

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: P332209

Luminaire Tested: **S123DIW-S1000D1535U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332209
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S1000D1535U835-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1535 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9443.1 lumens
Efficiency: N/A
Efficacy: 123.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

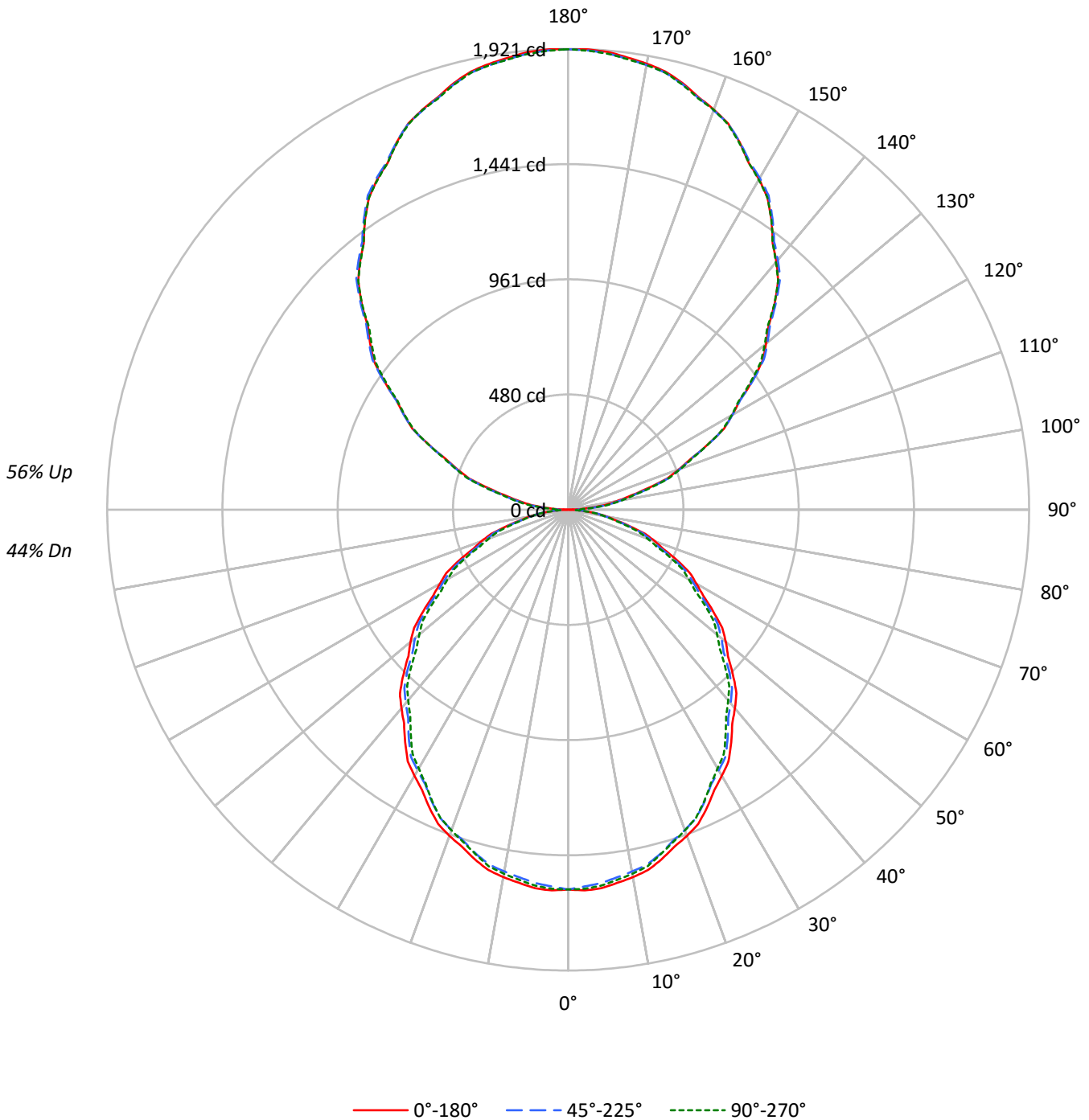
Input Watts (W): 76.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332209

