

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: P332033-930

Luminaire Tested: **S123DIP-S1000D1025U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332033-930
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: S123DIP-S1000D1025U930-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6701.5 lumens
Efficiency: N/A
Efficacy: 110.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

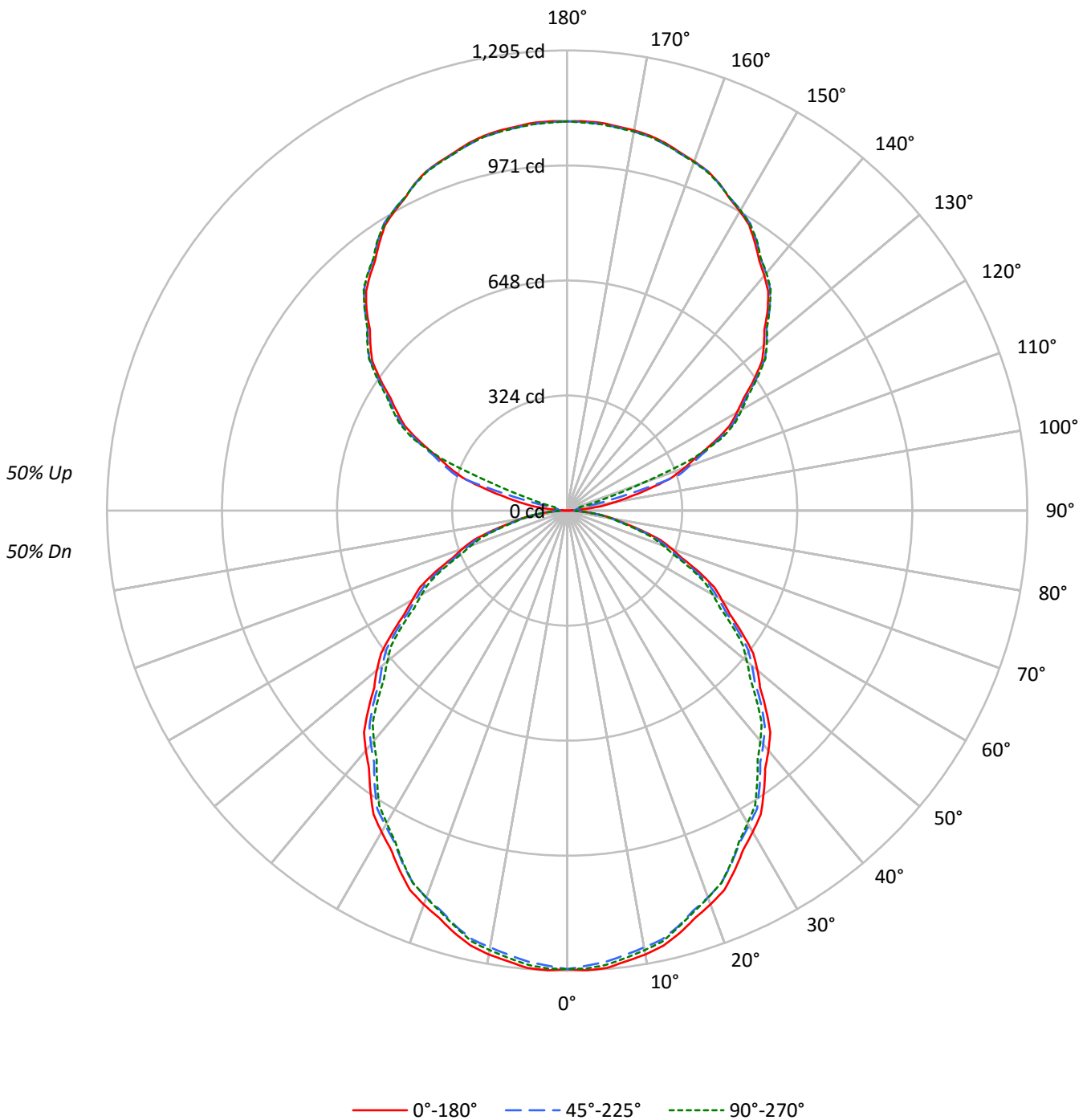
Input Watts (W): 60.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	99	99	99	99	83	83	83		69	69	69		56	56	56	50
1	98	93	89	86	90	86	83	80	73	71	68		61	59	58		50	48	47	42
2	89	82	75	70	82	75	70	66	64	60	57		53	51	48		44	42	40	35
3	81	72	64	58	75	66	60	55	56	52	48		47	44	41		39	36	34	30
4	74	63	55	49	68	59	52	46	50	45	40		42	38	35		35	32	29	26
5	68	56	48	42	63	52	45	40	45	39	35		38	33	30		31	28	25	22
6	63	51	42	37	58	47	40	35	40	35	30		34	30	26		28	25	22	19
7	58	46	38	32	53	43	35	30	37	31	27		31	27	23		26	22	20	17
8	54	41	34	28	50	39	32	27	33	28	24		28	24	21		24	20	18	15
9	50	38	30	25	46	35	29	24	31	25	21		26	22	19		22	18	16	14
10	47	35	27	23	43	32	26	21	28	23	19		24	20	17		20	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13891	13891	13891
5°	13956	13765	13861
10°	13864	13645	13729
15°	13701	13490	13515
20°	13512	13270	13283
25°	13258	13007	12981
30°	12978	12716	12619
35°	12686	12408	12248
40°	12381	12067	11880
45°	12044	11756	11469
50°	11707	11372	11055
55°	11265	10975	10640
60°	10820	10512	10176
65°	10427	10004	9694
70°	9847	9429	9010
75°	9000	8675	8305
80°	8114	7773	7705
85°	7126	6854	6570



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.6	1.8
10°-20°	343.3	5.1
20°-30°	507.0	7.6
30°-40°	592.3	8.8
40°-50°	595.5	8.9
50°-60°	523.1	7.8
60°-70°	389.7	5.8
70°-80°	222.0	3.3
80°-90°	66.8	1.0
90°-100°	39.8	0.6
100°-110°	189.8	2.8
110°-120°	455.9	6.8
120°-130°	580.5	8.7
130°-140°	620.3	9.3
140°-150°	580.0	8.7
150°-160°	467.9	7.0
160°-170°	302.0	4.5
170°-180°	104.1	1.6
0°-30°	971.9	14.5
0°-40°	1564.1	23.3
0°-60°	2682.6	40.0
0°-90°	3361.1	50.2
90°-120°	685.5	10.2
