

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: P333231-840

Luminaire Tested: **S125DIP-S850D810U840-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333231-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-19,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DIP-S850D810U840-4F0-1E-UDD-F4
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 850 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6388.9 lumens
Efficiency: N/A
Efficacy: 139.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')
CIE Type: General Diffuse

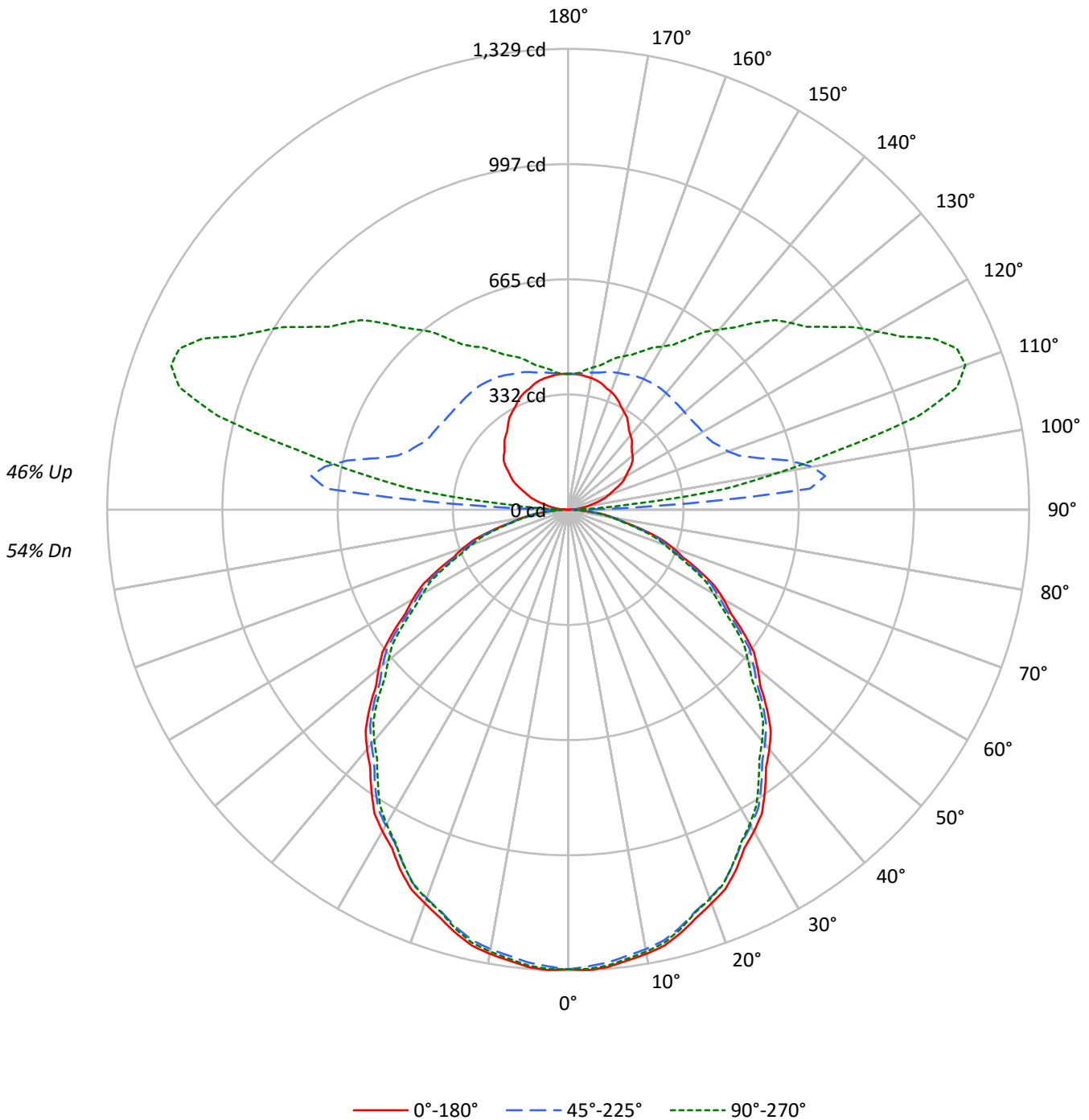
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P333231-840

