

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: P332206-830

Luminaire Tested: **S123DIW-S1000D1535U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332206-830
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-S1000D1535U830-4F0-1E-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: 9746.5 lumens
Efficiency: N/A
Efficacy: 127.2 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

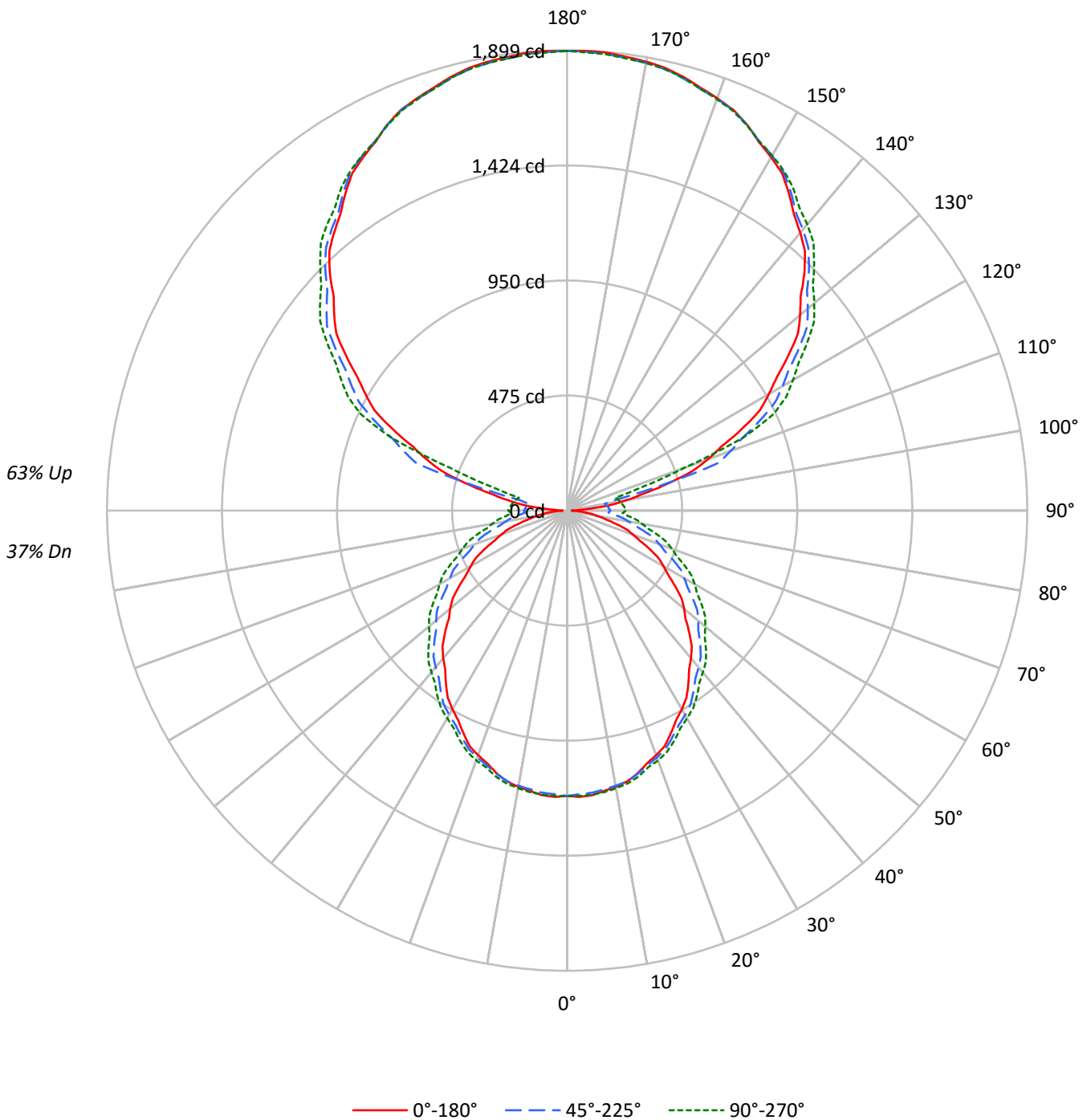
Input Watts (W): 76.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332206-830

CATALOG NUMBER: S123DIW-S1000D1535U830-4F0-1E-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°	12676	12676	12676
5°	12715	12357	12363
10°	12602	12072	12012
15°	12439	11748	11627
20°	12206	11380	11204
25°	11920	10955	10760
30°	11627	10572	10310
35°	11297	10169	9950
40°	10983	9801	9564
45°	10635	9448	9257
50°	10293	9100	8917
55°	9912	8741	8611
60°	9543	8380	8298
65°	9165	7994	7927
70°	8591	7558	7545
75°	7872	7060	7157
80°	7040	6572	6712
85°	6274	6235	6458



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.6	1.1
10°-20°	318.2	3.3
20°-30°	476.0	4.9
30°-40°	568.4	5.8
40°-50°	594.7	6.1
50°-60°	558.1	5.7
60°-70°	466.1	4.8
70°-80°	333.5	3.4
80°-90°	204.2	2.1
90°-100°	193.7	2.0
100°-110°	420.3	4.3
110°-120°	850.6	8.7
120°-130°	1040.2	10.7
130°-140°	1089.7	11.2
140°-150°	1007.7	10.3
150°-160°	810.2	8.3
160°-170°	522.9	5.4
170°-180°	180.2	1.8
0°-30°	905.9	9.3
0°-40°	1474.3	15.1
0°-60°	2627.1	27.0
0°-90°	3630.9	37.3
90°-120°	1464.7	15.0
90°-150°	4602.4	47.2
90°-180°	6116.0	62.8
0°-180°	9746.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1178	1178	1178	1178	1178	
5°	1179	1176	1169	1178	1178	112
15°	1122	1126	1125	1137	1137	316
25°	1013	1026	1030	1046	1047	467
35°	872	893	910	928	934	545
45°	713	744	776	800	811	550
55°	544	586	632	666	677	487
65°	376	426	482	519	534	371
75°	204	264	328	369	386	218
85°	63	127	195	237	252	66
90°	18	95	179	226	244	15
95°	100	97	171	218	233	117
105°	430	470	405	204	206	456
115°	794	820	877	920	938	784
125°	1114	1127	1168	1197	1210	995
