

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: P332709-830

Luminaire Tested: **SA4XXDIP-C1195D1205U830-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332709-830
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-C1195D1205U830-4F0-1E-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

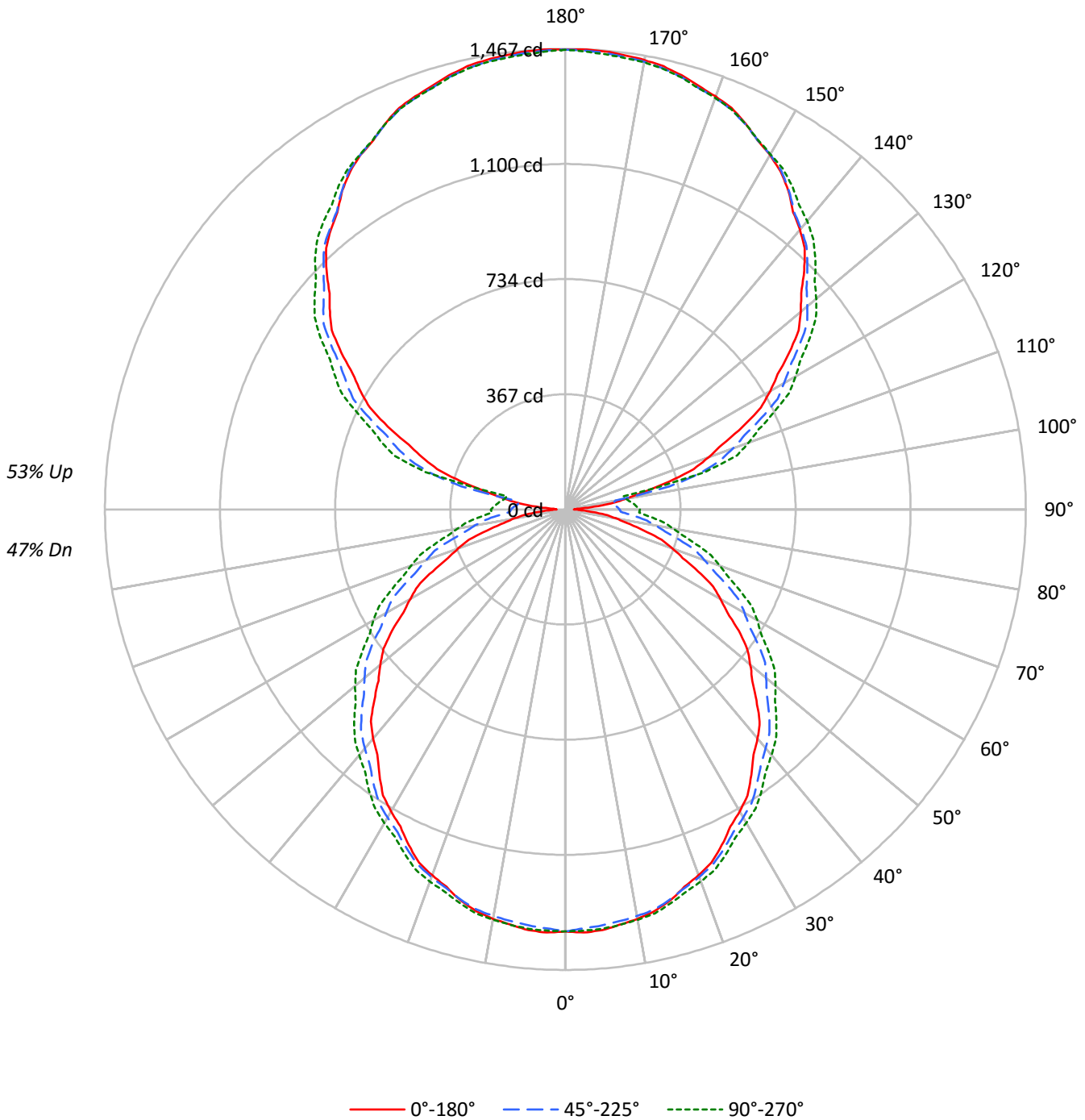
Lumens per Lamp: N/A
Luminaire Lumens: 9115.2 lumens
Efficiency: N/A
Efficacy: 127.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									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	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	47	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	37	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	30	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	25	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	21	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	18	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	16	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	14	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	13	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	11	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	10	26	21	17	22	18	15	18	14	12	10																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10851	10851	10851
5°	10884	10604	10635
10°	10818	10431	10423
15°	10721	10231	10174
20°	10574	10009	9931
25°	10410	9760	9665
30°	10231	9513	9392
35°	10029	9259	9152
40°	9868	9019	8902
45°	9628	8797	8688
50°	9425	8541	8461
55°	9216	8300	8195
60°	8889	7992	7953
65°	8532	7663	7655
70°	8098	7286	7308
75°	7493	6872	6995
80°	6823	6474	6686
85°	5963	6123	6505



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.3	1.4
10°-20°	364.7	4.0
20°-30°	551.4	6.0
30°-40°	667.1	7.3
40°-50°	705.3	7.7
50°-60°	663.8	7.3
60°-70°	550.7	6.0
70°-80°	386.8	4.2
80°-90°	222.9	2.4
90°-100°	179.9	2.0
100°-110°	415.4	4.6
110°-120°	675.4	7.4
120°-130°	811.8	8.9
130°-140°	845.4	9.3
140°-150°	779.0	8.5
150°-160°	625.7	6.9
160°-170°	403.5	4.4
170°-180°	139.1	1.5
0°-30°	1043.3	11.4
0°-40°	1710.5	18.8
0°-60°	3079.5	33.8
0°-90°	4240.0	46.5
90°-120°	1270.7	13.9
90°-150°	3707.0	40.7
