

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: P332709-927

Luminaire Tested: **SA4XXDIP-C1195D1205U927-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332709-927  
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: SA4XXDIP-C1195D1205U927-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1205 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7661.1 lumens  
Efficiency: N/A  
Efficacy: 106.8 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

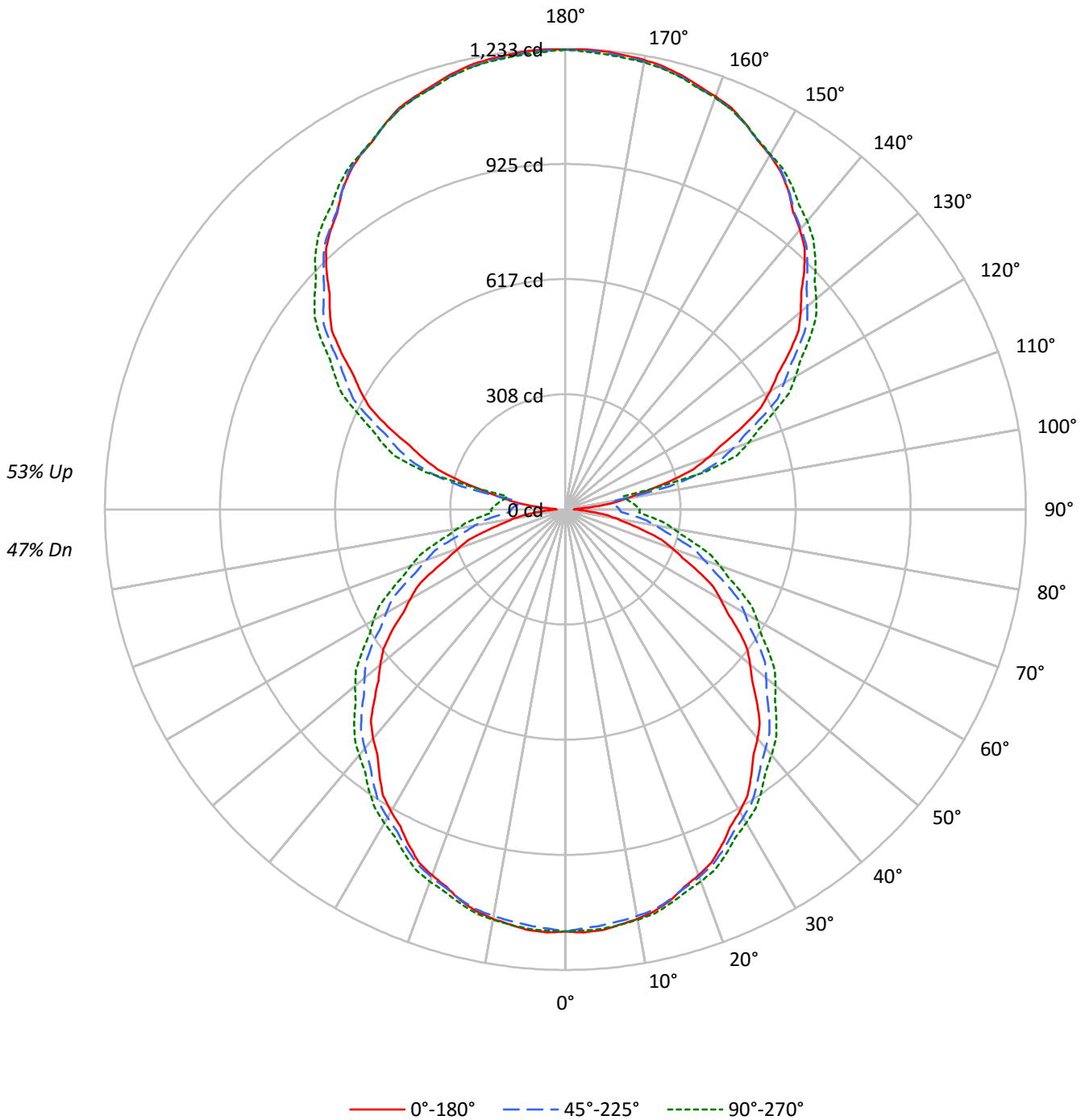
Input Watts (W): 71.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332709-927

