

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: P331463-935

Luminaire Tested: **S122DIP-S1005D1080U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331463-935  
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-S1005D1080U935-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1080 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6809.9 lumens  
Efficiency: N/A  
Efficacy: 95.0 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

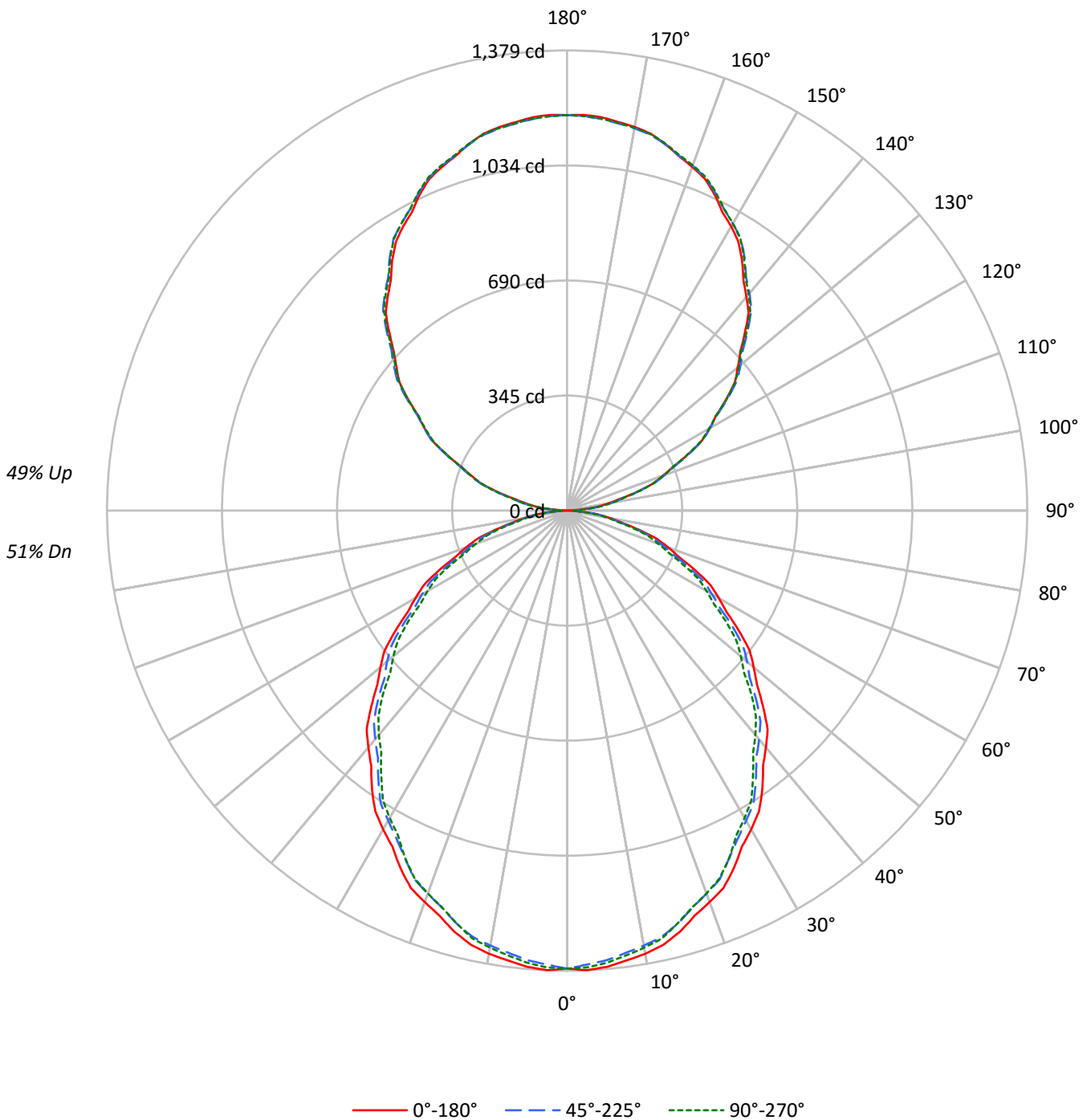
Input Watts (W): 71.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	98	94	90	86	90	87	83	80	74	71	69	62	60	58	51	49	48	43
2	89	82	76	70	82	76	70	66	65	61	57	54	51	49	45	43	41	36
3	81	72	65	59	75	67	60	55	57	52	48	48	44	41	40	37	35	31
4	75	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30	26
5	68	57	49	43	63	53	46	40	45	40	35	38	34	31	32	29	26	23
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	26	23	20
7	58	46	38	32	54	43	36	31	37	31	27	32	27	24	26	23	20	18
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18	16
9	50	38	31	26	47	36	29	24	31	25	22	27	22	19	22	19	17	14
10	47	35	28	23	44	33	26	22	29	23	20	25	20	17	21	17	15	13

