

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: P333025-940

Luminaire Tested: **S124RDIW-S350D1050U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333025-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDIW-S350D1050U940-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1050 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5013.6 lumens  
Efficiency: N/A  
Efficacy: 131.9 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

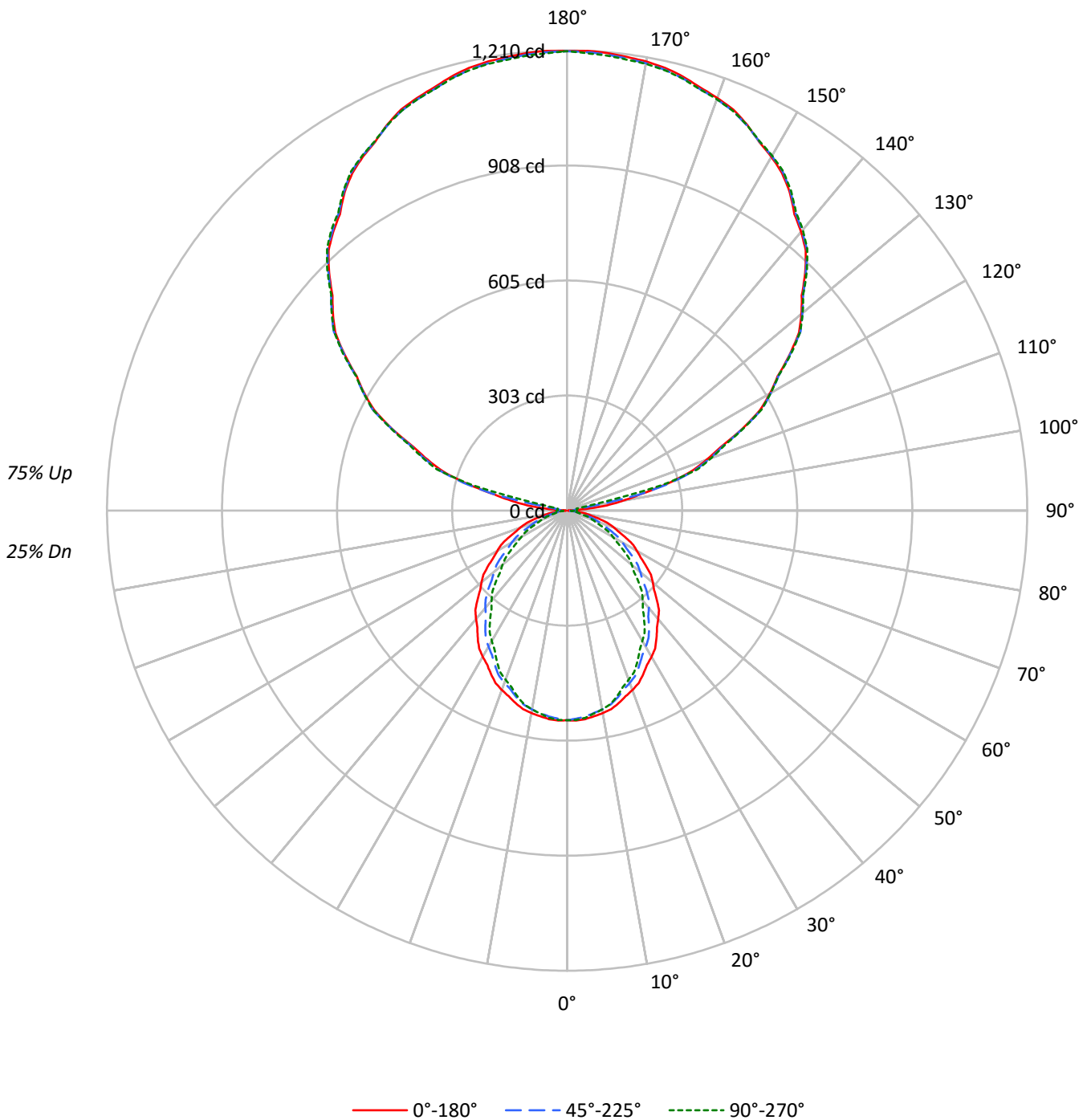
Input Watts (W): 38  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P333025-940

