

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: P331800-930

Luminaire Tested: **S122RDIW-S485D1240U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331800-930  
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: S122RDIW-S485D1240U930-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1240 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4891.7 lumens  
Efficiency: N/A  
Efficacy: 90.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

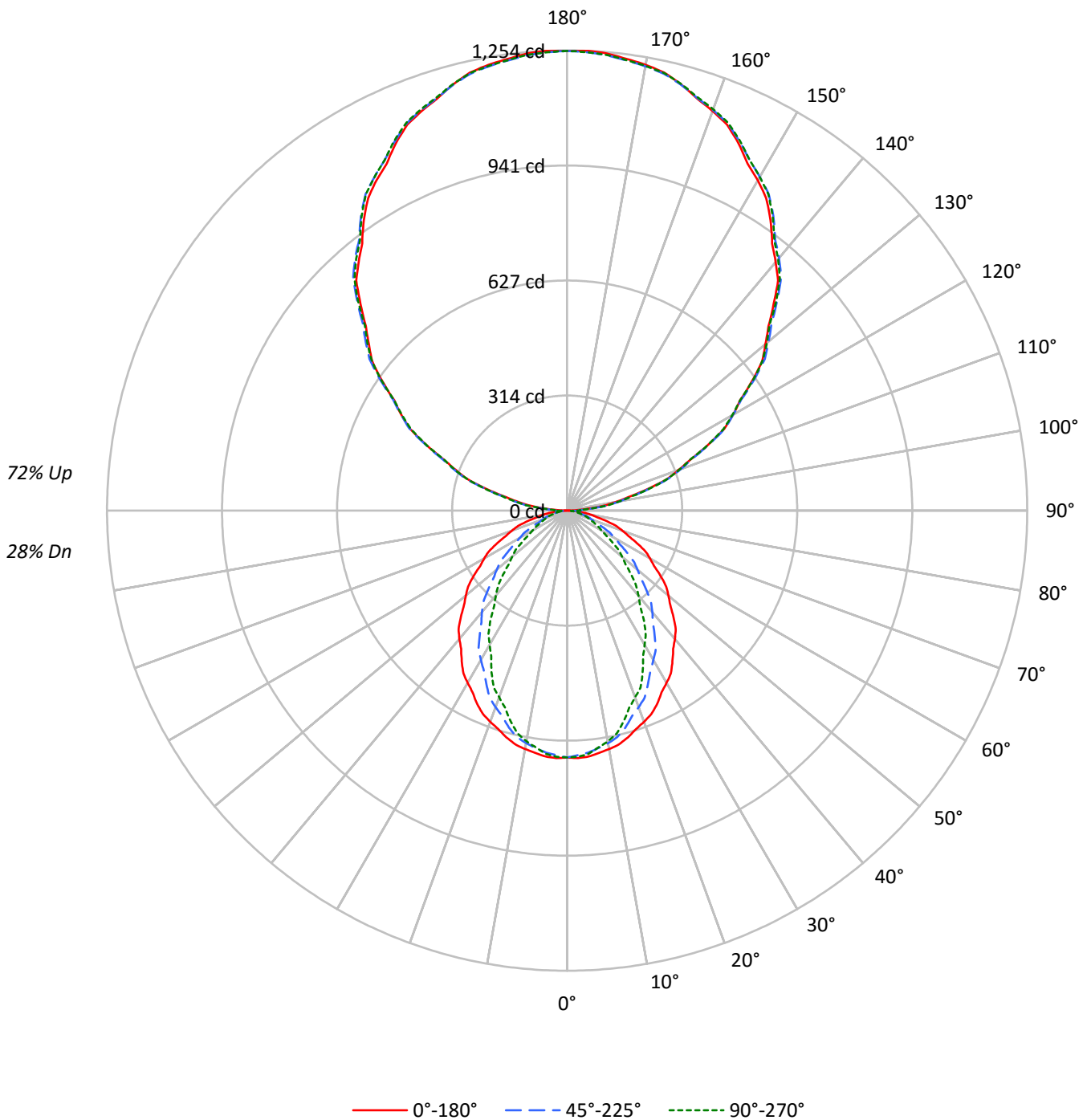
Input Watts (W): 53.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331800-930

