

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: P331515-927

Luminaire Tested: **S122DIW-S485D1240U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331515-927  
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-S485D1240U927-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1240 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5485.3 lumens  
Efficiency: N/A  
Efficacy: 102.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

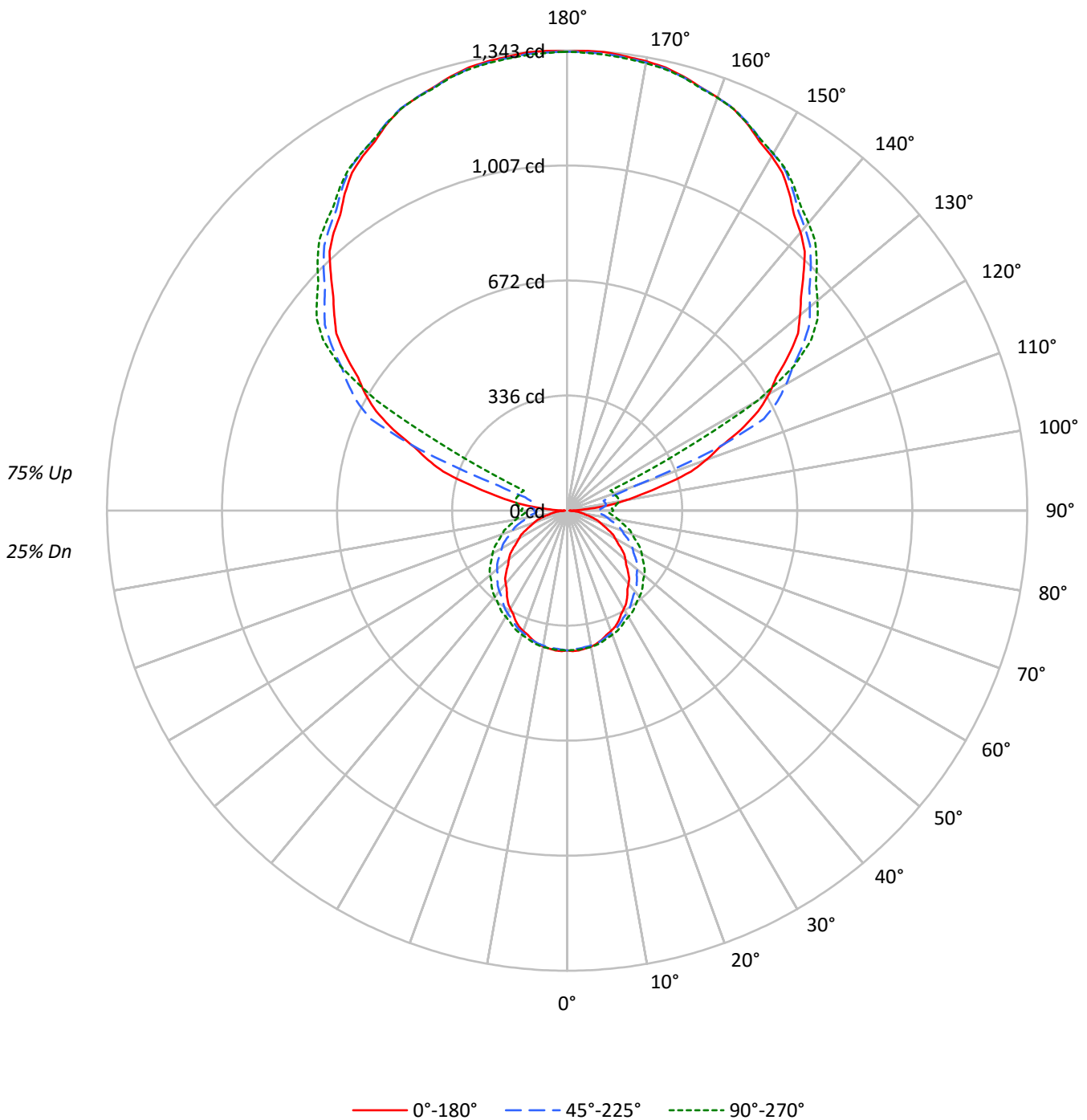
Input Watts (W): 53.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331515-927