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

	0°	45°	90°
0°	22157	22157	22157
5°	22242	21921	22049
10°	22109	21697	21807
15°	21835	21417	21396
20°	21448	20993	20972
25°	21063	20475	20475
30°	20566	19999	19827
35°	20103	19429	19141
40°	19524	18858	18493
45°	18952	18287	17838
50°	18329	17698	17071
55°	17681	17011	16380
60°	16956	16191	15594
65°	16180	15373	14670
70°	15196	14389	13704
75°	13830	13250	12926
80°	12273	11901	11288
85°	10022	9541	8540



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.0	1.9
10°-20°	363.1	5.3
20°-30°	533.7	7.8
30°-40°	619.9	9.1
40°-50°	619.3	9.1
50°-60°	540.0	7.9
60°-70°	399.3	5.9
70°-80°	226.2	3.3
80°-90°	65.6	1.0
90°-100°	75.1	1.1
100°-110°	233.2	3.4
110°-120°	398.7	5.9
120°-130°	524.3	7.7
130°-140°	588.5	8.6
140°-150°	577.0	8.5
150°-160°	484.0	7.1
160°-170°	321.0	4.7
170°-180°	112.2	1.6
0°-30°	1025.8	15.1
0°-40°	1645.7	24.2
0°-60°	2805.0	41.2
0°-90°	3496.0	51.3
90°-120°	707.0	10.4
90°-150°	2396.8	35.2
90°-180°	3314.0	48.7
0°-180°	6809.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1372	1372	1372	1372	1372	
5°	1372	1366	1352	1362	1360	130
15°	1306	1298	1281	1286	1280	368
25°	1182	1171	1149	1152	1149	544
35°	1020	1006	986	978	971	637
45°	830	820	801	787	781	640
55°	628	620	604	589	582	561
65°	424	415	402	391	384	419
75°	222	219	212	205	207	237
85°	54	53	52	48	46	62
90°	1	14	35	33	34	5
95°	52	62	64	64	62	60
105°	215	218	220	222	222	227
115°	400	406	404	403	400	396
125°	582	590	588	585	584	520
135°	753	764	766	765	762	582
145°	914	921	927	928	924	571
155°	1045	1048	1051	1056	1053	481
165°	1137	1136	1136	1142	1138	321
175°	1183	1180	1178	1184	1179	112
180°	1185	1185	1185	1185	1185	