CATALOG NUMBER: S123DIW-S1000D1535U835-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P332209

CATALOG NUMBER: S123DIW-S1000D1535U835-4F0-1E-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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44				44
1	96	92	88	85	88	84	81	78	70	67	65	57	55	53	44	43	42				37	
2	88	80	74	69	80	74	68	64	61	57	54	50	47	45	39	37	36				31	
3	80	71	63	57	73	65	58	53	54	49	45	44	41	38	35	32	30				26	
4	73	62	55	49	67	57	50	45	48	43	39	39	35	32	31	28	26				22	
5	67	55	47	41	61	51	44	39	43	37	33	35	31	28	28	25	23				19	
6	62	50	42	36	56	46	39	34	38	33	29	32	28	24	25	22	20				17	
7	57	45	37	31	52	41	34	29	35	29	25	29	25	22	23	20	18				15	
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16				13	
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14				12	
10	46	34	27	22	42	31	25	21	27	22	18	22	18	16	18	15	13				11	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17038	17038	17038
5°	17117	16883	17001
10°	17004	16736	16840
15°	16805	16547	16577
20°	16573	16276	16292
25°	16262	15954	15922
30°	15918	15597	15478
35°	15559	15219	15023
40°	15185	14802	14573
45°	14772	14420	14067
50°	14359	13949	13561
55°	13818	13461	13052
60°	13272	12893	12482
65°	12791	12271	11889
70°	12079	11566	11050
75°	11038	10643	10189
80°	9955	9534	9447
85°	8744	8410	8065



TEST NUMBER: P332209

CATALOG NUMBER: S123DIW-S1000D1535U835-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.1	1.6
10°-20°	421.0	4.5
20°-30°	621.9	6.6
30°-40°	726.5	7.7
40°-50°	730.4	7.7
50°-60°	641.5	6.8
60°-70°	478.0	5.1
70°-80°	272.3	2.9
80°-90°	83.8	0.9
90°-100°	125.1	1.3
100°-110°	374.3	4.0
110°-120°	636.6	6.7
120°-130°	837.4	8.9
130°-140°	941.2	10.0
140°-150°	925.2	9.8
150°-160°	778.9	8.2
160°-170°	518.5	5.5
170°-180°	181.6	1.9
0°-30°	1192.0	12.6
0°-40°	1918.5	20.3
0°-60°	3290.4	34.8
0°-90°	4124.5	43.7
90°-120°	1136.0	12.0
90°-150°	3839.7	40.7
90°-180°	5319.0	56.3
0°-180°	9443.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1583	1583	1583	1583	1583	
5°	1584	1577	1562	1575	1573	150
15°	1508	1502	1485	1495	1488	425
25°	1369	1360	1343	1344	1341	630
35°	1184	1175	1158	1150	1143	740
45°	970	964	947	932	924	749
55°	736	734	717	703	696	659
65°	502	495	482	471	467	495
75°	265	260	256	249	245	284
85°	71	68	68	65	65	78
90°	2	17	36	42	45	9
95°	89	100	112	117	118	100
105°	339	343	356	356	359	363
115°	641	645	642	644	642	634
125°	938	942	940	933	927	836
135°	1217	1225	1224	1219	1215	937
145°	1476	1479	1484	1482	1476	922
155°	1690	1690	1692	1697	1687	778
165°	1841	1837	1837	1845	1835	519
175°	1915	1909	1909	1917	1908	182
180°	1920	1920	1920	1920	1920	



