

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: P331547

Luminaire Tested: **S122DIW-S675D1240U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331547
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S675D1240U835-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7659.5 lumens
Efficiency: N/A
Efficacy: 124.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

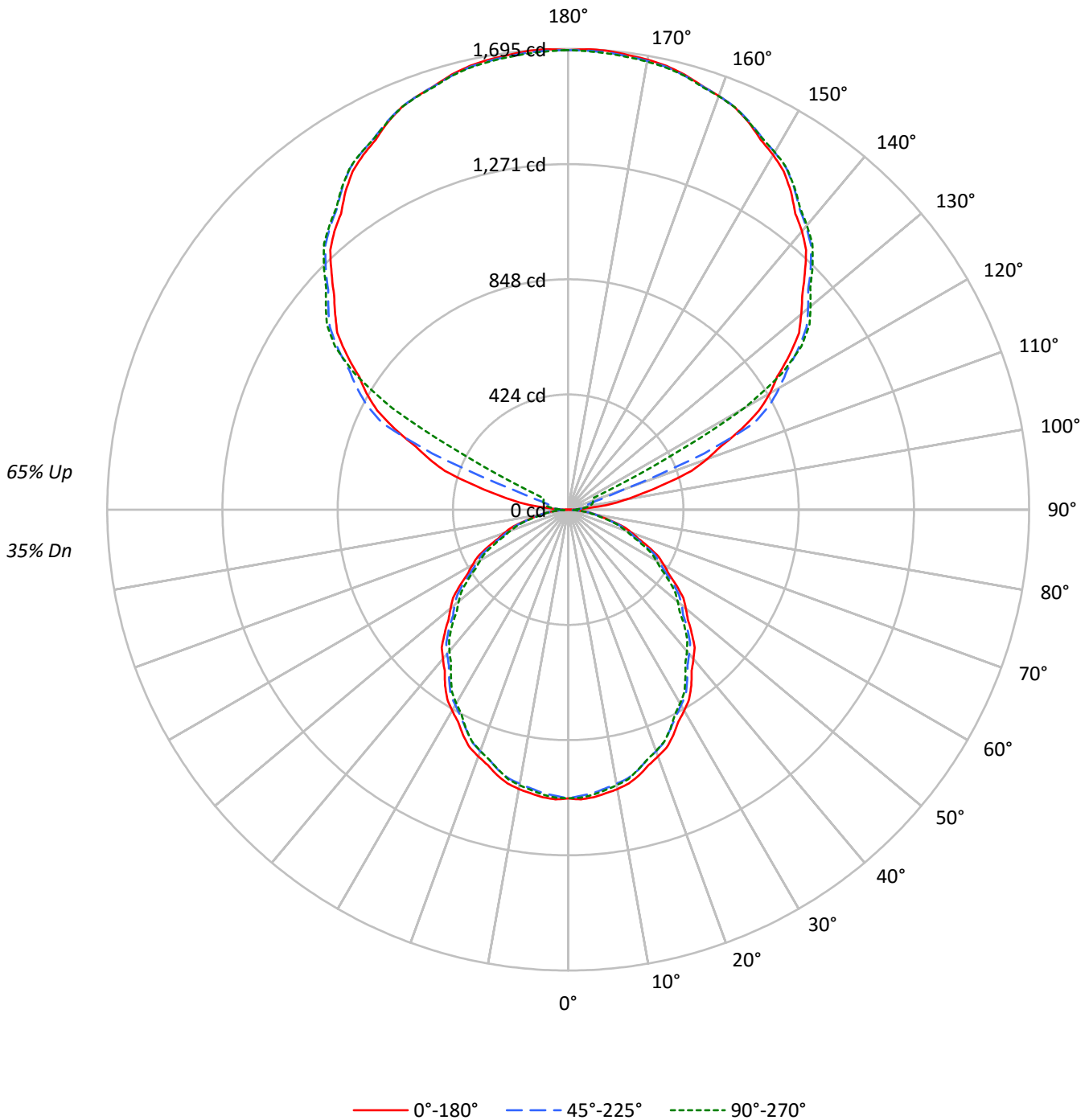
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331547

