

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: P332351-940

Luminaire Tested: **S123RDIP-S1000D1025U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332351-940
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-S1000D1025U940-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 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: 7037.3 lumens
Efficiency: N/A
Efficacy: 116.3 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

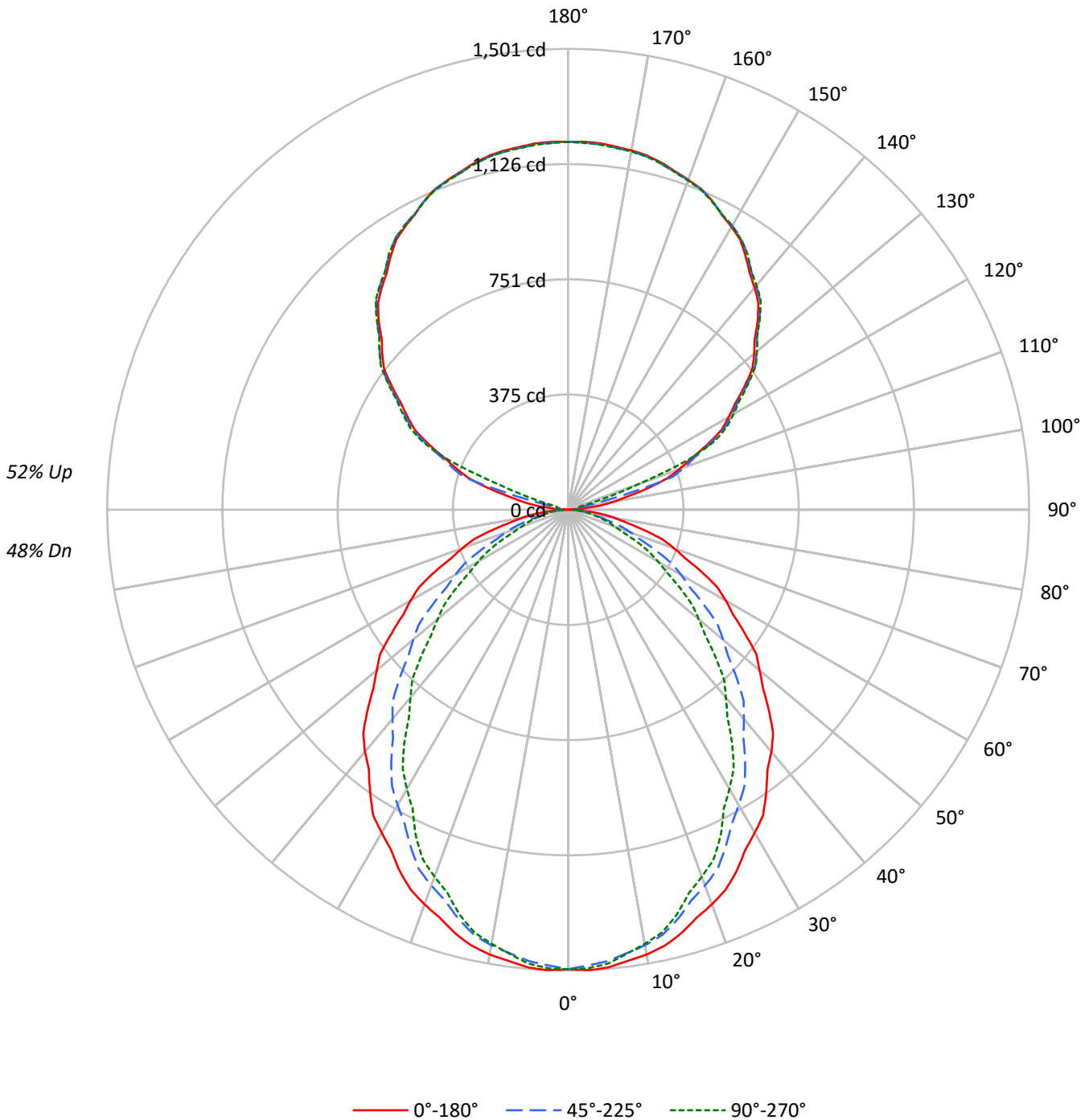
Input Watts (W): 60.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	54	54	54	48
1	98	93	90	86	90	86	83	80	73	70	68	60	58	57	49	47	47	41
2	89	82	76	71	82	76	71	66	64	60	57	53	50	48	43	41	40	35
3	82	72	65	59	75	67	61	56	57	52	48	47	44	41	38	36	34	30
4	75	64	56	51	69	59	53	47	51	45	41	42	38	35	35	32	30	26
5	69	57	49	43	63	53	46	41	45	40	36	38	34	31	31	28	26	23
6	63	51	44	38	58	48	41	36	41	35	31	34	30	27	28	25	23	20
7	59	47	39	33	54	43	36	31	37	32	28	31	27	24	26	23	21	18
8	54	42	35	29	50	39	33	28	34	29	25	29	25	22	24	21	18	16
9	51	39	31	26	47	36	29	25	31	26	22	27	22	19	22	19	17	15
10	47	35	28	24	44	33	27	22	29	24	20	25	20	18	21	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16108	16108	16108
5°	16170	15946	16038
10°	16078	15746	15692
15°	15905	15377	15216
20°	15668	14917	14569
25°	15423	14400	13938
30°	15100	13803	13048
35°	14767	13205	12232
40°	14462	12500	11221
45°	14059	11805	10310
50°	13618	11015	9287
55°	13165	10113	8336
60°	12751	9145	7289
65°	12210	8099	6243
70°	11534	6801	5042
75°	10551	5352	4741
80°	9403	4736	4364
85°	7941	4199	3903



