271.4	273.7	275.5
50°	241.9	244.2	246.5	248.8	251.1	253.4	255.8	258.1	260.4	262.7	264.8
52.5°	229.8	232.1	234.4	236.7	239.0	241.5	244.1	246.8	249.4	252.1	254.2
55°	212.1	214.3	216.5	218.7	220.9	223.6	226.7	229.9	233.0	236.2	238.3
57.5°	192.3	195.0	197.7	200.5	203.2	206.1	209.3	212.4	215.5	218.7	221.2
60°	179.4	182.1	184.9	187.6	190.3	193.4	196.9	200.4	203.8	207.3	209.7
62.5°	166.9	169.9	172.9	175.9	178.8	182.1	185.5	189.0	192.5	196.0	198.4
65°	146.7	150.1	153.5	156.8	160.2	163.7	167.2	170.8	174.4	178.0	180.6
67.5°	127.3	130.9	134.5	138.1	141.6	145.3	149.2	153.0	156.8	160.6	163.3
70°	114.1	117.6	121.2	124.8	128.4	132.2	136.2	140.2	144.2	148.2	151.0
72.5°	101.2	104.9	108.5	112.2	115.8	119.8	124.0	128.3	132.5	136.8	139.5
75°	81.4	85.3	89.2	93.1	97.0	101.1	105.6	110.0	114.4	118.8	121.8
77.5°	63.0	67.1	71.2	75.3	79.4	83.8	88.4	93.1	97.7	102.3	105.3
80°	51.6	55.8	60.0	64.2	68.4	72.8	77.5	82.1	86.7	91.4	94.5
82.5°	40.2	44.6	49.0	53.4	57.7	62.2	66.9	71.5	76.1	80.8	84.0
85°	25.1	29.5	33.9	38.3	42.8	47.3	52.1	56.8	61.5	66.3	69.4
87.5°	14.6	19.4	24.2	28.9	33.7	38.6	43.6	48.5	53.5	58.4	61.8
90°	10.6	17.2	23.9	30.5	37.2	43.6	49.9	56.2	62.5	68.8	73.2
92.5°	19.8	23.7	27.6	31.5	35.5	40.6	46.9	53.2	59.5	65.8	70.0
95°	61.1	57.0	52.9	48.8	44.8	45.0	49.5	54.1	58.6	63.1	67.3
97.5°	122.2	129.9	137.6	145.3	152.9	146.5	126.1	105.6	85.1	64.6	67.5
100°	168.9	175.7	182.4	189.1	195.8	185.9	159.4	132.9	106.4	79.9	79.0
102.5°	221.6	227.0	232.3	237.6	242.9	245.6	245.6	245.7	245.7	245.7	207.8
105°	304.7	308.2	311.6	315.0	318.5	322.7	327.7	332.7	337.7	342.7	347.3
107.5°	382.7	385.1	387.5	389.9	392.3	396.1	401.3	406.4	411.6	416.8	420.4
110°	435.0	437.2	439.3	441.5	443.6	447.2	452.2	457.2	462.2	467.2	470.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	485.8	488.3	490.8	493.3	495.8	499.1	503.2	507.4	511.5	515.6	517.9
115°	563.9	565.5	567.1	568.7	570.3	572.7	575.8	579.0	582.1	585.3	588.0
117.5°	634.7	636.1	637.6	639.0	640.5	643.0	646.6	650.3	653.9	657.5	659.6
120°	682.2	683.4	684.6	685.8	687.0	689.0	691.8	694.7	697.5	700.3	702.9
122.5°	726.9	727.5	728.1	728.7	729.3	731.2	734.4	737.6	740.8	744.0	746.3
125°	790.5	791.3	792.1	792.9	793.7	795.1	797.3	799.5	801.7	803.9	806.5
127.5°	851.1	851.2	851.4	851.5	851.6	853.2	856.2	859.3	862.3	865.3	867.1
130°	889.9	890.0	890.1	890.2	890.3	891.6	893.9	896.3	898.6	901.0	903.1
132.5°	925.8	926.1	926.4	926.7	927.0	928.2	930.4	932.6	934.8	937.0	939.0
135°	979.3	979.0	978.8	978.6	978.4	979.1	980.7	982.3	983.9	985.6	987.7
137.5°	1027.0	1027.0	1026.9	1026.9	1026.9	1027.6	1028.9	1030.2	1031.6	1032.9	1034.9
140°	1058.1	1058.5	1058.8	1059.1	1059.5	1059.9	1060.5	1061.0	1061.6	1062.1	1064.1
