

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: P331453-940

Luminaire Tested: **SA2XXDIP-C1005D925U940-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331453-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C1005D925U940-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

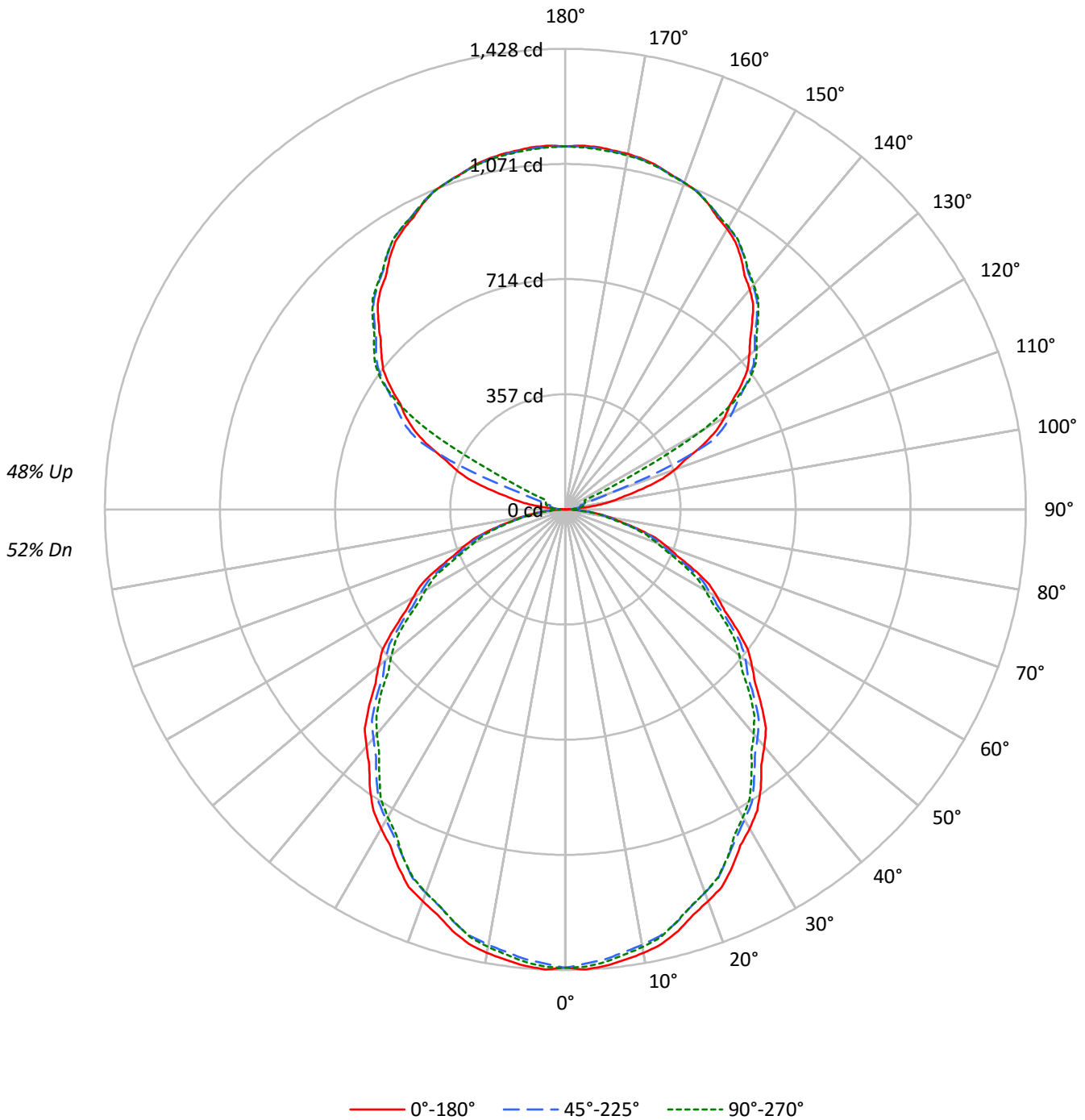
Lumens per Lamp: N/A
Luminaire Lumens: 6916.9 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 66.8
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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	58	58	58	52				
1	98	94	90	87	91	87	84	81	74	72	69	62	61	59	51	50	49	44				
2	90	82	76	71	83	76	71	66	65	61	58	55	52	49	45	43	41	37				
3	82	72	65	59	75	67	61	55	57	52	48	48	45	42	40	38	35	31				
4	75	64	56	50	69	59	52	47	51	46	41	43	39	36	36	33	30	27				
5	69	57	49	43	63	53	46	40	46	40	36	39	34	31	32	29	27	23				
6	63	51	43	37	58	48	40	35	41	35	31	35	31	27	29	26	23	20				
7	58	46	38	33	54	43	36	31	37	32	27	32	27	24	27	23	21	18				
8	54	42	34	29	50	39	32	27	34	28	24	29	25	21	25	21	19	16				
9	51	38	31	26	47	36	29	24	31	26	22	27	22	19	23	19	17	15				
10	47	35	28	23	44	33	26	22	29	23	20	25	21	17	21	18	15	13				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22946	22946	22946
5°	23034	22702	22835
10°	22897	22471	22584
15°	22614	22181	22158
20°	22213	21742	21720
25°	21814	21205	21205
30°	21300	20713	20534
35°	20820	20120	19825
40°	20219	19530	19153
45°	19628	18941	18472
50°	18982	18331	17678
55°	18311	17619	16963
60°	17563	16769	16152
65°	16756	15924	15194
70°	15739	14903	14195
75°	14323	13724	13381
80°	12710	12329	11688
85°	10374	9874	8855



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.6	1.9
10°-20°	376.0	5.4
20°-30°	552.7	8.0
30°-40°	642.0	9.3
40°-50°	641.3	9.3
50°-60°	559.3	8.1
60°-70°	413.6	6.0
70°-80°	234.2	3.4
80°-90°	65.8	1.0
90°-100°	37.5	0.5
100°-110°	137.7	2.0
110°-120°	368.0	5.3
120°-130°	607.5	8.8
130°-140°	646.1	9.3
140°-150°	600.5	8.7
150°-160°	482.8	7.0
160°-170°	311.1	4.5
170°-180°	107.1	1.5
0°-30°	1062.4	15.4
0°-40°	1704.4	24.6
0°-60°	2905.1	42.0
0°-90°	3618.6	52.3
90°-120°	543.2	7.9
