

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: P332892-830

Luminaire Tested: **SA4XXRDIP-C350D1205U830-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332892-830  
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: SA4XXRDIP-C350D1205U830-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1205 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5879.8 lumens  
Efficiency: N/A  
Efficacy: 139.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

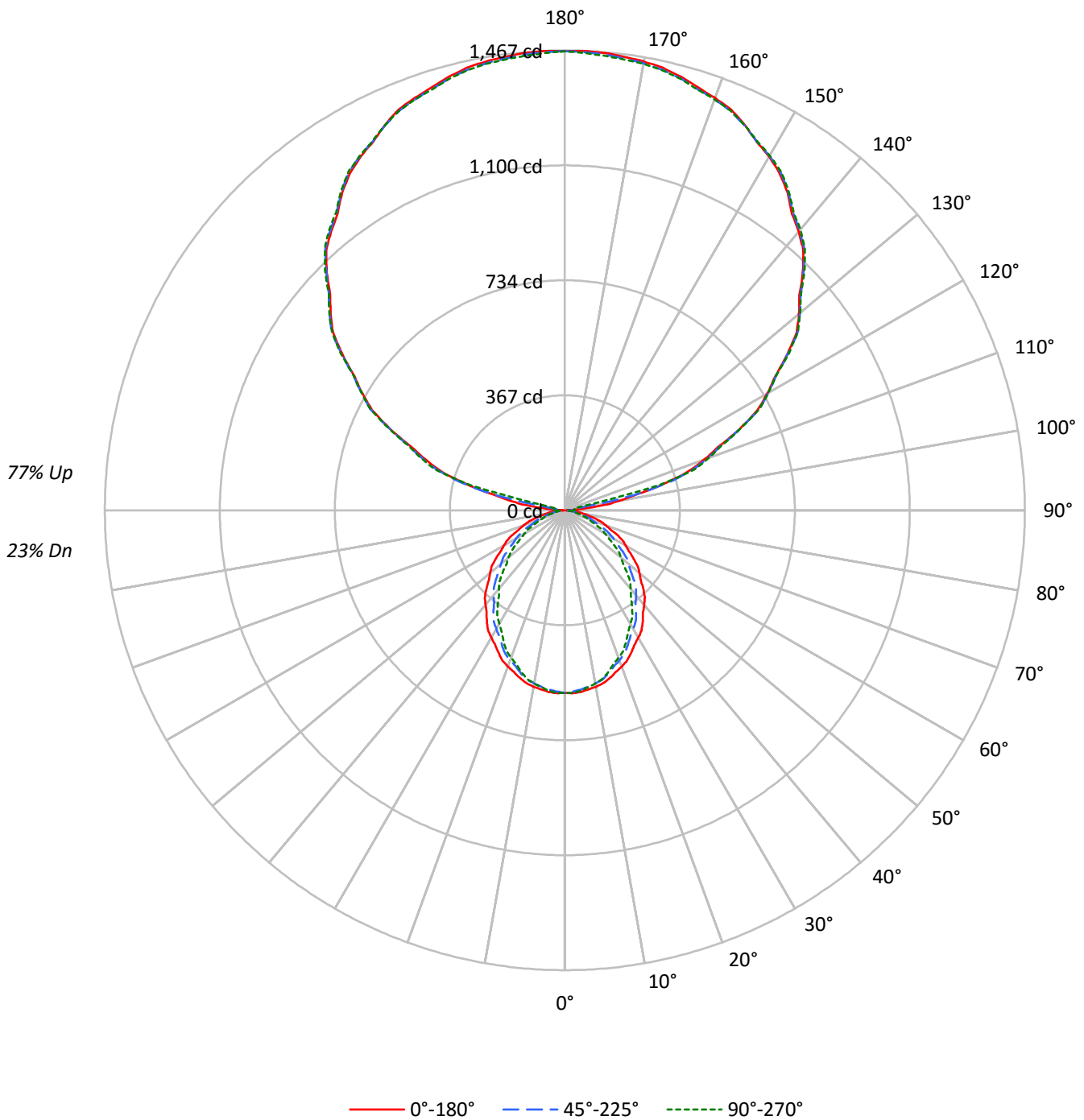
Input Watts (W): 42.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	89	89	89	89	68	68	68	49	49	49	31	31	31	23				
1	92	88	84	81	81	78	75	72	60	58	56	43	42	41	28	27	27	20				
2	84	77	71	66	74	68	63	59	53	49	47	38	36	34	25	23	23	17				
3	76	67	61	55	68	60	54	50	46	42	39	34	31	29	22	20	19	14				
4	70	60	52	46	62	53	47	42	41	37	33	30	27	25	20	18	17	12				
5	64	53	45	40	57	47	41	36	37	32	29	27	24	22	18	16	15	11				
6	59	47	40	34	52	42	36	31	33	28	25	24	21	19	16	14	13	9				
7	54	43	35	30	48	38	32	27	30	25	22	22	19	17	15	13	11	8				
8	50	39	31	26	44	35	28	24	27	22	19	20	17	15	13	12	10	8				
9	47	35	28	23	41	31	25	21	25	20	17	18	15	13	12	11	9	7				
10	43	32	25	21	39	29	23	19	23	18	15	17	14	12	11	10	8	6				

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

	0°	45°	90°
0°	4704	4704	4704
5°	4714	4657	4686
10°	4685	4601	4601
15°	4631	4504	4471
20°	4558	4376	4296
25°	4464	4228	4121
30°	4371	4072	3901
35°	4269	3909	3680
40°	4147	3724	3442
45°	4035	3540	3199
50°	3905	3328	2941
55°	3768	3108	2663
60°	3615	2868	2377
65°	3477	2565	2096
70°	3274	2231	1780
75°	3019	1853	1447
80°	2631	1409	1330
85°	2232	1288	1195



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.7	0.9
10°-20°	152.6	2.6
20°-30°	220.4	3.7
30°-40°	249.8	4.2
40°-50°	241.2	4.1
50°-60°	200.6	3.4
60°-70°	138.5	2.4
70°-80°	70.2	1.2
80°-90°	22.2	0.4
90°-100°	50.1	0.9
100°-110°	319.3	5.4
110°-120°	610.8	10.4
120°-130°	775.4	13.2
130°-140°	829.7	14.1
140°-150°	775.8	13.2
150°-160°	625.7	10.6
160°-170°	403.5	6.9
170°-180°	139.1	2.4
0°-30°	427.8	7.3
