

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: P332532

Luminaire Tested: **SA4XXDIP-C350D1205U835-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332532  
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-C350D1205U835-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1205 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

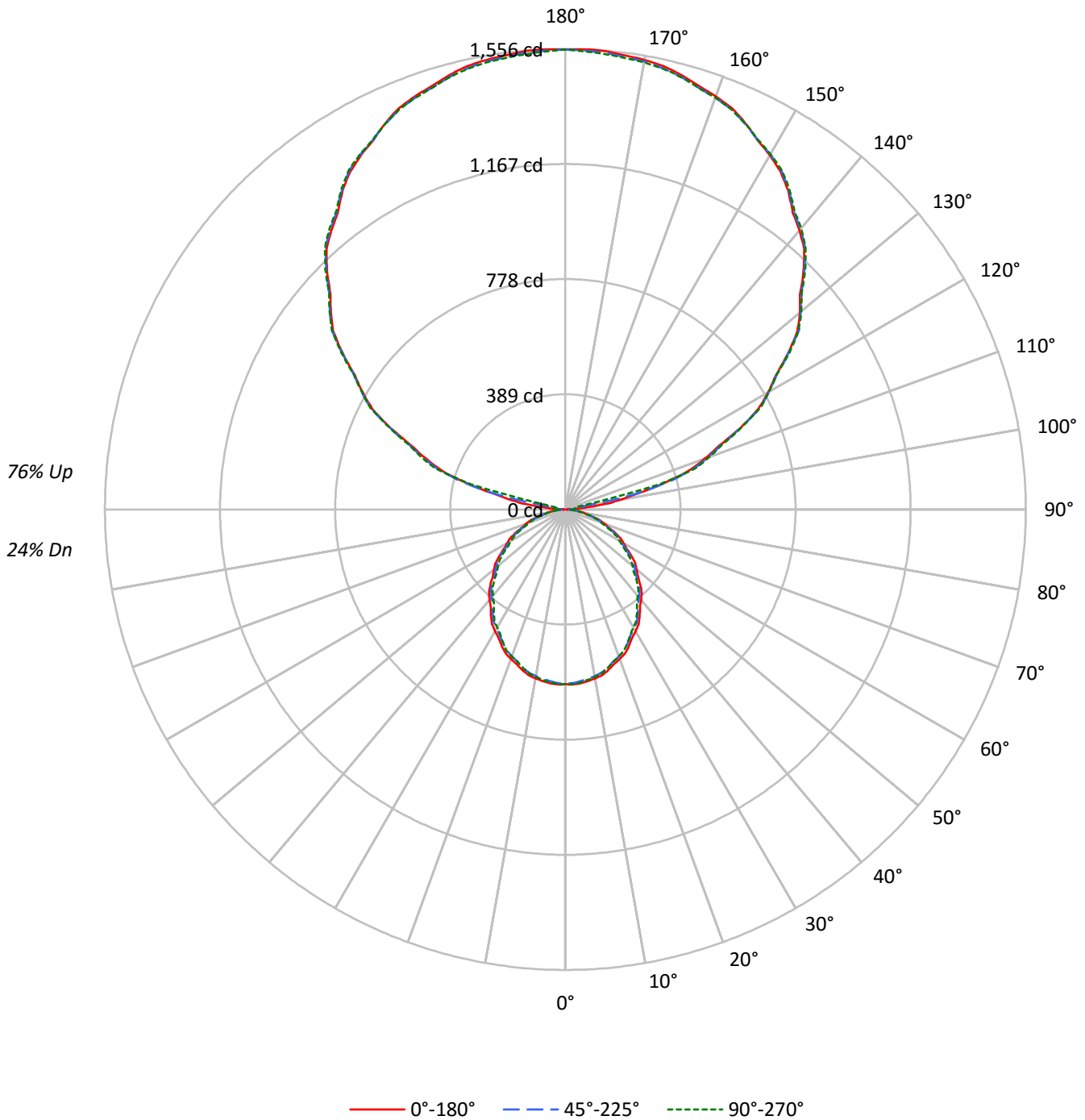
Lumens per Lamp: N/A  
Luminaire Lumens: 6325.9 lumens  
Efficiency: N/A  
Efficacy: 149.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

