

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: P332039-830

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332039-830
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-S1000D1195U830-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8456.4 lumens
Efficiency: N/A
Efficacy: 129.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

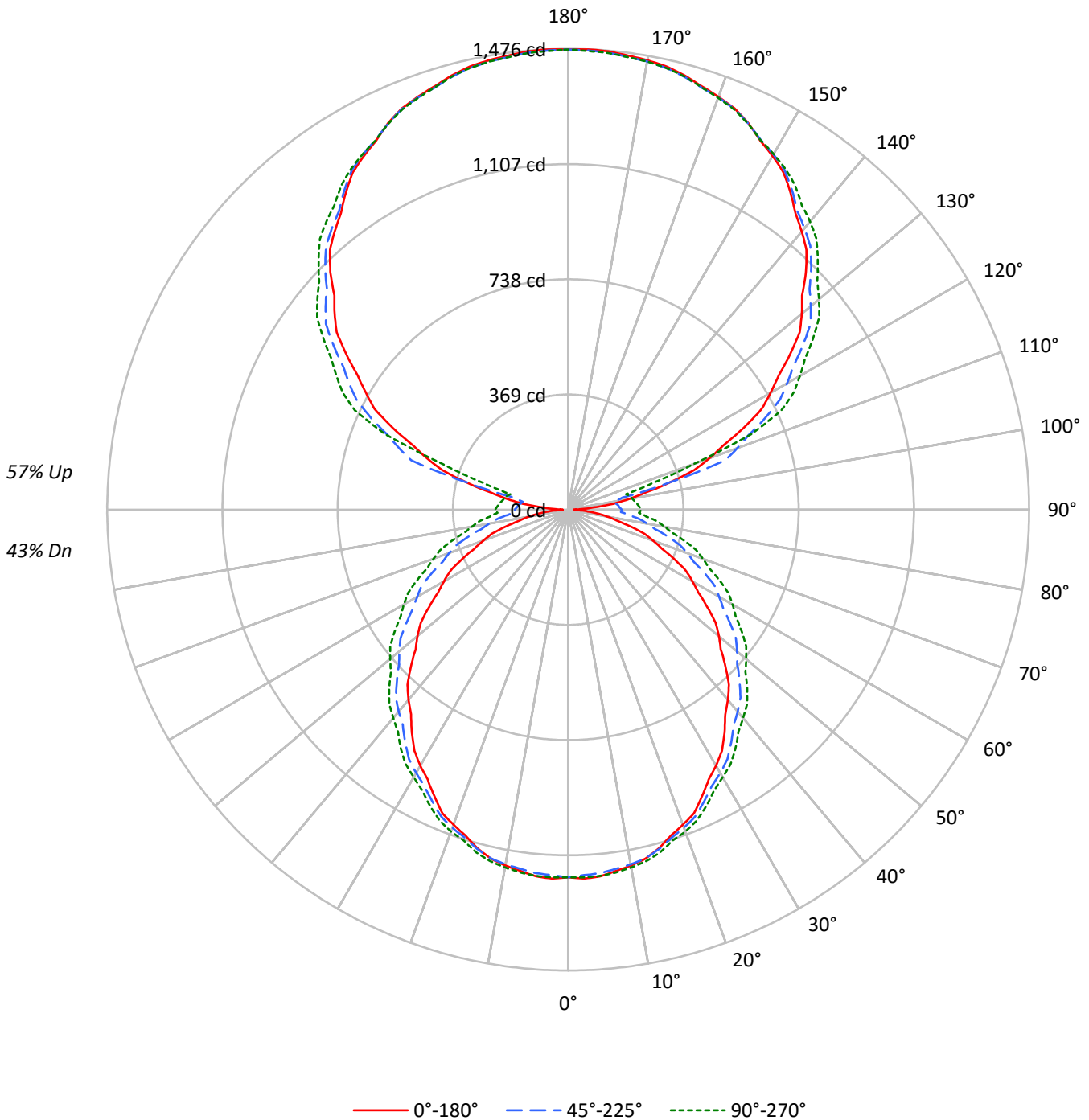
Input Watts (W): 65.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332039-830

