

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: P332703-940

Luminaire Tested: **S124DIP-S1195D1035U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332703-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S1195D1035U940-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8245.0 lumens
Efficiency: N/A
Efficacy: 123.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

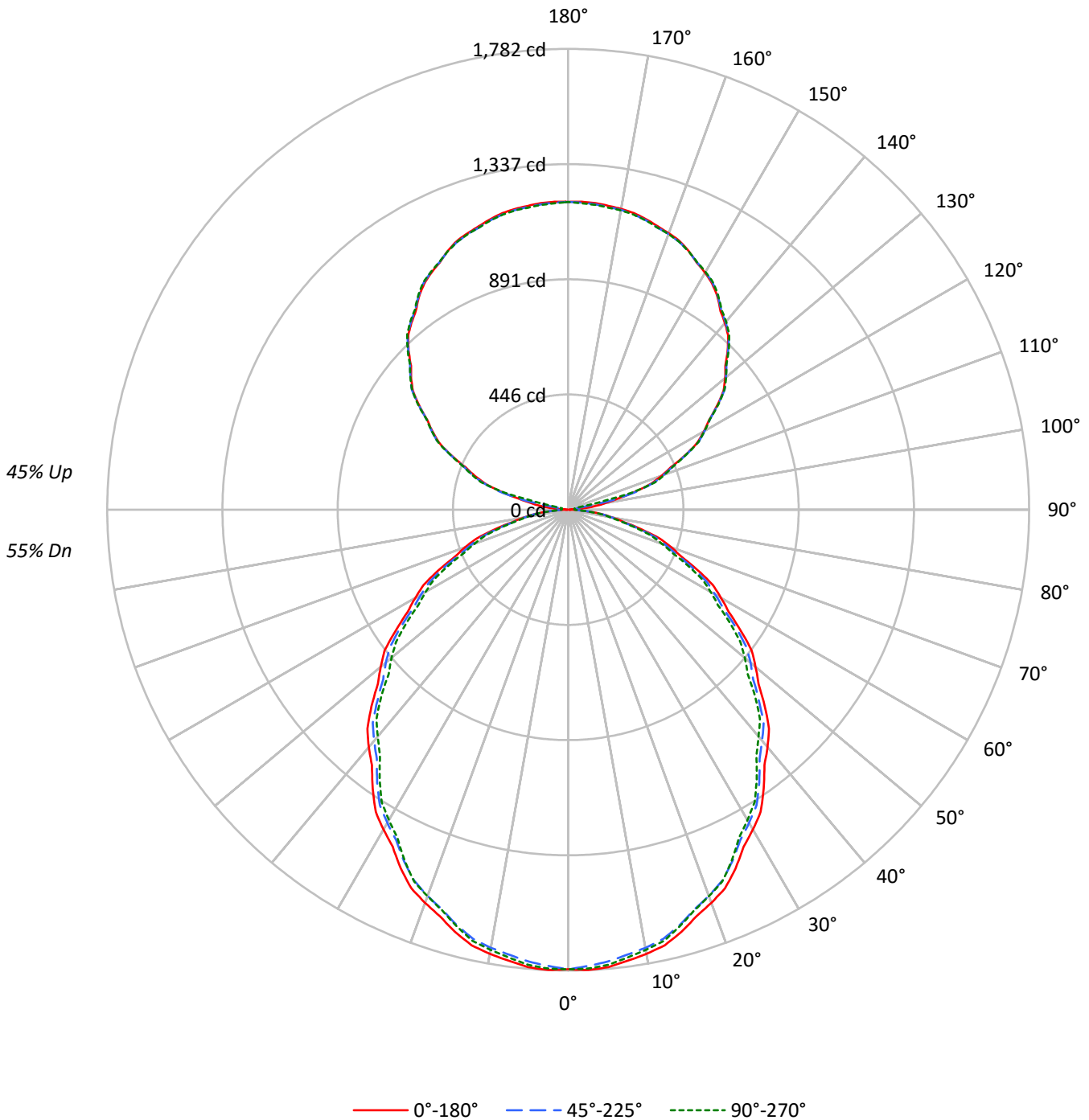
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332703-940

