

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: P331524-935

Luminaire Tested: **S122DIW-S485D1440U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331524-935  
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: S122DIW-S485D1440U935-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6008.4 lumens  
Efficiency: N/A  
Efficacy: 99.1 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-Indirect

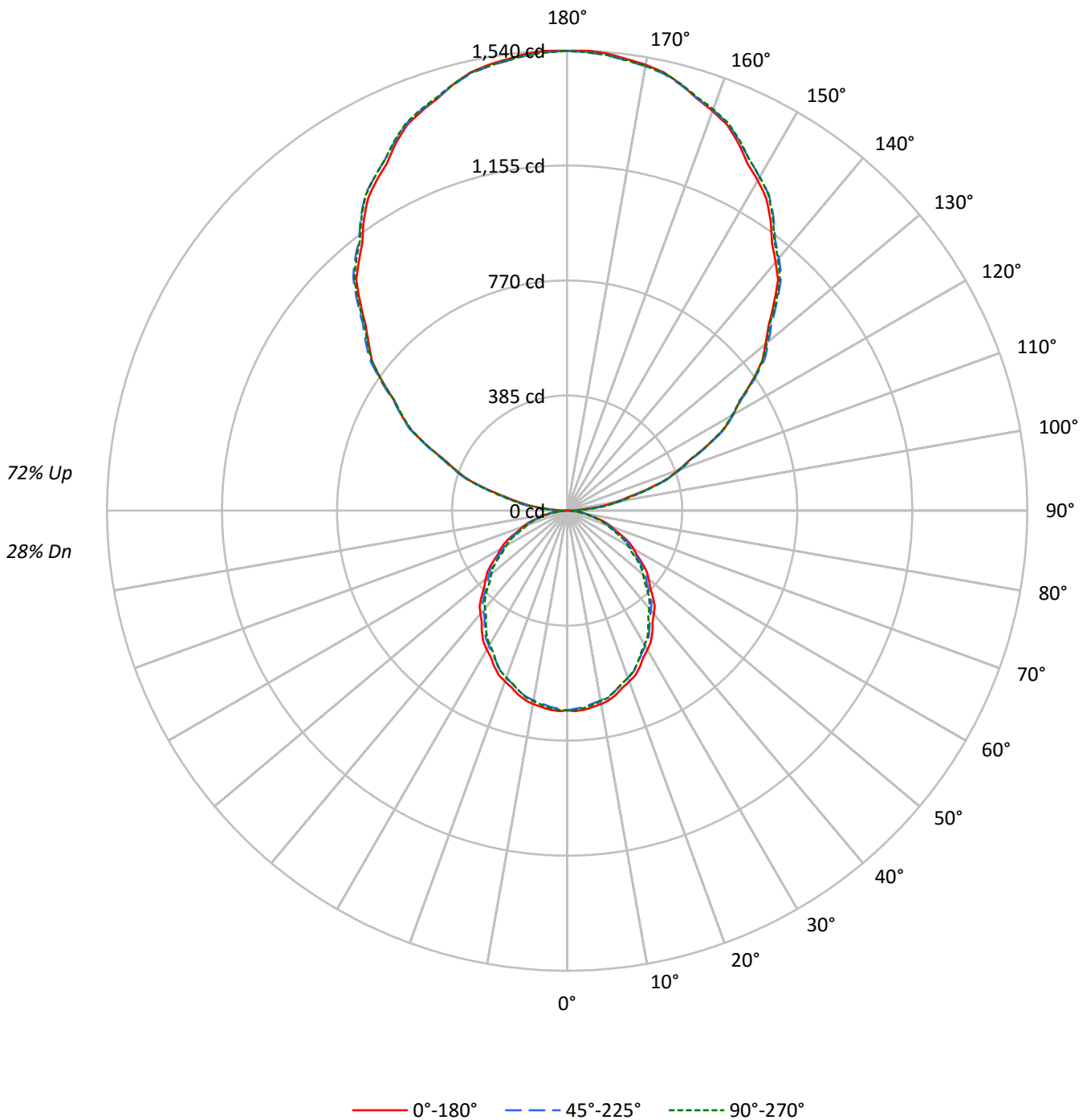
Input Watts (W): 60.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331524-935