CATALOG NUMBER: S122DIW-S675D1240U835-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P331547

CATALOG NUMBER: S122DIW-S675D1240U835-4F0-1E-UDD-F

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	75	75	75	58	58	58	43	43	43	35
1	94	90	86	83	85	82	79	76	66	64	62	51	50	48	38	37	36	30
2	86	79	73	68	78	71	66	62	58	54	51	45	42	40	33	32	30	25
3	78	69	62	56	71	63	57	52	51	46	43	40	37	34	29	27	26	21
4	72	61	53	48	65	56	49	44	45	40	36	35	32	29	26	24	22	18
5	66	54	46	41	59	50	43	37	40	35	31	32	28	25	24	21	19	16
6	60	49	41	35	54	44	37	32	36	31	27	29	25	22	21	19	17	14
7	56	44	36	31	50	40	33	28	33	28	24	26	22	19	20	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	18	15	13	11
9	48	36	29	24	43	33	27	22	27	22	19	22	18	15	17	14	12	10
10	45	33	26	21	41	30	24	20	25	20	17	20	16	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17142	17142	17142
5°	17208	16960	17058
10°	17105	16787	16870
15°	16893	16568	16552
20°	16593	16242	16225
25°	16295	15841	15841
30°	15910	15474	15340
35°	15554	15031	14808
40°	15104	14587	14309
45°	14661	14150	13798
50°	14179	13692	13205
55°	13678	13163	12673
60°	13120	12526	12064
65°	12520	11897	11351
70°	11759	11131	10603
75°	10699	10256	10000
80°	9493	9205	8731
85°	7762	7373	6614



TEST NUMBER: P331547

CATALOG NUMBER: S122DIW-S675D1240U835-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.8	1.3
10°-20°	280.9	3.7
20°-30°	412.9	5.4
30°-40°	479.6	6.3
40°-50°	479.1	6.3
50°-60°	417.8	5.5
60°-70°	308.9	4.0
70°-80°	175.0	2.3
80°-90°	51.2	0.7
90°-100°	56.4	0.7
100°-110°	206.8	2.7
110°-120°	552.8	7.2
120°-130°	912.5	11.9
130°-140°	970.4	12.7
140°-150°	902.0	11.8
150°-160°	725.2	9.5
160°-170°	467.3	6.1
170°-180°	160.9	2.1
0°-30°	793.6	10.4
0°-40°	1273.2	16.6
0°-60°	2170.1	28.3
0°-90°	2705.3	35.3
90°-120°	816.0	10.7
90°-150°	3600.9	47.0
90°-180°	4954.0	64.7
0°-180°	7659.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1062	1062	1062	1062	1062	
5°	1062	1057	1046	1054	1052	101
15°	1011	1004	991	995	990	284
25°	915	906	889	891	889	421
35°	789	779	763	756	751	492
45°	642	635	620	609	604	495
55°	486	479	468	456	450	434
65°	328	321	311	302	297	324
75°	172	169	164	159	160	183
85°	42	41	40	37	36	48
90°	1	14	24	30	33	6
95°	80	42	48	53	53	97
105°	372	388	75	88	93	397
115°	703	725	755	215	100	692
125°	994	1011	1034	1042	1046	886
135°	1231	1250	1261	1273	1271	950
145°	1428	1428	1447	1455	1450	893
155°	1572	1562	1576	1582	1573	724
165°	1656	1650	1653	1660	1653	468
175°	1694	1686	1688	1696	1684	161
180°	1690	1690	1690	1690	1690	



