

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: P332341-935

Luminaire Tested: **S123RDIP-S1000D585U935-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332341-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
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-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5091.2 lumens
Efficiency: N/A
Efficacy: 104.3 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: Semi-Direct

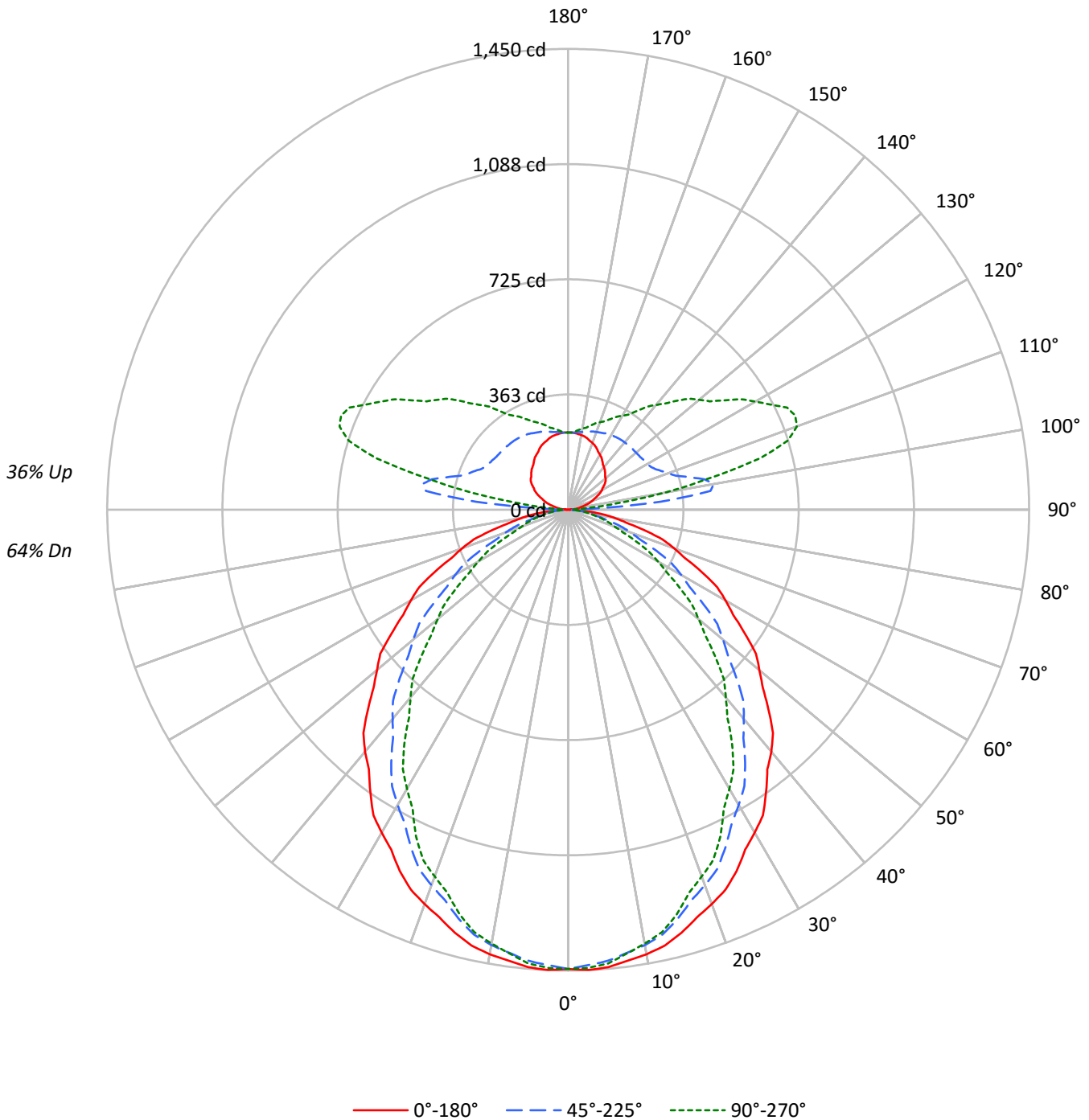
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	104	104	104	104	91	91	91		80	80	80		69	69	69	64
1	101	97	93	90	95	91	88	85	81	78	76		71	69	67		62	60	59	55
2	93	85	79	74	87	80	75	70	71	67	64		63	60	57		55	53	51	47
3	85	75	68	62	79	71	65	59	63	58	54		56	52	49		49	46	43	40
4	78	67	59	53	73	63	56	51	56	51	46		50	46	42		44	41	38	35
5	72	60	52	46	67	57	49	44	51	45	40		45	40	37		40	36	33	30
6	66	54	46	40	62	51	44	38	46	40	35		41	36	32		36	32	29	27
7	61	49	41	35	58	47	39	34	42	36	31		37	32	29		33	29	26	24
8	57	45	37	31	54	42	35	30	38	32	28		34	29	26		31	27	24	21
9	53	41	33	28	50	39	32	27	35	29	25		32	27	23		28	24	21	19
10	50	38	30	26	47	36	29	25	33	27	23		29	25	21		26	22	20	18