90°-150°	2466.4	36.8
90°-180°	3340.0	49.8
0°-180°	6701.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1290	1290	1290	1290	1290	
5°	1292	1286	1274	1284	1283	122
15°	1230	1224	1211	1219	1213	346
25°	1116	1109	1095	1096	1093	514
35°	965	958	944	938	932	604
45°	791	786	772	759	753	611
55°	600	598	585	573	567	538
65°	409	404	393	384	381	404
75°	216	212	209	203	200	231
85°	58	56	56	53	53	63
90°	1	9	20	23	24	5
95°	50	19	25	31	31	61
105°	242	247	178	42	36	257
115°	455	460	467	475	478	449
125°	641	648	651	653	654	572
135°	798	803	806	809	806	614
145°	921	927	928	930	930	576
155°	1015	1013	1014	1018	1013	467
165°	1070	1068	1067	1073	1068	302
175°	1095	1092	1092	1097	1091	104
180°	1095	1095	1095	1095	1095	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5
2.5°	1294.9	1294.2	1293.4	1292.6	1291.8	1290.3	1288.2	1286.0	1283.9	1281.7	1283.6
5°	1291.6	1290.4	1289.2	1287.9	1286.7	1284.7	1282.1	1279.3	1276.6	1273.9	1276.4
7.5°	1279.0	1277.7	1276.5	1275.3	1274.1	1272.0	1269.3	1266.4	1263.6	1260.8	1263.0
10°	1268.4	1267.1	1265.8	1264.6	1263.4	1261.2	1258.0	1254.7	1251.6	1248.4	1250.6
12.5°	1254.1	1253.1	1252.1	1251.0	1250.0	1248.0	1245.0	1241.9	1238.9	1235.9	1237.5
15°	1229.5	1228.5	1227.5	1226.5	1225.6	1223.4	1220.3	1217.1	1213.8	1210.6	1212.6
17.5°	1200.9	1199.5	1198.3	1197.0	1195.7	1193.5	1190.3	1187.1	1183.9	1180.6	1182.0
20°	1179.6	1178.1	1176.6	1175.1	1173.6	1171.3	1168.1	1164.9	1161.7	1158.5	1159.4
22.5°	1155.6	1154.1	1152.7	1151.1	1149.7	1147.4	1144.1	1140.9	1137.8	1134.5	1135.3
25°	1116.3	1114.8	1113.4	1111.9	1110.4	1108.1	1104.8	1101.6	1098.5	1095.2	1095.4
27.5°	1074.4	1072.9	1071.5	1070.1	1068.6	1066.2	1062.7	1059.3	1055.8	1052.4	1052.6
30°	1044.2	1042.9	1041.7	1040.5	1039.3	1036.9	1033.5	1030.0	1026.5	1023.1	1023.1
32.5°	1014.0	1012.4	1010.7	1009.1	1007.5	1005.3	1002.7	1000.0	997.4	994.7	993.3
35°	965.4	963.9	962.5	961.0	959.4	957.2	953.9	950.7	947.5	944.3	942.8
37.5°	915.7	913.8	911.9	910.0	908.2	905.6	902.4	899.1	895.9	892.6	890.8
40°	881.1	879.5	878.1	876.6	875.1	872.7	869.2	865.8	862.3	858.8	856.9