0°-40°	677.6	11.5
0°-60°	1119.4	19.0
0°-90°	1350.4	23.0
90°-120°	980.2	16.7
90°-150°	3361.2	57.2
90°-180°	4529.0	77.0
0°-180°	5879.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	583	583	583	583	583	
5°	582	580	575	579	578	55
15°	554	550	539	538	535	156
25°	501	492	475	467	463	231
35°	433	418	397	382	373	271
45°	353	336	310	289	280	272
55°	268	249	221	198	189	239
65°	182	162	134	116	110	180
75°	97	80	59	50	46	102
85°	24	16	14	13	13	27
90°	3	15	24	30	33	4
95°	60	25	24	30	32	77
105°	330	336	342	349	312	345
115°	616	619	618	620	620	605
125°	865	869	867	871	872	772
135°	1073	1072	1077	1079	1081	827
145°	1238	1241	1241	1242	1244	773
155°	1357	1358	1355	1359	1356	625
165°	1431	1426	1426	1434	1425	404
175°	1464	1458	1459	1467	1456	139
180°	1464	1464	1464	1464	1464	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	582.7	582.7	582.7	582.7	582.7	582.7	582.7	582.7	582.7	582.7	582.7
2.5°	584.1	583.7	583.4	583.2	582.8	582.2	581.4	580.5	579.6	578.7	579.6
5°	581.7	581.4	581.0	580.6	580.1	579.4	578.2	577.0	575.8	574.7	575.6
7.5°	576.5	576.1	575.7	575.2	574.9	573.8	572.3	570.7	569.2	567.7	568.3
10°	571.5	571.0	570.5	570.0	569.5	568.4	566.6	564.8	563.0	561.3	561.7
12.5°	565.1	564.5	563.9	563.4	562.8	561.5	559.3	557.2	555.2	553.0	553.3
15°	554.1	553.2	552.3	551.4	550.5	548.8	546.4	543.8	541.4	538.9	538.8
17.5°	540.8	539.5	538.2	537.0	535.6	533.5	530.6	527.5	524.6	521.6	521.0
20°	530.5	529.1	527.9	526.6	525.3	523.0	519.6	516.2	512.8	509.4	508.7
22.5°	519.1	517.6	516.1	514.7	513.2	510.7	507.1	503.5	499.9	496.2	495.1
25°	501.1	499.3	497.5	495.7	493.9	491.0	486.9	482.9	478.7	474.7	473.0
27.5°	482.1	479.8	477.6	475.4	473.2	469.9	465.5	461.2	456.9	452.5	450.3
30°	468.9	466.4	463.9	461.5	459.0	455.4	450.7	446.1	441.4	436.8	434.3
32.5°	455.0	452.1	449.4	446.6	443.7	440.0	435.2	430.4	425.6	420.8	417.8
35°	433.2	430.0	426.9	423.7	420.5	416.4	411.5	406.5	401.6	396.6	393.2
37.5°	409.9	406.6	403.4	400.1	396.8	392.5	386.9	381.4	376.0	370.5	366.7
40°	393.5	390.2	386.9	383.7	380.4	376.0	370.3	364.7	359.0	353.4	349.2
