

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: P332456

Luminaire Tested: **S123RDIW-S1000D755U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332456
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: S123RDIW-S1000D755U835-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 755 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6814.4 lumens
Efficiency: N/A
Efficacy: 127.1 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

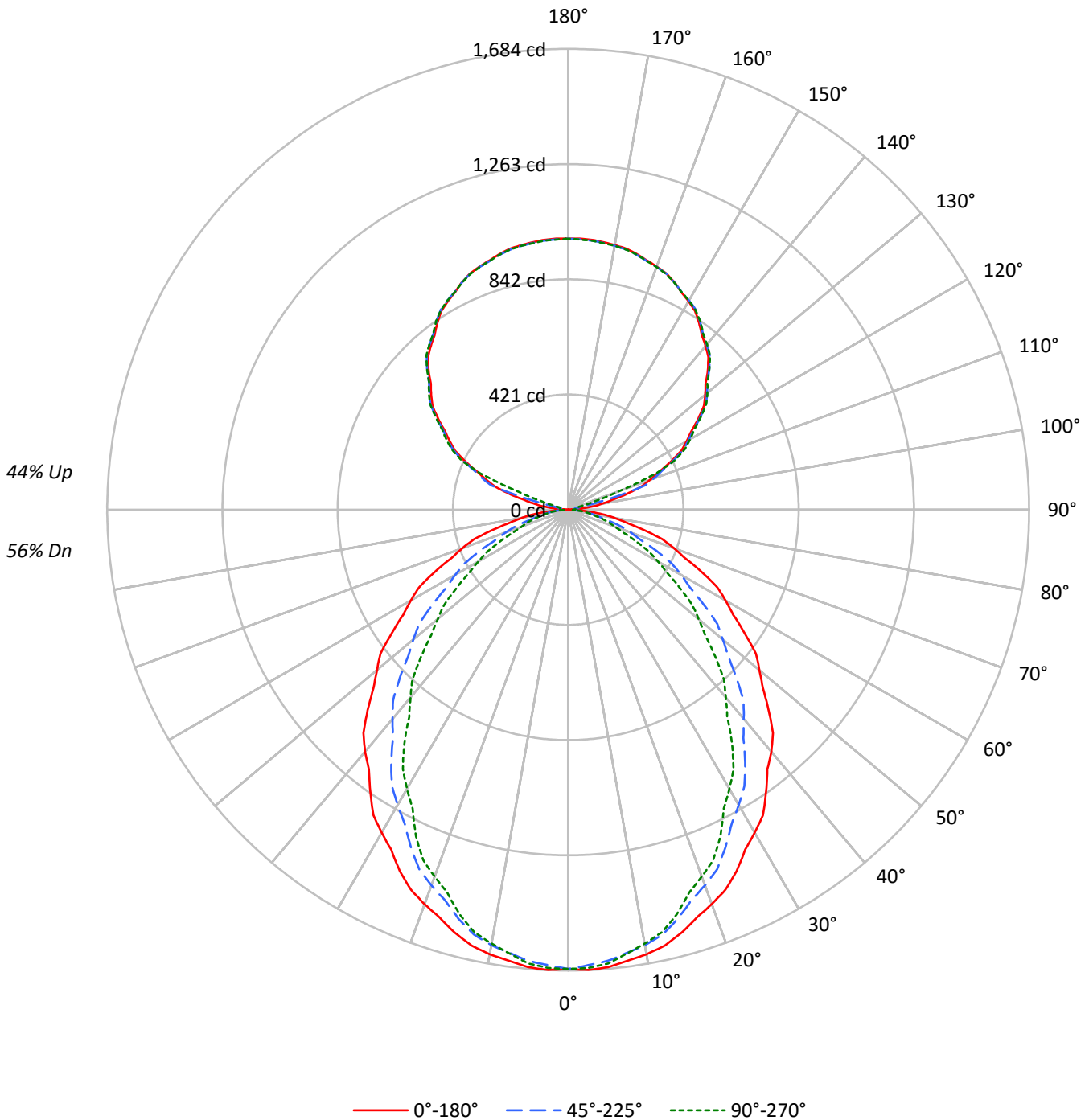
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	56
1	99	95	91	88	92	89	85	82	76	74	72	65	63	62	55	54	53	48
2	91	84	78	72	84	78	73	68	67	63	60	58	55	52	49	47	45	40
3	83	74	67	61	77	69	63	57	60	55	51	51	48	45	43	41	38	35
4	76	66	58	52	71	61	54	49	53	48	44	46	42	38	39	36	33	30
5	70	59	51	45	65	55	48	42	48	42	38	41	37	34	35	32	29	26
6	65	53	45	39	60	49	42	37	43	38	33	38	33	30	32	29	26	23
7	60	48	40	34	56	45	38	33	39	34	29	34	30	26	29	26	23	21
8	56	43	36	30	52	41	34	29	36	30	26	31	27	24	27	24	21	19
9	52	40	32	27	48	37	31	26	33	28	24	29	24	21	25	22	19	17
10	49	37	29	25	45	34	28	23	31	25	21	27	22	19	23	20	17	15