TEST NUMBER: P331547

CATALOG NUMBER: S122DIW-S675D1240U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7
2.5°	1066.6	1065.7	1064.8	1063.9	1063.0	1061.5	1059.5	1057.5	1055.5	1053.5	1055.3
5°	1061.7	1060.8	1059.9	1059.0	1058.1	1056.4	1053.9	1051.4	1048.9	1046.4	1048.2
7.5°	1052.3	1050.9	1049.5	1048.1	1046.7	1044.7	1042.2	1039.6	1037.1	1034.5	1036.3
10°	1043.3	1041.7	1040.1	1038.5	1037.0	1034.8	1032.1	1029.4	1026.6	1023.9	1025.7
12.5°	1031.1	1029.7	1028.2	1026.8	1025.4	1023.4	1020.6	1017.9	1015.2	1012.5	1013.8
15°	1010.6	1009.3	1007.9	1006.6	1005.2	1003.0	1000.1	997.1	994.2	991.2	992.2
17.5°	984.5	983.1	981.8	980.4	979.1	976.9	973.9	970.9	967.9	964.9	966.0
20°	965.7	964.4	963.0	961.6	960.3	958.0	954.8	951.7	948.5	945.3	946.0
22.5°	946.9	945.0	943.1	941.2	939.3	936.9	933.9	930.9	927.9	924.9	925.0
25°	914.7	912.9	911.1	909.2	907.4	904.6	900.7	896.9	893.0	889.2	889.6
27.5°	877.9	876.3	874.7	873.0	871.4	869.1	866.0	863.0	859.9	856.9	856.2
30°	853.4	851.6	849.8	848.0	846.2	843.6	840.2	836.8	833.4	830.0	829.3
32.5°	827.3	825.8	824.4	822.9	821.5	819.0	815.4	811.8	808.2	804.6	803.4
35°	789.1	786.9	784.6	782.3	780.0	777.1	773.5	769.8	766.2	762.6	761.2
37.5°	746.0	744.0	742.0	740.0	738.1	735.2	731.6	728.0	724.4	720.7	719.0
40°	716.6	714.8	713.0	711.2	709.4	706.7	703.0	699.4	695.8	692.1	690.1
42.5°	688.1	686.2	684.4	682.6	680.8	678.1	674.4	670.8	667.2	663.6	661.3
45°	642.1	640.5	638.9	637.4	635.8	633.3	629.9	626.5	623.1	619.7	617.2
47.5°	596.4	594.9	593.4	591.9	590.4	587.9	584.3	580.8	577.3	573.7	571.1
50°	564.5	563.4	562.3	561.1	560.0	557.8	554.7	551.5	548.3	545.1	542.0
52.5°	533.5	532.0	530.5	529.0	527.5	525.3	522.3	519.3	516.3	513.3	510.7
55°	485.9	484.6	483.2	481.8	480.5	478.4	475.7	473.0	470.3	467.6	464.8
57.5°	438.1	437.1	436.0	434.9	433.8	431.8	428.8	425.8	422.8	419.8	417.1
60°	406.3	405.4	404.5	403.6	402.7	400.6	397.5	394.3	391.1	387.9	385.4
62.5°	375.3	373.8	372.4	370.9	369.5	367.5	365.1	362.6	360.2	357.7	355.4
65°	327.7	326.3	325.0	323.6	322.2	320.4	318.2	315.9	313.6	311.4	309.3
67.5°	279.3	278.2	277.1	276.0	274.9	273.4	271.3	269.3	267.3	265.2	263.6
70°	249.1	248.2	247.3	246.4	245.5	244.0	241.9	239.9	237.9	235.8	234.2
72.5°	218.1	217.1	216.2	215.3	214.4	213.3	212.0	210.7	209.4	208.0	206.5
75°	171.5	171.0	170.6	170.1	169.7	168.9	167.8	166.6	165.5	164.4	163.0
77.5°	129.9	129.1	128.3	127.5	126.8	126.2	125.7	125.2	124.8	124.3	123.7
80°	102.1	101.9	101.6	101.4	101.2	100.8	100.4	99.9	99.5	99.0	98.3
82.5°	76.0	75.9	75.9	75.8	75.8	75.6	75.3	75.1	74.8	74.5	73.7
85°	41.9	41.6	41.4	41.2	40.9	40.7	40.5	40.3	40.0	39.8	39.1
87.5°	14.9	15.2	15.4	15.7	15.9	16.0	16.1	16.2	16.3	16.3	16.1
90°	1.2	4.2	7.2	10.2	13.2	15.8	17.9	20.1	22.3	24.5	25.8
92.5°	24.7	24.4	24.2	23.9	23.6	24.0	25.1	26.2	27.3	28.4	29.1
95°	79.5	70.5	61.6	52.6	43.6	40.1	42.0	43.9	45.8	47.7	49.1
97.5°	157.8	132.5	107.2	82.0	56.7	46.2	50.6	55.0	59.5	63.9	64.9
100°	216.5	179.3	142.0	104.8	67.6	51.2	55.9	60.5	65.1	69.7	71.9
102.5°	281.1	273.2	265.3	257.5	249.6	226.3	187.6	149.0	110.3	71.7	74.5
105°	371.9	380.0	388.2	396.3	404.5	371.5	297.3	223.0	148.8	74.6	77.6
107.5°	475.4	481.9	488.5	495.1	501.7	460.5	371.5	282.5	193.5	104.5	101.4
110°	541.9	547.6	553.3	559.0	564.7	528.3	449.8	371.2	292.6	214.1	186.9



