

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: P331453-830

Luminaire Tested: **SA2XXDIP-C1005D925U830-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331453-830  
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-C1005D925U830-4F0-1E-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: 7311.2 lumens  
Efficiency: N/A  
Efficacy: 109.4 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

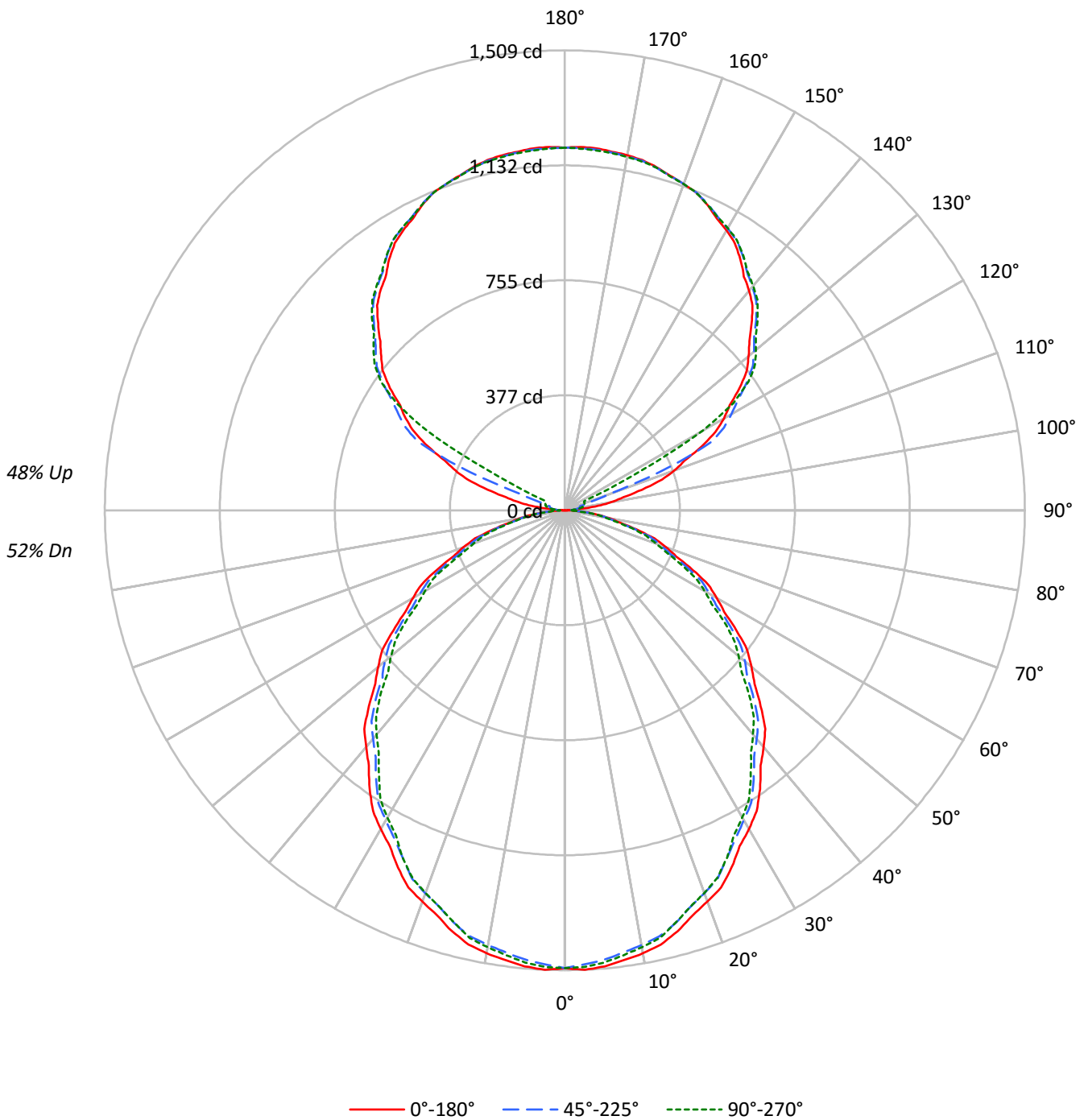
Input Watts (W): 66.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	24254	24254	24254
5°	24347	23995	24136
10°	24202	23753	23871
15°	23903	23445	23422
20°	23479	22983	22957
25°	23058	22413	22413
30°	22514	21893	21705
35°	22007	21268	20954
40°	21372	20643	20244
45°	20747	20021	19527
50°	20065	19376	18686
55°	19356	18624	17931
60°	18564	17725	17073
65°	17712	16829	16061
70°	16636	15753	15002
75°	15140	14504	14148
80°	13436	13036	12357
85°	10967	10448	9355



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.3	1.9
10°-20°	397.5	5.4
20°-30°	584.2	8.0
30°-40°	678.6	9.3
40°-50°	677.9	9.3
50°-60°	591.2	8.1
60°-70°	437.1	6.0
70°-80°	247.6	3.4
80°-90°	69.5	1.0
90°-100°	39.7	0.5
100°-110°	145.5	2.0
110°-120°	389.0	5.3
120°-130°	642.1	8.8
130°-140°	682.9	9.3
140°-150°	634.7	8.7
150°-160°	510.3	7.0
160°-170°	328.8	4.5
170°-180°	113.2	1.5
0°-30°	1123.0	15.4
0°-40°	1801.6	24.6
0°-60°	3070.7	42.0
0°-90°	3824.9	52.3
90°-120°	574.2	7.9
90°-150°	2533.9	34.7
90°-180°	3486.0	47.7
0°-180°	7311.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1502	1502	1502	1502	1502	
5°	1502	1496	1480	1491	1489	142
15°	1430	1421	1403	1408	1401	402
25°	1294	1282	1258	1261	1258	595
35°	1116	1102	1079	1070	1063	697
45°	909	898	877	862	855	701
55°	688	678	662	645	637	615
65°	464	455	440	428	420	458
75°	243	240	232	225	227	259
85°	59	58	56	52	50	68
90°	1	10	17	21	23	5
95°	56	29	34	38	37	68
105°	262	273	52	62	65	280
115°	495	510	531	151	71	487
125°	700	711	727	733	736	624
135°	866	879	888	896	894	669
145°	1005	1005	1018	1024	1020	628
155°	1106	1099	1109	1113	1107	509
165°	1166	1161	1163	1168	1163	329
175°	1192	1187	1188	1193	1185	113
180°	1190	1190	1190	1190	1190	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2
2.5°	1509.2	1507.9	1506.7	1505.3	1504.0	1502.0	1499.2	1496.4	1493.6	1490.7	1493.3
5°	1502.2	1501.0	1499.7	1498.4	1497.1	1494.7	1491.2	1487.6	1484.1	1480.5	1483.2
