

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: P332529-840

Luminaire Tested: **SA4XXDIP-C350D1205U840-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332529-840  
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-C350D1205U840-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1205 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

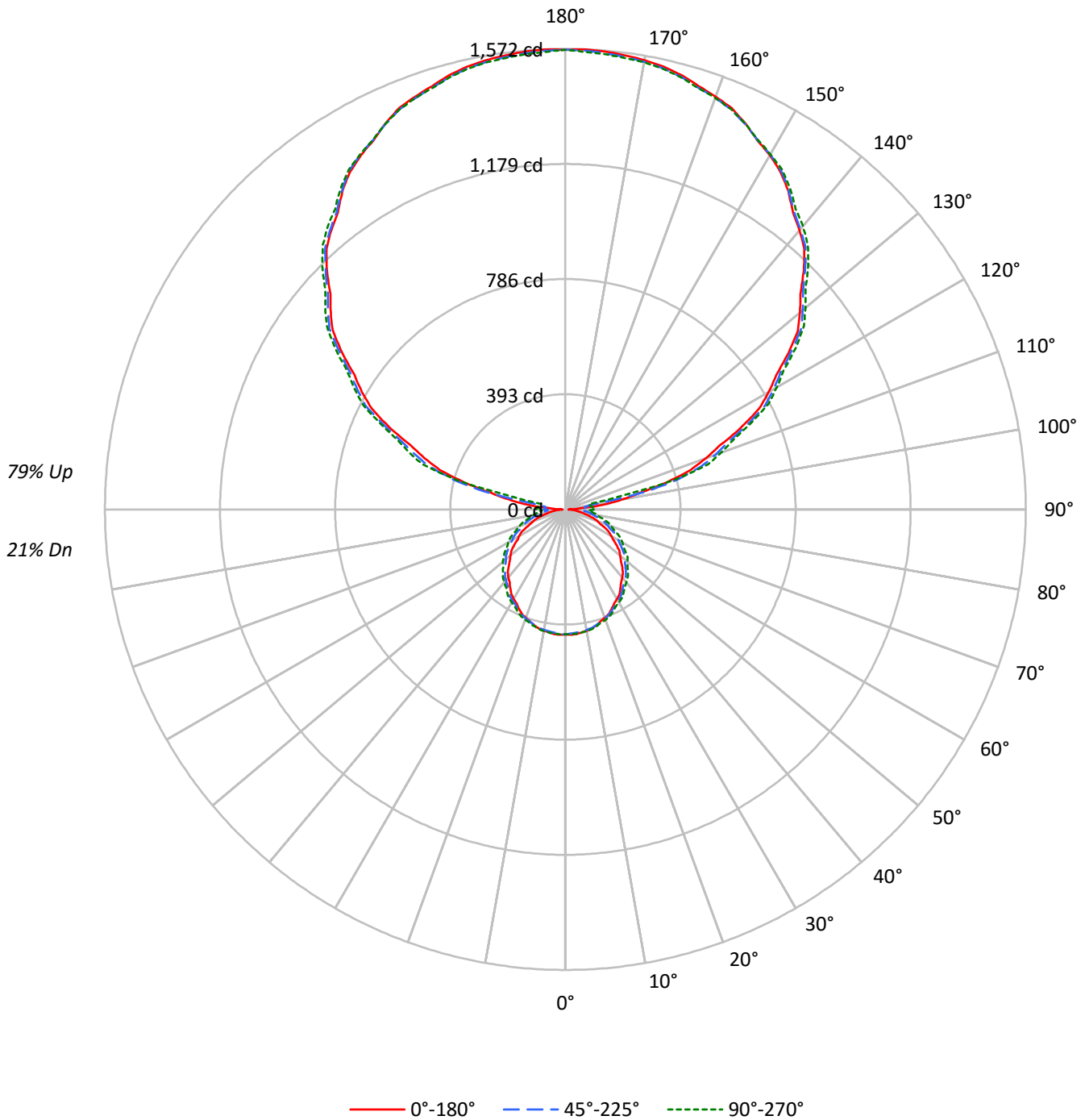
Lumens per Lamp: N/A  
Luminaire Lumens: 6312.6 lumens  
Efficiency: N/A  
Efficacy: 149.6 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

