

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: P332381-940

Luminaire Tested: **S123RDIP-S1165D1025U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332381-940
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: S123RDIP-S1165D1025U940-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7561.1 lumens
Efficiency: N/A
Efficacy: 113.2 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

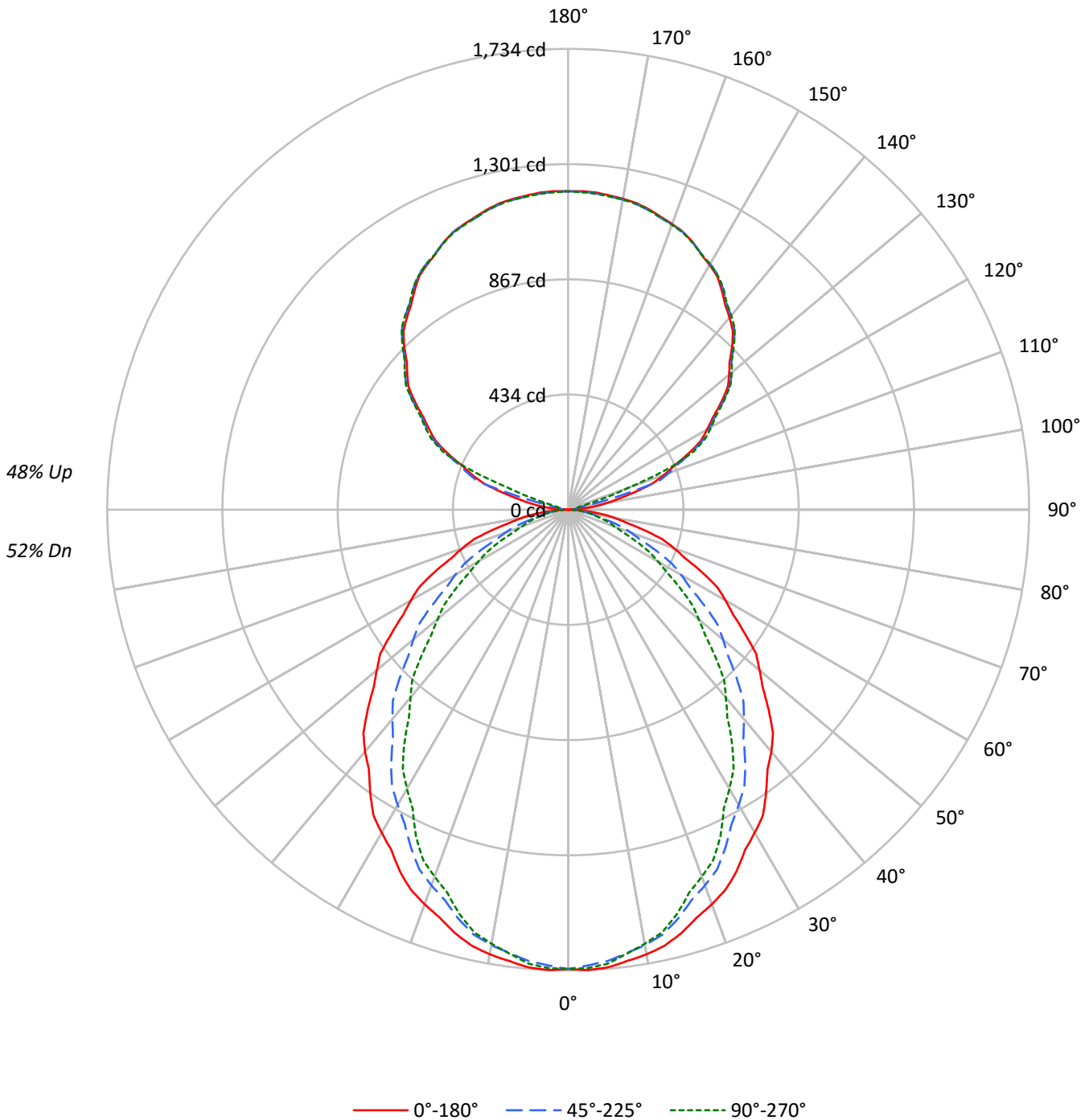
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332381-940