CATALOG NUMBER: S124DIP-S1195D1035U940-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P332703-940

CATALOG NUMBER: S124DIP-S1195D1035U940-4F0-1E-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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	99	95	91	87	92	88	85	81	76	73	71	64	63	61	54	53	51	47
2	90	83	76	71	83	77	71	67	66	62	59	56	53	51	47	45	43	39
3	82	73	65	59	76	68	61	56	58	53	49	50	46	43	42	39	37	33
4	75	64	56	50	70	60	53	47	52	46	42	44	40	37	38	34	32	28
5	69	57	49	43	64	54	46	41	47	41	36	40	35	32	34	30	28	25
6	64	51	43	37	59	48	41	35	42	36	32	36	32	28	31	27	24	22
7	59	46	38	33	55	44	36	31	38	32	28	33	28	25	28	24	22	19
8	55	42	34	29	51	40	33	28	35	29	25	30	26	22	26	22	19	17
9	51	39	31	26	47	36	29	25	32	26	22	28	23	20	24	20	18	15
10	48	35	28	23	44	33	27	22	29	24	20	26	21	18	22	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14346	14346	14346
5°	14389	14216	14319
10°	14299	14100	14170
15°	14125	13900	13936
20°	13897	13651	13664
25°	13635	13367	13331
30°	13313	13035	12915
35°	12980	12686	12518
40°	12635	12290	12064
45°	12273	11900	11671
50°	11875	11552	11195
55°	11444	11102	10742
60°	11013	10598	10277
65°	10527	10118	9712
70°	9982	9477	9106
75°	9148	8706	8484
80°	8140	7810	7610
85°	7123	6854	6725



TEST NUMBER: P332703-940

CATALOG NUMBER: S124DIP-S1195D1035U940-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.3	2.0
10°-20°	471.5	5.7
20°-30°	694.0	8.4
30°-40°	806.8	9.8
40°-50°	806.8	9.8
50°-60°	705.8	8.6
60°-70°	524.1	6.4
70°-80°	297.8	3.6
80°-90°	89.4	1.1
90°-100°	40.7	0.5
100°-110°	259.5	3.1
110°-120°	496.5	6.0
120°-130°	630.3	7.6
130°-140°	674.3	8.2
140°-150°	630.6	7.6
150°-160°	508.5	6.2
160°-170°	328.0	4.0
170°-180°	113.0	1.4
0°-30°	1332.9	16.2
0°-40°	2139.7	26.0
0°-60°	3652.3	44.3
0°-90°	4563.5	55.3
90°-120°	796.7	9.7
90°-150°	2731.9	33.1
90°-180°	3681.0	44.6
0°-180°	8245.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1777	1777	1777	1777	1777	
5°	1776	1769	1754	1769	1767	168
15°	1690	1684	1663	1671	1667	476
25°	1531	1520	1501	1502	1497	704
35°	1317	1307	1287	1277	1270	823
45°	1075	1064	1042	1027	1022	828
55°	813	808	789	772	763	728
65°	551	544	530	516	508	545
75°	293	286	279	274	272	312
85°	77	77	74	74	73	85
90°	3	12	20	25	27	6
95°	49	20	20	25	26	63
105°	268	273	278	284	254	280
115°	500	503	502	504	504	492
125°	703	706	705	708	709	628
135°	872	872	875	877	879	672
145°	1006	1008	1008	1010	1011	628
155°	1103	1104	1101	1104	1102	508
165°	1163	1159	1159	1165	1158	329
175°	1190	1185	1186	1193	1183	113
180°	1190	1190	1190	1190	1190	



