

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: P332339-935

Luminaire Tested: **S123RDIP-S1000D585U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332339-935
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-S1000D585U935-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5281.7 lumens
Efficiency: N/A
Efficacy: 108.2 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: Semi-Direct

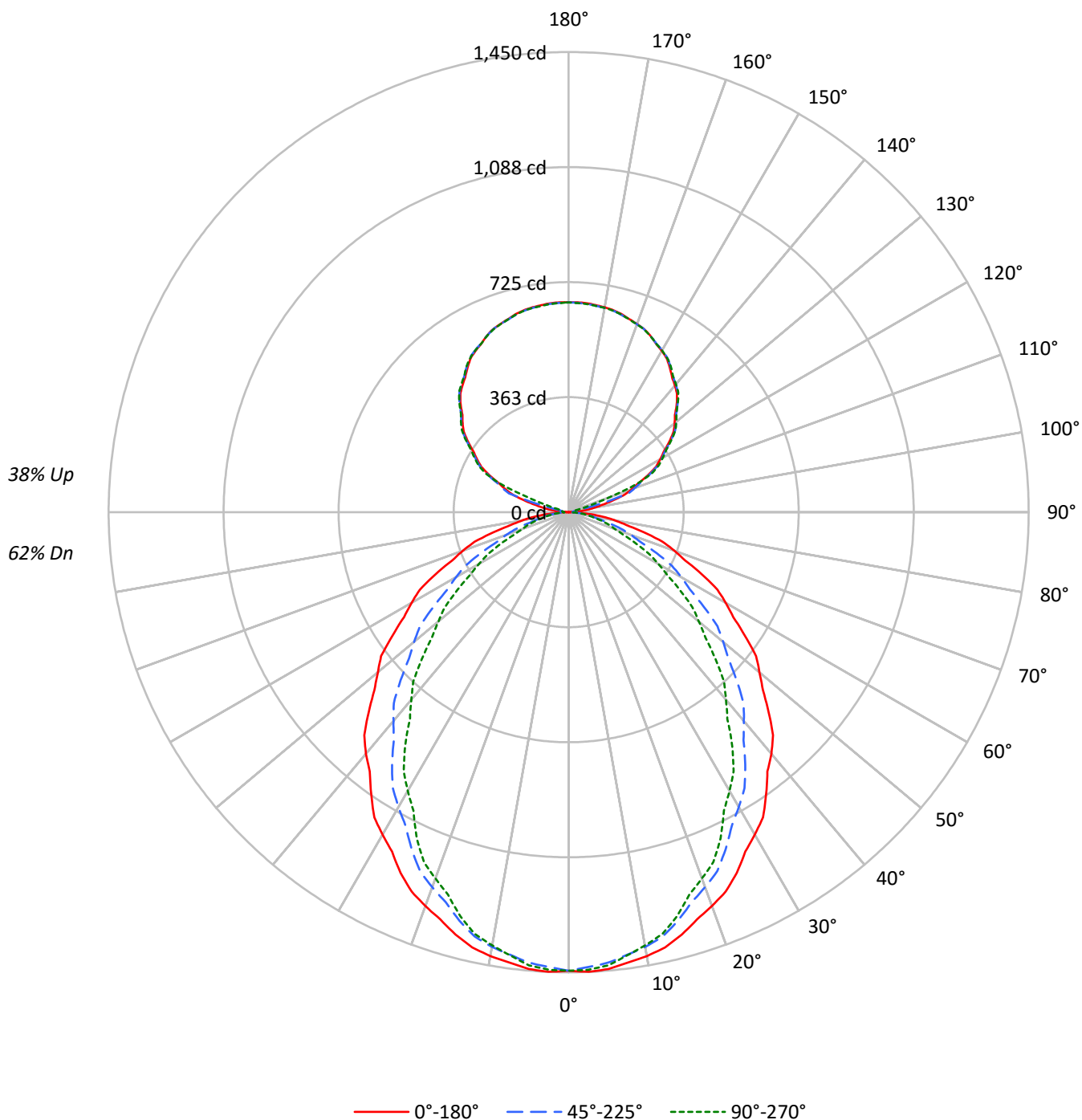
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	0
RCR																				
0	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	67	67	62
1	101	97	93	89	94	91	87	84	80	77	75	69	67	66	60	59	57	57	57	53
2	92	85	79	74	86	80	74	70	70	66	63	61	58	56	53	51	49	49	49	45
3	84	75	68	62	79	71	64	59	62	57	53	55	51	47	47	45	42	42	42	39
4	77	67	59	53	72	63	56	50	56	50	46	49	45	41	43	39	37	37	37	33
5	71	60	51	45	67	56	49	44	50	44	40	44	39	36	39	35	32	32	32	29
6	66	54	46	40	61	51	43	38	45	39	35	40	35	32	35	31	28	28	28	26
7	61	49	41	35	57	46	39	34	41	35	31	37	32	28	32	28	25	25	25	23
8	57	44	37	31	53	42	35	30	38	32	28	34	29	25	30	26	23	23	23	21
9	53	41	33	28	50	39	32	27	35	29	25	31	26	23	27	24	21	21	21	19
10	49	37	30	25	46	36	29	24	32	26	23	29	24	21	26	22	19	19	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15553	15553	15553
5°	15612	15397	15486
10°	15524	15204	15152
15°	15357	14848	14692
20°	15128	14403	14068
25°	14892	13904	13459
30°	14579	13328	12599
35°	14259	12750	11811
40°	13964	12069	10835
45°	13575	11399	9954
50°	13147	10637	8967
55°	12710	9764	8049
60°	12312	8831	7037
65°	11790	7819	6029
70°	11138	6565	4869
75°	10189	5165	4579
80°	9081	4575	4209
85°	7669	4051	3767

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.7	2.6
10°-20°	377.5	7.1
20°-30°	543.6	10.3
30°-40°	612.3	11.6
40°-50°	585.8	11.1
50°-60°	479.7	9.1
60°-70°	323.7	6.1
70°-80°	162.8	3.1
80°-90°	44.9	0.9
90°-100°	24.0	0.5
100°-110°	114.5	2.2
110°-120°	275.1	5.2
120°-130°	350.3	6.6
130°-140°	374.3	7.1
140°-150°	350.0	6.6
150°-160°	282.3	5.3
160°-170°	182.2	3.5
