

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: P331583-935

Luminaire Tested: **S122DIW-S865D1440U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331583-935
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-S865D1440U935-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7986.5 lumens
Efficiency: N/A
Efficacy: 104.3 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

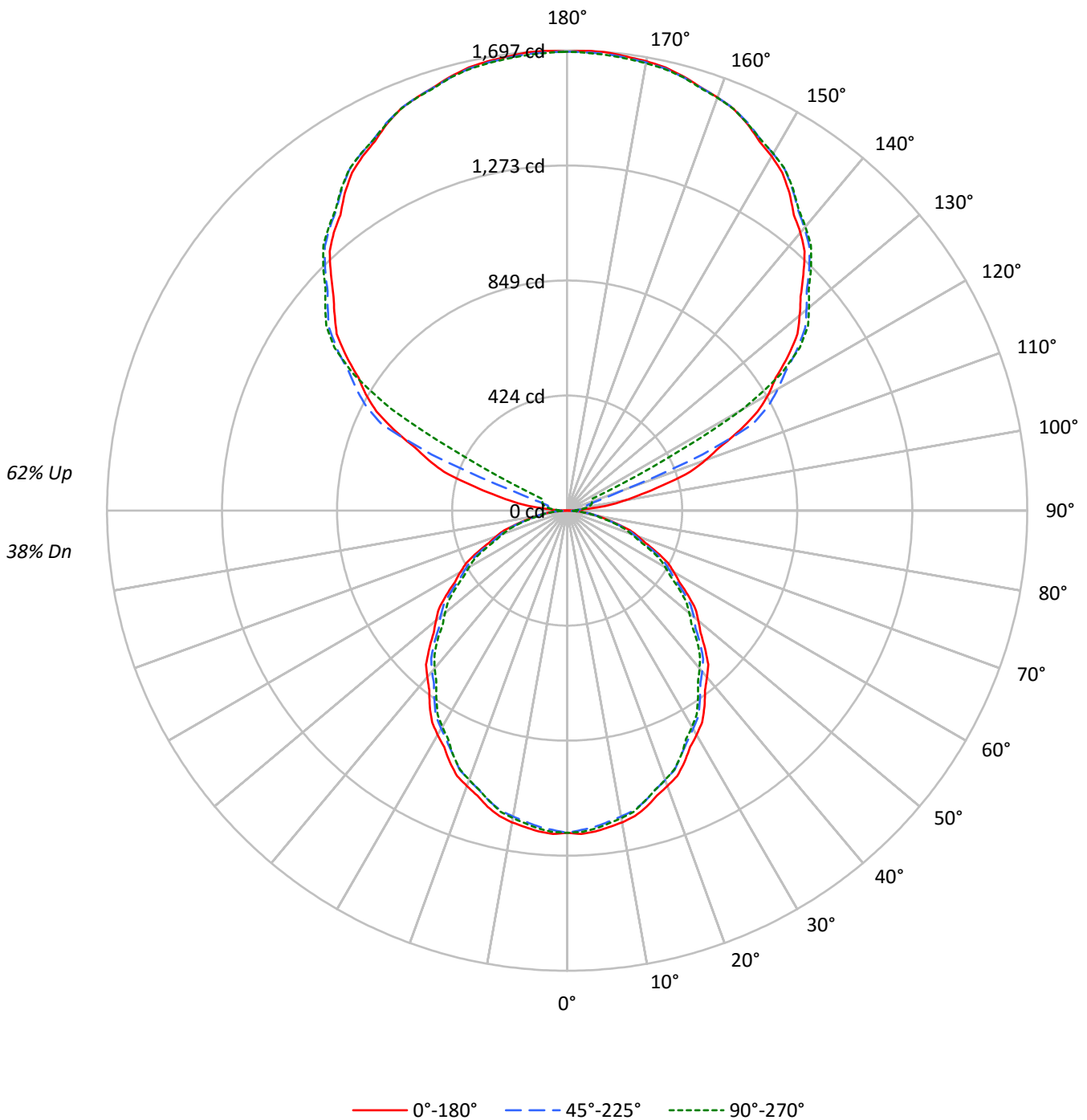
Input Watts (W): 76.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331583-935