CATALOG NUMBER: S123RDIP-S1165D1025U940-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P332381-940

CATALOG NUMBER: S123RDIP-S1165D1025U940-4F0-1E-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	99	99	99	99	84	84	84	70	70	70	58	58	58	52
1	99	94	91	87	91	87	84	81	74	72	70	62	61	59	51	50	49	44
2	90	83	77	72	83	77	72	67	66	62	58	55	52	50	46	44	42	38
3	82	73	66	60	76	68	62	56	58	53	49	49	46	43	41	38	36	32
4	75	65	57	51	70	60	53	48	52	47	42	44	40	37	37	34	31	28
5	69	58	50	44	64	54	47	42	47	41	37	40	35	32	33	30	28	24
6	64	52	44	38	59	49	41	36	42	36	32	36	32	28	30	27	24	22
7	59	47	39	34	55	44	37	32	38	33	29	33	28	25	28	24	22	19
8	55	43	35	30	51	40	33	28	35	29	25	30	26	23	25	22	20	17
9	51	39	32	27	47	37	30	25	32	27	23	28	23	20	24	20	18	16
10	48	36	29	24	44	34	27	23	30	24	21	26	21	18	22	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18603	18603	18603
5°	18674	18416	18522
10°	18569	18185	18124
15°	18369	17761	17572
20°	18095	17228	16827
25°	17813	16631	16098
30°	17439	15940	15070
35°	17056	15251	14127
40°	16703	14436	12960
45°	16238	13633	11905
50°	15726	12722	10727
55°	15204	11678	9627
60°	14725	10562	8420
65°	14103	9352	7210
70°	13322	7852	5822
75°	12181	6180	5481
80°	10860	5473	5040
85°	9176	4841	4508



TEST NUMBER: P332381-940

CATALOG NUMBER: S123RDIP-S1165D1025U940-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.3	2.1
10°-20°	451.6	6.0
20°-30°	650.2	8.6
30°-40°	732.4	9.7
40°-50°	700.7	9.3
50°-60°	573.8	7.6
60°-70°	387.1	5.1
70°-80°	194.8	2.6
80°-90°	54.9	0.7
90°-100°	43.6	0.6
100°-110°	207.6	2.7
110°-120°	498.6	6.6
120°-130°	634.9	8.4
130°-140°	678.4	9.0
140°-150°	634.4	8.4
150°-160°	511.7	6.8
160°-170°	330.3	4.4
170°-180°	113.8	1.5
0°-30°	1264.1	16.7
0°-40°	1996.5	26.4
0°-60°	3270.9	43.3
0°-90°	3907.7	51.7
90°-120°	749.8	9.9
90°-150°	2697.6	35.7
90°-180°	3653.0	48.3
0°-180°	7561.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1728	1728	1728	1728	1728	
5°	1728	1721	1704	1716	1714	164
15°	1648	1632	1594	1587	1577	464
25°	1500	1463	1400	1372	1355	689
35°	1298	1246	1161	1102	1075	812
45°	1067	1001	896	818	782	823
55°	810	739	622	544	513	726
65°	554	475	367	302	283	548
75°	293	225	149	135	132	312
85°	74	45	39	37	36	83
90°	1	10	21	25	27	6
95°	54	20	28	34	34	67
105°	265	270	195	46	39	281
115°	498	503	511	520	523	491
125°	701	708	712	714	716	626
135°	873	878	882	884	882	672
145°	1008	1014	1016	1017	1017	630
155°	1110	1108	1109	1113	1108	511
165°	1170	1168	1167	1173	1168	331
175°	1198	1194	1194	1200	1194	114
180°	1198	1198	1198	1198	1198	