CATALOG NUMBER: S125DIP-S850D810U840-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





TEST NUMBER: P333231-840

CATALOG NUMBER: S125DIP-S850D810U840-4F0-1E-UDD-F4

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60
1	99	94	90	87	91	88	84	81	75	72	70	63	62	60	53	52	50
2	90	82	76	71	83	76	71	66	66	62	58	56	53	50	46	44	42
3	82	72	65	59	76	67	61	55	58	53	49	49	45	42	41	38	36
4	75	64	56	50	69	60	53	47	51	46	42	44	40	36	37	34	31
5	69	57	49	43	63	53	46	40	46	40	36	39	35	31	33	30	27
6	63	51	43	37	59	48	40	35	41	36	31	36	31	28	30	27	24
7	59	46	38	33	54	43	36	31	38	32	28	32	28	24	27	24	21
8	54	42	34	29	50	39	32	27	34	29	25	30	25	22	25	22	19
9	51	38	31	26	47	36	29	24	31	26	22	27	23	20	23	20	17
10	47	35	28	23	44	33	26	22	29	24	20	25	21	18	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8561	8561	8561
5°	8581	8499	8554
10°	8529	8439	8487
15°	8436	8338	8372
20°	8304	8195	8210
25°	8161	8027	8020
30°	7986	7845	7806
35°	7798	7649	7541
40°	7605	7436	7331
45°	7395	7242	7099
50°	7166	7007	6797
55°	6944	6742	6554
60°	6679	6475	6245
65°	6363	6154	5946
70°	6060	5784	5586
75°	5522	5340	5155
80°	4917	4839	4720
85°	4276	4357	4113



TEST NUMBER: P333231-840

CATALOG NUMBER: S125DIP-S850D810U840-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.0	2.0
10°-20°	353.1	5.5
20°-30°	521.3	8.2
30°-40°	608.3	9.5
40°-50°	611.0	9.6
50°-60°	536.3	8.4
60°-70°	399.6	6.3
70°-80°	228.5	3.6
80°-90°	68.7	1.1
90°-100°	283.9	4.4
100°-110°	610.3	9.6
110°-120°	572.7	9.0
120°-130°	464.2	7.3
130°-140°	372.5	5.8
140°-150°	281.1	4.4
150°-160°	197.9	3.1
160°-170°	116.6	1.8
170°-180°	37.9	0.6
0°-30°	999.4	15.6
0°-40°	1607.8	25.2
0°-60°	2755.1	43.1
0°-90°	3451.9	54.0
90°-120°	1466.9	23.0
90°-150°	2584.6	40.5
90°-180°	2937.0	46.0
0°-180°	6388.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1326	1326	1326	1326	1326	
5°	1324	1321	1311	1320	1319	125
15°	1262	1258	1247	1252	1252	355
25°	1145	1140	1126	1128	1125	527
35°	989	984	970	965	956	618
45°	810	805	793	781	777	624
55°	617	613	599	590	582	550
65°	416	414	403	394	389	413
75°	221	219	214	211	207	236
85°	58	59	59	58	56	64
90°	1	7	13	17	18	5
95°	26	77	700	317	186	28
105°	89	125	572	1127	1046	94
115°	160	192	460	991	1166	157
125°	221	259	441	788	918	196
135°	259	311	438	660	763	201
145°	302	346	439	547	602	189
155°	344	370	428	484	504	158
165°	376	386	411	436	442	106
175°	391	391	394	399	397	37
180°	392	392	392	392	392	