CATALOG NUMBER: S122DIW-S485D1440U935-4F0-1E-UDD-F1

### Luminous Intensity Polar Plot





TEST NUMBER: P331524-935

CATALOG NUMBER: S122DIW-S485D1440U935-4F0-1E-UDD-F1

**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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28
1	93	89	85	82	83	80	76	74	62	60	58	47	45	44	32	31	31	24
2	85	77	72	67	75	69	65	60	55	51	48	41	39	37	28	27	26	20
3	77	68	61	55	69	61	55	50	48	44	40	36	33	31	25	23	22	17
4	70	60	52	47	63	54	48	43	43	38	34	32	29	26	22	20	19	15
5	65	53	46	40	58	48	41	36	38	33	30	29	25	23	20	18	16	13
6	59	48	40	34	53	43	36	31	34	29	26	26	23	20	18	16	14	11
7	55	43	35	30	49	39	32	27	31	26	22	23	20	18	17	14	13	10
8	51	39	31	26	45	35	29	24	28	23	20	21	18	16	15	13	11	9
9	47	35	28	23	42	32	26	21	26	21	18	20	16	14	14	12	10	8
10	44	32	25	21	39	29	23	19	24	19	16	18	15	13	13	11	9	7

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

	0°	45°	90°
0°	10797	10797	10797
5°	10838	10682	10746
10°	10775	10575	10627
15°	10641	10437	10425
20°	10452	10232	10220
25°	10265	9978	9978
30°	10023	9747	9661
35°	9798	9469	9329
40°	9514	9190	9012
45°	9236	8912	8690
50°	8932	8626	8317
55°	8617	8290	7983
60°	8263	7892	7598
65°	7885	7492	7148
70°	7407	7010	6680
75°	6744	6457	6301
80°	5979	5793	5504
85°	4872	4650	4168



TEST NUMBER: P331524-935

CATALOG NUMBER: S122DIW-S485D1440U935-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.9	1.0
10°-20°	176.9	2.9
20°-30°	260.1	4.3
30°-40°	302.1	5.0
40°-50°	301.8	5.0
50°-60°	263.2	4.4
60°-70°	194.6	3.2
70°-80°	110.2	1.8
80°-90°	35.8	0.6
90°-100°	97.5	1.6
100°-110°	302.7	5.0
110°-120°	517.4	8.6
120°-130°	680.4	11.3
130°-140°	763.7	12.7
140°-150°	748.8	12.5
150°-160°	628.1	10.5
160°-170°	416.6	6.9
170°-180°	145.6	2.4
0°-30°	499.9	8.3
0°-40°	802.0	13.3
0°-60°	1366.9	22.8
0°-90°	1707.5	28.4
90°-120°	917.6	15.3
90°-150°	3110.6	51.8
90°-180°	4301.0	71.6
0°-180°	6008.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	669	669	669	669	669	
5°	669	666	659	664	663	63
15°	637	632	624	627	624	179
25°	576	571	560	561	560	265
35°	497	490	480	476	473	310
45°	404	400	390	384	381	312
55°	306	302	294	287	284	274
65°	206	202	196	190	187	204
75°	108	107	104	100	101	115
85°	26	26	25	23	22	30
90°	1	18	46	43	44	5
95°	68	80	83	83	80	77
105°	279	283	286	288	288	295
115°	519	526	524	523	519	513
125°	755	766	763	759	758	675
135°	977	991	994	993	989	755
145°	1186	1195	1203	1204	1199	741
155°	1356	1360	1364	1370	1367	624
165°	1476	1475	1474	1483	1477	416
175°	1536	1532	1529	1537	1530	146
180°	1538	1538	1538	1538	1538	