TEST NUMBER: P332381-940

CATALOG NUMBER: S123RDIP-S1165D1025U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1728.3	1728.3	1728.3	1728.3	1728.3	1728.3	1728.3	1728.3	1728.3	1728.3	1728.3
2.5°	1733.9	1732.9	1731.9	1730.9	1729.9	1727.9	1724.9	1721.9	1719.0	1715.9	1718.7
5°	1728.3	1726.7	1725.2	1723.6	1722.1	1719.4	1715.7	1711.9	1708.2	1704.4	1707.3
7.5°	1712.3	1710.7	1709.0	1707.3	1705.6	1702.3	1697.5	1692.6	1687.7	1682.8	1684.4
10°	1698.9	1696.7	1694.5	1692.3	1690.1	1686.2	1680.6	1675.0	1669.4	1663.8	1664.1
12.5°	1679.8	1677.4	1674.9	1672.5	1670.1	1665.4	1658.6	1651.7	1644.8	1638.0	1637.8
15°	1648.4	1644.9	1641.6	1638.1	1634.7	1628.6	1619.9	1611.1	1602.4	1593.8	1592.1
17.5°	1608.8	1604.9	1600.9	1596.9	1593.0	1585.4	1574.3	1563.2	1552.1	1541.1	1537.8
20°	1579.7	1574.8	1569.8	1564.8	1559.8	1551.4	1539.5	1527.7	1515.8	1504.0	1499.9
22.5°	1547.2	1541.4	1535.7	1530.0	1524.3	1515.1	1502.5	1490.0	1477.4	1464.7	1459.7
25°	1499.8	1492.0	1484.3	1476.4	1468.6	1457.6	1443.2	1429.0	1414.6	1400.3	1393.7
27.5°	1442.3	1433.8	1425.1	1416.6	1407.9	1395.7	1379.7	1363.8	1347.8	1331.9	1322.8
30°	1403.1	1393.7	1384.4	1375.0	1365.7	1352.3	1334.9	1317.4	1300.0	1282.5	1271.9
32.5°	1363.9	1353.3	1342.6	1332.0	1321.5	1307.0	1288.5	1270.1	1251.6	1233.2	1221.6
35°	1298.0	1286.7	1275.5	1264.4	1253.1	1237.9	1218.5	1199.3	1179.9	1160.6	1147.2
37.5°	1231.3	1218.8	1206.3	1193.8	1181.4	1164.8	1144.2	1123.6	1103.0	1082.4	1067.2
40°	1188.7	1174.9	1161.2	1147.5	1133.8	1115.9	1093.8	1071.7	1049.5	1027.4	1011.2
42.5°	1140.4	1126.7	1113.0	1099.3	1085.6	1067.3	1044.5	1021.5	998.7	975.9	958.1
45°	1066.7	1052.7	1038.7	1024.7	1010.6	991.6	967.6	943.6	919.6	895.6	877.9
47.5°	992.9	977.6	962.2	946.8	931.4	911.7	887.7	863.7	839.7	815.8	796.5
50°	939.1	924.5	909.8	895.2	880.6	860.7	835.4	810.2	785.0	759.7	740.4
52.5°	890.9	875.0	859.2	843.3	827.3	806.9	781.9	757.0	732.0	707.0	687.0
55°	810.2	794.9	779.6	764.4	749.1	728.3	701.8	675.3	648.8	622.3	604.3
57.5°	735.6	719.0	702.3	685.7	669.1	647.5	620.9	594.2	567.7	541.1	524.0
60°	684.0	666.9	649.8	632.7	615.5	594.0	568.1	542.3	516.5	490.6	473.8
62.5°	632.4	615.3	598.2	581.0	563.9	542.4	516.6	490.7	464.8	439.0	423.2
65°	553.7	536.5	519.4	502.3	485.2	464.4	440.1	415.8	391.6	367.2	352.0
67.5°	474.9	457.5	440.2	422.9	405.6	385.3	362.0	338.7	315.4	292.1	280.7
70°	423.3	406.5	389.7	372.8	356.1	336.7	315.0	293.1	271.3	249.5	238.6
72.5°	371.8	355.2	338.6	322.0	305.4	287.2	267.4	247.6	227.8	208.0	199.1
75°	292.9	278.0	263.1	248.1	233.2	217.1	200.0	182.8	165.7	148.6	145.4
77.5°	221.1	207.7	194.1	180.7	167.1	154.8	143.8	132.8	121.7	110.8	109.1
80°	175.2	162.5	149.6	136.9	124.1	114.5	107.9	101.4	94.9	88.3	87.4
82.5°	131.4	120.5	109.4	98.4	87.4	80.3	77.3	74.2	71.2	68.1	67.1
85°	74.3	67.4	60.5	53.8	46.9	43.0	42.1	41.1	40.2	39.2	38.6
87.5°	27.1	24.7	22.4	20.1	17.7	16.8	17.3	17.8	18.4	18.8	18.7
90°	0.9	2.9	4.8	6.9	8.8	11.1	13.6	16.2	18.8	21.4	22.1
92.5°	16.6	16.0	15.4	14.9	14.4	15.1	16.9	18.9	20.9	22.8	24.1
95°	54.3	46.2	38.1	30.0	21.8	18.9	21.0	23.3	25.4	27.6	29.0
97.5°	109.1	105.5	101.8	98.2	94.5	85.6	71.4	57.2	42.9	28.6	30.2
100°	150.4	154.4	158.4	162.3	166.2	152.8	121.9	91.0	60.2	29.3	30.9
102.5°	197.4	200.3	203.1	206.0	208.8	193.4	159.7	126.0	92.3	58.6	53.7
105°	265.2	267.4	269.6	271.8	273.9	266.1	248.3	230.5	212.8	194.9	159.9
107.5°	336.8	338.6	340.3	342.1	343.8	346.1	348.8	351.7	354.5	357.3	331.6
110°	384.5	386.1	387.6	389.2	390.8	392.7	394.8	397.1	399.2	401.4	394.8