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

Luminous Intensity Polar Plot





TEST NUMBER: P332039-830

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

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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	50	50	50	43
1	95	91	86	83	87	83	79	76	68	66	63	55	53	51	42	41	40	34
2	86	79	72	67	79	72	66	62	59	55	52	48	45	42	37	35	33	28
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	32	30	28	23
4	72	61	53	46	65	56	48	43	46	41	36	37	33	30	29	26	24	20
5	66	54	46	39	60	49	42	37	41	35	31	33	29	26	26	23	20	17
6	60	48	40	34	55	44	37	32	37	31	27	30	26	22	23	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	21	17	19	16	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	10
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	17	14	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12676	12676	12676
5°	12715	12357	12363
10°	12602	12072	12012
15°	12439	11748	11627
20°	12206	11380	11204
25°	11920	10955	10760
30°	11627	10572	10310
35°	11297	10169	9950
40°	10983	9801	9564
45°	10635	9448	9257
50°	10293	9100	8917
55°	9912	8741	8611
60°	9543	8380	8298
65°	9165	7994	7927
70°	8591	7558	7545
75°	7872	7060	7157
80°	7040	6572	6712
85°	6274	6235	6458



TEST NUMBER: P332039-830

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.6	1.3
10°-20°	318.2	3.8
20°-30°	476.0	5.6
30°-40°	568.4	6.7
40°-50°	594.7	7.0
50°-60°	558.1	6.6
60°-70°	466.1	5.5
70°-80°	333.5	3.9
80°-90°	203.0	2.4
90°-100°	178.4	2.1
100°-110°	347.1	4.1
110°-120°	674.7	8.0
120°-130°	816.2	9.7
130°-140°	850.4	10.1
140°-150°	783.9	9.3
150°-160°	629.6	7.4
160°-170°	406.3	4.8
170°-180°	140.0	1.7
0°-30°	905.9	10.7
0°-40°	1474.3	17.4
0°-60°	2627.1	31.1
0°-90°	3629.7	42.9
90°-120°	1200.2	14.2
90°-150°	3650.6	43.2
90°-180°	4827.0	57.1
0°-180°	8456.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1178	1178	1178	1178	1178	
5°	1179	1176	1169	1178	1178	112
15°	1122	1126	1125	1137	1137	316
25°	1013	1026	1030	1046	1047	467
35°	872	893	910	928	934	545
45°	713	744	776	800	811	550
55°	544	586	632	666	677	487
65°	376	426	482	519	534	371
75°	204	264	328	369	386	218
85°	63	127	195	237	252	66
90°	18	92	171	217	234	15
95°	81	90	161	206	221	94
105°	337	375	336	188	192	356
115°	619	642	696	737	753	611
125°	867	877	917	945	957	774
135°	1077	1083	1101	1126	1130	829
145°	1241	1247	1249	1262	1267	776
155°	1366	1364	1364	1369	1363	629
165°	1440	1437	1436	1443	1437	407
175°	1474	1469	1470	1476	1468	140
180°	1474	1474	1474	1474	1474	