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



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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	50	30	10	0	
RCR																						
0	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24				24
1	92	88	84	81	82	78	75	72	60	58	56	44	42	41	28	28	27	20				20
2	84	77	71	66	74	68	63	59	53	49	46	38	36	34	25	24	23	17				17
3	76	67	60	55	68	60	54	49	46	42	39	34	31	29	22	21	19	14				14
4	70	59	52	46	62	53	47	42	41	37	33	30	27	25	20	18	17	12				12
5	64	53	45	39	56	47	41	36	37	32	28	27	24	21	18	16	14	11				11
6	59	47	39	34	52	42	36	31	33	28	25	24	21	19	16	14	13	9				9
7	54	42	35	29	48	38	31	27	30	25	22	22	19	16	15	13	11	8				8
8	50	38	31	26	44	34	28	23	27	22	19	20	17	14	13	11	10	7				7
9	46	35	28	23	41	31	25	21	25	20	17	18	15	13	12	10	9	7				7
10	43	32	25	20	38	29	23	18	23	18	15	17	14	12	11	10	8	6				6

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

	0°	45°	90°
0°	4769	4769	4769
5°	4783	4725	4760
10°	4753	4687	4710
15°	4695	4621	4633
20°	4619	4538	4542
25°	4532	4444	4431
30°	4426	4333	4294
35°	4315	4217	4161
40°	4200	4086	4011
45°	4080	3956	3881
50°	3947	3841	3721
55°	3804	3690	3571
60°	3660	3523	3416
65°	3500	3364	3228
70°	3319	3151	3028
75°	3041	2895	2820
80°	2706	2599	2529
85°	2371	2279	2232