142.5°	1085.7	1086.5	1087.2	1088.0	1088.8	1089.3	1089.5	1089.7	1089.9	1090.1	1091.8
145°	1128.5	1129.1	1129.6	1130.2	1130.8	1131.0	1131.0	1131.0	1131.0	1131.0	1131.9
147.5°	1162.7	1163.8	1164.9	1166.1	1167.2	1167.7	1167.4	1167.2	1167.0	1166.8	1167.0
150°	1187.4	1188.2	1189.0	1189.8	1190.5	1190.8	1190.6	1190.4	1190.2	1189.9	1189.9
152.5°	1207.8	1208.5	1209.2	1209.9	1210.6	1210.7	1210.3	1209.9	1209.5	1209.1	1209.5
155°	1236.9	1237.1	1237.3	1237.5	1237.7	1237.5	1236.9	1236.2	1235.5	1234.9	1235.7
157.5°	1261.4	1261.3	1261.1	1261.0	1260.9	1260.4	1259.7	1258.9	1258.2	1257.4	1258.6
160°	1275.8	1275.1	1274.5	1273.8	1273.1	1272.7	1272.5	1272.2	1272.0	1271.8	1273.1
162.5°	1288.6	1287.7	1286.9	1286.0	1285.2	1284.7	1284.4	1284.2	1284.0	1283.8	1285.1
165°	1304.7	1303.6	1302.5	1301.4	1300.3	1299.7	1299.7	1299.7	1299.7	1299.7	1301.5
167.5°	1317.5	1316.4	1315.2	1314.1	1312.9	1312.3	1312.1	1312.0	1311.9	1311.7	1313.7
170°	1324.7	1323.4	1322.0	1320.7	1319.4	1318.8	1319.0	1319.3	1319.5	1319.7	1321.5
172.5°	1329.5	1328.2	1326.8	1325.5	1324.2	1323.6	1323.8	1324.1	1324.3	1324.5	1326.3
175°	1334.7	1333.4	1332.0	1330.7	1329.4	1328.8	1329.0	1329.3	1329.5	1329.7	1331.7
177.5°	1337.1	1335.8	1334.6	1333.4	1332.1	1331.7	1332.0	1332.4	1332.7	1333.1	1334.5
180°	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7
2.5°	421.2	421.8	422.4	422.6	422.6	422.5	422.4	422.3
5°	420.1	420.9	421.8	422.2	422.1	421.9	421.8	421.7
7.5°	417.9	418.8	419.8	420.2	420.1	420.0	419.9	419.8
10°	415.6	416.5	417.5	417.9	417.8	417.7	417.6	417.5
12.5°	412.4	413.3	414.1	414.5	414.5	414.5	414.5	414.4
15°	406.6	407.5	408.5	408.9	408.8	408.7	408.6	408.5
17.5°	399.5	400.5	401.5	401.9	401.8	401.7	401.7	401.6
20°	394.0	395.1	396.1	396.7	396.7	396.7	396.7	396.7
22.5°	387.6	388.6	389.7	390.3	390.5	390.6	390.8	391.0
25°	377.7	378.8	380.0	380.6	380.7	380.8	380.9	381.0
27.5°	366.5	367.6	368.7	369.3	369.4	369.5	369.6	369.8
30°	358.7	359.9	361.0	361.7	361.9	362.2	362.4	362.6
32.5°	350.7	352.1	353.4	354.2	354.4	354.6	354.8	355.0
35°	338.1	339.5	341.0	341.9	342.2	342.5	342.9	343.2
37.5°	324.9	326.3	327.8	328.8	329.1	329.4	329.8	330.1
40°	315.6	317.1	318.7	319.7	320.1	320.6	321.0	321.4
42.5°	306.4	308.2	309.9	311.0	311.3	311.6	312.0	312.3
45°	292.3	294.1	295.9	297.0	297.6	298.1	298.6	299.1
47.5°	277.4	279.2	281.1	282.3	283.0	283.6	284.2	284.9
50°	266.9	269.0	271.1	272.5	273.1	273.7	274.4	275.0
52.5°	256.3	258.4	260.5	261.9	262.5	263.1	263.8	264.4
55°	240.4	242.5	244.6	246.0	246.6	247.2	247.9	248.5
57.5°	223.7	226.2	228.7	230.2	230.8	231.4	232.0	232.6
60°	212.2	214.6	217.0	218.6	219.5	220.3	221.2	222.0
62.5°	200.8	203.2	205.6	207.3	208.1	208.9	209.8	210.6
65°	183.2	185.9	188.5	190.2	191.1	191.9	192.8	193.6
