

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: P332532-940

Luminaire Tested: **SA4XXDIP-C350D1205U940-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332532-940  
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-C350D1205U940-4F0-1E-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: 5640.9 lumens  
Efficiency: N/A  
Efficacy: 133.7 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

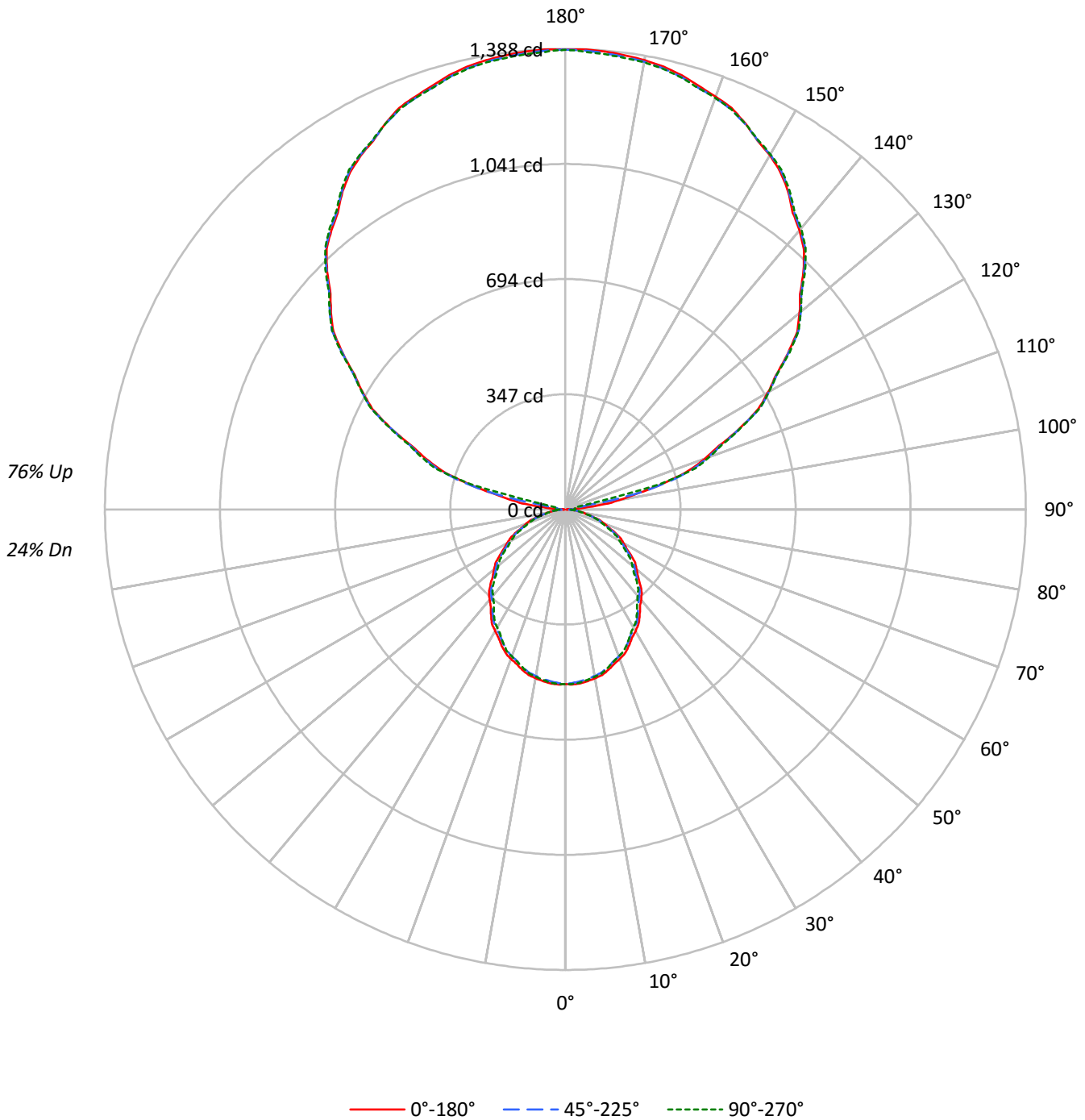
Input Watts (W): 42.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	4252	4252	4252
5°	4265	4214	4245
10°	4238	4180	4200
15°	4187	4120	4131
20°	4119	4046	4050
25°	4041	3963	3951
30°	3947	3864	3828
35°	3847	3761	3710
40°	3744	3643	3577
45°	3639	3528	3460
50°	3520	3425	3318
55°	3392	3291	3184
60°	3265	3142	3047
65°	3121	2999	2879
70°	2960	2809	2700
75°	2711	2583	2514
80°	2413	2315	2255
85°	2112	2029	1991



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.6	0.9
10°-20°	139.8	2.5
20°-30°	205.7	3.6
30°-40°	239.2	4.2
40°-50°	239.2	4.2
50°-60°	209.2	3.7
60°-70°	155.4	2.8
70°-80°	88.3	1.6
80°-90°	29.5	0.5
90°-100°	47.4	0.8
100°-110°	302.1	5.4
110°-120°	577.9	10.2
120°-130°	733.6	13.0
130°-140°	784.9	13.9
140°-150°	734.0	13.0
150°-160°	591.9	10.5
160°-170°	381.8	6.8
170°-180°	131.6	2.3
0°-30°	395.1	7.0
0°-40°	634.2	11.2
0°-60°	1082.6	19.2
0°-90°	1355.7	24.0
90°-120°	927.4	16.4
90°-150°	3179.9	56.4
90°-180°	4285.0	76.0
0°-180°	5640.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	527	527	527	527	527	
5°	526	524	520	524	524	50
15°	501	499	493	495	494	141
25°	454	451	445	445	444	209
35°	390	387	382	379	376	244
45°	319	316	309	305	303	246
55°	241	240	234	229	226	216
65°	163	161	157	153	151	162
75°	87	85	83	81	81	92
85°	23	23	22	22	22	25
90°	3	14	23	29	31	4
95°	57	24	23	29	30	73
105°	312	318	323	330	295	326
115°	582	585	584	586	586	573
125°	818	822	821	824	825	730
135°	1015	1015	1018	1021	1023	782
145°	1171	1174	1174	1175	1177	731
155°	1284	1285	1282	1285	1283	592
165°	1354	1349	1349	1356	1348	383
175°	1385	1379	1380	1388	1377	132
180°	1385	1385	1385	1385	1385	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7
2.5°	528.1	527.9	527.6	527.4	527.2	526.6	525.8	525.0	524.2	523.3	524.1
5°	526.3	525.9	525.6	525.2	524.9	524.1	523.1	522.1	521.0	520.0	521.0
7.5°	521.5	521.0	520.7	520.3	520.0	519.2	518.0	516.9	515.8	514.6	515.4