TEST NUMBER: P331524-935

CATALOG NUMBER: S122DIW-S485D1440U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7
2.5°	671.8	671.2	670.7	670.1	669.5	668.7	667.4	666.2	664.9	663.6	664.8
5°	668.7	668.1	667.6	667.0	666.5	665.4	663.8	662.3	660.6	659.1	660.2
7.5°	662.8	661.9	661.1	660.1	659.3	658.1	656.4	654.9	653.2	651.6	652.8
10°	657.2	656.2	655.1	654.2	653.2	651.8	650.1	648.4	646.7	645.0	646.1
12.5°	649.5	648.6	647.6	646.8	645.9	644.6	642.9	641.2	639.5	637.7	638.5
15°	636.6	635.8	634.9	634.0	633.2	631.8	629.9	628.1	626.2	624.4	624.9
17.5°	620.1	619.3	618.5	617.6	616.7	615.4	613.5	611.6	609.7	607.8	608.5
20°	608.3	607.4	606.6	605.7	604.9	603.5	601.4	599.4	597.4	595.5	595.9
22.5°	596.5	595.3	594.1	592.9	591.7	590.1	588.2	586.3	584.4	582.6	582.6
25°	576.2	575.0	573.9	572.7	571.6	569.8	567.4	564.9	562.5	560.1	560.3
27.5°	553.0	552.0	551.0	549.9	548.9	547.4	545.5	543.5	541.7	539.8	539.3
30°	537.6	536.4	535.3	534.2	533.0	531.3	529.2	527.1	525.0	522.8	522.4
32.5°	521.1	520.2	519.3	518.3	517.5	515.8	513.6	511.3	509.1	506.9	506.1
35°	497.1	495.6	494.2	492.8	491.4	489.5	487.2	484.9	482.6	480.4	479.5
37.5°	469.9	468.6	467.4	466.1	464.9	463.1	460.8	458.6	456.2	454.0	452.9
40°	451.4	450.2	449.1	448.0	446.9	445.1	442.8	440.6	438.2	436.0	434.7
42.5°	433.4	432.2	431.1	430.0	428.9	427.1	424.8	422.6	420.3	417.9	416.6
45°	404.5	403.5	402.4	401.5	400.5	398.9	396.7	394.6	392.4	390.3	388.7
47.5°	375.7	374.7	373.8	372.8	371.9	370.3	368.1	365.8	363.6	361.4	359.7
50°	355.6	354.9	354.1	353.4	352.8	351.4	349.4	347.4	345.3	343.4	341.4
52.5°	336.0	335.1	334.2	333.2	332.3	330.9	329.0	327.1	325.2	323.3	321.7
55°	306.1	305.2	304.4	303.5	302.6	301.4	299.6	297.9	296.2	294.5	292.8
57.5°	276.0	275.3	274.6	274.0	273.3	272.0	270.1	268.2	266.3	264.4	262.7
60°	255.9	255.4	254.8	254.2	253.7	252.4	250.4	248.3	246.3	244.4	242.8
62.5°	236.3	235.5	234.5	233.6	232.7	231.5	230.0	228.4	226.9	225.3	223.9
65°	206.4	205.5	204.7	203.8	203.0	201.8	200.4	199.0	197.5	196.1	194.8
67.5°	175.9	175.2	174.5	173.8	173.1	172.2	170.9	169.6	168.3	167.0	166.1
70°	156.9	156.4	155.8	155.2	154.6	153.7	152.4	151.1	149.8	148.5	147.6
72.5°	137.3	136.8	136.2	135.6	135.1	134.4	133.5	132.7	131.9	131.0	130.0
75°	108.1	107.7	107.5	107.2	106.9	106.4	105.6	105.0	104.3	103.5	102.6
77.5°	81.8	81.3	80.8	80.3	79.8	79.5	79.2	78.9	78.6	78.4	77.9
80°	64.3	64.1	64.1	63.9	63.7	63.5	63.2	62.9	62.7	62.3	61.9
82.5°	47.9	47.8	47.8	47.8	47.7	47.6	47.4	47.3	47.1	46.9	46.4
85°	26.3	26.3	26.1	25.9	25.8	25.7	25.5	25.4	25.2	25.1	24.6
87.5°	9.6	10.0	10.4	10.9	11.4	12.1	13.2	14.2	15.2	16.3	15.8
90°	1.3	4.7	8.2	11.7	15.2	20.1	26.4	32.7	39.1	45.5	44.9
92.5°	23.1	25.7	28.2	30.7	33.2	35.3	36.8	38.3	39.8	41.2	41.4
95°	67.5	70.3	73.3	76.1	79.0	80.8	81.4	81.9	82.5	83.1	83.1
97.5°	123.3	125.9	128.4	131.0	133.5	135.3	136.4	137.5	138.5	139.7	139.7
100°	164.9	167.1	169.4	171.8	174.1	175.6	176.5	177.4	178.2	179.1	179.1
102.5°	208.4	210.3	212.2	214.0	215.9	217.3	218.4	219.5	220.6	221.7	222.0
105°	279.1	279.9	280.8	281.6	282.5	283.3	283.9	284.4	285.0	285.6	286.1
107.5°	350.2	351.5	352.8	354.0	355.2	355.9	355.9	355.9	355.9	355.9	356.1
110°	395.9	397.6	399.3	401.1	402.8	403.7	403.7	403.7	403.7	403.7	403.7



