

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: P332469

Luminaire Tested: **S123RDIW-S1000D1535U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332469
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: S123RDIW-S1000D1535U835-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1535 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9115.4 lumens
Efficiency: N/A
Efficacy: 119.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

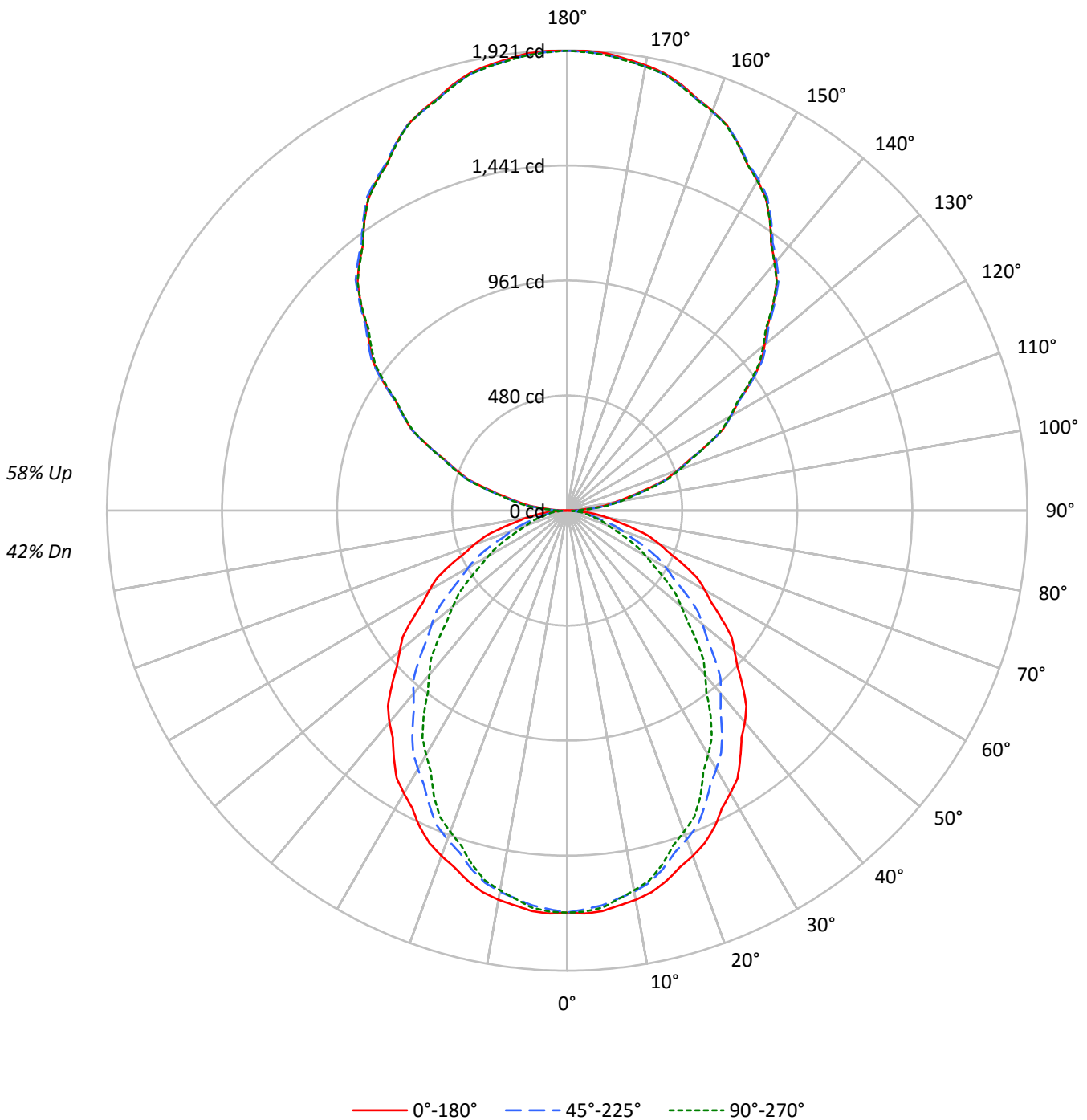
Input Watts (W): 76.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	42
1	96	92	88	85	88	84	81	78	69	67	65	56	54	53	43	42	41	36
2	88	81	75	70	80	74	69	64	61	57	54	49	47	45	38	37	35	30
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	34	32	30	26
4	73	63	55	50	67	58	51	46	48	43	39	39	36	33	31	28	26	22
5	67	56	48	42	61	52	45	40	43	38	34	35	31	28	28	25	23	20
6	62	50	43	37	57	46	40	34	39	34	30	32	28	25	25	23	20	17
7	57	46	38	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	34	29	49	38	31	27	32	27	23	27	23	20	21	18	16	14
9	50	38	30	26	45	35	28	24	30	24	21	24	21	18	20	17	15	13
10	46	35	28	23	42	32	26	22	27	22	19	23	19	16	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18064	18064	18064
5°	18133	17882	17986
10°	18030	17658	17598
15°	17836	17245	17063
20°	17570	16728	16339
25°	17296	16149	15631
30°	16933	15479	14633
35°	16561	14808	13717
40°	16218	14018	12584
45°	15767	13239	11561
50°	15270	12353	10416
55°	14763	11340	9348
60°	14299	10256	8174
65°	13692	9082	7002
70°	12935	7626	5655
75°	11832	6001	5319
80°	10544	5312	4891
85°	8904	4705	4372