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	2.7
10°-20°	377.5	7.4
20°-30°	543.6	10.7
30°-40°	612.3	12.0
40°-50°	585.8	11.5
50°-60°	479.7	9.4
60°-70°	323.7	6.4
70°-80°	162.8	3.2
80°-90°	45.0	0.9
90°-100°	135.0	2.7
100°-110°	382.3	7.5
110°-120°	376.1	7.4
120°-130°	300.0	5.9
130°-140°	236.5	4.6
140°-150°	176.5	3.5
150°-160°	123.0	2.4
160°-170°	72.3	1.4
170°-180°	23.5	0.5
0°-30°	1056.8	20.8
0°-40°	1669.1	32.8
0°-60°	2734.6	53.7
0°-90°	3266.0	64.2
90°-120°	893.4	17.5
90°-150°	1606.4	31.6
90°-180°	1825.0	35.8
0°-180°	5091.2	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°	1	6	12	14	14	4
95°	17	54	291	85	57	18
105°	57	84	395	690	625	61
115°	101	125	302	662	760	100
125°	140	165	282	511	599	124
135°	164	196	278	421	486	127
145°	187	214	274	345	380	117
155°	213	229	266	302	315	98
165°	232	239	254	270	274	65
175°	242	242	244	248	247	23
180°	243	243	243	243	243	



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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°	22.7	20.6	18.5	16.5	14.4	13.4	13.8	14.0	14.4	14.6	14.4
90°	0.9	2.0	2.9	4.4	5.4	6.4	7.8	9.3	10.8	12.3	11.8
92.5°	6.1	9.0	13.2	17.0	21.1	28.4	41.2	62.3	83.1	75.5	57.0
95°	16.7	18.2	23.6	31.9	44.7	63.8	105.6	178.7	259.3	291.2	236.2
97.5°	28.5	29.0	33.2	40.5	53.0	73.8	113.7	196.1	330.4	451.3	482.8
100°	36.3	36.9	40.3	47.2	58.9	78.1	112.4	185.1	314.3	465.0	561.8
102.5°	44.6	45.5	48.6	55.0	65.6	83.2	114.0	175.7	290.8	439.5	565.8
105°	57.0	58.5	61.4	67.2	76.6	91.9	118.4	168.9	261.7	394.9	535.8
107.5°	70.1	71.6	74.5	80.2	89.0	103.1	126.4	168.4	243.3	355.3	483.4
110°	79.6	81.0	83.5	88.9	97.2	111.0	133.1	170.4	236.2	332.9	450.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	88.2	89.7	92.1	97.6	105.9	119.2	139.7	174.4	232.3	318.1	421.6
115°	100.7	102.6	105.6	110.5	118.8	132.1	150.8	180.7	230.8	302.0	387.0
117.5°	113.1	115.4	117.9	122.3	131.7	144.0	162.5	189.2	231.7	292.6	366.1
120°	121.8	123.3	125.7	130.6	140.0	152.2	169.9	195.4	233.2	288.3	355.1
122.5°	129.2	130.7	133.2	138.4	147.4	160.5	177.8	201.4	236.0	285.5	346.0
125°	140.0	140.9	143.9	149.3	158.6	171.9	189.1	210.7	240.1	281.9	334.4
127.5°	148.1	149.6	153.3	158.7	169.0	182.3	198.9	218.3	244.9	280.1	324.3
130°	153.3	154.7	159.1	165.0	175.3	188.6	204.7	223.4	248.0	279.0	318.7
132.5°	157.1	159.0	163.8	170.9	181.2	194.1	209.9	228.2	250.4	278.5	313.6
135°	164.0	166.0	171.4	178.7	189.1	202.3	217.6	234.3	253.9	277.9	306.9
137.5°	170.5	172.5	177.9	185.7	196.0	208.2	222.8	238.8	256.2	276.9	301.2
140°	174.9	177.3	182.2	190.0	199.8	212.2	226.4	241.2	257.8	276.5	297.6
142.5°	179.5	181.6	186.9	194.0	203.8	215.3	229.1	243.5	259.0	275.7	294.5
145°	187.1	188.6	193.0	200.4	208.7	220.0	232.8	246.1	259.8	274.5	290.2
147.5°	194.8	195.6	200.0	206.4	214.4	224.0	235.7	247.6	259.8	272.7	286.1
150°	199.8	200.4	204.3	210.7	217.6	226.4	237.7	248.0	259.8	271.0	283.4
152.5°	205.0	205.1	209.1	214.6	220.7	229.1	238.8	248.8	258.6	269.1	280.3
155°	212.7	212.7	215.6	220.5	225.9	232.8	241.2	249.0	257.4	265.7	275.5
157.5°	218.7	219.1	221.4	225.8	230.4	235.7	242.4	249.5	255.6	262.6	270.2
160°	223.4	223.4	225.4	229.4	232.8	237.7	243.6	249.5	254.9	260.3	266.7
162.5°	227.0	227.0	228.6	231.7	234.7	238.8	244.0	249.1	253.3	258.0	263.1
165°	232.3	231.8	232.8	235.2	237.2	240.6	244.5	248.0	251.0	254.4	258.3
167.5°	236.3	235.7	236.2	238.1	239.4	241.6	244.4	247.2	248.6	250.8	253.7
170°	238.7	237.7	238.2	239.6	240.6	241.6	244.1	246.1	247.0	248.5	251.0
172.5°	240.2	239.6	239.8	240.8	241.4	242.0	244.1	245.6	245.8	246.5	248.2
175°	242.1	241.6	241.2	242.1	242.1	242.6	243.6	244.5	244.1	244.1	245.0
177.5°	243.0	242.6	242.2	242.6	242.6	242.6	243.0	243.7	243.0	242.6	243.0
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6