90°-150°	2397.3	34.7
90°-180°	3298.0	47.7
0°-180°	6916.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1421	1421	1421	1421	1421	
5°	1421	1415	1401	1411	1409	135
15°	1353	1344	1327	1332	1326	381
25°	1224	1213	1190	1193	1190	563
35°	1056	1042	1021	1013	1006	659
45°	860	849	830	815	809	663
55°	650	642	626	610	603	581
65°	439	430	417	405	398	434
75°	230	227	220	212	214	245
85°	56	55	53	49	48	64
90°	1	10	16	20	22	5
95°	53	28	32	36	35	65
105°	248	258	50	58	62	265
115°	468	482	502	143	67	461
125°	662	673	688	694	696	590
135°	819	832	840	847	846	633
145°	950	950	963	969	965	594
155°	1046	1040	1049	1053	1047	482
165°	1103	1098	1100	1105	1100	311
175°	1128	1123	1124	1129	1121	107
180°	1126	1126	1126	1126	1126	



TEST NUMBER: P331453-940

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1421.2	1421.2	1421.2	1421.2	1421.2	1421.2	1421.2	1421.2	1421.2	1421.2	1421.2
2.5°	1427.8	1426.6	1425.4	1424.2	1422.9	1421.0	1418.4	1415.7	1413.0	1410.3	1412.7
5°	1421.2	1420.0	1418.8	1417.6	1416.4	1414.1	1410.8	1407.4	1404.1	1400.7	1403.2
7.5°	1408.6	1406.8	1404.9	1403.0	1401.1	1398.5	1395.1	1391.7	1388.3	1384.9	1387.3
10°	1396.6	1394.5	1392.4	1390.3	1388.1	1385.3	1381.6	1378.0	1374.3	1370.6	1373.1
12.5°	1380.3	1378.3	1376.4	1374.6	1372.7	1369.9	1366.3	1362.6	1359.1	1355.4	1357.1
15°	1352.9	1351.1	1349.2	1347.5	1345.6	1342.7	1338.8	1334.8	1330.9	1327.0	1328.2
17.5°	1317.9	1316.1	1314.3	1312.4	1310.6	1307.7	1303.7	1299.7	1295.7	1291.7	1293.1
20°	1292.8	1290.9	1289.1	1287.3	1285.5	1282.5	1278.2	1274.0	1269.7	1265.4	1266.3
22.5°	1267.7	1265.1	1262.6	1260.0	1257.4	1254.2	1250.2	1246.2	1242.2	1238.1	1238.3
25°	1224.5	1222.0	1219.6	1217.2	1214.8	1210.9	1205.8	1200.6	1195.4	1190.3	1190.9
27.5°	1175.3	1173.0	1170.9	1168.7	1166.5	1163.4	1159.3	1155.2	1151.2	1147.1	1146.2
30°	1142.5	1140.1	1137.6	1135.1	1132.7	1129.3	1124.7	1120.2	1115.6	1111.0	1110.1
32.5°	1107.5	1105.5	1103.6	1101.6	1099.7	1096.4	1091.5	1086.7	1081.9	1077.1	1075.5
35°	1056.3	1053.3	1050.3	1047.2	1044.2	1040.3	1035.4	1030.6	1025.7	1020.8	1019.0
37.5°	998.7	996.0	993.4	990.7	988.0	984.3	979.4	974.6	969.6	964.8	962.5
