

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: P333026-935

Luminaire Tested: **S124RDIW-S350D1050U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333026-935
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: S124RDIW-S350D1050U935-4F0-1E-UDD-F1
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, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4362.1 lumens
Efficiency: N/A
Efficacy: 114.8 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

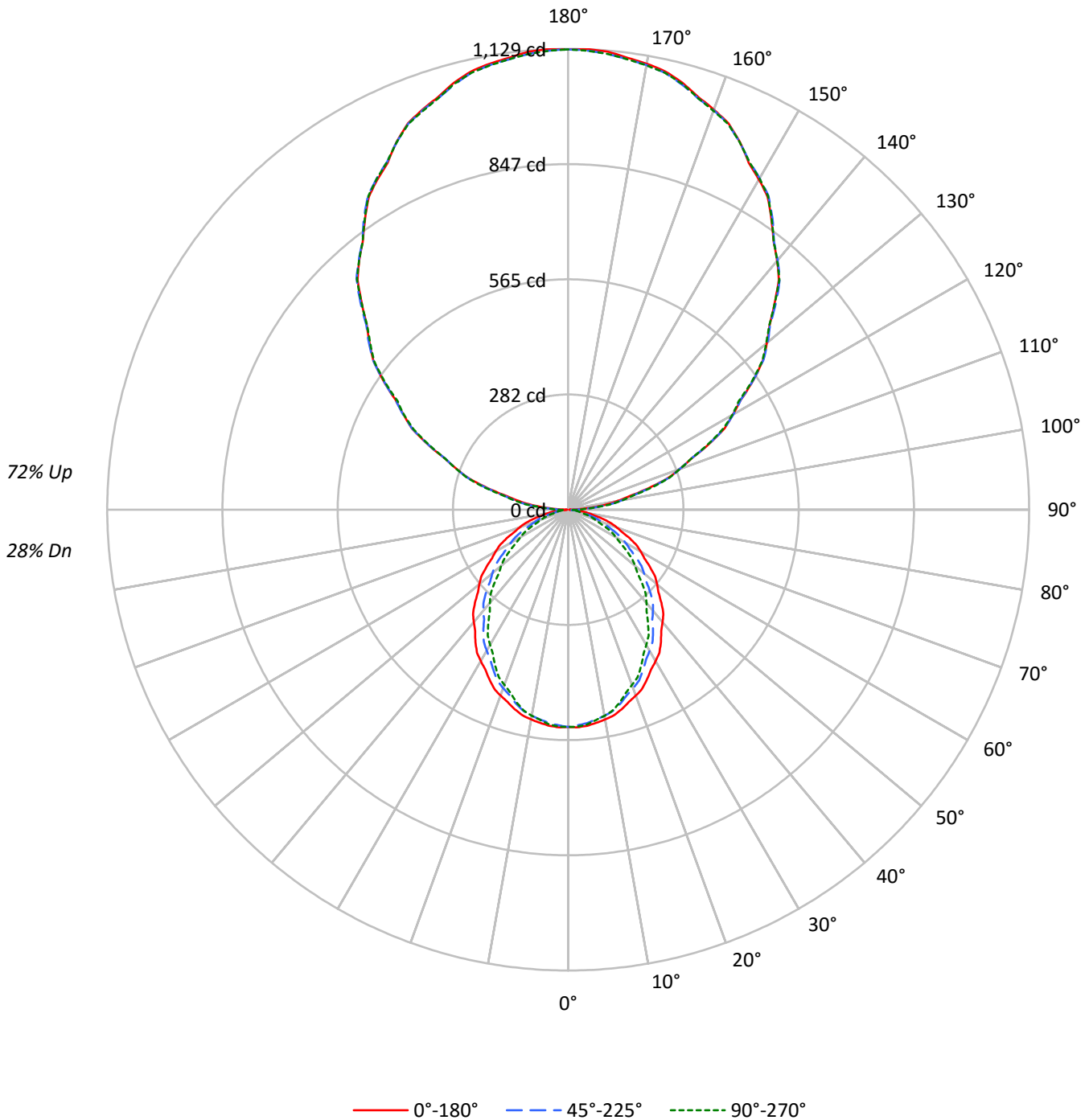
Input Watts (W): 38
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P333026-935