CATALOG NUMBER: S122DIW-S485D1240U927-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P331515-927

CATALOG NUMBER: S122DIW-S485D1240U927-4F0-1E-UDD-D

**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	50	30	10	50	30	10	0		
RCR																										
0	101	101	101	101	90	90	90	90	70	70	70	51	51	51	33	33	33	25								
1	91	87	83	79	81	77	74	71	60	57	55	43	42	41	28	27	27	20								
2	83	75	69	64	73	67	62	58	52	48	45	38	35	33	24	23	22	16								
3	75	66	59	53	67	59	53	48	45	41	38	33	30	28	21	20	18	13								
4	69	58	50	44	61	52	45	40	40	35	32	29	26	23	19	17	15	11								
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9								
6	58	46	38	32	51	41	34	29	32	27	23	23	20	17	15	13	12	8								
7	53	41	33	28	47	37	30	25	29	24	20	21	18	15	14	12	10	7								
8	49	37	30	25	44	33	27	22	26	21	18	19	16	13	13	11	9	6								
9	46	34	27	22	41	30	24	20	24	19	16	18	14	12	12	10	8	6								
10	43	31	24	19	38	28	22	17	22	17	14	16	13	11	11	9	7	5								

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

	0°	45°	90°
0°	6591	6591	6591
5°	6623	6345	6320
10°	6581	6158	6088
15°	6491	5959	5843
20°	6376	5745	5607
25°	6263	5540	5394
30°	6103	5330	5178
35°	5943	5127	5028
40°	5773	4954	4876
45°	5612	4799	4746
50°	5439	4657	4618
55°	5257	4507	4488
60°	5033	4351	4351
65°	4802	4169	4189
70°	4546	3970	4013
75°	4214	3778	3850
80°	3692	3579	3685
85°	3187	3410	3559



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.7	0.7
10°-20°	110.9	2.0
20°-30°	168.1	3.1
30°-40°	204.7	3.7
40°-50°	220.3	4.0
50°-60°	213.9	3.9
60°-70°	186.8	3.4
70°-80°	143.8	2.6
80°-90°	99.8	1.8
90°-100°	111.2	2.0
100°-110°	212.4	3.9
110°-120°	470.0	8.6
120°-130°	740.8	13.5
130°-140°	776.3	14.2
140°-150°	715.8	13.0
150°-160°	574.5	10.5
160°-170°	370.2	6.7
170°-180°	127.4	2.3
0°-30°	317.7	5.8
0°-40°	522.4	9.5
0°-60°	956.6	17.4
0°-90°	1386.9	25.3
90°-120°	793.5	14.5
90°-150°	3026.3	55.2
90°-180°	4098.0	74.7
0°-180°	5485.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	408	408	408	408	408	
5°	409	408	404	407	407	39
15°	390	392	392	397	396	110
25°	355	359	364	371	373	163
35°	306	316	327	340	344	191
45°	251	267	288	305	312	194
55°	192	214	244	265	273	172
65°	131	161	195	219	227	130
75°	73	106	144	168	177	77
85°	21	58	96	120	129	23
90°	7	52	97	125	135	7
95°	68	66	106	132	139	81
105°	298	328	110	140	152	318
115°	560	584	633	223	139	551
125°	789	803	839	861	870	703
135°	975	991	1006	1027	1030	753
145°	1131	1131	1146	1156	1155	707
155°	1245	1238	1248	1253	1246	574
165°	1312	1307	1309	1315	1309	371
175°	1342	1336	1337	1343	1334	128
180°	1339	1339	1339	1339	1339	