TEST NUMBER: P331547

CATALOG NUMBER: S122DIW-S675D1240U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	604.5	609.6	614.6	619.7	624.8	617.6	598.2	578.8	559.4	539.9	440.8
115°	703.4	708.0	712.6	717.2	721.9	727.6	734.4	741.2	748.0	754.8	628.9
117.5°	791.7	796.9	802.0	807.2	812.4	817.3	821.9	826.6	831.3	836.0	805.5
120°	856.3	860.4	864.4	868.5	872.6	877.1	882.0	886.9	891.8	896.6	899.9
122.5°	911.1	915.4	919.7	924.0	928.3	933.1	938.4	943.7	949.1	954.4	956.3
125°	994.5	998.0	1001.6	1005.1	1008.6	1013.0	1018.2	1023.3	1028.5	1033.7	1035.6
127.5°	1070.1	1074.0	1077.9	1081.9	1085.8	1089.7	1093.5	1097.4	1101.2	1105.1	1107.9
130°	1118.1	1122.4	1126.8	1131.1	1135.5	1139.1	1142.1	1145.1	1148.1	1151.1	1154.1
132.5°	1167.0	1170.7	1174.4	1178.1	1181.8	1185.1	1188.1	1191.1	1194.1	1197.1	1199.6
135°	1230.6	1234.9	1239.3	1243.6	1248.0	1251.4	1253.8	1256.3	1258.7	1261.2	1263.9
137.5°	1294.9	1298.0	1301.0	1304.1	1307.1	1310.0	1312.8	1315.6	1318.3	1321.1	1323.8
140°	1337.0	1339.2	1341.4	1343.5	1345.7	1348.3	1351.3	1354.3	1357.3	1360.3	1362.7
142.5°	1372.3	1374.2	1376.2	1378.1	1380.1	1382.8	1386.2	1389.6	1393.0	1396.5	1398.7
145°	1427.5	1427.3	1427.0	1426.7	1426.5	1428.6	1433.3	1437.9	1442.5	1447.1	1449.0
147.5°	1475.7	1474.7	1473.7	1472.6	1471.6	1473.4	1477.9	1482.5	1487.1	1491.6	1493.1
150°	1507.1	1505.2	1503.3	1501.3	1499.4	1500.7	1505.0	1509.4	1513.7	1518.1	1519.7
152.5°	1533.5	1531.4	1529.2	1527.1	1525.0	1526.0	1530.1	1534.3	1538.4	1542.5	1544.2
155°	1571.9	1569.4	1567.0	1564.5	1562.1	1562.5	1565.8	1569.0	1572.3	1575.6	1577.2
157.5°	1602.0	1599.9	1597.8	1595.8	1593.7	1593.8	1596.1	1598.4	1600.7	1603.0	1604.8
160°	1619.6	1618.0	1616.3	1614.7	1613.1	1613.1	1614.7	1616.3	1618.0	1619.6	1621.2
162.5°	1635.3	1633.6	1632.0	1630.4	1628.7	1628.6	1630.0	1631.4	1632.9	1634.3	1636.1
165°	1656.3	1654.7	1653.0	1651.4	1649.8	1649.4	1650.2	1651.0	1651.8	1652.6	1654.5
167.5°	1672.0	1670.3	1668.7	1667.1	1665.4	1665.0	1665.8	1666.5	1667.3	1668.0	1669.9
170°	1680.8	1679.1	1677.5	1675.9	1674.2	1673.7	1674.2	1674.8	1675.3	1675.9	1677.8
172.5°	1686.6	1685.0	1683.4	1681.7	1680.1	1679.6	1680.1	1680.6	1681.2	1681.7	1683.6
175°	1694.2	1692.3	1690.4	1688.5	1686.6	1685.9	1686.5	1687.0	1687.6	1688.1	1690.0
177.5°	1695.4	1693.9	1692.4	1690.9	1689.3	1688.7	1688.9	1689.1	1689.3	1689.6	1691.1
180°	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5



