

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: P332940-940

Luminaire Tested: **SA4XXRDIP-C795D810U940-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332940-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C795D810U940-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 810 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5748.2 lumens
Efficiency: N/A
Efficacy: 125.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

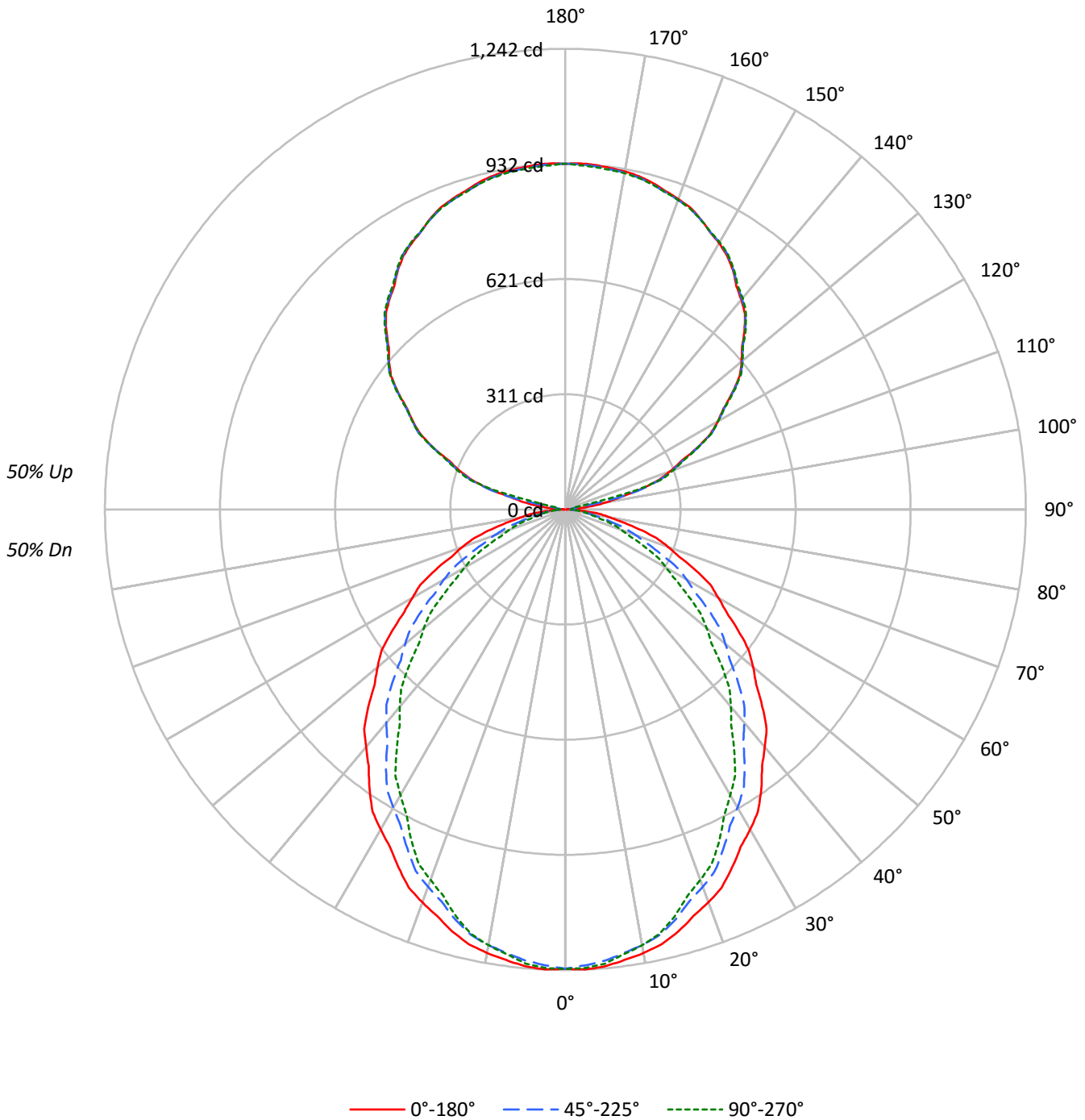
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332940-940

