

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: P332043-830

Luminaire Tested: **S123DIP-S1000D1195U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332043-830
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: S123DIP-S1000D1195U830-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7748.8 lumens
Efficiency: N/A
Efficacy: 118.5 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

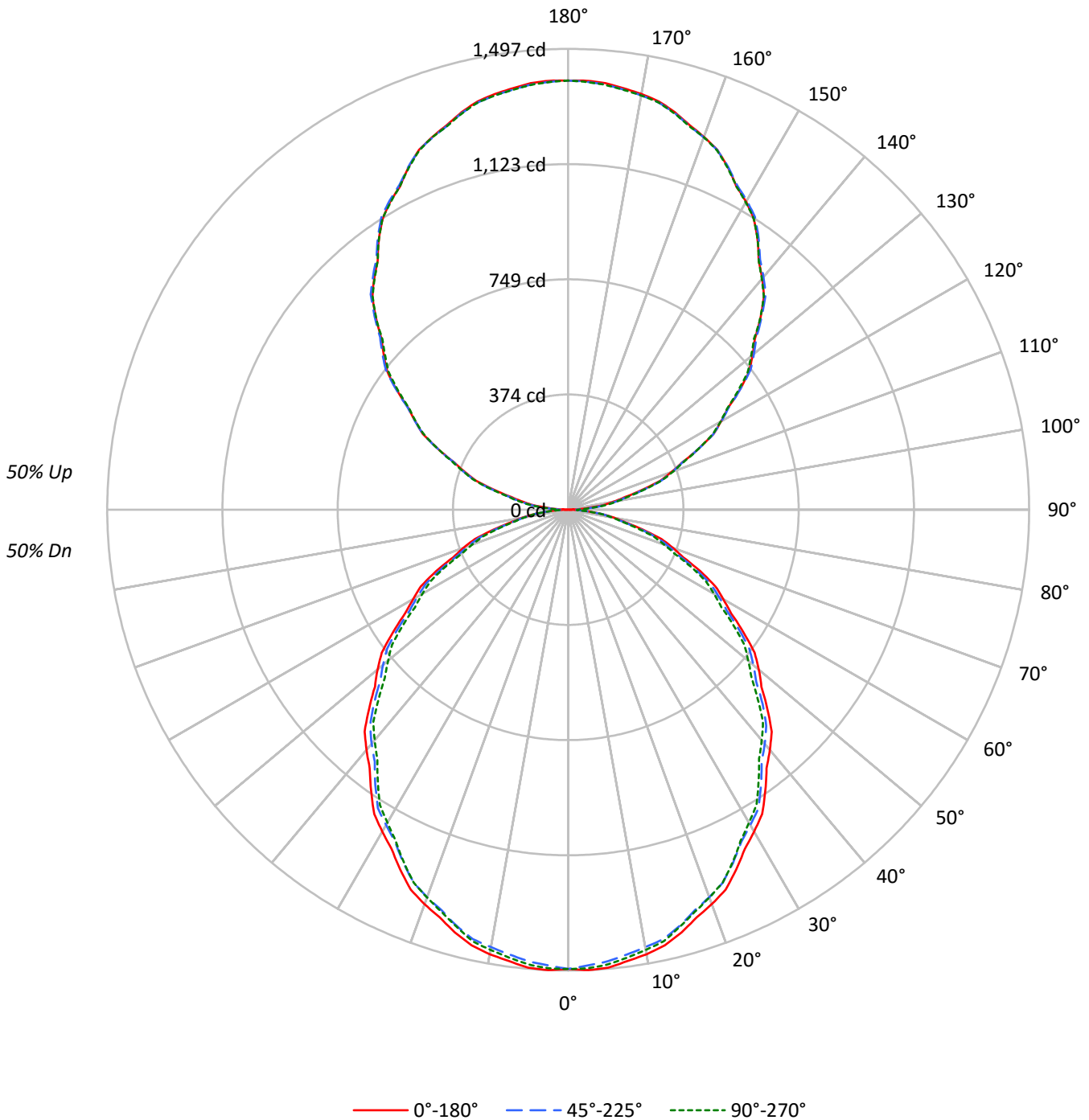
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332043-830