TEST NUMBER: P331463-935

CATALOG NUMBER: S122DIP-S1005D1080U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3
2.5°	1378.6	1377.4	1376.3	1375.1	1373.9	1372.1	1369.5	1366.9	1364.3	1361.8	1364.1
5°	1372.3	1371.1	1369.9	1368.7	1367.6	1365.4	1362.2	1358.9	1355.7	1352.5	1354.9
7.5°	1360.1	1358.3	1356.5	1354.7	1352.9	1350.3	1347.0	1343.8	1340.5	1337.2	1339.5
10°	1348.5	1346.5	1344.5	1342.4	1340.3	1337.6	1334.0	1330.5	1327.0	1323.4	1325.9
12.5°	1332.7	1330.8	1329.0	1327.2	1325.4	1322.8	1319.2	1315.7	1312.3	1308.7	1310.4
15°	1306.3	1304.6	1302.8	1301.1	1299.2	1296.5	1292.7	1288.8	1285.0	1281.3	1282.5
17.5°	1272.6	1270.7	1269.0	1267.2	1265.5	1262.7	1258.8	1254.9	1251.0	1247.2	1248.5
20°	1248.3	1246.5	1244.7	1242.9	1241.2	1238.3	1234.2	1230.1	1226.0	1221.8	1222.7
22.5°	1224.0	1221.5	1219.1	1216.6	1214.1	1211.0	1207.1	1203.2	1199.4	1195.5	1195.7
25°	1182.3	1179.9	1177.6	1175.3	1172.9	1169.2	1164.2	1159.3	1154.3	1149.3	1149.9
27.5°	1134.8	1132.6	1130.6	1128.4	1126.4	1123.3	1119.4	1115.4	1111.6	1107.6	1106.7
30°	1103.1	1100.8	1098.4	1096.1	1093.7	1090.4	1086.0	1081.6	1077.2	1072.7	1071.9
32.5°	1069.4	1067.5	1065.6	1063.7	1061.8	1058.6	1054.0	1049.3	1044.7	1040.0	1038.5
35°	1019.9	1017.0	1014.1	1011.2	1008.2	1004.4	999.7	995.1	990.4	985.7	984.0
37.5°	964.3	961.7	959.2	956.6	954.0	950.4	945.6	941.0	936.3	931.6	929.4
40°	926.3	923.9	921.6	919.3	916.9	913.4	908.7	904.0	899.3	894.7	892.0
42.5°	889.3	887.0	884.7	882.4	879.9	876.4	871.8	867.0	862.4	857.6	854.8
45°	830.0	827.9	825.9	823.8	821.7	818.6	814.2	809.8	805.4	800.9	797.7
47.5°	770.9	769.0	767.0	765.1	763.1	759.8	755.3	750.7	746.1	741.6	738.1
50°	729.7	728.2	726.8	725.3	723.8	721.0	717.0	712.8	708.7	704.6	700.5
52.5°	689.6	687.7	685.7	683.8	681.8	678.9	675.0	671.1	667.4	663.5	660.0
55°	628.1	626.3	624.6	622.8	621.0	618.4	614.9	611.4	607.9	604.3	600.8
57.5°	566.4	564.9	563.5	562.1	560.7	558.1	554.2	550.4	546.5	542.6	539.2
60°	525.1	524.0	522.8	521.7	520.5	517.8	513.8	509.6	505.5	501.4	498.2
62.5°	485.1	483.2	481.3	479.4	477.5	475.0	471.8	468.7	465.5	462.4	459.3
65°	423.5	421.8	420.1	418.3	416.6	414.1	411.2	408.3	405.4	402.4	399.8
67.5°	361.0	359.6	358.2	356.8	355.4	353.4	350.7	348.1	345.4	342.9	340.8
70°	321.9	320.8	319.6	318.5	317.3	315.4	312.7	310.0	307.5	304.8	302.7
72.5°	281.8	280.7	279.5	278.4	277.2	275.7	274.1	272.3	270.6	268.9	266.8
75°	221.7	221.1	220.5	219.9	219.3	218.3	216.8	215.3	213.9	212.4	210.7
77.5°	167.8	166.9	165.8	164.9	163.8	163.1	162.5	161.9	161.3	160.7	159.8
80°	132.0	131.6	131.4	131.0	130.8	130.4	129.8	129.2	128.5	128.0	127.1
82.5°	98.2	98.2	98.1	98.0	97.9	97.7	97.4	97.0	96.7	96.3	95.2
85°	54.1	53.8	53.6	53.2	53.0	52.6	52.3	52.0	51.7	51.5	50.5
87.5°	19.2	19.3	19.4	19.4	19.5	19.7	20.2	20.8	21.3	21.8	21.0
90°	1.0	3.7	6.4	9.0	11.7	15.4	20.3	25.2	30.1	35.0	34.5
92.5°	17.8	19.7	21.7	23.7	25.7	27.2	28.3	29.5	30.7	31.8	31.9
95°	52.0	54.2	56.5	58.6	60.9	62.3	62.7	63.1	63.5	64.0	64.0
97.5°	95.1	96.9	98.9	100.9	102.8	104.3	105.0	105.9	106.8	107.6	107.6
100°	127.0	128.8	130.6	132.3	134.1	135.3	136.0	136.6	137.3	138.0	138.0
102.5°	160.7	162.0	163.5	164.9	166.3	167.5	168.3	169.1	170.0	170.8	171.0
105°	215.0	215.7	216.4	217.1	217.7	218.3	218.7	219.1	219.6	220.0	220.5
107.5°	269.8	270.8	271.8	272.8	273.7	274.2	274.2	274.2	274.2	274.2	274.4
110°	305.1	306.3	307.7	309.0	310.4	311.1	311.1	311.1	311.1	311.1	311.1