Input Watts (W): 42.2  
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: P332529-840  
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### Luminous Intensity Polar Plot





TEST NUMBER: P332529-840

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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	50	30	10	0	
RCR																						
0	100	100	100	100	89	89	89	89	67	67	67	48	48	48	30	30	30	21				
1	91	87	83	79	80	77	73	71	58	56	54	41	40	39	26	25	24	17				
2	83	75	69	64	73	67	62	57	51	47	44	36	34	32	22	21	20	14				
3	75	66	59	53	66	59	53	48	45	40	37	32	29	27	20	18	17	12				
4	69	58	50	45	60	52	45	40	39	35	31	28	25	23	17	16	14	10				
5	63	51	44	38	55	46	39	34	35	30	27	25	22	19	16	14	12	8				
6	58	46	38	33	51	41	34	29	31	27	23	22	19	17	14	12	11	7				
7	53	41	34	28	47	37	30	25	28	24	20	20	17	15	13	11	9	6				
8	49	37	30	25	43	33	27	22	26	21	18	18	15	13	12	10	8	6				
9	46	34	27	22	40	30	24	20	23	19	16	17	14	12	11	9	8	5				
10	42	31	24	19	37	28	22	17	21	17	14	15	12	10	10	8	7	5				

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

	0°	45°	90°
0°	3446	3446	3446
5°	3457	3367	3378
10°	3435	3313	3310
15°	3404	3249	3231
20°	3358	3179	3155
25°	3306	3100	3070
30°	3249	3021	2983
35°	3185	2941	2907
40°	3134	2865	2828
45°	3058	2793	2759
50°	2994	2713	2687
55°	2928	2636	2603
60°	2824	2538	2526
65°	2708	2435	2431
70°	2572	2315	2320
75°	2379	2183	2220
80°	2166	2057	2123
85°	1893	1946	2065



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.4	0.6
10°-20°	115.8	1.8
20°-30°	175.1	2.8
30°-40°	211.9	3.4
40°-50°	224.0	3.5
50°-60°	210.8	3.3
60°-70°	174.9	2.8
70°-80°	122.9	1.9
80°-90°	74.0	1.2
90°-100°	94.9	1.5
100°-110°	372.6	5.9
110°-120°	675.0	10.7
120°-130°	842.4	13.3
130°-140°	893.9	14.2
140°-150°	832.3	13.2
150°-160°	670.3	10.6
160°-170°	432.4	6.8
170°-180°	149.0	2.4
0°-30°	331.4	5.2
0°-40°	543.2	8.6
0°-60°	978.1	15.5
0°-90°	1349.8	21.4
90°-120°	1142.5	18.1
90°-150°	3711.1	58.8
90°-180°	4963.0	78.6
0°-180°	6312.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	427	427	427	427	427	
5°	427	426	422	426	426	41
15°	410	410	409	413	412	115
25°	375	378	379	384	385	173
35°	328	334	338	345	347	205
45°	273	282	292	299	302	211
55°	214	224	238	248	251	191
65°	148	164	180	191	196	147
75°	82	100	120	133	138	87
85°	25	46	67	81	86	27
90°	11	43	73	93	100	8
95°	71	49	67	87	93	88
105°	358	374	398	417	382	374
115°	662	670	684	697	700	652
125°	929	933	943	955	959	829
135°	1151	1150	1158	1168	1173	887
145°	1326	1329	1330	1334	1338	829
155°	1454	1455	1452	1456	1453	670
165°	1534	1528	1528	1536	1527	433
175°	1569	1562	1563	1572	1559	149
180°	1569	1569	1569	1569	1569	