CATALOG NUMBER: S123DIP-S1000D1195U830-4F0-1E-UDD-F1

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	65	64	60	57		53	51	48		44	42	40	35
3	81	72	64	58	75	66	60	55	56	52	47		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°	16060	16060	16060
5°	16134	15913	16024
10°	16027	15774	15872
15°	15840	15597	15624
20°	15621	15341	15356
25°	15327	15037	15007
30°	15003	14701	14588
35°	14666	14345	14160
40°	14313	13952	13735
45°	13922	13592	13259
50°	13534	13147	12782
55°	13024	12688	12301
60°	12510	12152	11765
65°	12055	11566	11207
70°	11383	10902	10414
75°	10405	10031	9603
80°	9385	8988	8901
85°	8238	7929	7595



TEST NUMBER: P332043-830

CATALOG NUMBER: S123DIP-S1000D1195U830-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.5	1.8
10°-20°	396.8	5.1
20°-30°	586.2	7.6
30°-40°	684.7	8.8
40°-50°	688.4	8.9
50°-60°	604.7	7.8
60°-70°	450.5	5.8
70°-80°	256.7	3.3
80°-90°	77.8	1.0
90°-100°	90.8	1.2
100°-110°	271.8	3.5
110°-120°	462.3	6.0
120°-130°	608.1	7.8
130°-140°	683.5	8.8
140°-150°	671.9	8.7
150°-160°	565.6	7.3
160°-170°	376.5	4.9
170°-180°	131.8	1.7
0°-30°	1123.5	14.5
0°-40°	1808.2	23.3
0°-60°	3101.3	40.0
0°-90°	3886.3	50.2
90°-120°	825.0	10.6
90°-150°	2788.5	36.0
90°-180°	3863.0	49.9
0°-180°	7748.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1492	1492	1492	1492	1492	
5°	1493	1486	1473	1485	1483	141
15°	1421	1416	1400	1409	1402	401
25°	1290	1282	1266	1267	1264	594
35°	1116	1108	1092	1084	1078	698
45°	915	909	893	878	871	706
55°	694	692	676	662	656	621
65°	473	467	454	444	440	467
75°	250	245	241	235	231	267
85°	67	64	64	62	62	73
90°	1	12	26	31	33	8
95°	65	72	81	85	85	73
105°	246	249	258	259	261	264
115°	465	468	467	468	467	460
125°	681	684	682	678	674	607
135°	884	890	889	885	883	681
145°	1072	1074	1078	1076	1072	669
155°	1228	1228	1229	1232	1225	565
165°	1337	1334	1334	1340	1333	377
175°	1391	1387	1386	1392	1385	132
180°	1394	1394	1394	1394	1394	