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.6	0.9
10°-20°	156.7	2.5
20°-30°	230.7	3.6
30°-40°	268.2	4.2
40°-50°	268.2	4.2
50°-60°	234.6	3.7
60°-70°	174.2	2.8
70°-80°	99.0	1.6
80°-90°	33.1	0.5
90°-100°	53.1	0.8
100°-110°	338.8	5.4
110°-120°	648.1	10.2
120°-130°	822.7	13.0
130°-140°	880.2	13.9
140°-150°	823.1	13.0
150°-160°	663.8	10.5
160°-170°	428.1	6.8
170°-180°	147.6	2.3
0°-30°	443.1	7.0
0°-40°	711.3	11.2
0°-60°	1214.1	19.2
0°-90°	1520.4	24.0
90°-120°	1040.0	16.4
90°-150°	3566.1	56.4
90°-180°	4806.0	76.0
0°-180°	6325.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	591	591	591	591	591	
5°	590	588	583	588	587	56
15°	562	560	553	555	554	158
25°	509	505	499	499	498	234
35°	438	434	428	425	422	274
45°	357	354	346	342	340	275
55°	270	269	262	257	254	242
65°	183	181	176	172	169	181
75°	98	95	93	91	90	104
85°	26	26	25	25	24	28
90°	4	16	26	32	35	4
95°	64	27	26	32	34	82
105°	350	357	362	370	331	366
115°	653	656	655	658	658	642
125°	918	922	920	924	925	819
135°	1139	1138	1142	1145	1147	877
145°	1313	1316	1316	1318	1320	820
155°	1440	1441	1437	1442	1438	663
165°	1519	1513	1513	1521	1512	429
175°	1554	1547	1548	1557	1544	148
180°	1554	1554	1554	1554	1554	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7
2.5°	592.2	592.0	591.7	591.5	591.2	590.6	589.7	588.8	587.9	586.9	587.8
5°	590.2	589.8	589.4	589.0	588.6	587.8	586.6	585.5	584.3	583.1	584.3
7.5°	584.8	584.3	583.9	583.5	583.1	582.2	580.9	579.7	578.4	577.1	578.0
10°	579.8	579.4	579.0	578.6	578.2	577.3	575.9	574.5	573.2	571.8	572.6
12.5°	573.4	573.0	572.6	572.1	571.7	570.8	569.3	567.9	566.4	565.0	565.9
15°	561.8	561.4	561.0	560.6	560.2	559.2	557.6	556.0	554.4	552.9	553.5
17.5°	547.9	547.4	546.9	546.4	545.8	544.8	543.3	541.8	540.3	538.8	539.2
20°	537.7	537.2	536.7	536.1	535.6	534.6	533.0	531.4	529.8	528.2	528.6
22.5°	526.7	526.0	525.3	524.6	523.9	522.8	521.2	519.7	518.1	516.5	517.1
25°	508.8	508.1	507.4	506.6	505.9	504.8	503.3	501.8	500.4	498.9	499.0
27.5°	488.4	487.6	486.9	486.1	485.4	484.3	482.9	481.6	480.2	478.8	478.6
30°	474.8	473.9	473.1	472.2	471.4	470.3	468.9	467.5	466.2	464.8	464.4
32.5°	460.4	459.6	458.8	458.1	457.3	456.2	454.8	453.3	451.9	450.4	449.9
35°	437.8	437.1	436.4	435.6	434.9	433.8	432.3	430.8	429.4	427.9	427.2
37.5°	414.1	413.4	412.7	412.1	411.4	410.3	408.7	407.1	405.5	403.9	403.1
40°	398.5	397.7	396.9	396.0	395.2	394.0	392.4	390.8	389.2	387.7	386.6
42.5°	381.9	381.4	380.9	380.4	379.9	378.7	377.0	375.2	373.5	371.8	370.5
45°	357.4	356.6	355.9	355.2	354.4	353.2	351.5	349.8	348.2	346.5	345.3
47.5°	331.7	331.2	330.7	330.2	329.7	328.7	327.1	325.5	324.0	322.4	321.1
50°	314.3	313.9	313.5	313.0	312.6	311.7	310.2	308.7	307.2	305.8	304.3
52.5°	297.3	296.7	296.2	295.7	295.2	294.2	292.6	291.1	289.5	288.0	286.7
55°	270.3	270.0	269.6	269.3	269.0	268.1	266.6	265.2	263.7	262.2	261.0
57.5°	244.5	244.2	243.8	243.5	243.1	242.2	240.7	239.3	237.8	236.4	235.2
60°	226.7	226.2	225.7	225.1	224.6	223.7	222.3	220.9	219.6	218.2	217.3
62.5°	209.3	208.9	208.4	208.0	207.5	206.6	205.1	203.7	202.2	200.8	199.9
65°	183.2	182.7	182.1	181.6	181.1	180.3	179.2	178.2	177.1	176.1	175.0
67.5°	156.9	156.4	155.9	155.4	154.9	154.2	153.2	152.2	151.2	150.1	149.1
70°	140.6	139.8	139.1	138.4	137.6	136.8	136.0	135.2	134.3	133.5	132.6
72.5°	123.2	122.4	121.7	121.0	120.2	119.5	118.8	118.2	117.5	116.8	116.1
75°	97.5	97.0	96.5	95.9	95.4	94.9	94.4	93.8	93.3	92.8	92.4
77.5°	73.0	72.8	72.5	72.3	72.1	71.7	71.3	70.8	70.3	69.9	69.7
80°	58.2	57.9	57.6	57.3	57.0	56.7	56.5	56.3	56.1	55.9	55.6
82.5°	43.8	43.7	43.5	43.4	43.2	43.1	43.1	43.1	43.0	43.0	42.9
85°	25.6	25.6	25.6	25.6	25.6	25.5	25.2	25.0	24.8	24.6	24.6
87.5°	10.5	11.0	11.5	12.0	12.5	12.9	13.2	13.5	13.9	14.2	14.5
90°	3.5	6.3	9.2	12.0	14.8	17.3	19.4	21.4	23.5	25.6	27.1
92.5°	14.6	14.8	15.0	15.1	15.3	16.4	18.4	20.5	22.6	24.6	26.2
95°	63.9	55.1	46.3	37.6	28.8	24.5	24.8	25.0	25.3	25.6	27.1
97.5°	135.7	141.2	146.7	152.1	157.6	145.9	117.1	88.3	59.5	30.7	30.8
100°	190.6	195.2	199.9	204.5	209.2	193.7	158.0	122.4	86.8	51.1	46.7
102.5°	251.9	255.3	258.7	262.1	265.5	264.9	260.3	255.6	251.0	246.3	199.0
105°	349.7	351.3	352.8	354.4	355.9	357.4	358.7	359.9	361.2	362.5	364.9
107.5°	440.6	441.4	442.2	442.9	443.7	445.0	446.7	448.5	450.2	452.0	453.1
110°	502.0	502.7	503.5	504.3	505.1	506.2	507.8	509.3	510.9	512.4	512.9