TEST NUMBER: P332209

CATALOG NUMBER: S123DIW-S1000D1535U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9
2.5°	1588.3	1587.4	1586.4	1585.4	1584.5	1582.6	1580.0	1577.3	1574.7	1572.0	1574.4
5°	1584.2	1582.7	1581.2	1579.7	1578.2	1575.8	1572.5	1569.1	1565.8	1562.5	1565.5
7.5°	1568.7	1567.2	1565.7	1564.2	1562.7	1560.2	1556.8	1553.3	1549.9	1546.4	1549.1
10°	1555.7	1554.2	1552.6	1551.1	1549.6	1546.9	1543.0	1539.0	1535.1	1531.2	1533.9
12.5°	1538.2	1537.0	1535.7	1534.4	1533.2	1530.7	1527.0	1523.3	1519.6	1515.9	1517.9
15°	1508.0	1506.8	1505.6	1504.4	1503.2	1500.6	1496.7	1492.8	1488.8	1484.9	1487.3
17.5°	1472.9	1471.3	1469.8	1468.2	1466.6	1463.9	1459.9	1456.0	1452.1	1448.1	1449.8
20°	1446.8	1445.0	1443.2	1441.3	1439.5	1436.6	1432.7	1428.8	1424.9	1420.9	1422.1
22.5°	1417.4	1415.6	1413.8	1411.9	1410.1	1407.3	1403.3	1399.4	1395.5	1391.5	1392.5
25°	1369.2	1367.4	1365.6	1363.8	1361.9	1359.1	1355.1	1351.2	1347.3	1343.3	1343.6
27.5°	1317.8	1316.0	1314.2	1312.5	1310.7	1307.7	1303.5	1299.3	1295.0	1290.8	1291.0
30°	1280.7	1279.2	1277.7	1276.2	1274.7	1271.8	1267.6	1263.3	1259.1	1254.9	1254.9
32.5°	1243.7	1241.7	1239.7	1237.7	1235.7	1233.1	1229.8	1226.6	1223.3	1220.0	1218.3
35°	1184.1	1182.3	1180.5	1178.7	1176.8	1174.0	1170.0	1166.1	1162.2	1158.2	1156.4
37.5°	1123.1	1120.8	1118.5	1116.2	1113.9	1110.8	1106.8	1102.8	1098.8	1094.8	1092.6
40°	1080.7	1078.8	1077.0	1075.2	1073.4	1070.4	1066.1	1061.9	1057.7	1053.4	1051.0
42.5°	1038.2	1036.1	1034.1	1032.0	1030.0	1026.8	1022.6	1018.4	1014.1	1009.9	1007.5
45°	970.4	969.2	968.0	966.8	965.6	963.0	959.1	955.1	951.2	947.3	943.7
47.5°	903.2	901.4	899.7	897.9	896.2	893.4	889.8	886.1	882.4	878.7	875.1
50°	857.5	855.9	854.4	852.9	851.4	848.7	844.7	840.8	836.9	833.0	829.6
52.5°	809.5	808.5	807.5	806.5	805.4	802.8	798.7	794.5	790.3	786.1	783.3
55°	736.3	736.0	735.7	735.4	735.1	733.0	729.1	725.1	721.2	717.3	713.9
57.5°	666.6	665.6	664.6	663.6	662.5	660.4	657.3	654.1	651.0	647.9	644.9
60°	616.5	616.2	615.9	615.6	615.3	613.4	609.7	606.1	602.5	598.9	596.1
62.5°	571.9	571.1	570.3	569.5	568.8	566.6	562.9	559.3	555.7	552.0	549.3
65°	502.2	500.7	499.2	497.7	496.2	493.9	490.9	487.9	484.8	481.8	479.4
67.5°	428.5	427.1	425.8	424.5	423.1	421.3	419.0	416.7	414.4	412.1	410.0
70°	383.8	382.0	380.2	378.4	376.6	374.7	372.9	371.1	369.3	367.5	365.4
72.5°	337.0	335.7	334.3	333.0	331.7	330.0	327.9	325.9	323.8	321.7	319.9
75°	265.4	264.2	263.0	261.8	260.6	259.5	258.6	257.7	256.8	255.9	254.4
77.5°	202.0	201.3	200.6	200.0	199.3	198.4	197.4	196.3	195.2	194.1	193.1
80°	160.6	159.7	158.8	157.9	157.0	156.2	155.6	155.0	154.4	153.8	153.5
82.5°	120.3	120.1	120.0	119.8	119.6	119.4	119.3	119.2	119.1	119.0	118.4
85°	70.8	70.2	69.6	69.0	68.4	68.1	68.1	68.1	68.1	68.1	67.4
87.5°	28.6	28.6	28.5	28.4	28.4	28.7	29.3	29.9	30.6	31.2	31.2
90°	1.5	4.9	8.2	11.6	14.9	18.8	23.1	27.5	31.8	36.2	37.5
92.5°	36.5	38.8	41.0	43.3	45.6	48.0	50.5	52.9	55.4	57.9	59.0
95°	89.0	91.3	93.7	96.0	98.4	100.9	103.5	106.2	108.9	111.6	112.9
97.5°	158.0	159.8	161.5	163.3	165.0	166.8	168.8	170.7	172.7	174.6	176.2
100°	205.1	207.1	209.1	211.1	213.1	215.0	216.6	218.3	220.0	221.7	222.7
102.5°	259.4	260.6	261.8	263.0	264.2	265.9	268.1	270.3	272.5	274.7	275.8
105°	339.3	340.0	340.6	341.3	342.0	343.8	346.8	349.8	352.9	355.9	355.9
107.5°	432.2	432.6	433.0	433.4	433.8	434.6	435.8	437.0	438.2	439.4	440.5
110°	490.1	490.8	491.4	492.1	492.8	493.4	494.1	494.8	495.4	496.1	497.5