TEST NUMBER: P332043-830

CATALOG NUMBER: S123DIP-S1000D1195U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0
2.5°	1497.0	1496.2	1495.2	1494.3	1493.5	1491.7	1489.2	1486.7	1484.2	1481.7	1483.9
5°	1493.2	1491.8	1490.3	1488.9	1487.5	1485.3	1482.1	1478.9	1475.8	1472.7	1475.6
7.5°	1478.6	1477.2	1475.7	1474.3	1472.9	1470.6	1467.4	1464.1	1460.8	1457.5	1460.1
10°	1466.3	1464.9	1463.4	1462.0	1460.6	1458.0	1454.3	1450.6	1446.9	1443.2	1445.8
12.5°	1449.8	1448.7	1447.5	1446.2	1445.1	1442.7	1439.3	1435.8	1432.3	1428.8	1430.7
15°	1421.4	1420.2	1419.1	1418.0	1416.8	1414.4	1410.7	1407.0	1403.3	1399.6	1401.8
17.5°	1388.3	1386.8	1385.3	1383.8	1382.3	1379.8	1376.0	1372.3	1368.7	1364.9	1366.5
20°	1363.7	1362.0	1360.3	1358.5	1356.8	1354.1	1350.4	1346.7	1343.0	1339.3	1340.4
22.5°	1336.0	1334.3	1332.6	1330.8	1329.1	1326.4	1322.7	1319.0	1315.3	1311.5	1312.5
25°	1290.5	1288.8	1287.1	1285.4	1283.6	1281.0	1277.2	1273.6	1269.9	1266.1	1266.4
27.5°	1242.1	1240.4	1238.7	1237.1	1235.4	1232.6	1228.6	1224.6	1220.6	1216.6	1216.8
30°	1207.1	1205.7	1204.3	1202.9	1201.5	1198.7	1194.8	1190.7	1186.8	1182.8	1182.8
32.5°	1172.2	1170.4	1168.5	1166.6	1164.7	1162.2	1159.1	1156.1	1153.0	1149.9	1148.3
35°	1116.1	1114.4	1112.7	1111.0	1109.2	1106.5	1102.8	1099.1	1095.4	1091.7	1090.0
37.5°	1058.6	1056.4	1054.2	1052.1	1049.9	1047.0	1043.2	1039.4	1035.7	1031.9	1029.8
40°	1018.6	1016.8	1015.1	1013.4	1011.7	1008.9	1004.8	1000.9	996.9	992.9	990.6
42.5°	978.5	976.6	974.7	972.7	970.8	967.8	963.8	959.9	955.8	951.9	949.6
45°	914.6	913.5	912.4	911.3	910.1	907.7	904.0	900.2	896.5	892.9	889.5
47.5°	851.3	849.6	848.0	846.3	844.7	842.1	838.7	835.2	831.7	828.2	824.8
50°	808.2	806.7	805.3	803.9	802.5	799.9	796.2	792.5	788.8	785.1	781.9
52.5°	763.0	762.0	761.1	760.2	759.1	756.7	752.8	748.9	744.9	740.9	738.3
55°	694.0	693.7	693.4	693.1	692.9	690.9	687.2	683.4	679.8	676.1	672.9
57.5°	628.3	627.4	626.4	625.5	624.4	622.5	619.5	616.5	613.6	610.7	607.8
60°	581.1	580.8	580.5	580.2	579.9	578.2	574.7	571.3	567.9	564.5	561.8
62.5°	539.0	538.3	537.5	536.8	536.1	534.0	530.6	527.2	523.8	520.3	517.7
65°	473.3	471.9	470.5	469.1	467.7	465.5	462.7	459.9	456.9	454.1	451.9
67.5°	403.9	402.6	401.3	400.1	398.8	397.1	394.9	392.8	390.6	388.4	386.4
70°	361.7	360.1	358.4	356.7	355.0	353.2	351.5	349.8	348.1	346.4	344.4
72.5°	317.6	316.4	315.1	313.9	312.6	311.0	309.1	307.2	305.2	303.2	301.5
75°	250.2	249.0	247.9	246.8	245.6	244.6	243.7	242.9	242.0	241.2	239.8
77.5°	190.4	189.7	189.1	188.5	187.8	187.0	186.1	185.0	184.0	182.9	182.0
80°	151.4	150.5	149.7	148.8	148.0	147.2	146.7	146.1	145.5	145.0	144.7
82.5°	113.4	113.2	113.1	112.9	112.7	112.5	112.4	112.4	112.3	112.2	111.6
85°	66.7	66.2	65.6	65.0	64.5	64.2	64.2	64.2	64.2	64.2	63.5
87.5°	26.9	26.7	26.5	26.3	26.1	26.2	26.6	27.1	27.4	27.8	27.8
90°	1.1	3.5	5.9	8.4	10.8	13.7	16.8	20.0	23.1	26.3	27.2
92.5°	26.5	28.2	29.8	31.5	33.1	34.9	36.7	38.5	40.2	42.0	42.8
95°	64.7	66.4	68.1	69.7	71.4	73.2	75.2	77.1	79.1	81.1	82.0
97.5°	114.8	116.0	117.3	118.6	119.8	121.2	122.6	124.0	125.4	126.8	127.9
100°	148.9	150.4	151.8	153.4	154.8	156.1	157.3	158.5	159.8	161.0	161.7
102.5°	188.3	189.3	190.1	191.0	191.9	193.1	194.7	196.3	197.9	199.5	200.3
105°	246.4	246.9	247.4	247.9	248.4	249.7	251.8	254.1	256.3	258.4	258.4
107.5°	313.9	314.1	314.4	314.7	315.0	315.7	316.5	317.4	318.2	319.1	319.9
110°	355.9	356.4	356.8	357.4	357.9	358.4	358.8	359.3	359.8	360.3	361.3