135°	1385	1393	1412	1438	1441	1066
145°	1596	1605	1608	1620	1626	999
155°	1757	1754	1756	1762	1754	809
165°	1853	1849	1847	1857	1849	523
175°	1897	1890	1891	1900	1890	180
180°	1897	1897	1897	1897	1897	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6
2.5°	1182.8	1182.1	1181.4	1180.7	1180.1	1178.7	1177.0	1175.2	1173.3	1171.5	1173.3
5°	1178.9	1178.4	1177.8	1177.2	1176.7	1175.5	1173.8	1172.1	1170.4	1168.7	1170.9
7.5°	1167.3	1167.5	1167.6	1167.7	1167.8	1167.1	1165.5	1163.8	1162.1	1160.5	1163.3
10°	1157.2	1157.7	1158.3	1158.9	1159.4	1159.0	1157.5	1156.1	1154.7	1153.3	1156.1
12.5°	1144.8	1145.6	1146.4	1147.2	1148.0	1147.9	1147.0	1145.9	1145.0	1144.1	1146.7
15°	1122.5	1123.3	1124.2	1125.0	1125.9	1126.1	1125.9	1125.6	1125.3	1125.0	1127.9
17.5°	1094.3	1096.0	1097.7	1099.4	1101.1	1101.9	1101.8	1101.6	1101.5	1101.5	1104.0
20°	1073.7	1075.4	1077.1	1078.8	1080.5	1081.8	1082.3	1082.9	1083.5	1084.0	1086.6
22.5°	1052.2	1053.9	1055.6	1057.3	1059.0	1060.3	1061.1	1061.9	1062.7	1063.5	1066.7
25°	1013.4	1016.2	1019.2	1022.0	1024.8	1026.7	1027.6	1028.4	1029.3	1030.1	1033.8
27.5°	974.4	977.7	980.9	984.2	987.4	990.0	991.8	993.6	995.4	997.3	1000.5
30°	946.7	950.5	954.1	957.8	961.6	964.5	966.9	969.1	971.4	973.6	977.1
32.5°	916.0	920.1	924.3	928.4	932.6	936.1	939.1	942.1	945.1	948.0	951.7
35°	872.3	876.8	881.5	886.0	890.6	894.7	898.4	902.1	905.8	909.6	913.8
37.5°	826.1	831.3	836.4	841.5	846.7	851.5	856.1	860.6	865.2	869.8	874.6
40°	795.3	800.5	805.6	810.8	815.9	821.3	827.0	832.7	838.4	844.1	848.9
42.5°	761.5	767.8	774.0	780.3	786.6	792.7	798.6	804.6	810.5	816.4	821.7
45°	713.2	720.1	727.0	733.8	740.6	747.6	754.7	761.9	769.0	776.1	781.6
47.5°	662.7	670.4	678.3	686.0	693.7	701.7	709.8	718.0	726.1	734.3	740.4
50°	629.9	637.8	645.8	653.8	661.8	670.2	679.0	687.9	696.7	705.6	712.1
52.5°	594.9	603.4	611.9	620.3	628.8	637.8	647.6	657.3	667.0	676.8	683.6
55°	543.9	553.4	562.7	572.1	581.5	591.4	601.6	611.9	622.2	632.4	640.2
57.5°	494.2	504.0	513.8	523.6	533.4	543.9	555.2	566.4	577.6	588.8	596.5
