

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: P332533-940

Luminaire Tested: **S124DIP-S350D1205U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332533-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S350D1205U940-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5072.2 lumens  
Efficiency: N/A  
Efficacy: 120.2 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

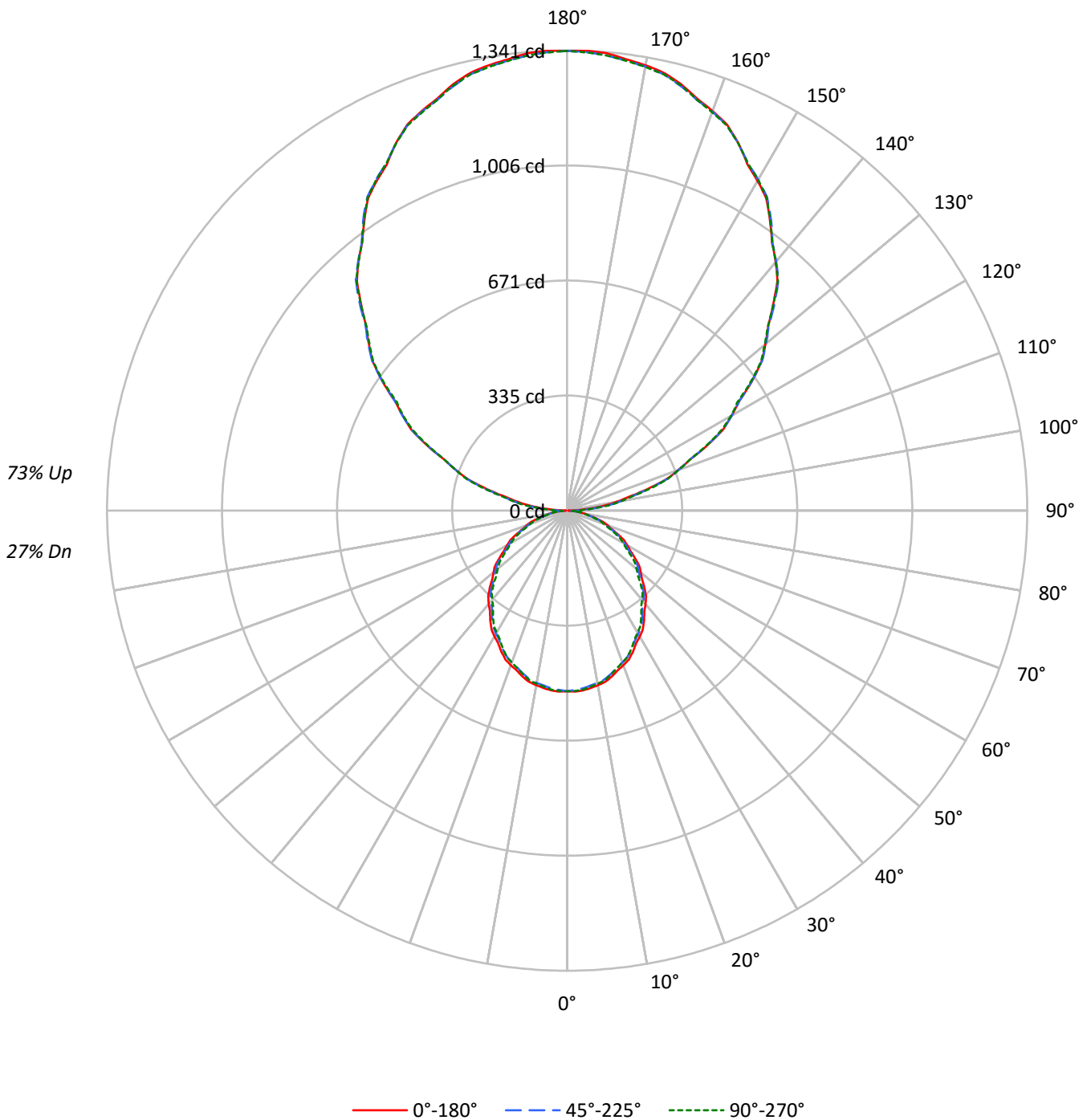
Input Watts (W): 42.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332533-940