TEST NUMBER: P332043-830

CATALOG NUMBER: S123DIP-S1000D1195U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	399.7	400.0	400.3	400.6	400.9	401.1	401.1	401.2	401.3	401.4	402.7
115°	465.4	466.2	466.8	467.6	468.3	468.4	468.0	467.5	467.0	466.6	466.7
117.5°	531.6	532.1	532.5	533.0	533.5	533.5	532.8	532.2	531.6	530.9	530.8
120°	572.8	574.2	575.7	577.1	578.6	578.7	577.5	576.3	575.0	573.8	573.6
122.5°	615.7	616.7	617.8	618.9	620.0	620.2	619.5	618.9	618.3	617.6	617.0
125°	681.2	681.9	682.6	683.3	684.1	684.2	683.7	683.2	682.8	682.3	681.3
127.5°	741.6	743.2	744.7	746.3	747.8	748.4	747.8	747.2	746.8	746.2	744.9
130°	781.9	783.8	785.8	787.8	789.7	790.3	789.6	788.8	788.2	787.4	786.5
132.5°	822.2	824.2	826.1	828.0	830.0	830.8	830.2	829.6	829.1	828.6	827.4
135°	883.7	885.2	886.6	888.2	889.6	890.2	889.9	889.8	889.5	889.2	888.3
137.5°	940.8	941.9	943.1	944.3	945.6	946.5	947.2	947.7	948.4	949.0	948.0
140°	980.1	981.4	982.6	983.8	985.0	985.7	986.0	986.2	986.5	986.7	986.5
142.5°	1016.1	1017.3	1018.5	1019.7	1021.0	1021.7	1022.2	1022.7	1023.0	1023.5	1023.2
145°	1072.1	1072.6	1073.1	1073.6	1074.0	1074.7	1075.4	1076.1	1076.9	1077.6	1077.3
147.5°	1121.2	1122.1	1122.9	1123.8	1124.7	1125.5	1126.1	1126.8	1127.5	1128.2	1128.2
150°	1155.4	1155.8	1156.3	1156.8	1157.3	1157.8	1158.3	1158.8	1159.2	1159.7	1159.7
152.5°	1183.4	1184.1	1184.8	1185.4	1186.1	1186.6	1186.8	1187.2	1187.5	1187.8	1188.2
155°	1227.7	1227.7	1227.7	1227.7	1227.7	1227.8	1228.0	1228.2	1228.5	1228.7	1229.7
157.5°	1265.3	1265.0	1264.7	1264.4	1264.1	1264.0	1264.3	1264.5	1264.7	1264.9	1265.9
160°	1288.9	1288.5	1288.0	1287.5	1287.0	1286.8	1286.8	1286.8	1286.8	1286.8	1288.0
162.5°	1309.9	1309.3	1308.6	1308.0	1307.3	1307.0	1307.2	1307.4	1307.6	1307.8	1309.0
165°	1337.2	1336.4	1335.7	1334.9	1334.3	1333.9	1333.9	1333.9	1333.9	1333.9	1335.3
167.5°	1358.9	1357.8	1356.9	1355.9	1354.9	1354.5	1354.7	1354.9	1355.1	1355.3	1356.8
170°	1371.1	1370.1	1369.1	1368.2	1367.2	1366.7	1366.7	1366.7	1366.7	1366.7	1368.4
172.5°	1380.7	1379.8	1378.8	1377.8	1376.9	1376.4	1376.4	1376.4	1376.4	1376.4	1377.9
175°	1390.8	1389.9	1388.8	1387.9	1387.0	1386.4	1386.4	1386.4	1386.4	1386.4	1387.9
177.5°	1395.0	1394.2	1393.5	1392.6	1391.9	1391.5	1391.5	1391.5	1391.5	1391.5	1392.6
180°	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1