CATALOG NUMBER: SA4XXRDIP-C795D810U940-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P332940-940

CATALOG NUMBER: SA4XXRDIP-C795D810U940-4F0-1E-UDD-F

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	94	90	87	90	87	83	81	73	71	69	61	60	58	50	49	48	43
2	89	82	76	71	82	76	71	66	65	61	57	54	51	49	44	42	41	36
3	82	72	65	60	75	67	61	56	57	52	49	48	45	42	39	37	35	31
4	75	64	57	51	69	60	53	48	51	46	42	43	39	36	35	33	30	27
5	69	57	49	43	63	53	46	41	46	40	36	39	34	31	32	29	26	23
6	63	52	44	38	58	48	41	36	41	36	32	35	31	27	29	26	23	21
7	59	47	39	33	54	43	36	31	37	32	28	32	28	24	27	23	21	18
8	55	42	35	29	50	40	33	28	34	29	25	29	25	22	24	21	19	16
9	51	39	31	26	47	36	30	25	31	26	22	27	23	20	23	19	17	15
10	47	36	28	24	44	33	27	22	29	24	20	25	21	18	21	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10001	10001	10001
5°	10023	9900	9961
10°	9960	9781	9781
15°	9845	9576	9504
20°	9688	9306	9135
25°	9487	8989	8761
30°	9292	8655	8294
35°	9077	8310	7824
40°	8816	7917	7317
45°	8576	7526	6801
50°	8303	7076	6253
55°	8010	6608	5661
60°	7689	6095	5054
65°	7393	5454	4458
70°	6963	4747	3784
75°	6419	3936	3075
80°	5602	2999	2822
85°	4742	2723	2547



TEST NUMBER: P332940-940

CATALOG NUMBER: SA4XXRDIP-C795D810U940-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.4	2.0
10°-20°	324.5	5.6
20°-30°	468.6	8.2
30°-40°	531.1	9.2
40°-50°	512.9	8.9
50°-60°	426.5	7.4
60°-70°	294.5	5.1
70°-80°	149.3	2.6
80°-90°	41.0	0.7
90°-100°	31.9	0.6
100°-110°	203.3	3.5
110°-120°	388.9	6.8
120°-130°	493.7	8.6
130°-140°	528.2	9.2
140°-150°	493.9	8.6
150°-160°	398.3	6.9
160°-170°	256.9	4.5
170°-180°	88.5	1.5
0°-30°	909.4	15.8
0°-40°	1440.5	25.1
0°-60°	2379.9	41.4
0°-90°	2864.6	49.8
90°-120°	624.1	10.9
90°-150°	2139.8	37.2
90°-180°	2884.0	50.2
0°-180°	5748.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1239	1239	1239	1239	1239	
5°	1237	1233	1222	1230	1229	117
15°	1178	1169	1146	1144	1137	332
25°	1065	1047	1009	993	984	491
35°	921	890	843	812	794	575
45°	751	715	659	614	596	579
55°	569	530	470	422	402	509
65°	387	345	286	246	233	382
75°	206	170	126	105	99	217
85°	51	33	29	28	28	58
90°	2	10	15	19	21	4
95°	38	16	15	19	20	49
105°	210	214	218	222	199	220
115°	392	394	393	395	395	385
125°	551	553	552	554	555	492
135°	683	683	685	687	688	526
145°	788	790	790	791	792	492
155°	864	864	862	865	863	398
165°	911	908	908	913	907	257
175°	932	928	929	934	927	89
180°	932	932	932	932	932	



