

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: P332382-930

Luminaire Tested: **S123RDIP-S1165D1025U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332382-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S1165D1025U930-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6443.3 lumens
Efficiency: N/A
Efficacy: 96.5 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

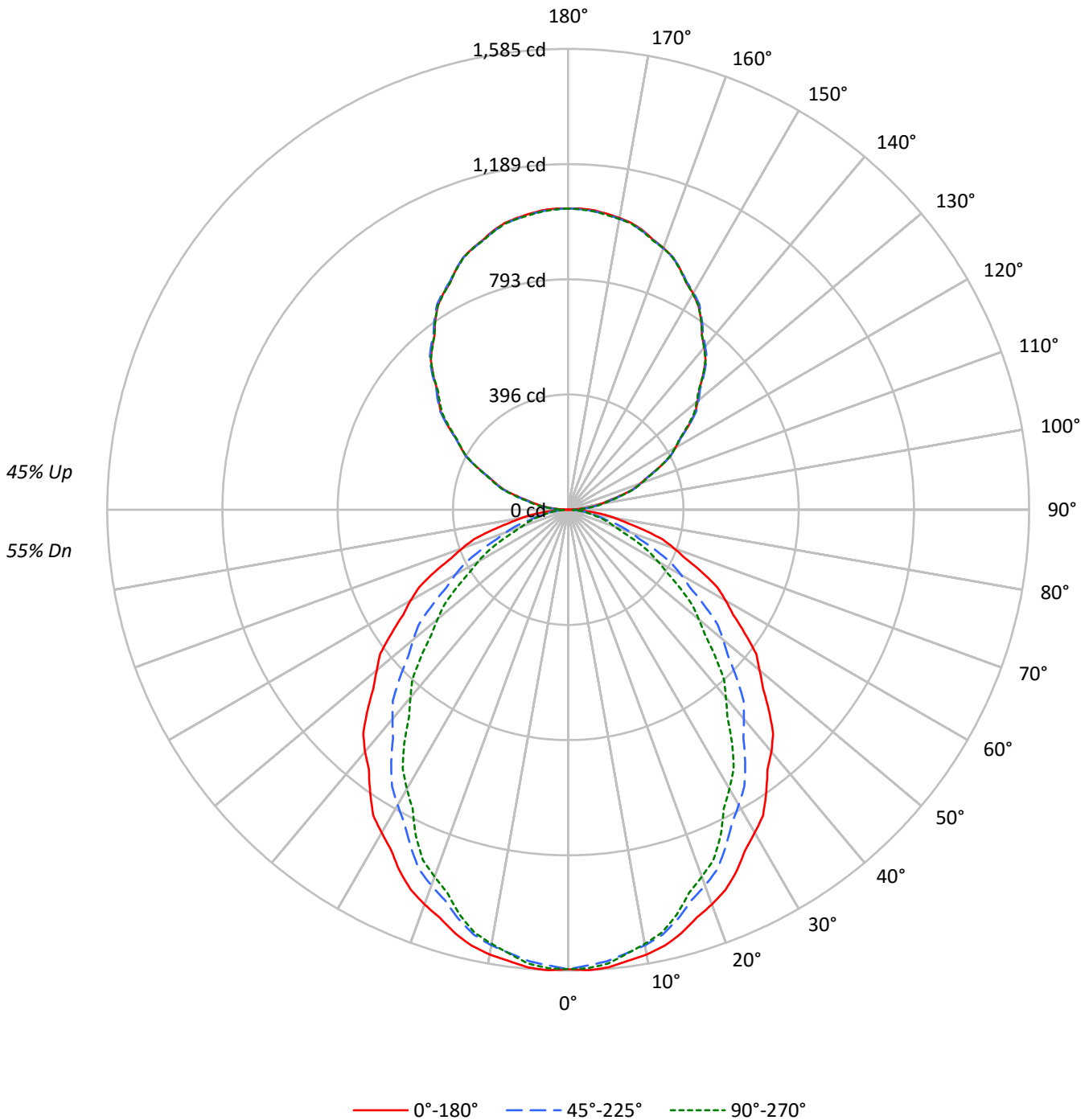
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332382-930