TEST NUMBER: P332043-830

CATALOG NUMBER: S123DIP-S1000D1195U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0	1492.0
2.5°	1486.2	1488.6	1490.8	1491.9	1491.6	1491.4	1491.1	1490.9
5°	1478.4	1481.2	1484.1	1485.3	1484.7	1484.1	1483.6	1483.0
7.5°	1462.7	1465.3	1467.8	1469.0	1468.6	1468.3	1467.9	1467.5
10°	1448.3	1450.9	1453.5	1454.4	1453.9	1453.3	1452.7	1452.2
12.5°	1432.6	1434.5	1436.3	1437.1	1436.8	1436.4	1436.1	1435.8
15°	1404.1	1406.4	1408.7	1409.0	1407.3	1405.5	1403.8	1402.1
17.5°	1368.1	1369.7	1371.3	1371.8	1371.2	1370.6	1369.9	1369.3
20°	1341.5	1342.7	1343.9	1344.0	1343.1	1342.3	1341.4	1340.6
22.5°	1313.4	1314.3	1315.2	1315.1	1314.1	1313.0	1311.9	1310.8
25°	1266.7	1267.1	1267.3	1267.1	1266.1	1265.3	1264.4	1263.6
27.5°	1217.1	1217.3	1217.6	1217.1	1216.1	1214.9	1213.9	1212.8
30°	1182.8	1182.8	1182.8	1181.8	1179.8	1177.8	1175.8	1173.7
32.5°	1146.7	1145.2	1143.6	1142.2	1141.1	1140.0	1139.0	1137.8
35°	1088.3	1086.6	1084.9	1083.3	1081.9	1080.4	1079.0	1077.6
37.5°	1027.8	1025.8	1023.7	1022.2	1021.3	1020.4	1019.5	1018.6
40°	988.4	986.1	983.8	982.0	980.9	979.8	978.6	977.5
42.5°	947.3	945.0	942.7	941.0	939.9	938.8	937.6	936.5
45°	886.0	882.6	879.2	876.8	875.3	873.9	872.5	871.0
47.5°	821.4	818.1	814.7	812.5	811.2	809.9	808.7	807.4
50°	778.8	775.7	772.5	770.2	768.5	766.7	765.0	763.3
52.5°	735.6	732.9	730.3	728.0	726.3	724.6	722.9	721.2
55°	669.8	666.7	663.5	661.2	659.8	658.4	657.0	655.5
57.5°	605.0	602.3	599.5	597.2	595.6	593.9	592.3	590.6
60°	559.3	556.8	554.2	552.2	550.7	549.3	547.9	546.5
62.5°	515.2	512.6	510.0	508.3	507.3	506.3	505.4	504.4
65°	449.6	447.2	445.0	443.5	442.6	441.8	440.8	440.0
67.5°	384.5	382.5	380.5	378.9	377.7	376.5	375.2	374.1
70°	342.3	340.4	338.4	336.7	335.3	333.8	332.4	330.9
72.5°	299.7	297.9	296.1	294.9	294.2	293.4	292.8	292.0
75°	238.4	236.9	235.4	234.3	233.5	232.6	231.8	230.9
77.5°	181.0	180.0	179.1	178.6	178.6	178.6	178.6	178.6
80°	144.4	144.1	143.8	143.6	143.6	143.6	143.6	143.6
82.5°	111.1	110.6	110.1	109.7	109.4	109.2	109.1	108.8
85°	63.0	62.4	61.8	61.5	61.5	61.5	61.5	61.5
87.5°	27.8	27.7	27.7	27.7	27.8	27.9	28.0	28.1
90°	28.3	29.2	30.2	30.9	31.4	31.9	32.3	32.9
92.5°	43.6	44.4	45.1	45.4	45.1	44.9	44.5	44.2
95°	82.9	84.0	84.9	85.4	85.4	85.4	85.4	85.4
97.5°	129.0	130.2	131.3	131.8	131.7	131.6	131.5	131.4
100°	162.4	163.2	163.9	164.5	165.0	165.5	166.0	166.5
102.5°	201.0	201.7	202.5	202.7	202.6	202.6	202.5	202.4
105°	258.4	258.4	258.4	258.7	259.2	259.7	260.1	260.6
107.5°	320.7	321.5	322.3	322.4	322.2	321.9	321.6	321.3
110°	362.2	363.3	364.2	364.4	363.9	363.4	363.0	362.5