CATALOG NUMBER: S122DIW-S865D1440U935-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P331583-935

CATALOG NUMBER: S122DIW-S865D1440U935-4F0-1E-UDD-F

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45
1	95	91	87	84	86	83	79	76	67	65	63	53	51	50	40	39	38
2	87	79	73	68	78	72	67	63	59	55	52	46	44	42	35	33	32
3	79	70	62	57	71	63	57	52	52	47	44	41	38	35	31	29	27
4	72	62	54	48	65	56	49	44	46	41	37	36	33	30	28	25	23
5	66	55	47	41	60	50	43	38	41	36	32	33	29	26	25	22	20
6	61	49	41	35	55	45	38	33	37	32	28	30	26	23	23	20	18
7	56	44	36	31	51	40	34	29	33	28	24	27	23	20	21	18	16
8	52	40	32	27	47	37	30	25	30	25	22	25	21	18	19	16	14
9	48	36	29	24	44	34	27	23	28	23	19	23	19	16	17	15	13
10	45	33	26	22	41	31	24	20	26	21	17	21	17	14	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19184	19184	19184
5°	19258	18979	19091
10°	19143	18787	18882
15°	18907	18544	18524
20°	18570	18179	18158
25°	18235	17728	17728
30°	17807	17316	17167
35°	17406	16821	16575
40°	16904	16326	16012
45°	16408	15835	15445
50°	15870	15325	14780
55°	15308	14728	14184
60°	14683	14018	13504
65°	14013	13310	12699
70°	13161	12458	11863
75°	11971	11472	11185
80°	10628	10302	9772
85°	8670	8262	7410



TEST NUMBER: P331583-935

CATALOG NUMBER: S122DIW-S865D1440U935-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.7	1.4
10°-20°	314.4	3.9
20°-30°	462.1	5.8
30°-40°	536.8	6.7
40°-50°	536.2	6.7
50°-60°	467.6	5.9
60°-70°	345.7	4.3
70°-80°	195.8	2.5
80°-90°	56.8	0.7
90°-100°	56.5	0.7
100°-110°	207.0	2.6
110°-120°	553.4	6.9
120°-130°	913.5	11.4
130°-140°	971.4	12.2
140°-150°	902.9	11.3
150°-160°	726.0	9.1
160°-170°	467.8	5.9
170°-180°	161.0	2.0
0°-30°	888.2	11.1
0°-40°	1425.0	17.8
0°-60°	2428.7	30.4
0°-90°	3027.1	37.9
90°-120°	816.8	10.2
90°-150°	3604.6	45.1
90°-180°	4959.0	62.1
0°-180°	7986.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1188	1183	1171	1180	1178	113
15°	1131	1124	1109	1113	1108	318
25°	1024	1014	995	997	995	471
35°	883	871	853	847	841	551
45°	719	710	694	681	676	554
55°	544	537	523	510	504	486
65°	367	360	348	338	332	363
75°	192	189	184	178	179	205
85°	47	46	45	41	40	54
90°	1	14	24	30	33	6
95°	80	42	48	53	53	97
105°	372	388	75	88	93	398
115°	704	725	756	215	100	693
125°	996	1012	1035	1043	1047	887
135°	1232	1251	1262	1274	1272	951
145°	1429	1429	1449	1456	1451	893
155°	1574	1564	1577	1584	1575	725
165°	1658	1651	1654	1662	1654	468
175°	1696	1688	1690	1697	1686	161
180°	1692	1692	1692	1692	1692	