CATALOG NUMBER: S123RDIP-S1165D1025U930-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P332382-930

CATALOG NUMBER: S123RDIP-S1165D1025U930-4F0-1E-UDD-F1

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	88	92	89	85	82	76	74	72	65	63	62	55	53	52	47
2	91	83	77	72	84	78	73	68	67	63	60	58	55	52	48	46	45	40
3	83	74	66	61	77	69	62	57	60	55	51	51	48	44	43	41	38	35
4	76	65	58	52	71	61	54	49	53	48	44	46	42	38	39	36	33	30
5	70	59	50	45	65	55	48	42	48	42	38	41	37	33	35	32	29	26
6	65	53	45	39	60	49	42	37	43	37	33	37	33	30	32	29	26	23
7	60	48	40	34	56	45	38	33	39	34	29	34	30	26	29	26	23	21
8	56	43	36	30	52	41	34	29	36	30	26	31	27	24	27	23	21	19
9	52	40	32	27	48	37	31	26	33	27	24	29	24	21	25	21	19	17
10	49	36	29	24	45	34	28	23	30	25	21	27	22	19	23	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17009	17009	17009
5°	17074	16839	16935
10°	16978	16628	16571
15°	16796	16238	16067
20°	16544	15753	15385
25°	16286	15206	14719
30°	15945	14574	13779
35°	15594	13943	12917
40°	15271	13200	11849
45°	14846	12466	10886
50°	14380	11632	9808
55°	13902	10678	8801
60°	13464	9657	7698
65°	12893	8550	6594
70°	12180	7179	5325
75°	11137	5648	5011
80°	9930	5002	4612
85°	8386	4434	4113



TEST NUMBER: P332382-930

CATALOG NUMBER: S123RDIP-S1165D1025U930-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.4	2.3
10°-20°	412.9	6.4
20°-30°	594.5	9.2
30°-40°	669.6	10.4
40°-50°	640.6	9.9
50°-60°	524.6	8.1
60°-70°	354.0	5.5
70°-80°	178.1	2.8
80°-90°	50.2	0.8
90°-100°	67.5	1.0
100°-110°	202.0	3.1
110°-120°	343.6	5.3
120°-130°	451.9	7.0
130°-140°	508.0	7.9
140°-150°	499.3	7.7
150°-160°	420.4	6.5
160°-170°	279.8	4.3
170°-180°	98.0	1.5
0°-30°	1155.7	17.9
0°-40°	1825.4	28.3
0°-60°	2990.6	46.4
0°-90°	3572.8	55.5
90°-120°	613.1	9.5
90°-150°	2072.3	32.2
90°-180°	2870.0	44.5
0°-180°	6443.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1580	1580	1580	1580	1580	
5°	1580	1573	1558	1569	1567	150
15°	1507	1492	1457	1451	1442	424
25°	1371	1338	1280	1254	1239	630
35°	1187	1139	1061	1008	983	742
45°	975	915	819	748	715	752
55°	741	675	569	497	469	664
65°	506	434	336	276	259	501
75°	268	206	136	124	120	286
85°	68	41	36	33	33	76
90°	1	9	20	23	24	6
95°	48	54	60	63	64	54
105°	183	185	192	192	194	196
115°	346	348	347	347	347	342
125°	506	508	507	504	500	451
135°	657	661	661	658	656	506
145°	797	798	801	800	797	497
155°	912	912	913	916	911	420
165°	994	991	991	996	990	280
175°	1034	1030	1030	1035	1030	98
180°	1036	1036	1036	1036	1036	