42.5°	377.8	374.4	370.9	367.5	364.1	359.4	353.5	347.6	341.8	335.8	331.6
45°	353.4	349.7	346.0	342.3	338.7	333.8	327.9	322.0	316.0	310.1	305.2
47.5°	328.1	324.3	320.6	316.7	312.9	307.9	301.8	295.6	289.4	283.2	278.1
50°	310.9	307.1	303.2	299.4	295.5	290.4	284.1	277.7	271.4	265.0	260.0
52.5°	293.5	289.6	285.9	282.1	278.3	273.1	266.6	260.1	253.6	247.1	242.1
55°	267.7	263.7	259.8	255.8	251.8	246.6	240.2	233.8	227.2	220.8	215.7
57.5°	242.1	238.0	233.9	229.8	225.6	220.5	214.1	207.7	201.4	195.0	189.8
60°	223.9	220.0	216.0	212.1	208.1	202.9	196.6	190.2	183.9	177.6	172.4
62.5°	207.5	203.4	199.3	195.2	191.1	185.8	179.3	172.8	166.3	159.8	155.0
65°	182.0	177.8	173.5	169.3	164.9	159.7	153.4	146.9	140.6	134.3	130.1
67.5°	155.5	151.5	147.3	143.3	139.2	134.2	128.3	122.4	116.5	110.7	107.0
70°	138.7	134.6	130.4	126.3	122.1	117.2	111.5	105.8	100.2	94.5	91.3
72.5°	120.9	117.2	113.4	109.6	105.8	101.3	96.0	90.6	85.3	79.9	77.2
75°	96.8	93.1	89.4	85.8	82.1	77.9	73.3	68.6	64.0	59.4	57.0
77.5°	72.4	69.3	66.2	63.1	59.9	56.5	52.7	48.9	45.1	41.4	40.1
80°	56.6	53.8	50.9	48.1	45.1	42.2	39.3	36.3	33.3	30.3	30.1
82.5°	43.1	40.4	37.8	35.2	32.5	30.3	28.7	27.0	25.3	23.6	23.4
85°	24.1	22.1	20.2	18.1	16.1	15.0	14.7	14.4	14.1	13.9	13.7
87.5°	8.9	8.8	8.7	8.6	8.5	8.6	8.9	9.2	9.5	9.8	10.0
90°	3.3	5.9	8.7	11.3	13.9	16.3	18.3	20.2	22.1	24.1	25.5
92.5°	13.8	13.9	14.1	14.2	14.4	15.5	17.3	19.3	21.3	23.2	24.7
95°	60.2	51.9	43.6	35.4	27.1	23.1	23.4	23.6	23.8	24.1	25.5
97.5°	127.9	133.1	138.3	143.4	148.5	137.5	110.4	83.2	56.1	28.9	29.0
100°	179.6	184.0	188.4	192.7	197.2	182.6	148.9	115.4	81.8	48.2	44.0
102.5°	237.4	240.6	243.8	247.0	250.2	249.7	245.3	240.9	236.6	232.1	187.6
105°	329.6	331.1	332.5	334.0	335.5	336.9	338.1	339.2	340.4	341.7	343.9
107.5°	415.3	416.0	416.8	417.5	418.2	419.4	421.0	422.7	424.3	426.0	427.1
110°	473.2	473.8	474.6	475.3	476.1	477.1	478.6	480.0	481.5	483.0	483.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	529.2	530.6	531.8	533.1	534.4	535.5	536.1	536.8	537.5	538.2	538.1
115°	615.5	616.2	617.0	617.6	618.4	618.7	618.4	618.2	617.9	617.6	618.2