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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°	14.2	14.1	14.0	14.0	13.7	13.6	13.4	13.2
90°	12.3	12.7	13.3	14.2	13.8	14.2	14.7	14.2
92.5°	41.3	32.8	29.0	26.4	25.6	24.0	24.5	23.7
95°	176.8	119.9	93.8	76.1	66.8	62.3	58.9	57.0
97.5°	440.7	353.0	289.6	230.9	194.7	172.5	159.3	155.1
100°	579.0	539.2	481.7	412.0	362.4	326.6	307.5	307.9
102.5°	625.0	623.7	590.2	546.0	507.4	479.0	463.0	451.7
105°	638.4	687.5	696.9	684.1	661.5	642.8	627.2	624.7
107.5°	599.7	679.5	722.5	739.9	740.4	734.1	728.8	724.3
110°	562.7	653.2	715.1	749.4	763.2	767.1	766.1	765.1



TEST NUMBER: P332341-935

CATALOG NUMBER: S123RDIP-S1000D585U935-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	526.2	618.5	687.9	732.1	757.2	769.5	773.2	773.4
115°	477.9	563.3	635.5	689.0	725.8	747.4	757.2	759.7
117.5°	442.7	516.5	581.3	635.7	674.1	698.8	713.0	716.3
120°	424.3	490.6	549.5	599.2	637.9	665.5	677.2	680.2
122.5°	409.7	469.8	524.3	570.4	604.9	629.6	642.7	646.4
125°	390.4	443.9	491.1	530.4	561.8	583.4	595.7	599.2
127.5°	373.5	421.3	463.8	499.6	527.5	546.0	557.1	560.3
130°	362.9	407.1	446.9	480.3	506.4	524.0	534.3	538.2
132.5°	353.1	393.7	430.8	462.6	487.1	504.7	513.8	516.6
135°	339.8	374.7	406.7	434.6	458.7	473.4	482.2	485.7
137.5°	327.8	356.4	383.8	408.1	428.3	443.2	450.7	453.0
140°	320.7	345.7	369.3	390.4	409.1	422.8	430.7	430.2
142.5°	314.0	335.5	355.9	374.3	390.2	402.4	409.5	409.0
145°	305.9	322.2	337.9	352.1	364.4	374.7	378.7	379.6
147.5°	299.4	312.2	324.9	335.0	344.3	351.3	355.1	355.4
150°	294.6	305.9	316.2	325.6	332.9	338.4	341.3	341.3
152.5°	290.3	300.1	309.2	316.9	322.7	327.8	329.5	329.5
155°	283.9	291.7	299.1	305.0	309.4	313.3	314.3	314.8
157.5°	277.0	283.5	289.3	293.9	297.7	300.7	301.4	301.4
160°	273.0	278.4	283.4	286.8	290.2	293.2	293.2	292.7
162.5°	268.4	272.9	277.5	280.5	282.8	285.3	285.3	284.8
165°	262.3	265.2	268.6	271.0	273.0	275.0	274.5	274.5
167.5°	256.9	259.2	261.1	262.9	263.8	265.2	264.7	264.7
170°	253.4	254.9	256.8	257.8	258.3	259.3	258.8	258.8
172.5°	250.3	251.3	252.9	253.5	253.6	254.6	253.7	253.3
175°	246.1	246.5	247.5	247.5	247.5	248.0	247.5	247.0
177.5°	243.4	243.7	244.2	244.2	243.7	244.2	243.4	243.4
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6

(END OF REPORT)