

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: P331607-935

Luminaire Tested: **S122DIW-S1005D1240U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331607-935
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-S1005D1240U935-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7760.5 lumens
Efficiency: N/A
Efficacy: 101.8 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

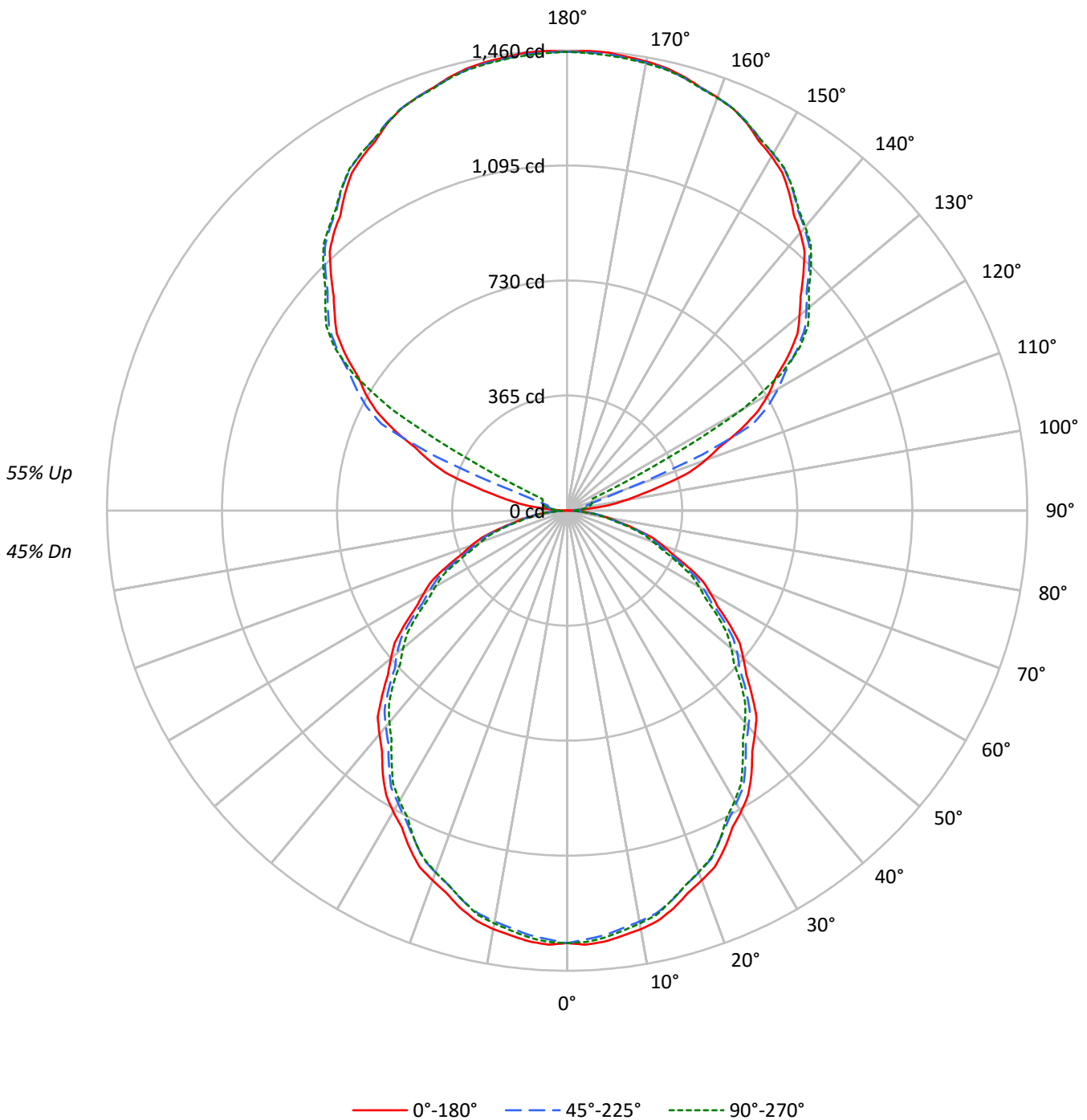
Input Watts (W): 76.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	81	81	81		65	65	65		52	52	52	45
1	97	92	88	85	88	85	81	78	71	68	66		58	56	54		46	44	44	38
2	88	81	75	69	80	74	69	64	62	58	55		51	48	45		40	38	37	32
3	80	71	64	58	73	65	59	54	55	50	46		45	41	38		36	33	31	27
4	73	63	55	49	67	58	51	46	48	43	39		40	36	33		32	29	27	23
5	67	56	48	42	61	52	44	39	43	38	34		36	32	29		29	26	23	20
6	62	50	42	36	57	46	39	34	39	34	29		32	28	25		26	23	21	18
7	57	45	37	32	52	42	35	30	35	30	26		29	25	22		24	21	18	16
8	53	41	33	28	49	38	31	26	32	27	23		27	23	20		22	19	16	14
9	49	37	30	25	45	35	28	23	30	24	21		25	21	18		20	17	15	13
10	46	34	27	22	42	32	25	21	27	22	18		23	19	16		19	16	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	1.7
10°-20°	363.1	4.7
20°-30°	533.7	6.9
30°-40°	619.9	8.0
40°-50°	619.3	8.0
50°-60°	540.0	7.0
60°-70°	399.3	5.1
70°-80°	226.2	2.9
80°-90°	64.4	0.8
90°-100°	48.6	0.6
100°-110°	178.1	2.3
110°-120°	476.0	6.1
120°-130°	785.7	10.1
130°-140°	835.5	10.8
140°-150°	776.6	10.0
150°-160°	624.4	8.0
160°-170°	402.3	5.2
170°-180°	138.5	1.8
0°-30°	1025.8	13.2
0°-40°	1645.7	21.2
0°-60°	2805.0	36.1
0°-90°	3494.9	45.0
90°-120°	702.6	9.1
90°-150°	3100.4	40.0
90°-180°	4266.0	55.0
0°-180°	7760.5	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	12	21	26	28	6
95°	68	36	41	46	45	84
105°	320	334	64	75	80	342
115°	606	624	650	185	86	596
125°	856	870	890	897	900	763
135°	1060	1076	1086	1096	1094	818
145°	1229	1229	1246	1253	1248	768
155°	1353	1345	1357	1362	1354	623
165°	1426	1420	1423	1429	1423	403
175°	1459	1452	1454	1460	1450	139
180°	1456	1456	1456	1456	1456	



