

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: P332382-927

Luminaire Tested: **S123RDIP-S1165D1025U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332382-927
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-S1165D1025U927-4F0-1E-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: 6260.6 lumens
Efficiency: N/A
Efficacy: 93.7 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

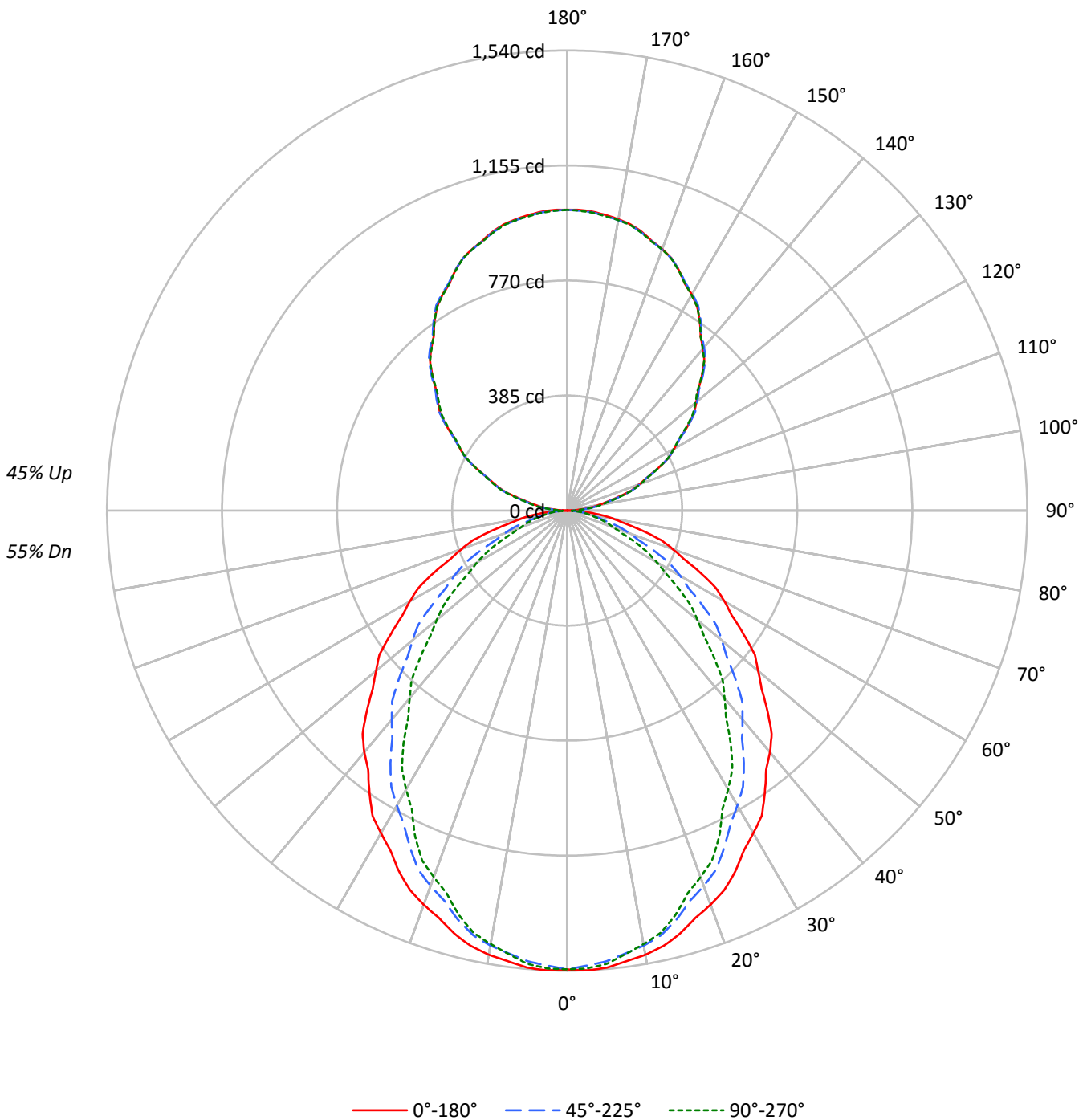
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332382-927

CATALOG NUMBER: S123RDIP-S1165D1025U927-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P332382-927

CATALOG NUMBER: S123RDIP-S1165D1025U927-4F0-1E-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°	16527	16527	16527
5°	16590	16361	16455
10°	16497	16156	16101
15°	16319	15778	15611
20°	16076	15306	14948
25°	15824	14775	14301
30°	15493	14162	13387
35°	15152	13548	12550
40°	14838	12826	11514
45°	14425	12113	10577
50°	13971	11302	9530
55°	13508	10376	8552
60°	13082	9384	7481
65°	12528	8308	6406
70°	11833	6977	5174
75°	10821	5490	4870
80°	9651	4860	4475
85°	8151	4310	4001