TEST NUMBER: P331515-927

CATALOG NUMBER: S122DIW-S485D1240U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	410.6	410.3	410.0	409.6	409.3	408.8	408.1	407.3	406.6	405.8	406.4
5°	409.4	409.0	408.6	408.2	407.8	407.3	406.5	405.7	404.9	404.1	404.9
7.5°	405.8	405.4	405.2	405.0	404.7	404.3	403.6	403.1	402.4	401.8	402.7
10°	402.9	402.7	402.3	402.1	401.9	401.6	401.2	400.8	400.4	400.0	401.0
12.5°	398.2	398.2	398.3	398.3	398.4	398.2	398.0	397.7	397.4	397.1	398.2
15°	390.5	390.7	391.0	391.3	391.5	391.7	391.7	391.7	391.7	391.7	392.8
17.5°	380.6	381.1	381.7	382.2	382.8	383.3	383.7	384.0	384.5	384.9	386.1
20°	373.9	374.5	375.3	375.9	376.5	377.2	377.6	378.2	378.7	379.2	380.6
22.5°	366.8	367.6	368.4	369.1	369.9	370.6	371.4	372.1	372.8	373.6	375.0
25°	355.0	355.9	356.8	357.7	358.6	359.7	360.9	362.1	363.3	364.4	366.0
27.5°	340.8	342.3	343.8	345.3	346.7	348.2	349.6	351.0	352.4	353.8	355.8
30°	331.3	333.0	334.7	336.4	338.2	339.8	341.6	343.3	345.0	346.7	348.8
32.5°	320.9	322.8	324.7	326.7	328.6	330.6	332.6	334.6	336.6	338.7	341.0
35°	305.9	308.1	310.4	312.6	314.8	317.2	319.6	322.2	324.6	327.2	330.0
37.5°	289.5	292.2	294.7	297.3	299.8	302.8	306.0	309.2	312.4	315.7	318.9
40°	278.7	281.5	284.5	287.3	290.3	293.4	297.0	300.6	304.1	307.7	311.1
42.5°	268.2	271.2	274.0	276.9	279.8	283.3	287.4	291.4	295.6	299.6	303.3
45°	250.9	254.4	257.9	261.5	265.1	269.1	273.7	278.3	283.0	287.6	291.6
47.5°	233.7	237.6	241.5	245.3	249.1	253.8	259.2	264.6	270.0	275.4	279.6
50°	221.9	225.9	230.0	234.1	238.1	243.1	249.1	255.0	260.9	266.8	271.3
52.5°	210.5	214.8	219.0	223.4	227.7	232.9	239.2	245.3	251.6	257.9	262.4
55°	192.3	197.0	201.8	206.4	211.2	217.0	223.9	230.7	237.5	244.3	249.1
57.5°	174.3	179.7	185.0	190.3	195.7	201.8	208.7	215.7	222.7	229.7	234.8
60°	161.5	167.2	172.9	178.5	184.1	190.7	198.2	205.7	213.2	220.7	225.7
62.5°	150.1	156.0	161.9	167.8	173.6	180.3	187.7	195.3	202.8	210.2	215.6
65°	131.3	137.8	144.3	150.7	157.1	164.2	172.0	179.7	187.5	195.3	200.7
67.5°	114.1	120.8	127.5	134.3	141.0	148.3	156.3	164.2	172.1	180.1	185.5
70°	101.8	108.6	115.4	122.2	129.1	136.6	144.7	152.9	161.1	169.2	174.8
72.5°	90.4	97.4	104.5	111.5	118.6	126.3	134.5	142.8	151.0	159.2	164.9
75°	72.8	80.2	87.5	94.8	102.2	110.1	118.5	126.9	135.4	143.8	149.4
77.5°	55.8	63.5	71.1	78.8	86.6	94.7	103.2	111.8	120.3	128.9	134.5
80°	44.4	52.4	60.4	68.4	76.4	84.8	93.3	101.8	110.4	118.9	124.5
82.5°	34.9	42.9	50.7	58.6	66.5	74.9	83.5	92.1	100.8	109.5	114.9
85°	21.3	29.5	37.6	45.8	53.9	62.2	70.6	79.0	87.5	95.9	101.4
87.5°	11.8	20.1	28.4	36.8	45.0	53.6	62.3	71.1	79.9	88.6	94.2