CATALOG NUMBER: S124DIP-S350D1205U940-4F0-1E-UDD-F1

### Luminous Intensity Polar Plot





TEST NUMBER: P332533-940

CATALOG NUMBER: S124DIP-S350D1205U940-4F0-1E-UDD-F1

**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	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35	27
1	93	88	85	81	82	79	76	73	61	59	57	45	44	43	31	30	29	22
2	84	77	71	66	75	69	64	60	54	50	48	40	38	36	27	26	25	19
3	77	68	61	55	68	61	55	50	47	43	40	35	32	30	24	22	21	16
4	70	60	52	46	62	54	47	42	42	37	34	31	28	26	21	19	18	14
5	64	53	45	40	57	48	41	36	37	33	29	28	25	22	19	17	16	12
6	59	47	40	34	53	43	36	31	34	29	25	25	22	19	17	15	14	10
7	54	43	35	30	48	38	32	27	30	26	22	23	20	17	16	14	12	9
8	50	39	31	26	45	35	28	24	28	23	19	21	18	15	14	12	11	8
9	47	35	28	23	42	32	25	21	25	21	17	19	16	14	13	11	10	7
10	44	32	25	21	39	29	23	19	23	19	15	18	14	12	12	10	9	7

**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



TEST NUMBER: P332533-940

CATALOG NUMBER: S124DIP-S350D1205U940-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.6	1.0
10°-20°	139.8	2.8
20°-30°	205.7	4.1
30°-40°	239.2	4.7
40°-50°	239.2	4.7
50°-60°	209.2	4.1
60°-70°	155.4	3.1
70°-80°	88.3	1.7
80°-90°	29.5	0.6
90°-100°	88.4	1.7
100°-110°	261.7	5.2
110°-120°	444.2	8.8
120°-130°	585.7	11.5
130°-140°	657.8	13.0
140°-150°	646.4	12.7
150°-160°	543.7	10.7
160°-170°	361.7	7.1
170°-180°	126.7	2.5
0°-30°	395.1	7.8
0°-40°	634.2	12.5
0°-60°	1082.6	21.3
0°-90°	1355.7	26.7
90°-120°	794.3	15.7
90°-150°	2684.3	52.9
90°-180°	3716.0	73.3
0°-180°	5072.2	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	5
95°	62	71	79	82	82	69
105°	241	243	247	250	253	256
115°	452	452	450	449	448	445
125°	658	658	657	655	653	586
135°	848	854	855	853	850	656
145°	1031	1035	1036	1035	1032	645
155°	1181	1181	1180	1184	1180	543
165°	1286	1283	1280	1286	1282	362
175°	1338	1332	1331	1338	1331	127
180°	1340	1340	1340	1340	1340	



TEST NUMBER: P332533-940

CATALOG NUMBER: S124DIP-S350D1205U940-4F0-1E-UDD-F1

**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°	22.2	25.1	28.0	30.9	33.8	35.8	37.2	38.4	39.8	41.0	41.8
95°	62.2	64.2	66.3	68.4	70.4	72.3	73.9	75.5	77.1	78.7	79.5
97.5°	108.6	110.2	111.9	113.5	115.2	117.0	118.9	120.7	122.6	124.5	125.4
100°	145.1	146.0	146.9	147.8	148.7	150.3	152.3	154.4	156.4	158.5	159.0
102.5°	183.2	183.5	183.9	184.2	184.7	185.7	187.6	189.6	191.5	193.3	193.9
105°	241.4	241.7	241.8	242.1	242.3	242.9	243.8	244.7	245.7	246.6	247.3
107.5°	302.5	302.8	303.1	303.4	303.6	303.8	304.0	304.1	304.3	304.3	305.1
110°	343.9	344.4	344.8	345.4	345.8	345.9	345.7	345.4	345.2	345.0	344.6