TEST NUMBER: P332351-940

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.5	2.0
10°-20°	391.0	5.6
20°-30°	563.0	8.0
30°-40°	634.1	9.0
40°-50°	606.7	8.6
50°-60°	496.8	7.1
60°-70°	335.2	4.8
70°-80°	168.6	2.4
80°-90°	48.0	0.7
90°-100°	43.6	0.6
100°-110°	207.6	2.9
110°-120°	498.6	7.1
120°-130°	634.9	9.0
130°-140°	678.4	9.6
140°-150°	634.4	9.0
150°-160°	511.7	7.3
160°-170°	330.3	4.7
170°-180°	113.8	1.6
0°-30°	1094.5	15.6
0°-40°	1728.6	24.6
0°-60°	2832.1	40.2
0°-90°	3384.0	48.1
90°-120°	749.8	10.7
90°-150°	2697.6	38.3
90°-180°	3653.0	51.9
0°-180°	7037.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1496	1496	1496	1496	1496	
5°	1496	1490	1476	1486	1484	142
15°	1427	1413	1380	1374	1365	402
25°	1299	1267	1212	1188	1174	597
35°	1124	1078	1005	954	931	703
45°	924	867	776	709	677	712
55°	702	640	539	471	444	629
65°	479	411	318	261	245	474
75°	254	195	129	117	114	270
85°	64	39	34	32	32	72
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: P332351-940