TEST NUMBER: P332382-927

CATALOG NUMBER: S123RDIP-S1165D1025U927-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.2	2.3
10°-20°	401.2	6.4
20°-30°	577.6	9.2
30°-40°	650.7	10.4
40°-50°	622.5	9.9
50°-60°	509.7	8.1
60°-70°	343.9	5.5
70°-80°	173.0	2.8
80°-90°	48.8	0.8
90°-100°	65.6	1.0
100°-110°	196.3	3.1
110°-120°	333.8	5.3
120°-130°	439.1	7.0
130°-140°	493.6	7.9
140°-150°	485.2	7.7
150°-160°	408.4	6.5
160°-170°	271.9	4.3
170°-180°	95.2	1.5
0°-30°	1123.0	17.9
0°-40°	1773.6	28.3
0°-60°	2905.8	46.4
0°-90°	3471.5	55.5
90°-120°	595.7	9.5
90°-150°	2013.5	32.2
90°-180°	2789.0	44.5
0°-180°	6260.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1535	1535	1535	1535	1535	
5°	1535	1529	1514	1525	1523	146
15°	1464	1450	1416	1410	1401	412
25°	1332	1300	1244	1219	1204	613
35°	1153	1106	1031	979	955	721
45°	948	889	796	727	695	731
55°	720	656	553	483	456	645
65°	492	422	326	268	252	487
75°	260	200	132	120	117	278
85°	66	40	35	32	32	74
90°	1	9	19	22	24	6
95°	47	52	58	62	62	52
105°	178	180	187	187	188	191
115°	336	338	337	338	337	332
125°	492	494	493	489	486	438
135°	638	643	642	639	637	492
145°	774	776	778	777	774	483
155°	886	886	887	890	885	408
165°	966	963	963	967	962	272
175°	1004	1001	1001	1005	1000	95
180°	1007	1007	1007	1007	1007	



