

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: P332039-940

Luminaire Tested: **S123DIP-S1000D1195U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332039-940  
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-S1000D1195U940-4F0-1E-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: 8000.3 lumens  
Efficiency: N/A  
Efficacy: 122.3 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

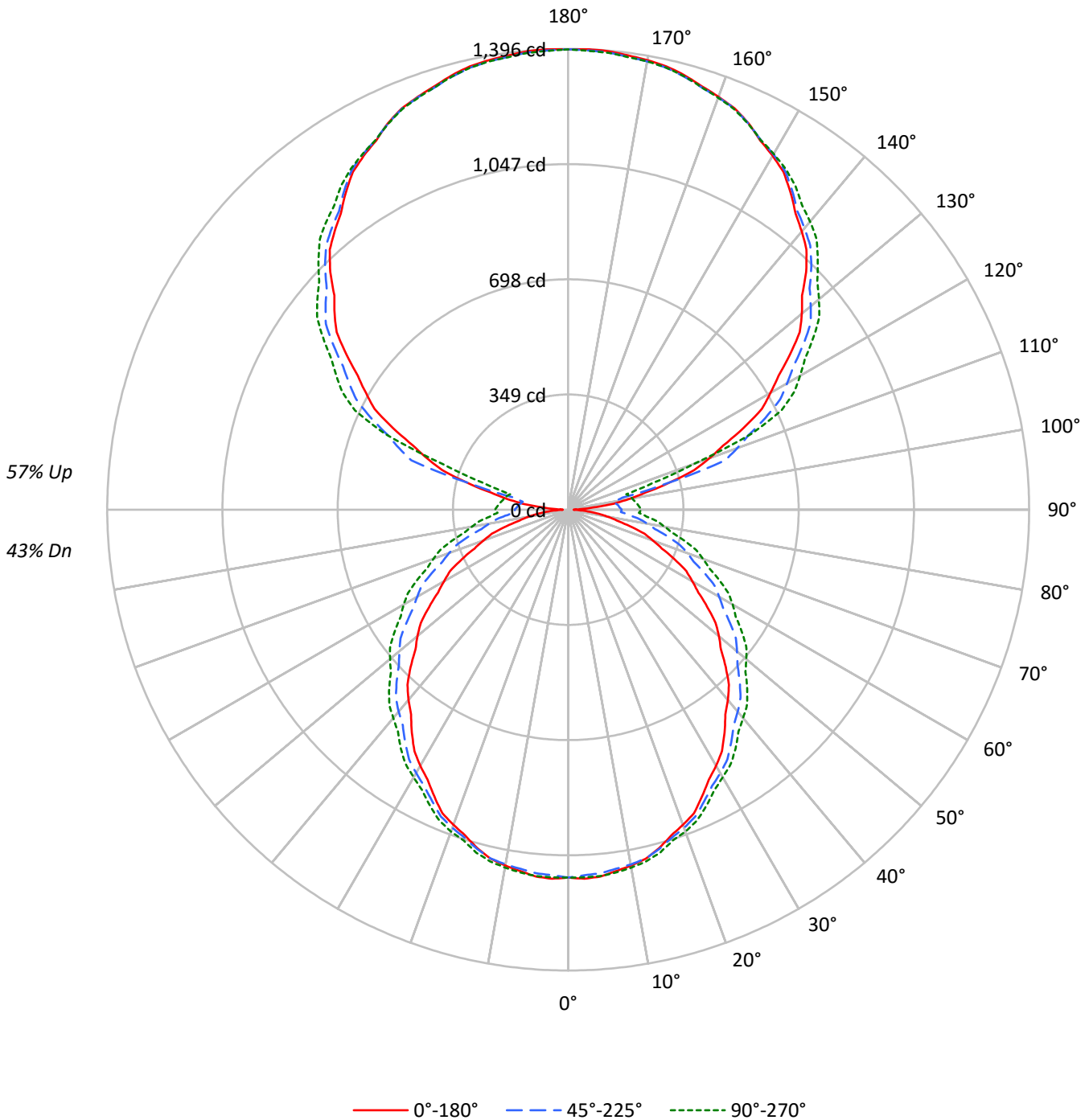
Input Watts (W): 65.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P332039-940

CATALOG NUMBER: S123DIP-S1000D1195U940-4F0-1E-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°	11992	11992	11992
5°	12030	11690	11697
10°	11922	11421	11364
15°	11768	11114	11000
20°	11548	10767	10600
25°	11278	10365	10179
30°	10999	10002	9754
35°	10689	9620	9413
40°	10391	9273	9048
45°	10062	8938	8757
50°	9737	8608	8436
55°	9378	8270	8147
60°	9028	7928	7850
65°	8670	7563	7499
70°	8127	7150	7138
75°	7448	6679	6770
80°	6658	6216	6350
85°	5935	5899	6108



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.6	1.3
10°-20°	301.1	3.8
20°-30°	450.3	5.6
30°-40°	537.8	6.7
40°-50°	562.6	7.0
50°-60°	528.0	6.6
60°-70°	441.0	5.5
70°-80°	315.5	3.9
80°-90°	192.1	2.4
90°-100°	168.8	2.1
100°-110°	328.4	4.1
110°-120°	638.3	8.0
120°-130°	772.2	9.7
130°-140°	804.5	10.1
140°-150°	741.6	9.3
150°-160°	595.7	7.4
160°-170°	384.4	4.8
170°-180°	132.5	1.7
0°-30°	857.0	10.7
0°-40°	1394.8	17.4
0°-60°	2485.4	31.1
0°-90°	3434.0	42.9
90°-120°	1135.5	14.2
90°-150°	3453.8	43.2
90°-180°	4566.0	57.1
0°-180°	8000.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1114	1114	1114	1114	1114	
5°	1115	1113	1106	1115	1114	106
15°	1062	1065	1064	1076	1075	299
25°	959	970	975	989	990	442
35°	825	844	860	878	884	516
45°	675	704	734	757	767	520
55°	515	555	598	630	641	461
65°	356	403	456	491	505	351
75°	193	250	311	349	365	206
85°	60	120	184	224	238	62
90°	17	87	162	206	222	14
95°	76	85	152	195	209	88
105°	318	354	318	178	182	337
115°	585	608	659	697	712	578
125°	820	830	868	894	906	733
135°	1019	1024	1041	1065	1069	784
145°	1174	1180	1182	1194	1199	734
155°	1292	1290	1291	1295	1290	595
165°	1362	1359	1358	1366	1359	385
175°	1394	1390	1390	1397	1389	133
180°	1394	1394	1394	1394	1394	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1
2.5°	1119.0	1118.4	1117.7	1117.0	1116.4	1115.2	1113.5	1111.8	1110.0	1108.3	1110.0