42.5°	846.4	844.7	843.1	841.4	839.8	837.1	833.7	830.3	826.8	823.4	821.4
45°	791.2	790.2	789.2	788.2	787.3	785.1	782.0	778.7	775.5	772.3	769.4
47.5°	736.4	734.9	733.5	732.1	730.7	728.4	725.5	722.4	719.4	716.4	713.5
50°	699.1	697.8	696.6	695.4	694.1	691.9	688.7	685.5	682.3	679.1	676.4
52.5°	660.0	659.2	658.4	657.5	656.6	654.5	651.2	647.8	644.3	640.9	638.6
55°	600.3	600.1	599.8	599.6	599.3	597.6	594.4	591.2	588.0	584.8	582.0
57.5°	543.5	542.7	541.8	541.0	540.1	538.4	535.9	533.3	530.8	528.2	525.8
60°	502.6	502.4	502.1	501.9	501.7	500.1	497.1	494.2	491.2	488.3	486.0
62.5°	466.3	465.6	465.0	464.3	463.7	461.9	458.9	456.0	453.1	450.0	447.8
65°	409.4	408.2	407.0	405.8	404.6	402.7	400.2	397.8	395.3	392.8	390.9
67.5°	349.4	348.2	347.2	346.1	345.0	343.5	341.6	339.7	337.9	336.0	334.3
70°	312.9	311.4	310.0	308.5	307.0	305.5	304.0	302.6	301.1	299.6	297.9
72.5°	274.8	273.7	272.6	271.5	270.4	269.0	267.3	265.7	264.0	262.3	260.8
75°	216.4	215.4	214.4	213.4	212.5	211.6	210.8	210.1	209.4	208.6	207.4
77.5°	164.7	164.1	163.5	163.1	162.5	161.8	160.9	160.0	159.1	158.2	157.4
80°	130.9	130.2	129.5	128.7	128.0	127.3	126.9	126.4	125.9	125.4	125.1
82.5°	98.1	97.9	97.8	97.7	97.5	97.3	97.3	97.2	97.1	97.0	96.5
85°	57.7	57.2	56.7	56.3	55.8	55.5	55.5	55.5	55.5	55.5	55.0
87.5°	23.2	23.0	22.7	22.6	22.3	22.3	22.6	22.9	23.2	23.4	23.4
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°	15.2	14.6	14.1	13.6	13.1	13.8	15.5	17.3	19.1	20.9	22.0
95°	49.7	42.2	34.8	27.4	20.0	17.3	19.2	21.3	23.2	25.2	26.5
97.5°	99.8	96.4	93.1	89.8	86.4	78.3	65.3	52.3	39.2	26.2	27.6
100°	137.5	141.1	144.8	148.4	152.0	139.7	111.5	83.2	55.0	26.8	28.3
102.5°	180.5	183.1	185.7	188.3	190.9	176.8	146.0	115.2	84.4	53.6	49.1
105°	242.5	244.5	246.5	248.5	250.5	243.3	227.1	210.8	194.5	178.2	146.2
107.5°	307.9	309.6	311.1	312.7	314.3	316.4	318.9	321.6	324.1	326.7	303.2
110°	351.6	353.0	354.4	355.9	357.3	359.1	361.0	363.1	365.0	367.0	361.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	393.2	394.5	395.8	397.1	398.4	400.1	402.1	404.1	406.0	408.1	408.1