TEST NUMBER: P332209

CATALOG NUMBER: S123DIW-S1000D1535U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	550.4	550.8	551.2	551.6	552.0	552.3	552.4	552.5	552.7	552.8	554.4
115°	640.9	641.9	642.9	643.9	644.9	645.1	644.4	643.7	643.1	642.4	642.7
117.5°	732.0	732.6	733.3	734.0	734.6	734.5	733.7	732.8	731.9	731.1	731.0
120°	788.7	790.7	792.7	794.7	796.7	796.9	795.2	793.5	791.8	790.2	789.8
122.5°	847.8	849.2	850.7	852.2	853.7	854.0	853.1	852.2	851.4	850.5	849.6
125°	937.9	938.9	940.0	941.0	942.0	942.1	941.5	940.8	940.1	939.5	938.1
127.5°	1021.2	1023.3	1025.5	1027.6	1029.8	1030.5	1029.7	1029.0	1028.3	1027.5	1025.6
130°	1076.7	1079.4	1082.0	1084.7	1087.4	1088.2	1087.2	1086.2	1085.2	1084.2	1082.9
132.5°	1132.2	1134.8	1137.5	1140.2	1142.9	1143.9	1143.1	1142.4	1141.6	1140.9	1139.3
135°	1216.9	1218.9	1220.9	1222.9	1225.0	1225.8	1225.5	1225.1	1224.8	1224.5	1223.1
137.5°	1295.3	1297.0	1298.7	1300.4	1302.0	1303.3	1304.2	1305.0	1305.9	1306.8	1305.4
140°	1349.6	1351.3	1353.0	1354.6	1356.3	1357.3	1357.7	1358.0	1358.3	1358.7	1358.3
142.5°	1399.1	1400.7	1402.4	1404.1	1405.8	1406.9	1407.5	1408.1	1408.7	1409.3	1409.0
145°	1476.3	1477.0	1477.6	1478.3	1479.0	1479.8	1480.8	1481.8	1482.8	1483.8	1483.5
147.5°	1543.8	1545.0	1546.2	1547.5	1548.7	1549.7	1550.7	1551.6	1552.5	1553.5	1553.5
150°	1590.9	1591.6	1592.2	1592.9	1593.6	1594.2	1594.9	1595.6	1596.2	1596.9	1596.9
152.5°	1629.5	1630.4	1631.4	1632.3	1633.2	1633.9	1634.3	1634.7	1635.1	1635.5	1636.1
155°	1690.4	1690.4	1690.4	1690.4	1690.4	1690.6	1690.9	1691.2	1691.6	1691.9	1693.3
157.5°	1742.3	1741.9	1741.5	1741.1	1740.7	1740.6	1740.9	1741.1	1741.4	1741.7	1743.1
160°	1774.9	1774.2	1773.5	1772.8	1772.2	1771.8	1771.8	1771.8	1771.8	1771.8	1773.5
162.5°	1803.8	1802.9	1801.9	1801.0	1800.1	1799.7	1800.0	1800.3	1800.5	1800.8	1802.5
165°	1841.2	1840.2	1839.2	1838.2	1837.2	1836.7	1836.7	1836.7	1836.7	1836.7	1838.7
167.5°	1871.1	1869.7	1868.4	1867.0	1865.7	1865.2	1865.4	1865.7	1866.0	1866.2	1868.3
170°	1887.9	1886.6	1885.3	1883.9	1882.6	1881.9	1881.9	1881.9	1881.9	1881.9	1884.3
172.5°	1901.2	1899.9	1898.5	1897.2	1895.9	1895.2	1895.2	1895.2	1895.2	1895.2	1897.3
175°	1915.1	1913.8	1912.4	1911.1	1909.7	1909.1	1909.1	1909.1	1909.1	1909.1	1911.1
177.5°	1920.8	1919.8	1918.7	1917.6	1916.5	1916.0	1916.0	1916.0	1916.0	1916.0	1917.6
180°	1919.6	1919.6	1919.6	1919.6	1919.6	1919.6	1919.6	1919.6	1919.6	1919.6	1919.6