7.5°	1488.9	1487.0	1485.0	1483.0	1481.0	1478.2	1474.6	1471.0	1467.4	1463.9	1466.4
10°	1476.2	1474.0	1471.8	1469.5	1467.3	1464.2	1460.4	1456.5	1452.6	1448.8	1451.4
12.5°	1459.0	1456.9	1454.9	1452.9	1451.0	1448.0	1444.2	1440.3	1436.5	1432.7	1434.5
15°	1430.0	1428.1	1426.2	1424.3	1422.3	1419.3	1415.1	1410.9	1406.7	1402.6	1403.9
17.5°	1393.1	1391.1	1389.2	1387.2	1385.3	1382.2	1378.0	1373.8	1369.5	1365.4	1366.8
20°	1366.5	1364.5	1362.6	1360.7	1358.8	1355.6	1351.0	1346.6	1342.1	1337.6	1338.5
22.5°	1339.9	1337.2	1334.5	1331.8	1329.1	1325.7	1321.4	1317.2	1313.0	1308.7	1308.9
25°	1294.3	1291.7	1289.1	1286.6	1284.0	1280.0	1274.5	1269.0	1263.6	1258.1	1258.8
27.5°	1242.3	1239.9	1237.7	1235.3	1233.0	1229.7	1225.4	1221.1	1216.8	1212.5	1211.5
30°	1207.6	1205.0	1202.4	1199.9	1197.3	1193.6	1188.8	1184.0	1179.2	1174.3	1173.4
32.5°	1170.6	1168.6	1166.5	1164.4	1162.3	1158.9	1153.8	1148.7	1143.6	1138.5	1136.8
35°	1116.5	1113.3	1110.1	1106.9	1103.7	1099.6	1094.4	1089.3	1084.2	1079.0	1077.1
37.5°	1055.6	1052.8	1050.0	1047.2	1044.3	1040.4	1035.2	1030.1	1024.9	1019.8	1017.4
40°	1014.0	1011.4	1008.9	1006.4	1003.7	999.9	994.8	989.7	984.5	979.4	976.5
42.5°	973.6	971.0	968.5	965.9	963.3	959.4	954.3	949.1	944.1	938.9	935.8
45°	908.6	906.3	904.1	901.8	899.6	896.1	891.3	886.5	881.7	876.8	873.3
47.5°	843.9	841.8	839.6	837.5	835.4	831.8	826.8	821.8	816.8	811.8	808.0
50°	798.8	797.2	795.6	794.0	792.4	789.3	784.9	780.3	775.8	771.4	766.9
52.5°	754.9	752.8	750.6	748.6	746.4	743.2	739.0	734.7	730.6	726.3	722.6
55°	687.6	685.6	683.7	681.8	679.9	676.9	673.2	669.3	665.4	661.6	657.7
57.5°	620.0	618.4	616.9	615.4	613.8	611.0	606.7	602.5	598.2	594.0	590.2
60°	574.9	573.6	572.3	571.1	569.8	566.8	562.4	557.9	553.4	548.9	545.4
62.5°	531.0	529.0	526.9	524.8	522.7	520.0	516.5	513.1	509.6	506.1	502.8
65°	463.6	461.8	459.9	457.9	456.0	453.4	450.2	447.0	443.7	440.5	437.7
67.5°	395.2	393.7	392.1	390.6	389.1	386.8	383.9	381.1	378.1	375.3	373.1
70°	352.4	351.2	349.9	348.6	347.3	345.3	342.3	339.4	336.6	333.7	331.4
72.5°	308.5	307.3	305.9	304.7	303.4	301.8	300.0	298.1	296.2	294.4	292.1
75°	242.7	242.0	241.4	240.7	240.1	238.9	237.3	235.7	234.1	232.5	230.6
77.5°	183.7	182.7	181.5	180.5	179.4	178.5	177.9	177.2	176.5	176.0	174.9
80°	144.5	144.1	143.8	143.5	143.2	142.7	142.0	141.4	140.7	140.2	139.1
82.5°	107.4	107.4	107.4	107.3	107.2	107.0	106.6	106.2	105.8	105.5	104.2