CATALOG NUMBER: S123RDIP-S1000D1025U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5
2.5°	1501.3	1500.4	1499.6	1498.7	1497.8	1496.1	1493.5	1490.9	1488.4	1485.8	1488.1
5°	1496.5	1495.0	1493.7	1492.4	1491.0	1488.7	1485.5	1482.3	1479.1	1475.8	1478.2
7.5°	1482.6	1481.1	1479.7	1478.2	1476.8	1473.9	1469.7	1465.5	1461.3	1457.1	1458.5
10°	1471.0	1469.1	1467.1	1465.3	1463.4	1460.0	1455.2	1450.3	1445.5	1440.6	1440.9
12.5°	1454.5	1452.3	1450.3	1448.1	1446.0	1442.0	1436.1	1430.1	1424.2	1418.3	1418.1
15°	1427.3	1424.3	1421.3	1418.4	1415.4	1410.2	1402.6	1395.0	1387.5	1379.9	1378.6
17.5°	1393.0	1389.6	1386.2	1382.7	1379.2	1372.7	1363.1	1353.5	1343.9	1334.3	1331.4
20°	1367.8	1363.5	1359.1	1354.9	1350.5	1343.3	1333.0	1322.8	1312.5	1302.3	1298.8
22.5°	1339.6	1334.7	1329.7	1324.7	1319.8	1311.9	1300.9	1290.0	1279.2	1268.3	1263.9
25°	1298.6	1291.9	1285.1	1278.4	1271.7	1262.0	1249.6	1237.2	1224.9	1212.5	1206.8
27.5°	1248.8	1241.4	1233.9	1226.5	1219.1	1208.4	1194.6	1180.8	1167.0	1153.2	1145.3
30°	1214.9	1206.8	1198.7	1190.6	1182.5	1170.9	1155.8	1140.7	1125.6	1110.5	1101.4
32.5°	1180.9	1171.7	1162.5	1153.3	1144.2	1131.7	1115.7	1099.7	1083.7	1067.7	1057.7
35°	1123.8	1114.1	1104.4	1094.8	1085.0	1071.7	1055.1	1038.3	1021.6	1004.9	993.3
37.5°	1066.0	1055.3	1044.5	1033.7	1022.9	1008.6	990.8	972.9	955.0	937.2	924.0
40°	1029.2	1017.4	1005.4	993.5	981.7	966.2	947.1	927.9	908.7	889.6	875.6
42.5°	987.4	975.5	963.7	951.8	940.0	924.2	904.4	884.6	864.8	845.0	829.6
45°	923.6	911.4	899.3	887.2	875.0	858.6	837.9	817.1	796.3	775.5	760.2
47.5°	859.8	846.4	833.1	819.7	806.5	789.4	768.7	747.9	727.1	706.3	689.6
50°	813.2	800.5	787.8	775.2	762.4	745.2	723.4	701.5	679.7	657.8	641.1
52.5°	771.4	757.7	743.9	730.1	716.4	698.7	677.1	655.4	633.8	612.2	594.8
55°	701.5	688.3	675.0	661.8	648.6	630.5	607.6	584.7	561.8	538.9	523.3
57.5°	636.9	622.5	608.1	593.7	579.3	560.6	537.5	514.5	491.5	468.5	453.7
60°	592.3	577.5	562.6	547.8	532.9	514.3	492.0	469.6	447.2	424.8	410.2
62.5°	547.6	532.8	517.9	503.1	488.3	469.7	447.3	424.9	402.5	380.1	366.4
65°	479.4	464.6	449.7	434.9	420.1	402.2	381.1	360.1	339.0	318.0	304.8
67.5°	411.2	396.2	381.2	366.2	351.2	333.6	313.4	293.3	273.1	252.9	243.1
70°	366.5	352.0	337.4	322.8	308.3	291.6	272.7	253.8	234.9	216.1	206.6
72.5°	321.8	307.6	293.2	278.8	264.5	248.7	231.6	214.5	197.2	180.1	172.4
75°	253.7	240.7	227.7	214.8	201.9	188.0	173.2	158.3	143.5	128.7	125.9
77.5°	191.5	179.8	168.1	156.4	144.7	134.0	124.5	114.9	105.4	95.9	94.4
80°	151.7	140.6	129.6	118.5	107.5	99.2	93.5	87.7	82.1	76.4	75.6
82.5°	113.9	104.3	94.8	85.2	75.6	69.6	66.9	64.3	61.6	58.9	58.1
85°	64.3	58.4	52.4	46.5	40.6	37.2	36.4	35.6	34.8	34.0	33.4
87.5°	23.5	21.5	19.5	17.6	15.6	14.8	15.3	15.9	16.4	16.9	16.9
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: P332351-940