TEST NUMBER: P331524-935

CATALOG NUMBER: S122DIW-S485D1440U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	445.7	447.5	449.2	450.9	452.6	453.4	453.1	453.0	452.7	452.5	451.8
115°	519.2	520.9	522.6	524.4	526.2	526.7	526.2	525.6	525.0	524.4	524.1
117.5°	592.5	594.7	597.0	599.3	601.7	602.0	600.4	598.7	597.1	595.6	594.9
120°	641.2	643.5	645.8	648.2	650.5	650.5	648.2	645.8	643.5	641.2	641.2
122.5°	685.9	688.6	691.4	694.1	697.0	697.5	695.9	694.3	692.7	691.0	690.3
125°	755.4	758.0	760.6	763.2	765.9	766.7	765.9	765.0	764.1	763.2	762.3
127.5°	823.2	826.5	829.7	833.1	836.4	837.5	836.5	835.4	834.4	833.4	832.2
130°	865.7	869.5	873.3	877.0	880.8	882.4	881.8	881.2	880.6	880.0	879.5
132.5°	913.5	916.6	919.6	922.7	925.7	927.4	927.5	927.6	927.7	927.8	926.5
135°	977.4	980.6	983.8	986.9	990.1	992.0	992.6	993.2	993.7	994.3	994.0
137.5°	1044.7	1047.2	1049.8	1052.4	1055.0	1056.7	1057.5	1058.2	1058.9	1059.7	1059.5
140°	1085.1	1087.7	1090.4	1093.0	1095.5	1097.5	1099.0	1100.4	1101.9	1103.3	1103.3
142.5°	1126.7	1129.3	1131.9	1134.5	1137.0	1138.8	1139.8	1140.8	1141.8	1142.8	1143.0
145°	1186.4	1188.4	1190.4	1192.4	1194.5	1196.4	1198.1	1199.8	1201.5	1203.2	1203.5
147.5°	1239.6	1242.0	1244.4	1246.9	1249.3	1251.1	1252.2	1253.4	1254.6	1255.7	1256.4
150°	1275.9	1277.6	1279.4	1281.2	1282.9	1284.3	1285.5	1286.6	1287.8	1288.9	1289.8
152.5°	1308.1	1309.8	1311.6	1313.3	1315.1	1316.6	1318.0	1319.4	1320.8	1322.2	1323.3
155°	1356.4	1357.3	1358.1	1359.0	1359.9	1360.7	1361.6	1362.4	1363.3	1364.2	1365.6
157.5°	1397.7	1398.3	1398.9	1399.5	1400.0	1400.6	1401.1	1401.6	1402.1	1402.7	1404.5
160°	1422.6	1423.2	1423.7	1424.4	1425.0	1425.4	1425.6	1425.9	1426.2	1426.5	1428.2
162.5°	1445.4	1445.6	1445.7	1445.8	1446.0	1446.1	1446.4	1446.7	1447.0	1447.3	1449.2
165°	1475.8	1475.6	1475.2	1475.0	1474.7	1474.5	1474.5	1474.5	1474.5	1474.5	1476.5
167.5°	1501.2	1500.4	1499.5	1498.7	1497.8	1497.4	1497.3	1497.3	1497.2	1497.1	1499.2
170°	1514.8	1513.9	1513.0	1512.2	1511.3	1510.7	1510.5	1510.2	1509.8	1509.6	1511.6
172.5°	1524.1	1523.3	1522.4	1521.6	1520.7	1520.1	1519.8	1519.5	1519.2	1518.9	1521.0
175°	1535.5	1534.6	1533.8	1532.9	1532.1	1531.4	1530.8	1530.2	1529.7	1529.0	1531.1
177.5°	1540.2	1539.6	1538.9	1538.2	1537.5	1536.9	1536.4	1535.9	1535.5	1535.0	1536.4
180°	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2