CATALOG NUMBER: S124RDIW-S350D1050U940-4F0-1E-UDD-F

### Luminous Intensity Polar Plot





TEST NUMBER: P333025-940

CATALOG NUMBER: S124RDIW-S350D1050U940-4F0-1E-UDD-F

**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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	25
1	92	88	85	81	82	79	76	73	61	59	57	45	44	42	30	29	29	22
2	84	77	71	67	75	69	64	60	54	50	48	39	37	36	26	25	24	18
3	77	68	61	55	68	61	55	50	47	43	40	35	32	30	23	22	21	16
4	70	60	53	47	62	54	47	43	42	38	34	31	28	26	21	19	18	14
5	64	53	46	40	57	48	41	36	38	33	29	28	25	22	19	17	16	12
6	59	48	40	35	53	43	36	31	34	29	25	25	22	20	17	15	14	10
7	55	43	35	30	49	39	32	27	31	26	22	23	20	17	16	14	12	9
8	51	39	32	26	45	35	29	24	28	23	20	21	18	15	14	12	11	8
9	47	35	28	23	42	32	26	21	25	21	18	19	16	14	13	11	10	8
10	44	32	25	21	39	29	23	19	23	19	16	18	15	12	12	10	9	7

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

	0°	45°	90°
0°	4451	4451	4451
5°	4460	4406	4433
10°	4432	4353	4353
15°	4381	4262	4229
20°	4312	4141	4064
25°	4222	4000	3899
30°	4135	3852	3691
35°	4039	3698	3482
40°	3923	3523	3256
45°	3817	3350	3027
50°	3695	3149	2783
55°	3564	2940	2519
60°	3421	2713	2249
65°	3289	2428	1983
70°	3099	2110	1683
75°	2857	1753	1369
80°	2492	1334	1255
85°	2112	1213	1130



TEST NUMBER: P333025-940

CATALOG NUMBER: S124RDIW-S350D1050U940-4F0-1E-UDD-F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.8	1.0
10°-20°	144.4	2.9
20°-30°	208.5	4.2
30°-40°	236.4	4.7
40°-50°	228.2	4.6
50°-60°	189.8	3.8
60°-70°	131.1	2.6
70°-80°	66.4	1.3
80°-90°	20.5	0.4
90°-100°	41.3	0.8
100°-110°	263.4	5.3
110°-120°	503.9	10.1
120°-130°	639.7	12.8
130°-140°	684.4	13.7
140°-150°	640.0	12.8
150°-160°	516.1	10.3
160°-170°	332.9	6.6
170°-180°	114.7	2.3
0°-30°	404.7	8.1
0°-40°	641.0	12.8
0°-60°	1059.1	21.1
0°-90°	1277.1	25.5
90°-120°	808.6	16.1
90°-150°	2772.8	55.3
90°-180°	3737.0	74.5
0°-180°	5013.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	551	551	551	551	551	
5°	550	548	544	548	547	52
15°	524	520	510	509	506	148
25°	474	466	449	442	438	218
35°	410	396	375	361	353	256
45°	334	318	293	273	265	258
55°	253	236	209	188	179	226
65°	172	154	127	110	104	170
75°	92	76	56	47	44	97
85°	23	15	13	12	12	26
90°	3	12	20	25	27	3
95°	50	21	20	25	26	64
105°	272	277	282	288	258	285
115°	508	510	510	511	511	499
125°	714	717	716	718	719	637
135°	885	885	888	890	892	682
145°	1021	1023	1024	1025	1026	638
155°	1119	1120	1118	1121	1118	516
165°	1181	1177	1176	1183	1175	334
175°	1208	1203	1204	1210	1201	115
180°	1208	1208	1208	1208	1208	