CATALOG NUMBER: S124RDIW-S350D1050U935-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P333026-935

CATALOG NUMBER: S124RDIW-S350D1050U935-4F0-1E-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	71	71	71	53	53	53	36	36	36	28
1	93	89	85	82	83	80	77	74	63	60	59	47	45	44	32	31	31	24
2	85	78	72	67	76	70	65	61	55	52	49	41	39	37	28	27	26	20
3	77	68	61	56	69	62	56	51	49	44	41	36	34	32	25	24	22	17
4	71	61	53	47	63	54	48	43	43	39	35	33	29	27	23	21	19	15
5	65	54	46	40	58	49	42	37	39	34	30	29	26	23	20	18	17	13
6	60	48	40	35	53	44	37	32	35	30	26	26	23	20	19	17	15	12
7	55	43	36	30	49	39	33	28	31	26	23	24	21	18	17	15	13	10
8	51	39	32	27	46	36	29	25	28	24	20	22	18	16	16	13	12	9
9	47	36	29	24	42	32	26	22	26	21	18	20	17	14	14	12	11	8
10	44	33	26	21	40	30	24	20	24	19	16	18	15	13	13	11	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4297	4297	4297
5°	4306	4254	4280
10°	4279	4203	4203
15°	4231	4115	4084
20°	4163	3998	3924
25°	4077	3862	3764
30°	3993	3719	3564
35°	3900	3571	3362
40°	3789	3402	3144
45°	3685	3234	2923
50°	3567	3041	2688
55°	3441	2839	2432
60°	3303	2619	2172
65°	3177	2344	1914
70°	2991	2039	1626
75°	2757	1691	1323
80°	2404	1288	1213
85°	2038	1176	1093



TEST NUMBER: P333026-935

CATALOG NUMBER: S124RDIW-S350D1050U935-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.0	1.1
10°-20°	139.4	3.2
20°-30°	201.3	4.6
30°-40°	228.2	5.2
40°-50°	220.4	5.1
50°-60°	183.2	4.2
60°-70°	126.5	2.9
70°-80°	64.1	1.5
80°-90°	19.8	0.5
90°-100°	74.4	1.7
100°-110°	220.4	5.1
110°-120°	374.0	8.6
120°-130°	493.2	11.3
130°-140°	553.9	12.7
140°-150°	544.3	12.5
150°-160°	457.8	10.5
160°-170°	304.6	7.0
170°-180°	106.6	2.4
0°-30°	390.7	9.0
0°-40°	619.0	14.2
0°-60°	1022.6	23.4
0°-90°	1233.1	28.3
90°-120°	668.7	15.3
90°-150°	2260.0	51.8
90°-180°	3129.0	71.7
0°-180°	4362.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	532	532	532	532	532	
5°	531	530	525	529	528	50
15°	506	502	492	491	489	143
25°	458	450	434	427	423	211
35°	396	382	362	349	341	247
45°	323	307	283	264	256	249
55°	244	228	202	181	173	219
65°	166	148	123	106	100	164
75°	88	73	54	45	42	93
85°	22	14	13	12	12	25
90°	3	12	19	24	26	4
95°	52	60	66	69	69	58
105°	203	204	208	210	213	216
115°	380	380	379	378	377	375
125°	554	554	553	551	550	493
135°	714	719	720	718	715	552
145°	868	871	872	871	869	543
155°	994	994	994	997	994	457
165°	1082	1080	1078	1083	1080	305
175°	1126	1122	1121	1126	1121	107
180°	1128	1128	1128	1128	1128	