67.5°	166.0	168.7	171.3	173.1	173.9	174.7	175.5	176.4
70°	153.8	156.7	159.5	161.3	162.0	162.8	163.5	164.2
72.5°	142.3	145.1	147.8	149.6	150.4	151.2	152.1	152.9
75°	124.7	127.6	130.6	132.5	133.5	134.4	135.4	136.3
77.5°	108.3	111.3	114.3	116.3	117.3	118.3	119.3	120.3
80°	97.7	100.8	104.0	106.0	106.8	107.7	108.5	109.3
82.5°	87.2	90.5	93.7	95.8	96.7	97.6	98.6	99.5
85°	72.6	75.7	78.9	81.0	82.0	83.1	84.1	85.2
87.5°	65.1	68.4	71.7	73.9	74.9	75.9	76.9	77.9
90°	77.6	82.0	86.3	89.2	90.5	91.8	93.0	94.3
92.5°	74.3	78.6	82.9	85.6	86.5	87.4	88.3	89.3
95°	71.5	75.7	79.8	82.5	83.7	84.8	86.0	87.2
97.5°	70.4	73.3	76.2	78.2	79.3	80.4	81.5	82.7
100°	78.0	77.1	76.2	76.2	77.1	78.1	79.1	80.0
102.5°	169.9	131.9	94.0	75.5	76.3	77.2	78.1	78.9
105°	352.0	356.6	361.2	359.9	352.8	345.7	338.5	331.4
107.5°	423.9	427.5	431.1	433.7	435.3	436.9	438.5	440.1
110°	472.9	475.8	478.7	480.9	482.4	483.9	485.4	486.9





TEST NUMBER: P332520

CATALOG NUMBER: SA4XXDIP-C350D1035U835-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	520.1	522.4	524.6	526.6	528.3	530.0	531.6	533.3
115°	590.8	593.5	596.3	598.0	598.8	599.5	600.3	601.0
117.5°	661.7	663.8	665.9	667.3	668.1	668.8	669.6	670.3
120°	705.4	708.0	710.5	712.0	712.4	712.8	713.2	713.6
122.5°	748.7	751.1	753.4	754.8	755.1	755.4	755.7	756.0
125°	809.2	811.9	814.5	816.3	817.2	818.0	818.9	819.7
127.5°	868.9	870.6	872.4	873.5	874.1	874.6	875.1	875.7
130°	905.2	907.3	909.4	910.8	911.4	912.1	912.7	913.3
132.5°	941.1	943.1	945.1	946.4	946.8	947.3	947.7	948.2
135°	989.8	991.9	994.1	995.7	996.7	997.8	998.9	1000.0
137.5°	1036.9	1039.0	1041.0	1042.2	1042.6	1043.0	1043.4	1043.8
140°	1066.2	1068.2	1070.2	1071.6	1072.4	1073.1	1073.9	1074.6
142.5°	1093.5	1095.2	1096.8	1097.9	1098.4	1098.9	1099.4	1099.9
145°	1132.7	1133.6	1134.5	1135.3	1136.2	1137.0	1137.9	1138.8
147.5°	1167.3	1167.6	1167.8	1168.2	1168.8	1169.4	1169.9	1170.5
150°	1189.9	1189.9	1189.9	1190.0	1190.3	1190.5	1190.7	1190.9
152.5°	1209.8	1210.2	1210.5	1210.6	1210.5	1210.4	1210.2	1210.1
155°	1236.6	1237.5	1238.4	1238.5	1237.9	1237.2	1236.5	1235.9
157.5°	1259.7	1260.9	1262.0	1262.0	1260.9	1259.7	1258.6	1257.4
160°	1274.5	1275.8	1277.1	1277.1	1275.8	1274.5	1273.1	1271.8
162.5°	1286.4	1287.8	1289.1	1289.0	1287.5	1286.0	1284.5	1283.0
165°	1303.3	1305.1	1306.8	1306.7	1304.7	1302.7	1300.7	1298.7
167.5°	1315.6	1317.6	1319.5	1319.4	1317.2	1315.0	1312.7	1310.5
170°	1323.3	1325.0	1326.8	1326.6	1324.4	1322.2	1319.9	1317.7
172.5°	1328.1	1329.8	1331.6	1331.3	1328.9	1326.5	1324.1	1321.7
175°	1333.7	1335.7	1337.7	1337.3	1334.7	1332.0	1329.4	1326.7
177.5°	1335.9	1337.3	1338.8	1338.4	1336.3	1334.2	1332.0	1329.9
180°	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7	1334.7

(END OF REPORT)