

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: P332206-935

Luminaire Tested: **S123DIW-S1000D1535U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332206-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S1000D1535U935-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1535 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8903.3 lumens
Efficiency: N/A
Efficacy: 116.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

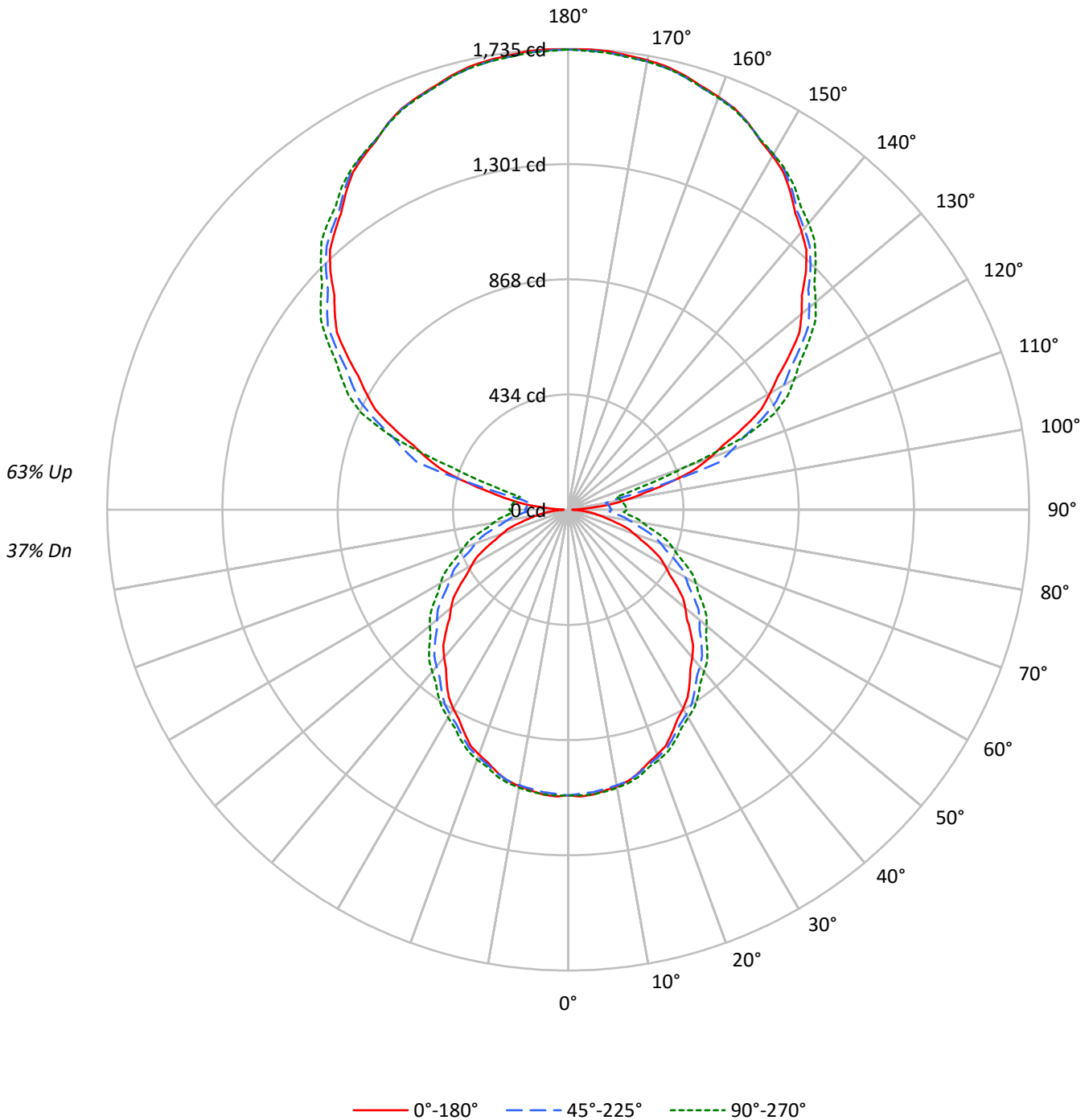
Input Watts (W): 76.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332206-935