40°	959.3	956.9	954.5	952.1	949.6	946.0	941.1	936.3	931.4	926.6	923.8
42.5°	921.0	918.6	916.2	913.8	911.3	907.7	902.9	898.0	893.1	888.2	885.3
45°	859.6	857.5	855.3	853.2	851.0	847.7	843.2	838.7	834.1	829.5	826.2
47.5°	798.3	796.4	794.3	792.4	790.3	786.9	782.2	777.5	772.8	768.0	764.5
50°	755.7	754.2	752.7	751.2	749.7	746.7	742.5	738.2	734.0	729.8	725.5
52.5°	714.2	712.2	710.2	708.2	706.1	703.1	699.1	695.1	691.2	687.2	683.6
55°	650.5	648.6	646.8	645.1	643.2	640.4	636.9	633.2	629.5	625.9	622.2
57.5°	586.6	585.1	583.6	582.2	580.7	578.0	574.0	570.0	566.0	562.0	558.4
60°	543.9	542.7	541.4	540.3	539.0	536.3	532.1	527.8	523.5	519.3	515.9
62.5°	502.4	500.4	498.5	496.5	494.5	492.0	488.7	485.4	482.1	478.8	475.7
65°	438.6	436.8	435.1	433.2	431.4	428.9	425.9	422.8	419.8	416.8	414.1
67.5°	373.9	372.5	371.0	369.5	368.1	366.0	363.2	360.5	357.8	355.1	352.9
70°	333.4	332.3	331.0	329.8	328.6	326.6	323.9	321.1	318.4	315.7	313.5
72.5°	291.9	290.7	289.4	288.3	287.0	285.5	283.8	282.0	280.3	278.5	276.3
75°	229.6	229.0	228.4	227.7	227.1	226.0	224.5	223.0	221.5	220.0	218.2
77.5°	173.8	172.8	171.7	170.8	169.7	168.9	168.3	167.6	167.0	166.5	165.5
80°	136.7	136.3	136.1	135.7	135.5	135.0	134.4	133.8	133.1	132.6	131.6
82.5°	101.7	101.7	101.6	101.5	101.4	101.2	100.9	100.5	100.1	99.8	98.6
85°	56.0	55.7	55.5	55.1	54.8	54.5	54.2	53.9	53.6	53.3	52.3
87.5°	19.9	19.8	19.7	19.6	19.5	19.4	19.2	19.0	18.7	18.5	18.0
90°	0.8	2.8	4.8	6.8	8.7	10.5	11.9	13.4	14.8	16.3	17.2
92.5°	16.4	16.2	16.1	15.9	15.7	16.0	16.8	17.5	18.2	18.9	19.4
95°	53.0	47.0	41.0	35.0	29.1	26.7	28.0	29.2	30.5	31.7	32.6
97.5°	105.0	88.2	71.4	54.6	37.7	30.8	33.7	36.6	39.6	42.5	43.2
100°	144.2	119.3	94.5	69.7	44.9	34.2	37.2	40.3	43.3	46.5	47.9
102.5°	187.2	181.9	176.6	171.4	166.1	150.7	124.9	99.2	73.5	47.7	49.6
105°	247.5	253.0	258.4	263.9	269.3	247.3	197.9	148.5	99.1	49.7	51.6
107.5°	316.5	320.8	325.2	329.6	334.0	306.6	247.3	188.1	128.8	69.6	67.5
110°	360.8	364.6	368.4	372.2	375.9	351.7	299.4	247.1	194.8	142.5	124.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	402.4	405.8	409.2	412.6	415.9	411.2	398.2	385.3	372.4	359.4	293.5