TEST NUMBER: P332043-830

CATALOG NUMBER: S123DIP-S1000D1195U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	403.8	405.0	406.1	406.7	406.6	406.5	406.4	406.3
115°	467.0	467.2	467.5	467.5	467.2	467.0	466.7	466.6
117.5°	530.8	530.7	530.7	530.4	529.7	529.0	528.3	527.6
120°	573.3	573.2	572.9	572.5	572.0	571.6	571.1	570.5
122.5°	616.4	615.8	615.1	614.4	613.8	613.1	612.4	611.7
125°	680.3	679.4	678.3	677.4	676.5	675.4	674.5	673.5
127.5°	743.5	742.2	740.7	739.5	738.4	737.3	736.1	735.1
130°	785.4	784.5	783.5	782.1	780.4	778.7	777.0	775.3
132.5°	826.2	825.1	823.9	822.7	821.3	820.0	818.7	817.4
135°	887.3	886.3	885.3	884.6	884.1	883.6	883.2	882.7
137.5°	947.0	945.9	944.9	944.0	943.0	942.2	941.2	940.3
140°	986.2	986.0	985.7	984.8	983.1	981.4	979.7	978.0
142.5°	1023.0	1022.8	1022.6	1021.7	1020.4	1019.1	1017.9	1016.5
145°	1077.1	1076.9	1076.7	1076.0	1075.1	1074.0	1073.1	1072.1
147.5°	1128.2	1128.2	1128.2	1127.5	1126.0	1124.5	1123.0	1121.6
150°	1159.7	1159.7	1159.7	1159.0	1157.5	1156.1	1154.6	1153.2
152.5°	1188.5	1188.9	1189.3	1188.9	1187.6	1186.4	1185.1	1183.8
155°	1230.7	1231.6	1232.7	1232.3	1230.6	1228.9	1227.2	1225.4
157.5°	1266.9	1267.9	1268.9	1268.8	1267.4	1266.0	1264.7	1263.3
160°	1289.2	1290.4	1291.7	1291.8	1290.8	1289.8	1288.8	1287.9
162.5°	1310.2	1311.5	1312.7	1312.5	1310.9	1309.4	1307.8	1306.3
165°	1336.8	1338.2	1339.7	1339.5	1337.8	1336.1	1334.5	1332.8
167.5°	1358.3	1359.8	1361.3	1361.3	1359.8	1358.3	1356.8	1355.3
170°	1370.1	1371.9	1373.6	1373.6	1371.9	1370.1	1368.4	1366.7
172.5°	1379.4	1380.9	1382.4	1382.3	1380.5	1378.8	1377.1	1375.5
175°	1389.3	1390.8	1392.2	1392.1	1390.4	1388.7	1387.0	1385.3
177.5°	1393.8	1395.0	1396.1	1396.0	1394.7	1393.3	1391.9	1390.6
180°	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1

(END OF REPORT)