CATALOG NUMBER: S122RDIW-S485D1240U930-4F0-1E-UDD-F1

### Luminous Intensity Polar Plot





TEST NUMBER: P331800-930

CATALOG NUMBER: S122RDIW-S485D1240U930-4F0-1E-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	77	74	63	61	59	47	46	45	32	32	31	24
2	85	78	72	67	76	70	65	61	55	52	49	42	39	38	29	28	27	21
3	78	69	62	56	69	62	56	51	49	45	42	37	34	32	26	24	23	18
4	71	61	53	48	63	55	49	44	44	39	36	33	30	28	23	21	20	16
5	65	54	47	41	58	49	42	37	39	34	31	30	27	24	21	19	17	14
6	60	49	41	35	54	44	37	33	35	30	27	27	24	21	19	17	16	12
7	56	44	36	31	50	40	33	29	32	27	24	24	21	19	18	15	14	11
8	51	40	32	27	46	36	30	25	29	24	21	22	19	17	16	14	12	10
9	48	36	29	24	43	33	27	22	27	22	19	21	17	15	15	13	11	9
10	45	33	26	22	40	30	24	20	24	20	17	19	16	13	14	12	10	8

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

	0°	45°	90°
0°	10863	10863	10863
5°	10904	10728	10786
10°	10822	10552	10462
15°	10696	10238	9944
20°	10524	9792	9301
25°	10349	9285	8678
30°	10103	8764	7879
35°	9865	8198	7177
40°	9624	7611	6365
45°	9344	6951	5631
50°	9053	6285	4908
55°	8757	5571	4217
60°	8415	4818	3500
65°	8027	4046	3186
70°	7558	3333	2932
75°	6987	3038	2739
80°	6174	2715	2492
85°	4854	2149	2149



TEST NUMBER: P331800-930

CATALOG NUMBER: S122RDIW-S485D1240U930-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.0	1.3
10°-20°	172.9	3.5
20°-30°	242.8	5.0
30°-40°	264.8	5.4
40°-50°	243.5	5.0
50°-60°	191.2	3.9
60°-70°	124.7	2.5
70°-80°	64.3	1.3
80°-90°	21.7	0.4
90°-100°	79.4	1.6
100°-110°	246.5	5.0
110°-120°	421.4	8.6
120°-130°	554.2	11.3
130°-140°	622.0	12.7
140°-150°	609.9	12.5
150°-160°	511.5	10.5
160°-170°	339.3	6.9
170°-180°	118.6	2.4
0°-30°	478.7	9.8
0°-40°	743.5	15.2
0°-60°	1178.2	24.1
0°-90°	1388.8	28.4
90°-120°	747.3	15.3
90°-150°	2533.4	51.8
90°-180°	3503.0	71.6
0°-180°	4891.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	673	673	673	673	673	
5°	673	670	662	667	666	64
15°	640	632	612	601	595	180
25°	581	560	521	497	487	267
35°	500	468	416	379	364	313
45°	409	367	304	263	247	316
55°	311	263	198	163	150	278
65°	210	160	106	86	83	208
75°	112	71	49	45	44	119
85°	26	14	12	12	12	31
90°	1	14	37	35	36	4
95°	55	65	68	68	66	63
105°	227	230	233	235	235	240
115°	423	429	427	426	423	418
125°	615	624	622	619	617	550
135°	796	807	810	809	806	615
145°	966	974	980	981	977	603
155°	1105	1108	1111	1116	1113	508
165°	1202	1201	1201	1208	1203	339
175°	1251	1248	1245	1252	1246	119
180°	1253	1253	1253	1253	1253	



