

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: P331613-935

Luminaire Tested: **S122DIW-S1005D1440U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331613-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S1005D1440U935-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8454.9 lumens
Efficiency: N/A
Efficacy: 102.0 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

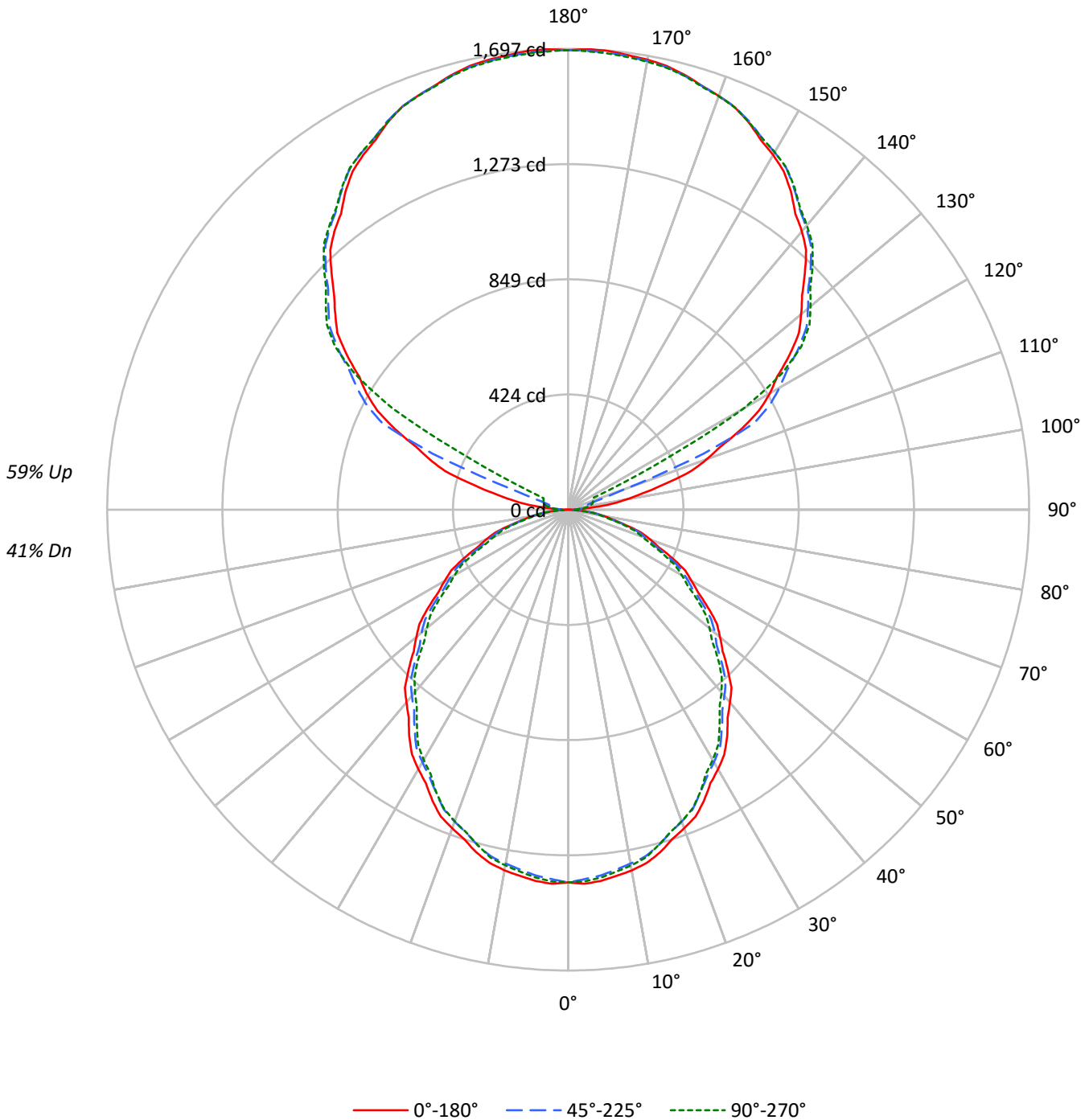
Input Watts (W): 82.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	41
1	96	92	88	84	87	84	80	77	69	66	64	55	54	52	43	42	41	35
2	87	80	74	69	79	73	68	63	60	57	53	48	46	44	37	36	34	29
3	80	70	63	57	72	64	58	53	53	49	45	43	40	37	33	31	29	25
4	73	62	54	48	66	57	50	45	47	42	38	38	34	32	30	27	25	21
5	67	55	47	41	61	51	44	38	42	37	33	34	30	27	27	24	22	18
6	61	50	42	36	56	46	38	33	38	33	29	31	27	24	24	21	19	16
7	57	45	37	31	52	41	34	29	34	29	25	28	24	21	22	19	17	14
8	53	40	33	28	48	37	31	26	31	26	22	26	22	19	20	17	15	13
9	49	37	30	25	45	34	27	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	26	21	18	22	18	15	17	15	13	11