CATALOG NUMBER: SA4XXDIP-C1195D1205U927-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P332709-927

CATALOG NUMBER: SA4XXDIP-C1195D1205U927-4F0-1E-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	106	106	106	106	98	98	98	98	81	81	81	67	67	67	53	53	53	47
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37
2	87	79	73	67	80	73	67	62	61	57	53	50	47	44	39	37	35	30
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	30	25
4	72	61	53	47	66	56	49	43	47	42	37	39	34	31	31	28	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	56	45	37	32	38	32	28	31	27	23	25	22	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	23	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	13
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9120	9120	9120
5°	9147	8912	8938
10°	9092	8767	8760
15°	9010	8598	8551
20°	8888	8412	8347
25°	8749	8203	8124
30°	8599	7995	7894
35°	8429	7783	7692
40°	8293	7580	7482
45°	8093	7394	7302
50°	7922	7178	7111
55°	7746	6976	6888
60°	7471	6718	6685
65°	7170	6440	6434
70°	6805	6123	6141
75°	6298	5775	5878
80°	5734	5442	5618
85°	5012	5144	5468



TEST NUMBER: P332709-927

CATALOG NUMBER: SA4XXDIP-C1195D1205U927-4F0-1E-UDD-D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.0	1.4
10°-20°	306.5	4.0
20°-30°	463.4	6.0
30°-40°	560.7	7.3
40°-50°	592.8	7.7
50°-60°	557.9	7.3
60°-70°	462.9	6.0
70°-80°	325.1	4.2
80°-90°	187.4	2.4
90°-100°	151.2	2.0
100°-110°	349.2	4.6
110°-120°	567.6	7.4
120°-130°	682.3	8.9
130°-140°	710.5	9.3
140°-150°	654.7	8.5
150°-160°	525.9	6.9
160°-170°	339.2	4.4
170°-180°	116.9	1.5
0°-30°	876.9	11.4
0°-40°	1437.6	18.8
0°-60°	2588.3	33.8
0°-90°	3563.6	46.5
90°-120°	1068.0	13.9
90°-150°	3115.6	40.7
90°-180°	4098.0	53.5
0°-180°	7661.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1130	1130	1130	1130	1130	
5°	1131	1127	1118	1128	1127	107
15°	1084	1085	1082	1092	1092	305
25°	992	999	1003	1016	1018	457
35°	868	883	896	912	917	543
45°	724	748	772	792	800	559
55°	567	594	631	656	664	505
65°	392	433	476	506	517	389
75°	218	265	318	352	364	231
85°	67	120	177	214	228	71
90°	23	84	145	186	200	16
95°	67	80	130	168	182	78
105°	288	320	371	407	388	303
115°	525	540	579	607	617	517
125°	732	736	764	790	800	654
135°	905	904	916	938	948	697
145°	1041	1043	1043	1051	1058	651
155°	1140	1141	1139	1142	1140	526
165°	1203	1199	1198	1205	1198	340
175°	1231	1226	1226	1233	1223	117
180°	1231	1231	1231	1231	1231	