TEST NUMBER: P332703-940

CATALOG NUMBER: S124DIP-S1195D1035U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0
2.5°	1781.5	1780.8	1780.0	1779.3	1778.5	1776.7	1774.0	1771.2	1768.4	1765.7	1768.2
5°	1775.6	1774.3	1773.1	1771.8	1770.6	1768.2	1764.7	1761.2	1757.7	1754.3	1757.7
7.5°	1759.1	1757.8	1756.6	1755.2	1754.0	1751.5	1747.6	1743.7	1739.9	1736.0	1738.8
10°	1744.3	1743.0	1741.8	1740.4	1739.2	1736.5	1732.4	1728.3	1724.2	1720.1	1722.6
12.5°	1724.9	1723.7	1722.3	1721.1	1719.8	1717.0	1712.7	1708.3	1704.0	1699.6	1702.4
15°	1690.1	1688.9	1687.7	1686.4	1685.1	1682.1	1677.3	1672.6	1667.9	1663.1	1665.0
17.5°	1648.3	1646.7	1645.1	1643.6	1642.0	1639.0	1634.4	1630.0	1625.5	1621.0	1622.2
20°	1617.6	1616.0	1614.4	1612.8	1611.2	1608.0	1603.3	1598.6	1593.8	1589.0	1590.0
22.5°	1584.5	1582.4	1580.4	1578.2	1576.2	1572.7	1568.0	1563.3	1558.5	1553.7	1555.5
25°	1530.7	1528.5	1526.3	1524.0	1521.8	1518.5	1514.0	1509.7	1505.2	1500.7	1501.1
27.5°	1469.2	1466.9	1464.6	1462.3	1460.1	1456.9	1452.8	1448.7	1444.6	1440.4	1439.7
30°	1428.2	1425.7	1423.1	1420.6	1418.1	1414.7	1410.6	1406.5	1402.4	1398.3	1397.0
32.5°	1384.9	1382.6	1380.4	1378.0	1375.7	1372.4	1368.1	1363.7	1359.3	1355.0	1353.4
35°	1317.1	1314.9	1312.7	1310.5	1308.2	1304.9	1300.5	1296.1	1291.6	1287.2	1285.0
37.5°	1245.6	1243.6	1241.6	1239.6	1237.5	1234.1	1229.4	1224.7	1219.9	1215.1	1212.7
40°	1198.9	1196.4	1193.8	1191.3	1188.8	1185.2	1180.4	1175.6	1170.9	1166.2	1163.0
42.5°	1148.8	1147.3	1145.8	1144.2	1142.7	1139.3	1134.1	1128.8	1123.6	1118.3	1114.6
45°	1075.0	1072.8	1070.6	1068.4	1066.2	1062.6	1057.5	1052.4	1047.3	1042.3	1038.8
47.5°	997.8	996.3	994.8	993.3	991.8	988.7	984.0	979.4	974.6	970.0	966.1
50°	945.5	944.2	942.9	941.6	940.4	937.5	933.1	928.7	924.3	919.8	915.4
52.5°	894.2	892.7	891.2	889.7	888.1	885.0	880.4	875.7	871.0	866.3	862.4
55°	813.1	812.1	811.2	810.2	809.2	806.6	802.1	797.7	793.3	788.8	785.1
57.5°	735.6	734.5	733.4	732.4	731.3	728.5	724.2	719.8	715.4	711.1	707.5
60°	682.1	680.5	678.9	677.3	675.7	672.9	668.8	664.7	660.5	656.4	653.5
62.5°	629.6	628.3	627.0	625.6	624.4	621.5	617.2	612.8	608.4	604.0	601.5
65°	551.1	549.5	547.9	546.3	544.7	542.3	539.2	536.0	532.9	529.7	526.6
67.5°	471.9	470.5	469.0	467.5	466.1	463.8	460.7	457.7	454.7	451.7	448.6
70°	422.9	420.7	418.5	416.3	414.0	411.7	409.1	406.6	404.0	401.5	399.0
72.5°	370.5	368.3	366.0	363.8	361.7	359.5	357.5	355.4	353.5	351.4	349.4
75°	293.3	291.8	290.2	288.6	287.0	285.4	283.8	282.2	280.7	279.1	277.9
77.5°	219.5	218.8	218.2	217.5	216.8	215.7	214.4	212.9	211.6	210.2	209.8
80°	175.1	174.2	173.3	172.3	171.4	170.6	170.0	169.2	168.6	168.0	167.4
82.5°	131.9	131.4	131.0	130.5	130.1	129.8	129.7	129.6	129.4	129.3	128.9
85°	76.9	76.9	76.9	76.9	76.9	76.6	76.0	75.3	74.6	74.0	74.0
87.5°	30.1	30.3	30.5	30.7	30.9	31.0	31.0	31.1	31.2	31.3	31.5
90°	2.7	4.8	7.0	9.2	11.4	13.3	14.8	16.4	18.0	19.6	20.8
92.5°	11.2	11.3	11.4	11.6	11.7	12.6	14.1	15.7	17.3	18.9	20.1
95°	49.0	42.3	35.5	28.8	22.0	18.8	19.0	19.2	19.4	19.6	20.8
97.5°	104.0	108.2	112.4	116.5	120.7	111.8	89.7	67.7	45.6	23.5	23.6
100°	146.0	149.5	153.1	156.7	160.2	148.4	121.1	93.8	66.4	39.1	35.8
102.5°	193.0	195.6	198.2	200.8	203.4	203.0	199.4	195.8	192.3	188.7	152.4
105°	268.0	269.1	270.3	271.5	272.7	273.8	274.7	275.7	276.8	277.8	279.6
107.5°	337.5	338.1	338.8	339.3	339.9	340.9	342.2	343.6	344.9	346.3	347.1
110°	384.6	385.1	385.8	386.3	386.9	387.8	389.0	390.2	391.4	392.5	393.0