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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°	19.2	19.3	19.3	19.4	19.4	19.4	19.3	19.2	19.1	19.0	18.5
90°	1.0	3.6	6.2	8.8	11.4	13.6	15.4	17.3	19.2	21.1	22.2
92.5°	21.3	21.0	20.8	20.6	20.3	20.7	21.6	22.6	23.5	24.5	25.1
95°	68.4	60.7	53.0	45.3	37.5	34.5	36.2	37.8	39.4	41.1	42.3
97.5°	135.9	114.1	92.3	70.6	48.8	39.8	43.6	47.4	51.2	55.0	55.9
100°	186.4	154.4	122.3	90.2	58.2	44.1	48.1	52.1	56.1	60.0	61.9
102.5°	242.0	235.2	228.4	221.7	214.9	194.8	161.5	128.3	95.0	61.7	64.1
105°	320.2	327.2	334.2	341.2	348.3	319.9	256.0	192.0	128.1	64.2	66.8
107.5°	409.3	414.9	420.6	426.3	432.0	396.5	319.9	243.2	166.6	90.0	87.3
110°	466.6	471.5	476.4	481.3	486.2	454.9	387.3	319.6	251.9	184.3	160.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	520.5	524.9	529.2	533.6	538.0	531.8	515.1	498.3	481.6	464.9	379.5
115°	605.6	609.6	613.5	617.5	621.6	626.5	632.3	638.2	644.0	649.9	541.5
117.5°	681.7	686.1	690.5	695.0	699.5	703.7	707.7	711.7	715.7	719.8	693.5
120°	737.3	740.8	744.2	747.8	751.3	755.2	759.4	763.6	767.8	772.0	774.8
122.5°	784.5	788.2	791.9	795.6	799.3	803.4	808.0	812.5	817.2	821.7	823.4
125°	856.3	859.3	862.4	865.4	868.4	872.2	876.7	881.1	885.5	890.0	891.7
127.5°	921.4	924.7	928.1	931.5	934.9	938.2	941.5	944.9	948.1	951.5	953.9
130°	962.7	966.4	970.2	973.9	977.7	980.8	983.3	985.9	988.5	991.1	993.7
132.5°	1004.8	1008.0	1011.2	1014.3	1017.5	1020.4	1023.0	1025.5	1028.1	1030.7	1032.9
135°	1059.5	1063.2	1067.0	1070.7	1074.5	1077.5	1079.5	1081.7	1083.7	1085.9	1088.2
137.5°	1114.9	1117.6	1120.2	1122.8	1125.4	1127.9	1130.3	1132.7	1135.1	1137.5	1139.8
140°	1151.2	1153.1	1154.9	1156.8	1158.6	1160.9	1163.5	1166.1	1168.6	1171.2	1173.3
142.5°	1181.6	1183.2	1184.9	1186.5	1188.3	1190.6	1193.5	1196.4	1199.4	1202.4	1204.3
145°	1229.1	1228.9	1228.6	1228.4	1228.2	1230.0	1234.1	1238.0	1242.0	1246.0	1247.6
147.5°	1270.6	1269.7	1268.9	1267.9	1267.0	1268.6	1272.5	1276.4	1280.4	1284.3	1285.6
150°	1297.6	1296.0	1294.3	1292.6	1291.0	1292.1	1295.8	1299.6	1303.3	1307.1	1308.5
152.5°	1320.3	1318.5	1316.6	1314.8	1313.0	1313.9	1317.4	1321.0	1324.6	1328.1	1329.6
155°	1353.4	1351.3	1349.2	1347.0	1345.0	1345.3	1348.2	1350.9	1353.8	1356.6	1358.0
157.5°	1379.3	1377.5	1375.7	1374.0	1372.2	1372.3	1374.2	1376.2	1378.2	1380.2	1381.7
160°	1394.5	1393.1	1391.6	1390.3	1388.9	1388.9	1390.3	1391.6	1393.1	1394.5	1395.9
162.5°	1408.0	1406.5	1405.2	1403.8	1402.3	1402.2	1403.4	1404.6	1405.9	1407.1	1408.7
165°	1426.1	1424.7	1423.2	1421.9	1420.5	1420.1	1420.8	1421.5	1422.2	1422.9	1424.5
167.5°	1439.6	1438.1	1436.8	1435.4	1433.9	1433.6	1434.3	1434.9	1435.5	1436.1	1437.8
170°	1447.2	1445.7	1444.3	1442.9	1441.5	1441.1	1441.5	1442.0	1442.4	1442.9	1444.6
172.5°	1452.2	1450.8	1449.4	1447.9	1446.6	1446.1	1446.6	1447.0	1447.5	1447.9	1449.6
175°	1458.7	1457.1	1455.4	1453.8	1452.2	1451.6	1452.1	1452.5	1453.0	1453.5	1455.1
177.5°	1459.7	1458.4	1457.2	1455.9	1454.5	1454.0	1454.1	1454.3	1454.5	1454.7	1456.0
180°	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5