85°	59.2	58.9	58.6	58.2	58.0	57.6	57.3	56.9	56.6	56.4	55.3
87.5°	21.0	20.9	20.8	20.7	20.6	20.5	20.3	20.1	19.8	19.6	19.0
90°	0.8	2.9	5.1	7.2	9.2	11.1	12.6	14.1	15.6	17.2	18.2
92.5°	17.3	17.2	17.0	16.8	16.6	16.9	17.7	18.5	19.2	20.0	20.5
95°	56.0	49.7	43.4	37.0	30.7	28.2	29.6	30.9	32.2	33.6	34.5
97.5°	111.0	93.2	75.5	57.7	39.9	32.5	35.6	38.7	41.8	45.0	45.7
100°	152.4	126.1	99.9	73.7	47.5	36.1	39.3	42.6	45.8	49.1	50.6
102.5°	197.8	192.3	186.7	181.2	175.6	159.3	132.1	104.8	77.7	50.4	52.4
105°	261.6	267.4	273.1	278.9	284.6	261.4	209.2	156.9	104.7	52.5	54.6
107.5°	334.5	339.1	343.7	348.4	353.1	324.0	261.4	198.8	136.1	73.5	71.4
110°	381.4	385.4	389.4	393.4	397.4	371.7	316.5	261.2	205.9	150.6	131.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	425.4	429.0	432.5	436.1	439.6	434.6	420.9	407.3	393.6	379.9	310.2
115°	494.9	498.2	501.4	504.7	507.9	512.0	516.8	521.6	526.3	531.1	442.5
117.5°	557.1	560.7	564.4	568.1	571.7	575.1	578.4	581.7	585.0	588.2	566.8
120°	602.6	605.4	608.3	611.1	614.1	617.2	620.7	624.1	627.5	630.9	633.3
122.5°	641.1	644.1	647.1	650.2	653.2	656.6	660.3	664.1	667.9	671.7	673.0
125°	699.8	702.3	704.8	707.3	709.8	712.8	716.5	720.1	723.8	727.4	728.8
127.5°	753.0	755.8	758.6	761.3	764.0	766.8	769.5	772.2	775.0	777.7	779.6
130°	786.8	789.9	792.9	796.0	799.0	801.6	803.7	805.8	807.9	810.0	812.1
132.5°	821.2	823.8	826.4	829.1	831.6	834.0	836.1	838.2	840.3	842.4	844.2
135°	866.0	869.0	872.1	875.2	878.3	880.6	882.3	884.1	885.8	887.5	889.4
137.5°	911.3	913.4	915.6	917.7	919.8	921.9	923.8	925.8	927.7	929.7	931.5
140°	940.8	942.4	944.0	945.5	947.0	948.9	950.9	953.0	955.2	957.2	958.9
142.5°	965.6	967.0	968.5	969.8	971.2	973.1	975.4	977.9	980.3	982.7	984.3
145°	1004.6	1004.4	1004.2	1004.0	1003.8	1005.3	1008.6	1011.8	1015.1	1018.3	1019.6
147.5°	1038.5	1037.7	1037.1	1036.3	1035.6	1036.8	1040.0	1043.3	1046.5	1049.7	1050.7
150°	1060.5	1059.2	1057.8	1056.5	1055.2	1056.0	1059.1	1062.2	1065.3	1068.3	1069.4
152.5°	1079.1	1077.6	1076.1	1074.7	1073.2	1073.8	1076.8	1079.7	1082.6	1085.5	1086.7
155°	1106.2	1104.5	1102.7	1101.0	1099.3	1099.6	1101.8	1104.2	1106.5	1108.7	1109.8
157.5°	1127.3	1125.9	1124.5	1122.9	1121.5	1121.6	1123.2	1124.8	1126.4	1128.0	1129.4
160°	1139.7	1138.6	1137.5	1136.2	1135.1	1135.1	1136.2	1137.5	1138.6	1139.7	1140.9
162.5°	1150.8	1149.6	1148.5	1147.3	1146.1	1146.0	1147.1	1148.0	1149.1	1150.1	1151.3