117.5°	693.2	694.2	695.2	696.2	697.1	697.9	698.4	699.0	699.6	700.0	699.9
120°	745.8	746.8	747.8	748.8	749.7	750.1	749.9	749.6	749.3	749.1	749.6
122.5°	794.8	795.5	796.1	796.6	797.2	797.7	798.1	798.3	798.7	799.1	799.4
125°	865.2	866.2	867.1	868.1	869.1	869.3	868.8	868.4	867.9	867.4	868.1
127.5°	931.8	932.0	932.3	932.6	932.7	933.4	934.5	935.7	936.8	937.9	937.7
130°	974.7	975.0	975.2	975.4	975.7	976.2	976.9	977.6	978.4	979.1	979.3
132.5°	1014.2	1014.6	1015.0	1015.5	1015.9	1016.6	1017.5	1018.4	1019.4	1020.3	1020.5
135°	1073.3	1073.1	1072.8	1072.5	1072.3	1072.7	1073.7	1074.6	1075.6	1076.6	1077.0
137.5°	1125.7	1125.8	1125.9	1126.0	1126.1	1126.6	1127.7	1128.8	1129.8	1130.9	1131.4
140°	1159.8	1160.3	1160.7	1161.3	1161.8	1162.2	1162.7	1163.2	1163.7	1164.2	1164.9
142.5°	1190.4	1191.4	1192.2	1193.1	1194.0	1194.6	1194.9	1195.1	1195.4	1195.7	1196.3
145°	1237.6	1238.3	1239.1	1239.7	1240.5	1240.9	1240.9	1240.9	1240.9	1240.9	1241.1
147.5°	1275.0	1276.4	1277.7	1279.1	1280.4	1281.0	1280.8	1280.5	1280.3	1280.1	1280.3
150°	1302.2	1303.2	1304.1	1305.1	1306.1	1306.5	1306.2	1306.0	1305.7	1305.4	1305.4
152.5°	1324.9	1325.8	1326.5	1327.3	1328.0	1328.2	1327.9	1327.4	1326.9	1326.5	1326.9
155°	1357.0	1357.2	1357.4	1357.6	1357.9	1357.6	1357.0	1356.2	1355.5	1354.7	1355.8
157.5°	1383.8	1383.7	1383.6	1383.5	1383.3	1382.8	1382.0	1381.2	1380.4	1379.5	1380.7
160°	1399.7	1398.9	1398.2	1397.5	1396.8	1396.3	1396.0	1395.7	1395.5	1395.2	1396.8
162.5°	1413.6	1412.8	1411.8	1410.9	1409.9	1409.4	1409.1	1408.9	1408.6	1408.4	1409.9
165°	1431.4	1430.2	1429.0	1427.8	1426.5	1426.0	1426.0	1426.0	1426.0	1426.0	1427.9
167.5°	1445.4	1444.2	1442.9	1441.6	1440.4	1439.6	1439.5	1439.4	1439.3	1439.1	1441.2
170°	1453.3	1451.9	1450.4	1449.0	1447.5	1446.9	1447.1	1447.4	1447.6	1447.8	1449.8
172.5°	1458.6	1457.1	1455.7	1454.2	1452.7	1452.1	1452.4	1452.6	1452.8	1453.1	1455.0
175°	1464.2	1462.8	1461.3	1459.9	1458.4	1457.8	1458.0	1458.3	1458.6	1458.8	1460.9
177.5°	1466.9	1465.6	1464.1	1462.8	1461.4	1460.9	1461.3	1461.7	1462.2	1462.5	1464.1