5°	1115.4	1114.8	1114.3	1113.7	1113.2	1112.1	1110.5	1108.8	1107.2	1105.6	1107.8
7.5°	1104.4	1104.6	1104.7	1104.7	1104.8	1104.1	1102.6	1101.0	1099.4	1097.9	1100.5
10°	1094.8	1095.3	1095.8	1096.4	1096.9	1096.4	1095.1	1093.8	1092.4	1091.1	1093.8
12.5°	1083.1	1083.8	1084.6	1085.3	1086.1	1086.0	1085.1	1084.1	1083.3	1082.4	1084.9
15°	1061.9	1062.7	1063.5	1064.3	1065.1	1065.4	1065.1	1064.9	1064.6	1064.3	1067.1
17.5°	1035.3	1036.9	1038.5	1040.1	1041.7	1042.5	1042.4	1042.2	1042.1	1042.1	1044.5
20°	1015.8	1017.4	1019.0	1020.7	1022.3	1023.4	1024.0	1024.5	1025.0	1025.6	1028.0
22.5°	995.4	997.0	998.7	1000.3	1001.9	1003.1	1003.9	1004.6	1005.4	1006.1	1009.1
25°	958.8	961.4	964.2	966.9	969.6	971.3	972.1	972.9	973.7	974.6	978.0
27.5°	921.9	925.0	928.0	931.1	934.2	936.6	938.3	940.0	941.7	943.5	946.6
30°	895.6	899.2	902.7	906.2	909.7	912.5	914.7	916.9	919.0	921.1	924.4
32.5°	866.6	870.5	874.4	878.3	882.3	885.6	888.5	891.3	894.1	896.9	900.4
35°	825.3	829.6	833.9	838.2	842.6	846.4	850.0	853.5	856.9	860.5	864.5
37.5°	781.6	786.5	791.3	796.1	801.0	805.6	809.9	814.2	818.5	822.9	827.4
40°	752.4	757.3	762.1	767.0	771.9	777.0	782.4	787.8	793.2	798.6	803.2
42.5°	720.4	726.4	732.3	738.2	744.1	749.9	755.5	761.2	766.8	772.4	777.4
45°	674.8	681.3	687.8	694.2	700.7	707.3	714.0	720.8	727.5	734.2	739.4
47.5°	627.0	634.3	641.7	649.0	656.3	663.9	671.5	679.3	687.0	694.7	700.4
50°	595.9	603.4	611.0	618.6	626.1	634.1	642.4	650.8	659.2	667.5	673.7
52.5°	562.8	570.9	578.9	586.8	594.9	603.4	612.7	621.9	631.1	640.3	646.8
55°	514.6	523.5	532.4	541.3	550.2	559.5	569.2	578.9	588.6	598.3	605.6
57.5°	467.5	476.8	486.1	495.3	504.6	514.6	525.2	535.8	546.4	557.1	564.4
60°	434.5	444.2	453.9	463.6	473.3	483.7	494.7	505.9	516.9	528.0	535.5
62.5°	403.4	413.3	423.3	433.2	443.1	454.0	465.7	477.3	489.0	500.8	508.3
65°	355.6	366.1	376.7	387.2	397.7	408.8	420.7	432.6	444.4	456.4	464.4
67.5°	307.0	318.3	329.4	340.5	351.7	363.4	375.4	387.5	399.6	411.7	420.5
70°	273.0	284.6	296.2	307.9	319.5	331.7	344.6	357.7	370.6	383.5	392.2
72.5°	242.0	253.6	265.2	276.8	288.4	300.9	314.2	327.6	341.0	354.4	363.2
75°	193.0	205.6	218.3	231.0	243.7	256.7	270.3	283.7	297.2	310.7	319.6
77.5°	150.3	163.0	175.8	188.6	201.3	214.5	228.2	241.7	255.4	268.9	278.3
80°	120.1	133.4	146.6	159.8	173.0	186.6	200.6	214.7	228.7	242.7	251.9
82.5°	93.9	107.4	120.8	134.2	147.7	161.5	175.8	189.9	204.2	218.5	227.7
85°	59.5	72.9	86.4	100.0	113.4	127.3	141.6	155.9	170.1	184.5	193.7