CATALOG NUMBER: S123RDIP-S1000D1025U940-4F0-1E-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: P332351-940

CATALOG NUMBER: S123RDIP-S1000D1025U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5
2.5°	1490.5	1492.9	1495.2	1496.2	1495.8	1495.4	1495.0	1494.5
5°	1480.7	1483.1	1485.5	1486.5	1485.9	1485.4	1484.9	1484.3
7.5°	1459.8	1461.2	1462.5	1462.8	1461.8	1460.9	1460.0	1459.0
10°	1441.2	1441.5	1441.7	1441.2	1439.8	1438.4	1437.1	1435.7
12.5°	1417.9	1417.8	1417.6	1416.8	1415.2	1413.6	1412.1	1410.5
15°	1377.2	1375.9	1374.6	1372.9	1371.0	1369.1	1367.3	1365.4
17.5°	1328.6	1325.7	1322.9	1320.0	1317.2	1314.4	1311.6	1308.8
20°	1295.2	1291.7	1288.3	1284.9	1281.7	1278.4	1275.1	1271.9
22.5°	1259.5	1255.2	1250.8	1247.1	1244.1	1241.1	1238.1	1235.0
25°	1201.1	1195.4	1189.8	1185.4	1182.5	1179.6	1176.6	1173.6
27.5°	1137.5	1129.6	1121.7	1115.5	1111.0	1106.4	1101.9	1097.4
30°	1092.2	1083.0	1073.8	1067.1	1062.7	1058.5	1054.1	1049.8
32.5°	1047.7	1037.7	1027.6	1020.4	1015.8	1011.3	1006.7	1002.2
35°	981.7	970.1	958.5	950.3	945.5	940.6	935.8	930.9
37.5°	910.9	897.7	884.6	874.9	869.0	863.0	857.0	851.0
40°	861.6	847.6	833.5	823.4	817.2	811.0	804.8	798.6
42.5°	814.3	799.0	783.6	773.2	767.7	762.1	756.5	751.0
45°	744.8	729.4	714.0	703.1	696.6	690.2	683.7	677.3
47.5°	672.9	656.2	639.4	628.2	622.4	616.7	610.9	605.1
50°	624.4	607.6	590.9	579.4	573.3	567.0	560.9	554.6
52.5°	577.5	560.1	542.7	531.2	525.7	520.1	514.6	509.0
55°	507.6	492.0	476.3	465.7	460.4	455.0	449.6	444.2
57.5°	438.9	424.1	409.4	399.7	395.1	390.5	385.9	381.3
60°	395.7	381.1	366.5	357.0	352.4	347.8	343.2	338.6
62.5°	352.7	339.0	325.3	316.0	311.3	306.5	301.7	296.9
65°	291.6	278.3	265.1	257.0	254.0	251.1	248.2	245.1
67.5°	233.2	223.3	213.5	206.9	203.8	200.5	197.3	194.2
70°	197.2	187.7	178.3	172.1	169.1	166.1	163.2	160.2
72.5°	164.7	156.9	149.3	144.8	143.6	142.3	141.1	139.8
75°	123.2	120.6	117.9	116.3	115.7	115.1	114.6	114.0
77.5°	93.0	91.5	90.1	89.1	88.5	88.0	87.5	86.9
80°	74.8	74.0	73.2	72.6	72.1	71.5	70.9	70.4
82.5°	57.3	56.5	55.7	55.3	55.2	55.1	54.9	54.8
85°	32.9	32.4	31.8	31.6	31.6	31.6	31.6	31.6
87.5°	16.8	16.8	16.7	16.6	16.4	16.3	16.1	16.1
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: P332351-940

CATALOG NUMBER: S123RDIP-S1000D1025U940-4F0-1E-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)