TEST NUMBER: P333026-935

CATALOG NUMBER: S124RDIW-S350D1050U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3
2.5°	533.6	533.2	533.0	532.7	532.4	531.8	531.1	530.3	529.4	528.7	529.4
5°	531.4	531.1	530.7	530.4	529.9	529.3	528.1	527.1	526.0	525.0	525.8
7.5°	526.6	526.2	525.9	525.5	525.1	524.2	522.8	521.3	520.0	518.6	519.1
10°	522.0	521.6	521.2	520.7	520.2	519.2	517.5	515.9	514.3	512.7	513.1
12.5°	516.2	515.7	515.1	514.6	514.1	512.9	510.9	509.0	507.1	505.1	505.4
15°	506.2	505.3	504.5	503.7	502.9	501.4	499.1	496.8	494.6	492.3	492.1
17.5°	494.0	492.8	491.6	490.5	489.3	487.3	484.7	481.9	479.2	476.5	476.0
20°	484.6	483.4	482.2	481.0	479.8	477.8	474.7	471.6	468.5	465.4	464.7
22.5°	474.2	472.8	471.5	470.2	468.8	466.5	463.2	459.9	456.7	453.3	452.3
25°	457.7	456.1	454.4	452.8	451.2	448.5	444.8	441.1	437.3	433.6	432.0
27.5°	440.4	438.3	436.3	434.3	432.2	429.2	425.2	421.3	417.3	413.4	411.4
30°	428.3	426.0	423.8	421.5	419.3	416.0	411.7	407.5	403.2	399.0	396.7
32.5°	415.6	413.0	410.5	407.9	405.4	401.9	397.5	393.1	388.7	384.4	381.7
35°	395.7	392.8	389.9	387.0	384.1	380.4	375.9	371.3	366.9	362.3	359.2
37.5°	374.4	371.4	368.5	365.5	362.5	358.5	353.4	348.4	343.5	338.5	335.0
40°	359.5	356.5	353.4	350.5	347.5	343.5	338.3	333.1	328.0	322.8	319.0
42.5°	345.1	342.0	338.8	335.7	332.6	328.3	323.0	317.5	312.2	306.8	302.9
45°	322.8	319.4	316.1	312.7	309.4	305.0	299.5	294.1	288.7	283.3	278.8
47.5°	299.7	296.3	292.8	289.3	285.9	281.3	275.7	270.0	264.3	258.7	254.1
50°	284.0	280.5	277.0	273.5	269.9	265.3	259.5	253.7	247.9	242.1	237.5
52.5°	268.1	264.6	261.1	257.7	254.3	249.5	243.6	237.6	231.7	225.8	221.2
55°	244.5	240.9	237.3	233.7	230.1	225.2	219.4	213.5	207.6	201.7	197.0
57.5°	221.2	217.4	213.7	209.9	206.1	201.4	195.5	189.8	184.0	178.1	173.4
60°	204.6	201.0	197.3	193.7	190.1	185.4	179.6	173.7	168.0	162.2	157.5
62.5°	189.6	185.8	182.0	178.3	174.5	169.7	163.8	157.8	151.9	145.9	141.5
65°	166.3	162.4	158.5	154.6	150.7	145.9	140.1	134.2	128.5	122.7	118.8
67.5°	142.1	138.4	134.6	130.9	127.2	122.6	117.2	111.8	106.4	101.1	97.7
70°	126.7	123.0	119.2	115.4	111.5	107.0	101.9	96.7	91.5	86.4	83.4
72.5°	110.5	107.0	103.6	100.1	96.7	92.6	87.6	82.7	77.9	73.0	70.5
75°	88.4	85.1	81.7	78.4	75.0	71.2	67.0	62.7	58.5	54.2	52.1
77.5°	66.1	63.3	60.4	57.6	54.8	51.6	48.1	44.7	41.2	37.8	36.6
80°	51.7	49.2	46.5	43.9	41.2	38.6	35.9	33.1	30.4	27.7	27.5
82.5°	39.3	36.9	34.5	32.1	29.7	27.7	26.2	24.6	23.1	21.5	21.4
85°	22.0	20.2	18.4	16.5	14.7	13.7	13.4	13.2	12.9	12.7	12.5
87.5°	8.0	7.8	7.7	7.6	7.4	7.5	7.7	7.9	8.2	8.4	8.5
90°	2.6	4.7	6.9	9.0	11.1	13.0	14.6	16.1	17.7	19.2	20.3
92.5°	18.7	21.1	23.6	26.0	28.4	30.2	31.3	32.4	33.5	34.5	35.2
95°	52.3	54.1	55.8	57.6	59.3	60.9	62.3	63.5	64.9	66.3	66.9
97.5°	91.4	92.8	94.2	95.6	97.0	98.5	100.0	101.7	103.2	104.9	105.6
100°	122.1	122.9	123.6	124.4	125.2	126.5	128.2	129.9	131.7	133.5	133.8
102.5°	154.2	154.5	154.8	155.2	155.4	156.4	158.0	159.5	161.2	162.7	163.3
105°	203.2	203.5	203.6	203.8	204.0	204.5	205.3	206.0	206.8	207.6	208.2
107.5°	254.7	254.9	255.1	255.4	255.6	255.8	255.9	256.1	256.1	256.2	256.8
110°	289.6	290.0	290.3	290.8	291.1	291.2	291.0	290.8	290.7	290.4	290.1