TEST NUMBER: P331463-935

CATALOG NUMBER: S122DIP-S1005D1080U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	343.5	344.7	346.1	347.4	348.8	349.4	349.1	349.0	348.8	348.6	348.1
115°	400.0	401.4	402.7	404.1	405.4	405.8	405.4	404.9	404.5	404.1	403.8
117.5°	456.4	458.2	460.0	461.8	463.6	463.8	462.6	461.3	460.1	458.8	458.3
120°	494.0	495.8	497.7	499.4	501.2	501.2	499.4	497.7	495.8	494.0	494.0
122.5°	528.5	530.6	532.7	534.9	537.0	537.4	536.2	534.9	533.7	532.4	531.9
125°	582.0	584.1	586.1	588.1	590.0	590.7	590.0	589.4	588.8	588.1	587.4
127.5°	634.3	636.8	639.4	641.9	644.4	645.3	644.5	643.7	642.9	642.0	641.3
130°	667.1	669.9	672.9	675.7	678.6	679.8	679.4	679.0	678.6	678.1	677.6
132.5°	703.9	706.3	708.6	710.9	713.3	714.5	714.6	714.7	714.8	714.9	713.9
135°	753.1	755.5	758.0	760.4	762.8	764.3	764.7	765.2	765.7	766.1	765.9
137.5°	804.9	806.9	808.9	810.9	812.9	814.2	814.8	815.4	815.9	816.5	816.3
140°	836.1	838.1	840.1	842.1	844.1	845.7	846.8	847.9	849.0	850.1	850.1
142.5°	868.1	870.1	872.1	874.1	876.1	877.4	878.2	879.0	879.8	880.5	880.7
145°	914.1	915.7	917.2	918.8	920.3	921.8	923.1	924.5	925.7	927.1	927.3
147.5°	955.1	957.0	958.8	960.7	962.6	964.0	964.8	965.8	966.6	967.5	968.0
150°	983.1	984.5	985.8	987.1	988.4	989.5	990.5	991.4	992.2	993.2	993.8
152.5°	1007.9	1009.3	1010.6	1011.9	1013.2	1014.4	1015.5	1016.6	1017.7	1018.7	1019.6
155°	1045.2	1045.8	1046.5	1047.1	1047.8	1048.4	1049.1	1049.8	1050.5	1051.1	1052.2
157.5°	1076.9	1077.4	1077.8	1078.2	1078.7	1079.1	1079.5	1080.0	1080.3	1080.7	1082.3
160°	1096.1	1096.6	1097.0	1097.4	1097.9	1098.2	1098.5	1098.7	1098.9	1099.2	1100.4
162.5°	1113.7	1113.8	1113.9	1114.0	1114.1	1114.2	1114.5	1114.7	1114.9	1115.2	1116.6
165°	1137.1	1137.0	1136.7	1136.4	1136.3	1136.2	1136.2	1136.2	1136.2	1136.2	1137.7
167.5°	1156.8	1156.1	1155.4	1154.8	1154.1	1153.7	1153.7	1153.7	1153.6	1153.6	1155.1
170°	1167.2	1166.5	1165.8	1165.1	1164.5	1164.1	1163.8	1163.6	1163.4	1163.1	1164.7
172.5°	1174.3	1173.7	1173.0	1172.3	1171.6	1171.2	1171.0	1170.8	1170.5	1170.4	1171.9
175°	1183.2	1182.5	1181.8	1181.1	1180.5	1179.9	1179.5	1179.1	1178.6	1178.1	1179.7
177.5°	1186.7	1186.2	1185.7	1185.2	1184.6	1184.1	1183.8	1183.4	1183.1	1182.8	1183.8
180°	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2