60°	459.3	469.5	479.8	490.0	500.3	511.2	522.9	534.7	546.4	558.1	566.0
62.5°	426.4	436.9	447.4	457.9	468.3	479.8	492.2	504.5	516.9	529.3	537.2
65°	375.9	387.0	398.1	409.3	420.4	432.2	444.7	457.2	469.8	482.4	490.9
67.5°	324.5	336.4	348.2	360.0	371.7	384.1	396.8	409.6	422.4	435.2	444.5
70°	288.6	300.9	313.1	325.5	337.7	350.6	364.3	378.1	391.7	405.4	414.5
72.5°	255.8	268.1	280.3	292.6	304.8	318.0	332.2	346.3	360.4	374.6	383.9
75°	204.0	217.4	230.7	244.2	257.6	271.4	285.7	299.9	314.1	328.4	337.8
77.5°	158.8	172.3	185.9	199.3	212.8	226.8	241.2	255.5	269.9	284.3	294.2
80°	127.0	141.0	155.0	168.9	182.9	197.3	212.1	227.0	241.8	256.6	266.3
82.5°	99.2	113.5	127.7	141.9	156.1	170.7	185.8	200.8	215.8	230.9	240.6
85°	62.9	77.1	91.3	105.7	119.9	134.6	149.7	164.8	179.8	195.0	204.7
87.5°	34.4	49.2	64.1	78.9	93.7	108.8	124.1	139.5	154.9	170.2	180.1
90°	18.1	35.2	52.3	69.4	86.5	104.3	122.9	141.6	160.1	178.8	189.7
92.5°	41.8	53.5	65.3	77.0	88.8	103.3	120.6	138.1	155.4	172.9	184.3
95°	100.1	98.3	96.6	94.9	93.2	101.0	118.5	135.8	153.3	170.7	181.7
97.5°	185.3	189.6	193.9	198.1	202.5	199.9	190.8	181.5	172.3	163.2	174.2
100°	249.7	265.0	280.4	295.9	311.2	301.0	265.3	229.6	193.9	158.1	168.9
102.5°	323.0	335.7	348.5	361.2	373.9	360.1	319.6	279.1	238.7	198.1	198.4
105°	430.2	440.5	450.7	461.0	471.3	468.5	452.6	436.7	420.8	404.8	357.3
107.5°	542.0	550.5	559.0	567.6	576.2	588.5	604.6	620.7	636.8	652.8	619.8
110°	616.4	624.1	631.7	639.3	647.0	658.2	673.1	687.9	702.8	717.6	714.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	688.5	695.0	701.5	707.9	714.4	724.9	739.3	753.7	768.1	782.5	789.9
115°	794.1	799.4	804.6	810.0	815.3	824.4	837.5	850.6	863.7	876.8	886.7
117.5°	897.3	901.7	906.2	910.6	914.9	922.7	933.8	944.9	955.9	967.0	976.3
120°	960.5	964.7	968.9	973.2	977.5	984.8	995.1	1005.4	1015.8	1026.1	1035.2
122.5°	1025.9	1029.0	1032.0	1035.0	1038.1	1044.7	1054.9	1065.0	1075.2	1085.2	1093.3
125°	1114.2	1116.7	1119.2	1121.7	1124.3	1130.2	1139.7	1149.2	1158.8	1168.3	1175.0
