

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: P331410-940

Luminaire Tested: **SA2XXDIP-C865D925U940-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331410-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C865D925U940-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

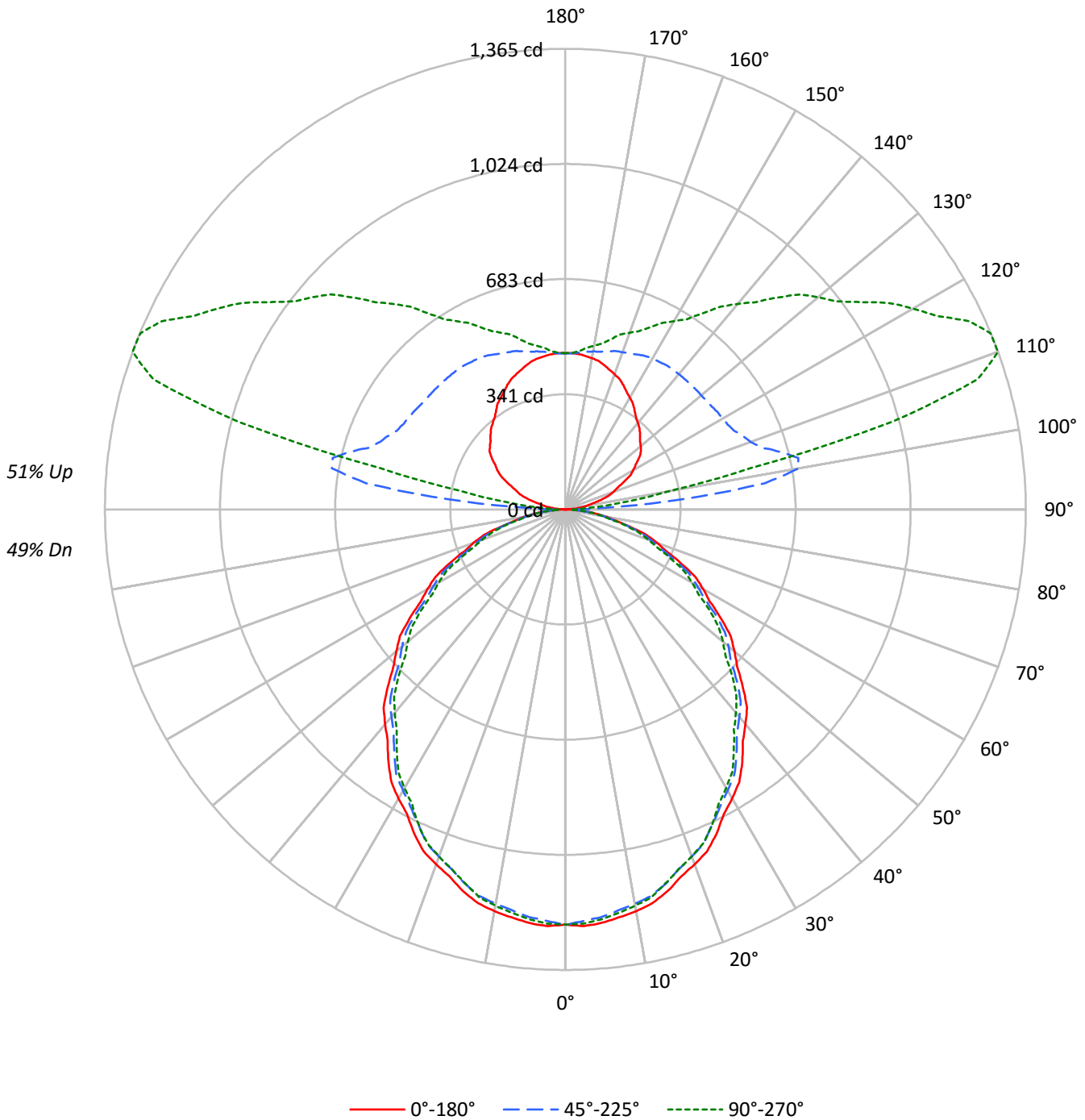
Lumens per Lamp: N/A
Luminaire Lumens: 6355.2 lumens
Efficiency: N/A
Efficacy: 105.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