CATALOG NUMBER: S123DIW-S1000D1535U935-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P332206-935

CATALOG NUMBER: S123DIW-S1000D1535U935-4F0-1E-UDD-D

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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44	37
1	94	90	85	82	85	81	78	75	66	63	61	51	50	48	38	37	36	30
2	85	78	71	66	77	71	65	60	57	53	50	44	42	39	33	31	30	24
3	78	68	61	55	70	62	55	50	50	45	41	39	36	33	29	27	25	20
4	71	60	52	46	64	55	48	42	44	39	35	35	31	28	26	23	21	17
5	65	53	45	39	58	48	41	36	39	34	30	31	27	24	23	20	18	15
6	60	48	39	34	54	43	36	31	35	30	26	28	24	21	21	18	16	13
7	55	43	35	29	50	39	32	27	32	27	23	25	21	18	19	16	14	11
8	51	39	31	26	46	35	29	24	29	24	20	23	19	16	17	15	13	10
9	47	35	28	23	43	32	26	21	27	21	18	21	17	15	16	13	11	9
10	44	32	25	20	40	30	23	19	24	19	16	19	16	13	15	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11579	11579	11579
5°	11615	11288	11294
10°	11511	11028	10973
15°	11363	10732	10622
20°	11151	10395	10235
25°	10888	10007	9829
30°	10621	9658	9417
35°	10321	9289	9089
40°	10033	8953	8737
45°	9715	8630	8455
50°	9402	8312	8146
55°	9056	7985	7866
60°	8718	7655	7580
65°	8372	7303	7241
70°	7847	6904	6893
75°	7189	6449	6538
80°	6431	6003	6131
85°	5726	5695	5898



TEST NUMBER: P332206-935

CATALOG NUMBER: S123DIW-S1000D1535U935-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.0	1.1
10°-20°	290.7	3.3
20°-30°	434.8	4.9
30°-40°	519.2	5.8
40°-50°	543.3	6.1
50°-60°	509.8	5.7
60°-70°	425.8	4.8
70°-80°	304.6	3.4
80°-90°	186.5	2.1
90°-100°	177.0	2.0
100°-110°	384.0	4.3
110°-120°	777.0	8.7
120°-130°	950.2	10.7
130°-140°	995.5	11.2
140°-150°	920.5	10.3
150°-160°	740.1	8.3
160°-170°	477.6	5.4
170°-180°	164.6	1.8
0°-30°	827.5	9.3
0°-40°	1346.7	15.1
0°-60°	2399.8	27.0
0°-90°	3316.8	37.3
90°-120°	1338.0	15.0
90°-150°	4204.2	47.2
90°-180°	5587.0	62.8
0°-180°	8903.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1076	1076	1076	1076	1076	
5°	1077	1074	1068	1076	1076	102
15°	1025	1029	1028	1039	1038	289
25°	926	937	941	955	956	426
35°	797	815	831	848	853	498
45°	652	680	709	731	741	502
55°	497	536	578	608	619	445
65°	343	389	441	474	488	339
75°	186	242	300	337	353	199
85°	57	116	178	216	230	60
90°	16	87	163	207	223	14
95°	91	89	156	199	213	107
105°	393	429	370	186	188	416
115°	725	749	801	840	856	716
125°	1018	1030	1067	1094	1105	909
135°	1265	1272	1290	1313	1317	974
145°	1458	1466	1469	1480	1485	912
155°	1605	1603	1604	1610	1603	739
165°	1693	1689	1688	1697	1689	478
175°	1732	1726	1727	1735	1726	165
180°	1732	1732	1732	1732	1732	