TEST NUMBER: P332039-830

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6
2.5°	1182.8	1182.1	1181.4	1180.7	1180.1	1178.7	1177.0	1175.2	1173.3	1171.5	1173.3
5°	1178.9	1178.4	1177.8	1177.2	1176.7	1175.5	1173.8	1172.1	1170.4	1168.7	1170.9
7.5°	1167.3	1167.5	1167.6	1167.7	1167.8	1167.1	1165.5	1163.8	1162.1	1160.5	1163.3
10°	1157.2	1157.7	1158.3	1158.9	1159.4	1159.0	1157.5	1156.1	1154.7	1153.3	1156.1
12.5°	1144.8	1145.6	1146.4	1147.2	1148.0	1147.9	1147.0	1145.9	1145.0	1144.1	1146.7
15°	1122.5	1123.3	1124.2	1125.0	1125.9	1126.1	1125.9	1125.6	1125.3	1125.0	1127.9
17.5°	1094.3	1096.0	1097.7	1099.4	1101.1	1101.9	1101.8	1101.6	1101.5	1101.5	1104.0
20°	1073.7	1075.4	1077.1	1078.8	1080.5	1081.8	1082.3	1082.9	1083.5	1084.0	1086.6
22.5°	1052.2	1053.9	1055.6	1057.3	1059.0	1060.3	1061.1	1061.9	1062.7	1063.5	1066.7
25°	1013.4	1016.2	1019.2	1022.0	1024.8	1026.7	1027.6	1028.4	1029.3	1030.1	1033.8
27.5°	974.4	977.7	980.9	984.2	987.4	990.0	991.8	993.6	995.4	997.3	1000.5
30°	946.7	950.5	954.1	957.8	961.6	964.5	966.9	969.1	971.4	973.6	977.1
32.5°	916.0	920.1	924.3	928.4	932.6	936.1	939.1	942.1	945.1	948.0	951.7
35°	872.3	876.8	881.5	886.0	890.6	894.7	898.4	902.1	905.8	909.6	913.8
37.5°	826.1	831.3	836.4	841.5	846.7	851.5	856.1	860.6	865.2	869.8	874.6
40°	795.3	800.5	805.6	810.8	815.9	821.3	827.0	832.7	838.4	844.1	848.9
42.5°	761.5	767.8	774.0	780.3	786.6	792.7	798.6	804.6	810.5	816.4	821.7
45°	713.2	720.1	727.0	733.8	740.6	747.6	754.7	761.9	769.0	776.1	781.6
47.5°	662.7	670.4	678.3	686.0	693.7	701.7	709.8	718.0	726.1	734.3	740.4
50°	629.9	637.8	645.8	653.8	661.8	670.2	679.0	687.9	696.7	705.6	712.1
52.5°	594.9	603.4	611.9	620.3	628.8	637.8	647.6	657.3	667.0	676.8	683.6
55°	543.9	553.4	562.7	572.1	581.5	591.4	601.6	611.9	622.2	632.4	640.2
57.5°	494.2	504.0	513.8	523.6	533.4	543.9	555.2	566.4	577.6	588.8	596.5
60°	459.3	469.5	479.8	490.0	500.3	511.2	522.9	534.7	546.4	558.1	566.0
62.5°	426.4	436.9	447.4	457.9	468.3	479.8	492.2	504.5	516.9	529.3	537.2
65°	375.9	387.0	398.1	409.3	420.4	432.2	444.7	457.2	469.8	482.4	490.9
67.5°	324.5	336.4	348.2	360.0	371.7	384.1	396.8	409.6	422.4	435.2	444.5
70°	288.6	300.9	313.1	325.5	337.7	350.6	364.3	378.1	391.7	405.4	414.5
72.5°	255.8	268.1	280.3	292.6	304.8	318.0	332.2	346.3	360.4	374.6	383.9
75°	204.0	217.4	230.7	244.2	257.6	271.4	285.7	299.9	314.1	328.4	337.8
77.5°	158.8	172.3	185.9	199.3	212.8	226.8	241.2	255.5	269.9	284.3	294.2
80°	127.0	141.0	155.0	168.9	182.9	197.3	212.1	227.0	241.8	256.6	266.3
82.5°	99.2	113.5	127.7	141.9	156.1	170.7	185.8	200.8	215.8	230.9	240.6
85°	62.9	77.1	91.3	105.7	119.9	134.6	149.7	164.8	179.8	195.0	204.7
87.5°	34.3	49.0	63.7	78.4	93.1	108.0	123.2	138.4	153.5	168.7	178.6
90°	17.8	34.2	50.6	67.0	83.4	100.5	118.1	135.8	153.5	171.3	181.9
92.5°	36.0	48.0	59.9	71.8	83.7	98.0	114.7	131.4	148.1	164.8	175.8
95°	80.9	82.1	83.2	84.4	85.5	94.3	111.0	127.6	144.3	161.0	171.4
97.5°	146.8	152.4	158.0	163.5	169.1	169.8	165.6	161.4	157.2	153.1	163.4
100°	196.6	210.6	224.6	238.6	252.6	247.1	222.3	197.5	172.6	147.8	158.0
102.5°	253.4	265.1	276.8	288.5	300.3	291.8	263.3	234.7	206.0	177.5	179.6
105°	336.6	346.1	355.6	365.1	374.7	374.6	365.0	355.3	345.6	336.0	301.0
107.5°	423.1	431.0	439.0	447.0	455.0	466.5	481.5	496.6	511.7	526.8	502.8
110°	480.8	487.9	494.9	502.0	509.1	519.6	533.8	547.8	561.8	576.0	575.3