TEST NUMBER: P332709-927

CATALOG NUMBER: SA4XXDIP-C1195D1205U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7
2.5°	1133.7	1133.0	1132.3	1131.6	1131.0	1129.7	1127.9	1126.2	1124.3	1122.5	1124.1
5°	1130.8	1130.0	1129.2	1128.4	1127.5	1126.1	1124.1	1122.1	1120.2	1118.2	1120.5
7.5°	1121.3	1120.8	1120.2	1119.7	1119.3	1118.2	1116.6	1114.9	1113.3	1111.7	1114.2
10°	1113.2	1112.9	1112.6	1112.3	1112.1	1111.2	1109.8	1108.4	1107.0	1105.6	1108.1
12.5°	1102.0	1102.0	1101.9	1101.8	1101.8	1101.3	1100.3	1099.4	1098.4	1097.5	1099.8
15°	1084.1	1084.3	1084.7	1084.9	1085.2	1084.9	1084.1	1083.2	1082.4	1081.6	1084.1
17.5°	1059.5	1060.4	1061.2	1062.1	1062.9	1063.3	1063.1	1062.9	1062.7	1062.6	1065.2
20°	1042.4	1043.1	1044.0	1044.9	1045.7	1046.2	1046.6	1046.9	1047.1	1047.4	1050.2
22.5°	1023.1	1024.1	1025.2	1026.3	1027.4	1028.2	1028.6	1029.2	1029.7	1030.2	1033.0
25°	991.7	993.4	995.1	996.8	998.5	999.7	1000.6	1001.4	1002.3	1003.1	1006.2
27.5°	956.8	959.3	961.8	964.2	966.7	968.6	969.9	971.2	972.5	973.8	976.6
30°	933.5	935.8	938.0	940.3	942.5	944.7	946.6	948.6	950.5	952.5	955.6
32.5°	908.2	910.9	913.6	916.3	919.0	921.5	923.7	925.9	928.0	930.3	933.8
35°	867.8	871.2	874.5	877.9	881.2	884.3	887.2	889.9	892.8	895.6	899.5
37.5°	827.0	830.9	834.8	838.7	842.6	846.2	849.7	853.2	856.7	860.2	864.2
40°	800.7	804.4	808.0	811.7	815.3	819.1	823.1	827.0	830.9	834.9	839.1
42.5°	770.4	774.4	778.6	782.7	786.8	791.2	795.7	800.3	804.9	809.6	814.3
45°	723.6	728.9	734.3	739.6	744.9	750.3	755.6	761.0	766.3	771.7	776.4
47.5°	678.7	684.3	689.8	695.3	700.8	706.7	712.9	719.1	725.2	731.4	736.3
50°	646.4	652.6	658.8	665.0	671.1	677.3	683.5	689.7	695.9	702.0	707.7
52.5°	614.0	620.2	626.4	632.6	638.7	645.4	652.4	659.6	666.6	673.8	679.4
55°	566.7	572.6	578.5	584.4	590.3	597.5	605.9	614.3	622.8	631.2	636.8
57.5°	513.8	521.2	528.5	535.8	543.0	550.9	559.3	567.7	576.1	584.4	591.1
60°	479.4	486.7	494.0	501.4	508.7	517.0	526.2	535.5	544.8	554.1	560.5
62.5°	446.0	454.0	462.0	470.0	477.9	486.6	495.9	505.2	514.4	523.7	530.1
65°	392.1	401.2	410.1	419.1	428.1	437.4	446.9	456.5	466.0	475.6	482.7
67.5°	340.2	349.8	359.4	368.9	378.5	388.4	398.6	408.8	419.1	429.4	436.5
70°	304.8	314.4	324.0	333.5	343.1	353.2	363.8	374.5	385.2	395.9	403.5
72.5°	270.5	280.2	290.0	299.8	309.6	320.1	331.5	342.9	354.2	365.6	373.0
75°	217.6	228.0	238.4	248.7	259.2	270.3	282.1	293.9	305.7	317.5	325.3
77.5°	168.3	179.3	190.3	201.3	212.3	224.0	236.4	248.7	261.1	273.5	281.5
80°	137.9	149.1	160.3	171.6	182.8	194.6	207.0	219.4	231.8	244.2	252.5
82.5°	107.5	119.2	130.9	142.6	154.3	166.4	178.7	191.1	203.4	215.8	224.4
85°	67.0	78.8	90.6	102.4	114.2	126.5	139.1	151.8	164.5	177.1	185.5
87.5°	38.0	49.9	61.9	73.8	85.6	97.9	110.6	123.3	135.9	148.5	156.9
90°	23.0	36.5	50.0	63.5	77.0	90.6	104.3	118.0	131.7	145.4	154.9
92.5°	30.8	41.0	51.3	61.6	71.8	83.8	97.5	111.2	124.9	138.7	147.8
95°	67.1	69.4	71.7	74.1	76.4	83.4	95.1	106.9	118.6	130.3	139.1
97.5°	122.5	134.8	147.1	159.4	171.7	172.1	160.7	149.3	137.9	126.5	134.0
100°	164.9	175.9	186.9	197.8	208.8	205.7	188.5	171.2	153.9	136.7	140.8
102.5°	213.5	222.6	231.7	240.8	249.9	258.0	265.1	272.1	279.2	286.2	256.0
105°	288.4	295.3	302.1	309.0	315.8	325.0	336.4	347.8	359.3	370.7	379.5
107.5°	360.2	365.4	370.7	375.8	381.0	389.3	400.5	411.8	423.0	434.2	442.0
110°	407.7	412.3	416.8	421.4	426.0	433.8	444.8	455.9	467.0	478.0	484.9