TEST NUMBER: P331583-935

CATALOG NUMBER: S122DIW-S865D1440U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2
2.5°	1193.7	1192.7	1191.6	1190.7	1189.6	1188.0	1185.8	1183.5	1181.3	1179.1	1181.1
5°	1188.2	1187.1	1186.2	1185.2	1184.1	1182.2	1179.5	1176.6	1173.9	1171.0	1173.1
7.5°	1177.7	1176.1	1174.6	1172.9	1171.4	1169.2	1166.3	1163.5	1160.6	1157.8	1159.9
10°	1167.6	1165.9	1164.1	1162.3	1160.5	1158.1	1155.0	1152.0	1149.0	1145.9	1148.0
12.5°	1153.9	1152.4	1150.8	1149.2	1147.6	1145.3	1142.3	1139.2	1136.2	1133.2	1134.5
15°	1131.1	1129.5	1128.0	1126.5	1125.0	1122.6	1119.3	1115.9	1112.7	1109.4	1110.3
17.5°	1101.8	1100.3	1098.8	1097.3	1095.7	1093.3	1089.9	1086.6	1083.2	1079.9	1081.1
20°	1080.8	1079.3	1077.8	1076.2	1074.7	1072.2	1068.6	1065.1	1061.5	1058.0	1058.7
22.5°	1059.8	1057.7	1055.5	1053.3	1051.3	1048.5	1045.2	1041.8	1038.5	1035.1	1035.3
25°	1023.6	1021.7	1019.6	1017.6	1015.5	1012.4	1008.1	1003.8	999.4	995.1	995.7
27.5°	982.6	980.8	978.9	977.1	975.3	972.6	969.2	965.8	962.4	959.0	958.3
30°	955.1	953.1	951.1	949.1	947.0	944.1	940.3	936.5	932.6	928.8	928.1
32.5°	925.9	924.3	922.6	921.0	919.4	916.5	912.6	908.5	904.6	900.5	899.1
35°	883.1	880.6	878.0	875.6	873.0	869.7	865.6	861.6	857.5	853.4	852.0
37.5°	834.9	832.7	830.4	828.2	826.0	822.9	818.8	814.8	810.6	806.6	804.7
40°	802.0	800.0	798.0	795.9	793.9	790.8	786.8	782.7	778.7	774.6	772.3
42.5°	770.1	768.0	765.9	764.0	761.9	758.9	754.8	750.8	746.7	742.6	740.1
45°	718.6	716.9	715.1	713.3	711.5	708.7	704.9	701.1	697.3	693.5	690.7
47.5°	667.4	665.8	664.1	662.5	660.7	657.9	653.9	650.0	646.0	642.0	639.1
50°	631.8	630.5	629.3	628.0	626.7	624.3	620.8	617.2	613.6	610.1	606.6
52.5°	597.1	595.4	593.7	592.0	590.4	587.9	584.5	581.2	577.8	574.5	571.5
55°	543.8	542.3	540.8	539.2	537.7	535.5	532.4	529.3	526.3	523.2	520.2
57.5°	490.3	489.1	487.9	486.7	485.5	483.2	479.8	476.5	473.1	469.8	466.8
60°	454.7	453.7	452.7	451.7	450.6	448.4	444.8	441.3	437.7	434.1	431.4
62.5°	420.0	418.4	416.7	415.1	413.5	411.3	408.5	405.8	403.0	400.4	397.8
65°	366.8	365.2	363.7	362.1	360.7	358.6	356.1	353.5	351.0	348.4	346.2
67.5°	312.6	311.3	310.1	308.9	307.7	306.0	303.7	301.4	299.1	296.8	295.1
70°	278.8	277.8	276.7	275.7	274.7	273.0	270.8	268.5	266.2	263.9	262.2
72.5°	244.0	243.1	242.0	241.0	240.0	238.8	237.3	235.8	234.3	232.8	231.1
75°	191.9	191.4	190.9	190.5	189.9	189.0	187.8	186.5	185.2	183.9	182.4
77.5°	145.3	144.5	143.6	142.8	141.9	141.2	140.7	140.2	139.7	139.1	138.4
80°	114.3	114.0	113.7	113.5	113.2	112.9	112.4	111.8	111.3	110.8	110.0
82.5°	85.0	85.0	84.9	84.8	84.8	84.6	84.3	84.0	83.7	83.4	82.4
85°	46.8	46.6	46.3	46.1	45.8	45.5	45.3	45.0	44.8	44.6	43.8
87.5°	16.7	16.9	17.0	17.3	17.5	17.6	17.6	17.7	17.7	17.7	17.4
90°	1.2	4.2	7.2	10.2	13.2	15.8	18.0	20.1	22.3	24.5	25.8
92.5°	24.7	24.5	24.2	23.9	23.7	24.0	25.1	26.3	27.3	28.4	29.1
95°	79.6	70.6	61.6	52.7	43.7	40.1	42.0	43.9	45.9	47.8	49.1
97.5°	158.0	132.7	107.4	82.1	56.7	46.3	50.7	55.1	59.5	63.9	65.0
100°	216.7	179.4	142.2	104.9	67.6	51.3	55.9	60.5	65.2	69.8	72.0
102.5°	281.4	273.5	265.6	257.7	249.9	226.5	187.9	149.1	110.5	71.7	74.6
105°	372.3	380.4	388.6	396.7	404.9	371.9	297.6	223.3	149.0	74.7	77.7
107.5°	475.9	482.4	489.0	495.6	502.2	461.0	371.9	282.8	193.6	104.6	101.5
110°	542.5	548.2	553.9	559.6	565.3	528.8	450.2	371.6	292.9	214.3	187.1