180°	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	582.7	582.7	582.7	582.7	582.7	582.7	582.7	582.7
2.5°	580.5	581.4	582.2	582.6	582.5	582.5	582.4	582.3
5°	576.6	577.6	578.6	579.0	578.8	578.6	578.3	578.2
7.5°	568.9	569.6	570.2	570.3	570.0	569.8	569.4	569.1
10°	562.0	562.4	562.8	562.8	562.4	562.0	561.7	561.3
12.5°	553.5	553.7	554.0	553.8	553.3	552.7	552.1	551.6
15°	538.6	538.4	538.1	537.7	537.0	536.3	535.6	534.9
17.5°	520.5	520.0	519.4	518.6	517.6	516.5	515.5	514.4
20°	507.9	507.1	506.3	505.3	504.0	502.7	501.4	500.1
22.5°	493.9	492.7	491.5	490.4	489.4	488.3	487.3	486.2
25°	471.3	469.7	468.0	466.7	465.6	464.6	463.6	462.6
27.5°	448.3	446.2	444.1	442.4	440.9	439.5	438.1	436.7
30°	431.8	429.3	426.9	424.8	423.2	421.7	420.1	418.5
32.5°	415.0	412.1	409.3	407.0	405.5	404.0	402.5	401.0
35°	389.8	386.5	383.1	380.6	378.8	377.0	375.2	373.4
37.5°	363.0	359.2	355.4	352.6	350.8	349.0	347.2	345.4
40°	345.0	340.8	336.7	333.8	332.0	330.2	328.4	326.6
42.5°	327.3	323.1	318.9	315.8	314.0	312.1	310.2	308.4
45°	300.4	295.5	290.6	287.3	285.5	283.7	281.9	280.2
47.5°	273.1	268.1	263.1	259.6	257.6	255.6	253.6	251.8
50°	255.1	250.2	245.2	241.8	239.9	238.0	236.1	234.2
52.5°	237.0	232.1	227.1	223.5	221.6	219.6	217.6	215.7
55°	210.6	205.4	200.2	196.7	194.8	192.9	191.1	189.2
57.5°	184.5	179.4	174.1	170.8	169.4	168.0	166.5	165.0
60°	167.2	162.1	156.9	153.5	151.9	150.4	148.8	147.2
62.5°	150.2	145.4	140.7	137.7	136.4	135.2	133.8	132.6
65°	125.7	121.5	117.3	114.5	113.3	112.2	110.9	109.7
67.5°	103.3	99.6	96.0	93.5	92.2	90.9	89.5	88.2
70°	88.0	84.7	81.5	79.4	78.3	77.4	76.3	75.4
72.5°	74.4	71.5	68.8	66.9	66.0	65.1	64.2	63.2
75°	54.8	52.5	50.2	48.8	48.2	47.6	47.0	46.4
77.5°	38.7	37.4	36.1	35.3	35.2	35.0	34.8	34.6
80°	29.8	29.4	29.1	28.9	28.8	28.7	28.7	28.6
82.5°	23.1	22.9	22.7	22.5	22.4	22.3	22.2	22.1
85°	13.5	13.2	13.0	12.9	12.9	12.9	12.9	12.9
87.5°	10.3	10.5	10.7	10.8	11.0	11.2	11.4	11.6
90°	27.1	28.5	30.0	30.9	31.4	31.9	32.3	32.9
92.5°	26.1	27.6	29.0	29.9	30.0	30.1	30.2	30.3
95°	27.1	28.5	30.0	30.8	31.0	31.3	31.5	31.8
97.5°	29.2	29.3	29.5	29.7	30.0	30.2	30.4	30.6