127.5°	1201.0	1203.2	1205.4	1207.7	1209.8	1215.1	1223.5	1231.9	1240.2	1248.6	1255.2
130°	1255.1	1257.4	1259.5	1261.8	1263.9	1268.6	1275.5	1282.5	1289.5	1296.4	1303.1
132.5°	1306.0	1308.4	1310.8	1313.2	1315.7	1319.7	1325.3	1330.9	1336.4	1342.0	1348.4
135°	1384.9	1386.5	1388.1	1389.7	1391.3	1394.2	1398.6	1403.0	1407.4	1411.8	1417.9
137.5°	1452.3	1454.4	1456.6	1458.7	1460.8	1463.2	1465.7	1468.1	1470.6	1473.0	1479.0
140°	1496.3	1498.2	1500.1	1501.9	1503.8	1505.7	1507.5	1509.3	1511.1	1512.9	1518.3
142.5°	1538.0	1539.6	1541.3	1542.9	1544.6	1546.1	1547.1	1548.2	1549.4	1550.5	1555.3
145°	1596.4	1598.3	1600.2	1602.1	1604.0	1605.2	1605.9	1606.5	1607.1	1607.8	1610.7
147.5°	1650.0	1651.5	1652.9	1654.4	1655.8	1656.8	1657.5	1658.1	1658.7	1659.3	1660.7
150°	1683.9	1684.8	1685.7	1686.7	1687.6	1688.4	1689.0	1689.7	1690.3	1690.9	1691.5
152.5°	1714.3	1714.8	1715.1	1715.6	1716.1	1716.5	1716.8	1717.2	1717.6	1718.0	1719.1
155°	1757.1	1756.5	1755.9	1755.3	1754.6	1754.4	1754.8	1755.1	1755.4	1755.7	1757.3
157.5°	1790.4	1790.4	1790.3	1790.2	1790.2	1790.0	1789.6	1789.3	1789.0	1788.7	1790.5
160°	1810.7	1810.3	1810.1	1809.8	1809.4	1809.1	1808.8	1808.5	1808.2	1807.9	1809.8
162.5°	1829.9	1829.0	1828.2	1827.4	1826.6	1826.0	1825.7	1825.4	1825.0	1824.8	1826.9
165°	1852.9	1852.0	1851.1	1850.1	1849.2	1848.6	1848.2	1847.9	1847.7	1847.3	1849.8
167.5°	1870.9	1869.7	1868.5	1867.3	1866.0	1865.4	1865.4	1865.4	1865.4	1865.4	1867.8
170°	1881.1	1879.9	1878.6	1877.4	1876.1	1875.5	1875.5	1875.5	1875.5	1875.5	1878.0
172.5°	1887.9	1886.4	1884.9	1883.4	1881.9	1881.2	1881.5	1881.8	1882.0	1882.3	1884.8
175°	1896.6	1895.1	1893.5	1892.0	1890.4	1889.7	1890.1	1890.4	1890.6	1891.0	1893.2
177.5°	1898.8	1897.6	1896.4	1895.2	1893.9	1893.4	1893.7	1893.9	1894.1	1894.4	1896.4
180°	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6
2.5°	1175.2	1177.0	1178.7	1179.6	1179.3	1179.1	1178.9	1178.6
5°	1173.2	1175.5	1177.8	1178.7	1178.5	1178.2	1177.9	1177.6
7.5°	1166.1	1169.0	1171.9	1173.1	1172.8	1172.4	1172.1	1171.8
10°	1159.0	1161.8	1164.7	1165.8	1165.3	1164.7	1164.1	1163.6
