

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: P332952-940

Luminaire Tested: **SA4XXRDIP-C795D1205U940-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332952-940
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-C795D1205U940-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1205 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7151.1 lumens
Efficiency: N/A
Efficacy: 125.7 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

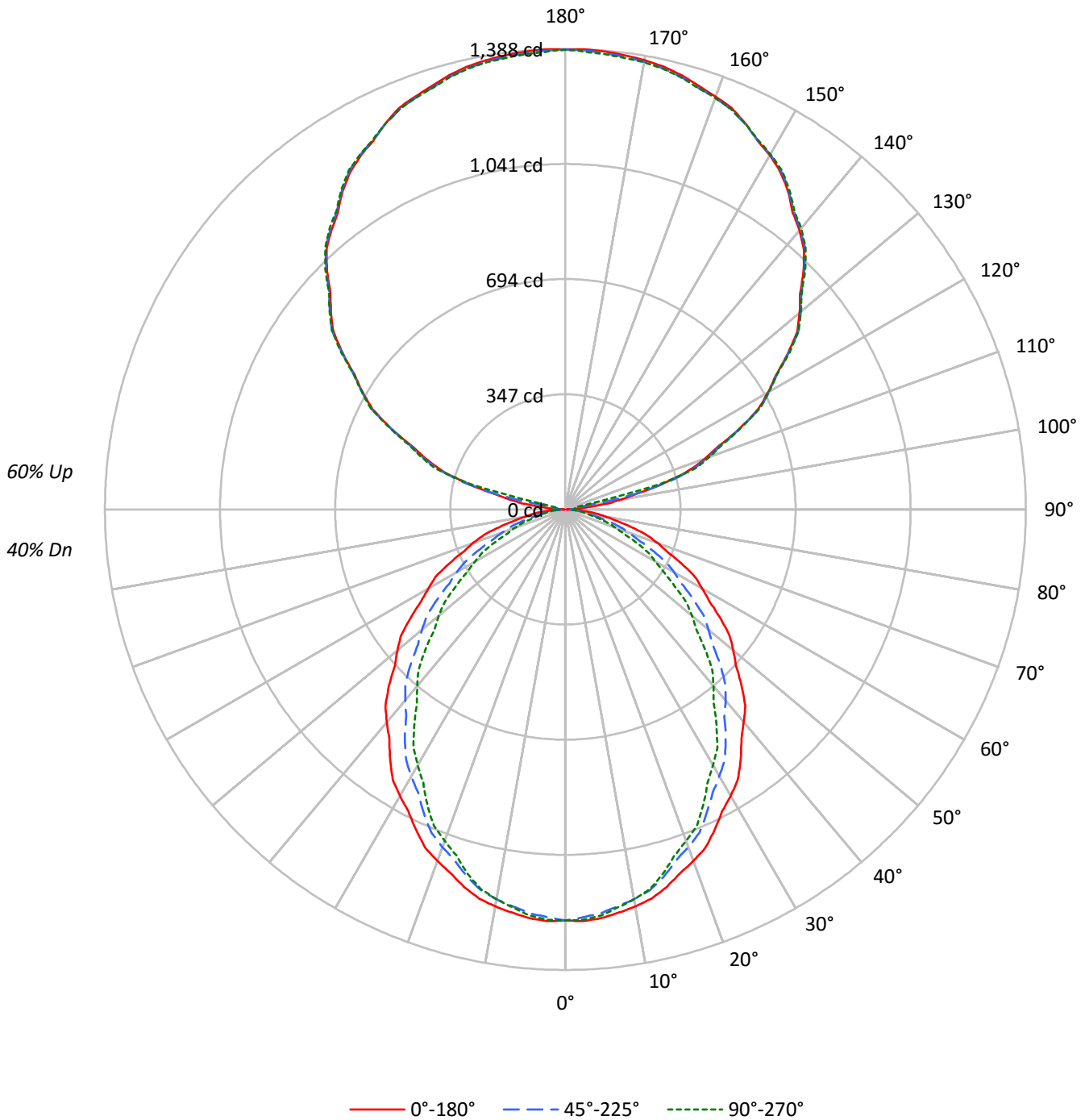
Input Watts (W): 56.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	50	30	10	0	
RCR																						
0	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40				
1	96	92	88	84	87	84	80	78	68	66	64	55	53	52	42	41	40	34				
2	87	80	74	69	79	73	68	64	60	57	53	48	46	44	37	35	34	29				
3	80	71	64	58	72	65	59	54	53	49	45	43	40	37	33	31	29	25				
4	73	63	55	49	66	57	51	46	47	42	39	38	35	32	30	27	25	21				
5	67	56	48	42	61	51	44	39	42	37	33	34	31	28	27	24	22	19				
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	24	22	20	17				
7	57	45	37	32	52	42	35	30	35	29	26	28	24	22	22	20	17	15				
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	20	18	16	13				
9	49	37	30	25	45	34	28	24	29	24	20	24	20	17	19	16	14	12				
10	46	34	27	23	42	32	25	21	27	22	18	22	18	16	18	15	13	11				