TEST NUMBER: P332532

CATALOG NUMBER: SA4XXDIP-C350D1205U835-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	561.5	562.9	564.2	565.6	567.0	568.1	568.8	569.5	570.3	571.0	570.9
115°	653.0	653.8	654.6	655.3	656.1	656.4	656.1	655.9	655.6	655.3	655.9
117.5°	735.5	736.5	737.6	738.6	739.6	740.4	741.0	741.6	742.2	742.7	742.6
120°	791.3	792.3	793.4	794.4	795.4	795.8	795.6	795.3	795.0	794.8	795.3
122.5°	843.3	844.0	844.6	845.2	845.8	846.3	846.7	847.0	847.4	847.8	848.1
125°	917.9	919.0	920.0	921.0	922.1	922.3	921.8	921.3	920.8	920.3	921.0
127.5°	988.6	988.8	989.1	989.4	989.6	990.3	991.5	992.7	993.9	995.1	994.9
130°	1034.1	1034.4	1034.7	1034.9	1035.2	1035.7	1036.5	1037.2	1038.0	1038.8	1039.0
132.5°	1076.0	1076.4	1076.9	1077.4	1077.8	1078.6	1079.5	1080.5	1081.5	1082.5	1082.7
135°	1138.7	1138.5	1138.2	1137.9	1137.7	1138.1	1139.1	1140.1	1141.2	1142.2	1142.7
137.5°	1194.3	1194.4	1194.5	1194.6	1194.7	1195.3	1196.4	1197.6	1198.7	1199.8	1200.4
140°	1230.5	1231.0	1231.5	1232.1	1232.6	1233.1	1233.6	1234.1	1234.6	1235.2	1235.9
142.5°	1263.0	1264.0	1264.9	1265.8	1266.8	1267.4	1267.7	1268.0	1268.3	1268.6	1269.2
145°	1313.0	1313.8	1314.6	1315.3	1316.1	1316.5	1316.5	1316.5	1316.5	1316.5	1316.8
147.5°	1352.7	1354.2	1355.6	1357.1	1358.5	1359.1	1358.9	1358.6	1358.3	1358.1	1358.3
150°	1381.6	1382.6	1383.6	1384.7	1385.7	1386.1	1385.8	1385.6	1385.3	1385.0	1385.0
152.5°	1405.7	1406.6	1407.4	1408.2	1409.0	1409.2	1408.8	1408.3	1407.8	1407.4	1407.8
155°	1439.7	1439.9	1440.2	1440.4	1440.7	1440.4	1439.7	1438.9	1438.1	1437.3	1438.4
157.5°	1468.2	1468.1	1467.9	1467.8	1467.6	1467.1	1466.2	1465.4	1464.5	1463.6	1464.9
160°	1485.0	1484.2	1483.4	1482.7	1481.9	1481.4	1481.1	1480.8	1480.6	1480.3	1481.9
162.5°	1499.8	1498.9	1497.9	1496.9	1495.9	1495.3	1495.0	1494.8	1494.5	1494.3	1495.8
165°	1518.7	1517.4	1516.1	1514.8	1513.5	1512.9	1512.9	1512.9	1512.9	1512.9	1514.9
167.5°	1533.5	1532.2	1530.9	1529.5	1528.2	1527.4	1527.3	1527.1	1527.0	1526.8	1529.1
170°	1541.9	1540.4	1538.8	1537.3	1535.7	1535.1	1535.3	1535.6	1535.8	1536.1	1538.2
172.5°	1547.5	1545.9	1544.4	1542.8	1541.3	1540.6	1540.9	1541.2	1541.4	1541.7	1543.7
175°	1553.5	1552.0	1550.4	1548.9	1547.3	1546.7	1546.9	1547.2	1547.5	1547.7	1550.0
177.5°	1556.3	1554.9	1553.4	1552.0	1550.5	1550.0	1550.4	1550.8	1551.3	1551.7	1553.3
180°	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5