12.5°	1149.2	1151.9	1154.5	1155.6	1155.0	1154.4	1153.9	1153.3
15°	1130.8	1133.6	1136.4	1137.7	1137.5	1137.2	1136.9	1136.6
17.5°	1106.5	1109.2	1111.7	1112.8	1112.4	1112.0	1111.6	1111.2
20°	1089.1	1091.7	1094.3	1095.7	1096.0	1096.3	1096.6	1096.8
22.5°	1070.0	1073.2	1076.5	1078.0	1077.8	1077.7	1077.5	1077.3
25°	1037.6	1041.2	1044.9	1046.8	1046.8	1046.8	1046.8	1046.8
27.5°	1003.6	1006.8	1010.0	1011.7	1012.0	1012.2	1012.5	1012.7
30°	980.5	983.9	987.3	989.1	989.1	989.1	989.1	989.1
32.5°	955.4	958.9	962.6	964.8	965.4	966.1	966.9	967.5
35°	918.0	922.4	926.6	929.3	930.5	931.6	932.7	933.9
37.5°	879.5	884.3	889.2	892.0	893.0	893.8	894.8	895.7
40°	853.8	858.7	863.5	866.5	867.6	868.7	869.9	871.0
42.5°	827.0	832.3	837.6	841.0	842.6	844.2	845.8	847.4
45°	786.9	792.4	797.8	801.6	803.9	806.2	808.5	810.8
47.5°	746.5	752.6	758.7	762.6	764.4	766.2	767.9	769.7
50°	718.7	725.2	731.8	736.0	738.1	740.1	742.1	744.0
52.5°	690.4	697.2	704.0	708.6	711.1	713.5	716.0	718.4
55°	647.8	655.5	663.3	668.2	670.5	672.8	675.0	677.3
57.5°	604.4	612.1	619.8	625.1	627.7	630.4	633.1	635.7
60°	574.0	582.0	589.9	595.5	598.7	601.8	604.9	608.0
62.5°	545.3	553.3	561.2	566.7	569.6	572.5	575.4	578.3
65°	499.5	508.0	516.5	522.3	525.1	527.9	530.8	533.7
67.5°	453.8	463.2	472.5	478.4	480.8	483.2	485.6	488.0
70°	423.6	432.7	441.9	447.9	450.7	453.6	456.4	459.3
72.5°	393.3	402.7	412.0	418.1	420.9	423.8	426.7	429.5
75°	347.2	356.7	366.0	372.5	375.9	379.3	382.7	386.2
77.5°	304.2	314.1	324.0	330.3	332.8	335.5	338.1	340.7
80°	276.0	285.7	295.3	301.6	304.4	307.3	310.2	313.0
82.5°	250.3	260.0	269.7	276.0	278.8	281.6	284.5	287.4
85°	214.3	224.0	233.8	240.1	242.9	245.7	248.5	251.5
87.5°	190.1	200.0	210.0	216.4	219.4	222.3	225.4	228.4
90°	200.7	211.6	222.5	229.8	233.3	236.8	240.2	243.6
92.5°	195.8	207.3	218.7	225.9	228.9	232.0	234.9	237.9
95°	192.7	203.8	214.8	221.8	224.6	227.4	230.3	233.2
97.5°	185.1	196.1	207.2	214.2	217.4	220.6	223.7	226.9
100°	179.6	190.4	201.2	208.2	211.3	214.5	217.6	220.8
102.5°	198.7	199.0	199.3	201.1	204.5	207.9	211.3	214.8