115°	454.9	456.0	457.1	458.2	459.3	460.6	462.2	463.8	465.5	467.1	469.0
117.5°	514.6	516.0	517.3	518.7	520.0	521.1	521.9	522.8	523.6	524.4	525.9
120°	551.7	553.3	555.0	556.6	558.2	559.4	559.9	560.4	561.0	561.5	563.0
122.5°	589.5	590.8	592.2	593.5	594.8	595.9	596.6	597.3	597.9	598.6	599.7
125°	641.2	642.7	644.2	645.6	647.0	648.2	648.9	649.5	650.3	651.0	651.4
127.5°	691.4	692.8	694.3	695.7	697.2	698.3	699.2	700.1	700.9	701.8	702.4
130°	722.7	724.1	725.5	727.0	728.5	729.5	730.3	731.0	731.6	732.4	733.1
132.5°	752.6	754.1	755.5	756.9	758.4	759.4	759.9	760.5	761.2	761.7	762.5
135°	798.3	799.4	800.5	801.6	802.7	803.6	804.3	805.0	805.8	806.5	807.0
137.5°	837.4	838.8	840.2	841.6	842.9	843.8	844.2	844.6	845.0	845.4	846.2
140°	863.4	864.5	865.6	866.7	867.8	868.6	869.1	869.7	870.3	870.7	871.5
142.5°	887.5	888.6	889.7	890.8	891.9	892.7	893.2	893.7	894.3	894.9	895.4
145°	921.2	922.5	923.7	925.0	926.3	927.1	927.5	927.8	928.1	928.5	928.9
147.5°	952.9	953.8	954.6	955.4	956.3	956.8	957.2	957.6	958.0	958.3	958.7
150°	972.5	973.1	973.5	974.1	974.6	975.1	975.4	975.8	976.2	976.6	976.9
152.5°	990.0	990.3	990.6	990.8	991.1	991.3	991.5	991.7	992.0	992.1	992.8
155°	1014.8	1014.4	1014.1	1013.7	1013.3	1013.3	1013.4	1013.6	1013.8	1014.0	1014.9
157.5°	1034.0	1034.0	1034.0	1033.9	1033.9	1033.7	1033.6	1033.4	1033.2	1033.0	1034.1
160°	1045.7	1045.5	1045.4	1045.2	1045.0	1044.8	1044.6	1044.5	1044.2	1044.1	1045.2
162.5°	1056.8	1056.3	1055.8	1055.4	1054.9	1054.6	1054.4	1054.2	1054.0	1053.9	1055.1
165°	1070.2	1069.6	1069.0	1068.5	1068.0	1067.6	1067.4	1067.2	1067.1	1066.9	1068.3
167.5°	1080.5	1079.9	1079.1	1078.4	1077.7	1077.3	1077.3	1077.3	1077.3	1077.3	1078.7
170°	1086.4	1085.7	1085.0	1084.3	1083.5	1083.1	1083.1	1083.1	1083.1	1083.1	1084.6
172.5°	1090.3	1089.5	1088.6	1087.7	1086.9	1086.5	1086.6	1086.8	1086.9	1087.0	1088.5
175°	1095.4	1094.5	1093.6	1092.7	1091.8	1091.4	1091.5	1091.8	1091.9	1092.1	1093.4
177.5°	1096.7	1095.9	1095.2	1094.5	1093.8	1093.5	1093.6	1093.8	1093.9	1094.1	1095.2
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5