TEST NUMBER: P332709-927

CATALOG NUMBER: SA4XXDIP-C1195D1205U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	453.9	458.4	463.0	467.6	472.2	479.5	489.5	499.5	509.4	519.4	525.5
115°	524.9	528.1	531.2	534.3	537.5	543.4	552.2	561.0	569.8	578.6	585.2
117.5°	590.0	592.3	594.7	597.0	599.4	604.9	613.8	622.6	631.4	640.2	646.0
120°	633.2	634.9	636.5	638.2	639.8	644.6	652.6	660.5	668.4	676.4	682.5
122.5°	674.4	675.1	675.7	676.4	677.1	681.4	689.4	697.4	705.4	713.4	719.2
125°	732.2	732.8	733.3	733.9	734.4	738.0	744.6	751.2	757.8	764.5	770.4
127.5°	788.0	787.9	787.8	787.7	787.7	790.8	797.1	803.4	809.8	816.1	821.1
130°	823.0	822.9	822.8	822.8	822.7	825.2	830.4	835.4	840.6	845.7	851.0
132.5°	856.2	856.3	856.3	856.4	856.5	858.7	863.1	867.5	871.9	876.2	881.3
135°	904.6	904.4	904.2	904.0	903.8	905.1	907.8	910.6	913.5	916.2	921.1
137.5°	948.6	948.4	948.2	948.0	947.8	948.6	950.5	952.4	954.2	956.1	960.6
140°	977.3	977.5	977.6	977.7	977.8	978.3	978.9	979.6	980.3	981.0	985.2
142.5°	1002.1	1002.7	1003.5	1004.1	1004.8	1005.2	1005.3	1005.4	1005.4	1005.5	1009.2
145°	1041.4	1041.7	1042.0	1042.4	1042.7	1042.9	1042.9	1042.9	1042.9	1042.9	1044.8
147.5°	1072.9	1073.7	1074.6	1075.5	1076.3	1076.7	1076.5	1076.3	1076.0	1075.9	1076.3
150°	1095.7	1096.2	1096.8	1097.3	1097.9	1098.0	1097.8	1097.6	1097.4	1097.2	1097.2
152.5°	1113.9	1114.4	1115.1	1115.6	1116.3	1116.3	1116.0	1115.6	1115.2	1114.9	1115.2
155°	1140.5	1140.7	1140.9	1141.1	1141.3	1141.1	1140.5	1139.9	1139.2	1138.6	1139.5
157.5°	1163.1	1163.0	1162.8	1162.8	1162.6	1162.2	1161.5	1160.9	1160.2	1159.4	1160.5
160°	1176.4	1175.8	1175.1	1174.6	1173.9	1173.5	1173.3	1173.1	1172.9	1172.7	1173.9
162.5°	1188.1	1187.4	1186.6	1185.8	1185.0	1184.6	1184.3	1184.2	1183.9	1183.8	1184.9
165°	1203.1	1202.1	1201.0	1200.0	1199.0	1198.5	1198.5	1198.5	1198.5	1198.5	1200.1
167.5°	1214.8	1213.8	1212.8	1211.6	1210.6	1210.0	1209.9	1209.7	1209.7	1209.5	1211.3
170°	1221.5	1220.3	1219.0	1217.8	1216.6	1216.1	1216.2	1216.5	1216.6	1216.9	1218.5
172.5°	1225.9	1224.6	1223.4	1222.2	1221.0	1220.4	1220.7	1220.9	1221.1	1221.3	1222.9
175°	1230.7	1229.5	1228.2	1227.0	1225.7	1225.3	1225.4	1225.7	1225.9	1226.1	1227.9
177.5°	1232.9	1231.8	1230.6	1229.5	1228.3	1227.9	1228.2	1228.5	1228.9	1229.2	1230.5
180°	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7