TEST NUMBER: P332206-935

CATALOG NUMBER: S123DIW-S1000D1535U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1080.5	1079.9	1079.2	1078.6	1078.0	1076.8	1075.1	1073.5	1071.8	1070.1	1071.8
5°	1076.9	1076.4	1075.9	1075.4	1074.9	1073.8	1072.3	1070.7	1069.1	1067.6	1069.6
7.5°	1066.3	1066.5	1066.6	1066.7	1066.8	1066.1	1064.6	1063.1	1061.5	1060.1	1062.6
10°	1057.0	1057.6	1058.1	1058.6	1059.1	1058.7	1057.4	1056.1	1054.8	1053.5	1056.1
12.5°	1045.8	1046.5	1047.2	1047.9	1048.7	1048.6	1047.8	1046.8	1045.9	1045.1	1047.5
15°	1025.4	1026.1	1026.9	1027.7	1028.5	1028.7	1028.5	1028.2	1027.9	1027.7	1030.4
17.5°	999.6	1001.2	1002.7	1004.3	1005.8	1006.6	1006.5	1006.3	1006.3	1006.2	1008.5
20°	980.9	982.4	984.0	985.5	987.1	988.2	988.7	989.2	989.7	990.2	992.6
22.5°	961.1	962.7	964.3	965.9	967.4	968.5	969.3	970.0	970.8	971.5	974.4
25°	925.7	928.3	931.0	933.6	936.2	937.9	938.7	939.4	940.2	941.0	944.3
27.5°	890.1	893.1	896.0	899.1	902.0	904.3	906.0	907.7	909.3	911.0	914.0
30°	864.8	868.2	871.6	874.9	878.4	881.1	883.2	885.3	887.3	889.4	892.6
32.5°	836.7	840.5	844.3	848.1	851.9	855.1	857.9	860.6	863.3	866.0	869.4
35°	796.9	801.0	805.2	809.3	813.6	817.3	820.7	824.1	827.4	830.9	834.7
37.5°	754.7	759.4	764.1	768.7	773.4	777.8	782.0	786.2	790.3	794.5	798.9
40°	726.5	731.2	735.9	740.6	745.3	750.3	755.4	760.7	765.9	771.1	775.5
42.5°	695.6	701.4	707.1	712.8	718.5	724.1	729.5	734.9	740.4	745.8	750.6
45°	651.5	657.8	664.1	670.3	676.6	682.9	689.4	695.9	702.5	708.9	713.9
47.5°	605.4	612.4	619.6	626.6	633.7	641.0	648.4	655.9	663.3	670.8	676.3
50°	575.4	582.6	590.0	597.3	604.5	612.3	620.3	628.4	636.5	644.5	650.5
52.5°	543.5	551.2	559.0	566.6	574.4	582.6	591.6	600.5	609.3	618.3	624.5
55°	496.9	505.5	514.0	522.6	531.2	540.2	549.6	559.0	568.3	577.7	584.8
57.5°	451.4	460.4	469.3	478.3	487.2	496.9	507.1	517.4	527.6	537.9	544.9
60°	419.6	428.9	438.2	447.6	457.0	467.0	477.7	488.4	499.1	509.8	517.0
62.5°	389.5	399.1	408.7	418.3	427.8	438.3	449.6	460.9	472.2	483.5	490.8
65°	343.4	353.5	363.7	373.8	384.0	394.8	406.2	417.7	429.1	440.7	448.4
67.5°	296.4	307.3	318.1	328.8	339.6	350.9	362.5	374.2	385.8	397.5	406.0
70°	263.6	274.8	286.0	297.3	308.5	320.3	332.8	345.3	357.8	370.3	378.7
72.5°	233.7	244.9	256.1	267.3	278.4	290.5	303.4	316.3	329.2	342.2	350.7
75°	186.3	198.5	210.8	223.1	235.3	247.9	261.0	274.0	287.0	300.0	308.6
77.5°	145.1	157.4	169.8	182.1	194.4	207.2	220.3	233.4	246.6	259.7	268.7
80°	116.0	128.8	141.5	154.3	167.0	180.2	193.7	207.3	220.8	234.4	243.2
82.5°	90.7	103.7	116.7	129.6	142.6	155.9	169.7	183.4	197.2	210.9	219.8
85°	57.4	70.4	83.4	96.5	109.5	123.0	136.7	150.5	164.3	178.1	187.0
87.5°	31.4	44.9	58.5	72.1	85.6	99.4	113.4	127.4	141.5	155.5	164.5
90°	16.5	32.1	47.8	63.4	79.0	95.3	112.3	129.3	146.3	163.3	173.3
92.5°	38.2	48.9	59.7	70.3	81.1	94.4	110.2	126.1	142.0	157.9	168.3
95°	91.4	89.8	88.3	86.7	85.2	92.3	108.2	124.1	140.0	155.9	166.0
97.5°	169.3	173.2	177.1	181.0	184.9	182.6	174.3	165.8	157.4	149.0	159.1
100°	228.1	242.1	256.1	270.3	284.3	275.0	242.4	209.7	177.1	144.4	154.3
102.5°	295.1	306.7	318.3	329.9	341.6	328.9	292.0	254.9	218.0	181.0	181.2
105°	393.0	402.3	411.7	421.1	430.5	428.0	413.5	398.9	384.4	369.8	326.4
107.5°	495.1	502.9	510.7	518.5	526.3	537.6	552.3	567.0	581.7	596.3	566.2
110°	563.1	570.1	577.0	584.0	591.0	601.2	614.8	628.4	642.0	655.5	652.8