TEST NUMBER: P332381-940

CATALOG NUMBER: S123RDIP-S1165D1025U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	430.1	431.5	432.9	434.4	435.8	437.6	439.8	441.9	444.1	446.3	446.4
115°	497.6	498.7	499.9	501.1	502.3	503.8	505.5	507.3	509.1	510.9	512.9
117.5°	562.8	564.4	565.8	567.3	568.7	569.9	570.8	571.8	572.7	573.5	575.2
120°	603.4	605.2	607.0	608.8	610.6	611.8	612.3	613.0	613.6	614.1	615.7
122.5°	644.8	646.2	647.6	649.2	650.6	651.8	652.5	653.3	654.0	654.7	655.9
125°	701.3	702.9	704.5	706.1	707.7	708.9	709.7	710.4	711.2	712.0	712.5
127.5°	756.2	757.8	759.4	760.9	762.5	763.8	764.7	765.7	766.6	767.6	768.2
130°	790.4	791.9	793.5	795.1	796.7	797.9	798.7	799.5	800.2	801.0	801.8
132.5°	823.1	824.7	826.3	827.9	829.5	830.5	831.2	831.8	832.5	833.1	833.9
135°	873.2	874.3	875.5	876.7	877.9	878.9	879.7	880.5	881.3	882.1	882.6
137.5°	915.9	917.4	918.9	920.4	921.9	922.8	923.3	923.7	924.2	924.6	925.5
140°	944.3	945.6	946.7	947.9	949.1	950.0	950.6	951.2	951.8	952.3	953.1
142.5°	970.7	971.9	973.0	974.3	975.4	976.3	977.0	977.5	978.1	978.7	979.4
145°	1007.5	1009.0	1010.3	1011.7	1013.1	1014.0	1014.4	1014.8	1015.1	1015.6	1015.9
147.5°	1042.2	1043.2	1044.1	1045.0	1045.9	1046.5	1047.0	1047.3	1047.8	1048.1	1048.6
150°	1063.6	1064.3	1064.8	1065.4	1066.0	1066.5	1066.8	1067.3	1067.6	1068.1	1068.4
152.5°	1082.8	1083.2	1083.4	1083.7	1084.0	1084.2	1084.4	1084.7	1084.9	1085.1	1085.8
155°	1109.9	1109.5	1109.1	1108.8	1108.3	1108.2	1108.4	1108.6	1108.8	1109.0	1110.0
157.5°	1130.9	1130.9	1130.9	1130.8	1130.8	1130.6	1130.4	1130.2	1130.1	1129.8	1131.0
160°	1143.7	1143.5	1143.4	1143.2	1142.9	1142.7	1142.5	1142.4	1142.1	1141.9	1143.2
162.5°	1155.8	1155.3	1154.8	1154.3	1153.8	1153.4	1153.2	1153.0	1152.8	1152.6	1154.0
165°	1170.5	1169.8	1169.2	1168.7	1168.1	1167.7	1167.4	1167.2	1167.1	1166.9	1168.4
167.5°	1181.8	1181.1	1180.3	1179.5	1178.7	1178.2	1178.2	1178.2	1178.2	1178.2	1179.8
170°	1188.2	1187.4	1186.7	1185.9	1185.1	1184.6	1184.6	1184.6	1184.6	1184.6	1186.2
172.5°	1192.5	1191.6	1190.6	1189.6	1188.7	1188.3	1188.5	1188.7	1188.7	1188.9	1190.5
175°	1198.0	1197.0	1196.1	1195.1	1194.1	1193.6	1193.8	1194.1	1194.3	1194.4	1195.9
177.5°	1199.4	1198.6	1197.8	1197.0	1196.3	1196.0	1196.1	1196.3	1196.4	1196.6	1197.8
180°	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0