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



TEST NUMBER: P331410-940
CATALOG NUMBER: SA2XXDIP-C865D925U940-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





TEST NUMBER: P331410-940

CATALOG NUMBER: SA2XXDIP-C865D925U940-4F0-1E-UDD-F4

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	49
1	98	93	89	86	90	86	83	80	73	70	68	60	59	57	49	48	47	42
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	43	41	39	35
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	36	34	29
4	74	63	55	49	68	59	52	46	50	45	40	42	38	35	34	31	29	25
5	68	56	48	42	63	52	45	40	45	39	35	38	33	30	31	28	25	22
6	63	51	43	37	58	47	40	35	40	35	30	34	30	26	28	25	22	19
7	58	46	38	32	53	43	35	30	36	31	27	31	26	23	26	22	20	17
8	54	42	34	28	50	39	32	27	33	28	24	28	24	21	23	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	28	23	43	32	26	22	28	23	19	24	20	17	20	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19869	19869	19869
5°	19945	19656	19772
10°	19825	19457	19556
15°	19580	19206	19184
20°	19234	18826	18806
25°	18887	18360	18360
30°	18442	17935	17780
35°	18027	17422	17164
40°	17506	16910	16583
45°	16993	16401	15995
50°	16435	15872	15307
55°	15854	15254	14688
60°	15206	14518	13986
65°	14514	13788	13154
70°	13629	12902	12288
75°	12402	11884	11584
80°	11000	10674	10126
85°	8985	8559	7669



TEST NUMBER: P331410-940

CATALOG NUMBER: SA2XXDIP-C865D925U940-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.7	1.8
10°-20°	325.6	5.1
20°-30°	478.6	7.5
30°-40°	555.9	8.7
40°-50°	555.3	8.7
50°-60°	484.3	7.6
60°-70°	358.1	5.6
70°-80°	202.8	3.2
80°-90°	58.7	0.9
90°-100°	185.0	2.9
100°-110°	627.9	9.9
110°-120°	667.1	10.5
120°-130°	549.1	8.6
130°-140°	441.0	6.9
140°-150°	333.2	5.2
150°-160°	234.2	3.7
160°-170°	137.9	2.2
170°-180°	44.9	0.7
0°-30°	919.9	14.5
0°-40°	1475.8	23.2
0°-60°	2515.4	39.6
0°-90°	3134.9	49.3
90°-120°	1480.0	23.3
90°-150°	2803.4	44.1
90°-180°	3220.0	50.7
0°-180°	6355.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1231	1231	1231	1231	1231	
5°	1231	1225	1213	1222	1220	117
15°	1171	1164	1149	1153	1148	330
25°	1060	1050	1031	1033	1031	488
35°	915	902	884	877	871	571
45°	744	735	718	706	700	574
55°	563	556	542	528	522	503
65°	380	372	361	350	344	376
75°	199	196	190	184	186	212
85°	48	47	46	43	41	56
90°	1	12	30	29	29	4
95°	31	77	349	132	102	33
105°	109	164	659	1179	1003	115
115°	191	242	552	1139	1320	190
125°	267	316	530	922	1071	237
135°	313	374	524	775	887	242
145°	358	411	522	647	708	224
155°	407	439	506	573	595	187
165°	443	457	485	514	522	125
175°	462	462	466	472	471	44
180°	463	463	463	463	463	



