

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: P331799-930

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331799-930  
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: S122RDIW-S485D1240U930-4F0-1E-UDD-F  
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, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5426.4 lumens  
Efficiency: N/A  
Efficacy: 100.9 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

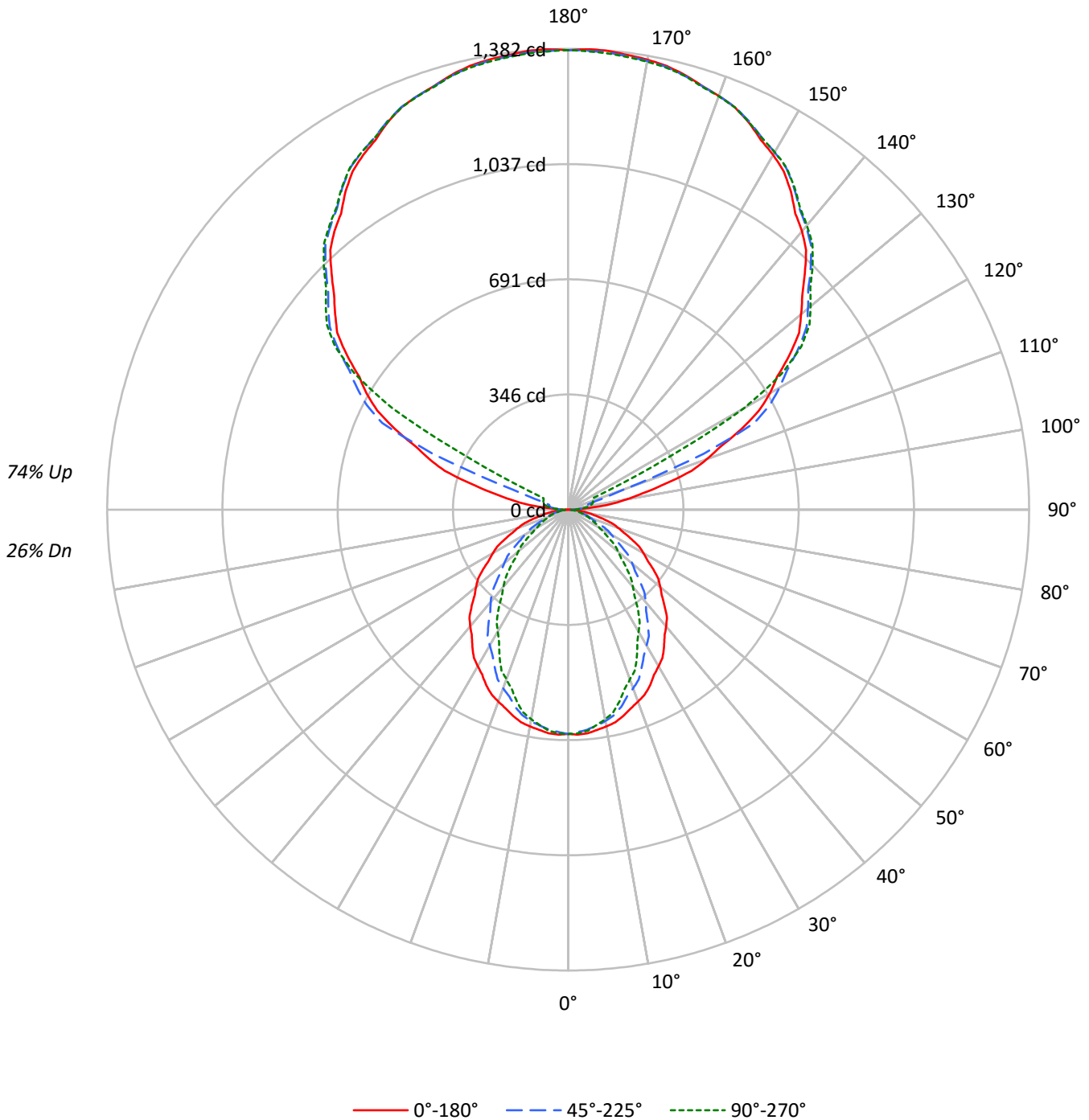
Input Watts (W): 53.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331799-930