165°	1165.5	1164.4	1163.3	1162.1	1160.9	1160.6	1161.2	1161.8	1162.4	1163.0	1164.3
167.5°	1176.6	1175.4	1174.3	1173.1	1172.0	1171.7	1172.2	1172.7	1173.3	1173.8	1175.2
170°	1182.8	1181.6	1180.4	1179.3	1178.2	1177.8	1178.2	1178.6	1178.9	1179.3	1180.6
172.5°	1186.8	1185.7	1184.6	1183.5	1182.3	1181.9	1182.3	1182.7	1183.1	1183.5	1184.8
175°	1192.2	1190.9	1189.6	1188.2	1186.8	1186.4	1186.8	1187.1	1187.5	1187.9	1189.3
177.5°	1193.1	1192.0	1191.0	1189.9	1188.8	1188.4	1188.5	1188.6	1188.8	1188.9	1190.1
180°	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2	1502.2
2.5°	1495.8	1498.4	1501.0	1502.0	1501.5	1501.0	1500.4	1500.0
5°	1485.7	1488.3	1490.8	1491.9	1491.2	1490.5	1489.9	1489.2
7.5°	1469.0	1471.5	1474.1	1475.1	1474.3	1473.7	1472.9	1472.3
10°	1454.0	1456.5	1459.1	1459.9	1459.0	1457.9	1457.0	1456.0
12.5°	1436.2	1438.0	1439.8	1440.4	1439.6	1439.0	1438.2	1437.6
15°	1405.1	1406.5	1407.7	1407.6	1406.0	1404.4	1402.8	1401.2
17.5°	1368.3	1369.8	1371.2	1371.2	1369.6	1368.1	1366.6	1365.0
20°	1339.5	1340.5	1341.4	1341.2	1340.0	1338.7	1337.5	1336.1
22.5°	1309.1	1309.3	1309.5	1309.2	1308.4	1307.7	1306.8	1306.1
25°	1259.4	1260.1	1260.7	1260.7	1260.1	1259.4	1258.8	1258.1
27.5°	1210.6	1209.6	1208.6	1207.4	1205.9	1204.3	1202.8	1201.3
30°	1172.4	1171.5	1170.5	1169.4	1168.1	1166.8	1165.5	1164.2
32.5°	1135.1	1133.3	1131.6	1130.1	1128.8	1127.6	1126.2	1124.9
35°	1075.2	1073.3	1071.3	1069.6	1068.0	1066.4	1064.7	1063.1
37.5°	1015.0	1012.7	1010.3	1008.3	1006.8	1005.2	1003.7	1002.2
40°	973.6	970.7	967.8	965.7	964.4	963.2	961.9	960.5
42.5°	932.6	929.4	926.3	923.9	922.1	920.3	918.5	916.6
45°	869.8	866.2	862.7	860.3	858.9	857.7	856.4	855.2
47.5°	804.4	800.6	796.9	794.1	792.2	790.4	788.5	786.6
50°	762.3	757.9	753.4	750.4	748.8	747.2	745.6	743.9
52.5°	718.9	715.1	711.4	708.5	706.3	704.3	702.1	700.0
55°	653.8	650.0	646.2	643.5	641.9	640.3	638.7	637.0
57.5°	586.4	582.6	578.8	576.3	575.1	573.9	572.7	571.5
60°	541.9	538.3	534.8	532.5	531.6	530.7	529.6	528.7
62.5°	499.6	496.3	493.0	490.8	489.6	488.3	487.1	485.9
65°	434.8	431.9	429.0	426.8	425.2	423.6	422.0	420.4
67.5°	370.8	368.5	366.3	364.5	363.3	361.9	360.7	359.4
70°	329.1	327.0	324.7	322.9	321.6	320.4	319.1	317.8
72.5°	289.9	287.7	285.4	283.8	282.8	281.7	280.7	279.7
75°	228.8	226.8	224.9	224.2	224.9	225.5	226.1	226.8
77.5°	174.0	173.1	172.1	171.2	170.2	169.4	168.4	167.6