90°	6.9	16.9	26.9	36.8	46.9	57.0	67.1	77.2	87.4	97.4	103.8
92.5°	25.0	31.9	38.8	45.7	52.5	60.4	69.5	78.4	87.4	96.3	102.0
95°	67.7	66.8	65.8	65.0	64.0	68.3	77.6	87.1	96.4	105.8	111.9
97.5°	129.1	114.6	100.1	85.6	71.1	69.3	80.3	91.4	102.5	113.5	119.2
100°	175.6	151.0	126.4	101.7	77.1	70.3	81.4	92.4	103.4	114.4	121.0
102.5°	226.3	224.6	222.8	220.9	219.1	206.5	183.1	159.5	136.1	112.6	119.6
105°	297.5	307.8	318.1	328.4	338.7	317.8	265.9	213.9	161.9	110.0	116.9
107.5°	379.4	387.7	395.9	404.2	412.5	384.6	320.7	256.7	192.7	128.8	130.8
110°	431.7	438.8	445.9	453.1	460.3	435.9	380.2	324.3	268.5	212.8	195.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	481.3	487.5	493.7	499.9	506.1	504.6	495.4	486.1	476.9	467.6	393.2
115°	559.6	564.7	569.8	574.9	580.0	588.2	599.5	610.8	622.1	633.4	537.7
117.5°	628.9	634.0	639.1	644.0	649.1	656.2	665.4	674.5	683.7	692.9	672.6
120°	680.1	683.9	687.6	691.3	695.1	701.6	710.7	719.9	729.0	738.2	744.4
122.5°	723.5	727.1	730.7	734.4	738.0	744.3	753.5	762.7	771.8	781.0	786.2
125°	789.0	791.8	794.6	797.4	800.2	805.7	814.0	822.4	830.7	838.9	844.0
127.5°	848.9	851.8	854.8	857.8	860.8	865.5	872.0	878.4	884.9	891.3	896.8
130°	886.9	890.2	893.5	896.8	900.2	904.4	909.5	914.7	919.7	924.9	930.4
132.5°	925.7	928.4	931.2	934.1	936.8	940.5	945.0	949.5	953.9	958.5	963.5
135°	975.4	978.9	982.3	985.8	989.2	992.6	995.9	999.1	1002.3	1005.6	1010.5
137.5°	1026.4	1028.8	1031.2	1033.6	1035.9	1038.6	1041.3	1044.1	1046.9	1049.6	1054.2
140°	1059.8	1061.4	1063.0	1064.5	1066.1	1068.3	1070.9	1073.5	1076.1	1078.8	1082.8
142.5°	1087.7	1089.1	1090.5	1091.9	1093.4	1095.4	1098.2	1101.0	1103.7	1106.5	1109.9
145°	1130.8	1130.7	1130.4	1130.2	1130.0	1131.7	1135.4	1139.1	1142.7	1146.4	1148.7
147.5°	1169.0	1168.2	1167.4	1166.6	1165.8	1167.2	1170.8	1174.4	1178.1	1181.6	1182.9
150°	1193.9	1192.4	1190.9	1189.3	1187.8	1188.8	1192.2	1195.7	1199.1	1202.6	1203.9
152.5°	1214.8	1213.1	1211.4	1209.7	1208.1	1208.9	1212.1	1215.4	1218.7	1221.9	1223.3
155°	1245.2	1243.3	1241.3	1239.4	1237.5	1237.8	1240.4	1242.9	1245.5	1248.2	1249.4
157.5°	1269.1	1267.4	1265.7	1264.2	1262.5	1262.6	1264.4	1266.2	1268.0	1269.9	1271.3
160°	1283.0	1281.8	1280.4	1279.1	1277.9	1277.9	1279.1	1280.4	1281.8	1283.0	1284.3
162.5°	1295.5	1294.1	1292.8	1291.6	1290.2	1290.1	1291.3	1292.4	1293.6	1294.7	1296.1
165°	1312.1	1310.8	1309.5	1308.2	1306.9	1306.6	1307.3	1307.9	1308.5	1309.2	1310.7
167.5°	1324.5	1323.2	1321.9	1320.6	1319.3	1319.0	1319.6	1320.2	1320.8	1321.4	1322.9
170°	1331.5	1330.2	1328.9	1327.6	1326.3	1325.9	1326.3	1326.7	1327.1	1327.6	1329.1
172.5°	1336.1	1334.8	1333.6	1332.2	1330.9	1330.5	1330.9	1331.3	1331.8	1332.2	1333.7
