

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: P331792-935

Luminaire Tested: **S122RDIW-S485D710U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331792-935
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: S122RDIW-S485D710U935-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3581.4 lumens
Efficiency: N/A
Efficacy: 95.3 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: General Diffuse

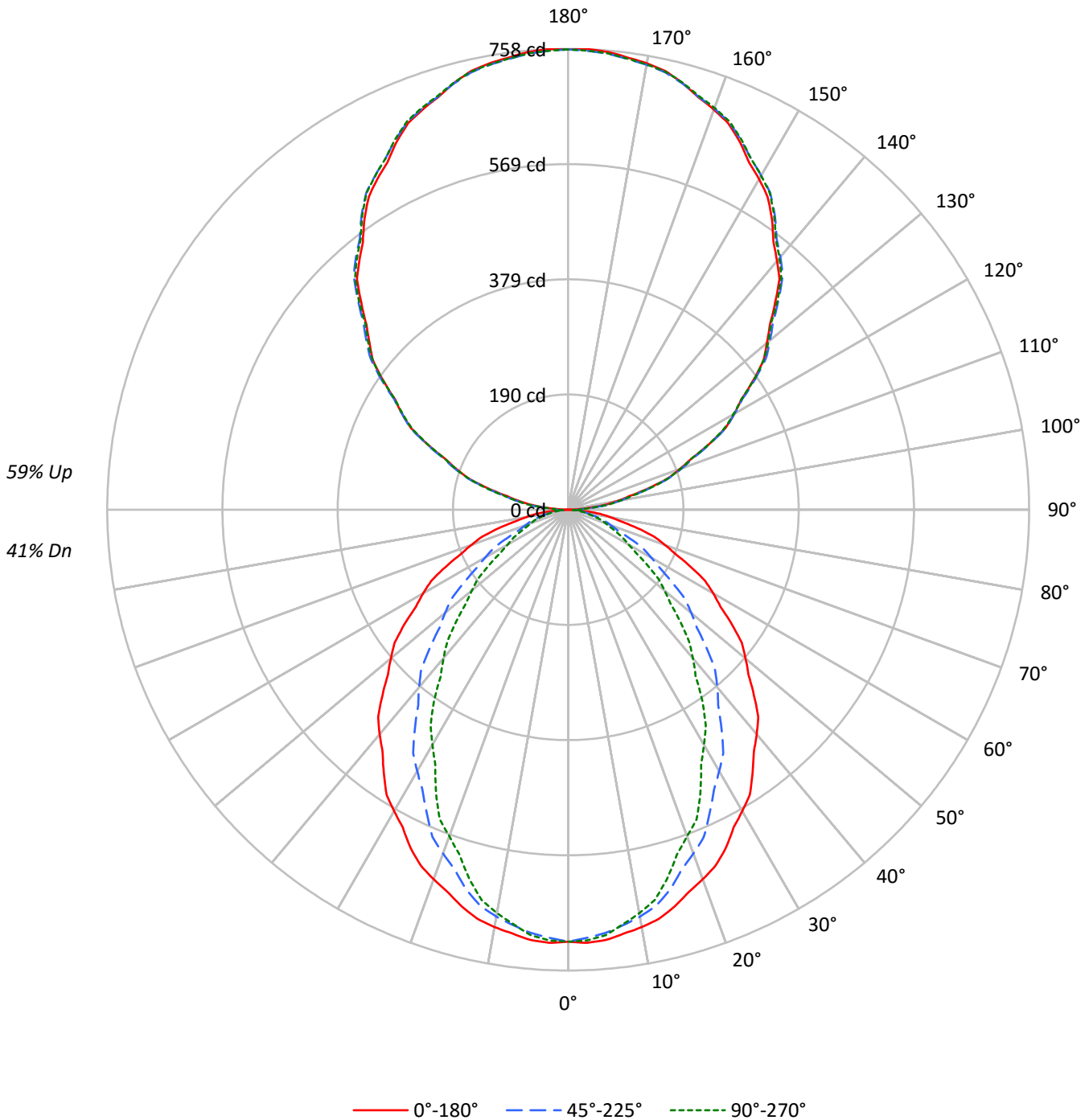
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331792-935

CATALOG NUMBER: S122RDIW-S485D710U935-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P331792-935