TEST NUMBER: P331583-935

CATALOG NUMBER: S122DIW-S865D1440U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	605.2	610.2	615.3	620.4	625.4	618.2	598.8	579.4	559.9	540.5	441.3
115°	704.1	708.8	713.3	718.0	722.6	728.3	735.1	741.9	748.7	755.5	629.6
117.5°	792.6	797.7	802.9	808.0	813.2	818.1	822.8	827.5	832.2	836.9	806.4
120°	857.2	861.3	865.3	869.4	873.5	878.0	882.9	887.8	892.7	897.6	900.9
122.5°	912.1	916.4	920.7	925.0	929.3	934.1	939.4	944.7	950.0	955.4	957.3
125°	995.6	999.1	1002.6	1006.2	1009.7	1014.1	1019.3	1024.4	1029.6	1034.7	1036.6
127.5°	1071.3	1075.1	1079.1	1083.0	1086.9	1090.8	1094.7	1098.5	1102.4	1106.3	1109.1
130°	1119.2	1123.6	1127.9	1132.3	1136.7	1140.3	1143.3	1146.3	1149.3	1152.3	1155.3
132.5°	1168.2	1171.9	1175.6	1179.3	1183.0	1186.4	1189.4	1192.3	1195.3	1198.3	1200.9
135°	1231.9	1236.2	1240.6	1244.9	1249.3	1252.7	1255.2	1257.6	1260.1	1262.5	1265.2
137.5°	1296.3	1299.3	1302.4	1305.4	1308.5	1311.4	1314.1	1317.0	1319.7	1322.5	1325.2
140°	1338.4	1340.6	1342.8	1345.0	1347.1	1349.7	1352.7	1355.7	1358.7	1361.7	1364.2
142.5°	1373.7	1375.6	1377.6	1379.6	1381.6	1384.2	1387.7	1391.1	1394.5	1397.9	1400.2
145°	1429.1	1428.7	1428.5	1428.2	1428.0	1430.1	1434.8	1439.4	1444.0	1448.6	1450.5
147.5°	1477.3	1476.3	1475.2	1474.2	1473.2	1474.9	1479.5	1484.1	1488.7	1493.2	1494.6
150°	1508.6	1506.8	1504.9	1503.0	1501.0	1502.3	1506.6	1511.0	1515.3	1519.7	1521.3
152.5°	1535.1	1533.0	1530.9	1528.7	1526.6	1527.6	1531.7	1535.9	1540.0	1544.1	1545.8
155°	1573.6	1571.1	1568.7	1566.2	1563.7	1564.2	1567.5	1570.7	1574.0	1577.2	1578.8
157.5°	1603.7	1601.6	1599.6	1597.5	1595.4	1595.5	1597.8	1600.1	1602.3	1604.6	1606.5
160°	1621.3	1619.6	1618.1	1616.4	1614.8	1614.8	1616.4	1618.1	1619.6	1621.3	1622.9
162.5°	1636.9	1635.4	1633.7	1632.1	1630.5	1630.3	1631.8	1633.1	1634.6	1636.0	1637.9
165°	1658.0	1656.4	1654.8	1653.1	1651.5	1651.1	1651.9	1652.7	1653.6	1654.3	1656.3
167.5°	1673.7	1672.1	1670.4	1668.8	1667.2	1666.7	1667.5	1668.3	1669.0	1669.8	1671.7
170°	1682.6	1680.9	1679.3	1677.7	1676.0	1675.4	1676.0	1676.5	1677.1	1677.7	1679.6
172.5°	1688.4	1686.8	1685.1	1683.5	1681.9	1681.4	1681.9	1682.4	1683.0	1683.5	1685.4
175°	1696.0	1694.1	1692.2	1690.3	1688.4	1687.7	1688.2	1688.8	1689.4	1689.9	1691.8
177.5°	1697.2	1695.7	1694.2	1692.6	1691.1	1690.5	1690.7	1690.9	1691.1	1691.3	1692.9
180°	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3