TEST NUMBER: P332940-940

CATALOG NUMBER: SA4XXRDIP-C795D810U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8
2.5°	1241.8	1241.1	1240.4	1239.7	1239.0	1237.8	1235.9	1234.1	1232.3	1230.4	1232.3
5°	1236.8	1236.0	1235.1	1234.3	1233.4	1231.8	1229.2	1226.7	1224.1	1221.6	1223.8
7.5°	1225.7	1224.8	1223.9	1223.0	1222.1	1220.0	1216.7	1213.4	1210.1	1206.8	1208.2
10°	1215.0	1214.0	1212.9	1211.8	1210.8	1208.4	1204.6	1200.8	1197.0	1193.2	1194.0
12.5°	1201.3	1200.2	1198.9	1197.7	1196.5	1193.6	1189.2	1184.6	1180.2	1175.7	1176.3
15°	1178.0	1176.2	1174.2	1172.3	1170.5	1166.9	1161.5	1156.3	1151.0	1145.8	1145.3
17.5°	1149.8	1147.0	1144.2	1141.6	1138.8	1134.3	1127.9	1121.6	1115.3	1108.9	1107.8
20°	1127.7	1125.0	1122.3	1119.5	1116.8	1111.9	1104.7	1097.5	1090.3	1083.2	1081.5
22.5°	1103.5	1100.4	1097.3	1094.2	1091.2	1085.7	1078.1	1070.4	1062.7	1055.1	1052.6
25°	1065.1	1061.3	1057.6	1053.7	1050.0	1043.7	1035.1	1026.4	1017.8	1009.1	1005.6
27.5°	1024.9	1020.2	1015.4	1010.7	1005.8	998.9	989.6	980.4	971.2	962.0	957.5
30°	996.8	991.6	986.3	981.1	975.8	968.2	958.3	948.4	938.4	928.5	923.3
32.5°	967.2	961.4	955.4	949.4	943.5	935.4	925.1	914.9	904.6	894.4	888.3
35°	921.0	914.3	907.5	900.7	894.0	885.4	874.9	864.2	853.7	843.2	836.1
37.5°	871.5	864.5	857.6	850.6	843.6	834.4	822.7	811.0	799.3	787.6	779.6
40°	836.6	829.6	822.7	815.7	808.8	799.2	787.2	775.3	763.2	751.2	742.3
42.5°	803.2	795.9	788.6	781.3	774.0	764.1	751.6	739.0	726.6	714.0	705.0
45°	751.2	743.4	735.6	727.8	720.0	709.8	697.1	684.5	671.8	659.2	648.9
47.5°	697.5	689.5	681.4	673.3	665.3	654.7	641.6	628.4	615.3	602.1	591.4
50°	661.1	652.9	644.6	636.4	628.2	617.3	603.9	590.4	576.8	563.4	552.9
52.5°	623.9	615.9	607.8	599.8	591.7	580.8	566.9	553.1	539.3	525.5	514.8
55°	569.1	560.6	552.2	543.8	535.4	524.3	510.6	496.9	483.2	469.5	458.5
57.5°	514.9	506.0	497.3	488.6	479.7	468.6	455.1	441.7	428.2	414.6	403.6
60°	476.2	467.7	459.3	450.8	442.4	431.5	417.9	404.5	391.0	377.5	366.5
62.5°	441.2	432.5	423.7	414.9	406.2	394.8	381.0	367.2	353.4	339.6	329.4
65°	387.0	377.9	368.8	359.8	350.7	339.5	325.9	312.5	299.0	285.5	276.4
67.5°	330.6	322.0	313.3	304.6	295.9	285.3	272.8	260.3	247.7	235.2	227.4
70°	295.0	286.1	277.2	268.4	259.6	249.1	237.1	225.1	213.1	201.1	194.1
72.5°	257.1	249.1	241.0	233.0	225.0	215.3	204.0	192.6	181.3	170.0	164.0
75°	205.8	198.0	190.2	182.4	174.6	165.8	155.9	146.0	136.1	126.2	121.3
77.5°	153.8	147.2	140.6	134.0	127.3	120.0	112.1	104.1	96.0	88.0	85.2
80°	120.5	114.3	108.3	102.1	96.0	89.8	83.5	77.1	70.8	64.5	63.8
82.5°	91.7	86.1	80.4	74.8	69.2	64.6	61.0	57.3	53.7	50.1	49.6
85°	51.2	47.0	42.8	38.6	34.3	31.9	31.3	30.7	30.1	29.4	29.0
87.5°	17.8	16.9	15.9	14.8	13.8	13.4	13.5	13.6	13.6	13.7	13.7
90°	2.1	3.8	5.5	7.2	8.9	10.3	11.6	12.8	14.1	15.3	16.2
92.5°	8.8	8.9	9.0	9.1	9.2	9.8	11.1	12.3	13.6	14.8	15.7
95°	38.3	33.1	27.8	22.6	17.3	14.7	14.9	15.1	15.2	15.3	16.2
97.5°	81.4	84.7	88.0	91.3	94.6	87.6	70.3	53.0	35.7	18.4	18.5
100°	114.3	117.2	119.9	122.7	125.5	116.2	94.8	73.5	52.1	30.7	28.0
102.5°	151.1	153.2	155.2	157.3	159.3	159.0	156.1	153.4	150.6	147.8	119.4
105°	209.8	210.8	211.7	212.7	213.6	214.5	215.2	216.0	216.8	217.5	218.9
107.5°	264.4	264.8	265.3	265.8	266.3	267.0	268.0	269.1	270.2	271.3	271.9
110°	301.2	301.7	302.1	302.6	303.1	303.7	304.7	305.6	306.6	307.5	307.8