170°-180°	62.8	1.2
0°-30°	1056.8	20.0
0°-40°	1669.1	31.6
0°-60°	2734.6	51.8
0°-90°	3266.0	61.8
90°-120°	413.7	7.8
90°-150°	1488.3	28.2
90°-180°	2016.0	38.2
0°-180°	5281.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1445	1445	1445	1445	1445	
5°	1445	1439	1425	1435	1433	137
15°	1378	1364	1332	1326	1318	388
25°	1254	1223	1171	1147	1133	576
35°	1085	1041	970	922	899	679
45°	892	837	749	684	654	688
55°	677	618	520	455	429	607
65°	463	397	307	252	237	458
75°	245	188	124	113	110	261
85°	62	38	33	31	30	70
90°	0	5	12	14	15	4
95°	30	11	15	18	19	37
105°	146	149	108	26	22	155
115°	274	278	282	287	289	271
125°	387	391	393	394	395	345
135°	482	485	487	488	487	371
145°	556	559	560	561	561	348
155°	612	612	612	614	611	282
165°	646	644	644	647	644	182
175°	661	659	659	662	658	63
180°	661	661	661	661	661	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9
2.5°	1449.6	1448.7	1447.9	1447.1	1446.2	1444.6	1442.1	1439.6	1437.1	1434.6	1436.8
5°	1444.9	1443.6	1442.3	1441.0	1439.7	1437.4	1434.3	1431.2	1428.1	1425.0	1427.3
7.5°	1431.5	1430.1	1428.7	1427.3	1425.9	1423.1	1419.1	1415.1	1411.0	1407.0	1408.3
10°	1420.3	1418.5	1416.6	1414.8	1413.0	1409.7	1405.1	1400.3	1395.7	1391.0	1391.3
12.5°	1404.4	1402.3	1400.3	1398.3	1396.2	1392.3	1386.6	1380.9	1375.2	1369.4	1369.2
15°	1378.1	1375.3	1372.3	1369.5	1366.7	1361.6	1354.3	1346.9	1339.7	1332.4	1331.1
17.5°	1345.1	1341.7	1338.4	1335.1	1331.7	1325.4	1316.1	1306.9	1297.6	1288.3	1285.6
20°	1320.7	1316.6	1312.3	1308.2	1304.0	1297.0	1287.1	1277.2	1267.3	1257.4	1254.0
22.5°	1293.5	1288.7	1283.9	1279.1	1274.4	1266.7	1256.1	1245.6	1235.1	1224.6	1220.4
25°	1253.9	1247.4	1240.9	1234.3	1227.9	1218.6	1206.6	1194.6	1182.7	1170.7	1165.2
27.5°	1205.8	1198.7	1191.5	1184.3	1177.1	1166.8	1153.5	1140.1	1126.8	1113.5	1105.9
30°	1173.0	1165.2	1157.4	1149.6	1141.8	1130.6	1116.0	1101.4	1086.8	1072.3	1063.4
32.5°	1140.2	1131.4	1122.5	1113.6	1104.8	1092.7	1077.3	1061.9	1046.4	1031.0	1021.3
35°	1085.1	1075.7	1066.3	1057.0	1047.7	1034.8	1018.7	1002.5	986.4	970.3	959.1