TEST NUMBER: P331583-935

CATALOG NUMBER: S122DIW-S865D1440U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2	1188.2
2.5°	1183.1	1185.2	1187.1	1188.0	1187.6	1187.1	1186.8	1186.4
5°	1175.1	1177.2	1179.2	1179.9	1179.5	1179.0	1178.5	1177.9
7.5°	1161.8	1163.9	1166.0	1166.7	1166.1	1165.5	1165.0	1164.4
10°	1150.0	1152.0	1154.1	1154.7	1153.9	1153.1	1152.4	1151.7
12.5°	1136.0	1137.4	1138.8	1139.3	1138.7	1138.2	1137.6	1137.0
15°	1111.4	1112.4	1113.4	1113.3	1112.1	1110.8	1109.5	1108.2
17.5°	1082.2	1083.4	1084.6	1084.5	1083.3	1082.1	1080.9	1079.7
20°	1059.5	1060.2	1061.0	1060.8	1059.9	1058.9	1057.8	1056.8
22.5°	1035.4	1035.5	1035.7	1035.5	1034.8	1034.2	1033.6	1033.0
25°	996.2	996.6	997.1	997.1	996.6	996.2	995.7	995.1
27.5°	957.5	956.7	956.0	955.0	953.7	952.5	951.3	950.1
30°	927.3	926.6	925.8	924.9	923.9	922.9	921.9	920.8
32.5°	897.8	896.4	895.0	893.8	892.9	891.8	890.8	889.8
35°	850.4	848.9	847.4	845.9	844.7	843.4	842.1	840.9
37.5°	802.9	801.0	799.1	797.5	796.3	795.1	793.9	792.6
40°	770.1	767.8	765.5	763.8	762.8	761.8	760.8	759.7
42.5°	737.6	735.1	732.7	730.7	729.3	727.9	726.4	725.0
45°	687.9	685.1	682.3	680.4	679.4	678.4	677.3	676.4
47.5°	636.2	633.3	630.3	628.1	626.6	625.2	623.7	622.2
50°	603.0	599.4	595.9	593.5	592.2	590.9	589.7	588.4
52.5°	568.5	565.6	562.7	560.3	558.7	557.0	555.3	553.6
55°	517.2	514.1	511.1	508.9	507.6	506.4	505.1	503.9
57.5°	463.8	460.8	457.8	455.8	454.9	453.9	453.0	451.9
60°	428.6	425.8	423.0	421.2	420.4	419.7	418.9	418.2
62.5°	395.1	392.5	389.9	388.2	387.2	386.2	385.3	384.4
65°	343.9	341.6	339.3	337.5	336.3	335.0	333.7	332.4
67.5°	293.3	291.4	289.7	288.3	287.3	286.3	285.2	284.2
70°	260.4	258.6	256.8	255.4	254.4	253.4	252.4	251.3
72.5°	229.3	227.5	225.8	224.5	223.6	222.8	222.0	221.2
75°	180.9	179.3	177.9	177.4	177.9	178.4	178.8	179.3
77.5°	137.7	136.9	136.1	135.3	134.7	134.0	133.3	132.5
80°	109.3	108.6	107.8	107.1	106.6	106.2	105.6	105.1
82.5°	81.5	80.5	79.6	79.0	78.9	78.8	78.7	78.6
85°	43.0	42.3	41.5	41.0	40.7	40.5	40.2	40.0
87.5°	17.0	16.7	16.4	16.1	16.0	15.9	15.8	15.8
90°	27.2	28.6	30.0	30.9	31.4	31.9	32.5	33.1
92.5°	29.8	30.6	31.3	31.8	32.1	32.4	32.7	33.1
95°	50.5	51.8	53.2	53.7	53.5	53.2	53.0	52.7
97.5°	66.1	67.2	68.3	69.0	69.3	69.7	70.0	70.3
100°	74.1	76.4	78.5	79.9	80.4	80.9	81.5	82.1
102.5°	77.4	80.2	83.1	84.9	85.7	86.4	87.1	87.9
105°	80.7	83.7	86.7	88.7	89.8	90.9	92.0	93.1
107.5°	98.5	95.4	92.4	91.4	92.5	93.6	94.7	95.7
110°	159.9	132.7	105.5	92.4	93.5	94.5	95.7	96.8