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	2.3
10°-20°	438.5	6.4
20°-30°	631.4	9.3
30°-40°	711.2	10.4
40°-50°	680.4	10.0
50°-60°	557.2	8.2
60°-70°	375.9	5.5
70°-80°	189.1	2.8
80°-90°	52.8	0.8
90°-100°	36.0	0.5
100°-110°	171.6	2.5
110°-120°	412.3	6.0
120°-130°	525.0	7.7
130°-140°	560.9	8.2
140°-150°	524.5	7.7
150°-160°	423.1	6.2
160°-170°	273.1	4.0
170°-180°	94.1	1.4
0°-30°	1227.4	18.0
0°-40°	1938.6	28.4
0°-60°	3176.1	46.6
0°-90°	3793.9	55.7
90°-120°	619.9	9.1
90°-150°	2230.2	32.7
90°-180°	3020.0	44.3
0°-180°	6814.4	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°	1	8	18	21	22	6
95°	45	17	23	28	28	55
105°	219	223	161	38	32	232
115°	411	416	422	430	433	406
125°	580	586	589	590	592	518
135°	722	726	729	731	729	555
145°	833	838	840	841	841	521
155°	918	916	917	920	916	423
165°	968	966	965	970	965	273
175°	990	987	988	992	987	94
180°	990	990	990	990	990	



TEST NUMBER: P332456

CATALOG NUMBER: S123RDIW-S1000D755U835-4F0-1E-UDD-F

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°	26.3	23.9	21.6	19.3	16.9	16.0	16.4	16.8	17.3	17.7	17.6
90°	0.7	2.4	4.0	5.6	7.3	9.2	11.3	13.4	15.5	17.7	18.3
92.5°	13.7	13.2	12.8	12.3	11.9	12.4	14.0	15.6	17.2	18.8	19.9
95°	44.9	38.2	31.5	24.8	18.1	15.6	17.4	19.2	21.0	22.8	24.0
97.5°	90.2	87.2	84.2	81.2	78.2	70.8	59.0	47.2	35.5	23.7	25.0
100°	124.4	127.6	130.9	134.2	137.4	126.3	100.8	75.3	49.8	24.3	25.6
102.5°	163.2	165.6	167.9	170.3	172.6	159.9	132.0	104.1	76.3	48.4	44.4
105°	219.3	221.1	222.9	224.7	226.5	220.0	205.3	190.6	175.9	161.2	132.2
107.5°	278.4	279.9	281.3	282.8	284.2	286.1	288.4	290.7	293.1	295.4	274.1
110°	317.9	319.2	320.5	321.8	323.1	324.7	326.5	328.3	330.1	331.9	326.5



TEST NUMBER: P332456

CATALOG NUMBER: S123RDIW-S1000D755U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	355.6	356.7	357.9	359.1	360.3	361.8	363.6	365.4	367.2	369.0	369.1
115°	411.3	412.3	413.3	414.3	415.3	416.5	418.0	419.4	420.9	422.4	424.0
117.5°	465.4	466.6	467.8	469.0	470.2	471.2	471.9	472.7	473.4	474.2	475.5
120°	498.9	500.4	501.9	503.3	504.8	505.8	506.3	506.8	507.3	507.7	509.1
122.5°	533.1	534.3	535.5	536.7	537.9	538.8	539.4	540.1	540.7	541.3	542.2
125°	579.9	581.2	582.5	583.8	585.1	586.1	586.7	587.4	588.0	588.7	589.0
127.5°	625.2	626.5	627.8	629.1	630.4	631.5	632.3	633.0	633.8	634.6	635.1
130°	653.4	654.8	656.1	657.4	658.7	659.7	660.3	661.0	661.6	662.3	662.9
132.5°	680.5	681.8	683.1	684.4	685.8	686.7	687.2	687.7	688.2	688.8	689.4
135°	721.9	722.9	723.8	724.8	725.8	726.6	727.3	727.9	728.6	729.2	729.7
137.5°	757.2	758.4	759.7	760.9	762.2	763.0	763.3	763.7	764.1	764.4	765.2
140°	780.7	781.7	782.7	783.7	784.7	785.4	785.9	786.4	786.9	787.4	788.0
142.5°	802.5	803.5	804.5	805.5	806.5	807.2	807.7	808.2	808.7	809.2	809.7
145°	833.0	834.1	835.3	836.4	837.6	838.3	838.6	839.0	839.3	839.6	839.9
147.5°	861.7	862.4	863.2	863.9	864.7	865.2	865.6	865.9	866.2	866.5	866.9
150°	879.4	879.8	880.3	880.8	881.3	881.7	882.1	882.4	882.7	883.0	883.4
152.5°	895.2	895.5	895.7	895.9	896.2	896.4	896.6	896.8	897.0	897.2	897.7
155°	917.6	917.3	917.0	916.6	916.3	916.2	916.4	916.6	916.7	916.9	917.7
157.5°	935.0	935.0	934.9	934.9	934.9	934.8	934.6	934.4	934.3	934.1	935.1
160°	945.6	945.4	945.3	945.1	944.9	944.8	944.6	944.4	944.3	944.1	945.1
162.5°	955.6	955.2	954.7	954.3	953.9	953.6	953.4	953.3	953.1	952.9	954.1
165°	967.7	967.2	966.7	966.2	965.7	965.4	965.2	965.0	964.9	964.7	966.0
167.5°	977.1	976.4	975.8	975.1	974.5	974.1	974.1	974.1	974.1	974.1	975.4
170°	982.4	981.7	981.1	980.4	979.8	979.4	979.4	979.4	979.4	979.4	980.7
172.5°	985.9	985.1	984.3	983.6	982.8	982.4	982.6	982.7	982.8	983.0	984.3
175°	990.5	989.6	988.8	988.0	987.2	986.9	987.0	987.2	987.4	987.5	988.7
177.5°	991.6	991.0	990.3	989.7	989.0	988.8	988.9	989.0	989.2	989.3	990.3
180°	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5