37.5°	1029.3	1018.9	1008.5	998.1	987.7	973.9	956.7	939.4	922.1	904.9	892.2
40°	993.8	982.3	970.8	959.3	947.9	932.9	914.5	896.0	877.4	858.9	845.4
42.5°	953.4	941.9	930.5	919.0	907.6	892.3	873.2	854.1	835.0	815.9	801.1
45°	891.8	880.0	868.3	856.6	844.9	829.1	809.0	788.9	768.9	748.8	734.0
47.5°	830.2	817.3	804.4	791.5	778.7	762.2	742.2	722.1	702.1	682.0	665.9
50°	785.1	772.9	760.7	748.5	736.2	719.5	698.4	677.3	656.3	635.2	619.0
52.5°	744.9	731.6	718.2	705.0	691.7	674.6	653.8	632.8	612.0	591.1	574.3
55°	677.3	664.6	651.8	639.0	626.3	608.8	586.7	564.6	542.4	520.3	505.2
57.5°	615.0	601.1	587.2	573.3	559.4	541.3	519.0	496.8	474.6	452.4	438.1
60°	571.9	557.6	543.2	528.9	514.5	496.6	475.0	453.4	431.8	410.2	396.1
62.5°	528.7	514.4	500.1	485.8	471.5	453.5	431.9	410.3	388.7	367.0	353.8
65°	462.9	448.6	434.2	419.9	405.6	388.3	368.0	347.7	327.4	307.0	294.3
67.5°	397.0	382.5	368.1	353.6	339.1	322.1	302.6	283.2	263.7	244.2	234.7
70°	353.9	339.8	325.8	311.7	297.6	281.5	263.3	245.0	226.8	208.6	199.5
72.5°	310.7	297.0	283.1	269.2	255.4	240.1	223.6	207.1	190.5	173.9	166.4
75°	245.0	232.4	219.9	207.4	194.9	181.5	167.2	152.8	138.5	124.2	121.6
77.5°	184.9	173.6	162.3	151.0	139.7	129.4	120.2	111.0	101.8	92.6	91.2
80°	146.5	135.8	125.1	114.4	103.8	95.7	90.2	84.7	79.3	73.8	73.0
82.5°	109.9	100.7	91.5	82.2	73.0	67.2	64.6	62.1	59.5	56.9	56.1
85°	62.1	56.4	50.6	44.9	39.2	35.9	35.1	34.4	33.6	32.8	32.3
87.5°	22.6	20.5	18.4	16.4	14.3	13.4	13.7	13.9	14.3	14.6	14.5
90°	0.5	1.5	2.7	3.8	4.8	6.1	7.5	9.0	10.3	11.8	12.2
92.5°	9.1	8.9	8.5	8.2	7.9	8.3	9.4	10.4	11.5	12.6	13.3
95°	30.0	25.5	21.0	16.5	12.1	10.4	11.6	12.8	14.0	15.2	16.0
97.5°	60.2	58.2	56.2	54.2	52.2	47.3	39.3	31.5	23.7	15.8	16.7
100°	83.0	85.2	87.4	89.5	91.7	84.3	67.2	50.3	33.2	16.2	17.0
102.5°	108.9	110.5	112.1	113.7	115.2	106.7	88.1	69.5	50.9	32.3	29.6
105°	146.4	147.6	148.8	149.9	151.1	146.8	137.0	127.2	117.4	107.5	88.3
107.5°	185.8	186.8	187.8	188.7	189.7	190.9	192.4	194.0	195.5	197.1	183.0
110°	212.2	213.0	213.9	214.7	215.6	216.7	217.8	219.0	220.2	221.4	217.8