TEST NUMBER: P332039-830

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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	536.9	542.8	548.7	554.8	560.7	570.5	584.1	597.8	611.4	625.0	632.4
115°	618.6	623.4	628.3	633.2	638.1	646.8	659.2	671.7	684.1	696.5	705.9
117.5°	698.7	702.6	706.5	710.4	714.4	721.6	732.4	743.2	753.9	764.7	773.4
120°	747.6	751.2	754.8	758.5	762.0	768.9	779.0	789.2	799.4	809.5	817.9
122.5°	798.4	801.0	803.5	806.0	808.5	814.7	824.6	834.5	844.4	854.2	862.0
125°	866.8	868.7	870.6	872.6	874.6	880.1	889.4	898.6	907.9	917.1	923.6
127.5°	934.2	935.9	937.5	939.1	940.8	945.7	953.7	961.7	969.7	977.7	984.1
130°	976.3	977.9	979.6	981.3	982.9	987.0	993.7	1000.4	1007.1	1013.8	1020.2
132.5°	1015.5	1017.4	1019.3	1021.2	1023.1	1026.7	1032.1	1037.4	1042.7	1048.1	1054.2
135°	1076.9	1078.0	1079.2	1080.3	1081.5	1084.1	1088.3	1092.4	1096.5	1100.6	1106.5
137.5°	1129.2	1130.8	1132.4	1134.0	1135.6	1137.6	1139.9	1142.2	1144.4	1146.8	1152.4
140°	1163.1	1164.6	1166.0	1167.5	1168.9	1170.5	1172.1	1173.7	1175.3	1176.9	1182.1
142.5°	1195.5	1196.7	1198.0	1199.3	1200.5	1201.6	1202.4	1203.3	1204.3	1205.1	1209.8
145°	1240.9	1242.3	1243.7	1245.1	1246.5	1247.5	1248.0	1248.5	1249.0	1249.4	1252.3
147.5°	1282.3	1283.5	1284.6	1285.6	1286.8	1287.6	1288.1	1288.5	1289.0	1289.5	1290.7
150°	1308.6	1309.3	1310.0	1310.8	1311.5	1312.1	1312.6	1313.1	1313.6	1314.1	1314.6
152.5°	1332.3	1332.6	1332.9	1333.2	1333.6	1333.9	1334.2	1334.5	1334.8	1335.1	1336.0
155°	1365.6	1365.1	1364.5	1364.0	1363.6	1363.5	1363.7	1364.0	1364.2	1364.4	1365.6
157.5°	1391.4	1391.3	1391.3	1391.2	1391.2	1391.0	1390.8	1390.5	1390.3	1390.1	1391.6
160°	1407.1	1406.9	1406.7	1406.5	1406.2	1405.9	1405.7	1405.4	1405.2	1405.0	1406.5
162.5°	1422.0	1421.4	1420.8	1420.1	1419.5	1419.1	1418.8	1418.6	1418.3	1418.1	1419.8
165°	1440.0	1439.3	1438.5	1437.8	1437.1	1436.6	1436.3	1436.1	1435.9	1435.6	1437.6
167.5°	1454.1	1453.0	1452.1	1451.1	1450.1	1449.6	1449.6	1449.6	1449.6	1449.6	1451.6
170°	1461.9	1460.9	1460.0	1459.0	1458.0	1457.5	1457.5	1457.5	1457.5	1457.5	1459.4
172.5°	1467.2	1466.0	1464.8	1463.7	1462.4	1462.0	1462.2	1462.4	1462.5	1462.7	1464.7
175°	1473.9	1472.7	1471.5	1470.3	1469.0	1468.6	1468.9	1469.0	1469.3	1469.5	1471.3
177.5°	1475.7	1474.7	1473.8	1472.8	1471.8	1471.4	1471.6	1471.8	1472.0	1472.2	1473.8
180°	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9