TEST NUMBER: P332703-940

CATALOG NUMBER: S124DIP-S1195D1035U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	430.2	431.2	432.3	433.4	434.4	435.2	435.8	436.3	436.8	437.4	437.4
115°	500.2	500.9	501.5	502.0	502.7	502.8	502.7	502.5	502.2	502.0	502.5
117.5°	563.5	564.3	565.1	565.9	566.7	567.2	567.7	568.1	568.6	569.0	568.9
120°	606.2	607.0	607.8	608.6	609.4	609.7	609.5	609.3	609.0	608.9	609.3
122.5°	646.0	646.6	647.0	647.5	648.0	648.4	648.6	648.9	649.2	649.4	649.7
125°	703.2	704.0	704.8	705.6	706.4	706.6	706.2	705.8	705.4	705.0	705.6
127.5°	757.3	757.5	757.8	758.0	758.1	758.7	759.6	760.5	761.4	762.3	762.2
130°	792.3	792.5	792.6	792.8	793.0	793.4	794.1	794.6	795.2	795.9	796.0
132.5°	824.3	824.7	825.0	825.4	825.7	826.3	827.1	827.8	828.5	829.3	829.5
135°	872.4	872.2	872.0	871.7	871.6	871.8	872.6	873.4	874.2	875.0	875.4
137.5°	914.9	915.0	915.1	915.2	915.3	915.7	916.6	917.5	918.3	919.2	919.6
140°	942.7	943.1	943.5	943.9	944.2	944.7	945.0	945.5	945.8	946.3	946.8
142.5°	967.6	968.3	969.0	969.7	970.4	970.9	971.2	971.4	971.6	971.9	972.3
145°	1005.8	1006.5	1007.1	1007.6	1008.3	1008.5	1008.5	1008.5	1008.5	1008.5	1008.8
147.5°	1036.3	1037.4	1038.6	1039.6	1040.8	1041.3	1041.0	1040.8	1040.6	1040.4	1040.6
150°	1058.4	1059.2	1060.0	1060.8	1061.6	1061.8	1061.7	1061.5	1061.3	1061.0	1061.0
152.5°	1076.9	1077.5	1078.2	1078.8	1079.4	1079.6	1079.2	1078.9	1078.5	1078.2	1078.5
155°	1103.0	1103.1	1103.3	1103.5	1103.7	1103.5	1103.0	1102.3	1101.7	1101.2	1101.9
157.5°	1124.8	1124.7	1124.5	1124.4	1124.4	1123.9	1123.3	1122.6	1122.0	1121.2	1122.3
160°	1137.6	1137.0	1136.5	1135.9	1135.2	1134.9	1134.7	1134.4	1134.3	1134.1	1135.2
162.5°	1149.1	1148.3	1147.5	1146.7	1146.0	1145.6	1145.3	1145.1	1145.0	1144.8	1145.9
165°	1163.4	1162.4	1161.5	1160.5	1159.5	1159.0	1159.0	1159.0	1159.0	1159.0	1160.6
167.5°	1174.8	1173.8	1172.8	1171.8	1170.7	1170.2	1170.0	1169.9	1169.8	1169.7	1171.4
170°	1181.2	1180.1	1178.8	1177.7	1176.5	1176.0	1176.2	1176.4	1176.6	1176.8	1178.4
172.5°	1185.5	1184.4	1183.1	1182.0	1180.8	1180.3	1180.4	1180.7	1180.9	1181.1	1182.7
175°	1190.2	1189.0	1187.8	1186.6	1185.4	1184.9	1185.1	1185.4	1185.5	1185.7	1187.5
177.5°	1192.3	1191.1	1190.1	1189.0	1187.8	1187.5	1187.8	1188.1	1188.4	1188.7	1190.0
180°	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2