175°	1342.1	1340.6	1339.1	1337.6	1336.1	1335.5	1336.0	1336.4	1336.9	1337.3	1338.8
177.5°	1343.1	1341.9	1340.7	1339.5	1338.2	1337.8	1337.9	1338.1	1338.2	1338.5	1339.7
180°	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	406.9	407.4	408.0	408.1	407.9	407.7	407.5	407.3
5°	405.7	406.5	407.3	407.6	407.4	407.3	407.2	407.0
7.5°	403.7	404.6	405.6	406.0	405.9	405.8	405.6	405.5
10°	402.0	403.1	404.2	404.6	404.5	404.3	404.3	404.1
12.5°	399.2	400.3	401.3	401.8	401.6	401.5	401.4	401.2
15°	394.0	395.2	396.4	396.9	396.8	396.6	396.5	396.4
17.5°	387.4	388.6	389.8	390.5	390.5	390.5	390.5	390.5
20°	382.1	383.6	385.0	385.7	385.7	385.7	385.7	385.7
22.5°	376.4	377.9	379.4	380.2	380.4	380.6	380.8	381.0
25°	367.6	369.2	370.7	371.8	372.2	372.6	373.0	373.4
27.5°	357.8	359.8	361.8	362.9	363.2	363.5	363.8	364.1
30°	350.9	353.0	355.1	356.3	356.7	357.1	357.5	357.9
32.5°	343.5	345.9	348.3	349.9	350.6	351.3	352.0	352.8
35°	333.0	335.9	338.7	340.6	341.6	342.5	343.4	344.4
37.5°	322.1	325.3	328.5	330.6	331.6	332.6	333.5	334.5
40°	314.5	317.9	321.3	323.6	324.8	326.0	327.2	328.4
42.5°	307.0	310.8	314.5	317.0	318.1	319.3	320.5	321.7
45°	295.7	299.8	303.8	306.5	307.8	309.2	310.5	311.8
47.5°	283.8	288.1	292.4	295.2	296.7	298.1	299.6	301.0
50°	275.8	280.2	284.7	287.6	289.1	290.6	292.0	293.4
52.5°	267.0	271.6	276.2	279.2	280.7	282.3	283.8	285.4
55°	253.8	258.6	263.2	266.5	268.2	269.9	271.6	273.3
57.5°	239.9	244.9	250.1	253.5	255.2	257.0	258.7	260.5
60°	230.7	235.7	240.7	244.1	245.9	247.8	249.6	251.4
62.5°	220.9	226.2	231.5	235.0	236.8	238.5	240.3	242.0
65°	206.0	211.4	216.8	220.4	222.0	223.8	225.5	227.2
67.5°	191.0	196.4	201.8	205.5	207.2	209.1	210.9	212.6
70°	180.5	186.2	191.8	195.4	197.0	198.6	200.2	201.8
72.5°	170.4	175.9	181.5	185.2	187.0	188.9	190.8	192.7
75°	155.1	160.7	166.4	170.1	171.7	173.5	175.2	176.9
77.5°	140.1	145.8	151.4	155.1	156.9	158.8	160.7	162.5
80°	130.0	135.5	141.0	144.7	146.6	148.4	150.2	152.0
82.5°	120.5	126.0	131.5	135.1	136.9	138.6	140.4	142.1
85°	106.9	112.4	118.0	121.6	123.4	125.3	127.1	129.0
87.5°	99.7	105.4	110.9	114.6	116.4	118.1	119.9	121.7
90°	110.1	116.5	122.8	127.0	129.0	131.0	133.0	135.0
92.5°	107.7	113.4	119.1	122.9	124.8	126.6	128.5	130.3
95°	118.0	124.1	130.2	133.8	135.2	136.6	137.9	139.3
97.5°	125.0	130.7	136.4	140.2	142.0	143.9	145.6	147.4
100°	127.5	134.2	140.8	145.0	146.9	148.8	150.6	152.5
102.5°	126.7	133.6	140.6	145.1	147.2	149.2	151.3	153.4
105°	123.9	130.9	137.8	142.5	144.8	147.1	149.4	151.7
107.5°	132.8	134.8	136.8	138.9	141.2	143.5	145.9	148.2
110°	178.1	160.8	143.5	135.9	138.2	140.5	142.9	145.2