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.4	1.6
10°-20°	324.5	4.5
20°-30°	468.6	6.6
30°-40°	531.1	7.4
40°-50°	512.9	7.2
50°-60°	426.5	6.0
60°-70°	294.5	4.1
70°-80°	149.3	2.1
80°-90°	42.3	0.6
90°-100°	47.4	0.7
100°-110°	302.1	4.2
110°-120°	577.9	8.1
120°-130°	733.6	10.3
130°-140°	784.9	11.0
140°-150°	734.0	10.3
150°-160°	591.9	8.3
160°-170°	381.8	5.3
170°-180°	131.6	1.8
0°-30°	909.4	12.7
0°-40°	1440.5	20.1
0°-60°	2379.9	33.3
0°-90°	2866.0	40.1
90°-120°	927.4	13.0
90°-150°	3179.9	44.5
90°-180°	4285.0	59.9
0°-180°	7151.1	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°	3	14	23	29	31	5
95°	57	24	23	29	30	73
105°	312	318	323	330	295	326
115°	582	585	584	586	586	573
125°	818	822	821	824	825	730
135°	1015	1015	1018	1021	1023	782
145°	1171	1174	1174	1175	1177	731
155°	1284	1285	1282	1285	1283	592
165°	1354	1349	1349	1356	1348	383
175°	1385	1379	1380	1388	1377	132
180°	1385	1385	1385	1385	1385	



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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°	18.1	17.2	16.4	15.5	14.7	14.4	14.6	14.8	15.0	15.2	15.2
90°	3.1	5.6	8.2	10.7	13.2	15.4	17.3	19.1	21.0	22.8	24.2
92.5°	13.0	13.2	13.4	13.5	13.6	14.6	16.4	18.3	20.2	21.9	23.4
95°	57.0	49.1	41.3	33.5	25.7	21.8	22.1	22.3	22.6	22.8	24.2
97.5°	121.0	125.9	130.8	135.6	140.5	130.1	104.4	78.7	53.1	27.4	27.5
100°	170.0	174.1	178.3	182.4	186.5	172.7	140.9	109.1	77.4	45.6	41.6
102.5°	224.6	227.7	230.7	233.7	236.7	236.2	232.1	227.9	223.8	219.6	177.5
105°	311.8	313.3	314.6	316.0	317.4	318.7	319.9	320.9	322.1	323.2	325.4
107.5°	392.9	393.6	394.3	394.9	395.7	396.8	398.3	399.9	401.4	403.1	404.0
110°	447.6	448.3	449.0	449.7	450.4	451.4	452.8	454.1	455.6	456.9	457.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	500.7	501.9	503.1	504.4	505.6	506.6	507.2	507.8	508.5	509.2	509.1
115°	582.3	583.0	583.7	584.3	585.1	585.3	585.1	584.9	584.6	584.3	584.9
117.5°	655.9	656.7	657.7	658.6	659.5	660.2	660.8	661.3	661.8	662.3	662.2
120°	705.6	706.5	707.5	708.4	709.3	709.6	709.4	709.2	708.9	708.7	709.2
122.5°	752.0	752.6	753.1	753.7	754.2	754.7	755.0	755.3	755.6	756.0	756.3
125°	818.5	819.5	820.4	821.3	822.2	822.4	822.0	821.5	821.1	820.6	821.3
127.5°	881.5	881.7	882.0	882.3	882.4	883.1	884.1	885.2	886.3	887.3	887.2
130°	922.1	922.4	922.7	922.8	923.1	923.5	924.3	924.9	925.6	926.3	926.5
132.5°	959.5	959.8	960.3	960.7	961.1	961.8	962.6	963.5	964.4	965.3	965.5
135°	1015.4	1015.2	1014.9	1014.7	1014.5	1014.9	1015.7	1016.6	1017.6	1018.5	1019.0
137.5°	1065.0	1065.1	1065.1	1065.2	1065.3	1065.9	1066.8	1067.9	1068.9	1069.9	1070.4
140°	1097.3	1097.7	1098.1	1098.7	1099.1	1099.6	1100.0	1100.5	1100.9	1101.4	1102.1
142.5°	1126.2	1127.1	1127.9	1128.7	1129.6	1130.2	1130.4	1130.7	1131.0	1131.2	1131.8
145°	1170.8	1171.5	1172.2	1172.9	1173.6	1173.9	1173.9	1173.9	1173.9	1173.9	1174.2
147.5°	1206.2	1207.6	1208.8	1210.1	1211.4	1211.9	1211.7	1211.5	1211.2	1211.0	1211.2
150°	1232.0	1232.9	1233.8	1234.8	1235.6	1236.0	1235.7	1235.6	1235.3	1235.0	1235.0
152.5°	1253.5	1254.3	1255.0	1255.7	1256.4	1256.6	1256.2	1255.8	1255.4	1255.0	1255.4
155°	1283.8	1284.0	1284.2	1284.4	1284.7	1284.4	1283.8	1283.1	1282.4	1281.7	1282.6
157.5°	1309.2	1309.1	1308.9	1308.9	1308.7	1308.2	1307.4	1306.7	1305.9	1305.1	1306.3
160°	1324.2	1323.5	1322.8	1322.1	1321.4	1321.0	1320.7	1320.4	1320.3	1320.0	1321.4
162.5°	1337.4	1336.6	1335.7	1334.8	1333.9	1333.4	1333.1	1332.9	1332.7	1332.5	1333.8
165°	1354.2	1353.1	1351.9	1350.8	1349.6	1349.1	1349.1	1349.1	1349.1	1349.1	1350.9
167.5°	1367.4	1366.3	1365.1	1363.9	1362.7	1362.0	1361.9	1361.7	1361.6	1361.5	1363.5
170°	1374.9	1373.6	1372.2	1370.8	1369.4	1368.9	1369.0	1369.3	1369.5	1369.8	1371.6
172.5°	1379.9	1378.5	1377.2	1375.7	1374.4	1373.8	1374.0	1374.3	1374.5	1374.8	1376.5
175°	1385.3	1383.9	1382.5	1381.2	1379.7	1379.2	1379.4	1379.7	1379.9	1380.1	1382.2
177.5°	1387.8	1386.5	1385.2	1383.9	1382.6	1382.2	1382.5	1382.9	1383.3	1383.7	1385.1
180°	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3