TEST NUMBER: P331410-940

CATALOG NUMBER: SA2XXDIP-C865D925U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6
2.5°	1236.3	1235.2	1234.1	1233.1	1232.1	1230.4	1228.1	1225.7	1223.4	1221.1	1223.2
5°	1230.6	1229.5	1228.5	1227.4	1226.4	1224.4	1221.6	1218.6	1215.8	1212.8	1215.0
7.5°	1219.7	1218.1	1216.5	1214.8	1213.2	1210.9	1207.9	1205.0	1202.0	1199.1	1201.2
10°	1209.2	1207.5	1205.6	1203.7	1201.9	1199.4	1196.2	1193.1	1190.0	1186.8	1188.9
12.5°	1195.1	1193.5	1191.9	1190.2	1188.6	1186.2	1183.0	1179.8	1176.7	1173.6	1175.0
15°	1171.4	1169.8	1168.2	1166.7	1165.1	1162.6	1159.2	1155.7	1152.4	1149.0	1150.0
17.5°	1141.1	1139.5	1138.0	1136.4	1134.8	1132.3	1128.8	1125.3	1121.9	1118.4	1119.6
20°	1119.4	1117.8	1116.2	1114.6	1113.0	1110.4	1106.7	1103.0	1099.4	1095.7	1096.4
22.5°	1097.6	1095.4	1093.1	1090.9	1088.8	1085.9	1082.4	1079.0	1075.5	1072.0	1072.2
25°	1060.2	1058.1	1056.0	1053.9	1051.8	1048.5	1044.0	1039.6	1035.1	1030.6	1031.2
27.5°	1017.6	1015.7	1013.8	1011.9	1010.0	1007.3	1003.8	1000.2	996.8	993.2	992.5
30°	989.2	987.1	985.0	982.9	980.8	977.8	973.8	969.9	965.9	962.0	961.2
32.5°	958.9	957.3	955.6	953.9	952.2	949.2	945.1	940.9	936.8	932.6	931.2
35°	914.6	912.0	909.4	906.8	904.1	900.7	896.5	892.3	888.1	883.9	882.3
37.5°	864.7	862.4	860.1	857.7	855.5	852.2	848.0	843.8	839.5	835.4	833.4
40°	830.6	828.6	826.4	824.3	822.2	819.0	814.8	810.7	806.5	802.3	799.9
42.5°	797.5	795.4	793.3	791.2	789.1	786.0	781.8	777.6	773.3	769.1	766.5
45°	744.2	742.4	740.6	738.8	736.9	734.0	730.0	726.1	722.2	718.3	715.3
47.5°	691.3	689.6	687.8	686.1	684.3	681.4	677.3	673.2	669.1	664.9	661.9
50°	654.3	653.0	651.8	650.4	649.1	646.6	642.9	639.2	635.5	631.9	628.2
52.5°	618.4	616.6	614.9	613.1	611.4	608.9	605.4	601.9	598.4	594.9	591.9
55°	563.2	561.7	560.1	558.5	556.9	554.6	551.4	548.2	545.1	541.9	538.8
57.5°	507.8	506.6	505.3	504.1	502.8	500.4	497.0	493.5	490.0	486.5	483.5
60°	470.9	469.8	468.9	467.8	466.7	464.4	460.7	457.0	453.3	449.6	446.7
62.5°	435.0	433.3	431.6	429.9	428.2	426.0	423.1	420.3	417.4	414.6	412.0
65°	379.9	378.3	376.7	375.1	373.5	371.4	368.8	366.1	363.6	360.9	358.6
67.5°	323.8	322.4	321.2	319.9	318.7	316.9	314.5	312.1	309.8	307.4	305.6
70°	288.7	287.7	286.6	285.5	284.5	282.8	280.4	278.0	275.7	273.3	271.5
72.5°	252.7	251.7	250.7	249.6	248.5	247.3	245.8	244.2	242.6	241.1	239.3
75°	198.8	198.2	197.7	197.2	196.7	195.7	194.5	193.1	191.8	190.5	189.0
77.5°	150.5	149.6	148.7	147.8	147.0	146.2	145.7	145.2	144.6	144.1	143.3
80°	118.3	118.1	117.8	117.5	117.3	116.9	116.4	115.8	115.3	114.8	114.0
82.5°	88.0	88.0	87.9	87.8	87.8	87.7	87.3	87.0	86.7	86.4	85.3
85°	48.5	48.2	48.0	47.7	47.4	47.2	46.9	46.6	46.4	46.2	45.4
87.5°	17.2	17.3	17.7	17.6	17.5	17.6	18.1	18.9	19.5	19.3	18.5
90°	0.9	3.6	7.1	8.9	10.7	13.4	17.8	24.0	29.3	30.2	29.3
92.5°	10.9	15.7	22.1	25.9	32.0	40.4	60.5	88.8	114.0	115.7	97.7
95°	31.1	34.7	43.6	51.6	65.9	87.2	128.1	205.5	308.8	348.8	305.2
97.5°	50.7	55.6	65.0	77.0	93.5	117.6	169.1	277.0	448.5	595.6	624.7
100°	68.5	71.2	79.2	93.5	111.3	136.2	183.3	291.9	484.1	703.0	831.3
102.5°	84.9	86.9	94.9	109.1	127.6	152.6	196.2	292.7	470.6	706.6	908.1
105°	108.6	112.2	118.3	131.7	151.3	176.2	218.0	297.2	444.1	659.4	896.2
107.5°	134.2	137.1	143.1	155.4	174.8	199.9	240.5	309.5	430.9	608.9	818.1
110°	151.3	154.9	160.2	171.7	190.5	216.2	255.4	319.5	428.1	584.7	768.9