90°-180°	4875.0	53.5
0°-180°	9115.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1344	1344	1344	1344	1344	
5°	1346	1341	1330	1342	1341	128
15°	1290	1291	1287	1300	1299	363
25°	1180	1189	1194	1209	1212	543
35°	1032	1050	1066	1086	1091	646
45°	861	890	918	943	951	665
55°	674	707	751	780	790	601
65°	467	515	566	602	616	462
75°	259	315	378	418	434	275
85°	80	143	211	254	271	85
90°	27	100	173	221	238	19
95°	80	95	155	200	217	93
105°	343	381	441	484	461	360
115°	624	643	688	722	734	615
125°	871	876	910	940	952	778
135°	1076	1076	1090	1116	1128	829
145°	1239	1241	1241	1251	1259	774
155°	1357	1358	1355	1359	1356	626
165°	1431	1426	1426	1434	1425	404
175°	1464	1458	1459	1467	1456	139
180°	1464	1464	1464	1464	1464	



TEST NUMBER: P332709-830

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1
2.5°	1348.9	1348.0	1347.3	1346.4	1345.7	1344.2	1342.0	1339.9	1337.8	1335.6	1337.5
5°	1345.5	1344.5	1343.5	1342.6	1341.5	1339.8	1337.5	1335.1	1332.8	1330.5	1333.1
7.5°	1334.1	1333.5	1332.8	1332.3	1331.7	1330.4	1328.5	1326.5	1324.6	1322.7	1325.7
10°	1324.5	1324.1	1323.8	1323.4	1323.1	1322.1	1320.4	1318.8	1317.1	1315.4	1318.4
12.5°	1311.2	1311.2	1311.1	1311.0	1311.0	1310.3	1309.2	1308.1	1306.9	1305.8	1308.5
15°	1289.9	1290.2	1290.5	1290.8	1291.2	1290.8	1289.9	1288.8	1287.8	1286.9	1289.9
17.5°	1260.7	1261.7	1262.6	1263.7	1264.6	1265.1	1264.9	1264.6	1264.4	1264.2	1267.3
20°	1240.2	1241.1	1242.2	1243.2	1244.2	1244.8	1245.2	1245.6	1245.9	1246.2	1249.5
22.5°	1217.3	1218.5	1219.8	1221.1	1222.4	1223.3	1223.9	1224.6	1225.1	1225.7	1229.1
25°	1180.0	1181.9	1184.0	1186.0	1188.0	1189.5	1190.5	1191.5	1192.5	1193.5	1197.2
27.5°	1138.4	1141.4	1144.3	1147.3	1150.2	1152.4	1154.0	1155.6	1157.1	1158.6	1162.0
30°	1110.7	1113.4	1116.1	1118.8	1121.4	1124.0	1126.2	1128.6	1131.0	1133.3	1137.0
32.5°	1080.6	1083.8	1087.0	1090.2	1093.4	1096.4	1099.0	1101.6	1104.2	1106.8	1111.1
35°	1032.5	1036.5	1040.5	1044.5	1048.5	1052.2	1055.6	1058.9	1062.2	1065.5	1070.3
37.5°	984.0	988.6	993.3	997.9	1002.5	1006.8	1011.0	1015.1	1019.3	1023.4	1028.2
40°	952.7	957.1	961.4	965.7	970.1	974.6	979.3	984.0	988.6	993.3	998.3