TEST NUMBER: P332206-935

CATALOG NUMBER: S123DIW-S1000D1535U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	629.0	634.9	640.8	646.7	652.6	662.2	675.4	688.5	701.6	714.8	721.5
115°	725.4	730.2	735.0	739.9	744.8	753.1	765.1	777.1	789.0	801.0	810.0
117.5°	819.7	823.7	827.8	831.8	835.8	842.9	853.0	863.2	873.2	883.4	891.8
120°	877.4	881.2	885.1	889.0	892.9	899.6	909.0	918.4	927.9	937.4	945.6
122.5°	937.1	940.0	942.7	945.5	948.3	954.3	963.6	972.8	982.1	991.4	998.8
125°	1017.8	1020.1	1022.4	1024.7	1027.0	1032.4	1041.1	1049.8	1058.5	1067.2	1073.3
127.5°	1097.1	1099.2	1101.1	1103.2	1105.2	1110.0	1117.7	1125.3	1132.9	1140.6	1146.6
130°	1146.5	1148.6	1150.6	1152.6	1154.6	1158.8	1165.2	1171.6	1177.9	1184.2	1190.3
132.5°	1193.0	1195.2	1197.4	1199.6	1201.9	1205.6	1210.7	1215.7	1220.8	1225.9	1231.7
135°	1265.1	1266.5	1268.0	1269.5	1270.9	1273.6	1277.6	1281.6	1285.6	1289.7	1295.2
137.5°	1326.6	1328.6	1330.6	1332.5	1334.5	1336.6	1338.9	1341.1	1343.3	1345.6	1351.1
140°	1366.8	1368.6	1370.3	1372.0	1373.7	1375.4	1377.1	1378.7	1380.4	1382.0	1387.0
142.5°	1405.0	1406.4	1408.0	1409.5	1411.0	1412.3	1413.2	1414.3	1415.3	1416.3	1420.7
145°	1458.3	1460.0	1461.7	1463.5	1465.2	1466.4	1467.0	1467.5	1468.1	1468.7	1471.4
147.5°	1507.3	1508.6	1509.9	1511.2	1512.5	1513.5	1514.1	1514.7	1515.2	1515.8	1517.0
150°	1538.2	1539.0	1539.9	1540.8	1541.6	1542.3	1542.9	1543.5	1544.0	1544.6	1545.2
152.5°	1566.0	1566.4	1566.8	1567.2	1567.6	1568.0	1568.3	1568.7	1569.0	1569.3	1570.4
155°	1605.1	1604.6	1604.0	1603.4	1602.8	1602.7	1603.0	1603.3	1603.5	1603.8	1605.2
157.5°	1635.5	1635.5	1635.4	1635.3	1635.3	1635.1	1634.8	1634.5	1634.3	1633.9	1635.6
160°	1654.1	1653.7	1653.5	1653.2	1652.9	1652.6	1652.3	1652.0	1651.7	1651.5	1653.2
162.5°	1671.5	1670.8	1670.1	1669.3	1668.5	1668.0	1667.8	1667.5	1667.2	1666.9	1668.9
165°	1692.6	1691.8	1690.9	1690.1	1689.2	1688.7	1688.3	1688.1	1687.8	1687.5	1689.8
167.5°	1709.1	1708.0	1706.8	1705.7	1704.5	1704.0	1704.0	1704.0	1704.0	1704.0	1706.2
170°	1718.4	1717.3	1716.1	1714.9	1713.8	1713.2	1713.2	1713.2	1713.2	1713.2	1715.5
172.5°	1724.6	1723.2	1721.8	1720.5	1719.1	1718.5	1718.7	1719.0	1719.2	1719.4	1721.7
175°	1732.5	1731.1	1729.7	1728.3	1726.8	1726.2	1726.6	1726.8	1727.1	1727.4	1729.4
177.5°	1734.6	1733.5	1732.3	1731.2	1730.0	1729.6	1729.8	1730.0	1730.3	1730.5	1732.3
180°	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5