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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°	18.1	17.6	17.1	16.8	16.7	16.5	16.4	16.3
90°	23.4	24.5	25.7	26.6	27.0	27.5	28.0	28.4
92.5°	25.7	26.3	26.9	27.3	27.6	27.9	28.2	28.4
95°	43.4	44.6	45.7	46.2	46.0	45.7	45.5	45.3
97.5°	56.8	57.8	58.7	59.3	59.6	59.9	60.2	60.4
100°	63.8	65.6	67.5	68.7	69.1	69.7	70.1	70.6
102.5°	66.6	69.1	71.5	73.0	73.6	74.3	75.0	75.6
105°	69.4	72.0	74.6	76.3	77.2	78.2	79.1	80.1
107.5°	84.7	82.1	79.5	78.6	79.6	80.5	81.5	82.4
110°	137.5	114.1	90.7	79.5	80.4	81.4	82.3	83.2



TEST NUMBER: P331607-935

CATALOG NUMBER: S122DIW-S1005D1240U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	294.1	208.8	123.4	81.0	81.8	82.6	83.3	84.0
115°	433.1	324.8	216.4	153.8	136.9	120.1	103.2	86.4
117.5°	667.4	641.1	614.9	574.1	518.8	463.4	408.0	352.6
120°	777.7	780.4	783.3	768.9	737.3	705.7	674.1	642.5
122.5°	825.1	826.8	828.5	826.2	820.1	814.0	807.9	801.7
125°	893.3	894.9	896.6	897.7	898.4	899.1	899.8	900.5
127.5°	956.2	958.6	961.0	962.3	962.4	962.6	962.7	962.9
130°	996.3	998.8	1001.3	1002.5	1002.3	1002.1	1001.9	1001.6
132.5°	1035.1	1037.2	1039.5	1040.4	1040.3	1040.0	1039.7	1039.6
135°	1090.5	1092.9	1095.3	1096.1	1095.7	1095.3	1094.8	1094.3
137.5°	1142.0	1144.4	1146.7	1147.4	1146.6	1145.8	1145.0	1144.2
140°	1175.4	1177.5	1179.7	1180.1	1178.9	1177.8	1176.6	1175.4
142.5°	1206.2	1208.2	1210.0	1210.4	1209.3	1208.1	1206.9	1205.7
145°	1249.2	1250.9	1252.5	1252.8	1251.5	1250.4	1249.2	1248.1
147.5°	1286.8	1288.0	1289.2	1289.3	1288.3	1287.3	1286.3	1285.4
150°	1309.8	1311.3	1312.7	1312.8	1311.6	1310.4	1309.2	1308.1
152.5°	1330.9	1332.3	1333.8	1333.7	1332.1	1330.6	1329.0	1327.5
155°	1359.3	1360.8	1362.2	1361.9	1360.0	1358.2	1356.3	1354.4
157.5°	1383.4	1384.9	1386.6	1386.4	1384.6	1382.8	1381.0	1379.1
160°	1397.3	1398.7	1400.1	1400.0	1398.4	1396.7	1395.1	1393.4
162.5°	1410.3	1411.9	1413.5	1413.2	1411.3	1409.2	1407.2	1405.2
165°	1426.2	1427.8	1429.4	1429.4	1427.8	1426.2	1424.5	1422.9
167.5°	1439.4	1441.1	1442.7	1442.5	1440.4	1438.3	1436.1	1434.1
170°	1446.2	1447.9	1449.5	1449.2	1447.2	1445.0	1442.9	1440.8
172.5°	1451.2	1452.9	1454.5	1454.3	1452.2	1450.1	1447.9	1445.9
175°	1456.7	1458.4	1460.0	1459.7	1457.3	1455.0	1452.6	1450.3
177.5°	1457.3	1458.6	1460.0	1459.7	1458.1	1456.4	1454.7	1453.0
180°	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5	1455.5

(END OF REPORT)