TEST NUMBER: P332533-940

CATALOG NUMBER: S124DIP-S350D1205U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	387.0	387.2	387.3	387.4	387.4	387.3	386.8	386.5	386.0	385.6	385.5
115°	451.7	451.7	451.7	451.7	451.7	451.5	451.0	450.6	450.0	449.6	449.4
117.5°	512.6	512.8	513.0	513.2	513.4	513.3	512.9	512.6	512.3	512.0	511.2
120°	553.2	554.1	555.1	556.0	556.9	557.1	556.3	555.6	554.9	554.3	553.1
122.5°	595.5	595.8	596.2	596.6	597.0	597.0	596.6	596.4	596.0	595.7	594.9
125°	657.8	657.8	657.8	657.8	657.8	657.7	657.5	657.3	657.0	656.8	656.4
127.5°	714.4	715.2	715.8	716.5	717.2	717.4	716.9	716.6	716.2	715.9	715.4
130°	754.2	754.9	755.5	756.3	757.0	757.3	757.3	757.3	757.3	757.3	756.9
132.5°	794.8	795.3	795.9	796.3	796.8	797.0	796.8	796.7	796.5	796.3	795.8
135°	848.5	849.9	851.2	852.7	854.0	854.7	854.7	854.7	854.7	854.7	854.3
137.5°	906.9	907.6	908.2	908.8	909.5	910.0	910.3	910.7	911.1	911.4	910.9
140°	945.8	946.3	946.8	947.3	947.7	947.9	947.9	947.9	947.9	947.9	947.7
142.5°	981.5	982.0	982.4	982.8	983.4	983.5	983.3	983.1	982.9	982.8	982.7
145°	1030.8	1031.7	1032.7	1033.6	1034.5	1035.1	1035.3	1035.5	1035.7	1036.0	1035.7
147.5°	1079.7	1080.8	1081.9	1083.0	1084.1	1084.6	1084.4	1084.2	1084.1	1083.9	1083.7
150°	1109.6	1110.4	1111.4	1112.3	1113.2	1113.7	1113.7	1113.7	1113.7	1113.7	1113.7
152.5°	1137.7	1138.3	1138.8	1139.3	1140.0	1140.3	1140.5	1140.7	1140.9	1141.0	1141.6
155°	1181.0	1181.0	1181.0	1181.0	1181.0	1180.9	1180.7	1180.4	1180.2	1180.0	1180.9
157.5°	1217.5	1217.1	1216.7	1216.3	1215.8	1215.6	1215.6	1215.5	1215.5	1215.4	1216.1
160°	1239.0	1238.9	1238.6	1238.3	1238.1	1237.9	1237.7	1237.4	1237.2	1237.0	1237.7
162.5°	1258.9	1258.3	1257.8	1257.1	1256.5	1256.2	1255.9	1255.7	1255.4	1255.2	1256.4
165°	1285.7	1285.0	1284.2	1283.6	1282.9	1282.3	1281.8	1281.4	1280.9	1280.5	1281.8
167.5°	1306.2	1305.2	1304.2	1303.2	1302.3	1301.8	1301.9	1301.9	1302.0	1302.0	1303.4
170°	1317.8	1316.6	1315.5	1314.3	1313.1	1312.7	1313.0	1313.1	1313.4	1313.7	1315.0
172.5°	1326.1	1325.1	1324.1	1323.1	1322.2	1321.7	1321.8	1321.9	1321.9	1322.0	1323.5
175°	1337.5	1336.3	1335.2	1334.0	1332.8	1332.1	1331.9	1331.7	1331.5	1331.2	1332.8
177.5°	1341.2	1340.2	1339.3	1338.5	1337.5	1337.0	1337.0	1337.0	1337.0	1337.0	1338.4
180°	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5