TEST NUMBER: P333026-935

CATALOG NUMBER: S124RDIW-S350D1050U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	325.9	326.0	326.1	326.1	326.1	326.1	325.7	325.4	325.0	324.7	324.6
115°	380.3	380.3	380.3	380.3	380.3	380.1	379.7	379.4	378.9	378.6	378.3
117.5°	431.6	431.7	431.9	432.0	432.2	432.1	431.9	431.6	431.4	431.0	430.4
120°	465.8	466.6	467.4	468.1	468.9	469.0	468.4	467.8	467.3	466.7	465.7
122.5°	501.4	501.7	502.0	502.3	502.6	502.7	502.3	502.0	501.8	501.5	500.8
125°	553.9	553.9	553.9	553.9	553.9	553.8	553.5	553.4	553.2	553.0	552.6
127.5°	601.5	602.1	602.6	603.2	603.8	604.0	603.6	603.3	603.0	602.7	602.4
130°	635.0	635.6	636.1	636.7	637.3	637.6	637.6	637.6	637.6	637.6	637.2
132.5°	669.2	669.6	670.0	670.5	670.9	671.0	670.9	670.7	670.5	670.4	670.0
135°	714.4	715.5	716.7	717.8	719.0	719.6	719.6	719.6	719.6	719.6	719.2
137.5°	763.5	764.1	764.7	765.2	765.7	766.1	766.5	766.8	767.1	767.4	766.9
140°	796.3	796.8	797.1	797.5	797.9	798.1	798.1	798.1	798.1	798.1	797.9
142.5°	826.4	826.7	827.2	827.5	827.9	828.0	827.9	827.7	827.6	827.4	827.3
145°	867.9	868.7	869.4	870.2	871.0	871.4	871.7	871.8	872.0	872.2	872.0
147.5°	909.0	910.0	910.9	911.8	912.7	913.2	913.0	912.8	912.7	912.5	912.4
150°	934.2	935.0	935.7	936.5	937.3	937.6	937.6	937.6	937.6	937.6	937.6
152.5°	957.9	958.4	958.8	959.2	959.8	960.0	960.2	960.4	960.5	960.7	961.1
155°	994.4	994.4	994.4	994.4	994.4	994.3	994.0	993.9	993.7	993.5	994.3
157.5°	1025.0	1024.7	1024.3	1024.0	1023.6	1023.5	1023.4	1023.4	1023.3	1023.3	1023.9
160°	1043.2	1043.0	1042.8	1042.6	1042.4	1042.2	1042.0	1041.8	1041.6	1041.5	1042.0
162.5°	1059.9	1059.5	1058.9	1058.4	1057.9	1057.6	1057.4	1057.2	1057.0	1056.8	1057.8
165°	1082.4	1081.8	1081.2	1080.7	1080.1	1079.6	1079.3	1078.8	1078.5	1078.1	1079.3
167.5°	1099.7	1098.9	1098.1	1097.3	1096.5	1096.1	1096.1	1096.1	1096.1	1096.2	1097.3
170°	1109.5	1108.5	1107.5	1106.6	1105.6	1105.2	1105.4	1105.6	1105.8	1106.0	1107.2
172.5°	1116.5	1115.6	1114.8	1114.0	1113.2	1112.8	1112.8	1112.9	1112.9	1112.9	1114.3
175°	1126.0	1125.1	1124.1	1123.2	1122.1	1121.6	1121.4	1121.2	1121.0	1120.8	1122.1
177.5°	1129.2	1128.4	1127.7	1126.9	1126.1	1125.7	1125.7	1125.7	1125.7	1125.7	1126.8
180°	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8