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

### Luminous Intensity Polar Plot





TEST NUMBER: P331799-930

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

**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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	26
1	93	88	85	82	82	79	76	73	61	59	57	45	44	43	30	29	29	22
2	84	77	72	67	75	69	64	60	54	51	48	40	38	36	27	26	25	19
3	77	68	61	56	69	61	55	51	48	44	41	35	33	31	24	22	21	16
4	71	60	53	47	63	54	48	43	42	38	35	32	29	26	21	20	18	14
5	65	54	46	41	58	48	42	37	38	33	30	28	25	23	19	18	16	12
6	60	48	41	35	53	43	37	32	34	30	26	26	23	20	18	16	14	11
7	55	43	36	31	49	39	33	28	31	26	23	23	20	18	16	14	13	10
8	51	39	32	27	45	35	29	25	28	24	20	21	18	16	15	13	12	9
9	47	36	29	24	42	32	26	22	26	21	18	20	16	14	14	12	10	8
10	44	33	26	21	39	30	24	20	24	19	16	18	15	13	13	11	9	7

**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: P331799-930

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

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.0	1.2
10°-20°	172.9	3.2
20°-30°	242.8	4.5
30°-40°	264.8	4.9
40°-50°	243.5	4.5
50°-60°	191.2	3.5
60°-70°	124.7	2.3
70°-80°	64.3	1.2
80°-90°	20.1	0.4
90°-100°	46.0	0.8
100°-110°	168.6	3.1
110°-120°	450.7	8.3
120°-130°	744.0	13.7
130°-140°	791.2	14.6
140°-150°	735.4	13.6
150°-160°	591.2	10.9
160°-170°	381.0	7.0
170°-180°	131.1	2.4
0°-30°	478.7	8.8
0°-40°	743.5	13.7
0°-60°	1178.2	21.7
0°-90°	1387.2	25.6
90°-120°	665.3	12.3
90°-150°	2935.8	54.1
90°-180°	4039.0	74.4
0°-180°	5426.4	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	12	20	25	27	4
95°	65	34	39	44	43	79
105°	303	316	61	71	76	324
115°	574	591	615	175	82	564
125°	811	824	843	850	853	723
135°	1003	1019	1028	1038	1036	775
145°	1164	1164	1180	1186	1182	728
155°	1282	1274	1285	1290	1282	590
165°	1350	1345	1347	1354	1347	381
175°	1381	1375	1376	1382	1373	131
180°	1378	1378	1378	1378	1378	



TEST NUMBER: P331799-930

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

**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	7.6	7.3	6.8	6.4	6.4	6.8	7.2	7.5	7.9	8.0
90°	1.0	3.4	5.9	8.3	10.8	12.9	14.6	16.4	18.2	20.0	21.0
92.5°	20.1	19.9	19.7	19.5	19.2	19.6	20.5	21.4	22.3	23.2	23.7
95°	64.8	57.5	50.2	42.9	35.5	32.7	34.2	35.8	37.3	38.9	40.0
97.5°	128.7	108.0	87.4	66.9	46.2	37.7	41.3	44.8	48.5	52.1	52.9
100°	176.5	146.2	115.8	85.4	55.1	41.7	45.6	49.3	53.1	56.8	58.6
102.5°	229.2	222.7	216.3	209.9	203.5	184.5	153.0	121.5	89.9	58.5	60.7
105°	303.2	309.8	316.5	323.1	329.8	302.9	242.4	181.8	121.3	60.8	63.3
107.5°	387.6	392.9	398.3	403.7	409.0	375.4	302.9	230.3	157.8	85.2	82.7
110°	441.8	446.5	451.1	455.8	460.4	430.7	366.7	302.6	238.6	174.6	152.4