100°	39.9	35.8	31.7	29.7	30.0	30.2	30.4	30.6
102.5°	142.9	98.3	53.6	31.4	31.4	31.5	31.5	31.6
105°	346.1	348.3	350.4	347.1	338.4	329.6	320.9	312.2
107.5°	428.2	429.2	430.3	431.3	432.3	433.2	434.0	435.0
110°	484.0	484.5	484.9	485.5	486.3	487.0	487.8	488.4





TEST NUMBER: P332892-830

CATALOG NUMBER: SA4XXRDIP-C350D1205U830-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	538.0	537.9	537.8	538.2	539.1	540.1	541.0	541.9
115°	618.7	619.2	619.6	619.9	619.9	619.9	619.9	619.9
117.5°	699.8	699.7	699.6	699.6	699.5	699.4	699.3	699.2
120°	750.1	750.5	751.0	751.0	750.5	750.1	749.6	749.1
122.5°	799.7	799.9	800.2	800.1	799.7	799.2	798.6	798.1
125°	868.8	869.6	870.3	870.8	871.0	871.3	871.6	871.8
127.5°	937.6	937.5	937.4	937.2	937.0	936.8	936.6	936.4
130°	979.6	979.9	980.1	980.1	980.1	980.1	980.1	980.1
132.5°	1020.8	1021.1	1021.2	1021.2	1021.1	1020.9	1020.7	1020.5
135°	1077.5	1078.0	1078.6	1079.0	1079.5	1080.0	1080.4	1080.9
137.5°	1132.0	1132.5	1133.0	1133.2	1133.1	1132.9	1132.7	1132.7
140°	1165.6	1166.4	1167.2	1167.6	1167.8	1168.1	1168.3	1168.6
142.5°	1196.8	1197.3	1197.9	1198.2	1198.3	1198.3	1198.3	1198.3
145°	1241.3	1241.6	1241.8	1242.2	1242.6	1243.1	1243.7	1244.2
147.5°	1280.4	1280.6	1280.8	1281.0	1281.3	1281.6	1281.8	1282.0
150°	1305.4	1305.4	1305.4	1305.6	1305.8	1306.1	1306.4	1306.6
152.5°	1327.3	1327.7	1328.0	1328.1	1328.0	1327.9	1327.8	1327.6
155°	1356.7	1357.6	1358.7	1358.8	1358.0	1357.3	1356.6	1355.8
157.5°	1382.1	1383.3	1384.6	1384.6	1383.3	1382.1	1380.7	1379.5
160°	1398.2	1399.7	1401.1	1401.1	1399.7	1398.2	1396.8	1395.2
162.5°	1411.4	1412.8	1414.3	1414.2	1412.5	1410.9	1409.2	1407.5
165°	1429.8	1431.8	1433.7	1433.6	1431.4	1429.2	1427.0	1424.8
167.5°	1443.4	1445.5	1447.7	1447.5	1445.1	1442.7	1440.2	1437.8
170°	1451.7	1453.7	1455.7	1455.4	1452.9	1450.5	1448.1	1445.7
172.5°	1457.0	1459.0	1460.8	1460.6	1457.9	1455.3	1452.6	1450.0
175°	1463.2	1465.4	1467.5	1467.2	1464.2	1461.3	1458.4	1455.5
177.5°	1465.7	1467.2	1468.8	1468.4	1466.0	1463.7	1461.3	1459.1
180°	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2

(END OF REPORT)