CATALOG NUMBER: S122RDIW-S485D710U935-4F0-1E-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	50	30	10	0	
RCR																						
0	105	105	105	105	96	96	96	96	78	78	78	62	62	62	48	48	48	41				
1	96	92	88	85	87	84	81	78	69	67	65	55	54	53	43	42	41	35				
2	88	81	75	70	80	74	69	65	61	57	54	49	47	45	38	37	35	30				
3	80	71	64	59	73	65	59	54	54	50	46	44	41	38	34	32	30	26				
4	74	63	56	50	67	58	52	46	48	43	40	39	36	33	31	28	26	23				
5	68	57	49	43	62	52	45	40	43	38	34	35	32	29	28	25	23	20				
6	62	51	43	37	57	47	40	35	39	34	30	32	28	25	25	23	21	18				
7	58	46	38	33	53	42	36	31	36	30	27	29	25	23	23	21	19	16				
8	54	42	34	29	49	39	32	27	33	27	24	27	23	20	21	19	17	14				
9	50	38	31	26	46	35	29	24	30	25	21	25	21	18	20	17	15	13				
10	47	35	28	23	43	32	26	22	28	23	19	23	19	17	18	16	14	12				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11472	11472	11472
5°	11515	11329	11391
10°	11429	11144	11049
15°	11296	10813	10502
20°	11115	10340	9821
25°	10929	9805	9164
30°	10670	9257	8321
35°	10419	8657	7579
40°	10163	8037	6721
45°	9866	7341	5948
50°	9560	6636	5184
55°	9250	5883	4453
60°	8887	5089	3694
65°	8478	4271	3366
70°	7983	3522	3097
75°	7380	3206	2888
80°	6518	2864	2631
85°	5113	2260	2260



TEST NUMBER: P331792-935

CATALOG NUMBER: S122RDIW-S485D710U935-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.5	1.9
10°-20°	182.6	5.1
20°-30°	256.4	7.2
30°-40°	279.6	7.8
40°-50°	257.1	7.2
50°-60°	201.9	5.6
60°-70°	131.7	3.7
70°-80°	67.9	1.9
80°-90°	20.6	0.6
90°-100°	48.0	1.3
100°-110°	149.0	4.2
110°-120°	254.7	7.1
120°-130°	334.9	9.4
130°-140°	375.9	10.5
140°-150°	368.6	10.3
150°-160°	309.2	8.6
160°-170°	205.1	5.7
170°-180°	71.7	2.0
0°-30°	505.6	14.1
0°-40°	785.2	21.9
0°-60°	1244.3	34.7
0°-90°	1464.4	40.9
90°-120°	451.7	12.6
90°-150°	1531.1	42.8
90°-180°	2117.0	59.1
0°-180°	3581.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	710	710	710	710	710	
5°	710	707	699	704	703	67
15°	676	668	647	635	628	190
25°	614	592	550	525	514	282
35°	529	494	439	400	384	331
45°	432	388	322	278	260	334
55°	329	277	209	172	158	293
65°	222	169	112	91	88	220
75°	118	75	51	47	46	125
85°	28	15	12	12	12	33
90°	1	9	22	21	22	3
95°	33	39	41	41	40	38
105°	137	139	141	142	142	145
115°	256	259	258	257	256	253
125°	372	377	376	374	373	332
135°	481	488	489	489	487	372
145°	584	588	592	593	590	365
155°	668	670	672	674	673	307
165°	726	726	726	730	727	205
175°	756	754	753	757	753	72
180°	757	757	757	757	757	