TEST NUMBER: P331800-930

CATALOG NUMBER: S122RDIW-S485D1240U930-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8
2.5°	675.2	674.7	674.2	673.6	673.1	672.2	671.1	669.8	668.6	667.5	668.5
5°	672.8	672.1	671.5	670.8	670.1	668.9	667.2	665.4	663.7	661.9	663.1
7.5°	665.9	665.0	664.2	663.3	662.5	661.0	659.0	657.0	654.9	652.9	653.2
10°	660.1	659.1	658.1	657.2	656.2	654.4	651.8	649.0	646.3	643.6	643.2
12.5°	652.7	651.6	650.4	649.2	648.1	645.8	642.3	638.9	635.4	631.9	631.2
15°	639.9	638.5	637.0	635.4	634.0	631.0	626.3	621.7	617.2	612.5	610.0
17.5°	624.3	622.0	619.7	617.4	615.1	611.1	605.2	599.2	593.4	587.4	584.4
20°	612.5	609.8	607.2	604.5	601.7	597.0	590.2	583.4	576.7	569.9	566.6
22.5°	599.9	596.9	593.8	590.8	587.7	582.4	574.8	567.1	559.5	551.9	547.6
25°	580.9	576.6	572.3	567.9	563.5	556.9	548.0	539.1	530.1	521.2	515.7
27.5°	558.0	553.3	548.5	543.9	539.2	531.7	521.7	511.6	501.6	491.5	485.0
30°	541.9	536.8	531.7	526.5	521.4	513.4	502.6	491.7	480.9	470.1	463.2
32.5°	526.4	520.3	514.3	508.3	502.3	493.7	482.7	471.7	460.6	449.6	441.7
35°	500.5	493.6	486.7	479.8	472.9	463.5	451.6	439.7	427.8	415.9	407.3
37.5°	474.7	467.1	459.5	451.9	444.4	434.2	421.6	408.9	396.2	383.5	374.1
40°	456.6	448.6	440.4	432.4	424.2	413.6	400.5	387.3	374.2	361.1	351.5
42.5°	438.1	429.6	421.0	412.5	404.0	392.9	379.4	365.7	352.2	338.7	328.7
45°	409.2	400.1	391.0	382.0	372.9	361.3	347.1	332.9	318.6	304.4	294.8
47.5°	380.9	371.3	361.7	352.1	342.5	330.4	315.7	301.0	286.3	271.7	262.1
50°	360.4	350.8	341.3	331.7	322.0	309.8	294.9	280.1	265.1	250.2	240.9
52.5°	340.5	330.4	320.4	310.4	300.4	288.0	273.5	258.9	244.3	229.8	220.8
55°	311.1	300.6	290.0	279.5	269.0	256.3	241.7	227.1	212.5	197.9	189.8
57.5°	281.0	270.3	259.4	248.6	237.7	225.3	211.3	197.2	183.2	169.2	161.7
60°	260.6	249.8	239.0	228.1	217.3	205.0	191.0	177.1	163.1	149.2	142.3
62.5°	240.6	229.8	219.0	208.1	197.3	185.3	172.0	158.7	145.4	132.2	125.6
65°	210.1	199.1	188.2	177.2	166.2	154.7	142.5	130.3	118.1	105.9	101.3
67.5°	180.6	169.7	158.8	148.0	137.1	126.1	115.2	104.3	93.3	82.3	80.2
70°	160.1	149.6	139.0	128.5	117.9	107.9	98.7	89.3	80.0	70.6	69.3
72.5°	140.6	130.5	120.4	110.3	100.2	91.4	83.9	76.4	68.9	61.4	60.3
75°	112.0	102.6	93.1	83.6	74.1	67.1	62.5	57.9	53.3	48.7	47.8
77.5°	83.9	75.6	67.3	58.9	50.7	45.4	43.2	41.0	38.7	36.5	36.0
80°	66.4	59.4	52.6	45.7	38.7	34.7	33.3	32.0	30.6	29.2	28.7
82.5°	50.3	44.9	39.5	34.2	28.8	25.6	24.7	23.7	22.8	21.9	21.6
85°	26.2	23.3	20.5	17.7	14.8	13.2	12.8	12.4	12.0	11.6	11.6
87.5°	8.0	7.7	7.4	7.1	6.8	7.2	8.2	9.2	10.3	11.3	11.1
90°	1.1	3.9	6.7	9.5	12.3	16.3	21.5	26.7	31.8	37.0	36.5
92.5°	18.8	20.9	23.0	25.0	27.1	28.7	29.9	31.1	32.4	33.6	33.7
95°	55.0	57.3	59.7	62.0	64.4	65.8	66.3	66.7	67.2	67.7	67.7
97.5°	100.4	102.5	104.6	106.6	108.7	110.1	111.0	111.9	112.8	113.7	113.7
100°	134.3	136.2	138.0	139.9	141.8	143.1	143.7	144.5	145.2	145.9	145.9
102.5°	169.7	171.3	172.8	174.3	175.8	177.0	177.9	178.8	179.7	180.6	180.8
105°	227.3	228.0	228.7	229.4	230.1	230.7	231.1	231.6	232.1	232.6	233.0
107.5°	285.2	286.3	287.3	288.3	289.3	289.8	289.8	289.8	289.8	289.8	290.1
110°	322.5	323.8	325.2	326.7	328.1	328.8	328.8	328.8	328.8	328.8	328.8