TEST NUMBER: P331463-935

CATALOG NUMBER: S122DIP-S1005D1080U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3	1372.3
2.5°	1366.4	1368.7	1371.1	1372.1	1371.6	1371.1	1370.6	1370.2
5°	1357.2	1359.5	1361.8	1362.8	1362.2	1361.6	1361.0	1360.4
7.5°	1341.9	1344.2	1346.6	1347.5	1346.8	1346.2	1345.5	1344.9
10°	1328.2	1330.5	1332.8	1333.6	1332.7	1331.8	1330.9	1330.1
12.5°	1312.0	1313.6	1315.3	1315.8	1315.1	1314.5	1313.8	1313.2
15°	1283.6	1284.8	1285.9	1285.8	1284.4	1282.9	1281.4	1280.0
17.5°	1249.9	1251.3	1252.6	1252.6	1251.1	1249.7	1248.4	1246.9
20°	1223.7	1224.5	1225.4	1225.2	1224.1	1222.9	1221.8	1220.6
22.5°	1195.8	1196.0	1196.2	1195.9	1195.2	1194.6	1193.8	1193.1
25°	1150.5	1151.1	1151.7	1151.7	1151.1	1150.5	1149.9	1149.3
27.5°	1105.9	1104.9	1104.1	1102.9	1101.6	1100.1	1098.7	1097.3
30°	1071.0	1070.1	1069.3	1068.2	1067.0	1065.8	1064.7	1063.5
32.5°	1036.9	1035.3	1033.7	1032.3	1031.1	1030.0	1028.8	1027.6
35°	982.1	980.4	978.6	977.1	975.6	974.1	972.6	971.1
37.5°	927.2	925.1	922.9	921.1	919.7	918.3	916.9	915.5
40°	889.3	886.7	884.1	882.2	881.0	879.9	878.7	877.4
42.5°	852.0	849.0	846.2	844.0	842.3	840.7	839.0	837.3
45°	794.5	791.3	788.1	785.8	784.6	783.5	782.3	781.2
47.5°	734.8	731.3	728.0	725.4	723.7	722.0	720.3	718.6
50°	696.4	692.3	688.2	685.4	684.0	682.5	681.1	679.6
52.5°	656.7	653.2	649.9	647.2	645.2	643.3	641.4	639.5
55°	597.3	593.7	590.3	587.8	586.3	584.9	583.4	581.9
57.5°	535.6	532.2	528.7	526.4	525.4	524.3	523.1	522.0
60°	495.0	491.7	488.5	486.5	485.6	484.7	483.8	482.9
62.5°	456.4	453.4	450.4	448.3	447.2	446.1	445.0	443.8
65°	397.2	394.5	391.9	389.9	388.4	386.9	385.5	384.0
67.5°	338.7	336.7	334.6	332.9	331.8	330.6	329.5	328.3
70°	300.7	298.7	296.6	295.0	293.8	292.7	291.4	290.3
72.5°	264.8	262.8	260.7	259.2	258.3	257.4	256.4	255.5
75°	209.0	207.2	205.4	204.8	205.4	206.0	206.6	207.2
77.5°	158.9	158.1	157.2	156.4	155.5	154.7	153.9	153.1
80°	126.2	125.4	124.5	123.7	123.1	122.6	122.0	121.4
82.5°	94.1	93.0	91.9	91.3	91.1	91.0	90.9	90.7
85°	49.7	48.8	48.0	47.4	47.1	46.8	46.5	46.1
87.5°	20.2	19.4	18.6	18.1	17.9	17.7	17.6	17.4
90°	34.1	33.7	33.2	33.1	33.3	33.6	33.8	34.0
92.5°	31.9	32.0	32.2	32.2	32.3	32.3	32.4	32.4
95°	64.0	64.0	64.0	63.8	63.4	62.9	62.4	62.0
97.5°	107.6	107.6	107.6	107.6	107.5	107.5	107.5	107.5
100°	138.0	138.0	138.0	137.9	137.7	137.5	137.2	137.0
102.5°	171.2	171.3	171.5	171.5	171.3	171.1	170.8	170.7
105°	220.9	221.4	221.8	222.1	222.1	222.1	222.1	222.1
107.5°	274.6	274.7	274.9	274.5	273.5	272.5	271.5	270.4
110°	311.1	311.1	311.1	310.7	310.0	309.4	308.7	308.1