TEST NUMBER: P332940-940

CATALOG NUMBER: SA4XXRDIP-C795D810U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	336.9	337.7	338.6	339.4	340.3	340.9	341.3	341.7	342.1	342.6	342.6
115°	391.8	392.3	392.8	393.2	393.7	393.9	393.7	393.5	393.4	393.2	393.5
117.5°	441.3	441.9	442.6	443.2	443.8	444.3	444.6	445.0	445.3	445.7	445.6
120°	474.8	475.5	476.1	476.7	477.2	477.5	477.3	477.2	477.1	476.9	477.2
122.5°	506.0	506.4	506.8	507.1	507.6	507.8	508.0	508.3	508.5	508.7	508.9
125°	550.8	551.4	552.1	552.7	553.3	553.4	553.1	552.9	552.5	552.2	552.7
127.5°	593.2	593.3	593.5	593.7	593.8	594.2	594.9	595.7	596.4	597.1	597.0
130°	620.5	620.7	620.8	621.0	621.2	621.4	621.9	622.4	622.9	623.3	623.5
132.5°	645.6	645.9	646.2	646.5	646.8	647.2	647.7	648.4	648.9	649.5	649.7
135°	683.3	683.1	683.0	682.8	682.7	682.9	683.5	684.1	684.7	685.4	685.6
137.5°	716.6	716.7	716.8	716.8	716.8	717.2	717.9	718.6	719.3	720.0	720.3
140°	738.3	738.7	739.0	739.3	739.6	739.9	740.2	740.6	740.8	741.1	741.6
142.5°	757.9	758.4	759.0	759.6	760.1	760.5	760.6	760.9	761.1	761.3	761.6
145°	787.8	788.4	788.8	789.3	789.7	790.0	790.0	790.0	790.0	790.0	790.1
147.5°	811.7	812.6	813.4	814.3	815.2	815.6	815.4	815.2	815.0	814.9	815.0
150°	829.0	829.6	830.3	830.9	831.4	831.7	831.5	831.4	831.3	831.1	831.1
152.5°	843.5	844.0	844.5	845.0	845.5	845.6	845.3	845.1	844.7	844.5	844.7
155°	863.9	864.0	864.2	864.3	864.5	864.3	863.9	863.4	862.9	862.5	863.1
157.5°	881.0	880.9	880.8	880.7	880.7	880.3	879.8	879.3	878.8	878.2	879.0
160°	891.1	890.6	890.1	889.7	889.2	888.9	888.8	888.6	888.4	888.2	889.2
162.5°	900.0	899.4	898.8	898.2	897.6	897.2	897.1	897.0	896.8	896.6	897.6
165°	911.2	910.5	909.7	908.9	908.2	907.8	907.8	907.8	907.8	907.8	909.0
167.5°	920.2	919.4	918.6	917.7	916.9	916.5	916.4	916.3	916.2	916.1	917.5
170°	925.2	924.3	923.4	922.4	921.5	921.1	921.2	921.4	921.6	921.8	922.9
172.5°	928.5	927.6	926.7	925.8	924.9	924.4	924.6	924.8	924.9	925.1	926.3
175°	932.2	931.2	930.3	929.4	928.4	928.1	928.3	928.4	928.5	928.7	930.1
177.5°	933.9	933.0	932.1	931.2	930.4	930.1	930.3	930.6	930.9	931.0	932.0
180°	932.2	932.2	932.2	932.2	932.2	932.2	932.2	932.2	932.2	932.2	932.2