TEST NUMBER: P331800-930

CATALOG NUMBER: S122RDIW-S485D1240U930-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	363.1	364.4	365.8	367.3	368.7	369.2	369.1	368.9	368.7	368.5	367.9
115°	422.9	424.3	425.7	427.1	428.5	428.9	428.5	428.0	427.5	427.1	426.9
117.5°	482.5	484.4	486.2	488.1	490.0	490.3	488.9	487.6	486.3	485.0	484.5
120°	522.2	524.1	526.0	527.9	529.8	529.8	527.9	526.0	524.1	522.2	522.2
122.5°	558.6	560.8	563.1	565.3	567.6	568.1	566.8	565.5	564.1	562.8	562.2
125°	615.2	617.3	619.5	621.6	623.7	624.4	623.7	623.1	622.3	621.6	620.9
127.5°	670.4	673.1	675.8	678.5	681.2	682.1	681.3	680.4	679.6	678.7	677.8
130°	705.2	708.2	711.3	714.3	717.3	718.6	718.2	717.7	717.2	716.7	716.2
132.5°	744.0	746.5	749.0	751.5	754.0	755.3	755.4	755.5	755.5	755.6	754.6
135°	796.1	798.6	801.2	803.8	806.4	807.9	808.4	808.9	809.3	809.8	809.5
137.5°	850.8	852.9	855.0	857.1	859.2	860.6	861.2	861.9	862.4	863.1	862.9
140°	883.8	885.9	888.0	890.1	892.3	893.9	895.0	896.3	897.4	898.5	898.5
142.5°	917.6	919.7	921.9	924.0	926.1	927.5	928.3	929.1	929.9	930.7	930.9
145°	966.2	967.9	969.6	971.2	972.8	974.4	975.8	977.1	978.6	980.0	980.2
147.5°	1009.6	1011.5	1013.5	1015.5	1017.5	1019.0	1019.9	1020.8	1021.7	1022.7	1023.2
150°	1039.2	1040.6	1042.0	1043.4	1044.8	1046.0	1046.9	1047.9	1048.8	1049.8	1050.4
152.5°	1065.4	1066.8	1068.2	1069.6	1071.1	1072.3	1073.4	1074.6	1075.7	1076.8	1077.7
155°	1104.7	1105.5	1106.1	1106.9	1107.6	1108.2	1109.0	1109.6	1110.4	1111.1	1112.2
157.5°	1138.3	1138.8	1139.3	1139.8	1140.2	1140.7	1141.1	1141.5	1141.9	1142.4	1143.9
160°	1158.6	1159.1	1159.6	1160.1	1160.5	1160.9	1161.1	1161.3	1161.6	1161.8	1163.2
162.5°	1177.2	1177.4	1177.5	1177.5	1177.6	1177.8	1178.0	1178.3	1178.5	1178.8	1180.3
165°	1202.0	1201.8	1201.5	1201.3	1201.0	1200.9	1200.9	1200.9	1200.9	1200.9	1202.6
167.5°	1222.7	1222.0	1221.3	1220.6	1219.9	1219.5	1219.4	1219.4	1219.4	1219.3	1221.0
170°	1233.7	1233.0	1232.3	1231.6	1230.9	1230.4	1230.2	1230.0	1229.7	1229.5	1231.1
172.5°	1241.3	1240.6	1239.9	1239.2	1238.5	1238.0	1237.8	1237.5	1237.3	1237.1	1238.8
175°	1250.6	1249.9	1249.2	1248.5	1247.8	1247.2	1246.8	1246.3	1245.8	1245.3	1247.0
177.5°	1254.4	1253.8	1253.3	1252.7	1252.1	1251.7	1251.3	1250.9	1250.6	1250.2	1251.3
180°	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7