115°	468.2	471.4	474.4	477.5	480.5	484.4	488.9	493.5	497.9	502.5	418.7
117.5°	527.1	530.5	534.0	537.4	540.8	544.1	547.2	550.4	553.5	556.5	536.3
120°	570.1	572.7	575.5	578.2	580.9	583.9	587.2	590.4	593.7	596.9	599.1
122.5°	606.5	609.4	612.2	615.1	618.0	621.2	624.7	628.3	631.9	635.4	636.7
125°	662.1	664.4	666.8	669.1	671.5	674.4	677.9	681.3	684.7	688.1	689.5
127.5°	712.4	715.1	717.6	720.2	722.8	725.4	728.0	730.6	733.2	735.8	737.5
130°	744.4	747.3	750.1	753.0	755.9	758.4	760.4	762.3	764.4	766.3	768.3
132.5°	776.9	779.4	781.9	784.3	786.8	789.0	791.0	793.0	795.0	796.9	798.7
135°	819.3	822.2	825.1	828.0	830.9	833.1	834.7	836.4	838.0	839.6	841.4
137.5°	862.1	864.2	866.2	868.2	870.2	872.2	874.0	875.8	877.7	879.6	881.3
140°	890.1	891.6	893.0	894.5	895.9	897.7	899.6	901.6	903.7	905.6	907.2
142.5°	913.6	914.9	916.2	917.5	918.8	920.6	922.8	925.1	927.5	929.7	931.2
145°	950.4	950.2	950.0	949.9	949.7	951.1	954.2	957.3	960.4	963.4	964.7
147.5°	982.5	981.8	981.1	980.4	979.7	980.9	983.9	987.0	990.1	993.1	994.0
150°	1003.4	1002.1	1000.8	999.5	998.3	999.1	1002.0	1004.9	1007.8	1010.7	1011.7
152.5°	1020.9	1019.5	1018.1	1016.7	1015.3	1015.9	1018.7	1021.5	1024.2	1027.0	1028.1
155°	1046.5	1044.9	1043.2	1041.6	1040.0	1040.3	1042.4	1044.6	1046.8	1048.9	1050.0
157.5°	1066.5	1065.1	1063.8	1062.4	1061.0	1061.1	1062.7	1064.2	1065.7	1067.2	1068.4
160°	1078.3	1077.2	1076.1	1075.0	1073.9	1073.9	1075.0	1076.1	1077.2	1078.3	1079.3
162.5°	1088.7	1087.6	1086.5	1085.4	1084.3	1084.2	1085.2	1086.1	1087.1	1088.1	1089.2
165°	1102.7	1101.6	1100.5	1099.4	1098.3	1098.1	1098.6	1099.1	1099.7	1100.3	1101.5
167.5°	1113.1	1112.1	1111.0	1109.8	1108.8	1108.5	1109.0	1109.5	1110.0	1110.5	1111.8
170°	1119.0	1117.8	1116.8	1115.7	1114.6	1114.3	1114.6	1115.0	1115.4	1115.7	1117.0
172.5°	1122.8	1121.8	1120.7	1119.6	1118.6	1118.2	1118.6	1118.9	1119.3	1119.6	1120.9
175°	1127.9	1126.7	1125.4	1124.1	1122.8	1122.4	1122.8	1123.1	1123.5	1123.8	1125.2
177.5°	1128.7	1127.7	1126.8	1125.7	1124.7	1124.3	1124.4	1124.5	1124.7	1124.8	1125.9