TEST NUMBER: P332709-927

CATALOG NUMBER: SA4XXDIP-C1195D1205U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7	1129.7
2.5°	1125.7	1127.3	1128.9	1129.5	1129.3	1129.0	1128.9	1128.6
5°	1122.8	1125.0	1127.2	1128.2	1127.9	1127.7	1127.4	1127.1
7.5°	1116.7	1119.3	1121.8	1122.9	1122.6	1122.4	1122.0	1121.8
10°	1110.6	1113.2	1115.7	1116.8	1116.6	1116.3	1115.9	1115.7
12.5°	1102.1	1104.4	1106.7	1107.9	1107.8	1107.7	1107.6	1107.6
15°	1086.6	1089.2	1091.6	1092.8	1092.5	1092.3	1091.9	1091.6
17.5°	1067.8	1070.3	1072.9	1074.1	1073.9	1073.6	1073.4	1073.2
20°	1053.0	1055.8	1058.7	1060.0	1060.0	1060.0	1060.0	1060.0
22.5°	1035.8	1038.6	1041.4	1043.1	1043.5	1043.9	1044.4	1044.9
25°	1009.3	1012.4	1015.5	1017.2	1017.5	1017.7	1018.0	1018.3
27.5°	979.5	982.4	985.2	986.8	987.2	987.5	987.9	988.2
30°	958.7	961.8	964.9	966.7	967.3	967.8	968.4	969.0
32.5°	937.3	940.9	944.4	946.5	947.1	947.6	948.2	948.7
35°	903.5	907.4	911.3	913.7	914.6	915.4	916.2	917.1
37.5°	868.2	872.1	876.2	878.6	879.5	880.4	881.3	882.2
40°	843.3	847.6	851.8	854.4	855.6	856.7	857.8	858.9
42.5°	818.9	823.6	828.2	831.0	831.9	832.8	833.7	834.6
45°	781.2	786.0	790.8	793.8	795.3	796.6	798.0	799.5
47.5°	741.3	746.2	751.2	754.5	756.2	757.9	759.5	761.3
50°	713.3	718.9	724.5	728.2	729.9	731.6	733.2	734.9
52.5°	685.0	690.6	696.2	699.9	701.6	703.2	704.9	706.6
55°	642.5	648.1	653.7	657.4	659.0	660.8	662.4	664.1
57.5°	597.8	604.5	611.2	615.3	616.9	618.5	620.0	621.6
60°	567.0	573.5	579.9	584.2	586.5	588.7	591.0	593.3
62.5°	536.6	543.1	549.5	553.9	556.2	558.4	560.6	562.9
65°	489.6	496.7	503.7	508.3	510.6	512.9	515.2	517.4
67.5°	443.6	450.8	457.9	462.6	464.8	466.9	469.1	471.3
70°	411.1	418.7	426.3	431.1	433.0	435.0	437.0	438.9
72.5°	380.3	387.7	395.1	399.8	402.0	404.2	406.4	408.6
75°	333.3	341.1	349.0	354.2	356.7	359.3	361.8	364.3
77.5°	289.5	297.5	305.4	310.8	313.5	316.2	318.9	321.5
80°	261.0	269.4	277.9	283.2	285.4	287.7	289.9	292.2
82.5°	233.1	241.8	250.4	256.0	258.5	260.9	263.4	265.9
85°	193.9	202.4	210.8	216.4	219.3	222.0	224.9	227.7
87.5°	165.3	173.7	182.1	187.6	190.1	192.7	195.3	197.8
90°	164.2	173.6	183.0	189.0	191.7	194.3	197.0	199.6
92.5°	157.0	166.1	175.3	181.0	183.4	185.7	188.1	190.4
95°	147.9	156.8	165.6	171.3	174.0	176.8	179.6	182.3
97.5°	141.5	149.0	156.5	161.5	164.1	166.8	169.4	172.0
100°	144.9	149.0	153.0	156.2	158.4	160.6	162.7	164.9
102.5°	225.9	195.7	165.6	151.6	153.9	156.1	158.4	160.6
105°	388.4	397.3	406.2	408.1	402.9	397.8	392.7	387.5
107.5°	449.9	457.6	465.5	470.8	473.6	476.4	479.2	482.0
110°	491.8	498.7	505.6	510.4	513.3	516.1	519.0	521.9