TEST NUMBER: P332209

CATALOG NUMBER: S123DIW-S1000D1535U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9	1582.9
2.5°	1576.8	1579.3	1581.7	1582.8	1582.5	1582.3	1582.0	1581.8
5°	1568.5	1571.5	1574.6	1575.8	1575.2	1574.6	1574.0	1573.4
7.5°	1551.9	1554.6	1557.3	1558.5	1558.1	1557.8	1557.4	1557.0
10°	1536.6	1539.3	1542.1	1543.1	1542.5	1541.9	1541.3	1540.7
12.5°	1519.9	1521.9	1523.9	1524.7	1524.4	1524.0	1523.6	1523.3
15°	1489.7	1492.1	1494.6	1494.9	1493.1	1491.2	1489.4	1487.6
17.5°	1451.5	1453.2	1454.9	1455.4	1454.8	1454.1	1453.4	1452.8
20°	1423.3	1424.6	1425.8	1425.9	1425.0	1424.1	1423.2	1422.3
22.5°	1393.5	1394.4	1395.4	1395.3	1394.2	1393.0	1391.9	1390.7
25°	1343.9	1344.3	1344.6	1344.3	1343.3	1342.4	1341.5	1340.6
27.5°	1291.3	1291.5	1291.8	1291.3	1290.2	1289.0	1287.9	1286.7
30°	1254.9	1254.9	1254.9	1253.8	1251.7	1249.6	1247.5	1245.3
32.5°	1216.6	1215.0	1213.3	1211.8	1210.7	1209.5	1208.4	1207.2
35°	1154.6	1152.8	1151.0	1149.3	1147.8	1146.3	1144.8	1143.3
37.5°	1090.5	1088.3	1086.1	1084.5	1083.6	1082.6	1081.6	1080.7
40°	1048.6	1046.2	1043.8	1041.9	1040.7	1039.5	1038.3	1037.1
42.5°	1005.0	1002.6	1000.2	998.4	997.2	996.0	994.8	993.6
45°	940.0	936.4	932.8	930.2	928.7	927.2	925.7	924.1
47.5°	871.5	868.0	864.4	862.0	860.6	859.3	858.0	856.6
50°	826.3	823.0	819.6	817.1	815.3	813.4	811.6	809.8
52.5°	780.4	777.6	774.8	772.4	770.6	768.8	767.0	765.2
55°	710.6	707.3	704.0	701.5	700.0	698.5	697.0	695.5
57.5°	641.9	639.0	636.0	633.6	631.9	630.1	628.4	626.6
60°	593.4	590.7	588.0	585.9	584.3	582.8	581.3	579.8
62.5°	546.6	543.9	541.1	539.3	538.2	537.2	536.2	535.2
65°	477.0	474.5	472.1	470.5	469.6	468.7	467.7	466.8
67.5°	407.9	405.8	403.7	402.0	400.7	399.4	398.1	396.9
70°	363.2	361.1	359.0	357.2	355.7	354.2	352.7	351.1
72.5°	318.0	316.1	314.2	312.9	312.1	311.3	310.6	309.8
75°	252.9	251.3	249.8	248.6	247.7	246.8	245.9	245.0
77.5°	192.0	191.0	190.0	189.5	189.5	189.5	189.5	189.5
80°	153.2	152.9	152.6	152.4	152.4	152.4	152.4	152.4
82.5°	117.9	117.3	116.8	116.4	116.1	115.9	115.7	115.4
85°	66.8	66.2	65.6	65.3	65.3	65.3	65.3	65.3
87.5°	31.2	31.3	31.3	31.4	31.5	31.6	31.8	31.9
90°	38.9	40.2	41.6	42.6	43.2	43.9	44.6	45.2
92.5°	60.0	61.1	62.2	62.5	62.1	61.7	61.3	60.9
95°	114.3	115.6	116.9	117.6	117.6	117.6	117.6	117.6
97.5°	177.7	179.2	180.8	181.5	181.4	181.2	181.1	181.0
100°	223.7	224.7	225.7	226.5	227.2	227.9	228.5	229.2
102.5°	276.8	277.8	278.8	279.2	279.1	278.9	278.8	278.7
105°	355.9	355.9	355.9	356.2	356.9	357.6	358.2	358.9
107.5°	441.6	442.6	443.7	444.0	443.6	443.2	442.8	442.4
110°	498.8	500.1	501.5	501.8	501.1	500.5	499.8	499.1