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.6	1.7
10°-20°	438.5	4.8
20°-30°	631.4	6.9
30°-40°	711.2	7.8
40°-50°	680.4	7.5
50°-60°	557.2	6.1
60°-70°	375.9	4.1
70°-80°	189.1	2.1
80°-90°	55.7	0.6
90°-100°	125.1	1.4
100°-110°	374.3	4.1
110°-120°	636.6	7.0
120°-130°	837.4	9.2
130°-140°	941.2	10.3
140°-150°	925.2	10.1
150°-160°	778.9	8.5
160°-170°	518.5	5.7
170°-180°	181.6	2.0
0°-30°	1227.4	13.5
0°-40°	1938.6	21.3
0°-60°	3176.1	34.8
0°-90°	3796.8	41.7
90°-120°	1136.0	12.5
90°-150°	3839.7	42.1
90°-180°	5319.0	58.4
0°-180°	9115.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1678	1678	1678	1678	1678	
5°	1678	1671	1655	1666	1665	159
15°	1601	1584	1548	1541	1531	451
25°	1456	1421	1360	1332	1316	669
35°	1260	1209	1127	1070	1044	788
45°	1036	972	870	795	760	799
55°	787	717	604	528	498	705
65°	538	461	357	293	275	532
75°	284	219	144	131	128	303
85°	72	44	38	36	35	81
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	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2
2.5°	1683.6	1682.6	1681.7	1680.7	1679.7	1677.8	1674.9	1672.0	1669.1	1666.2	1668.8
5°	1678.2	1676.6	1675.1	1673.6	1672.1	1669.5	1665.9	1662.3	1658.7	1655.0	1657.7
7.5°	1662.6	1661.0	1659.4	1657.7	1656.1	1652.9	1648.2	1643.5	1638.8	1634.1	1635.6
10°	1649.6	1647.5	1645.3	1643.2	1641.1	1637.3	1631.9	1626.4	1621.0	1615.6	1615.9
12.5°	1631.1	1628.7	1626.4	1624.0	1621.6	1617.1	1610.5	1603.8	1597.2	1590.5	1590.3
15°	1600.6	1597.3	1593.9	1590.6	1587.3	1581.4	1572.9	1564.4	1556.0	1547.5	1546.0
17.5°	1562.2	1558.3	1554.5	1550.6	1546.7	1539.4	1528.6	1517.9	1507.1	1496.3	1493.1
20°	1533.9	1529.1	1524.2	1519.4	1514.5	1506.4	1494.9	1483.4	1471.9	1460.4	1456.5
22.5°	1502.3	1496.8	1491.2	1485.6	1480.1	1471.2	1458.9	1446.7	1434.5	1422.3	1417.4
25°	1456.3	1448.8	1441.2	1433.6	1426.1	1415.3	1401.4	1387.5	1373.6	1359.7	1353.3
27.5°	1400.5	1392.2	1383.8	1375.5	1367.1	1355.2	1339.7	1324.2	1308.7	1293.3	1284.4
30°	1362.4	1353.3	1344.3	1335.2	1326.1	1313.1	1296.2	1279.2	1262.3	1245.4	1235.1
32.5°	1324.3	1314.0	1303.7	1293.4	1283.2	1269.1	1251.2	1233.3	1215.3	1197.4	1186.2
35°	1260.3	1249.4	1238.5	1227.7	1216.8	1201.9	1183.2	1164.4	1145.7	1126.9	1113.9
37.5°	1195.5	1183.4	1171.3	1159.2	1147.1	1131.1	1111.1	1091.0	1071.0	1051.0	1036.2
40°	1154.2	1140.9	1127.5	1114.2	1100.9	1083.5	1062.1	1040.6	1019.1	997.6	981.9
42.5°	1107.3	1094.0	1080.7	1067.4	1054.1	1036.4	1014.2	992.0	969.8	947.6	930.4
45°	1035.8	1022.1	1008.5	994.9	981.3	962.9	939.6	916.3	893.0	869.7	852.5
47.5°	964.2	949.2	934.3	919.3	904.4	885.3	862.0	838.7	815.4	792.1	773.4
50°	911.9	897.7	883.5	869.3	855.0	835.7	811.2	786.7	762.2	737.7	718.9
52.5°	865.1	849.7	834.2	818.8	803.4	783.5	759.3	735.0	710.8	686.5	667.0
55°	786.7	771.9	757.0	742.2	727.4	707.1	681.4	655.7	630.0	604.3	586.8
57.5°	714.3	698.1	682.0	665.8	649.7	628.7	602.8	577.0	551.2	525.4	508.8
60°	664.2	647.6	630.9	614.3	597.6	576.8	551.7	526.6	501.5	476.4	460.0
62.5°	614.1	597.5	580.8	564.2	547.6	526.7	501.6	476.5	451.4	426.3	410.9
65°	537.6	521.0	504.3	487.7	471.1	451.0	427.4	403.8	380.2	356.6	341.8
67.5°	461.1	444.3	427.5	410.7	393.9	374.1	351.5	328.9	306.3	283.6	272.6
70°	411.0	394.7	378.4	362.0	345.7	327.0	305.8	284.6	263.4	242.3	231.7
72.5°	360.9	344.9	328.8	312.7	296.6	278.9	259.7	240.5	221.2	202.0	193.3
75°	284.5	269.9	255.4	240.9	226.4	210.8	194.2	177.5	160.9	144.3	141.2
77.5°	214.8	201.6	188.5	175.4	162.3	150.3	139.6	128.9	118.2	107.5	105.9
80°	170.1	157.7	145.3	132.9	120.5	111.2	104.8	98.4	92.1	85.7	84.8
82.5°	127.7	117.0	106.3	95.5	84.8	78.0	75.0	72.1	69.1	66.1	65.2
85°	72.1	65.5	58.8	52.2	45.5	41.7	40.8	39.9	39.0	38.1	37.5
87.5°	26.4	24.4	22.5	20.5	18.5	17.9	18.8	19.7	20.5	21.4	21.4
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