TEST NUMBER: P333025-940

CATALOG NUMBER: S124RDIW-S350D1050U940-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3
2.5°	552.6	552.2	552.0	551.7	551.3	550.8	550.0	549.2	548.3	547.5	548.3
5°	550.4	550.0	549.7	549.3	548.8	548.1	547.0	545.9	544.7	543.7	544.6
7.5°	545.4	545.0	544.7	544.2	543.9	542.9	541.4	539.9	538.5	537.1	537.6
10°	540.6	540.2	539.8	539.3	538.8	537.7	536.0	534.3	532.6	531.0	531.4
12.5°	534.6	534.0	533.5	533.0	532.4	531.2	529.1	527.2	525.2	523.2	523.4
15°	524.2	523.3	522.5	521.7	520.8	519.2	516.9	514.5	512.2	509.9	509.7
17.5°	511.7	510.4	509.2	508.0	506.8	504.7	501.9	499.1	496.3	493.5	492.9
20°	501.9	500.6	499.4	498.2	497.0	494.8	491.6	488.4	485.2	482.0	481.3
22.5°	491.1	489.6	488.3	487.0	485.5	483.1	479.7	476.4	473.0	469.5	468.4
25°	474.0	472.3	470.6	469.0	467.3	464.5	460.7	456.8	452.9	449.1	447.5
27.5°	456.1	454.0	451.8	449.8	447.6	444.5	440.4	436.3	432.2	428.1	426.1
30°	443.6	441.2	438.9	436.6	434.3	430.9	426.4	422.0	417.6	413.2	410.9
32.5°	430.4	427.8	425.2	422.5	419.8	416.3	411.7	407.2	402.6	398.1	395.3
35°	409.8	406.8	403.9	400.8	397.8	394.0	389.3	384.6	380.0	375.2	372.0
37.5°	387.8	384.7	381.7	378.5	375.4	371.3	366.0	360.9	355.7	350.5	347.0
40°	372.3	369.2	366.0	363.0	359.9	355.7	350.4	345.0	339.7	334.3	330.4
42.5°	357.4	354.2	350.9	347.7	344.5	340.0	334.5	328.9	323.3	317.7	313.7
45°	334.3	330.8	327.3	323.9	320.4	315.8	310.2	304.6	299.0	293.4	288.7
47.5°	310.4	306.8	303.3	299.6	296.0	291.3	285.5	279.6	273.8	268.0	263.1
50°	294.2	290.5	286.9	283.2	279.6	274.7	268.8	262.7	256.7	250.7	246.0
52.5°	277.7	274.0	270.5	266.9	263.3	258.4	252.3	246.1	240.0	233.8	229.1
55°	253.2	249.5	245.8	242.0	238.3	233.3	227.2	221.1	215.0	208.9	204.0
57.5°	229.1	225.2	221.3	217.4	213.5	208.6	202.5	196.5	190.6	184.5	179.6
60°	211.9	208.1	204.4	200.6	196.9	192.0	186.0	179.9	174.0	168.0	163.1
62.5°	196.4	192.4	188.5	184.7	180.7	175.8	169.6	163.5	157.3	151.1	146.6
65°	172.2	168.2	164.2	160.2	156.0	151.1	145.1	139.0	133.0	127.1	123.1
67.5°	147.1	143.3	139.4	135.5	131.7	127.0	121.4	115.8	110.2	104.7	101.2
70°	131.3	127.3	123.4	119.5	115.5	110.8	105.5	100.1	94.8	89.4	86.4
72.5°	114.4	110.8	107.3	103.7	100.1	95.9	90.8	85.7	80.7	75.6	73.0
75°	91.6	88.1	84.6	81.1	77.7	73.7	69.4	64.9	60.5	56.2	53.9
77.5°	68.5	65.5	62.6	59.7	56.7	53.4	49.8	46.3	42.7	39.1	37.9
80°	53.6	50.9	48.2	45.5	42.7	39.9	37.2	34.3	31.5	28.7	28.4
82.5°	40.8	38.3	35.8	33.3	30.8	28.7	27.1	25.5	23.9	22.3	22.1
85°	22.8	21.0	19.1	17.1	15.2	14.2	13.9	13.6	13.4	13.1	12.9
87.5°	8.3	8.1	8.0	7.8	7.7	7.8	7.9	8.2	8.5	8.7	8.8
90°	2.7	4.9	7.1	9.4	11.5	13.5	15.1	16.7	18.3	19.9	21.0
92.5°	11.4	11.5	11.6	11.8	11.9	12.8	14.4	16.0	17.6	19.2	20.3
95°	49.7	42.9	36.0	29.2	22.4	19.1	19.3	19.4	19.7	19.9	21.0
97.5°	105.5	109.8	114.0	118.3	122.5	113.5	91.0	68.7	46.3	23.8	24.0
100°	148.2	151.8	155.4	159.0	162.6	150.6	122.9	95.1	67.5	39.8	36.4
102.5°	195.9	198.5	201.2	203.8	206.4	206.0	202.4	198.8	195.1	191.5	154.7
105°	272.0	273.1	274.4	275.5	276.8	277.9	278.8	279.9	280.9	281.9	283.7
107.5°	342.6	343.2	343.8	344.4	345.0	346.0	347.3	348.7	350.1	351.4	352.3
110°	390.3	390.9	391.5	392.1	392.7	393.6	394.8	396.0	397.3	398.4	398.9