TEST NUMBER: P331799-930

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

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	492.8	497.0	501.1	505.2	509.4	503.5	487.7	471.9	456.1	440.2	359.4
115°	573.5	577.2	581.0	584.7	588.6	593.2	598.8	604.3	609.8	615.4	512.7
117.5°	645.5	649.7	653.9	658.1	662.3	666.3	670.1	673.9	677.8	681.6	656.7
120°	698.1	701.5	704.7	708.1	711.4	715.1	719.1	723.1	727.1	731.0	733.7
122.5°	742.8	746.3	749.8	753.3	756.8	760.8	765.1	769.4	773.8	778.1	779.7
125°	810.8	813.7	816.6	819.5	822.3	825.9	830.1	834.3	838.5	842.8	844.3
127.5°	872.5	875.6	878.8	882.1	885.3	888.4	891.5	894.7	897.8	901.0	903.3
130°	911.6	915.1	918.7	922.2	925.8	928.7	931.2	933.6	936.0	938.5	940.9
132.5°	951.5	954.5	957.5	960.5	963.5	966.2	968.7	971.1	973.5	976.0	978.0
135°	1003.3	1006.8	1010.4	1013.9	1017.5	1020.3	1022.2	1024.3	1026.2	1028.3	1030.5
137.5°	1055.7	1058.3	1060.7	1063.2	1065.7	1068.0	1070.3	1072.6	1074.8	1077.1	1079.3
140°	1090.1	1091.8	1093.6	1095.4	1097.1	1099.3	1101.7	1104.2	1106.6	1109.1	1111.0
142.5°	1118.8	1120.4	1122.0	1123.6	1125.2	1127.4	1130.2	1132.9	1135.7	1138.6	1140.4
145°	1163.8	1163.7	1163.4	1163.2	1163.0	1164.7	1168.6	1172.3	1176.1	1179.8	1181.4
147.5°	1203.1	1202.3	1201.5	1200.6	1199.8	1201.3	1204.9	1208.7	1212.4	1216.1	1217.3
150°	1228.7	1227.2	1225.6	1224.0	1222.5	1223.5	1227.0	1230.6	1234.1	1237.7	1239.0
152.5°	1250.3	1248.5	1246.8	1245.0	1243.3	1244.1	1247.5	1250.9	1254.3	1257.6	1259.0
155°	1281.6	1279.5	1277.6	1275.5	1273.6	1273.9	1276.6	1279.2	1281.9	1284.6	1285.9
157.5°	1306.1	1304.4	1302.7	1301.1	1299.3	1299.4	1301.3	1303.2	1305.0	1306.9	1308.4
160°	1320.5	1319.2	1317.8	1316.5	1315.2	1315.2	1316.5	1317.8	1319.2	1320.5	1321.8
162.5°	1333.3	1331.9	1330.6	1329.3	1327.9	1327.8	1328.9	1330.1	1331.3	1332.4	1333.9
165°	1350.4	1349.1	1347.7	1346.4	1345.1	1344.8	1345.4	1346.1	1346.7	1347.4	1348.9
167.5°	1363.2	1361.8	1360.5	1359.2	1357.8	1357.5	1358.1	1358.7	1359.3	1359.9	1361.5
170°	1370.4	1369.0	1367.7	1366.4	1365.0	1364.6	1365.0	1365.5	1365.9	1366.4	1367.9
172.5°	1375.1	1373.8	1372.5	1371.1	1369.8	1369.4	1369.8	1370.2	1370.7	1371.1	1372.6
175°	1381.3	1379.7	1378.2	1376.6	1375.1	1374.5	1375.0	1375.4	1375.9	1376.3	1377.9
177.5°	1382.3	1381.0	1379.8	1378.6	1377.3	1376.8	1377.0	1377.1	1377.3	1377.5	1378.8
180°	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3