TEST NUMBER: P332703-940

CATALOG NUMBER: S124DIP-S1195D1035U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0	1777.0
2.5°	1770.7	1773.3	1775.8	1776.9	1776.6	1776.4	1776.1	1775.8
5°	1761.2	1764.7	1768.2	1769.6	1769.0	1768.4	1767.7	1767.0
7.5°	1741.6	1744.4	1747.1	1748.4	1748.0	1747.6	1747.2	1746.9
10°	1725.1	1727.7	1730.2	1731.2	1730.5	1729.9	1729.2	1728.6
12.5°	1705.1	1707.9	1710.7	1711.6	1710.7	1709.9	1709.0	1708.1
15°	1666.9	1668.8	1670.7	1671.2	1670.3	1669.3	1668.3	1667.4
17.5°	1623.4	1624.6	1625.8	1626.0	1625.4	1624.8	1624.2	1623.5
20°	1591.0	1591.9	1592.9	1593.0	1592.4	1591.8	1591.2	1590.5
22.5°	1557.2	1558.9	1560.6	1560.9	1559.8	1558.6	1557.5	1556.3
25°	1501.5	1501.7	1502.1	1501.6	1500.3	1499.1	1497.8	1496.6
27.5°	1438.9	1438.2	1437.3	1436.2	1434.6	1433.1	1431.5	1429.9
30°	1395.7	1394.5	1393.2	1391.8	1390.2	1388.7	1387.1	1385.5
32.5°	1351.9	1350.4	1348.9	1347.4	1345.8	1344.2	1342.6	1341.0
35°	1282.8	1280.6	1278.4	1276.5	1274.9	1273.3	1271.7	1270.2
37.5°	1210.3	1207.9	1205.5	1203.3	1201.2	1199.1	1197.0	1194.9
40°	1159.8	1156.6	1153.5	1151.1	1149.6	1148.0	1146.4	1144.8
42.5°	1111.0	1107.3	1103.7	1101.3	1100.2	1099.1	1098.1	1097.0
45°	1035.4	1031.9	1028.4	1026.2	1025.2	1024.2	1023.3	1022.3
47.5°	962.2	958.2	954.3	951.1	948.7	946.3	943.9	941.5
50°	911.0	906.5	902.1	898.9	897.1	895.2	893.2	891.4
52.5°	858.4	854.5	850.6	847.5	845.1	842.7	840.3	837.9
55°	781.2	777.5	773.6	770.8	768.9	767.0	765.1	763.2
57.5°	703.9	700.3	696.7	693.9	692.1	690.3	688.4	686.6
60°	650.7	647.9	645.1	642.8	641.2	639.6	638.1	636.5
62.5°	598.8	596.2	593.6	591.6	590.0	588.4	586.8	585.2
65°	523.3	520.2	517.0	514.7	513.1	511.5	509.9	508.4
67.5°	445.6	442.6	439.5	437.7	437.3	436.8	436.4	436.0
70°	396.5	394.0	391.4	389.7	388.7	387.8	386.8	385.8
72.5°	347.4	345.4	343.3	341.8	340.9	339.9	338.9	338.0
75°	276.5	275.3	274.0	273.2	273.0	272.6	272.2	272.0
77.5°	209.4	209.0	208.7	208.0	207.2	206.4	205.5	204.7
80°	166.7	166.1	165.5	165.1	164.7	164.3	164.1	163.7
82.5°	128.5	128.1	127.8	127.4	127.1	126.8	126.4	126.2
85°	74.0	74.0	74.0	73.9	73.6	73.2	72.9	72.6
87.5°	31.7	31.9	32.2	32.4	32.5	32.5	32.6	32.6
90°	21.9	23.2	24.3	25.1	25.5	25.9	26.3	26.7
92.5°	21.2	22.5	23.6	24.3	24.3	24.4	24.5	24.6
95°	21.9	23.2	24.3	25.1	25.2	25.4	25.6	25.8
97.5°	23.7	23.9	24.0	24.2	24.3	24.5	24.7	25.0
100°	32.5	29.1	25.7	24.2	24.3	24.5	24.7	25.0
102.5°	116.2	79.9	43.6	25.5	25.5	25.6	25.6	25.7
105°	281.3	283.0	284.8	282.2	275.1	268.0	260.8	253.7
107.5°	348.0	348.9	349.7	350.5	351.3	352.0	352.8	353.6
110°	393.3	393.8	394.1	394.7	395.2	395.8	396.5	397.0