TEST NUMBER: P332533-940

CATALOG NUMBER: S124DIP-S350D1205U940-4F0-1E-UDD-F1

**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°	42.7	43.5	44.3	44.9	45.2	45.5	45.7	46.0
95°	80.1	80.8	81.5	81.9	81.9	81.9	81.9	81.9
97.5°	126.2	127.0	127.9	128.2	128.2	128.2	128.2	128.2
100°	159.4	159.9	160.3	160.6	160.6	160.6	160.6	160.6
102.5°	194.6	195.3	195.9	196.3	196.5	196.7	196.9	197.1
105°	248.0	248.6	249.3	250.0	250.7	251.4	252.1	252.8
107.5°	305.7	306.3	306.9	307.3	307.2	307.2	307.1	307.1
110°	344.0	343.6	343.1	343.2	343.9	344.6	345.4	346.0





TEST NUMBER: P332533-940

CATALOG NUMBER: S124DIP-S350D1205U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	385.4	385.3	385.2	385.2	385.4	385.5	385.7	385.8
115°	449.2	448.9	448.7	448.4	448.3	448.0	447.8	447.5
117.5°	510.4	509.6	508.8	508.3	507.7	507.3	506.8	506.4
120°	552.0	550.8	549.7	549.3	549.7	550.2	550.7	551.2
122.5°	594.1	593.3	592.5	591.7	590.9	590.1	589.2	588.4
125°	655.9	655.4	655.0	654.5	654.1	653.6	653.1	652.6
127.5°	715.0	714.5	714.0	713.6	713.3	712.8	712.5	712.1
130°	756.3	755.9	755.5	754.7	753.9	753.0	752.0	751.1
132.5°	795.3	794.9	794.4	794.0	793.6	793.3	792.9	792.6
135°	853.8	853.3	852.8	852.3	851.6	850.9	850.2	849.5
137.5°	910.3	909.6	909.1	908.8	909.0	909.1	909.3	909.4
140°	947.4	947.3	947.0	946.8	946.6	946.3	946.1	945.8
142.5°	982.7	982.6	982.6	982.5	982.5	982.4	982.4	982.3
145°	1035.5	1035.3	1035.1	1034.6	1033.9	1033.2	1032.5	1031.9
147.5°	1083.5	1083.3	1083.1	1082.9	1082.7	1082.4	1082.2	1082.0
150°	1113.7	1113.7	1113.7	1113.6	1113.3	1113.1	1112.9	1112.7
152.5°	1142.1	1142.7	1143.3	1143.3	1142.6	1142.0	1141.4	1140.9
155°	1181.9	1182.8	1183.7	1183.7	1182.8	1181.9	1180.9	1180.0
157.5°	1216.8	1217.5	1218.2	1218.2	1217.4	1216.6	1215.8	1215.0
160°	1238.3	1239.0	1239.7	1239.5	1238.3	1237.2	1236.1	1234.9
162.5°	1257.7	1258.9	1260.2	1260.3	1259.1	1257.9	1256.8	1255.6
165°	1283.3	1284.6	1286.0	1286.2	1285.3	1284.4	1283.4	1282.5
167.5°	1304.8	1306.2	1307.5	1307.5	1306.1	1304.7	1303.2	1301.8
170°	1316.4	1317.8	1319.2	1319.0	1317.4	1315.8	1314.2	1312.6
172.5°	1325.1	1326.6	1328.2	1328.2	1326.5	1324.9	1323.3	1321.7
175°	1334.4	1336.1	1337.7	1337.7	1336.1	1334.4	1332.8	1331.2
177.5°	1339.6	1341.0	1342.2	1342.1	1340.6	1339.2	1337.7	1336.2
180°	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5	1339.5

(END OF REPORT)