42.5°	916.6	921.4	926.3	931.2	936.1	941.3	946.8	952.3	957.7	963.3	968.8
45°	860.9	867.2	873.6	880.0	886.3	892.7	899.0	905.4	911.7	918.1	923.8
47.5°	807.6	814.2	820.8	827.3	833.9	840.8	848.2	855.5	862.9	870.2	876.1
50°	769.1	776.5	783.8	791.2	798.5	805.9	813.2	820.6	827.9	835.3	842.0
52.5°	730.6	737.9	745.3	752.6	760.0	767.9	776.3	784.8	793.1	801.6	808.3
55°	674.3	681.3	688.3	695.3	702.4	710.9	721.0	730.9	741.0	751.0	757.7
57.5°	611.3	620.1	628.8	637.4	646.1	655.4	665.4	675.4	685.4	695.3	703.3
60°	570.4	579.1	587.8	596.5	605.2	615.1	626.1	637.2	648.2	659.2	666.9
62.5°	530.7	540.2	549.7	559.2	568.6	578.9	590.0	601.1	612.1	623.1	630.7
65°	466.6	477.3	488.0	498.7	509.3	520.4	531.8	543.2	554.5	565.9	574.3
67.5°	404.8	416.2	427.6	438.9	450.3	462.1	474.3	486.4	498.6	510.9	519.3
70°	362.7	374.1	385.5	396.8	408.2	420.3	432.9	445.6	458.4	471.1	480.1
72.5°	321.8	333.4	345.1	356.7	368.3	380.9	394.5	407.9	421.4	435.0	443.7
75°	258.9	271.3	283.6	296.0	308.4	321.6	335.6	349.7	363.7	377.8	387.1
77.5°	200.2	213.3	226.4	239.5	252.6	266.6	281.3	296.0	310.7	325.4	334.9
80°	164.1	177.4	190.8	204.2	217.5	231.6	246.3	261.1	275.8	290.5	300.5
82.5°	127.9	141.9	155.8	169.7	183.6	197.9	212.6	227.3	242.0	256.7	267.0
85°	79.7	93.8	107.8	121.9	135.9	150.5	165.5	180.6	195.7	210.8	220.7
87.5°	45.2	59.4	73.6	87.8	101.9	116.5	131.6	146.7	161.6	176.7	186.7
90°	27.3	43.5	59.5	75.5	91.6	107.8	124.1	140.4	156.7	173.1	184.3
92.5°	36.7	48.8	61.1	73.2	85.4	99.7	116.0	132.3	148.6	165.0	175.9
95°	79.8	82.6	85.3	88.1	90.9	99.2	113.2	127.1	141.1	155.0	165.5
97.5°	145.7	160.3	175.0	189.6	204.3	204.8	191.2	177.7	164.1	150.5	159.4
100°	196.1	209.2	222.3	235.4	248.5	244.8	224.2	203.7	183.1	162.6	167.5
102.5°	254.0	264.9	275.7	286.5	297.4	307.0	315.4	323.8	332.2	340.5	304.6
105°	343.2	351.4	359.5	367.7	375.8	386.6	400.3	413.9	427.4	441.0	451.6
107.5°	428.6	434.8	441.0	447.1	453.4	463.2	476.5	489.9	503.3	516.6	525.9
110°	485.1	490.6	496.0	501.4	506.8	516.1	529.2	542.4	555.6	568.7	576.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	540.1	545.4	550.9	556.4	561.8	570.5	582.4	594.3	606.1	617.9	625.3
115°	624.5	628.3	632.0	635.7	639.5	646.6	657.0	667.5	678.0	688.4	696.3