TEST NUMBER: P331463-935

CATALOG NUMBER: S122DIP-S1005D1080U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	347.6	347.1	346.6	346.0	345.5	345.0	344.6	344.1
115°	403.6	403.4	403.1	402.7	402.1	401.4	400.7	400.0
117.5°	457.8	457.3	456.8	456.2	455.5	454.8	454.1	453.5
120°	494.0	494.0	494.0	493.7	493.1	492.4	491.7	491.0
122.5°	531.4	530.9	530.3	529.9	529.3	528.8	528.4	527.9
125°	586.8	586.1	585.4	585.0	584.7	584.5	584.3	584.1
127.5°	640.5	639.6	638.9	638.1	637.4	636.7	636.0	635.2
130°	677.2	676.7	676.3	675.6	674.8	673.8	673.0	672.1
132.5°	712.9	712.0	711.0	710.2	709.5	708.7	708.0	707.3
135°	765.7	765.4	765.2	764.7	764.1	763.4	762.8	762.1
137.5°	816.1	816.0	815.8	815.3	814.3	813.5	812.6	811.7
140°	850.1	850.1	850.1	849.6	848.8	847.9	847.0	846.1
142.5°	880.9	881.1	881.2	880.9	879.9	879.1	878.2	877.3
145°	927.6	927.8	928.0	927.6	926.8	925.9	925.0	924.1
147.5°	968.5	969.0	969.5	969.3	968.5	967.6	966.7	966.0
150°	994.5	995.1	995.8	995.8	995.1	994.5	993.8	993.2
152.5°	1020.5	1021.2	1022.1	1022.1	1021.2	1020.5	1019.6	1018.7
155°	1053.3	1054.5	1055.6	1055.8	1055.2	1054.5	1053.8	1053.1
157.5°	1083.7	1085.3	1086.8	1087.0	1085.9	1084.9	1083.8	1082.7
160°	1101.8	1103.1	1104.5	1104.7	1103.8	1102.9	1102.0	1101.1
162.5°	1118.2	1119.6	1121.2	1121.4	1120.3	1119.3	1118.2	1117.1
165°	1139.3	1140.8	1142.4	1142.5	1141.5	1140.4	1139.3	1138.2
167.5°	1156.7	1158.2	1159.8	1159.9	1158.8	1157.6	1156.5	1155.4
170°	1166.2	1167.8	1169.3	1169.5	1168.1	1166.8	1165.4	1164.2
172.5°	1173.5	1175.0	1176.6	1176.6	1175.4	1174.0	1172.7	1171.3
175°	1181.3	1182.8	1184.4	1184.5	1183.2	1181.8	1180.5	1179.1
177.5°	1184.9	1185.9	1187.0	1187.0	1185.9	1184.9	1183.8	1182.8
180°	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2	1185.2

(END OF REPORT)