2.5°	1285.6	1287.6	1289.6	1290.5	1290.2	1290.0	1289.8	1289.6
5°	1278.8	1281.2	1283.8	1284.7	1284.3	1283.8	1283.3	1282.8
7.5°	1265.3	1267.5	1269.7	1270.6	1270.3	1270.1	1269.7	1269.4
10°	1252.8	1255.0	1257.3	1258.1	1257.6	1257.1	1256.6	1256.1
12.5°	1239.2	1240.8	1242.4	1243.1	1242.8	1242.5	1242.2	1241.9
15°	1214.6	1216.5	1218.5	1218.8	1217.3	1215.8	1214.3	1212.8
17.5°	1183.4	1184.8	1186.2	1186.6	1186.1	1185.5	1185.0	1184.5
20°	1160.4	1161.5	1162.5	1162.5	1161.8	1161.1	1160.3	1159.6
22.5°	1136.1	1136.9	1137.7	1137.6	1136.7	1135.7	1134.8	1133.8
25°	1095.7	1096.0	1096.3	1096.0	1095.2	1094.5	1093.7	1093.0
27.5°	1052.8	1053.0	1053.2	1052.8	1051.9	1050.9	1050.0	1049.0
30°	1023.1	1023.1	1023.1	1022.2	1020.5	1018.8	1017.1	1015.3
32.5°	991.9	990.6	989.2	988.0	987.1	986.1	985.2	984.2
35°	941.3	939.9	938.4	937.0	935.8	934.6	933.4	932.1
37.5°	889.1	887.3	885.5	884.2	883.5	882.6	881.8	881.1
40°	854.9	853.0	851.0	849.5	848.5	847.5	846.5	845.5
42.5°	819.4	817.4	815.5	814.0	813.0	812.0	811.1	810.1
45°	766.4	763.4	760.5	758.4	757.2	755.9	754.7	753.4
47.5°	710.5	707.7	704.7	702.8	701.6	700.6	699.5	698.4
50°	673.7	671.0	668.2	666.2	664.7	663.2	661.7	660.2
52.5°	636.3	634.0	631.7	629.7	628.3	626.8	625.3	623.9
55°	579.4	576.7	574.0	571.9	570.7	569.5	568.3	567.0
57.5°	523.3	521.0	518.5	516.6	515.2	513.7	512.3	510.9
60°	483.8	481.6	479.4	477.7	476.4	475.2	473.9	472.7
62.5°	445.6	443.4	441.2	439.7	438.8	438.0	437.2	436.3
65°	388.9	386.9	384.9	383.6	382.9	382.1	381.3	380.6
67.5°	332.6	330.8	329.1	327.8	326.7	325.6	324.6	323.6
70°	296.1	294.4	292.7	291.2	290.0	288.8	287.6	286.3
72.5°	259.3	257.7	256.2	255.1	254.5	253.8	253.2	252.6
75°	206.2	204.9	203.7	202.7	201.9	201.2	200.5	199.7
77.5°	156.5	155.7	154.9	154.5	154.5	154.5	154.5	154.5
80°	124.9	124.7	124.4	124.3	124.3	124.3	124.3	124.3
82.5°	96.1	95.6	95.2	94.9	94.7	94.5	94.3	94.1
85°	54.5	54.0	53.5	53.2	53.2	53.2	53.2	53.2
87.5°	23.3	23.3	23.2	23.2	23.3	23.4	23.5	23.6
90°	21.0	21.7	22.4	23.0	23.3	23.7	24.1	24.4
92.5°	23.2	24.3	25.4	26.2	26.3	26.6	26.8	27.0
95°	27.7	29.0	30.3	30.9	30.9	30.9	30.9	30.9
