

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: P331436-940

Luminaire Tested: **S122DIP-S1005D530U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331436-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S1005D530U940-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

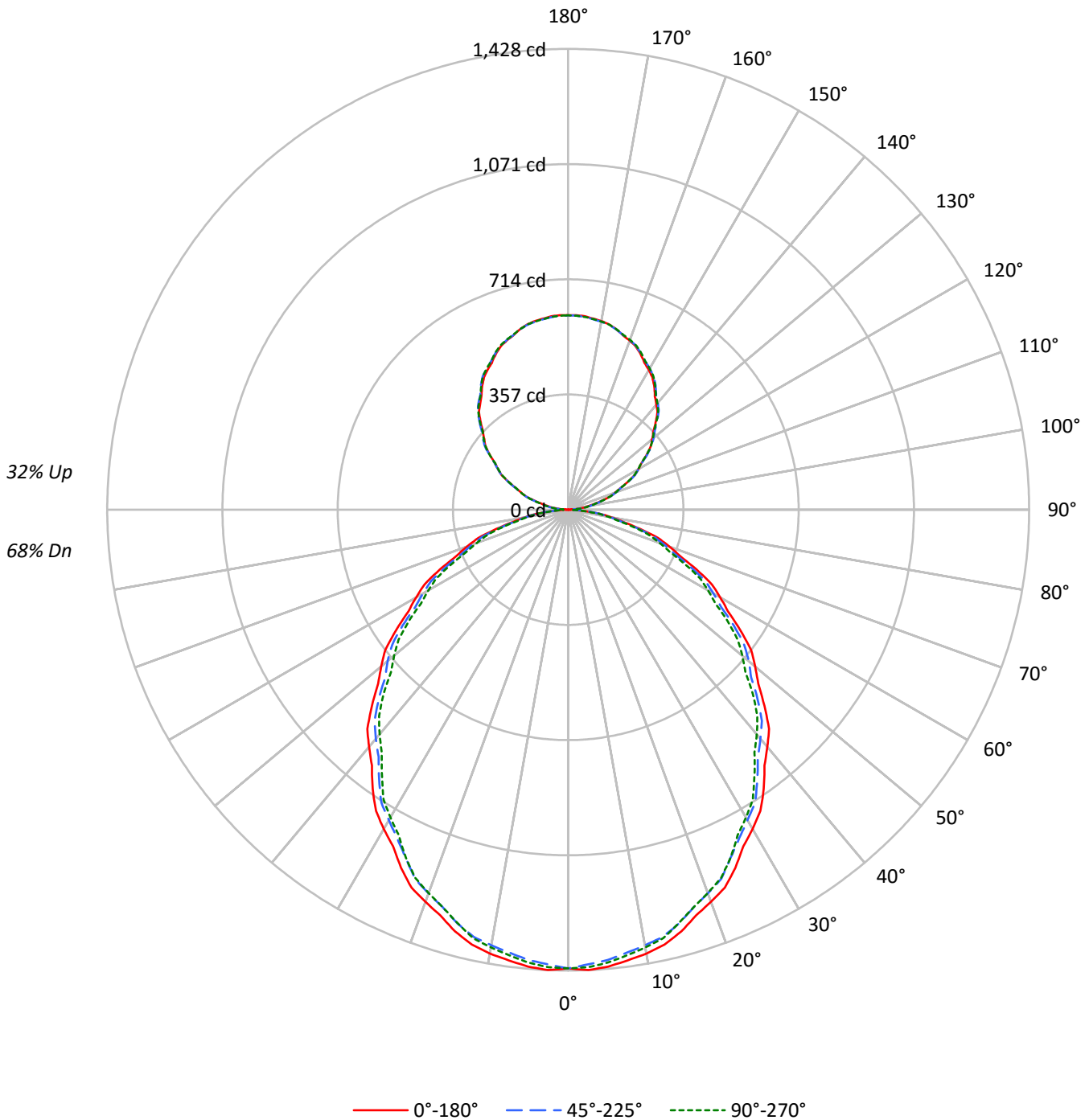
Lumens per Lamp: N/A  
Luminaire Lumens: 5303.1 lumens  
Efficiency: N/A  
Efficacy: 96.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct  
  
Input Watts (W): 55.1  
Input Voltage (V): 120  
Input Current (Ain): 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	0
RCR																		
0	111	111	111	111	105	105	105	105	93	93	93	83	83	83	73	73	73	68
1	102	97	93	90	96	92	89	85	82	79	77	73	71	69	64	63	62	57
2	93	85	79	73	87	81	75	70	72	68	64	64	61	58	57	54	52	48
3	85	75	67	61	80	71	64	59	64	58	54	57	52	49	50	47	44	41
4	78	66	58	52	73	63	56	50	57	51	46	51	46	42	45	41	38	35
5	71	59	51	45	67	56	49	43	51	44	40	45	40	36	41	36	33	30
6	66	53	45	39	62	51	43	37	46	39	35	41	36	32	37	33	29	27
7	61	48	40	34	57	46	38	33	42	35	31	37	32	28	34	29	26	24
8	57	44	36	30	53	42	35	29	38	32	27	34	29	25	31	27	23	21
9	53	40	32	27	50	38	31	26	35	29	25	32	27	23	29	24	21	19
10	49	37	30	25	47	35	28	24	32	26	22	29	24	21	27	22	19	17