TEST NUMBER: P332529-840

CATALOG NUMBER: SA4XXDIP-C350D1205U840-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	426.9	426.9	426.9	426.9	426.9	426.9	426.9	426.9	426.9	426.9	426.9
2.5°	428.4	428.1	427.9	427.6	427.4	426.9	426.3	425.6	424.9	424.1	424.7
5°	427.4	427.0	426.7	426.4	426.1	425.6	424.7	424.0	423.3	422.5	423.4
7.5°	423.7	423.5	423.3	423.1	422.9	422.5	421.9	421.3	420.7	420.1	421.0
10°	420.6	420.5	420.4	420.3	420.2	419.9	419.4	418.8	418.3	417.8	418.7
12.5°	416.5	416.4	416.4	416.4	416.4	416.2	415.8	415.5	415.1	414.8	415.6
15°	409.6	409.8	409.9	410.0	410.1	410.0	409.6	409.3	409.0	408.7	409.6
17.5°	400.4	400.7	401.0	401.3	401.6	401.8	401.7	401.6	401.6	401.5	402.5
20°	393.8	394.2	394.6	394.9	395.2	395.4	395.5	395.6	395.7	395.8	396.9
22.5°	386.6	387.0	387.4	387.8	388.2	388.5	388.7	388.9	389.1	389.3	390.3
25°	374.8	375.4	376.1	376.7	377.3	377.8	378.1	378.4	378.7	379.1	380.2
27.5°	361.5	362.5	363.5	364.4	365.3	366.0	366.5	367.0	367.5	368.0	369.0
30°	352.7	353.7	354.5	355.3	356.2	357.0	357.7	358.4	359.2	359.9	361.1
32.5°	343.3	344.3	345.3	346.3	347.3	348.2	349.0	349.8	350.7	351.5	352.8
35°	327.9	329.2	330.4	331.7	333.1	334.2	335.3	336.3	337.4	338.4	339.9
37.5°	312.6	314.0	315.5	316.9	318.4	319.7	321.1	322.4	323.8	325.1	326.6
40°	302.6	304.0	305.4	306.7	308.1	309.5	311.0	312.6	314.0	315.5	317.1
42.5°	291.1	292.7	294.2	295.8	297.3	298.9	300.7	302.5	304.2	305.9	307.7
45°	273.4	275.4	277.4	279.4	281.4	283.5	285.5	287.5	289.5	291.5	293.4
47.5°	256.5	258.6	260.6	262.8	264.8	267.0	269.3	271.8	274.1	276.4	278.2
50°	244.3	246.6	248.9	251.3	253.6	255.9	258.3	260.6	263.0	265.3	267.4
52.5°	232.1	234.4	236.7	239.0	241.4	243.9	246.5	249.2	251.9	254.6	256.7
55°	214.2	216.4	218.6	220.9	223.1	225.8	228.9	232.2	235.3	238.5	240.7
57.5°	194.2	196.9	199.7	202.5	205.2	208.1	211.4	214.5	217.6	220.9	223.4
60°	181.2	183.9	186.7	189.5	192.2	195.3	198.8	202.4	205.8	209.3	211.8
62.5°	168.5	171.6	174.6	177.6	180.6	183.9	187.3	190.9	194.4	197.9	200.4
65°	148.1	151.6	155.0	158.3	161.8	165.3	168.8	172.5	176.1	179.8	182.4
67.5°	128.6	132.2	135.8	139.5	143.0	146.7	150.7	154.5	158.3	162.2	164.9
70°	115.2	118.8	122.4	126.0	129.7	133.5	137.5	141.6	145.6	149.7	152.5
72.5°	102.2	105.9	109.6	113.3	116.9	121.0	125.2	129.6	133.8	138.1	140.9
75°	82.2	86.1	90.1	94.0	98.0	102.1	106.6	111.1	115.5	120.0	123.0
77.5°	63.6	67.8	71.9	76.0	80.2	84.6	89.3	94.0	98.7	103.3	106.3
80°	52.1	56.4	60.6	64.8	69.1	73.5	78.3	82.9	87.6	92.3	95.4
82.5°	40.6	45.0	49.5	53.9	58.3	62.8	67.6	72.2	76.9	81.6	84.8
85°	25.3	29.8	34.2	38.7	43.2	47.8	52.6	57.4	62.1	67.0	70.1
87.5°	14.8	19.8	24.6	29.6	34.4	39.5	44.5	49.6	54.6	59.8	63.1