TEST NUMBER: P333231-840

CATALOG NUMBER: S125DIP-S850D810U840-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6
2.5°	1329.1	1328.5	1328.0	1327.4	1326.8	1325.5	1323.7	1321.9	1320.0	1318.2	1320.0
5°	1323.6	1323.1	1322.6	1322.2	1321.7	1320.3	1318.0	1315.7	1313.3	1311.0	1313.1
7.5°	1311.4	1311.0	1310.5	1310.0	1309.6	1308.1	1305.5	1302.9	1300.4	1297.8	1299.8
10°	1300.5	1300.1	1299.6	1299.1	1298.7	1297.2	1294.5	1292.0	1289.5	1286.9	1288.8
12.5°	1287.1	1286.3	1285.5	1284.5	1283.7	1282.1	1279.8	1277.4	1275.0	1272.6	1274.1
15°	1261.7	1261.0	1260.3	1259.6	1258.9	1257.3	1254.8	1252.1	1249.6	1247.0	1248.2
17.5°	1232.5	1231.5	1230.5	1229.5	1228.5	1226.6	1224.0	1221.3	1218.6	1216.0	1217.4
20°	1208.2	1207.8	1207.3	1206.8	1206.4	1204.6	1201.5	1198.5	1195.5	1192.4	1194.2
22.5°	1183.9	1183.1	1182.2	1181.3	1180.5	1178.7	1175.9	1173.0	1170.1	1167.3	1168.4
25°	1145.3	1144.2	1143.0	1141.8	1140.6	1138.5	1135.5	1132.5	1129.4	1126.4	1126.9
27.5°	1100.1	1099.5	1098.8	1098.1	1097.4	1095.5	1092.4	1089.2	1086.1	1083.0	1083.1
30°	1070.9	1070.2	1069.4	1068.7	1068.0	1065.9	1062.5	1058.9	1055.4	1052.0	1051.5
32.5°	1038.9	1037.8	1036.8	1035.7	1034.7	1032.6	1029.5	1026.3	1023.2	1020.1	1019.3
35°	989.1	988.1	987.1	986.2	985.3	983.2	980.0	976.6	973.4	970.2	969.0
37.5°	937.3	936.0	934.8	933.7	932.5	930.4	927.4	924.2	921.2	918.2	916.4
40°	902.0	900.8	899.7	898.5	897.3	895.1	891.8	888.6	885.3	882.0	880.0
42.5°	864.2	863.2	862.2	861.3	860.3	858.2	855.0	851.6	848.4	845.2	843.2
45°	809.7	808.7	807.8	806.9	806.0	804.1	801.3	798.5	795.7	792.9	790.1
47.5°	750.9	751.0	751.0	751.0	751.1	749.5	746.1	742.8	739.4	736.1	733.2
50°	713.2	712.5	711.8	711.0	710.4	708.6	705.9	703.1	700.2	697.4	694.4
52.5°	674.6	674.1	673.6	673.1	672.6	670.8	667.8	664.8	661.9	658.8	656.2
55°	616.7	616.0	615.3	614.6	613.9	611.9	608.6	605.4	602.1	598.8	596.7
57.5°	555.6	555.3	554.9	554.5	554.2	552.6	549.9	547.1	544.3	541.6	538.9
60°	517.1	516.1	515.2	514.2	513.3	511.6	509.0	506.4	503.9	501.3	499.0
62.5°	476.8	476.1	475.3	474.5	473.8	472.3	470.2	468.0	465.7	463.5	461.1
65°	416.4	415.9	415.5	415.0	414.5	413.0	410.4	407.9	405.3	402.7	400.6
67.5°	357.9	356.9	355.9	354.9	354.0	352.4	350.6	348.7	346.8	344.9	343.1
70°	320.9	319.7	318.6	317.4	316.3	314.7	312.6	310.4	308.3	306.3	304.9
72.5°	280.6	279.8	279.0	278.3	277.5	276.4	275.1	273.7	272.4	271.0	269.4
75°	221.3	220.9	220.4	219.9	219.4	218.6	217.4	216.3	215.1	214.0	213.3
77.5°	166.5	166.3	166.2	166.0	165.8	165.4	164.7	164.1	163.4	162.8	162.4
80°	132.2	132.2	132.2	132.2	132.2	131.9	131.5	131.0	130.5	130.1	129.9
82.5°	101.9	101.6	101.2	100.8	100.5	100.2	100.1	100.1	100.0	99.9	99.5
85°	57.7	58.0	58.2	58.4	58.6	58.8	58.8	58.8	58.8	58.8	58.5
87.5°	22.8	22.9	23.3	23.6	23.9	24.1	24.1	24.2	24.2	24.3	24.5
90°	0.8	1.6	3.1	4.7	6.4	7.9	8.7	10.3	11.0	12.6	13.4
92.5°	9.6	11.7	18.3	28.1	41.7	64.7	107.9	180.2	258.6	254.6	206.1
95°	26.1	26.9	33.1	41.8	59.2	94.7	179.3	352.9	570.9	699.6	684.6
97.5°	43.2	44.2	48.7	57.4	72.9	98.6	154.4	281.8	509.8	747.1	866.2
100°	55.2	56.9	60.0	68.7	83.7	107.3	153.2	255.8	454.8	713.1	910.4
102.5°	68.6	69.5	72.0	81.3	95.0	118.2	158.9	245.1	413.1	653.0	883.9
105°	89.3	89.3	93.2	101.1	113.7	135.8	170.6	240.9	372.7	572.5	799.1
107.5°	109.5	111.0	114.8	121.3	134.4	154.3	187.9	248.1	355.7	517.1	712.6
110°	124.0	125.5	128.7	135.8	147.6	168.1	200.6	255.1	350.6	491.1	663.3