117.5°	702.0	704.7	707.6	710.3	713.1	719.7	730.3	740.7	751.2	761.8	768.6
120°	753.4	755.4	757.3	759.3	761.3	766.9	776.5	785.9	795.3	804.8	812.0
122.5°	802.4	803.2	804.0	804.7	805.6	810.7	820.2	829.7	839.2	848.8	855.7
125°	871.2	871.9	872.5	873.2	873.7	878.1	885.9	893.8	901.6	909.6	916.6
127.5°	937.5	937.5	937.4	937.3	937.2	940.8	948.4	955.9	963.5	971.0	976.9
130°	979.2	979.1	979.0	978.9	978.8	981.8	988.0	994.0	1000.1	1006.2	1012.5
132.5°	1018.7	1018.8	1018.9	1019.0	1019.1	1021.7	1026.9	1032.2	1037.4	1042.5	1048.6
135°	1076.3	1076.0	1075.8	1075.5	1075.3	1076.9	1080.2	1083.5	1086.8	1090.1	1096.0
137.5°	1128.6	1128.4	1128.1	1127.9	1127.7	1128.7	1130.9	1133.1	1135.3	1137.6	1142.9
140°	1162.8	1163.0	1163.1	1163.3	1163.4	1163.9	1164.7	1165.5	1166.4	1167.2	1172.2
142.5°	1192.3	1193.1	1193.9	1194.7	1195.5	1196.0	1196.1	1196.2	1196.3	1196.4	1200.7
145°	1239.1	1239.4	1239.8	1240.3	1240.7	1240.9	1240.9	1240.9	1240.9	1240.9	1243.1
147.5°	1276.5	1277.5	1278.6	1279.6	1280.6	1281.0	1280.8	1280.5	1280.3	1280.1	1280.5
150°	1303.7	1304.3	1305.0	1305.6	1306.3	1306.5	1306.2	1306.0	1305.7	1305.4	1305.4
152.5°	1325.3	1326.0	1326.7	1327.4	1328.1	1328.2	1327.9	1327.4	1326.9	1326.5	1326.9
155°	1357.0	1357.2	1357.4	1357.6	1357.9	1357.6	1357.0	1356.2	1355.5	1354.7	1355.8
157.5°	1383.8	1383.7	1383.6	1383.5	1383.3	1382.8	1382.0	1381.2	1380.4	1379.5	1380.7
160°	1399.7	1398.9	1398.2	1397.5	1396.8	1396.3	1396.0	1395.7	1395.5	1395.2	1396.8
162.5°	1413.6	1412.8	1411.8	1410.9	1409.9	1409.4	1409.1	1408.9	1408.6	1408.4	1409.9
165°	1431.4	1430.2	1429.0	1427.8	1426.5	1426.0	1426.0	1426.0	1426.0	1426.0	1427.9
167.5°	1445.4	1444.2	1442.9	1441.6	1440.4	1439.6	1439.5	1439.4	1439.3	1439.1	1441.2
170°	1453.3	1451.9	1450.4	1449.0	1447.5	1446.9	1447.1	1447.4	1447.6	1447.8	1449.8
172.5°	1458.6	1457.1	1455.7	1454.2	1452.7	1452.1	1452.4	1452.6	1452.8	1453.1	1455.0
175°	1464.2	1462.8	1461.3	1459.9	1458.4	1457.8	1458.0	1458.3	1458.6	1458.8	1460.9
177.5°	1466.9	1465.6	1464.1	1462.8	1461.4	1460.9	1461.3	1461.7	1462.2	1462.5	1464.1
180°	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1
2.5°	1339.4	1341.2	1343.1	1343.9	1343.6	1343.3	1343.1	1342.8