TEST NUMBER: P332209

CATALOG NUMBER: S123DIW-S1000D1535U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	556.0	557.6	559.2	560.0	559.9	559.7	559.6	559.4
115°	643.1	643.4	643.7	643.7	643.4	643.1	642.7	642.4
117.5°	730.9	730.9	730.8	730.3	729.3	728.4	727.5	726.5
120°	789.5	789.2	788.8	788.3	787.7	787.0	786.3	785.6
122.5°	848.7	847.9	847.0	846.1	845.2	844.2	843.3	842.3
125°	936.8	935.4	934.1	932.7	931.4	930.1	928.7	927.4
127.5°	1023.8	1021.9	1020.0	1018.3	1016.8	1015.2	1013.7	1012.1
130°	1081.5	1080.2	1078.9	1077.0	1074.7	1072.3	1070.0	1067.6
132.5°	1137.7	1136.1	1134.5	1132.8	1131.0	1129.2	1127.3	1125.5
135°	1221.8	1220.4	1219.1	1218.1	1217.4	1216.7	1216.1	1215.4
137.5°	1304.0	1302.6	1301.2	1299.8	1298.5	1297.3	1296.0	1294.7
140°	1358.0	1357.7	1357.3	1356.0	1353.6	1351.3	1348.9	1346.6
142.5°	1408.7	1408.3	1408.0	1406.9	1405.1	1403.3	1401.5	1399.7
145°	1483.1	1482.8	1482.5	1481.6	1480.3	1479.0	1477.6	1476.3
147.5°	1553.5	1553.5	1553.5	1552.5	1550.5	1548.5	1546.4	1544.4
150°	1596.9	1596.9	1596.9	1595.9	1593.9	1591.9	1589.9	1587.9
152.5°	1636.6	1637.1	1637.7	1637.1	1635.3	1633.6	1631.8	1630.1
155°	1694.6	1695.9	1697.3	1696.8	1694.4	1692.1	1689.7	1687.4
157.5°	1744.5	1745.9	1747.3	1747.1	1745.2	1743.3	1741.4	1739.6
160°	1775.2	1776.9	1778.5	1778.7	1777.4	1776.0	1774.7	1773.3
162.5°	1804.1	1805.8	1807.5	1807.3	1805.1	1803.0	1800.8	1798.7
165°	1840.7	1842.7	1844.7	1844.6	1842.2	1839.9	1837.5	1835.2
167.5°	1870.4	1872.5	1874.5	1874.5	1872.5	1870.4	1868.3	1866.2
170°	1886.6	1889.0	1891.3	1891.3	1889.0	1886.6	1884.3	1881.9
172.5°	1899.3	1901.4	1903.5	1903.4	1901.0	1898.7	1896.3	1894.0
175°	1913.1	1915.1	1917.1	1916.9	1914.6	1912.2	1909.9	1907.6
177.5°	1919.2	1920.8	1922.4	1922.3	1920.4	1918.5	1916.7	1914.8
180°	1919.6	1919.6	1919.6	1919.6	1919.6	1919.6	1919.6	1919.6

(END OF REPORT)