TEST NUMBER: P332940-940

CATALOG NUMBER: SA4XXRDIP-C795D810U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8
2.5°	1234.1	1235.9	1237.8	1238.7	1238.5	1238.3	1238.1	1238.0
5°	1225.8	1228.0	1230.1	1230.9	1230.5	1230.1	1229.7	1229.2
7.5°	1209.5	1210.9	1212.3	1212.5	1211.9	1211.2	1210.6	1209.9
10°	1194.9	1195.7	1196.6	1196.6	1195.7	1194.9	1194.0	1193.2
12.5°	1176.8	1177.2	1177.8	1177.4	1176.3	1175.1	1173.8	1172.7
15°	1145.0	1144.5	1144.1	1143.2	1141.7	1140.1	1138.7	1137.2
17.5°	1106.6	1105.5	1104.2	1102.5	1100.3	1098.1	1095.8	1093.6
20°	1079.8	1078.1	1076.4	1074.2	1071.5	1068.7	1066.0	1063.3
22.5°	1050.1	1047.5	1045.0	1042.6	1040.4	1038.1	1035.9	1033.7
25°	1002.0	998.4	994.9	992.0	989.9	987.8	985.7	983.6
27.5°	953.1	948.7	944.2	940.5	937.5	934.4	931.4	928.4
30°	918.0	912.8	907.5	903.1	899.8	896.4	893.0	889.7
32.5°	882.2	876.1	870.0	865.3	862.1	858.9	855.7	852.5
35°	828.8	821.7	814.6	809.0	805.3	801.5	797.6	793.9
37.5°	771.6	763.6	755.5	749.7	745.9	742.1	738.3	734.5
40°	733.5	724.6	715.8	709.4	705.7	701.9	698.1	694.3
42.5°	696.0	687.0	678.0	671.5	667.4	663.5	659.6	655.6
45°	638.6	628.2	617.9	610.8	607.0	603.2	599.4	595.7
47.5°	580.7	570.0	559.3	551.8	547.7	543.5	539.3	535.1
50°	542.3	531.8	521.2	514.0	510.0	506.0	501.9	497.9
52.5°	504.1	493.4	482.6	475.2	471.0	466.8	462.7	458.5
55°	447.5	436.6	425.7	418.2	414.2	410.2	406.2	402.2
57.5°	392.4	381.3	370.1	363.1	360.1	357.0	354.0	351.0
60°	355.6	344.6	333.7	326.5	323.2	319.8	316.4	313.0
62.5°	319.3	309.2	299.1	292.7	290.0	287.3	284.5	281.9
65°	267.3	258.3	249.2	243.4	240.9	238.4	235.9	233.4
67.5°	219.6	211.9	204.0	198.8	196.0	193.1	190.4	187.6
70°	187.2	180.2	173.3	168.7	166.7	164.5	162.4	160.3
72.5°	158.1	152.1	146.2	142.2	140.4	138.4	136.4	134.5
75°	116.5	111.6	106.7	103.7	102.5	101.2	99.9	98.6
77.5°	82.4	79.5	76.7	75.1	74.7	74.4	74.0	73.6
80°	63.2	62.6	62.0	61.5	61.3	61.1	60.9	60.7
82.5°	49.1	48.7	48.2	47.9	47.7	47.4	47.3	47.1
85°	28.5	28.2	27.7	27.5	27.5	27.5	27.5	27.5
87.5°	13.7	13.7	13.7	13.9	14.1	14.4	14.5	14.8
90°	17.2	18.1	19.1	19.7	20.0	20.3	20.6	21.0
92.5°	16.7	17.6	18.5	19.0	19.1	19.1	19.2	19.3
95°	17.2	18.1	19.1	19.6	19.8	19.9	20.1	20.2
97.5°	18.6	18.7	18.8	18.9	19.1	19.2	19.4	19.5
100°	25.4	22.7	20.2	18.9	19.1	19.2	19.4	19.5
102.5°	91.0	62.6	34.2	20.0	20.0	20.0	20.1	20.1
105°	220.3	221.7	223.1	221.1	215.4	209.8	204.3	198.7
107.5°	272.6	273.2	273.9	274.6	275.2	275.7	276.3	277.0
110°	308.1	308.4	308.7	309.1	309.6	310.0	310.5	310.9