TEST NUMBER: P333231-840

CATALOG NUMBER: S125DIP-S850D810U840-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	138.5	140.1	142.6	149.7	161.6	181.5	212.6	263.9	350.6	475.9	626.6
115°	159.5	161.1	163.5	170.6	182.4	202.2	231.4	277.1	352.9	459.6	586.6
117.5°	178.4	180.9	183.4	190.5	203.9	223.0	250.6	292.4	358.2	451.5	562.8
120°	191.1	193.5	196.6	203.7	217.1	236.9	264.5	302.5	363.2	447.7	549.6
122.5°	204.4	206.1	208.6	215.7	230.5	250.1	277.8	313.8	367.6	444.5	538.2
125°	221.1	222.7	226.6	233.7	248.7	269.2	295.3	329.2	375.1	440.6	522.7
127.5°	234.2	236.6	241.7	250.6	266.6	287.1	312.3	343.5	383.4	438.7	508.5
130°	242.4	244.8	251.1	261.4	277.9	298.5	323.0	352.9	388.5	437.5	499.1
132.5°	248.7	251.8	259.3	270.8	288.0	308.6	333.1	361.1	394.2	437.5	491.5
135°	259.0	262.2	271.7	284.3	300.8	322.1	346.7	372.7	401.9	437.5	482.4
137.5°	272.0	274.3	283.2	295.8	312.0	334.0	356.3	381.2	409.0	438.4	474.4
140°	279.5	281.9	291.3	304.0	319.0	340.3	363.2	386.9	412.1	439.0	470.6
142.5°	288.3	290.1	298.9	311.5	326.0	346.0	367.6	390.1	414.0	439.7	467.5
145°	301.6	303.2	311.1	322.1	336.4	354.6	375.1	394.8	416.2	439.0	462.7
147.5°	315.5	316.5	323.3	333.6	345.9	361.8	379.8	397.7	416.9	437.0	457.8
150°	323.8	325.3	330.8	341.1	352.1	365.6	382.9	399.5	416.9	435.0	454.0
152.5°	332.5	333.6	338.4	347.4	357.9	370.0	386.1	400.8	416.3	432.5	449.6
155°	344.3	344.3	349.0	356.9	364.8	375.9	389.3	401.9	414.5	428.0	442.2
157.5°	354.7	354.6	358.3	365.1	372.0	380.4	391.9	402.7	412.5	423.2	435.3
160°	361.6	360.8	364.1	369.5	375.9	382.9	393.2	402.7	410.6	420.1	429.6
162.5°	367.3	366.6	369.7	374.6	379.6	385.5	394.5	402.0	408.7	416.3	424.4
165°	375.9	374.3	376.7	380.6	383.7	388.5	394.8	401.1	405.9	410.6	416.9
167.5°	381.5	380.7	382.1	384.4	386.6	389.6	394.8	399.2	401.4	405.1	409.5
170°	385.4	384.6	385.4	386.9	388.5	390.8	394.8	398.0	399.5	401.9	405.1
172.5°	387.9	386.5	387.2	388.8	389.7	390.8	394.2	396.7	397.0	398.1	400.6
175°	390.8	389.3	390.1	390.8	390.8	390.8	393.2	394.8	394.0	394.0	394.8
177.5°	392.2	391.0	391.0	391.6	391.0	391.0	392.2	392.9	391.6	391.6	392.2
180°	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6