TEST NUMBER: P332381-940

CATALOG NUMBER: S123RDIP-S1165D1025U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1728.3	1728.3	1728.3	1728.3	1728.3	1728.3	1728.3	1728.3
2.5°	1721.4	1724.2	1726.9	1728.0	1727.5	1727.1	1726.5	1726.0
5°	1710.0	1712.9	1715.7	1716.7	1716.1	1715.5	1714.8	1714.2
7.5°	1686.0	1687.6	1689.1	1689.3	1688.3	1687.2	1686.1	1685.1
10°	1664.5	1664.7	1665.1	1664.5	1662.9	1661.3	1659.7	1658.2
12.5°	1637.6	1637.4	1637.3	1636.3	1634.5	1632.6	1630.8	1629.1
15°	1590.6	1589.0	1587.5	1585.6	1583.4	1581.3	1579.0	1576.9
17.5°	1534.5	1531.1	1527.8	1524.6	1521.3	1518.0	1514.8	1511.5
20°	1495.9	1491.8	1487.8	1483.9	1480.2	1476.4	1472.7	1469.0
22.5°	1454.6	1449.7	1444.6	1440.3	1436.8	1433.3	1429.9	1426.4
25°	1387.2	1380.6	1374.1	1369.1	1365.7	1362.3	1358.9	1355.4
27.5°	1313.7	1304.6	1295.5	1288.3	1283.1	1277.9	1272.6	1267.4
30°	1261.3	1250.8	1240.2	1232.4	1227.4	1222.4	1217.5	1212.5
32.5°	1210.1	1198.5	1186.9	1178.5	1173.2	1168.0	1162.8	1157.5
35°	1133.8	1120.4	1107.1	1097.5	1091.9	1086.3	1080.7	1075.1
37.5°	1052.0	1036.8	1021.5	1010.5	1003.6	996.7	989.8	982.8
40°	995.1	978.8	962.7	951.0	943.8	936.7	929.5	922.3
42.5°	940.5	922.7	905.1	893.0	886.6	880.2	873.8	867.4
45°	860.1	842.4	824.7	812.1	804.6	797.1	789.6	782.1
47.5°	777.1	757.9	738.5	725.6	718.9	712.2	705.5	698.9
50°	721.1	701.8	682.4	669.2	662.1	654.9	647.7	640.6
52.5°	666.9	646.8	626.8	613.5	607.1	600.7	594.3	587.9
55°	586.2	568.1	550.1	538.0	531.7	525.5	519.2	513.0
57.5°	506.9	489.8	472.8	461.5	456.3	451.0	445.7	440.4
60°	456.9	440.1	423.3	412.2	407.0	401.6	396.4	391.1
62.5°	407.3	391.6	375.7	365.1	359.4	353.9	348.4	342.9
65°	336.7	321.5	306.2	296.9	293.5	290.0	286.6	283.1
67.5°	269.3	257.9	246.5	239.0	235.3	231.6	227.9	224.3
70°	227.7	216.8	205.9	198.8	195.3	191.9	188.4	185.0
72.5°	190.2	181.3	172.4	167.2	165.8	164.3	162.9	161.5
75°	142.3	139.2	136.1	134.3	133.7	133.0	132.4	131.8
77.5°	107.4	105.7	104.0	102.8	102.2	101.6	100.9	100.3
80°	86.4	85.5	84.5	83.8	83.2	82.6	81.9	81.3
82.5°	66.3	65.4	64.4	63.8	63.8	63.6	63.5	63.4
85°	38.0	37.4	36.7	36.5	36.5	36.5	36.5	36.5
87.5°	18.6	18.5	18.5	18.4	18.2	18.0	17.8	17.7
90°	22.9	23.7	24.5	25.1	25.5	25.9	26.3	26.7
92.5°	25.3	26.6	27.8	28.6	28.8	29.1	29.3	29.5
95°	30.3	31.7	33.2	33.8	33.8	33.8	33.8	33.8
97.5°	31.8	33.4	35.0	35.8	36.1	36.3	36.5	36.6
100°	32.5	34.2	35.7	36.6	36.8	37.0	37.2	37.4
102.5°	48.8	43.9	39.0	36.6	37.0	37.4	37.7	38.1
105°	124.9	89.9	54.9	37.5	38.0	38.3	38.8	39.1
107.5°	305.9	280.3	254.6	228.5	202.2	175.8	149.4	123.0
110°	388.3	381.8	375.3	357.9	329.6	301.3	273.0	244.8