10°	517.0	516.7	516.3	515.9	515.6	514.8	513.5	512.3	511.1	509.9	510.6
12.5°	511.3	511.0	510.6	510.1	509.8	509.0	507.7	506.4	505.1	503.8	504.6
15°	501.0	500.6	500.2	499.9	499.5	498.6	497.2	495.8	494.4	493.0	493.6
17.5°	488.6	488.1	487.7	487.2	486.7	485.8	484.5	483.1	481.8	480.5	480.8
20°	479.5	479.0	478.6	478.0	477.6	476.7	475.3	473.9	472.4	471.0	471.4
22.5°	469.7	469.0	468.4	467.8	467.2	466.2	464.8	463.4	462.0	460.6	461.1
25°	453.7	453.1	452.5	451.7	451.1	450.1	448.8	447.5	446.2	444.9	445.0
27.5°	435.5	434.8	434.2	433.5	432.8	431.9	430.6	429.4	428.2	427.0	426.8
30°	423.4	422.6	421.9	421.1	420.4	419.4	418.1	416.9	415.7	414.5	414.1
32.5°	410.5	409.8	409.1	408.5	407.8	406.8	405.6	404.2	403.0	401.6	401.2
35°	390.4	389.8	389.1	388.4	387.8	386.8	385.5	384.1	382.9	381.6	380.9
37.5°	369.3	368.6	368.0	367.5	366.8	365.9	364.4	363.0	361.6	360.2	359.4
40°	355.3	354.6	353.9	353.1	352.4	351.3	349.9	348.5	347.1	345.7	344.7
42.5°	340.5	340.1	339.7	339.2	338.8	337.7	336.2	334.6	333.1	331.5	330.4
45°	318.7	318.0	317.4	316.7	316.0	315.0	313.4	311.9	310.5	309.0	307.9
47.5°	295.8	295.3	294.9	294.4	294.0	293.1	291.7	290.3	288.9	287.5	286.3
50°	280.3	279.9	279.6	279.1	278.7	277.9	276.6	275.3	273.9	272.7	271.3
52.5°	265.1	264.6	264.1	263.7	263.2	262.3	260.9	259.6	258.2	256.8	255.7
55°	241.0	240.8	240.4	240.1	239.9	239.1	237.7	236.5	235.1	233.8	232.7
57.5°	218.0	217.8	217.4	217.1	216.8	216.0	214.6	213.4	212.0	210.8	209.7
60°	202.2	201.7	201.3	200.7	200.3	199.5	198.2	197.0	195.8	194.6	193.8
62.5°	186.6	186.3	185.8	185.5	185.0	184.2	182.9	181.6	180.3	179.1	178.3
65°	163.4	162.9	162.4	161.9	161.5	160.8	159.8	158.9	157.9	157.0	156.0
67.5°	139.9	139.5	139.0	138.6	138.1	137.5	136.6	135.7	134.8	133.8	133.0
70°	125.4	124.7	124.0	123.4	122.7	122.0	121.3	120.6	119.8	119.0	118.2
72.5°	109.9	109.1	108.5	107.9	107.2	106.6	105.9	105.4	104.8	104.2	103.5
75°	86.9	86.5	86.1	85.5	85.1	84.6	84.2	83.6	83.2	82.8	82.4
77.5°	65.1	64.9	64.6	64.5	64.3	63.9	63.6	63.1	62.7	62.3	62.2
80°	51.9	51.6	51.4	51.1	50.8	50.6	50.4	50.2	50.0	49.8	49.6
82.5°	39.1	39.0	38.8	38.7	38.5	38.4	38.4	38.4	38.3	38.3	38.3
85°	22.8	22.8	22.8	22.8	22.8	22.7	22.5	22.3	22.1	21.9	21.9
87.5°	9.4	9.8	10.3	10.7	11.1	11.5	11.8	12.0	12.4	12.7	12.9
90°	3.1	5.6	8.2	10.7	13.2	15.4	17.3	19.1	21.0	22.8	24.2