TEST NUMBER: P333026-935

CATALOG NUMBER: S124RDIW-S350D1050U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3
2.5°	530.3	531.1	531.8	532.2	532.1	532.1	532.0	531.9
5°	526.8	527.6	528.6	528.9	528.7	528.6	528.3	528.1
7.5°	519.7	520.3	520.9	521.0	520.7	520.5	520.1	519.9
10°	513.4	513.8	514.1	514.1	513.8	513.4	513.1	512.7
12.5°	505.6	505.8	506.1	505.9	505.4	504.9	504.4	503.9
15°	492.0	491.8	491.5	491.2	490.5	489.9	489.3	488.6
17.5°	475.4	475.0	474.5	473.7	472.8	471.8	470.9	469.9
20°	464.0	463.2	462.5	461.6	460.4	459.2	458.1	456.8
22.5°	451.2	450.0	449.0	448.0	447.0	446.1	445.1	444.1
25°	430.5	429.0	427.5	426.3	425.3	424.4	423.5	422.6
27.5°	409.5	407.6	405.7	404.2	402.8	401.5	400.2	398.9
30°	394.4	392.2	389.9	388.1	386.6	385.2	383.7	382.3
32.5°	379.1	376.4	373.8	371.8	370.4	369.0	367.6	366.3
35°	356.1	353.1	350.0	347.7	346.0	344.4	342.8	341.1
37.5°	331.6	328.1	324.7	322.1	320.5	318.8	317.2	315.6
40°	315.1	311.3	307.5	304.9	303.2	301.6	300.0	298.3
42.5°	299.0	295.2	291.3	288.5	286.8	285.1	283.4	281.7
45°	274.4	269.9	265.4	262.4	260.8	259.2	257.5	256.0
47.5°	249.5	244.9	240.3	237.1	235.3	233.5	231.7	230.0
50°	233.0	228.5	223.9	220.8	219.1	217.4	215.7	214.0
52.5°	216.5	212.0	207.4	204.1	202.4	200.6	198.8	197.0
55°	192.3	187.6	182.9	179.7	178.0	176.2	174.5	172.8
57.5°	168.6	163.8	159.0	156.0	154.7	153.4	152.1	150.8
60°	152.7	148.1	143.4	140.3	138.8	137.4	136.0	134.5
62.5°	137.2	132.9	128.5	125.8	124.6	123.5	122.3	121.1
65°	114.9	111.0	107.1	104.6	103.5	102.5	101.3	100.2
67.5°	94.4	91.0	87.6	85.4	84.2	83.0	81.8	80.6
70°	80.4	77.4	74.5	72.5	71.5	70.7	69.7	68.9
72.5°	67.9	65.3	62.9	61.1	60.3	59.5	58.6	57.8
75°	50.0	48.0	45.9	44.6	44.0	43.5	43.0	42.4
77.5°	35.4	34.2	33.0	32.3	32.1	31.9	31.8	31.6
80°	27.2	26.9	26.6	26.4	26.3	26.3	26.2	26.1
82.5°	21.1	20.9	20.8	20.6	20.5	20.4	20.3	20.2
85°	12.3	12.1	11.9	11.8	11.8	11.8	11.8	11.8
87.5°	8.7	8.9	9.0	9.2	9.4	9.5	9.6	9.8
90°	21.5	22.6	23.8	24.6	25.0	25.4	25.7	26.2
92.5°	35.9	36.6	37.4	37.8	38.1	38.2	38.5	38.7
95°	67.4	68.0	68.6	68.9	68.9	68.9	68.9	68.9
97.5°	106.2	106.9	107.6	108.0	108.0	108.0	108.0	108.0
100°	134.2	134.6	135.0	135.2	135.2	135.2	135.2	135.2
102.5°	163.8	164.4	165.0	165.3	165.4	165.6	165.7	165.9
105°	208.8	209.3	209.9	210.5	211.1	211.6	212.2	212.8
107.5°	257.4	257.9	258.5	258.6	258.6	258.6	258.6	258.6
110°	289.6	289.3	288.9	289.0	289.6	290.2	290.8	291.4