TEST NUMBER: P332532

CATALOG NUMBER: SA4XXDIP-C350D1205U835-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	590.7	590.7	590.7	590.7	590.7	590.7	590.7	590.7
2.5°	588.6	589.5	590.3	590.7	590.6	590.5	590.4	590.3
5°	585.5	586.6	587.8	588.2	588.0	587.8	587.6	587.4
7.5°	578.9	579.9	580.8	581.2	581.1	580.9	580.8	580.7
10°	573.5	574.3	575.2	575.5	575.3	575.0	574.8	574.6
12.5°	566.8	567.7	568.7	569.0	568.7	568.4	568.1	567.8
15°	554.1	554.7	555.4	555.5	555.2	554.9	554.6	554.3
17.5°	539.6	540.0	540.4	540.5	540.3	540.1	539.9	539.7
20°	528.9	529.2	529.5	529.6	529.3	529.1	528.9	528.7
22.5°	517.6	518.2	518.8	518.9	518.5	518.1	517.7	517.4
25°	499.1	499.2	499.3	499.2	498.7	498.3	497.9	497.5
27.5°	478.3	478.1	477.8	477.4	476.9	476.4	475.8	475.3
30°	464.0	463.6	463.1	462.7	462.1	461.6	461.1	460.6
32.5°	449.4	448.9	448.4	447.9	447.4	446.8	446.3	445.8
35°	426.4	425.7	424.9	424.3	423.8	423.3	422.7	422.2
37.5°	402.3	401.5	400.7	400.0	399.3	398.6	397.9	397.2
40°	385.6	384.5	383.5	382.7	382.1	381.6	381.1	380.6
42.5°	369.3	368.1	366.9	366.1	365.7	365.4	365.0	364.7
45°	344.2	343.0	341.9	341.1	340.8	340.5	340.2	339.9
47.5°	319.8	318.5	317.2	316.2	315.4	314.6	313.8	313.0
50°	302.8	301.4	299.9	298.8	298.2	297.6	296.9	296.3
52.5°	285.4	284.1	282.8	281.7	280.9	280.1	279.3	278.5
55°	259.7	258.4	257.2	256.2	255.6	255.0	254.3	253.7
57.5°	234.0	232.8	231.6	230.7	230.1	229.5	228.9	228.2
60°	216.3	215.4	214.4	213.7	213.2	212.6	212.1	211.6
62.5°	199.1	198.2	197.3	196.6	196.1	195.6	195.1	194.5
65°	174.0	172.9	171.9	171.1	170.6	170.0	169.5	169.0
67.5°	148.1	147.1	146.1	145.5	145.4	145.2	145.1	144.9
70°	131.8	131.0	130.1	129.5	129.2	128.9	128.6	128.3
72.5°	115.5	114.8	114.1	113.6	113.3	113.0	112.7	112.4
75°	91.9	91.5	91.1	90.8	90.7	90.6	90.5	90.4
77.5°	69.6	69.5	69.4	69.2	68.9	68.6	68.3	68.1
80°	55.4	55.2	55.0	54.9	54.7	54.6	54.5	54.4
82.5°	42.7	42.6	42.5	42.4	42.3	42.1	42.0	41.9
85°	24.6	24.6	24.6	24.6	24.5	24.4	24.2	24.1
87.5°	14.8	15.1	15.4	15.6	15.7	15.9	16.0	16.1
90°	28.7	30.2	31.8	32.8	33.3	33.8	34.3	34.9
92.5°	27.7	29.3	30.8	31.7	31.8	31.9	32.0	32.1
95°	28.7	30.2	31.8	32.7	32.9	33.2	33.4	33.7
97.5°	31.0	31.1	31.3	31.5	31.8	32.0	32.3	32.5
100°	42.3	38.0	33.6	31.5	31.8	32.0	32.3	32.5
102.5°	151.6	104.3	56.9	33.3	33.3	33.4	33.4	33.5
105°	367.2	369.5	371.8	368.3	359.0	349.7	340.5	331.2
107.5°	454.3	455.4	456.5	457.6	458.6	459.6	460.5	461.5
110°	513.5	514.0	514.5	515.1	515.9	516.7	517.5	518.2