92.5°	13.0	13.2	13.4	13.5	13.6	14.6	16.4	18.3	20.2	21.9	23.4
95°	57.0	49.1	41.3	33.5	25.7	21.8	22.1	22.3	22.6	22.8	24.2
97.5°	121.0	125.9	130.8	135.6	140.5	130.1	104.4	78.7	53.1	27.4	27.5
100°	170.0	174.1	178.3	182.4	186.5	172.7	140.9	109.1	77.4	45.6	41.6
102.5°	224.6	227.7	230.7	233.7	236.7	236.2	232.1	227.9	223.8	219.6	177.5
105°	311.8	313.3	314.6	316.0	317.4	318.7	319.9	320.9	322.1	323.2	325.4
107.5°	392.9	393.6	394.3	394.9	395.7	396.8	398.3	399.9	401.4	403.1	404.0
110°	447.6	448.3	449.0	449.7	450.4	451.4	452.8	454.1	455.6	456.9	457.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	500.7	501.9	503.1	504.4	505.6	506.6	507.2	507.8	508.5	509.2	509.1
115°	582.3	583.0	583.7	584.3	585.1	585.3	585.1	584.9	584.6	584.3	584.9
117.5°	655.9	656.7	657.7	658.6	659.5	660.2	660.8	661.3	661.8	662.3	662.2
120°	705.6	706.5	707.5	708.4	709.3	709.6	709.4	709.2	708.9	708.7	709.2
122.5°	752.0	752.6	753.1	753.7	754.2	754.7	755.0	755.3	755.6	756.0	756.3
125°	818.5	819.5	820.4	821.3	822.2	822.4	822.0	821.5	821.1	820.6	821.3
127.5°	881.5	881.7	882.0	882.3	882.4	883.1	884.1	885.2	886.3	887.3	887.2
130°	922.1	922.4	922.7	922.8	923.1	923.5	924.3	924.9	925.6	926.3	926.5
132.5°	959.5	959.8	960.3	960.7	961.1	961.8	962.6	963.5	964.4	965.3	965.5
135°	1015.4	1015.2	1014.9	1014.7	1014.5	1014.9	1015.7	1016.6	1017.6	1018.5	1019.0
137.5°	1065.0	1065.1	1065.1	1065.2	1065.3	1065.9	1066.8	1067.9	1068.9	1069.9	1070.4
140°	1097.3	1097.7	1098.1	1098.7	1099.1	1099.6	1100.0	1100.5	1100.9	1101.4	1102.1
142.5°	1126.2	1127.1	1127.9	1128.7	1129.6	1130.2	1130.4	1130.7	1131.0	1131.2	1131.8
145°	1170.8	1171.5	1172.2	1172.9	1173.6	1173.9	1173.9	1173.9	1173.9	1173.9	1174.2
147.5°	1206.2	1207.6	1208.8	1210.1	1211.4	1211.9	1211.7	1211.5	1211.2	1211.0	1211.2
150°	1232.0	1232.9	1233.8	1234.8	1235.6	1236.0	1235.7	1235.6	1235.3	1235.0	1235.0
152.5°	1253.5	1254.3	1255.0	1255.7	1256.4	1256.6	1256.2	1255.8	1255.4	1255.0	1255.4
155°	1283.8	1284.0	1284.2	1284.4	1284.7	1284.4	1283.8	1283.1	1282.4	1281.7	1282.6
157.5°	1309.2	1309.1	1308.9	1308.9	1308.7	1308.2	1307.4	1306.7	1305.9	1305.1	1306.3
160°	1324.2	1323.5	1322.8	1322.1	1321.4	1321.0	1320.7	1320.4	1320.3	1320.0	1321.4
162.5°	1337.4	1336.6	1335.7	1334.8	1333.9	1333.4	1333.1	1332.9	1332.7	1332.5	1333.8