TEST NUMBER: P332456

CATALOG NUMBER: S123RDIW-S1000D755U835-4F0-1E-UDD-F

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°	17.5	17.4	17.2	17.1	16.9	16.7	16.6	16.4
90°	19.0	19.6	20.3	20.8	21.1	21.4	21.7	22.1
92.5°	20.9	22.0	23.0	23.6	23.8	24.0	24.2	24.4
95°	25.1	26.2	27.4	28.0	28.0	28.0	28.0	28.0
97.5°	26.3	27.6	28.9	29.7	29.8	30.0	30.2	30.3
100°	26.9	28.2	29.5	30.3	30.4	30.6	30.7	30.9
102.5°	40.3	36.3	32.2	30.3	30.6	30.9	31.2	31.5
105°	103.3	74.3	45.4	31.1	31.4	31.7	32.1	32.4
107.5°	252.9	231.7	210.5	189.0	167.1	145.3	123.5	101.7
110°	321.1	315.7	310.3	295.9	272.5	249.1	225.7	202.4



TEST NUMBER: P332456

CATALOG NUMBER: S123RDIW-S1000D755U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	369.2	369.3	369.4	366.9	362.0	357.1	352.1	347.2
115°	425.7	427.3	428.9	430.1	430.7	431.4	432.0	432.7
117.5°	476.8	478.1	479.4	480.1	480.3	480.4	480.5	480.7
120°	510.4	511.7	513.0	513.6	513.6	513.6	513.6	513.6
122.5°	543.1	544.0	545.0	545.5	545.6	545.7	545.9	546.0
125°	589.3	589.7	590.0	590.3	590.7	591.0	591.3	591.6
127.5°	635.7	636.2	636.7	636.8	636.5	636.1	635.8	635.5
130°	663.6	664.2	664.9	665.1	664.7	664.4	664.1	663.7
132.5°	690.1	690.7	691.4	691.5	691.0	690.6	690.1	689.6
135°	730.2	730.7	731.2	731.2	730.7	730.2	729.7	729.2
137.5°	766.0	766.8	767.6	767.8	767.5	767.1	766.8	766.5
140°	788.7	789.3	790.0	790.2	789.8	789.5	789.2	788.8
142.5°	810.2	810.7	811.2	811.3	810.8	810.4	809.9	809.4
145°	840.3	840.6	840.9	841.1	841.1	841.1	841.1	841.1
147.5°	867.2	867.5	867.9	867.6	866.9	866.1	865.4	864.6
150°	883.7	884.0	884.3	884.3	883.8	883.3	882.8	882.3
152.5°	898.3	898.9	899.5	899.4	898.7	897.9	897.2	896.4
155°	918.5	919.3	920.2	920.1	919.1	918.1	917.1	916.1
157.5°	936.1	937.0	938.0	937.9	936.6	935.3	934.1	932.8
160°	946.1	947.1	948.0	948.0	946.8	945.7	944.5	943.4
162.5°	955.2	956.3	957.4	957.4	956.4	955.4	954.4	953.4
165°	967.3	968.6	969.9	970.0	968.9	967.7	966.6	965.4
167.5°	976.7	978.1	979.4	979.4	978.1	976.7	975.4	974.1
170°	982.0	983.4	984.7	984.7	983.4	982.0	980.7	979.4
172.5°	985.6	986.9	988.2	988.1	986.7	985.3	983.8	982.4
175°	989.8	991.0	992.1	992.0	990.7	989.4	988.1	986.8
177.5°	991.4	992.4	993.5	993.3	992.0	990.7	989.4	988.1
180°	990.5	990.5	990.5	990.5	990.5	990.5	990.5	990.5

(END OF REPORT)