TEST NUMBER: P332381-940

CATALOG NUMBER: S123RDIP-S1165D1025U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	446.5	446.7	446.7	443.8	437.8	431.9	425.9	419.9
115°	514.9	516.8	518.8	520.2	520.9	521.7	522.5	523.3
117.5°	576.8	578.3	579.9	580.8	580.9	581.0	581.2	581.4
120°	617.3	618.8	620.5	621.3	621.3	621.3	621.3	621.3
122.5°	656.9	658.1	659.2	659.8	660.0	660.1	660.2	660.4
125°	712.8	713.2	713.6	714.0	714.4	714.8	715.2	715.6
127.5°	768.8	769.5	770.1	770.3	769.8	769.5	769.0	768.7
130°	802.6	803.4	804.2	804.4	804.1	803.6	803.3	802.8
132.5°	834.6	835.4	836.2	836.3	835.8	835.3	834.7	834.2
135°	883.2	883.9	884.4	884.4	883.9	883.2	882.6	882.1
137.5°	926.5	927.5	928.4	928.6	928.3	927.9	927.5	927.1
140°	954.0	954.8	955.6	955.7	955.3	954.9	954.6	954.1
142.5°	980.0	980.6	981.2	981.2	980.7	980.2	979.6	979.1
145°	1016.4	1016.7	1017.2	1017.4	1017.4	1017.4	1017.4	1017.4
147.5°	1048.9	1049.3	1049.7	1049.5	1048.6	1047.7	1046.7	1045.8
150°	1068.9	1069.3	1069.7	1069.5	1069.0	1068.4	1067.7	1067.2
152.5°	1086.5	1087.3	1088.0	1087.9	1087.0	1086.1	1085.2	1084.2
155°	1111.0	1112.0	1112.9	1112.9	1111.7	1110.5	1109.3	1108.1
157.5°	1132.2	1133.4	1134.6	1134.4	1132.8	1131.3	1129.8	1128.3
160°	1144.3	1145.5	1146.7	1146.6	1145.2	1143.8	1142.5	1141.0
162.5°	1155.3	1156.6	1158.0	1158.1	1156.8	1155.6	1154.4	1153.2
165°	1170.0	1171.6	1173.2	1173.3	1171.9	1170.5	1169.1	1167.8
167.5°	1181.4	1183.0	1184.5	1184.5	1183.0	1181.4	1179.8	1178.2
170°	1187.8	1189.5	1191.0	1191.0	1189.5	1187.8	1186.2	1184.6
172.5°	1192.1	1193.6	1195.2	1195.2	1193.5	1191.7	1190.0	1188.2
175°	1197.2	1198.6	1200.0	1199.9	1198.3	1196.8	1195.2	1193.6
177.5°	1199.1	1200.4	1201.7	1201.5	1199.9	1198.4	1196.8	1195.2
180°	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0	1198.0

(END OF REPORT)