TEST NUMBER: P333025-940

CATALOG NUMBER: S124RDIW-S350D1050U940-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	436.6	437.7	438.7	439.8	440.9	441.8	442.3	442.8	443.4	444.0	443.9
115°	507.7	508.4	509.0	509.5	510.1	510.3	510.1	510.0	509.8	509.5	510.0
117.5°	571.9	572.7	573.5	574.3	575.1	575.7	576.1	576.6	577.0	577.5	577.4
120°	615.3	616.1	616.9	617.7	618.5	618.8	618.6	618.4	618.1	618.0	618.4
122.5°	655.8	656.2	656.7	657.2	657.6	658.1	658.4	658.6	658.9	659.2	659.4
125°	713.7	714.5	715.3	716.1	716.9	717.1	716.8	716.3	716.0	715.5	716.1
127.5°	768.7	768.8	769.1	769.3	769.5	770.0	771.0	771.9	772.8	773.7	773.6
130°	804.1	804.3	804.5	804.7	804.9	805.3	805.9	806.5	807.1	807.7	807.9
132.5°	836.6	837.0	837.3	837.7	838.0	838.7	839.4	840.2	840.9	841.7	841.9
135°	885.4	885.2	885.0	884.8	884.6	884.9	885.7	886.5	887.3	888.1	888.5
137.5°	928.5	928.6	928.7	928.8	928.9	929.3	930.2	931.1	932.0	932.9	933.4
140°	956.8	957.2	957.6	958.0	958.4	958.8	959.2	959.6	960.0	960.4	961.0
142.5°	982.0	982.8	983.5	984.3	985.0	985.4	985.7	985.9	986.1	986.4	986.9
145°	1020.9	1021.5	1022.1	1022.7	1023.3	1023.6	1023.6	1023.6	1023.6	1023.6	1023.9
147.5°	1051.8	1052.9	1054.1	1055.2	1056.3	1056.8	1056.6	1056.4	1056.1	1056.0	1056.1
150°	1074.2	1075.0	1075.8	1076.7	1077.5	1077.7	1077.5	1077.4	1077.1	1076.9	1076.9
152.5°	1093.0	1093.7	1094.3	1094.9	1095.6	1095.7	1095.4	1095.0	1094.7	1094.3	1094.6
155°	1119.4	1119.6	1119.8	1120.0	1120.2	1120.0	1119.4	1118.8	1118.2	1117.6	1118.4
157.5°	1141.7	1141.5	1141.4	1141.2	1141.1	1140.8	1140.1	1139.3	1138.7	1138.0	1139.1
160°	1154.6	1154.1	1153.4	1152.8	1152.2	1151.8	1151.6	1151.4	1151.2	1151.0	1152.2
162.5°	1166.2	1165.5	1164.7	1163.9	1163.1	1162.6	1162.4	1162.3	1162.1	1161.8	1163.1
165°	1180.8	1179.8	1178.8	1177.8	1176.8	1176.3	1176.3	1176.3	1176.3	1176.3	1177.9
167.5°	1192.4	1191.3	1190.3	1189.3	1188.2	1187.7	1187.5	1187.4	1187.3	1187.1	1188.9
170°	1198.9	1197.7	1196.5	1195.2	1194.1	1193.6	1193.7	1194.0	1194.2	1194.4	1196.0
172.5°	1203.2	1202.0	1200.8	1199.6	1198.4	1197.9	1198.1	1198.3	1198.5	1198.7	1200.3
175°	1207.9	1206.8	1205.5	1204.3	1203.1	1202.7	1202.8	1203.0	1203.2	1203.5	1205.2
177.5°	1210.1	1209.0	1207.8	1206.8	1205.6	1205.2	1205.5	1205.9	1206.1	1206.5	1207.7
180°	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9