TEST NUMBER: P332382-930

CATALOG NUMBER: S123RDIP-S1165D1025U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2
2.5°	1585.3	1584.4	1583.5	1582.6	1581.7	1579.8	1577.1	1574.3	1571.7	1568.9	1571.4
5°	1580.2	1578.7	1577.4	1575.9	1574.5	1572.1	1568.6	1565.2	1561.8	1558.4	1561.0
7.5°	1565.5	1564.1	1562.5	1561.0	1559.4	1556.4	1552.0	1547.5	1543.1	1538.6	1540.1
10°	1553.3	1551.3	1549.3	1547.3	1545.3	1541.7	1536.6	1531.5	1526.3	1521.3	1521.5
12.5°	1535.9	1533.7	1531.4	1529.2	1527.0	1522.7	1516.5	1510.2	1503.9	1497.6	1497.5
15°	1507.2	1504.0	1500.9	1497.7	1494.6	1489.1	1481.1	1473.1	1465.1	1457.2	1455.7
17.5°	1471.0	1467.4	1463.7	1460.0	1456.5	1449.5	1439.4	1429.2	1419.1	1409.0	1406.0
20°	1444.3	1439.8	1435.3	1430.7	1426.1	1418.5	1407.6	1396.8	1385.9	1375.2	1371.4
22.5°	1414.6	1409.3	1404.1	1398.9	1393.7	1385.3	1373.8	1362.3	1350.8	1339.2	1334.6
25°	1371.3	1364.2	1357.1	1349.9	1342.8	1332.7	1319.6	1306.5	1293.4	1280.3	1274.3
27.5°	1318.7	1310.9	1303.0	1295.2	1287.3	1276.1	1261.5	1246.9	1232.3	1217.7	1209.4
30°	1282.9	1274.3	1265.8	1257.2	1248.7	1236.4	1220.5	1204.5	1188.6	1172.6	1162.9
32.5°	1247.0	1237.3	1227.6	1217.9	1208.3	1195.0	1178.1	1161.2	1144.4	1127.6	1117.0
35°	1186.7	1176.5	1166.2	1156.0	1145.7	1131.8	1114.1	1096.5	1078.8	1061.1	1048.9
37.5°	1125.8	1114.4	1102.9	1091.5	1080.2	1065.0	1046.2	1027.4	1008.5	989.6	975.8
40°	1086.8	1074.2	1061.7	1049.2	1036.7	1020.3	1000.0	979.8	959.6	939.4	924.5
42.5°	1042.7	1030.1	1017.7	1005.1	992.5	975.8	955.0	934.0	913.1	892.3	876.0
45°	975.3	962.5	949.7	936.9	924.0	906.6	884.7	862.7	840.8	818.9	802.7
47.5°	907.8	893.8	879.7	865.7	851.6	833.6	811.6	789.7	767.8	745.9	728.2
50°	858.7	845.3	831.8	818.5	805.1	786.9	763.9	740.8	717.7	694.6	676.9
52.5°	814.6	800.1	785.5	771.0	756.4	737.8	714.9	692.1	669.3	646.5	628.1
55°	740.8	726.8	712.8	698.9	684.9	665.9	641.6	617.4	593.2	569.0	552.5
57.5°	672.5	657.4	642.1	627.0	611.7	592.0	567.7	543.3	519.0	494.7	479.1
60°	625.4	609.8	594.1	578.5	562.7	543.1	519.4	495.9	472.2	448.6	433.2
62.5°	578.2	562.6	546.9	531.2	515.6	495.9	472.3	448.7	425.0	401.4	386.9
65°	506.2	490.6	474.9	459.3	443.6	424.6	402.4	380.2	358.0	335.7	321.8
67.5°	434.2	418.3	402.5	386.7	370.9	352.3	331.0	309.7	288.4	267.1	256.7
70°	387.0	371.7	356.3	340.9	325.5	307.9	288.0	268.0	248.1	228.1	218.2
72.5°	339.9	324.7	309.6	294.4	279.2	262.6	244.5	226.4	208.3	190.2	182.1
75°	267.8	254.2	240.5	226.8	213.2	198.5	182.9	167.1	151.5	135.8	133.0
77.5°	202.2	189.9	177.5	165.2	152.8	141.5	131.5	121.4	111.3	101.3	99.7
80°	160.2	148.5	136.8	125.1	113.5	104.7	98.7	92.7	86.7	80.7	79.9
82.5°	120.2	110.1	100.0	89.9	79.9	73.5	70.7	67.8	65.1	62.3	61.4
85°	67.9	61.6	55.4	49.2	42.9	39.3	38.5	37.6	36.8	35.9	35.3
87.5°	24.8	22.6	20.5	18.3	16.2	15.3	15.8	16.3	16.8	17.2	17.1
90°	0.8	2.6	4.4	6.3	8.1	10.1	12.5	14.8	17.2	19.6	20.2
92.5°	19.7	21.0	22.2	23.4	24.6	25.9	27.2	28.5	29.9	31.2	31.8
95°	48.0	49.2	50.5	51.9	53.1	54.5	55.8	57.3	58.8	60.3	61.0
97.5°	85.3	86.3	87.2	88.1	89.0	90.0	91.1	92.1	93.2	94.2	95.1
100°	110.7	111.8	112.8	113.9	115.0	116.0	116.9	117.8	118.7	119.6	120.2
102.5°	140.0	140.6	141.3	141.9	142.6	143.5	144.7	145.9	147.1	148.3	148.8
105°	183.1	183.4	183.8	184.2	184.6	185.6	187.2	188.8	190.5	192.1	192.1
107.5°	233.3	233.5	233.7	233.9	234.2	234.6	235.2	235.9	236.5	237.2	237.7
110°	264.5	264.9	265.2	265.5	266.0	266.3	266.7	267.0	267.4	267.7	268.5