165°	1354.2	1353.1	1351.9	1350.8	1349.6	1349.1	1349.1	1349.1	1349.1	1349.1	1350.9
167.5°	1367.4	1366.3	1365.1	1363.9	1362.7	1362.0	1361.9	1361.7	1361.6	1361.5	1363.5
170°	1374.9	1373.6	1372.2	1370.8	1369.4	1368.9	1369.0	1369.3	1369.5	1369.8	1371.6
172.5°	1379.9	1378.5	1377.2	1375.7	1374.4	1373.8	1374.0	1374.3	1374.5	1374.8	1376.5
175°	1385.3	1383.9	1382.5	1381.2	1379.7	1379.2	1379.4	1379.7	1379.9	1380.1	1382.2
177.5°	1387.8	1386.5	1385.2	1383.9	1382.6	1382.2	1382.5	1382.9	1383.3	1383.7	1385.1
180°	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7
2.5°	524.9	525.7	526.4	526.7	526.6	526.6	526.5	526.4
5°	522.1	523.1	524.1	524.5	524.3	524.1	524.0	523.8
7.5°	516.2	517.1	517.9	518.3	518.2	518.0	517.9	517.8
10°	511.4	512.1	512.9	513.2	513.0	512.7	512.6	512.4
12.5°	505.4	506.2	507.1	507.4	507.1	506.8	506.6	506.3
15°	494.1	494.6	495.3	495.3	495.1	494.8	494.5	494.3
17.5°	481.2	481.5	481.9	482.0	481.8	481.6	481.4	481.3
20°	471.6	471.9	472.2	472.3	472.0	471.8	471.6	471.4
22.5°	461.5	462.1	462.6	462.7	462.4	462.0	461.6	461.4
25°	445.1	445.1	445.2	445.1	444.7	444.3	444.0	443.6
27.5°	426.5	426.3	426.1	425.7	425.3	424.8	424.3	423.8
30°	413.8	413.4	413.0	412.6	412.1	411.6	411.2	410.7
32.5°	400.7	400.3	399.8	399.4	399.0	398.4	398.0	397.5
35°	380.2	379.6	378.9	378.4	377.9	377.5	376.9	376.5
37.5°	358.7	358.0	357.3	356.7	356.1	355.4	354.8	354.2
40°	343.8	342.9	342.0	341.3	340.7	340.3	339.8	339.4
42.5°	329.3	328.2	327.2	326.5	326.1	325.8	325.5	325.2
45°	306.9	305.9	304.9	304.2	303.9	303.6	303.4	303.1
47.5°	285.2	284.0	282.9	282.0	281.2	280.5	279.8	279.1
50°	270.0	268.8	267.4	266.4	265.9	265.4	264.7	264.2
52.5°	254.5	253.3	252.2	251.2	250.5	249.8	249.1	248.3
55°	231.6	230.4	229.3	228.5	227.9	227.4	226.8	226.2
57.5°	208.7	207.6	206.5	205.7	205.2	204.6	204.1	203.5
60°	192.9	192.1	191.2	190.6	190.1	189.6	189.1	188.7
62.5°	177.5	176.7	175.9	175.3	174.9	174.4	174.0	173.4
65°	155.2	154.2	153.3	152.6	152.1	151.6	151.1	150.7
67.5°	132.1	131.2	130.3	129.7	129.7	129.5	129.4	129.2
70°	117.5	116.8	116.0	115.5	115.2	114.9	114.7	114.4
72.5°	103.0	102.4	101.7	101.3	101.0	100.8	100.5	100.2
75°	81.9	81.6	81.2	81.0	80.9	80.8	80.7	80.6
77.5°	62.1	62.0	61.9	61.7	61.4	61.2	60.9	60.7
80°	49.4	49.2	49.0	49.0	48.8	48.7	48.6	48.5
82.5°	38.1	38.0	37.9	37.8	37.7	37.5	37.5	37.4
85°	21.9	21.9	21.9	21.9	21.8	21.8	21.6	21.5