TEST NUMBER: P332382-927

CATALOG NUMBER: S123RDIP-S1165D1025U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4
2.5°	1540.4	1539.4	1538.6	1537.7	1536.8	1535.0	1532.4	1529.7	1527.1	1524.4	1526.9
5°	1535.4	1534.0	1532.6	1531.2	1529.9	1527.5	1524.2	1520.8	1517.5	1514.2	1516.7
7.5°	1521.1	1519.7	1518.2	1516.7	1515.2	1512.3	1508.0	1503.6	1499.4	1495.0	1496.4
10°	1509.3	1507.3	1505.4	1503.4	1501.5	1498.0	1493.0	1488.0	1483.0	1478.1	1478.4
12.5°	1492.3	1490.2	1488.0	1485.8	1483.7	1479.6	1473.5	1467.4	1461.3	1455.2	1455.0
15°	1464.4	1461.3	1458.3	1455.2	1452.2	1446.8	1439.1	1431.3	1423.6	1415.9	1414.4
17.5°	1429.3	1425.8	1422.2	1418.6	1415.2	1408.4	1398.6	1388.7	1378.9	1369.0	1366.1
20°	1403.4	1399.0	1394.6	1390.1	1385.7	1378.2	1367.7	1357.2	1346.6	1336.2	1332.5
22.5°	1374.5	1369.4	1364.3	1359.2	1354.2	1346.0	1334.8	1323.7	1312.5	1301.2	1296.8
25°	1332.4	1325.5	1318.6	1311.6	1304.7	1294.9	1282.1	1269.5	1256.7	1244.0	1238.2
27.5°	1281.4	1273.7	1266.1	1258.5	1250.8	1239.9	1225.7	1211.6	1197.4	1183.2	1175.1
30°	1246.5	1238.2	1229.9	1221.5	1213.3	1201.3	1185.9	1170.4	1154.9	1139.4	1130.0
32.5°	1211.6	1202.2	1192.8	1183.4	1174.0	1161.1	1144.7	1128.3	1111.9	1095.6	1085.3
35°	1153.1	1143.1	1133.1	1123.2	1113.3	1099.7	1082.5	1065.4	1048.2	1031.0	1019.1
37.5°	1093.8	1082.8	1071.7	1060.6	1049.6	1034.8	1016.5	998.2	979.9	961.6	948.1
40°	1056.0	1043.8	1031.6	1019.5	1007.3	991.3	971.7	952.0	932.4	912.8	898.3
42.5°	1013.1	1000.9	988.8	976.6	964.4	948.2	927.9	907.5	887.2	867.0	851.2
45°	947.6	935.2	922.7	910.3	897.8	880.9	859.6	838.3	817.0	795.7	779.9
47.5°	882.1	868.5	854.8	841.1	827.4	809.9	788.6	767.3	746.0	724.8	707.6
50°	834.3	821.3	808.3	795.3	782.3	764.6	742.2	719.8	697.4	674.9	657.7
52.5°	791.5	777.4	763.3	749.2	735.0	716.8	694.7	672.5	650.3	628.1	610.3
55°	719.8	706.2	692.6	679.1	665.5	647.0	623.4	599.9	576.4	552.9	536.9
57.5°	653.5	638.7	623.9	609.2	594.4	575.2	551.6	527.9	504.3	480.7	465.5
60°	607.7	592.5	577.3	562.1	546.8	527.7	504.7	481.8	458.8	435.9	420.9
62.5°	561.8	546.6	531.4	516.2	501.0	481.9	458.9	435.9	413.0	390.0	376.0
65°	491.9	476.7	461.4	446.2	431.0	412.6	391.0	369.4	347.8	326.2	312.7
67.5°	421.9	406.5	391.1	375.7	360.4	342.3	321.6	300.9	280.2	259.5	249.4
70°	376.0	361.2	346.2	331.2	316.3	299.1	279.8	260.4	241.1	221.7	212.0
72.5°	330.3	315.5	300.8	286.1	271.3	255.2	237.6	220.0	202.4	184.8	176.9
75°	260.2	247.0	233.7	220.4	207.2	192.9	177.7	162.4	147.2	132.0	129.2
77.5°	196.5	184.5	172.5	160.5	148.5	137.5	127.8	118.0	108.1	98.4	96.9
80°	155.7	144.3	132.9	121.6	110.3	101.7	95.9	90.1	84.3	78.4	77.6
82.5°	116.8	107.0	97.2	87.4	77.6	71.4	68.7	65.9	63.2	60.5	59.7
85°	66.0	59.9	53.8	47.8	41.7	38.2	37.4	36.5	35.7	34.9	34.3
87.5°	24.1	21.9	19.9	17.8	15.8	14.9	15.4	15.8	16.3	16.7	16.6
90°	0.8	2.5	4.3	6.1	7.8	9.8	12.1	14.4	16.7	19.0	19.6
92.5°	19.2	20.4	21.5	22.7	23.9	25.2	26.5	27.7	29.1	30.3	30.9
95°	46.7	47.8	49.1	50.4	51.6	52.9	54.3	55.7	57.1	58.5	59.3
97.5°	82.9	83.8	84.7	85.6	86.5	87.5	88.5	89.5	90.5	91.6	92.4
100°	107.6	108.6	109.6	110.7	111.8	112.7	113.6	114.5	115.3	116.2	116.8
102.5°	136.0	136.7	137.3	137.9	138.6	139.4	140.6	141.7	142.9	144.1	144.6
105°	177.9	178.2	178.6	179.0	179.4	180.3	181.9	183.5	185.1	186.6	186.6
107.5°	226.6	226.9	227.0	227.3	227.5	227.9	228.5	229.2	229.8	230.4	231.0
110°	257.0	257.4	257.7	258.0	258.4	258.7	259.1	259.4	259.8	260.2	260.9