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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°	15.4	15.5	15.6	15.8	16.1	16.3	16.6	16.9
90°	25.6	26.9	28.4	29.2	29.7	30.1	30.6	31.1
92.5°	24.7	26.1	27.5	28.3	28.4	28.4	28.5	28.6
95°	25.6	26.9	28.4	29.2	29.3	29.6	29.8	30.1
97.5°	27.6	27.7	27.9	28.1	28.4	28.5	28.8	29.0
100°	37.7	33.9	30.0	28.1	28.4	28.5	28.8	29.0
102.5°	135.2	93.0	50.7	29.7	29.7	29.8	29.8	29.9
105°	327.4	329.5	331.5	328.4	320.1	311.8	303.6	295.3
107.5°	405.1	406.1	407.1	408.0	408.9	409.8	410.6	411.5
110°	457.9	458.3	458.8	459.3	460.0	460.7	461.5	462.1



TEST NUMBER: P332952-940

CATALOG NUMBER: SA4XXRDIP-C795D1205U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	509.0	508.9	508.8	509.2	510.1	511.0	511.8	512.6
115°	585.3	585.8	586.2	586.5	586.5	586.5	586.5	586.5
117.5°	662.1	662.0	661.9	661.8	661.7	661.6	661.6	661.5
120°	709.6	710.1	710.5	710.5	710.1	709.6	709.2	708.7
122.5°	756.5	756.8	757.1	757.0	756.5	756.1	755.5	755.1
125°	822.0	822.7	823.4	823.9	824.0	824.3	824.6	824.7
127.5°	887.1	886.9	886.8	886.6	886.4	886.3	886.1	885.9
130°	926.8	927.0	927.2	927.3	927.3	927.3	927.3	927.3
132.5°	965.7	966.0	966.2	966.2	966.0	965.8	965.6	965.5
135°	1019.4	1019.8	1020.4	1020.8	1021.3	1021.7	1022.2	1022.6
137.5°	1070.9	1071.4	1071.9	1072.1	1072.0	1071.8	1071.7	1071.6
140°	1102.8	1103.5	1104.2	1104.7	1104.8	1105.1	1105.3	1105.5
142.5°	1132.3	1132.7	1133.3	1133.5	1133.6	1133.6	1133.7	1133.7
145°	1174.4	1174.7	1174.8	1175.2	1175.6	1176.1	1176.6	1177.1
147.5°	1211.4	1211.6	1211.7	1211.9	1212.2	1212.5	1212.6	1212.9
150°	1235.0	1235.0	1235.0	1235.2	1235.4	1235.6	1235.9	1236.1
152.5°	1255.7	1256.1	1256.4	1256.5	1256.4	1256.2	1256.2	1256.0
155°	1283.5	1284.4	1285.4	1285.5	1284.8	1284.1	1283.4	1282.7
157.5°	1307.5	1308.7	1309.9	1309.9	1308.7	1307.5	1306.3	1305.1
160°	1322.8	1324.2	1325.5	1325.5	1324.2	1322.8	1321.4	1320.0
162.5°	1335.2	1336.6	1338.0	1337.9	1336.3	1334.8	1333.2	1331.6
165°	1352.7	1354.6	1356.4	1356.3	1354.2	1352.1	1350.1	1348.0
167.5°	1365.6	1367.5	1369.6	1369.4	1367.2	1364.9	1362.5	1360.2
170°	1373.4	1375.3	1377.2	1376.9	1374.6	1372.3	1370.0	1367.7
172.5°	1378.4	1380.3	1382.1	1381.8	1379.3	1376.8	1374.3	1371.8
175°	1384.3	1386.3	1388.4	1388.0	1385.3	1382.5	1379.7	1377.0
177.5°	1386.6	1388.0	1389.6	1389.2	1387.0	1384.7	1382.5	1380.4
180°	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3	1385.3

(END OF REPORT)