180°	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1421.2	1421.2	1421.2	1421.2	1421.2	1421.2	1421.2	1421.2
2.5°	1415.1	1417.6	1420.0	1421.0	1420.5	1420.0	1419.5	1419.1
5°	1405.6	1408.0	1410.4	1411.4	1410.8	1410.2	1409.5	1408.9
7.5°	1389.7	1392.1	1394.6	1395.5	1394.8	1394.2	1393.5	1392.9
10°	1375.6	1378.0	1380.4	1381.2	1380.3	1379.3	1378.4	1377.5
12.5°	1358.8	1360.5	1362.2	1362.7	1362.0	1361.4	1360.7	1360.0
15°	1329.4	1330.6	1331.8	1331.7	1330.2	1328.6	1327.1	1325.6
17.5°	1294.5	1295.9	1297.3	1297.3	1295.7	1294.3	1292.9	1291.4
20°	1267.3	1268.2	1269.1	1268.9	1267.7	1266.5	1265.3	1264.1
22.5°	1238.5	1238.7	1238.9	1238.6	1237.9	1237.2	1236.4	1235.6
25°	1191.5	1192.1	1192.8	1192.8	1192.1	1191.5	1190.9	1190.3
27.5°	1145.3	1144.3	1143.4	1142.3	1140.9	1139.3	1137.9	1136.5
30°	1109.2	1108.3	1107.4	1106.3	1105.1	1103.8	1102.7	1101.4
32.5°	1073.9	1072.2	1070.6	1069.2	1067.9	1066.8	1065.5	1064.3
35°	1017.2	1015.4	1013.5	1011.9	1010.4	1008.9	1007.3	1005.8
37.5°	960.3	958.1	955.8	954.0	952.5	951.0	949.6	948.2
40°	921.0	918.4	915.6	913.6	912.4	911.2	910.0	908.7
42.5°	882.3	879.3	876.4	874.1	872.4	870.7	869.0	867.2
45°	822.9	819.5	816.2	813.9	812.6	811.5	810.2	809.0
47.5°	761.0	757.4	753.9	751.3	749.5	747.8	746.0	744.2
50°	721.2	717.0	712.7	709.9	708.4	706.9	705.3	703.8
52.5°	680.1	676.5	673.1	670.3	668.2	666.3	664.2	662.3
55°	618.6	614.9	611.4	608.8	607.3	605.7	604.2	602.6
57.5°	554.7	551.2	547.6	545.2	544.1	543.0	541.8	540.6
60°	512.6	509.3	506.0	503.8	502.9	502.0	501.1	500.2
62.5°	472.7	469.6	466.5	464.3	463.2	462.0	460.8	459.7
65°	411.3	408.6	405.9	403.8	402.3	400.7	399.2	397.7
67.5°	350.8	348.7	346.5	344.8	343.7	342.4	341.3	340.0
70°	311.4	309.3	307.2	305.5	304.3	303.1	301.8	300.7
72.5°	274.3	272.2	270.0	268.5	267.5	266.5	265.6	264.6
75°	216.4	214.5	212.8	212.1	212.8	213.3	213.9	214.5
77.5°	164.6	163.7	162.8	161.9	161.0	160.2	159.3	158.5
80°	130.7	129.8	128.9	128.1	127.5	127.0	126.4	125.7
82.5°	97.5	96.3	95.1	94.5	94.3	94.3	94.2	94.0
85°	51.5	50.6	49.7	49.0	48.8	48.4	48.2	47.8
87.5°	17.5	16.9	16.4	16.1	15.9	15.7	15.5	15.3
90°	18.1	19.0	19.9	20.5	20.9	21.2	21.7	22.0
92.5°	19.8	20.3	20.8	21.1	21.3	21.6	21.8	22.0