90°	11.2	18.3	25.4	32.5	39.7	46.6	53.2	59.8	66.4	73.1	77.8
92.5°	22.0	26.1	30.0	34.0	38.0	43.3	50.0	56.6	63.2	69.9	74.4
95°	70.8	65.4	60.0	54.6	49.3	49.0	53.5	58.2	62.8	67.4	71.8
97.5°	142.7	151.3	159.8	168.3	176.8	168.7	144.0	119.2	94.4	69.6	72.5
100°	197.7	205.1	212.6	220.0	227.5	215.3	183.5	151.7	119.8	88.0	86.3
102.5°	259.6	265.5	271.4	277.2	283.1	285.7	285.1	284.5	283.8	283.2	238.1
105°	357.5	361.2	364.9	368.6	372.2	376.7	381.9	387.2	392.4	397.7	402.6
107.5°	449.2	451.7	454.2	456.8	459.3	463.2	468.8	474.2	479.8	485.2	489.0
110°	510.8	513.0	515.2	517.6	519.8	523.6	528.9	534.1	539.5	544.7	547.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	570.5	573.2	575.9	578.7	581.4	584.8	589.2	593.4	597.6	602.0	604.2
115°	662.4	664.1	665.8	667.5	669.2	671.8	674.9	678.0	681.2	684.3	687.1
117.5°	745.6	747.2	748.8	750.4	752.0	754.7	758.4	762.1	765.9	769.6	771.7
120°	801.5	802.8	804.3	805.6	807.0	809.0	811.8	814.7	817.5	820.3	822.9
122.5°	854.0	854.7	855.5	856.2	856.8	858.8	862.1	865.4	868.6	871.9	874.3
125°	928.9	929.9	930.8	931.7	932.6	934.2	936.3	938.5	940.6	942.7	945.5
127.5°	1000.2	1000.3	1000.5	1000.6	1000.8	1002.5	1005.7	1009.0	1012.2	1015.4	1017.1
130°	1045.8	1045.9	1046.1	1046.2	1046.4	1047.7	1050.2	1052.7	1055.1	1057.6	1059.9
132.5°	1088.0	1088.3	1088.7	1089.1	1089.4	1090.9	1093.2	1095.5	1097.9	1100.2	1102.3
135°	1150.9	1150.6	1150.3	1150.1	1149.8	1150.6	1152.5	1154.2	1156.0	1157.8	1160.0
137.5°	1207.0	1207.0	1207.0	1207.0	1207.0	1207.7	1209.2	1210.7	1212.2	1213.8	1215.9
140°	1243.6	1244.1	1244.5	1244.9	1245.3	1245.8	1246.4	1247.1	1247.7	1248.3	1250.4
142.5°	1276.1	1277.0	1277.9	1278.8	1279.7	1280.3	1280.6	1280.8	1281.1	1281.3	1283.1
145°	1326.5	1327.1	1327.8	1328.5	1329.2	1329.5	1329.5	1329.5	1329.5	1329.5	1330.4
147.5°	1366.5	1368.0	1369.3	1370.6	1372.0	1372.5	1372.3	1372.0	1371.7	1371.5	1371.8
150°	1395.6	1396.6	1397.6	1398.5	1399.4	1399.8	1399.5	1399.3	1399.0	1398.7	1398.7
152.5°	1419.7	1420.5	1421.3	1422.1	1422.9	1423.1	1422.7	1422.2	1421.7	1421.3	1421.7
155°	1453.9	1454.1	1454.4	1454.6	1454.9	1454.6	1453.9	1453.1	1452.3	1451.5	1452.6
157.5°	1482.7	1482.6	1482.4	1482.3	1482.1	1481.6	1480.7	1479.9	1478.9	1478.0	1479.4
160°	1499.6	1498.8	1498.0	1497.3	1496.5	1496.0	1495.7	1495.4	1495.2	1494.9	1496.5
162.5°	1514.6	1513.7	1512.7	1511.7	1510.7	1510.1	1509.7	1509.5	1509.2	1509.0	1510.6
165°	1533.7	1532.4	1531.1	1529.7	1528.4	1527.8	1527.8	1527.8	1527.8	1527.8	1529.8
167.5°	1548.6	1547.3	1546.0	1544.6	1543.3	1542.5	1542.4	1542.2	1542.1	1541.9	1544.2
170°	1557.1	1555.6	1554.0	1552.5	1550.8	1550.2	1550.4	1550.7	1551.0	1551.3	1553.4