TEST NUMBER: P331547

CATALOG NUMBER: S122DIW-S675D1240U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7
2.5°	1057.1	1059.0	1060.8	1061.5	1061.1	1060.8	1060.4	1060.1
5°	1050.0	1051.8	1053.6	1054.3	1053.9	1053.4	1053.0	1052.5
7.5°	1038.2	1040.0	1041.8	1042.4	1041.9	1041.5	1041.0	1040.5
10°	1027.5	1029.4	1031.2	1031.7	1031.1	1030.4	1029.7	1029.0
12.5°	1015.0	1016.3	1017.6	1017.9	1017.4	1017.0	1016.5	1016.0
15°	993.1	994.0	994.9	994.8	993.6	992.5	991.4	990.2
17.5°	967.0	968.0	969.1	969.1	968.0	966.9	965.8	964.7
20°	946.7	947.4	948.0	947.9	947.0	946.1	945.2	944.3
22.5°	925.2	925.3	925.4	925.2	924.7	924.1	923.6	923.1
25°	890.1	890.5	891.0	891.0	890.5	890.1	889.6	889.2
27.5°	855.5	854.9	854.2	853.3	852.2	851.1	850.0	848.9
30°	828.6	827.9	827.2	826.4	825.5	824.6	823.7	822.8
32.5°	802.2	801.0	799.7	798.7	797.8	796.9	795.9	795.0
35°	759.9	758.5	757.1	755.9	754.8	753.6	752.5	751.3
37.5°	717.4	715.7	714.0	712.6	711.5	710.4	709.4	708.3
40°	688.1	686.0	684.0	682.5	681.6	680.7	679.8	678.9
42.5°	659.1	656.9	654.7	652.9	651.6	650.4	649.1	647.8
45°	614.7	612.2	609.7	608.0	607.1	606.2	605.3	604.3
47.5°	568.5	565.8	563.2	561.2	559.9	558.6	557.3	556.0
50°	538.8	535.6	532.4	530.3	529.1	528.0	526.9	525.7
52.5°	508.0	505.4	502.8	500.7	499.2	497.7	496.2	494.7
55°	462.1	459.4	456.7	454.7	453.6	452.5	451.3	450.2
57.5°	414.4	411.7	409.1	407.3	406.4	405.6	404.7	403.8
60°	382.9	380.4	377.9	376.4	375.7	375.0	374.3	373.6
62.5°	353.1	350.8	348.5	346.9	346.0	345.1	344.3	343.4
65°	307.3	305.2	303.2	301.6	300.5	299.3	298.2	297.1
67.5°	262.0	260.5	258.9	257.6	256.7	255.8	254.9	254.0
70°	232.6	231.1	229.5	228.2	227.3	226.4	225.5	224.6
72.5°	204.9	203.3	201.7	200.5	199.8	199.1	198.4	197.6
75°	161.6	160.3	158.9	158.5	158.9	159.4	159.8	160.3
77.5°	123.0	122.3	121.6	121.0	120.3	119.7	119.1	118.4
80°	97.7	97.0	96.3	95.7	95.3	94.8	94.4	93.9
82.5°	72.8	71.9	71.1	70.6	70.5	70.4	70.3	70.2
85°	38.5	37.8	37.1	36.6	36.4	36.2	36.0	35.7
87.5°	15.8	15.5	15.2	15.1	15.0	14.9	14.8	14.8
90°	27.2	28.5	29.9	30.9	31.4	31.9	32.5	33.0
92.5°	29.8	30.5	31.2	31.7	32.0	32.4	32.7	33.0
95°	50.4	51.8	53.1	53.7	53.4	53.1	52.9	52.6
97.5°	66.0	67.1	68.2	68.9	69.2	69.6	69.9	70.2
100°	74.1	76.2	78.4	79.8	80.3	80.9	81.4	82.0
102.5°	77.3	80.2	83.0	84.8	85.5	86.3	87.1	87.8
105°	80.6	83.6	86.6	88.6	89.7	90.8	91.9	93.0
107.5°	98.4	95.3	92.3	91.3	92.4	93.5	94.6	95.7
110°	159.7	132.5	105.3	92.3	93.4	94.5	95.6	96.6