TEST NUMBER: P331524-935

CATALOG NUMBER: S122DIW-S485D1440U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	668.7	668.7	668.7	668.7	668.7	668.7	668.7	668.7
2.5°	665.9	667.0	668.1	668.7	668.4	668.1	668.0	667.7
5°	661.4	662.5	663.7	664.1	663.8	663.5	663.2	663.0
7.5°	653.9	655.0	656.3	656.6	656.3	656.0	655.7	655.4
10°	647.2	648.4	649.5	649.9	649.5	649.0	648.6	648.2
12.5°	639.4	640.2	640.9	641.2	640.8	640.6	640.2	639.9
15°	625.5	626.1	626.6	626.5	625.9	625.2	624.5	623.7
17.5°	609.1	609.8	610.4	610.4	609.7	609.1	608.4	607.7
20°	596.3	596.8	597.2	597.1	596.5	595.9	595.4	594.8
22.5°	582.7	582.8	582.9	582.8	582.5	582.1	581.8	581.4
25°	560.7	560.9	561.2	561.2	560.9	560.7	560.3	560.1
27.5°	538.9	538.5	538.0	537.5	536.8	536.1	535.5	534.8
30°	521.9	521.5	521.1	520.6	520.0	519.4	518.8	518.2
32.5°	505.3	504.5	503.8	503.1	502.5	502.0	501.4	500.8
35°	478.6	477.8	476.9	476.1	475.4	474.7	474.0	473.3
37.5°	451.9	450.8	449.8	448.8	448.2	447.5	446.8	446.2
40°	433.4	432.1	430.8	429.9	429.3	428.8	428.2	427.6
42.5°	415.2	413.8	412.3	411.3	410.4	409.7	408.9	408.0
45°	387.2	385.6	384.0	383.0	382.4	381.9	381.3	380.6
47.5°	358.1	356.4	354.7	353.5	352.7	351.9	351.0	350.2
50°	339.4	337.3	335.4	334.0	333.3	332.6	331.8	331.1
52.5°	320.0	318.3	316.7	315.4	314.4	313.5	312.5	311.6
55°	291.1	289.4	287.7	286.5	285.7	285.0	284.3	283.6
57.5°	261.1	259.3	257.7	256.6	256.0	255.5	254.9	254.3
60°	241.2	239.6	238.1	237.0	236.6	236.2	235.7	235.3
62.5°	222.4	220.9	219.5	218.5	217.9	217.4	216.9	216.3
65°	193.6	192.3	191.0	189.9	189.2	188.6	187.9	187.1
67.5°	165.1	164.0	163.1	162.3	161.7	161.1	160.6	160.0
70°	146.5	145.5	144.6	143.8	143.2	142.6	142.1	141.5
72.5°	129.1	128.0	127.1	126.3	125.9	125.4	124.9	124.5
75°	101.8	101.0	100.1	99.8	100.1	100.4	100.7	101.0
77.5°	77.5	77.1	76.6	76.2	75.8	75.4	75.0	74.6
80°	61.5	61.0	60.7	60.3	60.0	59.8	59.4	59.2
82.5°	45.9	45.3	44.8	44.4	44.4	44.3	44.3	44.3
85°	24.2	23.8	23.3	23.1	22.9	22.8	22.6	22.5
87.5°	15.4	14.9	14.5	14.2	14.1	14.1	14.0	13.9
90°	44.3	43.7	43.1	43.0	43.3	43.6	43.8	44.2
92.5°	41.5	41.6	41.8	41.8	41.8	41.9	42.0	42.0
95°	83.1	83.1	83.1	82.7	82.2	81.6	81.0	80.5
97.5°	139.7	139.7	139.7	139.7	139.6	139.5	139.5	139.4
100°	179.1	179.1	179.1	179.0	178.7	178.4	178.1	177.8
102.5°	222.1	222.4	222.7	222.6	222.3	222.1	221.7	221.4
105°	286.7	287.3	287.8	288.2	288.2	288.2	288.2	288.2
107.5°	356.4	356.6	356.8	356.3	355.0	353.6	352.3	350.9
110°	403.7	403.7	403.7	403.2	402.3	401.5	400.6	399.8