TEST NUMBER: P332709-927

CATALOG NUMBER: SA4XXDIP-C1195D1205U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	531.7	537.8	544.0	548.6	551.6	554.6	557.7	560.7
115°	591.8	598.4	605.0	609.3	611.2	613.2	615.1	617.1
117.5°	651.7	657.5	663.3	667.3	669.4	671.6	673.8	675.9
120°	688.5	694.5	700.5	704.5	706.3	708.1	710.0	711.9
122.5°	725.1	730.9	736.8	740.5	742.1	743.8	745.4	747.0
125°	776.3	782.3	788.2	792.2	794.1	796.0	797.9	799.7
127.5°	826.0	830.9	835.9	839.2	841.0	842.7	844.5	846.2
130°	856.2	861.5	866.7	870.2	871.9	873.6	875.3	876.9
132.5°	886.3	891.4	896.4	899.7	901.2	902.7	904.3	905.8
135°	926.1	931.0	935.8	939.4	941.4	943.6	945.6	947.7
137.5°	965.2	969.7	974.3	977.2	978.5	979.8	981.0	982.3
140°	989.5	993.8	998.1	1001.0	1002.6	1004.2	1005.8	1007.4
142.5°	1012.8	1016.4	1020.1	1022.5	1023.7	1025.0	1026.2	1027.5
145°	1046.7	1048.6	1050.4	1052.2	1053.7	1055.3	1056.8	1058.3
147.5°	1076.7	1077.1	1077.4	1078.2	1079.3	1080.4	1081.5	1082.6
150°	1097.2	1097.2	1097.2	1097.3	1097.5	1097.7	1098.0	1098.1
152.5°	1115.6	1115.9	1116.2	1116.3	1116.2	1116.0	1115.9	1115.8
155°	1140.3	1141.1	1141.9	1142.0	1141.4	1140.7	1140.2	1139.6
157.5°	1161.6	1162.6	1163.7	1163.7	1162.6	1161.6	1160.5	1159.4
160°	1175.1	1176.4	1177.6	1177.6	1176.4	1175.1	1173.9	1172.7
162.5°	1186.2	1187.4	1188.7	1188.6	1187.2	1185.8	1184.4	1183.0
165°	1201.7	1203.4	1205.0	1204.9	1203.1	1201.2	1199.4	1197.5
167.5°	1213.1	1214.9	1216.7	1216.6	1214.6	1212.5	1210.5	1208.4
170°	1220.1	1221.8	1223.4	1223.2	1221.1	1219.1	1217.1	1215.0
172.5°	1224.6	1226.2	1227.8	1227.6	1225.3	1223.1	1220.9	1218.7
175°	1229.8	1231.6	1233.4	1233.1	1230.7	1228.2	1225.7	1223.3
177.5°	1231.8	1233.1	1234.5	1234.1	1232.2	1230.2	1228.2	1226.3
180°	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7	1230.7

(END OF REPORT)