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	237.3	238.1	238.8	239.6	240.4	241.4	242.6	243.8	245.0	246.2	246.3
115°	274.5	275.2	275.8	276.5	277.2	277.9	279.0	279.9	280.9	281.9	283.0
117.5°	310.6	311.3	312.2	313.0	313.7	314.4	315.0	315.5	316.0	316.4	317.4
120°	332.9	333.9	334.9	335.9	336.9	337.5	337.9	338.2	338.5	338.8	339.8
122.5°	355.8	356.5	357.3	358.2	359.0	359.6	360.0	360.4	360.8	361.3	361.9
125°	386.9	387.9	388.7	389.6	390.5	391.2	391.6	392.0	392.4	392.9	393.0
127.5°	417.2	418.1	419.0	419.8	420.7	421.4	421.9	422.5	423.0	423.5	423.9
130°	436.1	437.0	437.8	438.7	439.5	440.2	440.7	441.1	441.5	442.0	442.4
132.5°	454.2	455.0	455.9	456.8	457.6	458.2	458.6	458.9	459.3	459.7	460.1
135°	481.7	482.4	483.0	483.7	484.4	484.9	485.3	485.8	486.2	486.6	487.0
137.5°	505.3	506.2	507.0	507.8	508.6	509.2	509.4	509.6	509.9	510.1	510.7
140°	521.0	521.7	522.4	523.0	523.7	524.2	524.4	524.8	525.1	525.5	525.9
142.5°	535.5	536.2	536.9	537.5	538.2	538.6	539.0	539.3	539.7	540.0	540.4
145°	555.9	556.6	557.4	558.2	559.0	559.5	559.6	559.9	560.1	560.3	560.5
147.5°	575.1	575.6	576.1	576.5	577.0	577.4	577.6	577.8	578.1	578.3	578.5
150°	586.9	587.2	587.5	587.8	588.1	588.4	588.7	588.8	589.1	589.3	589.5
152.5°	597.4	597.6	597.7	597.9	598.1	598.2	598.3	598.5	598.6	598.7	599.1
155°	612.3	612.2	611.9	611.7	611.5	611.5	611.6	611.7	611.7	611.9	612.4
157.5°	624.0	624.0	623.9	623.9	623.9	623.8	623.7	623.6	623.5	623.4	624.1
160°	631.0	630.9	630.9	630.7	630.6	630.5	630.3	630.3	630.2	630.1	630.7
162.5°	637.7	637.4	637.1	636.9	636.5	636.4	636.3	636.2	636.0	635.9	636.7
165°	645.8	645.4	645.1	644.8	644.5	644.2	644.1	644.0	643.9	643.8	644.7
167.5°	652.0	651.6	651.2	650.7	650.3	650.1	650.1	650.1	650.1	650.1	651.0
170°	655.6	655.1	654.7	654.3	653.8	653.6	653.6	653.6	653.6	653.6	654.5
172.5°	658.0	657.5	656.9	656.3	655.8	655.7	655.7	655.8	655.9	656.0	656.9
175°	661.0	660.5	659.9	659.4	658.8	658.6	658.7	658.8	658.9	659.0	659.8
177.5°	661.8	661.3	660.9	660.5	660.0	659.9	660.0	660.0	660.1	660.2	660.9