87.5°	32.5	46.4	60.3	74.2	88.1	102.2	116.5	130.9	145.3	159.6	169.0
90°	16.9	32.4	47.9	63.4	78.9	95.1	111.7	128.5	145.3	162.0	172.1
92.5°	34.1	45.4	56.6	67.9	79.2	92.7	108.5	124.3	140.1	155.9	166.3
95°	76.5	77.7	78.7	79.8	80.9	89.3	105.0	120.7	136.5	152.3	162.2
97.5°	138.9	144.2	149.5	154.7	160.0	160.6	156.7	152.7	148.7	144.8	154.6
100°	186.0	199.2	212.5	225.7	239.0	233.8	210.3	186.8	163.3	139.8	149.5
102.5°	239.7	250.8	261.9	273.0	284.1	276.1	249.1	222.0	194.9	167.9	169.9
105°	318.4	327.4	336.4	345.4	354.5	354.4	345.3	336.2	327.0	317.9	284.7
107.5°	400.3	407.8	415.4	422.8	430.4	441.3	455.6	469.8	484.1	498.4	475.7
110°	454.9	461.5	468.2	474.9	481.6	491.6	505.0	518.3	531.5	544.9	544.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	507.9	513.5	519.2	524.9	530.5	539.8	552.6	565.5	578.5	591.3	598.2
115°	585.2	589.8	594.4	599.1	603.7	611.9	623.7	635.4	647.2	659.0	667.8
117.5°	661.0	664.7	668.4	672.1	675.8	682.7	692.9	703.1	713.3	723.4	731.6
120°	707.3	710.7	714.1	717.6	720.9	727.5	737.0	746.6	756.3	765.8	773.8
122.5°	755.4	757.8	760.2	762.5	764.9	770.8	780.2	789.5	798.9	808.2	815.5
125°	820.0	821.9	823.7	825.5	827.4	832.7	841.4	850.2	858.9	867.6	873.8
127.5°	883.9	885.4	887.0	888.5	890.1	894.7	902.2	909.8	917.4	925.0	931.0
130°	923.6	925.1	926.8	928.4	929.9	933.8	940.1	946.5	952.8	959.1	965.2
132.5°	960.7	962.5	964.3	966.2	968.0	971.3	976.4	981.4	986.5	991.6	997.4
135°	1018.8	1019.8	1021.0	1022.1	1023.1	1025.6	1029.6	1033.5	1037.3	1041.3	1046.8
137.5°	1068.3	1069.8	1071.3	1072.8	1074.3	1076.2	1078.4	1080.6	1082.7	1084.9	1090.3
140°	1100.4	1101.8	1103.1	1104.6	1105.9	1107.4	1108.8	1110.4	1111.9	1113.4	1118.4
142.5°	1131.0	1132.2	1133.4	1134.6	1135.8	1136.8	1137.6	1138.4	1139.3	1140.1	1144.5
145°	1173.9	1175.3	1176.6	1177.9	1179.3	1180.3	1180.7	1181.2	1181.6	1182.1	1184.7
147.5°	1213.2	1214.2	1215.3	1216.3	1217.4	1218.2	1218.6	1219.1	1219.5	1219.9	1221.1
150°	1238.1	1238.7	1239.4	1240.1	1240.8	1241.4	1241.8	1242.2	1242.8	1243.2	1243.7
152.5°	1260.4	1260.7	1261.1	1261.3	1261.7	1261.9	1262.2	1262.6	1262.8	1263.1	1263.9
155°	1291.9	1291.5	1290.9	1290.5	1290.0	1289.9	1290.1	1290.4	1290.7	1290.8	1292.0
157.5°	1316.3	1316.3	1316.3	1316.2	1316.2	1316.0	1315.8	1315.5	1315.4	1315.1	1316.5
160°	1331.2	1331.1	1330.8	1330.6	1330.3	1330.1	1329.9	1329.6	1329.5	1329.2	1330.6
162.5°	1345.3	1344.8	1344.2	1343.5	1342.9	1342.6	1342.3	1342.1	1341.8	1341.6	1343.2