TEST NUMBER: P332039-830

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6
2.5°	1175.2	1177.0	1178.7	1179.6	1179.3	1179.1	1178.9	1178.6
5°	1173.2	1175.5	1177.8	1178.7	1178.5	1178.2	1177.9	1177.6
7.5°	1166.1	1169.0	1171.9	1173.1	1172.8	1172.4	1172.1	1171.8
10°	1159.0	1161.8	1164.7	1165.8	1165.3	1164.7	1164.1	1163.6
12.5°	1149.2	1151.9	1154.5	1155.6	1155.0	1154.4	1153.9	1153.3
15°	1130.8	1133.6	1136.4	1137.7	1137.5	1137.2	1136.9	1136.6
17.5°	1106.5	1109.2	1111.7	1112.8	1112.4	1112.0	1111.6	1111.2
20°	1089.1	1091.7	1094.3	1095.7	1096.0	1096.3	1096.6	1096.8
22.5°	1070.0	1073.2	1076.5	1078.0	1077.8	1077.7	1077.5	1077.3
25°	1037.6	1041.2	1044.9	1046.8	1046.8	1046.8	1046.8	1046.8
27.5°	1003.6	1006.8	1010.0	1011.7	1012.0	1012.2	1012.5	1012.7
30°	980.5	983.9	987.3	989.1	989.1	989.1	989.1	989.1
32.5°	955.4	958.9	962.6	964.8	965.4	966.1	966.9	967.5
35°	918.0	922.4	926.6	929.3	930.5	931.6	932.7	933.9
37.5°	879.5	884.3	889.2	892.0	893.0	893.8	894.8	895.7
40°	853.8	858.7	863.5	866.5	867.6	868.7	869.9	871.0
42.5°	827.0	832.3	837.6	841.0	842.6	844.2	845.8	847.4
45°	786.9	792.4	797.8	801.6	803.9	806.2	808.5	810.8
47.5°	746.5	752.6	758.7	762.6	764.4	766.2	767.9	769.7
50°	718.7	725.2	731.8	736.0	738.1	740.1	742.1	744.0
52.5°	690.4	697.2	704.0	708.6	711.1	713.5	716.0	718.4
55°	647.8	655.5	663.3	668.2	670.5	672.8	675.0	677.3
57.5°	604.4	612.1	619.8	625.1	627.7	630.4	633.1	635.7
60°	574.0	582.0	589.9	595.5	598.7	601.8	604.9	608.0
62.5°	545.3	553.3	561.2	566.7	569.6	572.5	575.4	578.3
65°	499.5	508.0	516.5	522.3	525.1	527.9	530.8	533.7
67.5°	453.8	463.2	472.5	478.4	480.8	483.2	485.6	488.0
70°	423.6	432.7	441.9	447.9	450.7	453.6	456.4	459.3
72.5°	393.3	402.7	412.0	418.1	420.9	423.8	426.7	429.5
75°	347.2	356.7	366.0	372.5	375.9	379.3	382.7	386.2
77.5°	304.2	314.1	324.0	330.3	332.8	335.5	338.1	340.7
80°	276.0	285.7	295.3	301.6	304.4	307.3	310.2	313.0
82.5°	250.3	260.0	269.7	276.0	278.8	281.6	284.5	287.4
85°	214.3	224.0	233.8	240.1	242.9	245.7	248.5	251.5
87.5°	188.5	198.3	208.2	214.6	217.6	220.6	223.5	226.5
90°	192.6	203.2	213.9	220.9	224.2	227.6	230.9	234.2
92.5°	186.8	197.8	208.9	215.8	218.8	221.7	224.6	227.5
95°	182.0	192.6	203.1	209.8	212.6	215.5	218.4	221.2
97.5°	173.9	184.4	194.8	201.5	204.6	207.7	210.8	214.0
100°	168.1	178.4	188.6	195.3	198.3	201.4	204.5	207.6
102.5°	181.5	183.5	185.5	188.1	191.4	194.7	198.0	201.3
105°	265.9	230.7	195.7	179.6	182.7	185.8	188.8	191.9
107.5°	478.9	455.0	431.0	404.1	374.1	344.1	314.1	284.3
110°	574.8	574.1	573.5	556.9	524.4	491.9	459.4	426.9