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9	1444.9
2.5°	1439.2	1441.5	1443.7	1444.7	1444.2	1443.9	1443.5	1443.0
5°	1429.7	1432.0	1434.3	1435.3	1434.8	1434.3	1433.7	1433.2
7.5°	1409.5	1410.8	1412.1	1412.4	1411.4	1410.6	1409.7	1408.8
10°	1391.5	1391.8	1392.1	1391.5	1390.2	1388.9	1387.6	1386.3
12.5°	1369.1	1369.0	1368.8	1368.0	1366.5	1364.9	1363.5	1361.9
15°	1329.8	1328.5	1327.2	1325.6	1323.8	1322.0	1320.2	1318.4
17.5°	1282.8	1280.0	1277.3	1274.5	1271.9	1269.1	1266.4	1263.7
20°	1250.6	1247.2	1243.9	1240.6	1237.5	1234.3	1231.2	1228.1
22.5°	1216.2	1211.9	1207.7	1204.1	1201.3	1198.3	1195.4	1192.5
25°	1159.8	1154.3	1148.8	1144.6	1141.8	1138.9	1136.1	1133.2
27.5°	1098.3	1090.7	1083.1	1077.1	1072.7	1068.3	1063.9	1059.6
30°	1054.6	1045.7	1036.8	1030.4	1026.1	1022.0	1017.8	1013.7
32.5°	1011.6	1001.9	992.2	985.2	980.9	976.5	972.1	967.7
35°	947.9	936.7	925.5	917.6	912.9	908.2	903.5	898.8
37.5°	879.5	866.8	854.1	844.8	839.0	833.3	827.5	821.7
40°	831.9	818.4	804.8	795.0	789.0	783.1	777.1	771.1
42.5°	786.3	771.5	756.6	746.6	741.2	735.9	730.5	725.1
45°	719.1	704.3	689.4	678.9	672.6	666.4	660.1	653.9
47.5°	649.7	633.6	617.4	606.6	601.0	595.5	589.9	584.3
50°	602.9	586.7	570.6	559.5	553.5	547.5	541.6	535.5
52.5°	557.6	540.8	524.0	512.9	507.6	502.2	496.9	491.5
55°	490.1	475.0	459.9	449.7	444.5	439.3	434.1	428.9
57.5°	423.8	409.5	395.3	385.9	381.5	377.0	372.6	368.2
60°	382.0	368.0	353.9	344.7	340.3	335.8	331.4	326.9
62.5°	340.5	327.4	314.1	305.1	300.6	295.9	291.3	286.6
65°	281.5	268.7	256.0	248.1	245.3	242.5	239.6	236.7
67.5°	225.2	215.6	206.1	199.8	196.7	193.6	190.5	187.5
70°	190.4	181.2	172.1	166.2	163.2	160.4	157.6	154.7
72.5°	159.0	151.5	144.1	139.8	138.6	137.4	136.2	135.0
75°	119.0	116.4	113.8	112.3	111.8	111.2	110.6	110.1
77.5°	89.8	88.3	87.0	86.0	85.5	85.0	84.5	83.9
80°	72.2	71.5	70.7	70.1	69.6	69.1	68.4	67.9
82.5°	55.4	54.6	53.8	53.4	53.3	53.2	53.0	53.0
85°	31.8	31.3	30.7	30.5	30.5	30.5	30.5	30.5
87.5°	14.3	14.2	14.0	13.9	13.8	13.6	13.4	13.3
90°	12.7	13.1	13.5	13.9	14.1	14.3	14.6	14.7