80°	138.2	137.2	136.3	135.4	134.8	134.2	133.6	132.9
82.5°	103.0	101.8	100.6	99.9	99.7	99.6	99.5	99.3
85°	54.4	53.4	52.5	51.8	51.6	51.2	50.9	50.5
87.5°	18.5	17.9	17.3	17.0	16.8	16.6	16.4	16.2
90°	19.1	20.1	21.0	21.7	22.1	22.4	22.9	23.3
92.5°	20.9	21.5	22.0	22.3	22.5	22.8	23.0	23.3
95°	35.4	36.5	37.4	37.8	37.6	37.4	37.2	37.0
97.5°	46.5	47.2	48.0	48.4	48.7	48.9	49.2	49.4
100°	52.1	53.6	55.2	56.2	56.6	56.9	57.3	57.7
102.5°	54.4	56.5	58.4	59.7	60.2	60.7	61.3	61.8
105°	56.7	58.8	60.9	62.4	63.2	63.9	64.7	65.4
107.5°	69.2	67.1	64.9	64.3	65.0	65.8	66.5	67.3
110°	112.4	93.2	74.1	64.9	65.7	66.4	67.2	68.1





TEST NUMBER: P331453-830

CATALOG NUMBER: SA2XXDIP-C1005D925U830-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	240.4	170.6	100.9	66.3	66.8	67.5	68.1	68.7
115°	354.0	265.4	176.8	125.6	111.9	98.1	84.4	70.6
117.5°	545.4	524.1	502.6	469.2	424.0	378.7	333.5	288.2
120°	635.6	637.9	640.2	628.4	602.6	576.7	550.9	525.1
122.5°	674.4	675.7	677.1	675.3	670.3	665.2	660.3	655.3
125°	730.1	731.4	732.7	733.7	734.2	734.8	735.5	736.0
127.5°	781.6	783.5	785.5	786.5	786.6	786.7	786.8	786.9
130°	814.3	816.3	818.4	819.4	819.3	819.0	818.8	818.6
132.5°	846.0	847.8	849.6	850.4	850.2	850.0	849.8	849.6
135°	891.4	893.2	895.1	895.9	895.5	895.1	894.8	894.4
137.5°	933.4	935.3	937.2	937.8	937.2	936.5	935.9	935.2
140°	960.6	962.4	964.1	964.5	963.6	962.6	961.7	960.6
142.5°	985.8	987.4	989.0	989.3	988.4	987.4	986.5	985.4
145°	1021.1	1022.4	1023.7	1023.9	1022.9	1022.0	1021.1	1020.1
147.5°	1051.7	1052.6	1053.7	1053.8	1052.9	1052.2	1051.3	1050.6
150°	1070.5	1071.8	1072.9	1073.0	1072.0	1071.0	1070.1	1069.1
152.5°	1087.8	1088.9	1090.1	1090.1	1088.7	1087.5	1086.3	1085.0
155°	1111.1	1112.2	1113.3	1113.1	1111.6	1110.0	1108.5	1107.0
157.5°	1130.6	1131.9	1133.2	1133.1	1131.6	1130.1	1128.6	1127.2
160°	1142.0	1143.2	1144.3	1144.2	1142.8	1141.5	1140.2	1138.9
162.5°	1152.6	1154.0	1155.3	1155.1	1153.5	1151.8	1150.2	1148.5
165°	1165.6	1167.0	1168.3	1168.3	1167.0	1165.6	1164.3	1163.0
167.5°	1176.5	1177.8	1179.2	1178.9	1177.2	1175.5	1173.8	1172.1
170°	1182.0	1183.4	1184.7	1184.5	1182.8	1181.0	1179.3	1177.6
172.5°	1186.1	1187.5	1188.8	1188.6	1186.8	1185.2	1183.5	1181.8
175°	1190.6	1191.9	1193.3	1193.0	1191.1	1189.2	1187.2	1185.3
177.5°	1191.1	1192.2	1193.3	1193.1	1191.8	1190.3	1188.9	1187.6
180°	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7

(END OF REPORT)