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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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2
2.5°	1671.5	1674.2	1676.8	1677.9	1677.4	1677.0	1676.5	1676.0
5°	1660.5	1663.2	1665.9	1667.0	1666.4	1665.8	1665.2	1664.6
7.5°	1637.1	1638.6	1640.1	1640.4	1639.3	1638.3	1637.3	1636.2
10°	1616.2	1616.5	1616.8	1616.2	1614.6	1613.1	1611.6	1610.1
12.5°	1590.1	1590.0	1589.8	1588.8	1587.1	1585.3	1583.6	1581.8
15°	1544.5	1543.0	1541.5	1539.6	1537.5	1535.4	1533.3	1531.2
17.5°	1489.9	1486.7	1483.5	1480.3	1477.2	1474.0	1470.9	1467.7
20°	1452.5	1448.6	1444.7	1440.9	1437.3	1433.6	1430.0	1426.4
22.5°	1412.5	1407.6	1402.7	1398.5	1395.2	1391.8	1388.4	1385.0
25°	1347.0	1340.6	1334.3	1329.4	1326.1	1322.8	1319.5	1316.1
27.5°	1275.6	1266.8	1257.9	1251.0	1245.9	1240.8	1235.7	1230.7
30°	1224.8	1214.5	1204.2	1196.7	1191.8	1187.0	1182.1	1177.3
32.5°	1174.9	1163.7	1152.4	1144.3	1139.2	1134.1	1129.0	1123.9
35°	1100.9	1087.9	1074.9	1065.7	1060.3	1054.8	1049.4	1043.9
37.5°	1021.5	1006.7	992.0	981.2	974.5	967.8	961.1	954.4
40°	966.2	950.5	934.7	923.4	916.4	909.5	902.5	895.6
42.5°	913.2	896.0	878.8	867.1	860.9	854.7	848.4	842.2
45°	835.2	818.0	800.7	788.5	781.2	774.0	766.7	759.5
47.5°	754.6	735.9	717.1	704.5	698.0	691.6	685.1	678.6
50°	700.2	681.4	662.7	649.8	642.9	635.9	629.0	622.0
52.5°	647.6	628.1	608.6	595.7	589.5	583.3	577.1	570.8
55°	569.2	551.7	534.1	522.3	516.3	510.2	504.2	498.1
57.5°	492.2	475.6	459.1	448.2	443.1	437.9	432.8	427.6
60°	443.7	427.4	411.0	400.3	395.2	390.0	384.9	379.7
62.5°	395.5	380.2	364.8	354.4	349.1	343.7	338.3	332.9
65°	327.0	312.1	297.3	288.2	284.9	281.6	278.3	274.9
67.5°	261.5	250.4	239.4	232.0	228.5	224.9	221.3	217.8
70°	221.1	210.5	199.9	193.0	189.6	186.3	183.0	179.7
72.5°	184.7	176.0	167.4	162.4	161.0	159.6	158.2	156.8
75°	138.2	135.2	132.2	130.4	129.8	129.1	128.5	127.9
77.5°	104.3	102.6	101.0	99.9	99.3	98.7	98.1	97.5
80°	83.9	83.0	82.1	81.4	80.8	80.2	79.5	78.9
82.5°	64.3	63.4	62.5	62.0	61.9	61.8	61.6	61.5
85°	36.9	36.3	35.7	35.4	35.4	35.4	35.4	35.4
87.5°	21.4	21.5	21.5	21.5	21.3	21.2	21.1	21.0
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: P332469

CATALOG NUMBER: S123RDIW-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)