5°	1335.9	1338.5	1341.1	1342.4	1342.0	1341.7	1341.3	1341.0
7.5°	1328.7	1331.7	1334.7	1336.1	1335.7	1335.4	1335.0	1334.7
10°	1321.4	1324.5	1327.5	1328.8	1328.5	1328.1	1327.8	1327.5
12.5°	1311.3	1314.0	1316.7	1318.1	1318.1	1318.0	1317.9	1317.9
15°	1292.9	1295.9	1298.8	1300.2	1299.9	1299.6	1299.2	1298.8
17.5°	1270.5	1273.5	1276.6	1278.0	1277.7	1277.4	1277.1	1276.9
20°	1252.9	1256.2	1259.6	1261.2	1261.2	1261.2	1261.2	1261.2
22.5°	1232.4	1235.8	1239.1	1241.0	1241.6	1242.1	1242.6	1243.2
25°	1200.9	1204.6	1208.2	1210.2	1210.6	1210.9	1211.3	1211.5
27.5°	1165.5	1168.8	1172.2	1174.1	1174.6	1175.0	1175.4	1175.7
30°	1140.7	1144.3	1148.0	1150.2	1150.8	1151.5	1152.2	1152.9
32.5°	1115.2	1119.5	1123.7	1126.1	1126.8	1127.5	1128.1	1128.8
35°	1075.0	1079.6	1084.3	1087.1	1088.2	1089.2	1090.1	1091.2
37.5°	1032.9	1037.6	1042.5	1045.4	1046.4	1047.4	1048.6	1049.6
40°	1003.3	1008.4	1013.4	1016.6	1017.9	1019.3	1020.6	1021.9
42.5°	974.3	979.9	985.4	988.7	989.9	990.9	991.9	993.1
45°	929.4	935.2	940.8	944.5	946.2	947.8	949.5	951.2
47.5°	882.0	887.9	893.8	897.7	899.8	901.7	903.7	905.8
50°	848.7	855.4	862.0	866.4	868.5	870.4	872.4	874.4
52.5°	815.0	821.7	828.3	832.7	834.7	836.7	838.7	840.7
55°	764.4	771.1	777.8	782.1	784.1	786.2	788.2	790.1
57.5°	711.2	719.3	727.2	732.1	734.0	735.8	737.7	739.6
60°	674.6	682.3	689.9	695.1	697.9	700.5	703.2	705.9
62.5°	638.5	646.2	653.8	659.0	661.8	664.4	667.0	669.8
65°	582.6	591.0	599.4	604.8	607.6	610.2	612.9	615.6
67.5°	527.8	536.3	544.8	550.4	553.0	555.5	558.2	560.8
70°	489.2	498.1	507.2	512.9	515.2	517.6	519.9	522.3
72.5°	452.5	461.3	470.0	475.7	478.3	480.9	483.5	486.2
75°	396.5	405.9	415.2	421.4	424.4	427.4	430.5	433.5
77.5°	344.4	353.9	363.4	369.8	373.0	376.2	379.4	382.6
80°	310.6	320.6	330.6	337.0	339.6	342.3	345.0	347.7
82.5°	277.4	287.7	297.9	304.6	307.6	310.5	313.4	316.3
85°	230.7	240.8	250.8	257.5	260.9	264.2	267.6	270.9
87.5°	196.7	206.7	216.7	223.2	226.2	229.2	232.3	235.4
90°	195.4	206.6	217.7	224.9	228.1	231.2	234.4	237.5
92.5°	186.8	197.7	208.6	215.4	218.2	220.9	223.8	226.5
95°	176.0	186.5	197.0	203.9	207.1	210.4	213.7	216.9