TEST NUMBER: P331800-930

CATALOG NUMBER: S122RDIW-S485D1240U930-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8
2.5°	669.6	670.7	671.8	672.2	672.1	671.8	671.6	671.4
5°	664.3	665.5	666.8	667.2	666.8	666.3	665.9	665.5
7.5°	653.5	653.9	654.3	654.1	653.4	652.6	652.0	651.3
10°	642.8	642.4	642.0	641.4	640.6	639.8	639.0	638.1
12.5°	630.5	629.7	629.0	627.9	626.6	625.3	623.9	622.6
15°	607.4	604.9	602.3	600.3	598.9	597.6	596.2	594.9
17.5°	581.3	578.3	575.2	572.5	570.2	567.9	565.6	563.2
20°	563.1	559.8	556.4	553.2	550.2	547.2	544.3	541.3
22.5°	543.2	538.8	534.5	531.2	529.0	526.8	524.6	522.3
25°	510.1	504.6	499.0	495.2	493.2	491.1	489.2	487.1
27.5°	478.6	472.1	465.6	460.8	457.5	454.4	451.1	447.9
30°	456.2	449.4	442.5	437.2	433.5	429.9	426.2	422.6
32.5°	433.8	426.0	418.1	412.5	409.0	405.6	402.1	398.7
35°	398.8	390.3	381.8	376.0	373.1	370.1	367.1	364.1
37.5°	364.7	355.3	345.9	339.5	336.1	332.7	329.3	325.9
40°	341.9	332.2	322.6	316.1	312.6	309.1	305.5	302.0
42.5°	318.8	308.8	299.0	292.3	288.9	285.4	282.0	278.6
45°	285.2	275.7	266.0	259.6	256.3	253.1	249.8	246.6
47.5°	252.6	243.0	233.5	227.2	224.3	221.4	218.3	215.4
50°	231.5	222.3	212.9	206.8	204.0	201.1	198.3	195.4
52.5°	211.7	202.8	193.7	187.9	185.3	182.7	180.0	177.4
55°	181.6	173.5	165.4	160.0	157.5	154.9	152.4	149.8
57.5°	154.3	146.8	139.4	134.6	132.4	130.3	128.1	125.9
60°	135.3	128.5	121.6	117.1	114.9	112.7	110.6	108.4
62.5°	119.0	112.4	105.8	101.9	100.6	99.3	98.0	96.7
65°	96.8	92.1	87.6	85.0	84.6	84.2	83.8	83.4
67.5°	78.1	76.0	73.9	72.6	72.2	71.7	71.3	70.8
70°	67.9	66.6	65.2	64.2	63.8	63.2	62.6	62.1
72.5°	59.1	58.0	56.8	56.1	55.8	55.4	55.1	54.8
75°	46.8	45.9	44.9	44.4	44.3	44.1	43.9	43.9
77.5°	35.5	34.9	34.4	34.0	33.8	33.6	33.3	33.1
80°	28.1	27.6	27.1	26.8	26.8	26.8	26.8	26.8
82.5°	21.3	21.0	20.6	20.5	20.5	20.5	20.5	20.5
85°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
87.5°	10.9	10.7	10.5	10.4	10.4	10.5	10.5	10.6
90°	36.0	35.6	35.1	35.0	35.2	35.5	35.7	36.0
92.5°	33.8	33.9	34.0	34.1	34.1	34.2	34.2	34.2
95°	67.7	67.7	67.7	67.4	66.9	66.4	66.0	65.6
97.5°	113.7	113.7	113.7	113.7	113.7	113.7	113.6	113.6
100°	145.9	145.9	145.9	145.8	145.5	145.3	145.0	144.8
102.5°	180.9	181.2	181.3	181.3	181.1	180.8	180.6	180.3
105°	233.5	234.0	234.5	234.7	234.7	234.7	234.7	234.7
107.5°	290.2	290.4	290.7	290.2	289.1	288.0	286.9	285.8
110°	328.8	328.8	328.8	328.4	327.8	327.0	326.3	325.6