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	1.5
10°-20°	363.1	4.3
20°-30°	533.7	6.3
30°-40°	619.9	7.3
40°-50°	619.3	7.3
50°-60°	540.0	6.4
60°-70°	399.3	4.7
70°-80°	226.2	2.7
80°-90°	65.0	0.8
90°-100°	56.5	0.7
100°-110°	207.0	2.4
110°-120°	553.4	6.5
120°-130°	913.5	10.8
130°-140°	971.4	11.5
140°-150°	902.9	10.7
150°-160°	726.0	8.6
160°-170°	467.8	5.5
170°-180°	161.0	1.9
0°-30°	1025.8	12.1
0°-40°	1645.7	19.5
0°-60°	2805.0	33.2
0°-90°	3495.5	41.3
90°-120°	816.8	9.7
90°-150°	3604.6	42.6
90°-180°	4959.0	58.7
0°-180°	8454.9	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	24	30	33	6
95°	80	42	48	53	53	97
105°	372	388	75	88	93	398
115°	704	725	756	215	100	693
125°	996	1012	1035	1043	1047	887
135°	1232	1251	1262	1274	1272	951
145°	1429	1429	1449	1456	1451	893
155°	1574	1564	1577	1584	1575	725
165°	1658	1651	1654	1662	1654	468
175°	1696	1688	1690	1697	1686	161
180°	1692	1692	1692	1692	1692	



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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°	19.3	19.4	19.5	19.6	19.8	19.8	19.8	19.7	19.7	19.7	19.3
90°	1.2	4.2	7.2	10.2	13.2	15.8	18.0	20.1	22.3	24.5	25.8
92.5°	24.7	24.5	24.2	23.9	23.7	24.0	25.1	26.3	27.3	28.4	29.1
95°	79.6	70.6	61.6	52.7	43.7	40.1	42.0	43.9	45.9	47.8	49.1
97.5°	158.0	132.7	107.4	82.1	56.7	46.3	50.7	55.1	59.5	63.9	65.0
100°	216.7	179.4	142.2	104.9	67.6	51.3	55.9	60.5	65.2	69.8	72.0
102.5°	281.4	273.5	265.6	257.7	249.9	226.5	187.9	149.1	110.5	71.7	74.6
105°	372.3	380.4	388.6	396.7	404.9	371.9	297.6	223.3	149.0	74.7	77.7
107.5°	475.9	482.4	489.0	495.6	502.2	461.0	371.9	282.8	193.6	104.6	101.5
110°	542.5	548.2	553.9	559.6	565.3	528.8	450.2	371.6	292.9	214.3	187.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	605.2	610.2	615.3	620.4	625.4	618.2	598.8	579.4	559.9	540.5	441.3
115°	704.1	708.8	713.3	718.0	722.6	728.3	735.1	741.9	748.7	755.5	629.6
117.5°	792.6	797.7	802.9	808.0	813.2	818.1	822.8	827.5	832.2	836.9	806.4
120°	857.2	861.3	865.3	869.4	873.5	878.0	882.9	887.8	892.7	897.6	900.9
122.5°	912.1	916.4	920.7	925.0	929.3	934.1	939.4	944.7	950.0	955.4	957.3
125°	995.6	999.1	1002.6	1006.2	1009.7	1014.1	1019.3	1024.4	1029.6	1034.7	1036.6
127.5°	1071.3	1075.1	1079.1	1083.0	1086.9	1090.8	1094.7	1098.5	1102.4	1106.3	1109.1
130°	1119.2	1123.6	1127.9	1132.3	1136.7	1140.3	1143.3	1146.3	1149.3	1152.3	1155.3
132.5°	1168.2	1171.9	1175.6	1179.3	1183.0	1186.4	1189.4	1192.3	1195.3	1198.3	1200.9
135°	1231.9	1236.2	1240.6	1244.9	1249.3	1252.7	1255.2	1257.6	1260.1	1262.5	1265.2
137.5°	1296.3	1299.3	1302.4	1305.4	1308.5	1311.4	1314.1	1317.0	1319.7	1322.5	1325.2
140°	1338.4	1340.6	1342.8	1345.0	1347.1	1349.7	1352.7	1355.7	1358.7	1361.7	1364.2
142.5°	1373.7	1375.6	1377.6	1379.6	1381.6	1384.2	1387.7	1391.1	1394.5	1397.9	1400.2
145°	1429.1	1428.7	1428.5	1428.2	1428.0	1430.1	1434.8	1439.4	1444.0	1448.6	1450.5
147.5°	1477.3	1476.3	1475.2	1474.2	1473.2	1474.9	1479.5	1484.1	1488.7	1493.2	1494.6
150°	1508.6	1506.8	1504.9	1503.0	1501.0	1502.3	1506.6	1511.0	1515.3	1519.7	1521.3
152.5°	1535.1	1533.0	1530.9	1528.7	1526.6	1527.6	1531.7	1535.9	1540.0	1544.1	1545.8
155°	1573.6	1571.1	1568.7	1566.2	1563.7	1564.2	1567.5	1570.7	1574.0	1577.2	1578.8
157.5°	1603.7	1601.6	1599.6	1597.5	1595.4	1595.5	1597.8	1600.1	1602.3	1604.6	1606.5
160°	1621.3	1619.6	1618.1	1616.4	1614.8	1614.8	1616.4	1618.1	1619.6	1621.3	1622.9
162.5°	1636.9	1635.4	1633.7	1632.1	1630.5	1630.3	1631.8	1633.1	1634.6	1636.0	1637.9
165°	1658.0	1656.4	1654.8	1653.1	1651.5	1651.1	1651.9	1652.7	1653.6	1654.3	1656.3
167.5°	1673.7	1672.1	1670.4	1668.8	1667.2	1666.7	1667.5	1668.3	1669.0	1669.8	1671.7
170°	1682.6	1680.9	1679.3	1677.7	1676.0	1675.4	1676.0	1676.5	1677.1	1677.7	1679.6
172.5°	1688.4	1686.8	1685.1	1683.5	1681.9	1681.4	1681.9	1682.4	1683.0	1683.5	1685.4
175°	1696.0	1694.1	1692.2	1690.3	1688.4	1687.7	1688.2	1688.8	1689.4	1689.9	1691.8
177.5°	1697.2	1695.7	1694.2	1692.6	1691.1	1690.5	1690.7	1690.9	1691.1	1691.3	1692.9
180°	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3