TEST NUMBER: P331792-935

CATALOG NUMBER: S122RDIW-S485D710U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5
2.5°	713.1	712.6	712.0	711.4	710.8	709.9	708.7	707.4	706.1	704.9	706.0
5°	710.5	709.8	709.1	708.4	707.7	706.4	704.6	702.7	700.9	699.0	700.3
7.5°	703.2	702.3	701.5	700.5	699.6	698.1	695.9	693.8	691.6	689.5	689.8
10°	697.1	696.0	695.0	694.1	693.0	691.1	688.3	685.4	682.5	679.7	679.2
12.5°	689.3	688.1	686.8	685.6	684.4	682.0	678.3	674.7	671.0	667.4	666.6
15°	675.8	674.2	672.7	671.1	669.5	666.3	661.4	656.6	651.8	646.9	644.2
17.5°	659.3	656.9	654.4	652.0	649.6	645.3	639.1	632.8	626.6	620.4	617.2
20°	646.9	644.0	641.2	638.3	635.4	630.4	623.3	616.1	609.0	601.8	598.3
22.5°	633.5	630.3	627.1	623.9	620.7	615.1	607.0	598.9	590.9	582.8	578.2
25°	613.5	608.9	604.3	599.7	595.1	588.1	578.7	569.3	559.8	550.4	544.6
27.5°	589.3	584.3	579.3	574.4	569.4	561.5	551.0	540.3	529.7	519.0	512.2
30°	572.3	566.9	561.5	556.0	550.6	542.2	530.7	519.3	507.8	496.5	489.1
32.5°	555.9	549.5	543.1	536.8	530.5	521.4	509.8	498.1	486.5	474.8	466.5
35°	528.6	521.2	514.0	506.7	499.4	489.5	476.9	464.3	451.8	439.2	430.2
37.5°	501.3	493.3	485.3	477.3	469.3	458.6	445.2	431.8	418.4	405.0	395.0
40°	482.2	473.7	465.1	456.6	448.0	436.8	422.9	409.1	395.2	381.3	371.2
42.5°	462.7	453.7	444.6	435.7	426.6	414.9	400.6	386.2	372.0	357.7	347.2
45°	432.1	422.6	412.9	403.4	393.8	381.5	366.5	351.5	336.5	321.5	311.3
47.5°	402.3	392.1	382.0	371.9	361.7	348.9	333.4	317.9	302.4	286.9	276.8
50°	380.6	370.5	360.4	350.3	340.1	327.2	311.4	295.8	280.0	264.2	254.4
52.5°	359.6	349.0	338.4	327.8	317.2	304.2	288.8	273.5	258.0	242.7	233.2
55°	328.6	317.5	306.3	295.2	284.0	270.7	255.3	239.9	224.4	209.0	200.4
57.5°	296.8	285.4	274.0	262.5	251.1	238.0	223.2	208.3	193.5	178.7	170.7
60°	275.2	263.8	252.4	240.9	229.5	216.5	201.7	187.0	172.3	157.6	150.2
62.5°	254.1	242.7	231.3	219.8	208.4	195.7	181.7	167.6	153.6	139.6	132.6
65°	221.9	210.3	198.7	187.1	175.6	163.3	150.5	137.6	124.8	111.8	107.0
67.5°	190.7	179.3	167.7	156.3	144.7	133.2	121.7	110.1	98.5	87.0	84.7
70°	169.1	158.0	146.8	135.7	124.5	114.0	104.2	94.3	84.5	74.6	73.2
72.5°	148.5	137.8	127.2	116.5	105.8	96.5	88.6	80.7	72.8	64.8	63.6
75°	118.3	108.3	98.3	88.3	78.3	70.9	66.0	61.1	56.3	51.4	50.5
77.5°	88.6	79.8	71.0	62.3	53.6	48.0	45.6	43.3	40.9	38.6	38.0
80°	70.1	62.8	55.5	48.2	40.9	36.6	35.1	33.8	32.3	30.8	30.3
82.5°	53.1	47.4	41.8	36.1	30.4	27.0	26.1	25.1	24.1	23.2	22.8
85°	27.6	24.6	21.6	18.7	15.7	13.9	13.5	13.1	12.7	12.2	12.2
87.5°	8.4	7.7	7.2	6.6	6.0	6.1	6.7	7.3	7.9	8.6	8.4
90°	0.6	2.3	4.0	5.8	7.5	9.9	13.0	16.1	19.2	22.4	22.0
92.5°	11.4	12.7	13.9	15.2	16.4	17.4	18.1	18.9	19.5	20.3	20.4
95°	33.2	34.6	36.1	37.5	38.9	39.8	40.0	40.3	40.6	40.9	40.9
97.5°	60.7	61.9	63.2	64.4	65.7	66.6	67.2	67.7	68.2	68.7	68.7
100°	81.1	82.3	83.4	84.6	85.7	86.4	86.9	87.3	87.7	88.2	88.2
102.5°	102.6	103.5	104.4	105.3	106.2	106.9	107.5	108.1	108.6	109.1	109.3
105°	137.3	137.8	138.2	138.6	139.1	139.4	139.7	140.0	140.3	140.6	140.9
107.5°	172.4	173.0	173.7	174.3	174.9	175.2	175.2	175.2	175.2	175.2	175.3
110°	194.8	195.7	196.6	197.4	198.3	198.7	198.7	198.7	198.7	198.7	198.7