TEST NUMBER: P332382-930

CATALOG NUMBER: S123RDIP-S1165D1025U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	297.0	297.3	297.5	297.7	297.9	298.1	298.2	298.2	298.3	298.3	299.2
115°	345.8	346.4	347.0	347.5	348.1	348.1	347.8	347.4	347.1	346.7	346.9
117.5°	395.0	395.4	395.7	396.2	396.5	396.4	396.0	395.5	395.0	394.5	394.5
120°	425.7	426.7	427.8	428.9	430.0	430.1	429.2	428.3	427.4	426.5	426.2
122.5°	457.5	458.4	459.1	459.9	460.7	460.9	460.4	459.9	459.5	459.0	458.5
125°	506.2	506.8	507.3	507.8	508.3	508.5	508.1	507.8	507.4	507.0	506.3
127.5°	551.1	552.3	553.4	554.6	555.8	556.1	555.7	555.4	555.0	554.6	553.5
130°	581.1	582.5	584.0	585.4	586.9	587.3	586.8	586.2	585.7	585.1	584.4
132.5°	611.1	612.5	613.9	615.4	616.9	617.3	616.9	616.5	616.1	615.7	614.9
135°	656.8	657.9	658.9	660.0	661.1	661.5	661.4	661.2	661.0	660.8	660.1
137.5°	699.1	700.0	700.9	701.8	702.7	703.4	703.8	704.3	704.8	705.2	704.5
140°	728.4	729.3	730.2	731.1	732.0	732.5	732.7	732.9	733.1	733.3	733.1
142.5°	755.0	755.9	756.9	757.8	758.7	759.3	759.6	759.9	760.3	760.6	760.4
145°	796.7	797.1	797.4	797.9	798.2	798.7	799.2	799.7	800.3	800.8	800.6
147.5°	833.2	833.9	834.5	835.2	835.8	836.4	836.9	837.4	837.9	838.5	838.5
150°	858.6	859.0	859.3	859.7	860.1	860.4	860.8	861.1	861.5	861.9	861.9
152.5°	879.5	880.0	880.4	880.9	881.4	881.8	882.1	882.2	882.5	882.7	883.0
155°	912.3	912.3	912.3	912.3	912.3	912.4	912.6	912.7	913.0	913.1	913.9
157.5°	940.3	940.1	939.9	939.6	939.5	939.4	939.6	939.7	939.9	940.0	940.8
160°	957.9	957.5	957.2	956.8	956.4	956.3	956.3	956.3	956.3	956.3	957.2
162.5°	973.5	973.0	972.5	972.0	971.5	971.3	971.4	971.6	971.8	971.9	972.8
165°	993.7	993.1	992.6	992.1	991.6	991.2	991.2	991.2	991.2	991.2	992.3
167.5°	1009.8	1009.1	1008.4	1007.6	1006.9	1006.7	1006.8	1006.9	1007.1	1007.2	1008.4
170°	1019.0	1018.2	1017.5	1016.8	1016.0	1015.7	1015.7	1015.7	1015.7	1015.7	1016.9
172.5°	1026.1	1025.4	1024.7	1023.9	1023.2	1022.8	1022.8	1022.8	1022.8	1022.8	1023.9
175°	1033.6	1032.8	1032.1	1031.4	1030.7	1030.3	1030.3	1030.3	1030.3	1030.3	1031.4
177.5°	1036.7	1036.1	1035.5	1034.9	1034.4	1034.0	1034.0	1034.0	1034.0	1034.0	1034.9
180°	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0