TEST NUMBER: P333231-840

CATALOG NUMBER: S125DIP-S850D810U840-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6
2.5°	1321.9	1323.7	1325.5	1326.5	1326.3	1326.1	1325.9	1325.6
5°	1315.2	1317.3	1319.4	1320.3	1320.1	1319.9	1319.6	1319.4
7.5°	1301.9	1303.9	1306.0	1306.9	1306.7	1306.5	1306.2	1306.0
10°	1290.6	1292.5	1294.3	1295.2	1294.9	1294.6	1294.4	1294.2
12.5°	1275.6	1277.1	1278.6	1279.3	1279.3	1279.2	1279.2	1279.1
15°	1249.4	1250.5	1251.7	1252.2	1252.2	1252.2	1252.2	1252.2
17.5°	1218.9	1220.3	1221.7	1221.9	1220.7	1219.6	1218.4	1217.3
20°	1195.8	1197.4	1199.0	1199.2	1198.1	1196.9	1195.8	1194.6
22.5°	1169.4	1170.5	1171.6	1171.7	1170.9	1170.1	1169.3	1168.6
25°	1127.3	1127.8	1128.3	1128.1	1127.5	1126.8	1126.1	1125.4
27.5°	1083.2	1083.3	1083.4	1083.1	1082.4	1081.7	1081.0	1080.3
30°	1051.1	1050.6	1050.1	1049.6	1048.8	1048.1	1047.4	1046.7
32.5°	1018.3	1017.5	1016.7	1015.6	1014.4	1013.1	1011.9	1010.7
35°	967.9	966.6	965.5	964.0	962.1	960.3	958.4	956.5
37.5°	914.6	912.9	911.2	909.8	908.8	907.7	906.7	905.5
40°	877.9	875.8	873.6	872.2	871.5	870.9	870.2	869.5
42.5°	841.3	839.4	837.5	836.0	835.0	833.8	832.7	831.7
45°	787.3	784.5	781.7	779.9	779.3	778.6	777.9	777.2
47.5°	730.3	727.5	724.7	722.5	720.8	719.2	717.5	715.9
50°	691.4	688.3	685.3	683.0	681.4	679.7	678.1	676.5
52.5°	653.6	650.9	648.2	646.0	644.2	642.4	640.6	638.7
55°	594.7	592.6	590.5	588.7	586.9	585.3	583.7	582.1
57.5°	536.2	533.5	530.8	529.0	528.1	527.3	526.3	525.4
60°	496.7	494.3	492.0	490.0	488.4	486.8	485.1	483.5
62.5°	458.6	456.1	453.5	451.6	450.4	449.1	447.9	446.6
65°	398.6	396.5	394.4	392.8	391.9	391.0	390.0	389.1
67.5°	341.3	339.5	337.8	336.6	336.1	335.5	334.9	334.4
70°	303.5	302.1	300.6	299.5	298.5	297.6	296.7	295.8
72.5°	267.8	266.3	264.7	263.4	262.5	261.6	260.6	259.6
75°	212.6	211.9	211.2	210.4	209.4	208.4	207.5	206.6
77.5°	162.0	161.5	161.1	160.6	159.9	159.3	158.6	157.9
80°	129.6	129.4	129.2	128.8	128.4	127.8	127.3	126.9
82.5°	99.0	98.6	98.2	98.0	97.9	97.8	97.7	97.6
85°	58.3	58.1	57.8	57.5	57.0	56.6	56.0	55.5
87.5°	24.6	24.8	24.9	25.1	24.7	24.3	24.1	23.7
90°	14.2	15.0	15.8	17.4	17.4	17.4	18.2	18.2
92.5°	140.0	101.6	76.4	64.7	54.6	52.7	51.6	50.4
95°	567.7	447.7	350.6	284.3	228.2	204.5	198.2	185.5
97.5°	845.6	761.3	666.7	574.5	525.7	481.5	458.6	448.5
100°	971.2	932.5	851.2	769.1	714.6	657.7	628.5	615.9
102.5°	1013.5	1037.4	998.4	942.8	884.5	844.0	812.3	802.8
105°	988.6	1096.8	1131.6	1122.9	1097.5	1071.5	1055.7	1046.2
107.5°	899.5	1043.9	1133.1	1174.3	1187.1	1186.9	1181.7	1175.4
110°	833.8	983.8	1095.2	1162.3	1197.8	1212.8	1218.4	1218.4