TEST NUMBER: P331410-940

CATALOG NUMBER: SA2XXDIP-C865D925U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	166.9	170.5	176.6	187.4	205.4	231.9	269.7	330.2	428.7	569.0	734.8
115°	191.4	195.8	201.2	211.8	229.6	253.6	291.9	346.2	432.5	551.8	692.4
117.5°	216.6	220.2	225.5	235.0	252.0	277.0	312.4	363.3	438.9	543.4	665.7
120°	232.3	235.9	241.2	249.1	267.0	291.9	326.6	374.7	443.2	538.4	651.5
122.5°	247.3	250.0	255.4	264.1	282.0	307.6	340.1	384.6	448.2	535.6	639.4
125°	267.0	269.7	275.0	285.7	303.4	328.4	360.4	400.5	455.7	530.4	622.1
127.5°	282.7	286.2	293.6	305.4	322.5	348.1	379.3	415.3	463.3	527.4	606.1
130°	291.9	295.4	304.3	316.8	334.7	359.5	390.7	424.5	469.0	525.9	595.4
132.5°	300.4	304.7	314.3	327.5	346.0	371.0	400.6	433.7	474.7	525.2	586.8
135°	313.3	316.8	327.5	340.8	361.3	386.2	414.7	445.9	481.4	524.1	574.9
137.5°	325.4	329.7	340.3	354.5	374.9	398.0	426.1	455.1	487.5	524.0	566.5
140°	334.7	338.2	348.8	363.1	382.7	405.8	432.5	460.1	490.4	523.3	561.6
142.5°	343.8	346.7	356.7	371.0	389.8	411.5	437.5	464.4	492.5	523.3	556.6
145°	357.8	361.3	370.2	383.6	401.4	421.0	445.0	469.9	494.8	521.5	550.0
147.5°	372.7	375.4	383.9	396.2	411.0	428.5	451.0	473.0	495.5	518.4	543.2
150°	382.7	385.3	392.4	404.0	417.4	433.4	453.9	474.3	494.8	516.2	537.5
152.5°	392.6	393.9	401.0	411.2	423.8	438.4	456.7	475.0	493.4	512.6	532.5
155°	406.7	407.6	413.0	422.8	432.5	445.9	461.0	476.1	491.2	506.4	523.3
157.5°	418.5	419.4	423.7	432.1	440.0	451.2	464.0	476.1	487.1	500.0	514.6
160°	426.3	427.2	430.7	437.8	445.0	454.8	465.5	476.1	485.0	495.7	508.2
162.5°	434.1	433.5	437.1	442.8	449.2	456.9	466.2	475.4	482.9	492.1	502.5
165°	443.2	442.3	444.1	449.4	453.9	459.2	467.3	473.5	478.8	485.0	493.0
167.5°	450.7	449.6	451.2	454.6	457.8	461.2	467.1	472.3	474.7	478.8	483.8
170°	455.7	453.9	454.8	457.4	459.2	461.9	466.4	470.8	472.6	475.2	478.8
172.5°	458.5	457.4	456.9	459.6	460.7	462.6	465.7	468.7	469.8	471.0	473.9
175°	461.9	461.0	460.1	461.9	461.9	462.8	464.6	466.4	465.5	466.4	467.3
177.5°	463.5	462.1	461.4	462.8	462.8	462.8	463.5	464.9	463.5	462.8	463.5
180°	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8