165°	1362.4	1361.6	1360.9	1360.3	1359.6	1359.1	1358.9	1358.6	1358.4	1358.2	1360.0
167.5°	1375.6	1374.7	1373.8	1372.9	1371.9	1371.5	1371.5	1371.5	1371.5	1371.5	1373.3
170°	1383.0	1382.2	1381.3	1380.3	1379.4	1378.9	1378.9	1378.9	1378.9	1378.9	1380.7
172.5°	1388.0	1387.0	1385.8	1384.7	1383.6	1383.1	1383.3	1383.5	1383.7	1383.8	1385.7
175°	1394.5	1393.3	1392.1	1391.0	1389.8	1389.4	1389.6	1389.8	1390.1	1390.3	1392.0
177.5°	1396.2	1395.2	1394.3	1393.4	1392.4	1392.0	1392.2	1392.4	1392.6	1392.8	1394.3
180°	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1
2.5°	1111.8	1113.5	1115.2	1116.0	1115.7	1115.5	1115.4	1115.1
5°	1109.9	1112.1	1114.3	1115.2	1114.9	1114.6	1114.4	1114.1
7.5°	1103.2	1106.0	1108.7	1109.8	1109.6	1109.2	1108.8	1108.6
10°	1096.4	1099.1	1101.9	1103.0	1102.4	1101.9	1101.4	1100.8
12.5°	1087.3	1089.8	1092.3	1093.2	1092.7	1092.2	1091.6	1091.1
15°	1069.8	1072.5	1075.1	1076.4	1076.1	1075.8	1075.6	1075.3
17.5°	1046.9	1049.4	1051.8	1052.8	1052.4	1052.0	1051.7	1051.2
20°	1030.4	1032.8	1035.3	1036.6	1036.9	1037.1	1037.4	1037.7
22.5°	1012.3	1015.3	1018.4	1019.8	1019.7	1019.6	1019.4	1019.2
25°	981.6	985.1	988.6	990.3	990.3	990.3	990.3	990.3
27.5°	949.5	952.5	955.6	957.2	957.4	957.6	957.9	958.1
30°	927.6	930.9	934.1	935.8	935.8	935.8	935.8	935.8
32.5°	903.8	907.2	910.7	912.8	913.4	914.0	914.7	915.3
35°	868.5	872.6	876.6	879.2	880.3	881.4	882.4	883.5
37.5°	832.1	836.6	841.2	843.9	844.8	845.6	846.5	847.4
40°	807.7	812.3	816.9	819.7	820.8	821.9	823.0	824.0
42.5°	782.4	787.4	792.5	795.7	797.2	798.7	800.2	801.7
45°	744.5	749.7	754.7	758.4	760.5	762.7	764.9	767.0
47.5°	706.2	712.0	717.7	721.5	723.2	724.9	726.5	728.2
50°	679.9	686.1	692.3	696.3	698.3	700.2	702.0	703.9
52.5°	653.2	659.6	666.0	670.4	672.7	675.0	677.3	679.7
55°	612.9	620.2	627.5	632.1	634.4	636.5	638.6	640.8
57.5°	571.8	579.1	586.4	591.4	593.9	596.4	599.0	601.5
60°	543.1	550.6	558.1	563.4	566.4	569.4	572.3	575.2
62.5°	515.9	523.4	530.9	536.1	538.9	541.6	544.4	547.2
65°	472.5	480.6	488.7	494.1	496.8	499.4	502.2	504.9
67.5°	429.4	438.2	447.0	452.6	454.9	457.2	459.4	461.6
70°	400.7	409.4	418.0	423.7	426.4	429.1	431.8	434.5
72.5°	372.1	380.9	389.8	395.6	398.2	400.9	403.7	406.4
75°	328.5	337.4	346.3	352.4	355.6	358.8	362.0	365.3
77.5°	287.8	297.1	306.5	312.5	314.9	317.4	319.9	322.4
80°	261.1	270.3	279.4	285.3	288.0	290.7	293.5	296.1
82.5°	236.8	245.9	255.1	261.1	263.8	266.4	269.1	271.9