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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°	18.9	18.3	17.9	17.7	17.6	17.4	17.3	17.1
90°	27.2	28.6	30.0	30.9	31.4	31.9	32.5	33.1
92.5°	29.8	30.6	31.3	31.8	32.1	32.4	32.7	33.1
95°	50.5	51.8	53.2	53.7	53.5	53.2	53.0	52.7
97.5°	66.1	67.2	68.3	69.0	69.3	69.7	70.0	70.3
100°	74.1	76.4	78.5	79.9	80.4	80.9	81.5	82.1
102.5°	77.4	80.2	83.1	84.9	85.7	86.4	87.1	87.9
105°	80.7	83.7	86.7	88.7	89.8	90.9	92.0	93.1
107.5°	98.5	95.4	92.4	91.4	92.5	93.6	94.7	95.7
110°	159.9	132.7	105.5	92.4	93.5	94.5	95.7	96.8



TEST NUMBER: P331613-935

CATALOG NUMBER: S122DIW-S1005D1440U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	342.0	242.7	143.4	94.2	95.1	96.0	96.9	97.7
115°	503.6	377.5	251.6	178.7	159.2	139.6	120.0	100.4
117.5°	775.9	745.5	715.0	667.5	603.1	538.7	474.3	410.0
120°	904.1	907.4	910.7	893.9	857.2	820.4	783.7	747.0
122.5°	959.3	961.3	963.2	960.6	953.5	946.4	939.3	932.1
125°	1038.5	1040.4	1042.3	1043.7	1044.6	1045.3	1046.2	1047.0
127.5°	1111.8	1114.6	1117.3	1118.9	1119.0	1119.1	1119.3	1119.5
130°	1158.3	1161.3	1164.2	1165.6	1165.4	1165.1	1164.8	1164.5
132.5°	1203.4	1206.0	1208.6	1209.7	1209.4	1209.2	1208.9	1208.6
135°	1267.9	1270.7	1273.4	1274.5	1273.9	1273.4	1272.8	1272.3
137.5°	1327.8	1330.5	1333.2	1334.0	1333.1	1332.2	1331.3	1330.3
140°	1366.6	1369.1	1371.5	1372.0	1370.7	1369.3	1368.0	1366.6
142.5°	1402.4	1404.6	1406.9	1407.3	1405.9	1404.5	1403.3	1401.9
145°	1452.4	1454.3	1456.3	1456.6	1455.2	1453.8	1452.4	1451.1
147.5°	1496.1	1497.5	1498.9	1499.0	1497.9	1496.8	1495.6	1494.4
150°	1522.9	1524.6	1526.2	1526.3	1525.0	1523.6	1522.2	1520.9
152.5°	1547.4	1549.0	1550.7	1550.6	1548.8	1547.0	1545.2	1543.4
155°	1580.5	1582.1	1583.7	1583.5	1581.3	1579.2	1576.9	1574.8
157.5°	1608.3	1610.2	1612.1	1611.9	1609.8	1607.7	1605.5	1603.4
160°	1624.5	1626.2	1627.8	1627.7	1625.8	1623.8	1622.0	1620.1
162.5°	1639.7	1641.6	1643.4	1643.1	1640.8	1638.5	1636.2	1633.8
165°	1658.2	1660.1	1662.0	1662.0	1660.1	1658.2	1656.3	1654.3
167.5°	1673.6	1675.5	1677.4	1677.1	1674.7	1672.2	1669.8	1667.3
170°	1681.4	1683.3	1685.2	1685.0	1682.6	1680.1	1677.7	1675.2
172.5°	1687.3	1689.2	1691.1	1690.8	1688.4	1685.9	1683.5	1681.0
175°	1693.7	1695.6	1697.5	1697.1	1694.4	1691.6	1688.9	1686.2
177.5°	1694.4	1695.9	1697.5	1697.2	1695.2	1693.3	1691.3	1689.4
180°	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3	1692.3

(END OF REPORT)