TEST NUMBER: P331583-935

CATALOG NUMBER: S122DIW-S865D1440U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	342.0	242.7	143.4	94.2	95.1	96.0	96.9	97.7
115°	503.6	377.5	251.6	178.7	159.2	139.6	120.0	100.4
117.5°	775.9	745.5	715.0	667.5	603.1	538.7	474.3	410.0
120°	904.1	907.4	910.7	893.9	857.2	820.4	783.7	747.0
122.5°	959.3	961.3	963.2	960.6	953.5	946.4	939.3	932.1
125°	1038.5	1040.4	1042.3	1043.7	1044.6	1045.3	1046.2	1047.0
127.5°	1111.8	1114.6	1117.3	1118.9	1119.0	1119.1	1119.3	1119.5
130°	1158.3	1161.3	1164.2	1165.6	1165.4	1165.1	1164.8	1164.5
132.5°	1203.4	1206.0	1208.6	1209.7	1209.4	1209.2	1208.9	1208.6
135°	1267.9	1270.7	1273.4	1274.5	1273.9	1273.4	1272.8	1272.3
137.5°	1327.8	1330.5	1333.2	1334.0	1333.1	1332.2	1331.3	1330.3
140°	1366.6	1369.1	1371.5	1372.0	1370.7	1369.3	1368.0	1366.6
142.5°	1402.4	1404.6	1406.9	1407.3	1405.9	1404.5	1403.3	1401.9
145°	1452.4	1454.3	1456.3	1456.6	1455.2	1453.8	1452.4	1451.1
147.5°	1496.1	1497.5	1498.9	1499.0	1497.9	1496.8	1495.6	1494.4
150°	1522.9	1524.6	1526.2	1526.3	1525.0	1523.6	1522.2	1520.9
152.5°	1547.4	1549.0	1550.7	1550.6	1548.8	1547.0	1545.2	1543.4
155°	1580.5	1582.1	1583.7	1583.5	1581.3	1579.2	1576.9	1574.8
157.5°	1608.3	1610.2	1612.1	1611.9	1609.8	1607.7	1605.5	1603.4
160°	1624.5	1626.2	1627.8	1627.7	1625.8	1623.8	1622.0	1620.1
162.5°	1639.7	1641.6	1643.4	1643.1	1640.8	1638.5	1636.2	1633.8
165°	1658.2	1660.1	1662.0	1662.0	1660.1	1658.2	1656.3	1654.3
167.5°	1673.6	1675.5	1677.4	1677.1	1674.7	1672.2	1669.8	1667.3
170°	1681.4	1683.3	1685.2	1685.0	1682.6	1680.1	1677.7	1675.2
172.5°	1687.3	1689.2	1691.1	1690.8	1688.4	1685.9	1683.5	1681.0
175°	1693.7	1695.6	1697.5	1697.1	1694.4	1691.6	1688.9	1686.2
177.5°	1694.4	1695.9	1697.5	1697.2	1695.2	1693.3	1691.3	1689.4
180°	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3

(END OF REPORT)