TEST NUMBER: P331800-930

CATALOG NUMBER: S122RDIW-S485D1240U930-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	367.4	366.8	366.2	365.7	365.2	364.7	364.2	363.6
115°	426.6	426.4	426.2	425.7	425.0	424.3	423.5	422.9
117.5°	483.9	483.3	482.7	482.2	481.4	480.7	480.0	479.3
120°	522.2	522.2	522.2	521.9	521.1	520.5	519.8	519.1
122.5°	561.7	561.2	560.6	560.0	559.5	559.0	558.5	558.0
125°	620.2	619.5	618.8	618.3	618.1	617.8	617.6	617.3
127.5°	677.0	676.1	675.3	674.5	673.8	673.0	672.3	671.5
130°	715.8	715.3	714.9	714.2	713.2	712.3	711.3	710.4
132.5°	753.6	752.5	751.5	750.6	749.9	749.1	748.4	747.6
135°	809.3	809.1	808.9	808.4	807.6	807.0	806.2	805.5
137.5°	862.7	862.5	862.3	861.8	860.8	859.9	858.9	858.0
140°	898.5	898.5	898.5	898.1	897.2	896.3	895.3	894.4
142.5°	931.1	931.3	931.5	931.1	930.2	929.2	928.3	927.3
145°	980.5	980.7	980.9	980.6	979.7	978.7	977.8	976.8
147.5°	1023.7	1024.3	1024.7	1024.6	1023.7	1022.8	1021.9	1021.0
150°	1051.2	1051.9	1052.6	1052.6	1051.9	1051.2	1050.4	1049.8
152.5°	1078.6	1079.5	1080.4	1080.4	1079.5	1078.6	1077.7	1076.8
155°	1113.5	1114.6	1115.7	1116.0	1115.3	1114.6	1113.9	1113.2
157.5°	1145.6	1147.1	1148.8	1149.0	1147.9	1146.7	1145.6	1144.4
160°	1164.7	1166.0	1167.4	1167.7	1166.8	1165.8	1164.9	1163.9
162.5°	1181.9	1183.5	1185.1	1185.4	1184.2	1183.1	1181.9	1180.9
165°	1204.2	1205.8	1207.5	1207.7	1206.6	1205.4	1204.2	1203.1
167.5°	1222.6	1224.3	1225.9	1226.1	1224.9	1223.7	1222.5	1221.2
170°	1232.7	1234.4	1236.1	1236.2	1234.8	1233.4	1231.9	1230.5
172.5°	1240.4	1242.0	1243.7	1243.7	1242.4	1241.0	1239.6	1238.1
175°	1248.6	1250.3	1251.9	1252.1	1250.6	1249.2	1247.8	1246.3
177.5°	1252.5	1253.6	1254.7	1254.7	1253.6	1252.5	1251.3	1250.2
180°	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7

(END OF REPORT)