TEST NUMBER: P332206-935

CATALOG NUMBER: S123DIW-S1000D1535U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1073.5	1075.1	1076.8	1077.5	1077.3	1077.1	1076.9	1076.7
5°	1071.7	1073.8	1075.9	1076.8	1076.5	1076.2	1076.0	1075.7
7.5°	1065.2	1067.9	1070.5	1071.6	1071.3	1071.0	1070.7	1070.4
10°	1058.7	1061.3	1063.9	1065.0	1064.5	1063.9	1063.4	1062.9
12.5°	1049.8	1052.2	1054.6	1055.6	1055.1	1054.6	1054.0	1053.5
15°	1032.9	1035.5	1038.1	1039.3	1039.1	1038.8	1038.5	1038.3
17.5°	1010.8	1013.2	1015.5	1016.5	1016.2	1015.8	1015.5	1015.0
20°	994.9	997.2	999.6	1000.9	1001.2	1001.4	1001.7	1001.9
22.5°	977.4	980.3	983.3	984.7	984.6	984.5	984.3	984.1
25°	947.8	951.1	954.5	956.2	956.2	956.2	956.2	956.2
27.5°	916.8	919.7	922.6	924.2	924.5	924.6	924.9	925.1
30°	895.7	898.8	901.9	903.5	903.5	903.5	903.5	903.5
32.5°	872.7	876.0	879.3	881.3	881.9	882.5	883.2	883.8
35°	838.6	842.6	846.4	848.9	850.0	851.0	852.0	853.1
37.5°	803.4	807.8	812.3	814.9	815.7	816.5	817.3	818.2
40°	779.9	784.4	788.8	791.5	792.6	793.6	794.6	795.7
42.5°	755.4	760.3	765.2	768.3	769.7	771.2	772.7	774.1
45°	718.8	723.8	728.8	732.3	734.3	736.4	738.6	740.6
47.5°	681.9	687.5	693.0	696.6	698.3	699.9	701.5	703.1
50°	656.5	662.5	668.5	672.4	674.2	676.1	677.9	679.7
52.5°	630.7	636.9	643.1	647.3	649.5	651.8	654.0	656.3
55°	591.8	598.8	605.9	610.4	612.5	614.6	616.6	618.7
57.5°	552.1	559.1	566.2	571.0	573.4	575.8	578.3	580.7
60°	524.3	531.7	538.9	544.0	546.9	549.7	552.6	555.4
62.5°	498.1	505.4	512.6	517.6	520.3	523.0	525.6	528.3
65°	456.2	464.1	471.8	477.1	479.7	482.2	484.9	487.5
67.5°	414.6	423.1	431.6	437.0	439.2	441.4	443.6	445.7
70°	386.9	395.3	403.6	409.1	411.7	414.3	416.9	419.6
72.5°	359.3	367.8	376.3	381.9	384.5	387.1	389.8	392.4
75°	317.2	325.8	334.3	340.3	343.4	346.5	349.6	352.8
77.5°	277.8	286.9	295.9	301.7	304.0	306.4	308.8	311.3
80°	252.1	261.0	269.8	275.5	278.1	280.7	283.4	285.9
82.5°	228.7	237.5	246.3	252.1	254.7	257.3	259.8	262.5
85°	195.8	204.7	213.5	219.3	221.9	224.5	227.0	229.7
87.5°	173.7	182.7	191.8	197.7	200.4	203.1	205.9	208.6
90°	183.3	193.3	203.3	209.9	213.1	216.3	219.4	222.6
92.5°	178.8	189.3	199.8	206.4	209.1	211.9	214.6	217.3
95°	176.1	186.1	196.2	202.6	205.2	207.8	210.3	213.0
97.5°	169.1	179.2	189.2	195.7	198.5	201.5	204.3	207.2
100°	164.1	173.9	183.8	190.2	193.0	196.0	198.8	201.7
102.5°	181.5	181.8	182.0	183.7	186.8	189.9	193.0	196.2
105°	283.1	239.8	196.4	176.2	179.2	182.0	184.9	187.9
107.5°	536.1	505.9	475.8	442.7	406.9	371.0	335.2	299.3
110°	650.1	647.5	644.8	624.1	585.3	546.5	507.6	468.8