97.5°	29.1	30.6	32.0	32.8	33.0	33.2	33.3	33.5
100°	29.8	31.2	32.6	33.4	33.7	33.8	34.0	34.2
102.5°	44.6	40.1	35.6	33.5	33.8	34.2	34.5	34.8
105°	114.2	82.2	50.2	34.3	34.7	35.1	35.5	35.8
107.5°	279.7	256.2	232.8	209.0	184.8	160.7	136.6	112.4
110°	355.1	349.1	343.2	327.3	301.3	275.5	249.6	223.8



TEST NUMBER: P332033-930

CATALOG NUMBER: S123DIP-S1000D1025U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	408.2	408.4	408.5	405.8	400.3	394.8	389.4	383.9
115°	470.8	472.5	474.3	475.6	476.3	477.0	477.8	478.5
117.5°	527.3	528.7	530.2	531.0	531.2	531.2	531.4	531.6
120°	564.4	565.8	567.3	568.0	568.0	568.0	568.0	568.0
122.5°	600.6	601.7	602.7	603.2	603.4	603.6	603.6	603.8
125°	651.8	652.1	652.5	652.8	653.2	653.5	654.0	654.3
127.5°	703.0	703.5	704.1	704.3	703.8	703.5	703.1	702.8
130°	733.9	734.6	735.3	735.5	735.2	734.7	734.4	734.0
132.5°	763.1	763.9	764.6	764.7	764.2	763.7	763.2	762.7
135°	807.6	808.1	808.6	808.6	808.1	807.6	807.0	806.5
137.5°	847.1	848.0	848.8	849.1	848.7	848.4	848.0	847.7
140°	872.2	872.9	873.7	873.8	873.4	873.1	872.8	872.4
142.5°	896.0	896.6	897.2	897.2	896.7	896.2	895.7	895.2
145°	929.3	929.6	930.0	930.2	930.2	930.2	930.2	930.2
147.5°	959.0	959.4	959.8	959.5	958.7	957.9	957.0	956.2
150°	977.3	977.6	978.0	977.9	977.4	976.8	976.2	975.8
152.5°	993.4	994.1	994.7	994.7	993.8	993.0	992.2	991.3
155°	1015.8	1016.7	1017.6	1017.5	1016.4	1015.4	1014.2	1013.2
157.5°	1035.2	1036.2	1037.4	1037.2	1035.8	1034.4	1033.0	1031.6
160°	1046.3	1047.3	1048.4	1048.3	1047.1	1045.8	1044.6	1043.3
162.5°	1056.3	1057.5	1058.7	1058.8	1057.7	1056.5	1055.5	1054.3
165°	1069.8	1071.2	1072.7	1072.8	1071.5	1070.2	1068.9	1067.7
167.5°	1080.2	1081.7	1083.0	1083.0	1081.7	1080.2	1078.7	1077.3
170°	1086.1	1087.5	1088.9	1088.9	1087.5	1086.1	1084.6	1083.1
172.5°	1090.0	1091.4	1092.8	1092.7	1091.2	1089.6	1088.0	1086.4
175°	1094.6	1095.9	1097.1	1097.1	1095.6	1094.2	1092.7	1091.3
177.5°	1096.3	1097.6	1098.7	1098.5	1097.1	1095.7	1094.2	1092.7
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4

(END OF REPORT)