TEST NUMBER: P332039-830

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	639.7	647.0	654.3	655.5	650.7	645.9	641.0	636.2
115°	715.1	724.3	733.7	739.9	743.2	746.4	749.7	752.9
117.5°	782.1	790.9	799.6	805.1	807.6	810.0	812.4	814.8
120°	826.5	835.0	843.5	848.8	850.7	852.7	854.7	856.7
122.5°	869.7	877.3	885.0	889.9	892.2	894.4	896.5	898.7
125°	930.0	936.5	943.0	947.4	950.0	952.4	954.9	957.4
127.5°	990.6	997.0	1003.4	1007.4	1008.8	1010.2	1011.7	1013.1
130°	1026.5	1032.9	1039.3	1043.1	1044.3	1045.6	1046.8	1048.0
132.5°	1060.4	1066.6	1072.7	1076.4	1077.7	1078.9	1080.2	1081.5
135°	1112.3	1118.1	1124.1	1127.3	1128.0	1128.7	1129.4	1130.1
137.5°	1158.1	1163.8	1169.5	1172.8	1173.7	1174.7	1175.6	1176.6
140°	1187.3	1192.6	1197.9	1200.9	1201.8	1202.8	1203.7	1204.7
142.5°	1214.4	1219.0	1223.5	1226.2	1227.0	1227.7	1228.4	1229.2
145°	1255.0	1257.7	1260.6	1262.4	1263.7	1264.8	1265.9	1267.1
147.5°	1291.8	1293.1	1294.2	1294.8	1294.7	1294.6	1294.5	1294.4
150°	1315.0	1315.5	1316.0	1316.2	1316.0	1315.9	1315.7	1315.5
152.5°	1336.8	1337.8	1338.6	1338.5	1337.6	1336.5	1335.5	1334.5
155°	1366.9	1368.1	1369.3	1369.1	1367.7	1366.3	1364.8	1363.4
157.5°	1393.0	1394.4	1395.9	1395.7	1393.8	1391.9	1390.0	1388.1
160°	1407.9	1409.3	1410.8	1410.7	1409.0	1407.3	1405.5	1403.8
162.5°	1421.4	1423.1	1424.7	1424.7	1423.2	1421.7	1420.2	1418.7
165°	1439.5	1441.4	1443.4	1443.5	1441.8	1440.1	1438.4	1436.7
167.5°	1453.5	1455.5	1457.5	1457.5	1455.5	1453.5	1451.6	1449.6
170°	1461.4	1463.4	1465.3	1465.3	1463.4	1461.4	1459.4	1457.5
172.5°	1466.7	1468.6	1470.6	1470.5	1468.3	1466.2	1464.1	1461.9
175°	1473.0	1474.7	1476.4	1476.2	1474.3	1472.3	1470.5	1468.5
177.5°	1475.3	1476.9	1478.4	1478.2	1476.3	1474.3	1472.3	1470.5
180°	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9	1473.9

(END OF REPORT)