TEST NUMBER: P331792-935

CATALOG NUMBER: S122RDIW-S485D710U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	219.4	220.2	221.1	222.0	222.8	223.2	223.1	222.9	222.8	222.7	222.4
115°	255.5	256.4	257.3	258.1	259.0	259.2	259.0	258.6	258.4	258.1	258.0
117.5°	291.6	292.7	293.9	295.0	296.1	296.3	295.5	294.7	293.9	293.2	292.8
120°	315.6	316.8	317.9	319.0	320.1	320.1	319.0	317.9	316.8	315.6	315.6
122.5°	337.6	339.0	340.4	341.6	343.0	343.4	342.5	341.7	341.0	340.2	339.8
125°	371.9	373.2	374.4	375.7	376.9	377.4	376.9	376.5	376.1	375.7	375.2
127.5°	405.2	406.8	408.5	410.0	411.6	412.2	411.7	411.2	410.7	410.2	409.7
130°	426.1	428.0	429.8	431.7	433.5	434.3	434.0	433.8	433.4	433.2	432.9
132.5°	449.7	451.2	452.7	454.2	455.6	456.5	456.5	456.6	456.7	456.7	456.1
135°	481.1	482.7	484.2	485.8	487.3	488.3	488.5	488.9	489.1	489.4	489.2
137.5°	514.2	515.5	516.8	518.1	519.3	520.1	520.5	520.9	521.2	521.6	521.5
140°	534.2	535.4	536.7	538.0	539.2	540.2	541.0	541.7	542.3	543.0	543.0
142.5°	554.6	555.9	557.2	558.4	559.6	560.6	561.0	561.5	562.0	562.5	562.6
145°	583.9	585.0	585.9	586.9	588.0	588.8	589.7	590.6	591.4	592.3	592.4
147.5°	610.2	611.3	612.5	613.7	614.9	615.8	616.4	616.9	617.5	618.1	618.4
150°	628.0	628.9	629.7	630.6	631.5	632.1	632.7	633.3	633.9	634.5	634.9
152.5°	643.9	644.7	645.6	646.4	647.3	648.1	648.8	649.5	650.1	650.8	651.3
155°	667.6	668.0	668.5	668.9	669.3	669.8	670.2	670.6	671.1	671.5	672.2
157.5°	687.9	688.3	688.5	688.8	689.1	689.4	689.7	689.9	690.2	690.4	691.4
160°	700.3	700.5	700.8	701.1	701.4	701.6	701.7	701.9	702.0	702.1	703.0
162.5°	711.4	711.5	711.6	711.6	711.7	711.8	712.0	712.1	712.2	712.4	713.3
165°	726.4	726.3	726.2	726.0	725.9	725.8	725.8	725.8	725.8	725.8	726.8
167.5°	739.0	738.6	738.1	737.7	737.3	737.0	737.0	736.9	736.9	736.9	737.9
170°	745.6	745.2	744.8	744.3	743.9	743.6	743.5	743.3	743.2	743.0	744.1
172.5°	750.2	749.8	749.3	748.9	748.5	748.2	748.0	748.0	747.8	747.6	748.6
175°	755.8	755.4	755.0	754.6	754.1	753.8	753.5	753.2	752.9	752.6	753.6
177.5°	758.1	757.8	757.4	757.1	756.7	756.5	756.2	756.0	755.8	755.5	756.2
180°	757.1	757.1	757.1	757.1	757.1	757.1	757.1	757.1	757.1	757.1	757.1