TEST NUMBER: P332382-927

CATALOG NUMBER: S123RDIP-S1165D1025U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	288.6	288.8	289.1	289.2	289.5	289.6	289.7	289.8	289.9	289.9	290.7
115°	336.0	336.6	337.2	337.6	338.2	338.3	337.9	337.5	337.2	336.8	337.1
117.5°	383.8	384.2	384.5	384.9	385.2	385.2	384.8	384.3	383.8	383.3	383.3
120°	413.6	414.6	415.7	416.8	417.8	417.9	417.0	416.1	415.3	414.4	414.2
122.5°	444.6	445.4	446.1	446.9	447.7	447.8	447.3	446.9	446.5	446.0	445.5
125°	491.9	492.4	492.9	493.5	493.9	494.1	493.7	493.4	493.0	492.7	491.9
127.5°	535.5	536.6	537.7	538.8	540.0	540.3	540.0	539.6	539.2	538.8	537.8
130°	564.6	566.0	567.4	568.8	570.2	570.7	570.1	569.6	569.1	568.5	567.8
132.5°	593.7	595.1	596.5	597.9	599.4	599.8	599.4	599.0	598.7	598.3	597.5
135°	638.2	639.2	640.2	641.3	642.4	642.8	642.6	642.5	642.3	642.1	641.4
137.5°	679.3	680.2	681.0	681.9	682.8	683.4	683.9	684.4	684.8	685.2	684.5
140°	707.7	708.6	709.5	710.3	711.2	711.8	711.9	712.1	712.3	712.5	712.3
142.5°	733.6	734.5	735.5	736.3	737.2	737.8	738.1	738.4	738.7	739.0	738.9
145°	774.1	774.5	774.8	775.2	775.5	776.0	776.5	777.1	777.6	778.1	777.9
147.5°	809.6	810.2	810.9	811.5	812.1	812.7	813.2	813.7	814.1	814.7	814.7
150°	834.2	834.6	835.0	835.3	835.7	836.0	836.4	836.7	837.1	837.4	837.4
152.5°	854.5	855.0	855.5	856.0	856.4	856.8	857.1	857.2	857.5	857.7	857.9
155°	886.5	886.5	886.5	886.5	886.5	886.5	886.7	886.8	887.1	887.2	888.0
157.5°	913.6	913.5	913.2	913.0	912.8	912.8	912.9	913.1	913.2	913.3	914.1
160°	930.7	930.3	930.0	929.7	929.3	929.2	929.2	929.2	929.2	929.2	930.0
162.5°	945.9	945.4	944.9	944.4	944.0	943.8	943.9	944.0	944.2	944.4	945.2
165°	965.5	965.0	964.5	963.9	963.5	963.1	963.1	963.1	963.1	963.1	964.2
167.5°	981.2	980.5	979.8	979.1	978.3	978.1	978.3	978.3	978.5	978.7	979.8
170°	990.1	989.4	988.6	987.9	987.2	986.9	986.9	986.9	986.9	986.9	988.1
172.5°	997.0	996.3	995.6	994.9	994.2	993.8	993.8	993.8	993.8	993.8	994.9
175°	1004.2	1003.5	1002.8	1002.2	1001.5	1001.1	1001.1	1001.1	1001.1	1001.1	1002.2
177.5°	1007.3	1006.7	1006.2	1005.6	1005.0	1004.7	1004.7	1004.7	1004.7	1004.7	1005.6
180°	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6



TEST NUMBER: P332382-927

CATALOG NUMBER: S123RDIP-S1165D1025U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4	1535.4
2.5°	1529.3	1531.8	1534.1	1535.2	1534.7	1534.3	1533.8	1533.3
5°	1519.2	1521.7	1524.2	1525.1	1524.6	1524.0	1523.4	1522.9
7.5°	1497.8	1499.2	1500.6	1500.8	1499.8	1498.9	1497.9	1497.0
10°	1478.7	1478.9	1479.2	1478.7	1477.3	1475.9	1474.5	1473.1
12.5°	1454.8	1454.7	1454.5	1453.7	1452.1	1450.4	1448.8	1447.2
15°	1413.1	1411.7	1410.3	1408.7	1406.7	1404.8	1402.8	1400.9
17.5°	1363.2	1360.2	1357.2	1354.4	1351.5	1348.6	1345.8	1342.8
20°	1329.0	1325.3	1321.8	1318.3	1314.9	1311.6	1308.4	1305.0
22.5°	1292.3	1287.9	1283.3	1279.5	1276.4	1273.4	1270.3	1267.2
25°	1232.4	1226.5	1220.8	1216.3	1213.3	1210.2	1207.2	1204.1
27.5°	1167.0	1159.0	1150.9	1144.5	1139.9	1135.3	1130.6	1125.9
30°	1120.5	1111.2	1101.8	1094.9	1090.4	1086.0	1081.6	1077.1
32.5°	1075.0	1064.7	1054.4	1046.9	1042.3	1037.6	1033.0	1028.3
35°	1007.3	995.4	983.5	975.0	970.0	965.0	960.0	955.1
37.5°	934.5	921.1	907.5	897.7	891.6	885.4	879.3	873.1
40°	884.0	869.6	855.2	844.9	838.4	832.1	825.8	819.4
42.5°	835.5	819.8	804.1	793.4	787.7	782.0	776.3	770.6
45°	764.1	748.4	732.6	721.4	714.8	708.1	701.5	694.8
47.5°	690.4	673.3	656.1	644.6	638.7	632.7	626.8	620.9
50°	640.6	623.4	606.3	594.5	588.2	581.8	575.4	569.1
52.5°	592.5	574.6	556.8	545.0	539.3	533.7	528.0	522.3
55°	520.8	504.7	488.7	477.9	472.4	466.8	461.3	455.7
57.5°	450.4	435.1	420.0	410.0	405.4	400.7	395.9	391.3
60°	405.9	391.0	376.0	366.2	361.6	356.8	352.1	347.5
62.5°	361.9	347.8	333.7	324.3	319.3	314.4	309.5	304.6
65°	299.1	285.6	272.0	263.7	260.7	257.6	254.6	251.5
67.5°	239.2	229.1	219.0	212.3	209.1	205.7	202.5	199.2
70°	202.2	192.6	182.9	176.6	173.5	170.5	167.4	164.4
72.5°	169.0	161.1	153.1	148.5	147.3	146.0	144.7	143.5
75°	126.4	123.7	120.9	119.3	118.7	118.2	117.6	117.1
77.5°	95.4	93.9	92.4	91.3	90.8	90.2	89.7	89.1
80°	76.8	76.0	75.1	74.5	73.9	73.4	72.8	72.2
82.5°	58.9	58.1	57.2	56.7	56.6	56.5	56.4	56.3
85°	33.7	33.2	32.6	32.4	32.4	32.4	32.4	32.4
87.5°	16.6	16.5	16.4	16.3	16.2	16.0	15.8	15.7
90°	20.4	21.1	21.8	22.3	22.7	23.1	23.4	23.7
92.5°	31.5	32.1	32.6	32.8	32.6	32.4	32.2	31.9
95°	59.9	60.6	61.3	61.7	61.7	61.7	61.7	61.7
97.5°	93.2	94.0	94.8	95.1	95.1	95.1	95.0	94.9
100°	117.3	117.8	118.4	118.8	119.1	119.5	119.9	120.2
102.5°	145.1	145.7	146.2	146.4	146.3	146.2	146.2	146.2
105°	186.6	186.6	186.6	186.8	187.1	187.5	187.8	188.2
107.5°	231.6	232.1	232.7	232.8	232.7	232.4	232.2	232.0
110°	261.6	262.3	263.0	263.2	262.8	262.4	262.1	261.7