85°	202.8	212.0	221.1	227.1	229.8	232.5	235.1	237.9
87.5°	178.3	187.6	197.0	203.0	205.9	208.7	211.4	214.3
90°	182.2	192.3	202.3	209.0	212.1	215.3	218.5	221.6
92.5°	176.7	187.2	197.6	204.2	207.0	209.7	212.5	215.3
95°	172.2	182.2	192.2	198.5	201.2	203.8	206.6	209.3
97.5°	164.5	174.4	184.3	190.6	193.6	196.5	199.5	202.4
100°	159.1	168.8	178.4	184.8	187.6	190.6	193.5	196.4
102.5°	171.7	173.6	175.5	178.0	181.1	184.2	187.3	190.5
105°	251.6	218.3	185.1	170.0	172.8	175.8	178.6	181.6
107.5°	453.1	430.4	407.8	382.3	353.9	325.6	297.2	268.9
110°	543.8	543.1	542.6	526.9	496.1	465.4	434.6	403.9





TEST NUMBER: P332039-940

CATALOG NUMBER: S123DIP-S1000D1195U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	605.2	612.1	619.0	620.2	615.6	611.1	606.5	601.9
115°	676.5	685.3	694.1	700.0	703.1	706.1	709.3	712.3
117.5°	739.9	748.2	756.4	761.7	764.0	766.3	768.6	770.9
120°	781.9	790.0	798.0	803.0	804.9	806.7	808.6	810.5
122.5°	822.8	830.0	837.3	842.0	844.1	846.1	848.2	850.2
125°	879.9	886.0	892.2	896.3	898.8	901.1	903.4	905.8
127.5°	937.2	943.3	949.3	953.1	954.4	955.7	957.2	958.5
130°	971.2	977.2	983.3	986.9	988.0	989.2	990.3	991.5
132.5°	1003.2	1009.1	1014.9	1018.3	1019.6	1020.7	1021.9	1023.1
135°	1052.3	1057.8	1063.5	1066.5	1067.2	1067.8	1068.5	1069.2
137.5°	1095.6	1101.0	1106.4	1109.6	1110.4	1111.3	1112.2	1113.1
140°	1123.3	1128.3	1133.3	1136.1	1137.0	1137.9	1138.8	1139.7
142.5°	1148.9	1153.2	1157.5	1160.1	1160.8	1161.5	1162.2	1162.9
145°	1187.3	1189.9	1192.6	1194.4	1195.5	1196.6	1197.7	1198.7
147.5°	1222.2	1223.3	1224.4	1224.9	1224.9	1224.8	1224.7	1224.6
150°	1244.1	1244.6	1245.0	1245.2	1245.0	1244.9	1244.7	1244.6
152.5°	1264.7	1265.6	1266.4	1266.3	1265.4	1264.4	1263.5	1262.6
155°	1293.2	1294.3	1295.5	1295.3	1294.0	1292.6	1291.2	1289.9
157.5°	1317.9	1319.2	1320.6	1320.4	1318.7	1316.8	1315.0	1313.2
160°	1331.9	1333.3	1334.7	1334.6	1333.0	1331.4	1329.7	1328.1
162.5°	1344.8	1346.3	1347.9	1347.9	1346.5	1345.1	1343.6	1342.2
165°	1361.9	1363.7	1365.6	1365.7	1364.1	1362.4	1360.8	1359.2
167.5°	1375.1	1377.0	1378.9	1378.9	1377.0	1375.1	1373.3	1371.5
170°	1382.6	1384.5	1386.3	1386.3	1384.5	1382.6	1380.7	1378.9
172.5°	1387.6	1389.4	1391.2	1391.2	1389.1	1387.1	1385.1	1383.0
175°	1393.6	1395.2	1396.8	1396.6	1394.8	1392.9	1391.2	1389.3
177.5°	1395.7	1397.2	1398.6	1398.5	1396.7	1394.8	1392.9	1391.2
180°	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5	1394.5

(END OF REPORT)