172.5°	1562.8	1561.2	1559.6	1558.0	1556.5	1555.8	1556.1	1556.4	1556.6	1556.9	1558.9
175°	1568.8	1567.3	1565.7	1564.2	1562.6	1562.0	1562.2	1562.5	1562.8	1563.0	1565.3
177.5°	1571.7	1570.2	1568.7	1567.3	1565.8	1565.3	1565.7	1566.1	1566.6	1567.0	1568.6
180°	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	426.9	426.9	426.9	426.9	426.9	426.9	426.9	426.9
2.5°	425.4	426.0	426.6	426.8	426.8	426.7	426.6	426.5
5°	424.2	425.1	426.0	426.4	426.3	426.1	426.0	425.9
7.5°	422.0	422.9	423.9	424.3	424.2	424.1	424.0	423.9
10°	419.7	420.6	421.6	422.0	421.9	421.8	421.7	421.6
12.5°	416.5	417.4	418.2	418.6	418.6	418.6	418.6	418.5
15°	410.6	411.5	412.5	412.9	412.8	412.7	412.6	412.5
17.5°	403.4	404.5	405.5	405.9	405.8	405.7	405.7	405.6
20°	397.9	399.0	400.0	400.6	400.6	400.6	400.6	400.6
22.5°	391.4	392.4	393.5	394.2	394.4	394.5	394.7	394.9
25°	381.4	382.5	383.7	384.4	384.5	384.6	384.7	384.8
27.5°	370.1	371.2	372.3	372.9	373.0	373.1	373.2	373.4
30°	362.2	363.5	364.6	365.3	365.5	365.8	366.0	366.2
32.5°	354.2	355.6	356.9	357.7	357.9	358.1	358.3	358.5
35°	341.4	342.8	344.4	345.3	345.6	345.9	346.3	346.6
37.5°	328.1	329.5	331.0	332.0	332.3	332.6	333.1	333.4
40°	318.7	320.2	321.8	322.9	323.3	323.8	324.2	324.6
42.5°	309.4	311.2	313.0	314.1	314.4	314.7	315.1	315.4
45°	295.2	297.0	298.8	299.9	300.5	301.0	301.5	302.1
47.5°	280.1	282.0	283.9	285.1	285.8	286.4	287.0	287.7
50°	269.5	271.7	273.8	275.2	275.8	276.4	277.1	277.7
52.5°	258.8	260.9	263.1	264.5	265.1	265.7	266.4	267.0
55°	242.8	244.9	247.0	248.4	249.0	249.6	250.3	251.0
57.5°	225.9	228.4	231.0	232.5	233.1	233.7	234.3	234.9
60°	214.3	216.7	219.1	220.8	221.7	222.5	223.4	224.2
62.5°	202.8	205.2	207.6	209.3	210.2	211.0	211.9	212.7
65°	185.0	187.7	190.4	192.1	193.0	193.8	194.7	195.5
67.5°	167.6	170.4	173.0	174.8	175.6	176.4	177.2	178.1
70°	155.3	158.2	161.1	162.9	163.6	164.4	165.1	165.8
72.5°	143.7	146.5	149.3	151.1	151.9	152.7	153.6	154.4
75°	125.9	128.9	131.9	133.8	134.8	135.7	136.7	137.6
77.5°	109.4	112.4	115.4	117.4	118.5	119.5	120.5	121.5
80°	98.7	101.8	105.0	107.0	107.9	108.8	109.6	110.4
82.5°	88.1	91.4	94.6	96.7	97.7	98.6	99.6	100.5
85°	73.3	76.4	79.7	81.8	82.8	83.9	84.9	86.0
87.5°	66.6	69.9	73.3	75.5	76.5	77.7	78.7	79.7
90°	82.4	87.1	91.7	94.7	96.1	97.5	98.9	100.2
92.5°	79.1	83.6	88.2	90.9	91.9	92.8	93.7	94.7
95°	76.2	80.7	85.1	88.0	89.2	90.4	91.6	92.8
97.5°	75.4	78.5	81.4	83.4	84.6	85.7	86.9	88.2
100°	84.8	83.3	81.7	81.4	82.4	83.4	84.4	85.4
102.5°	193.1	148.0	103.0	80.9	81.8	82.7	83.6	84.4
105°	407.7	412.6	417.7	415.9	407.4	398.8	390.3	381.7
107.5°	492.7	496.6	500.3	503.0	504.8	506.5	508.3	510.1
110°	550.7	553.6	556.5	558.9	560.5	562.2	563.8	565.4