97.5°	168.3	177.3	186.2	192.2	195.3	198.4	201.5	204.6
100°	172.4	177.3	182.1	185.9	188.5	191.1	193.6	196.2
102.5°	268.8	232.9	197.1	180.4	183.1	185.8	188.4	191.1
105°	462.1	472.7	483.2	485.5	479.4	473.3	467.2	461.1
107.5°	535.3	544.5	553.8	560.2	563.5	566.8	570.1	573.4
110°	585.1	593.3	601.5	607.3	610.7	614.1	617.5	620.9



TEST NUMBER: P332709-830

CATALOG NUMBER: SA4XXDIP-C1195D1205U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	632.6	639.9	647.2	652.7	656.3	659.9	663.5	667.1
115°	704.1	712.0	719.8	724.9	727.3	729.6	731.9	734.2
117.5°	775.4	782.3	789.2	793.9	796.4	799.1	801.6	804.2
120°	819.2	826.3	833.5	838.2	840.4	842.5	844.7	847.0
122.5°	862.7	869.7	876.7	881.1	883.0	885.0	886.8	888.8
125°	923.7	930.8	937.8	942.5	944.8	947.1	949.3	951.5
127.5°	982.8	988.6	994.6	998.5	1000.6	1002.7	1004.8	1006.8
130°	1018.7	1025.0	1031.2	1035.4	1037.4	1039.4	1041.4	1043.4
132.5°	1054.5	1060.5	1066.6	1070.4	1072.2	1074.0	1075.9	1077.7
135°	1101.8	1107.7	1113.4	1117.7	1120.1	1122.7	1125.1	1127.6
137.5°	1148.4	1153.8	1159.2	1162.6	1164.2	1165.7	1167.2	1168.8
140°	1177.3	1182.4	1187.5	1191.0	1192.9	1194.9	1196.7	1198.6
142.5°	1205.0	1209.4	1213.7	1216.6	1218.0	1219.6	1221.0	1222.5
145°	1245.4	1247.6	1249.8	1251.9	1253.7	1255.6	1257.4	1259.1
147.5°	1281.0	1281.5	1282.0	1282.8	1284.1	1285.4	1286.8	1288.1
150°	1305.4	1305.4	1305.4	1305.6	1305.8	1306.1	1306.4	1306.6
152.5°	1327.3	1327.7	1328.0	1328.1	1328.0	1327.9	1327.8	1327.6
155°	1356.7	1357.6	1358.7	1358.8	1358.0	1357.3	1356.6	1355.8
157.5°	1382.1	1383.3	1384.6	1384.6	1383.3	1382.1	1380.7	1379.5
160°	1398.2	1399.7	1401.1	1401.1	1399.7	1398.2	1396.8	1395.2
162.5°	1411.4	1412.8	1414.3	1414.2	1412.5	1410.9	1409.2	1407.5
165°	1429.8	1431.8	1433.7	1433.6	1431.4	1429.2	1427.0	1424.8
167.5°	1443.4	1445.5	1447.7	1447.5	1445.1	1442.7	1440.2	1437.8
170°	1451.7	1453.7	1455.7	1455.4	1452.9	1450.5	1448.1	1445.7
172.5°	1457.0	1459.0	1460.8	1460.6	1457.9	1455.3	1452.6	1450.0
175°	1463.2	1465.4	1467.5	1467.2	1464.2	1461.3	1458.4	1455.5
177.5°	1465.7	1467.2	1468.8	1468.4	1466.0	1463.7	1461.3	1459.1
180°	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2	1464.2

(END OF REPORT)