TEST NUMBER: P333231-840

CATALOG NUMBER: S125DIP-S850D810U840-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	782.0	924.4	1037.0	1116.2	1168.1	1193.9	1207.6	1213.4
115°	717.0	839.4	947.6	1033.6	1095.2	1133.1	1155.2	1165.5
117.5°	675.0	780.4	873.6	952.6	1014.2	1053.3	1075.3	1081.6
120°	652.2	747.0	833.8	903.3	961.7	999.7	1021.0	1027.2
122.5°	635.2	723.0	800.3	865.5	917.6	952.3	973.6	979.3
125°	610.4	690.9	759.6	816.5	860.7	893.0	910.4	918.3
127.5°	585.1	660.2	724.4	777.6	817.7	846.3	862.7	866.2
130°	569.3	638.8	700.3	751.7	791.2	817.3	833.0	837.8
132.5°	553.5	618.5	674.5	723.9	763.4	789.4	804.0	809.3
135°	533.0	587.4	638.0	683.0	717.7	743.8	758.0	762.8
137.5°	515.6	559.7	601.7	639.9	671.1	694.7	707.8	713.1
140°	506.1	543.2	579.6	612.7	642.0	662.5	674.3	678.2
142.5°	498.0	529.4	560.6	589.4	614.2	631.6	642.8	646.0
145°	487.2	511.7	536.1	557.4	576.4	589.9	598.5	601.7
147.5°	477.1	497.0	515.7	531.9	546.8	557.6	562.7	564.1
150°	471.4	488.8	503.7	518.0	529.9	539.3	542.5	543.2
152.5°	465.0	480.6	494.3	505.3	515.3	522.9	526.0	526.8
155°	455.7	468.3	479.3	488.0	495.8	501.4	503.7	504.5
157.5°	446.2	456.6	465.0	471.9	478.1	482.6	484.8	484.6
160°	439.8	447.7	455.7	461.1	466.7	470.6	472.2	471.4
162.5°	432.8	440.1	446.8	451.6	456.0	459.2	459.6	459.4
165°	423.2	428.8	433.5	437.5	440.6	442.2	442.2	442.2
167.5°	414.0	417.7	421.3	424.1	425.8	427.2	426.6	426.4
170°	409.0	411.4	413.7	415.4	416.9	417.7	417.7	416.9
172.5°	403.3	405.7	407.5	408.4	408.7	410.1	408.9	408.1
175°	397.2	397.2	398.8	398.8	398.8	399.5	398.0	397.2
177.5°	392.9	393.5	393.5	393.5	392.9	393.5	391.6	391.6
180°	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6

(END OF REPORT)