TEST NUMBER: P332206-935

CATALOG NUMBER: S123DIW-S1000D1535U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	728.2	734.9	741.7	741.9	735.6	729.2	722.9	716.5
115°	819.2	828.3	837.4	843.5	846.8	850.0	853.3	856.4
117.5°	900.3	908.8	917.3	922.6	925.0	927.2	929.4	931.7
120°	953.9	962.2	970.5	975.5	977.3	979.2	981.0	982.8
122.5°	1006.2	1013.6	1020.9	1025.6	1027.7	1029.8	1031.8	1033.8
125°	1079.3	1085.4	1091.4	1095.6	1098.0	1100.4	1102.8	1105.2
127.5°	1152.7	1158.7	1164.8	1168.5	1169.7	1170.9	1172.1	1173.3
130°	1196.4	1202.6	1208.6	1212.1	1213.1	1214.1	1215.1	1216.1
132.5°	1237.7	1243.5	1249.4	1252.8	1253.8	1254.8	1255.8	1256.7
135°	1300.7	1306.3	1311.8	1314.8	1315.3	1315.7	1316.1	1316.6
137.5°	1356.5	1362.0	1367.5	1370.6	1371.3	1372.1	1372.8	1373.6
140°	1392.1	1397.1	1402.1	1405.1	1405.8	1406.5	1407.2	1408.0
142.5°	1425.1	1429.5	1433.9	1436.4	1436.9	1437.4	1437.9	1438.4
145°	1473.9	1476.6	1479.3	1481.2	1482.2	1483.2	1484.3	1485.3
147.5°	1518.2	1519.4	1520.6	1521.0	1520.6	1520.3	1519.8	1519.5
150°	1545.8	1546.4	1546.9	1547.0	1546.7	1546.4	1546.0	1545.7
152.5°	1571.4	1572.4	1573.5	1573.4	1572.2	1570.9	1569.7	1568.5
155°	1606.7	1608.1	1609.6	1609.4	1607.7	1605.9	1604.2	1602.6
157.5°	1637.4	1639.1	1640.8	1640.5	1638.3	1636.1	1633.8	1631.6
160°	1654.9	1656.6	1658.3	1658.2	1656.1	1654.2	1652.2	1650.2
162.5°	1670.8	1672.8	1674.6	1674.7	1673.0	1671.2	1669.5	1667.7
165°	1692.0	1694.4	1696.7	1696.8	1694.8	1692.8	1690.7	1688.8
167.5°	1708.6	1710.8	1713.1	1713.1	1710.8	1708.6	1706.2	1704.0
170°	1717.8	1720.1	1722.4	1722.4	1720.1	1717.8	1715.5	1713.2
172.5°	1724.0	1726.3	1728.5	1728.5	1726.0	1723.5	1720.9	1718.4
175°	1731.4	1733.4	1735.4	1735.3	1732.9	1730.7	1728.4	1726.1
177.5°	1734.1	1735.9	1737.8	1737.6	1735.3	1733.0	1730.7	1728.5
180°	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5	1732.5

(END OF REPORT)