95°	33.5	34.5	35.4	35.8	35.6	35.4	35.2	35.0
97.5°	44.0	44.7	45.4	45.8	46.1	46.3	46.5	46.7
100°	49.3	50.7	52.3	53.1	53.5	53.9	54.2	54.6
102.5°	51.5	53.4	55.3	56.4	57.0	57.4	58.0	58.5
105°	53.7	55.6	57.6	59.0	59.7	60.5	61.2	61.9
107.5°	65.5	63.5	61.4	60.8	61.5	62.2	63.0	63.7
110°	106.3	88.2	70.1	61.4	62.2	62.9	63.6	64.4



TEST NUMBER: P331453-940

CATALOG NUMBER: SA2XXDIP-C1005D925U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	227.5	161.4	95.4	62.7	63.2	63.8	64.4	65.0
115°	334.9	251.1	167.3	118.9	105.8	92.8	79.8	66.8
117.5°	516.0	495.8	475.5	443.9	401.1	358.3	315.5	272.7
120°	601.3	603.5	605.6	594.5	570.1	545.6	521.2	496.8
122.5°	638.0	639.3	640.6	638.9	634.2	629.4	624.6	619.9
125°	690.7	692.0	693.2	694.1	694.6	695.2	695.8	696.3
127.5°	739.4	741.3	743.2	744.0	744.2	744.3	744.4	744.5
130°	770.3	772.3	774.3	775.3	775.1	774.8	774.6	774.5
132.5°	800.4	802.1	803.8	804.5	804.3	804.1	804.0	803.8
135°	843.3	845.1	846.9	847.6	847.2	846.9	846.5	846.1
137.5°	883.1	884.8	886.6	887.3	886.6	886.0	885.4	884.8
140°	908.8	910.5	912.1	912.5	911.6	910.7	909.8	908.8
142.5°	932.6	934.2	935.7	935.9	935.0	934.2	933.3	932.3
145°	966.0	967.2	968.5	968.7	967.8	966.9	966.0	965.1
147.5°	995.0	995.9	996.8	996.9	996.1	995.4	994.6	993.9
150°	1012.8	1014.0	1015.0	1015.1	1014.2	1013.3	1012.4	1011.5
152.5°	1029.1	1030.2	1031.3	1031.3	1030.0	1028.9	1027.7	1026.4
155°	1051.1	1052.2	1053.3	1053.1	1051.7	1050.2	1048.7	1047.3
157.5°	1069.6	1070.9	1072.1	1072.0	1070.6	1069.2	1067.7	1066.4
160°	1080.4	1081.6	1082.6	1082.5	1081.2	1080.0	1078.7	1077.5
162.5°	1090.5	1091.7	1093.0	1092.8	1091.3	1089.7	1088.2	1086.5
165°	1102.8	1104.0	1105.3	1105.3	1104.0	1102.8	1101.5	1100.3
167.5°	1113.0	1114.3	1115.6	1115.4	1113.7	1112.1	1110.5	1108.8
170°	1118.3	1119.5	1120.8	1120.6	1119.0	1117.3	1115.7	1114.1
172.5°	1122.1	1123.5	1124.7	1124.5	1122.8	1121.2	1119.6	1118.0
175°	1126.4	1127.7	1128.9	1128.6	1126.9	1125.1	1123.2	1121.4
177.5°	1126.9	1127.9	1128.9	1128.7	1127.5	1126.1	1124.8	1123.6
180°	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5	1125.5

(END OF REPORT)