105°	309.9	262.5	215.0	192.9	196.1	199.3	202.5	205.7
107.5°	586.8	553.8	520.8	484.7	445.4	406.1	366.9	327.6
110°	711.7	708.8	705.9	683.2	640.7	598.2	555.7	513.2



TEST NUMBER: P332206-830

CATALOG NUMBER: S123DIW-S1000D1535U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	797.2	804.6	811.9	812.2	805.2	798.2	791.4	784.4
115°	896.7	906.7	916.7	923.4	927.0	930.5	934.1	937.5
117.5°	985.6	994.9	1004.2	1010.0	1012.6	1015.0	1017.5	1019.9
120°	1044.2	1053.3	1062.4	1067.9	1069.9	1072.0	1073.9	1075.9
122.5°	1101.5	1109.6	1117.6	1122.8	1125.0	1127.3	1129.5	1131.7
125°	1181.6	1188.2	1194.8	1199.4	1202.0	1204.7	1207.2	1209.8
127.5°	1261.9	1268.5	1275.2	1279.1	1280.4	1281.8	1283.1	1284.4
130°	1309.8	1316.4	1323.0	1326.9	1328.0	1329.1	1330.2	1331.2
132.5°	1354.9	1361.3	1367.7	1371.5	1372.5	1373.7	1374.7	1375.7
135°	1423.9	1430.0	1436.1	1439.4	1439.8	1440.3	1440.8	1441.3
137.5°	1485.0	1491.0	1497.0	1500.4	1501.2	1502.0	1502.8	1503.6
140°	1523.9	1529.5	1534.9	1538.1	1538.9	1539.7	1540.5	1541.3
142.5°	1560.1	1564.9	1569.7	1572.4	1573.0	1573.5	1574.0	1574.6
145°	1613.5	1616.5	1619.4	1621.5	1622.6	1623.7	1624.8	1626.0
147.5°	1662.0	1663.3	1664.6	1665.0	1664.6	1664.2	1663.8	1663.4
150°	1692.1	1692.8	1693.4	1693.6	1693.2	1692.8	1692.4	1692.1
152.5°	1720.2	1721.4	1722.5	1722.4	1721.1	1719.7	1718.3	1717.0
155°	1758.9	1760.4	1762.0	1761.8	1759.9	1758.0	1756.1	1754.4
157.5°	1792.4	1794.3	1796.2	1795.9	1793.5	1791.0	1788.6	1786.1
160°	1811.7	1813.5	1815.3	1815.2	1813.0	1810.8	1808.6	1806.5
162.5°	1829.0	1831.2	1833.2	1833.3	1831.5	1829.5	1827.6	1825.6
165°	1852.3	1854.8	1857.4	1857.5	1855.3	1853.1	1850.9	1848.7
167.5°	1870.4	1872.8	1875.4	1875.4	1872.8	1870.4	1867.8	1865.4
170°	1880.5	1883.0	1885.6	1885.6	1883.0	1880.5	1878.0	1875.5
172.5°	1887.3	1889.8	1892.2	1892.2	1889.4	1886.7	1883.9	1881.1
175°	1895.4	1897.5	1899.8	1899.6	1897.1	1894.6	1892.1	1889.6
177.5°	1898.4	1900.4	1902.4	1902.1	1899.6	1897.1	1894.6	1892.2
180°	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6	1896.6

(END OF REPORT)