87.5°	13.2	13.5	13.7	13.9	14.0	14.2	14.3	14.4
90°	25.6	26.9	28.4	29.2	29.7	30.1	30.6	31.1
92.5°	24.7	26.1	27.5	28.3	28.4	28.4	28.5	28.6
95°	25.6	26.9	28.4	29.2	29.3	29.6	29.8	30.1
97.5°	27.6	27.7	27.9	28.1	28.4	28.5	28.8	29.0
100°	37.7	33.9	30.0	28.1	28.4	28.5	28.8	29.0
102.5°	135.2	93.0	50.7	29.7	29.7	29.8	29.8	29.9
105°	327.4	329.5	331.5	328.4	320.1	311.8	303.6	295.3
107.5°	405.1	406.1	407.1	408.0	408.9	409.8	410.6	411.5
110°	457.9	458.3	458.8	459.3	460.0	460.7	461.5	462.1





TEST NUMBER: P332532-940

CATALOG NUMBER: SA4XXDIP-C350D1205U940-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	509.0	508.9	508.8	509.2	510.1	511.0	511.8	512.6
115°	585.3	585.8	586.2	586.5	586.5	586.5	586.5	586.5
117.5°	662.1	662.0	661.9	661.8	661.7	661.6	661.6	661.5
120°	709.6	710.1	710.5	710.5	710.1	709.6	709.2	708.7
122.5°	756.5	756.8	757.1	757.0	756.5	756.1	755.5	755.1
125°	822.0	822.7	823.4	823.9	824.0	824.3	824.6	824.7
127.5°	887.1	886.9	886.8	886.6	886.4	886.3	886.1	885.9
130°	926.8	927.0	927.2	927.3	927.3	927.3	927.3	927.3
132.5°	965.7	966.0	966.2	966.2	966.0	965.8	965.6	965.5
135°	1019.4	1019.8	1020.4	1020.8	1021.3	1021.7	1022.2	1022.6
137.5°	1070.9	1071.4	1071.9	1072.1	1072.0	1071.8	1071.7	1071.6
140°	1102.8	1103.5	1104.2	1104.7	1104.8	1105.1	1105.3	1105.5
142.5°	1132.3	1132.7	1133.3	1133.5	1133.6	1133.6	1133.7	1133.7
145°	1174.4	1174.7	1174.8	1175.2	1175.6	1176.1	1176.6	1177.1
147.5°	1211.4	1211.6	1211.7	1211.9	1212.2	1212.5	1212.6	1212.9
150°	1235.0	1235.0	1235.0	1235.2	1235.4	1235.6	1235.9	1236.1
152.5°	1255.7	1256.1	1256.4	1256.5	1256.4	1256.2	1256.2	1256.0
155°	1283.5	1284.4	1285.4	1285.5	1284.8	1284.1	1283.4	1282.7
157.5°	1307.5	1308.7	1309.9	1309.9	1308.7	1307.5	1306.3	1305.1
160°	1322.8	1324.2	1325.5	1325.5	1324.2	1322.8	1321.4	1320.0
162.5°	1335.2	1336.6	1338.0	1337.9	1336.3	1334.8	1333.2	1331.6
165°	1352.7	1354.6	1356.4	1356.3	1354.2	1352.1	1350.1	1348.0
167.5°	1365.6	1367.5	1369.6	1369.4	1367.2	1364.9	1362.5	1360.2
170°	1373.4	1375.3	1377.2	1376.9	1374.6	1372.3	1370.0	1367.7
172.5°	1378.4	1380.3	1382.1	1381.8	1379.3	1376.8	1374.3	1371.8
175°	1384.3	1386.3	1388.4	1388.0	1385.3	1382.5	1379.7	1377.0
177.5°	1386.6	1388.0	1389.6	1389.2	1387.0	1384.7	1382.5	1380.4
180°	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3

(END OF REPORT)