**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



TEST NUMBER: P331436-940

CATALOG NUMBER: S122DIP-S1005D530U940-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.6	2.5
10°-20°	376.0	7.1
20°-30°	552.7	10.4
30°-40°	642.0	12.1
40°-50°	641.3	12.1
50°-60°	559.3	10.5
60°-70°	413.6	7.8
70°-80°	234.2	4.4
80°-90°	65.4	1.2
90°-100°	38.2	0.7
100°-110°	118.6	2.2
110°-120°	202.7	3.8
120°-130°	266.6	5.0
130°-140°	299.2	5.6
140°-150°	293.4	5.5
150°-160°	246.1	4.6
160°-170°	163.2	3.1
170°-180°	57.0	1.1
0°-30°	1062.4	20.0
0°-40°	1704.4	32.1
0°-60°	2905.1	54.8
0°-90°	3618.2	68.2
90°-120°	359.5	6.8
90°-150°	1218.6	23.0
90°-180°	1685.0	31.8
0°-180°	5303.1	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°	0	7	18	17	17	4
95°	26	31	32	32	32	30
105°	109	111	112	113	113	115
115°	203	206	206	205	203	201
125°	296	300	299	298	297	264
135°	383	388	390	389	387	296
145°	465	468	471	472	470	290
155°	531	533	534	537	536	244
165°	578	578	578	581	579	163
175°	602	600	599	602	600	57
180°	602	602	602	602	602	



TEST NUMBER: P331436-940

CATALOG NUMBER: S122DIP-S1005D530U940-4F0-1E-UDD-F1

**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°	19.8	19.5	19.4	19.2	18.9	18.8	18.8	18.8	18.8	18.9	18.1
90°	0.5	1.9	3.2	4.5	6.0	7.8	10.3	12.8	15.3	17.8	17.6
92.5°	9.1	10.1	11.1	12.0	13.0	13.8	14.4	15.0	15.6	16.1	16.2
95°	26.5	27.6	28.7	29.9	30.9	31.7	31.8	32.1	32.3	32.5	32.5
97.5°	48.3	49.3	50.3	51.3	52.3	53.0	53.4	53.9	54.3	54.8	54.8
100°	64.6	65.5	66.3	67.3	68.2	68.8	69.2	69.5	69.8	70.2	70.2
102.5°	81.7	82.4	83.1	83.8	84.5	85.2	85.6	86.0	86.4	86.9	86.9
105°	109.3	109.7	110.0	110.3	110.7	110.9	111.2	111.4	111.6	111.9	112.1
107.5°	137.2	137.7	138.2	138.7	139.2	139.5	139.5	139.5	139.5	139.5	139.6
110°	155.1	155.8	156.4	157.1	157.8	158.1	158.1	158.1	158.1	158.1	158.1



TEST NUMBER: P331436-940

CATALOG NUMBER: S122DIP-S1005D530U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	174.6	175.3	175.9	176.6	177.4	177.6	177.5	177.5	177.4	177.3	177.0
115°	203.4	204.1	204.7	205.5	206.1	206.3	206.1	205.9	205.6	205.5	205.4
117.5°	232.1	233.0	233.9	234.8	235.7	235.9	235.2	234.5	233.9	233.3	233.0
120°	251.2	252.1	253.0	253.9	254.9	254.9	253.9	253.0	252.1	251.2	251.2
122.5°	268.7	269.7	270.9	272.0	273.0	273.2	272.6	272.0	271.3	270.7	270.5
125°	296.0	296.9	298.0	299.0	300.0	300.3	300.0	299.7	299.3	299.0	298.6
127.5°	322.4	323.8	325.0	326.4	327.6	328.1	327.7	327.3	326.9	326.5	326.0
130°	339.2	340.6	342.1	343.6	345.0	345.6	345.4	345.2	345.0	344.7	344.6
132.5°	357.8	359.1	360.3	361.5	362.7	363.3	363.4	363.4	363.5	363.5	363.0
135°	382.9	384.1	385.4	386.6	387.9	388.6	388.8	389.1	389.3	389.5	389.4
137.5°	409.2	410.3	411.3	412.3	413.3	413.9	414.3	414.6	414.8	415.1	415.0
140°	425.1	426.1	427.1	428.1	429.2	430.0	430.5	431.1	431.7	432.2	432.2
142.5°	441.4	442.4	443.4	444.4	445.4	446.1	446.6	446.9	447.3	447.6	447.7
145°	464.8	465.6	466.4	467.2	468.0	468.7	469.3	470.0	470.7	471.4	471.4
147.5°	485.6	486.5	487.5	488.5	489.4	490.1	490.5	491.0	491.4	492.0	492.1
150°	499.9	500.5	501.2	501.9	502.6	503.1	503.5	504.0	504.4	505.0	505.2
152.5°	512.5	513.2	513.8	514.5	515.1	515.8	516.3	516.8	517.4	518.0	518.4
155°	531.4	531.7	532.1	532.4	532.7	533.1	533.4	533.8	534.0	534.4	535.0
157.5°	547.5	547.8	548.0	548.2	548.5	548.7	548.8	549.1	549.3	549.5	550.3
160°	557.3	557.5	557.8	557.9	558.2	558.4	558.5	558.6	558.7	558.8	559.5
162.5°	566.2	566.3	566.3	566.4	566.4	566.5	566.6	566.8	566.9	566.9	567.8
165°	578.2	578.0	577.9	577.8	577.7	577.7	577.7	577.7	577.7	577.7	578.5
167.5°	588.1	587.8	587.5	587.1	586.7	586.6	586.6	586.6	586.5	586.5	587.3
170°	593.4	593.1	592.7	592.4	592.1	591.8	591.7	591.6	591.5	591.4	592.2
172.5°	597.1	596.7	596.4	596.0	595.8	595.5	595.4	595.3	595.1	595.0	595.8
175°	601.5	601.2	600.8	600.6	600.2	599.9	599.7	599.5	599.2	599.0	599.8
177.5°	603.4	603.1	602.8	602.5	602.3	602.1	601.9	601.7	601.5	601.4	601.9
180°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5