TEST NUMBER: P332382-927

CATALOG NUMBER: S123RDIP-S1165D1025U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	291.6	292.4	293.3	293.7	293.6	293.5	293.4	293.3
115°	337.2	337.4	337.5	337.5	337.4	337.2	337.1	336.8
117.5°	383.3	383.3	383.3	382.9	382.5	382.0	381.5	381.0
120°	414.0	413.8	413.7	413.4	413.0	412.7	412.3	412.0
122.5°	445.0	444.7	444.2	443.7	443.2	442.7	442.2	441.7
125°	491.2	490.5	489.8	489.1	488.5	487.7	487.0	486.3
127.5°	536.9	535.9	534.9	534.0	533.2	532.3	531.6	530.8
130°	567.1	566.4	565.8	564.7	563.6	562.3	561.1	559.8
132.5°	596.6	595.8	594.9	594.1	593.1	592.2	591.2	590.3
135°	640.7	640.0	639.3	638.7	638.4	638.0	637.7	637.4
137.5°	683.8	683.1	682.3	681.6	681.0	680.2	679.6	679.0
140°	712.1	711.9	711.8	711.1	709.9	708.6	707.4	706.2
142.5°	738.7	738.6	738.3	737.8	736.8	735.9	734.9	734.0
145°	777.8	777.6	777.4	777.0	776.3	775.5	774.8	774.1
147.5°	814.7	814.7	814.7	814.1	813.1	812.0	811.0	809.9
150°	837.4	837.4	837.4	836.9	835.8	834.8	833.7	832.7
152.5°	858.3	858.5	858.8	858.5	857.5	856.7	855.7	854.8
155°	888.7	889.4	890.0	889.8	888.6	887.3	886.1	884.9
157.5°	914.8	915.5	916.3	916.2	915.2	914.2	913.2	912.2
160°	930.9	931.8	932.6	932.7	932.1	931.4	930.7	929.9
162.5°	946.1	947.0	947.8	947.7	946.6	945.5	944.4	943.3
165°	965.3	966.3	967.3	967.3	966.1	964.8	963.6	962.3
167.5°	980.8	981.9	983.0	983.0	981.9	980.8	979.8	978.7
170°	989.4	990.5	991.8	991.8	990.5	989.4	988.1	986.9
172.5°	996.0	997.1	998.1	998.1	996.9	995.7	994.4	993.2
175°	1003.2	1004.2	1005.4	1005.2	1004.0	1002.7	1001.6	1000.3
177.5°	1006.5	1007.3	1008.1	1008.1	1007.1	1006.1	1005.1	1004.1
180°	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6

(END OF REPORT)