TEST NUMBER: P331547

CATALOG NUMBER: S122DIW-S675D1240U835-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	341.6	242.5	143.3	94.1	95.0	95.9	96.7	97.6
115°	503.0	377.2	251.3	178.6	159.0	139.5	119.9	100.3
117.5°	775.1	744.6	714.2	666.8	602.5	538.2	473.9	409.5
120°	903.2	906.4	909.7	893.0	856.3	819.6	782.9	746.2
122.5°	958.3	960.3	962.2	959.6	952.5	945.4	938.3	931.1
125°	1037.5	1039.4	1041.3	1042.6	1043.4	1044.3	1045.1	1045.9
127.5°	1110.6	1113.4	1116.2	1117.7	1117.8	1118.0	1118.1	1118.3
130°	1157.1	1160.1	1163.0	1164.4	1164.1	1163.9	1163.6	1163.3
132.5°	1202.2	1204.7	1207.3	1208.4	1208.2	1207.9	1207.6	1207.4
135°	1266.6	1269.3	1272.1	1273.1	1272.6	1272.1	1271.5	1271.0
137.5°	1326.4	1329.1	1331.8	1332.6	1331.7	1330.8	1329.9	1328.9
140°	1365.2	1367.6	1370.1	1370.6	1369.2	1367.9	1366.5	1365.2
142.5°	1400.9	1403.2	1405.4	1405.8	1404.5	1403.1	1401.7	1400.4
145°	1450.9	1452.8	1454.7	1455.0	1453.6	1452.3	1450.9	1449.6
147.5°	1494.5	1495.9	1497.3	1497.4	1496.3	1495.1	1494.0	1492.9
150°	1521.3	1523.0	1524.6	1524.7	1523.4	1522.0	1520.6	1519.3
152.5°	1545.8	1547.4	1549.1	1549.0	1547.2	1545.4	1543.6	1541.8
155°	1578.8	1580.5	1582.1	1581.8	1579.6	1577.5	1575.3	1573.1
157.5°	1606.7	1608.5	1610.4	1610.2	1608.1	1606.0	1603.9	1601.7
160°	1622.9	1624.5	1626.1	1626.0	1624.1	1622.2	1620.3	1618.4
162.5°	1638.0	1639.8	1641.7	1641.4	1639.1	1636.7	1634.4	1632.1
165°	1656.4	1658.3	1660.2	1660.2	1658.3	1656.4	1654.5	1652.6
167.5°	1671.8	1673.7	1675.6	1675.4	1672.9	1670.5	1668.0	1665.6
170°	1679.7	1681.6	1683.5	1683.2	1680.8	1678.3	1675.9	1673.4
172.5°	1685.5	1687.4	1689.3	1689.1	1686.6	1684.2	1681.7	1679.3
175°	1691.9	1693.8	1695.7	1695.3	1692.6	1689.9	1687.1	1684.4
177.5°	1692.6	1694.1	1695.7	1695.4	1693.5	1691.5	1689.6	1687.6
180°	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5	1690.5

(END OF REPORT)