TEST NUMBER: P331515-927

CATALOG NUMBER: S122DIW-S485D1240U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	318.9	244.5	170.2	134.1	136.3	138.4	140.5	142.7
115°	441.9	346.1	250.3	195.4	181.4	167.3	153.3	139.2
117.5°	652.4	632.2	612.0	577.1	527.4	477.8	428.3	378.7
120°	750.7	756.9	763.2	752.5	724.8	697.3	669.6	642.0
122.5°	791.2	796.4	801.5	801.8	797.5	793.1	788.7	784.3
125°	849.1	854.1	859.2	862.6	864.4	866.3	868.2	870.0
127.5°	902.2	907.7	913.1	916.5	917.7	919.1	920.4	921.6
130°	936.0	941.4	947.0	950.1	951.0	951.8	952.7	953.5
132.5°	968.6	973.7	978.7	981.8	982.5	983.4	984.2	985.1
135°	1015.4	1020.3	1025.2	1028.0	1028.6	1029.3	1029.9	1030.5
137.5°	1058.7	1063.3	1067.8	1070.1	1070.2	1070.4	1070.6	1070.8
140°	1086.9	1090.9	1095.0	1096.8	1096.5	1096.2	1095.9	1095.7
142.5°	1113.4	1116.8	1120.3	1121.8	1121.4	1121.0	1120.6	1120.2
145°	1151.0	1153.3	1155.6	1156.5	1156.1	1155.6	1155.2	1154.8
147.5°	1184.1	1185.3	1186.5	1186.8	1186.3	1185.7	1185.1	1184.6
150°	1205.1	1206.5	1207.8	1207.8	1206.8	1205.7	1204.6	1203.6
152.5°	1224.6	1225.8	1227.2	1227.1	1225.7	1224.2	1222.8	1221.4
155°	1250.7	1252.0	1253.3	1253.1	1251.3	1249.7	1247.9	1246.2
157.5°	1272.8	1274.2	1275.7	1275.6	1273.9	1272.2	1270.6	1268.8
160°	1285.6	1286.9	1288.2	1288.1	1286.6	1285.1	1283.6	1282.1
162.5°	1297.6	1299.0	1300.5	1300.3	1298.5	1296.6	1294.7	1292.9
165°	1312.2	1313.7	1315.2	1315.2	1313.7	1312.2	1310.7	1309.2
167.5°	1324.4	1325.9	1327.4	1327.2	1325.2	1323.3	1321.4	1319.5
170°	1330.6	1332.1	1333.6	1333.4	1331.5	1329.5	1327.6	1325.6
172.5°	1335.2	1336.7	1338.2	1338.1	1336.1	1334.2	1332.2	1330.3
175°	1340.3	1341.8	1343.3	1343.0	1340.8	1338.7	1336.5	1334.4
177.5°	1340.8	1342.0	1343.3	1343.1	1341.6	1340.0	1338.5	1336.9
180°	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2

(END OF REPORT)