TEST NUMBER: P331410-940

CATALOG NUMBER: SA2XXDIP-C865D925U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6	1230.6
2.5°	1225.3	1227.4	1229.5	1230.4	1229.9	1229.5	1229.1	1228.7
5°	1217.0	1219.1	1221.3	1222.0	1221.6	1221.0	1220.5	1219.9
7.5°	1203.3	1205.4	1207.6	1208.3	1207.7	1207.1	1206.6	1205.9
10°	1191.0	1193.1	1195.2	1195.9	1195.1	1194.3	1193.5	1192.8
12.5°	1176.5	1177.9	1179.5	1179.9	1179.3	1178.8	1178.1	1177.6
15°	1151.0	1152.1	1153.2	1153.0	1151.7	1150.4	1149.1	1147.7
17.5°	1120.8	1122.0	1123.3	1123.2	1122.0	1120.7	1119.5	1118.2
20°	1097.3	1098.1	1098.9	1098.7	1097.7	1096.6	1095.6	1094.5
22.5°	1072.4	1072.5	1072.6	1072.5	1071.7	1071.1	1070.5	1069.9
25°	1031.7	1032.2	1032.7	1032.7	1032.2	1031.7	1031.2	1030.6
27.5°	991.7	990.9	990.1	989.1	987.7	986.5	985.3	984.0
30°	960.4	959.7	958.9	957.9	956.9	955.8	954.8	953.7
32.5°	929.8	928.4	926.9	925.7	924.7	923.6	922.6	921.5
35°	880.7	879.1	877.6	876.1	874.9	873.5	872.2	870.8
37.5°	831.5	829.6	827.6	826.0	824.7	823.5	822.2	820.9
40°	797.5	795.1	792.8	791.0	790.1	789.0	787.9	786.8
42.5°	763.9	761.3	758.8	756.8	755.3	753.9	752.3	750.9
45°	712.5	709.5	706.7	704.7	703.6	702.6	701.5	700.5
47.5°	658.9	655.9	652.8	650.5	649.0	647.5	646.0	644.4
50°	624.5	620.8	617.2	614.7	613.3	612.0	610.7	609.4
52.5°	588.8	585.8	582.7	580.3	578.6	576.8	575.2	573.4
55°	535.7	532.4	529.3	527.1	525.8	524.4	523.2	521.8
57.5°	480.4	477.2	474.1	472.1	471.1	470.1	469.1	468.1
60°	443.9	441.0	438.1	436.2	435.4	434.6	433.8	433.1
62.5°	409.2	406.5	403.9	402.1	401.0	400.0	399.0	398.1
65°	356.1	353.8	351.4	349.6	348.3	347.0	345.6	344.3
67.5°	303.7	301.8	300.1	298.6	297.6	296.5	295.4	294.4
70°	269.7	267.8	266.0	264.5	263.5	262.4	261.4	260.3
72.5°	237.5	235.6	233.8	232.5	231.6	230.8	229.9	229.1
75°	187.3	185.7	184.2	183.7	184.2	184.8	185.2	185.7
77.5°	142.6	141.8	141.0	140.2	139.5	138.8	138.0	137.2
80°	113.2	112.4	111.6	110.9	110.4	109.9	109.4	108.9
82.5°	84.4	83.4	82.4	81.9	81.7	81.6	81.5	81.4
85°	44.6	43.8	43.0	42.4	42.2	41.9	41.6	41.4
87.5°	17.7	16.7	16.4	16.1	16.0	15.8	15.5	15.3
90°	28.4	26.7	28.4	29.3	29.3	29.3	29.3	29.3
92.5°	77.6	66.6	59.1	53.6	52.9	50.0	50.7	49.3
95°	233.2	178.9	141.5	121.9	110.4	103.3	100.6	101.5
97.5°	544.1	445.1	348.8	284.6	242.1	220.2	207.1	199.7
100°	812.5	702.1	580.2	472.6	398.7	360.4	334.7	318.6
102.5°	988.4	963.5	874.3	760.2	679.9	614.6	582.4	560.7
105°	1081.3	1181.9	1193.5	1164.0	1108.8	1053.7	1015.4	1003.0
107.5°	1014.4	1165.8	1258.4	1301.5	1308.4	1305.4	1297.7	1281.2
110°	956.7	1116.0	1229.9	1302.9	1341.1	1358.1	1366.1	1365.2