TEST NUMBER: P331799-930

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

**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°	8.2	8.2	8.3	8.5	8.6	8.6	8.7	8.8
90°	22.2	23.2	24.4	25.2	25.6	26.0	26.5	26.9
92.5°	24.3	24.9	25.4	25.8	26.1	26.4	26.7	26.9
95°	41.1	42.2	43.3	43.8	43.5	43.3	43.1	42.9
97.5°	53.8	54.7	55.6	56.2	56.4	56.7	57.0	57.2
100°	60.4	62.1	63.9	65.1	65.5	66.0	66.4	66.9
102.5°	63.0	65.4	67.7	69.1	69.7	70.4	71.0	71.6
105°	65.7	68.2	70.6	72.2	73.1	74.0	74.9	75.8
107.5°	80.2	77.7	75.3	74.4	75.3	76.2	77.1	78.0
110°	130.2	108.0	85.9	75.3	76.1	77.0	77.9	78.8





TEST NUMBER: P331799-930

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

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	278.5	197.7	116.8	76.7	77.5	78.2	78.8	79.6
115°	410.1	307.5	204.9	145.6	129.6	113.7	97.8	81.8
117.5°	631.9	607.1	582.3	543.6	491.2	438.8	386.4	333.9
120°	736.4	739.0	741.7	728.1	698.1	668.2	638.3	608.4
122.5°	781.3	782.9	784.5	782.4	776.6	770.8	765.0	759.1
125°	845.9	847.4	849.0	850.0	850.7	851.4	852.1	852.7
127.5°	905.5	907.8	910.0	911.3	911.3	911.5	911.6	911.7
130°	943.4	945.8	948.2	949.3	949.1	948.9	948.7	948.4
132.5°	980.2	982.2	984.3	985.2	985.0	984.8	984.6	984.4
135°	1032.7	1034.9	1037.1	1038.0	1037.5	1037.1	1036.7	1036.2
137.5°	1081.4	1083.6	1085.8	1086.5	1085.7	1085.0	1084.3	1083.5
140°	1113.0	1115.0	1117.0	1117.4	1116.3	1115.2	1114.1	1113.0
142.5°	1142.2	1144.0	1145.8	1146.1	1145.1	1143.9	1142.8	1141.7
145°	1182.9	1184.5	1186.0	1186.3	1185.1	1184.1	1182.9	1181.9
147.5°	1218.5	1219.6	1220.7	1220.8	1219.9	1219.0	1218.1	1217.2
150°	1240.3	1241.7	1243.0	1243.1	1242.0	1240.9	1239.7	1238.7
152.5°	1260.3	1261.6	1263.0	1262.9	1261.4	1260.0	1258.5	1257.0
155°	1287.2	1288.6	1289.9	1289.6	1287.8	1286.1	1284.3	1282.5
157.5°	1309.9	1311.4	1313.0	1312.8	1311.1	1309.4	1307.7	1305.9
160°	1323.1	1324.5	1325.8	1325.7	1324.1	1322.6	1321.0	1319.5
162.5°	1335.5	1336.9	1338.5	1338.2	1336.4	1334.4	1332.5	1330.6
165°	1350.5	1352.0	1353.6	1353.6	1352.0	1350.5	1348.9	1347.4
167.5°	1363.0	1364.6	1366.1	1366.0	1363.9	1362.0	1359.9	1358.0
170°	1369.5	1371.0	1372.6	1372.3	1370.4	1368.3	1366.4	1364.3
172.5°	1374.2	1375.7	1377.3	1377.1	1375.1	1373.1	1371.1	1369.1
175°	1379.4	1381.0	1382.5	1382.2	1380.0	1377.8	1375.5	1373.3
177.5°	1380.0	1381.2	1382.5	1382.3	1380.7	1379.1	1377.5	1375.9
180°	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3

(END OF REPORT)