TEST NUMBER: P332382-930

CATALOG NUMBER: S123RDIP-S1165D1025U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2	1580.2
2.5°	1573.9	1576.5	1578.9	1580.0	1579.5	1579.1	1578.6	1578.1
5°	1563.5	1566.1	1568.6	1569.6	1569.0	1568.5	1567.9	1567.3
7.5°	1541.5	1543.0	1544.3	1544.6	1543.6	1542.6	1541.6	1540.7
10°	1521.8	1522.1	1522.4	1521.8	1520.4	1519.0	1517.5	1516.1
12.5°	1497.3	1497.1	1497.0	1496.1	1494.4	1492.7	1491.1	1489.5
15°	1454.3	1452.9	1451.5	1449.8	1447.7	1445.8	1443.7	1441.8
17.5°	1403.0	1399.9	1396.9	1393.9	1390.9	1388.0	1385.0	1382.0
20°	1367.7	1364.0	1360.3	1356.7	1353.3	1349.9	1346.5	1343.1
22.5°	1330.0	1325.4	1320.8	1316.9	1313.7	1310.5	1307.3	1304.2
25°	1268.4	1262.3	1256.4	1251.8	1248.7	1245.5	1242.4	1239.3
27.5°	1201.1	1192.8	1184.5	1177.9	1173.1	1168.4	1163.6	1158.8
30°	1153.2	1143.6	1133.9	1126.8	1122.3	1117.7	1113.1	1108.6
32.5°	1106.4	1095.8	1085.2	1077.5	1072.7	1067.9	1063.2	1058.3
35°	1036.7	1024.4	1012.2	1003.5	998.3	993.2	988.1	983.0
37.5°	961.8	947.9	934.0	923.9	917.6	911.3	905.0	898.6
40°	909.8	895.0	880.2	869.5	862.9	856.4	849.9	843.3
42.5°	859.9	843.7	827.5	816.5	810.7	804.8	798.9	793.0
45°	786.4	770.2	754.0	742.5	735.6	728.8	721.9	715.1
47.5°	710.5	692.9	675.2	663.4	657.3	651.2	645.1	639.0
50°	659.3	641.6	623.9	611.9	605.4	598.8	592.2	585.7
52.5°	609.8	591.4	573.1	560.9	555.1	549.3	543.4	537.5
55°	536.0	519.4	503.0	491.9	486.2	480.5	474.7	469.0
57.5°	463.5	447.8	432.3	422.0	417.2	412.4	407.5	402.7
60°	417.8	402.4	387.0	376.9	372.1	367.2	362.4	357.6
62.5°	372.4	358.0	343.5	333.8	328.6	323.6	318.5	313.5
65°	307.9	293.9	280.0	271.4	268.3	265.1	262.0	258.9
67.5°	246.2	235.8	225.3	218.5	215.2	211.7	208.4	205.0
70°	208.1	198.2	188.3	181.7	178.6	175.5	172.3	169.2
72.5°	173.9	165.8	157.6	152.9	151.6	150.3	149.0	147.7
75°	130.1	127.3	124.4	122.8	122.2	121.6	121.1	120.5
77.5°	98.2	96.6	95.1	94.0	93.4	92.9	92.3	91.7
80°	79.0	78.2	77.3	76.6	76.1	75.5	74.9	74.4
82.5°	60.6	59.8	58.9	58.4	58.3	58.1	58.0	58.0
85°	34.7	34.2	33.6	33.3	33.3	33.3	33.3	33.3
87.5°	17.0	17.0	16.9	16.8	16.6	16.5	16.3	16.1
90°	21.0	21.7	22.4	23.0	23.3	23.7	24.1	24.4
92.5°	32.4	33.0	33.6	33.8	33.5	33.3	33.1	32.9
95°	61.6	62.4	63.1	63.5	63.5	63.5	63.5	63.5
97.5°	95.9	96.8	97.6	97.9	97.9	97.8	97.8	97.7
100°	120.7	121.2	121.8	122.3	122.6	122.9	123.4	123.7
102.5°	149.4	149.9	150.4	150.7	150.6	150.5	150.5	150.4
105°	192.1	192.1	192.1	192.2	192.6	193.0	193.3	193.7
107.5°	238.3	238.9	239.5	239.6	239.5	239.2	239.0	238.8
110°	269.2	269.9	270.7	270.8	270.4	270.1	269.8	269.4