TEST NUMBER: P332703-940

CATALOG NUMBER: S124DIP-S1195D1035U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	437.3	437.2	437.1	437.5	438.2	439.0	439.7	440.4
115°	502.8	503.3	503.6	503.8	503.8	503.8	503.8	503.8
117.5°	568.8	568.7	568.6	568.6	568.6	568.5	568.4	568.3
120°	609.7	610.0	610.5	610.5	610.0	609.7	609.3	608.9
122.5°	650.0	650.1	650.4	650.3	650.0	649.5	649.2	648.7
125°	706.2	706.8	707.4	707.8	708.0	708.2	708.4	708.6
127.5°	762.1	762.0	761.9	761.7	761.6	761.4	761.3	761.1
130°	796.2	796.4	796.6	796.7	796.7	796.7	796.7	796.7
132.5°	829.6	829.9	830.1	830.1	829.9	829.7	829.6	829.5
135°	875.8	876.2	876.6	877.0	877.4	877.8	878.2	878.6
137.5°	920.1	920.5	921.0	921.0	921.0	920.9	920.7	920.6
140°	947.4	948.1	948.6	949.0	949.2	949.4	949.6	949.9
142.5°	972.8	973.2	973.7	973.8	973.9	973.9	974.0	974.0
145°	1009.0	1009.1	1009.3	1009.7	1010.0	1010.4	1010.8	1011.2
147.5°	1040.7	1040.9	1041.1	1041.3	1041.4	1041.6	1041.9	1042.1
150°	1061.0	1061.0	1061.0	1061.1	1061.4	1061.6	1061.8	1061.9
152.5°	1078.8	1079.1	1079.4	1079.5	1079.4	1079.3	1079.1	1079.1
155°	1102.7	1103.5	1104.3	1104.4	1103.8	1103.2	1102.6	1102.1
157.5°	1123.3	1124.4	1125.3	1125.3	1124.4	1123.3	1122.3	1121.2
160°	1136.5	1137.6	1138.8	1138.8	1137.6	1136.5	1135.2	1134.1
162.5°	1147.1	1148.3	1149.5	1149.4	1148.1	1146.7	1145.4	1144.1
165°	1162.2	1163.8	1165.3	1165.2	1163.4	1161.6	1159.8	1158.1
167.5°	1173.1	1174.9	1176.6	1176.5	1174.6	1172.6	1170.5	1168.6
170°	1180.0	1181.5	1183.1	1182.9	1181.0	1179.0	1177.0	1175.0
172.5°	1184.3	1185.8	1187.4	1187.1	1185.0	1182.9	1180.7	1178.6
175°	1189.3	1191.1	1192.8	1192.5	1190.2	1187.8	1185.4	1183.0
177.5°	1191.2	1192.5	1193.8	1193.5	1191.6	1189.7	1187.8	1185.9
180°	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2	1190.2

(END OF REPORT)