TEST NUMBER: P333025-940

CATALOG NUMBER: S124RDIW-S350D1050U940-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3
2.5°	549.2	550.0	550.8	551.2	551.1	551.1	551.0	550.9
5°	545.5	546.4	547.4	547.8	547.6	547.4	547.2	547.0
7.5°	538.2	538.9	539.5	539.6	539.3	539.0	538.7	538.4
10°	531.7	532.1	532.4	532.4	532.1	531.7	531.4	531.0
12.5°	523.6	523.9	524.1	524.0	523.4	522.9	522.4	521.8
15°	509.5	509.3	509.1	508.7	508.0	507.4	506.8	506.0
17.5°	492.4	492.0	491.4	490.6	489.6	488.7	487.7	486.7
20°	480.5	479.7	479.0	478.0	476.8	475.5	474.4	473.1
22.5°	467.3	466.1	465.0	464.0	463.0	462.0	461.0	459.9
25°	445.9	444.3	442.7	441.5	440.5	439.5	438.6	437.7
27.5°	424.1	422.1	420.2	418.6	417.1	415.8	414.5	413.1
30°	408.5	406.2	403.9	401.9	400.4	399.0	397.4	395.9
32.5°	392.6	389.9	387.2	385.0	383.6	382.2	380.8	379.3
35°	368.8	365.7	362.5	360.1	358.4	356.7	355.0	353.3
37.5°	343.4	339.8	336.3	333.6	331.9	330.2	328.5	326.8
40°	326.4	322.4	318.5	315.8	314.1	312.4	310.7	309.0
42.5°	309.7	305.7	301.7	298.8	297.0	295.2	293.5	291.8
45°	284.2	279.6	274.9	271.8	270.1	268.4	266.7	265.1
47.5°	258.4	253.6	248.9	245.6	243.7	241.8	240.0	238.2
50°	241.3	236.7	231.9	228.7	226.9	225.2	223.4	221.6
52.5°	224.3	219.5	214.8	211.4	209.6	207.8	205.9	204.0
55°	199.2	194.3	189.4	186.1	184.3	182.5	180.7	179.0
57.5°	174.6	169.7	164.7	161.6	160.2	158.9	157.5	156.1
60°	158.2	153.4	148.5	145.3	143.7	142.3	140.8	139.3
62.5°	142.1	137.6	133.1	130.3	129.0	127.9	126.6	125.5
65°	119.0	114.9	110.9	108.3	107.2	106.1	105.0	103.8
67.5°	97.7	94.3	90.8	88.5	87.2	86.0	84.7	83.5
70°	83.3	80.2	77.1	75.1	74.1	73.2	72.2	71.3
72.5°	70.4	67.7	65.1	63.3	62.4	61.6	60.7	59.8
75°	51.8	49.7	47.5	46.2	45.6	45.0	44.5	43.9
77.5°	36.6	35.4	34.2	33.4	33.3	33.1	32.9	32.7
80°	28.2	27.8	27.6	27.4	27.3	27.2	27.1	27.0
82.5°	21.8	21.7	21.5	21.3	21.2	21.1	21.0	21.0
85°	12.8	12.5	12.3	12.2	12.2	12.2	12.2	12.2
87.5°	9.0	9.2	9.4	9.5	9.7	9.8	10.0	10.2
90°	22.3	23.5	24.7	25.5	25.9	26.3	26.7	27.1
92.5°	21.6	22.7	24.0	24.6	24.7	24.8	24.9	25.0
95°	22.3	23.5	24.7	25.4	25.6	25.8	26.0	26.2
97.5°	24.1	24.3	24.3	24.5	24.7	24.9	25.1	25.3
100°	32.9	29.5	26.1	24.5	24.7	24.9	25.1	25.3
102.5°	117.9	81.1	44.2	25.9	25.9	25.9	25.9	26.0
105°	285.5	287.3	289.1	286.4	279.2	272.0	264.7	257.5
107.5°	353.2	354.1	355.0	355.8	356.6	357.3	358.1	358.8
110°	399.2	399.7	400.0	400.6	401.2	401.7	402.3	403.0