TEST NUMBER: P331524-935

CATALOG NUMBER: S122DIW-S485D1440U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	451.1	450.4	449.7	449.0	448.4	447.8	447.1	446.5
115°	523.8	523.5	523.2	522.6	521.8	520.9	520.0	519.2
117.5°	594.2	593.5	592.8	591.9	591.1	590.2	589.4	588.5
120°	641.2	641.2	641.2	640.8	639.9	639.0	638.2	637.3
122.5°	689.7	689.0	688.3	687.6	687.0	686.4	685.7	685.1
125°	761.5	760.6	759.7	759.2	758.9	758.6	758.4	758.0
127.5°	831.2	830.2	829.1	828.2	827.2	826.3	825.4	824.5
130°	878.9	878.3	877.7	876.8	875.7	874.6	873.4	872.3
132.5°	925.3	924.0	922.7	921.6	920.8	919.8	918.9	917.9
135°	993.7	993.4	993.2	992.6	991.7	990.8	990.0	989.1
137.5°	1059.2	1059.0	1058.8	1058.1	1057.0	1055.8	1054.6	1053.4
140°	1103.3	1103.3	1103.3	1102.8	1101.6	1100.4	1099.2	1098.1
142.5°	1143.2	1143.5	1143.7	1143.2	1142.1	1140.9	1139.8	1138.6
145°	1203.9	1204.1	1204.4	1203.9	1202.8	1201.7	1200.5	1199.4
147.5°	1257.0	1257.6	1258.3	1258.0	1256.9	1255.8	1254.7	1253.6
150°	1290.6	1291.5	1292.4	1292.4	1291.5	1290.6	1289.8	1288.9
152.5°	1324.3	1325.4	1326.5	1326.5	1325.4	1324.3	1323.3	1322.2
155°	1367.1	1368.6	1369.9	1370.3	1369.4	1368.6	1367.7	1366.8
157.5°	1406.5	1408.5	1410.5	1410.7	1409.4	1408.0	1406.6	1405.2
160°	1429.9	1431.7	1433.4	1433.7	1432.5	1431.4	1430.3	1429.1
162.5°	1451.2	1453.2	1455.1	1455.4	1454.1	1452.7	1451.3	1449.8
165°	1478.6	1480.6	1482.6	1482.9	1481.4	1480.1	1478.6	1477.1
167.5°	1501.2	1503.2	1505.2	1505.5	1504.0	1502.4	1501.0	1499.4
170°	1513.6	1515.6	1517.7	1517.8	1516.0	1514.3	1512.6	1510.9
172.5°	1522.9	1525.0	1527.0	1527.2	1525.4	1523.7	1522.0	1520.3
175°	1533.1	1535.1	1537.1	1537.3	1535.5	1533.8	1532.1	1530.3
177.5°	1537.8	1539.2	1540.6	1540.6	1539.2	1537.8	1536.4	1535.0
180°	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2	1538.2

(END OF REPORT)