TEST NUMBER: P332382-930

CATALOG NUMBER: S123RDIP-S1165D1025U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	300.1	300.9	301.8	302.2	302.1	302.1	302.0	301.9
115°	347.1	347.2	347.4	347.4	347.2	347.1	346.9	346.7
117.5°	394.4	394.4	394.4	394.1	393.6	393.1	392.6	392.1
120°	426.1	425.9	425.7	425.4	425.1	424.8	424.4	424.0
122.5°	458.0	457.6	457.1	456.6	456.2	455.6	455.1	454.6
125°	505.6	504.8	504.1	503.4	502.7	502.0	501.2	500.5
127.5°	552.5	551.5	550.5	549.6	548.8	547.9	547.1	546.3
130°	583.7	582.9	582.3	581.2	580.0	578.7	577.5	576.2
132.5°	614.0	613.2	612.3	611.4	610.4	609.4	608.5	607.5
135°	659.4	658.7	657.9	657.4	657.0	656.6	656.3	656.0
137.5°	703.8	703.0	702.2	701.5	700.8	700.1	699.4	698.8
140°	732.9	732.7	732.5	731.8	730.6	729.3	728.1	726.8
142.5°	760.3	760.1	759.9	759.3	758.3	757.3	756.4	755.4
145°	800.5	800.3	800.1	799.6	798.9	798.2	797.4	796.7
147.5°	838.5	838.5	838.5	837.9	836.8	835.7	834.6	833.6
150°	861.9	861.9	861.9	861.3	860.2	859.2	858.0	857.0
152.5°	883.3	883.5	883.9	883.5	882.6	881.7	880.7	879.8
155°	914.6	915.3	916.0	915.7	914.5	913.2	911.9	910.7
157.5°	941.5	942.2	943.1	942.9	941.9	940.9	939.9	938.8
160°	958.1	959.0	959.9	959.9	959.3	958.5	957.8	957.1
162.5°	973.7	974.6	975.5	975.3	974.2	973.1	971.9	970.8
165°	993.4	994.5	995.6	995.5	994.3	993.0	991.7	990.4
167.5°	1009.4	1010.6	1011.7	1011.7	1010.6	1009.4	1008.4	1007.2
170°	1018.2	1019.5	1020.8	1020.8	1019.5	1018.2	1016.9	1015.7
172.5°	1025.1	1026.2	1027.3	1027.3	1026.0	1024.7	1023.4	1022.1
175°	1032.5	1033.6	1034.7	1034.5	1033.3	1032.0	1030.8	1029.5
177.5°	1035.8	1036.7	1037.5	1037.5	1036.5	1035.4	1034.5	1033.4
180°	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0

(END OF REPORT)