TEST NUMBER: P333025-940

CATALOG NUMBER: S124RDIW-S350D1050U940-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	443.8	443.7	443.6	444.0	444.8	445.5	446.3	447.0
115°	510.3	510.8	511.1	511.4	511.4	511.4	511.4	511.4
117.5°	577.3	577.3	577.2	577.1	577.0	576.9	576.8	576.8
120°	618.8	619.2	619.6	619.6	619.2	618.8	618.4	618.0
122.5°	659.7	659.9	660.1	660.0	659.7	659.2	658.9	658.4
125°	716.8	717.4	717.9	718.4	718.5	718.7	719.0	719.2
127.5°	773.5	773.4	773.2	773.1	772.9	772.8	772.6	772.5
130°	808.1	808.3	808.5	808.6	808.6	808.6	808.6	808.6
132.5°	842.0	842.3	842.5	842.5	842.3	842.1	842.0	841.9
135°	888.9	889.3	889.7	890.1	890.6	890.9	891.4	891.7
137.5°	933.8	934.2	934.7	934.9	934.7	934.6	934.5	934.3
140°	961.6	962.2	962.8	963.2	963.4	963.6	963.8	964.0
142.5°	987.3	987.7	988.2	988.4	988.5	988.5	988.6	988.6
145°	1024.0	1024.2	1024.4	1024.8	1025.1	1025.6	1025.9	1026.4
147.5°	1056.3	1056.4	1056.6	1056.8	1057.0	1057.2	1057.4	1057.6
150°	1076.9	1076.9	1076.9	1077.0	1077.2	1077.5	1077.6	1077.8
152.5°	1094.9	1095.2	1095.6	1095.6	1095.6	1095.4	1095.3	1095.2
155°	1119.2	1120.0	1120.8	1120.9	1120.3	1119.7	1119.1	1118.5
157.5°	1140.1	1141.1	1142.2	1142.2	1141.1	1140.1	1139.1	1138.0
160°	1153.4	1154.6	1155.8	1155.8	1154.6	1153.4	1152.2	1151.0
162.5°	1164.2	1165.5	1166.6	1166.6	1165.2	1163.9	1162.5	1161.1
165°	1179.6	1181.2	1182.8	1182.6	1180.8	1179.0	1177.2	1175.4
167.5°	1190.7	1192.5	1194.2	1194.1	1192.1	1190.1	1188.1	1186.1
170°	1197.6	1199.2	1200.8	1200.6	1198.5	1196.6	1194.5	1192.6
172.5°	1201.9	1203.5	1205.1	1204.9	1202.7	1200.5	1198.4	1196.1
175°	1207.0	1208.8	1210.7	1210.3	1207.9	1205.5	1203.1	1200.7
177.5°	1209.1	1210.3	1211.7	1211.3	1209.3	1207.5	1205.5	1203.6
180°	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9

(END OF REPORT)