TEST NUMBER: P332532

CATALOG NUMBER: SA4XXDIP-C350D1205U835-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	570.8	570.7	570.6	571.0	572.0	573.0	574.0	574.9
115°	656.4	656.9	657.4	657.7	657.7	657.7	657.7	657.7
117.5°	742.5	742.4	742.3	742.2	742.1	742.0	741.9	741.8
120°	795.8	796.3	796.8	796.8	796.3	795.8	795.3	794.8
122.5°	848.4	848.7	849.0	848.9	848.4	847.9	847.3	846.8
125°	921.8	922.6	923.4	923.9	924.1	924.4	924.7	924.9
127.5°	994.8	994.6	994.5	994.3	994.1	993.9	993.7	993.5
130°	1039.3	1039.6	1039.8	1039.9	1039.9	1039.9	1039.9	1039.9
132.5°	1083.0	1083.3	1083.5	1083.5	1083.3	1083.1	1082.9	1082.7
135°	1143.2	1143.7	1144.3	1144.8	1145.3	1145.8	1146.3	1146.8
137.5°	1201.0	1201.5	1202.1	1202.3	1202.2	1202.0	1201.8	1201.7
140°	1236.7	1237.5	1238.3	1238.8	1239.0	1239.3	1239.5	1239.8
142.5°	1269.8	1270.3	1270.9	1271.2	1271.3	1271.3	1271.4	1271.4
145°	1317.0	1317.3	1317.5	1317.9	1318.4	1318.9	1319.5	1320.0
147.5°	1358.5	1358.7	1358.9	1359.1	1359.4	1359.7	1359.9	1360.2
150°	1385.0	1385.0	1385.0	1385.2	1385.4	1385.7	1386.0	1386.2
152.5°	1408.2	1408.6	1409.0	1409.1	1409.0	1408.8	1408.7	1408.5
155°	1439.4	1440.4	1441.5	1441.6	1440.8	1440.0	1439.3	1438.5
157.5°	1466.3	1467.6	1469.0	1469.0	1467.6	1466.3	1464.9	1463.6
160°	1483.4	1485.0	1486.5	1486.5	1485.0	1483.4	1481.9	1480.3
162.5°	1497.4	1498.9	1500.5	1500.4	1498.6	1496.9	1495.1	1493.3
165°	1517.0	1519.1	1521.1	1521.0	1518.7	1516.3	1514.0	1511.7
167.5°	1531.4	1533.6	1535.9	1535.7	1533.2	1530.6	1528.0	1525.4
170°	1540.2	1542.3	1544.4	1544.1	1541.5	1538.9	1536.4	1533.8
172.5°	1545.8	1547.9	1549.9	1549.6	1546.8	1544.0	1541.2	1538.4
175°	1552.4	1554.7	1557.0	1556.6	1553.5	1550.4	1547.3	1544.2
177.5°	1555.0	1556.6	1558.3	1557.9	1555.4	1552.9	1550.4	1548.0
180°	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5	1553.5

(END OF REPORT)