TEST NUMBER: P332529-840

CATALOG NUMBER: SA4XXDIP-C350D1205U840-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	606.4	608.7	611.0	613.0	614.8	616.7	618.5	620.4
115°	689.9	692.9	695.7	697.5	698.2	699.0	699.7	700.4
117.5°	773.9	776.0	778.1	779.5	780.2	781.0	781.7	782.4
120°	825.6	828.2	830.9	832.3	832.7	833.0	833.3	833.6
122.5°	876.8	879.2	881.6	883.0	883.2	883.4	883.7	883.9
125°	948.4	951.1	953.9	955.7	956.6	957.6	958.5	959.4
127.5°	1019.0	1020.7	1022.5	1023.6	1024.1	1024.6	1025.1	1025.6
130°	1062.0	1064.2	1066.3	1067.7	1068.3	1069.0	1069.6	1070.3
132.5°	1104.4	1106.5	1108.6	1109.8	1110.2	1110.6	1111.2	1111.6
135°	1162.3	1164.5	1166.7	1168.3	1169.5	1170.6	1171.8	1173.0
137.5°	1218.0	1220.1	1222.2	1223.6	1223.9	1224.3	1224.7	1225.1
140°	1252.6	1254.8	1257.0	1258.4	1259.2	1260.0	1260.8	1261.6
142.5°	1284.9	1286.7	1288.5	1289.6	1290.1	1290.6	1291.1	1291.6
145°	1331.3	1332.2	1333.1	1334.0	1334.9	1335.8	1336.9	1337.8
147.5°	1372.1	1372.4	1372.7	1373.1	1373.7	1374.3	1374.9	1375.5
150°	1398.7	1398.7	1398.7	1398.9	1399.1	1399.4	1399.7	1399.9
152.5°	1422.1	1422.5	1422.9	1423.0	1422.9	1422.7	1422.6	1422.4
155°	1453.6	1454.6	1455.7	1455.8	1455.0	1454.2	1453.5	1452.7
157.5°	1480.8	1482.1	1483.5	1483.5	1482.1	1480.8	1479.4	1478.0
160°	1498.0	1499.6	1501.2	1501.2	1499.6	1498.0	1496.5	1494.9
162.5°	1512.2	1513.7	1515.3	1515.2	1513.4	1511.7	1509.8	1508.0
165°	1532.0	1534.1	1536.1	1536.0	1533.7	1531.3	1528.9	1526.6
167.5°	1546.5	1548.7	1551.1	1550.8	1548.3	1545.7	1543.1	1540.4
170°	1555.4	1557.5	1559.6	1559.3	1556.7	1554.1	1551.6	1548.9
172.5°	1561.0	1563.2	1565.2	1564.9	1562.1	1559.2	1556.4	1553.6
175°	1567.7	1570.0	1572.4	1572.0	1568.8	1565.7	1562.6	1559.4
177.5°	1570.3	1572.0	1573.7	1573.3	1570.7	1568.2	1565.7	1563.3
180°	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8	1568.8

(END OF REPORT)