TEST NUMBER: P332940-940

CATALOG NUMBER: SA4XXRDIP-C795D810U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	342.5	342.4	342.3	342.6	343.2	343.8	344.4	345.0
115°	393.9	394.1	394.5	394.7	394.7	394.7	394.7	394.7
117.5°	445.5	445.5	445.4	445.3	445.3	445.2	445.1	445.1
120°	477.5	477.9	478.1	478.1	477.9	477.5	477.2	476.9
122.5°	509.1	509.3	509.4	509.3	509.1	508.7	508.5	508.1
125°	553.1	553.6	554.0	554.4	554.6	554.6	554.8	555.0
127.5°	596.9	596.8	596.7	596.6	596.5	596.4	596.3	596.1
130°	623.7	623.8	623.9	624.0	624.0	624.0	624.0	624.0
132.5°	649.9	650.0	650.1	650.1	650.1	649.9	649.8	649.7
135°	686.0	686.3	686.6	686.9	687.2	687.5	687.9	688.1
137.5°	720.6	720.9	721.3	721.4	721.3	721.2	721.1	721.0
140°	742.1	742.5	743.0	743.3	743.5	743.6	743.8	744.0
142.5°	761.9	762.2	762.6	762.8	762.8	762.9	762.9	762.9
145°	790.2	790.4	790.6	790.8	791.1	791.4	791.8	792.0
147.5°	815.2	815.3	815.4	815.6	815.7	815.8	816.0	816.2
150°	831.1	831.1	831.1	831.2	831.3	831.4	831.6	831.8
152.5°	845.0	845.3	845.4	845.5	845.4	845.3	845.3	845.2
155°	863.7	864.3	865.0	865.0	864.5	864.1	863.6	863.2
157.5°	879.9	880.7	881.5	881.5	880.7	879.9	879.0	878.2
160°	890.1	891.1	892.0	892.0	891.1	890.1	889.2	888.2
162.5°	898.5	899.4	900.4	900.3	899.2	898.1	897.2	896.1
165°	910.3	911.5	912.8	912.7	911.2	909.9	908.5	907.0
167.5°	918.9	920.2	921.6	921.5	920.0	918.4	916.9	915.3
170°	924.2	925.4	926.7	926.5	925.0	923.5	921.9	920.3
172.5°	927.6	928.8	930.1	929.8	928.2	926.5	924.8	923.1
175°	931.5	932.9	934.2	934.1	932.2	930.3	928.4	926.6
177.5°	933.1	934.1	935.0	934.8	933.3	931.8	930.3	928.8
180°	932.2	932.2	932.2	932.2	932.2	932.2	932.2	932.2

(END OF REPORT)