TEST NUMBER: P331410-940

CATALOG NUMBER: SA2XXDIP-C865D925U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	904.0	1056.9	1178.7	1262.3	1315.5	1343.8	1359.0	1363.8
115°	839.2	976.2	1092.9	1184.5	1247.7	1288.6	1311.8	1319.8
117.5°	790.4	910.8	1016.5	1102.5	1166.9	1210.1	1234.6	1241.3
120°	766.2	876.6	970.9	1052.0	1114.2	1156.0	1181.9	1190.8
122.5°	747.0	848.1	937.5	1010.7	1066.5	1107.6	1130.6	1138.1
125°	719.1	810.7	889.0	955.8	1007.5	1041.3	1063.5	1070.6
127.5°	691.5	774.5	848.3	909.9	954.9	986.6	1005.8	1011.6
130°	673.7	750.2	820.6	879.3	922.9	953.1	970.9	978.0
132.5°	656.6	727.5	792.0	847.2	890.1	920.4	936.7	943.2
135°	632.8	691.5	750.2	800.0	838.3	867.7	883.7	887.3
137.5°	613.7	662.8	709.4	752.9	787.8	813.1	827.2	832.5
140°	601.6	644.4	685.3	724.4	752.9	776.1	789.4	794.7
142.5°	591.7	627.9	663.2	696.0	723.0	744.0	755.9	757.0
145°	577.6	607.0	634.5	660.3	681.7	696.9	705.7	708.4
147.5°	566.7	589.9	611.4	630.3	647.9	660.0	666.0	667.6
150°	558.9	578.5	597.2	613.1	626.5	637.2	642.6	643.5
152.5°	551.1	569.2	585.1	599.0	609.4	618.7	622.6	622.8
155°	540.2	554.5	567.8	577.6	587.4	593.6	597.2	595.4
157.5°	527.5	539.5	550.7	558.4	565.3	570.4	572.0	572.0
160°	519.7	529.5	539.3	545.5	551.8	556.2	557.1	557.1
162.5°	511.9	520.2	528.6	533.4	539.7	542.7	543.6	542.9
165°	500.2	506.4	512.6	516.2	519.7	523.3	523.3	522.4
167.5°	488.9	493.7	498.0	501.2	502.8	504.8	504.6	503.5
170°	483.2	485.9	489.5	491.2	492.1	494.8	493.9	492.1
172.5°	476.8	478.8	481.6	482.7	483.6	484.8	483.9	482.9
175°	469.9	470.8	471.7	472.6	472.6	473.5	472.6	470.8
177.5°	464.9	464.9	465.7	465.7	465.7	465.7	464.9	463.5
180°	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8

(END OF REPORT)