92.5°	13.9	14.6	15.3	15.8	15.9	16.0	16.2	16.3
95°	16.8	17.5	18.3	18.7	18.7	18.7	18.7	18.7
97.5°	17.6	18.4	19.3	19.8	19.9	20.0	20.1	20.2
100°	17.9	18.9	19.7	20.1	20.3	20.4	20.5	20.7
102.5°	26.9	24.2	21.5	20.2	20.4	20.7	20.8	21.0
105°	68.9	49.6	30.3	20.8	20.9	21.2	21.4	21.6
107.5°	168.8	154.6	140.4	126.1	111.5	96.9	82.4	67.8
110°	214.3	210.7	207.1	197.4	181.8	166.3	150.7	135.0

TEST NUMBER: P332339-935

CATALOG NUMBER: S123RDIP-S1000D585U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	246.3	246.4	246.5	244.9	241.6	238.2	235.0	231.7
115°	284.0	285.2	286.3	287.0	287.4	287.9	288.3	288.8
117.5°	318.2	319.1	319.9	320.5	320.6	320.6	320.7	320.8
120°	340.6	341.5	342.3	342.8	342.8	342.8	342.8	342.8
122.5°	362.5	363.1	363.7	364.0	364.1	364.2	364.3	364.4
125°	393.3	393.5	393.7	394.0	394.2	394.4	394.6	394.9
127.5°	424.2	424.6	424.9	425.0	424.7	424.6	424.3	424.1
130°	442.8	443.2	443.7	443.8	443.6	443.4	443.2	443.0
132.5°	460.5	461.0	461.4	461.5	461.2	460.8	460.5	460.2
135°	487.3	487.7	487.9	487.9	487.7	487.3	487.0	486.6
137.5°	511.2	511.7	512.2	512.4	512.1	512.0	511.7	511.5
140°	526.3	526.8	527.2	527.3	527.1	526.8	526.7	526.4
142.5°	540.7	541.1	541.4	541.4	541.1	540.8	540.4	540.2
145°	560.8	560.9	561.2	561.3	561.3	561.3	561.3	561.3
147.5°	578.8	578.9	579.2	579.0	578.5	578.0	577.6	577.0
150°	589.7	590.0	590.1	590.1	589.8	589.4	589.1	588.8
152.5°	599.5	599.9	600.3	600.2	599.8	599.3	598.7	598.2
155°	612.9	613.5	614.1	614.0	613.4	612.7	612.1	611.4
157.5°	624.7	625.3	626.0	625.9	625.0	624.2	623.4	622.5
160°	631.4	632.0	632.7	632.6	631.9	631.1	630.3	629.6
162.5°	637.4	638.2	638.9	638.9	638.3	637.6	636.9	636.3
165°	645.6	646.4	647.3	647.4	646.6	645.8	645.1	644.3
167.5°	651.9	652.7	653.6	653.6	652.7	651.9	651.0	650.1
170°	655.4	656.3	657.1	657.1	656.3	655.4	654.5	653.6
172.5°	657.7	658.6	659.4	659.4	658.5	657.5	656.5	655.6
175°	660.6	661.3	662.1	662.0	661.2	660.3	659.4	658.5
177.5°	661.6	662.3	663.0	662.9	662.0	661.2	660.3	659.4
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0

(END OF REPORT)