TEST NUMBER: P333026-935

CATALOG NUMBER: S124RDIW-S350D1050U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	324.5	324.4	324.3	324.3	324.5	324.6	324.7	324.9
115°	378.2	378.0	377.8	377.5	377.4	377.2	377.0	376.8
117.5°	429.7	429.0	428.4	427.9	427.5	427.1	426.7	426.4
120°	464.7	463.7	462.8	462.4	462.9	463.2	463.6	464.0
122.5°	500.2	499.6	498.9	498.2	497.5	496.8	496.1	495.4
125°	552.2	551.8	551.5	551.0	550.7	550.3	549.9	549.5
127.5°	601.9	601.6	601.2	600.8	600.5	600.2	599.9	599.6
130°	636.8	636.5	636.0	635.5	634.7	634.0	633.2	632.4
132.5°	669.6	669.3	668.8	668.5	668.2	667.9	667.5	667.3
135°	718.8	718.4	718.1	717.6	717.0	716.4	715.8	715.2
137.5°	766.4	765.9	765.3	765.2	765.3	765.4	765.5	765.6
140°	797.7	797.5	797.3	797.1	796.9	796.8	796.5	796.3
142.5°	827.3	827.2	827.2	827.2	827.2	827.2	827.1	827.1
145°	871.8	871.7	871.4	871.1	870.5	869.9	869.4	868.7
147.5°	912.2	912.1	911.9	911.7	911.5	911.4	911.1	910.9
150°	937.6	937.6	937.6	937.5	937.4	937.2	936.9	936.8
152.5°	961.6	962.1	962.5	962.5	962.0	961.5	961.0	960.5
155°	995.1	995.8	996.6	996.6	995.8	995.1	994.3	993.5
157.5°	1024.5	1025.0	1025.6	1025.6	1024.9	1024.2	1023.6	1023.0
160°	1042.6	1043.2	1043.8	1043.5	1042.6	1041.6	1040.7	1039.7
162.5°	1058.9	1059.9	1061.0	1061.0	1060.1	1059.1	1058.1	1057.1
165°	1080.4	1081.6	1082.7	1082.9	1082.1	1081.3	1080.6	1079.8
167.5°	1098.5	1099.7	1100.9	1100.9	1099.7	1098.5	1097.3	1096.1
170°	1108.3	1109.5	1110.6	1110.5	1109.2	1107.8	1106.5	1105.1
172.5°	1115.6	1116.9	1118.3	1118.2	1116.9	1115.5	1114.1	1112.8
175°	1123.5	1124.9	1126.3	1126.3	1124.9	1123.5	1122.1	1120.8
177.5°	1127.9	1128.9	1130.1	1130.0	1128.7	1127.5	1126.3	1125.0
180°	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8

(END OF REPORT)