TEST NUMBER: P331436-940

CATALOG NUMBER: S122DIP-S1005D530U940-4F0-1E-UDD-F1

**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°	17.3	16.6	15.8	15.2	15.1	14.8	14.6	14.4
90°	17.4	17.1	16.9	16.9	16.9	17.0	17.2	17.3
92.5°	16.2	16.3	16.3	16.4	16.4	16.4	16.5	16.5
95°	32.5	32.5	32.5	32.5	32.2	32.0	31.7	31.6
97.5°	54.8	54.8	54.8	54.7	54.7	54.7	54.7	54.6
100°	70.2	70.2	70.2	70.1	70.0	69.9	69.8	69.6
102.5°	87.0	87.1	87.2	87.2	87.1	86.9	86.9	86.8
105°	112.4	112.5	112.8	112.9	112.9	112.9	112.9	112.9
107.5°	139.6	139.7	139.8	139.6	139.0	138.6	138.0	137.5
110°	158.1	158.1	158.1	158.0	157.7	157.3	156.9	156.6





TEST NUMBER: P331436-940

CATALOG NUMBER: S122DIP-S1005D530U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	176.7	176.5	176.2	175.9	175.7	175.4	175.1	175.0
115°	205.2	205.1	205.0	204.7	204.4	204.1	203.8	203.4
117.5°	232.7	232.5	232.2	231.9	231.6	231.2	230.9	230.5
120°	251.2	251.2	251.2	251.0	250.7	250.4	250.0	249.7
122.5°	270.2	269.9	269.7	269.4	269.1	268.9	268.7	268.4
125°	298.3	298.0	297.7	297.4	297.3	297.2	297.0	296.9
127.5°	325.7	325.2	324.9	324.4	324.0	323.7	323.3	323.0
130°	344.3	344.1	343.8	343.5	343.0	342.6	342.1	341.7
132.5°	362.5	361.9	361.5	361.1	360.7	360.3	360.0	359.6
135°	389.3	389.1	389.1	388.8	388.5	388.2	387.8	387.4
137.5°	414.9	414.8	414.7	414.5	414.0	413.6	413.1	412.7
140°	432.2	432.2	432.2	432.0	431.5	431.1	430.6	430.2
142.5°	447.8	447.9	448.0	447.8	447.4	446.9	446.5	446.0
145°	471.6	471.7	471.8	471.6	471.2	470.7	470.3	469.8
147.5°	492.4	492.7	492.9	492.8	492.4	492.0	491.5	491.1
150°	505.6	506.0	506.3	506.3	506.0	505.6	505.2	505.0
152.5°	518.8	519.2	519.7	519.7	519.2	518.8	518.4	518.0
155°	535.6	536.1	536.7	536.8	536.5	536.1	535.7	535.5
157.5°	551.0	551.8	552.6	552.7	552.1	551.6	551.1	550.5
160°	560.2	560.9	561.5	561.7	561.2	560.8	560.3	559.8
162.5°	568.5	569.3	570.1	570.2	569.6	569.1	568.6	568.0
165°	579.3	580.1	580.8	580.9	580.3	579.8	579.3	578.6
167.5°	588.1	588.9	589.7	589.8	589.2	588.6	588.0	587.4
170°	593.0	593.8	594.5	594.6	593.9	593.3	592.5	591.9
172.5°	596.6	597.4	598.2	598.2	597.6	596.9	596.2	595.6
175°	600.6	601.4	602.2	602.3	601.5	600.8	600.2	599.5
177.5°	602.4	603.0	603.5	603.5	603.0	602.4	601.9	601.4
180°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5

(END OF REPORT)