TEST NUMBER: P331792-935

CATALOG NUMBER: S122RDIW-S485D710U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5
2.5°	707.1	708.3	709.5	709.9	709.7	709.5	709.2	709.0
5°	701.5	702.8	704.1	704.6	704.1	703.7	703.3	702.8
7.5°	690.2	690.5	691.0	690.8	690.0	689.2	688.5	687.8
10°	678.8	678.4	678.0	677.3	676.5	675.6	674.8	673.9
12.5°	665.8	665.0	664.3	663.1	661.7	660.3	658.8	657.5
15°	641.4	638.8	636.0	634.0	632.5	631.1	629.6	628.3
17.5°	613.9	610.7	607.4	604.6	602.2	599.7	597.3	594.8
20°	594.7	591.2	587.5	584.2	581.1	577.9	574.8	571.6
22.5°	573.6	569.0	564.5	560.9	558.6	556.3	554.0	551.6
25°	538.7	532.9	527.0	523.0	520.8	518.7	516.6	514.4
27.5°	505.4	498.5	491.7	486.6	483.2	479.8	476.4	473.0
30°	481.8	474.6	467.3	461.7	457.8	454.0	450.1	446.3
32.5°	458.1	449.9	441.5	435.6	432.0	428.3	424.6	421.0
35°	421.2	412.2	403.2	397.1	394.0	390.8	387.7	384.5
37.5°	385.1	375.2	365.3	358.5	355.0	351.4	347.8	344.1
40°	361.0	350.9	340.7	333.8	330.1	326.4	322.6	318.9
42.5°	336.7	326.1	315.7	308.7	305.1	301.4	297.8	294.2
45°	301.2	291.1	280.9	274.1	270.7	267.3	263.8	260.5
47.5°	266.7	256.7	246.6	240.0	236.9	233.8	230.6	227.5
50°	244.5	234.7	224.8	218.4	215.4	212.4	209.4	206.4
52.5°	223.6	214.1	204.6	198.5	195.7	193.0	190.1	187.4
55°	191.8	183.2	174.7	169.0	166.3	163.6	160.9	158.2
57.5°	162.9	155.1	147.2	142.2	139.8	137.6	135.3	132.9
60°	142.9	135.7	128.4	123.6	121.3	119.0	116.8	114.4
62.5°	125.6	118.7	111.8	107.6	106.2	104.9	103.5	102.1
65°	102.2	97.3	92.5	89.8	89.4	88.9	88.5	88.1
67.5°	82.5	80.2	78.0	76.7	76.2	75.8	75.3	74.8
70°	71.7	70.3	68.9	67.8	67.3	66.7	66.1	65.6
72.5°	62.4	61.2	60.0	59.2	58.9	58.5	58.2	57.9
75°	49.4	48.5	47.4	46.8	46.8	46.6	46.4	46.3
77.5°	37.5	36.9	36.3	35.9	35.6	35.5	35.2	35.0
80°	29.7	29.2	28.6	28.3	28.3	28.3	28.3	28.3
82.5°	22.5	22.1	21.8	21.6	21.6	21.6	21.6	21.6
85°	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
87.5°	8.3	8.1	7.9	7.8	7.8	7.9	7.9	7.9
90°	21.8	21.5	21.3	21.2	21.3	21.4	21.6	21.7
92.5°	20.4	20.5	20.6	20.6	20.6	20.7	20.7	20.7
95°	40.9	40.9	40.9	40.7	40.5	40.2	39.9	39.6
97.5°	68.7	68.7	68.7	68.7	68.7	68.7	68.6	68.6
100°	88.2	88.2	88.2	88.1	88.0	87.8	87.6	87.6
102.5°	109.3	109.4	109.6	109.6	109.4	109.3	109.2	109.0
105°	141.1	141.4	141.7	141.8	141.8	141.8	141.8	141.8
107.5°	175.4	175.6	175.6	175.4	174.7	174.1	173.4	172.8
110°	198.7	198.7	198.7	198.5	198.0	197.6	197.2	196.8



TEST NUMBER: P331792-935

CATALOG NUMBER: S122RDIW-S485D710U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	222.1	221.7	221.4	221.0	220.8	220.4	220.1	219.8
115°	257.9	257.7	257.5	257.3	256.8	256.4	256.0	255.5
117.5°	292.5	292.1	291.8	291.4	290.9	290.5	290.1	289.6
120°	315.6	315.6	315.6	315.4	315.0	314.5	314.1	313.7
122.5°	339.5	339.1	338.8	338.5	338.1	337.9	337.5	337.3
125°	374.8	374.4	373.9	373.7	373.6	373.4	373.2	373.2
127.5°	409.1	408.6	408.1	407.7	407.2	406.7	406.3	405.9
130°	432.7	432.3	432.0	431.6	431.0	430.5	429.9	429.4
132.5°	455.5	454.8	454.2	453.7	453.2	452.7	452.3	451.9
135°	489.1	489.0	488.9	488.5	488.1	487.7	487.2	486.8
137.5°	521.3	521.2	521.2	520.8	520.2	519.7	519.1	518.5
140°	543.0	543.0	543.0	542.8	542.3	541.7	541.1	540.5
142.5°	562.7	562.8	562.9	562.7	562.1	561.5	561.0	560.4
145°	592.5	592.7	592.8	592.6	592.0	591.5	590.9	590.4
147.5°	618.7	619.0	619.3	619.2	618.7	618.1	617.6	617.1
150°	635.2	635.7	636.1	636.1	635.7	635.2	634.9	634.5
152.5°	651.9	652.4	653.0	653.0	652.4	651.9	651.3	650.8
155°	672.9	673.6	674.3	674.5	674.1	673.6	673.2	672.8
157.5°	692.3	693.3	694.2	694.4	693.7	693.0	692.3	691.6
160°	703.9	704.7	705.6	705.7	705.2	704.6	704.0	703.4
162.5°	714.3	715.3	716.3	716.4	715.7	715.1	714.4	713.7
165°	727.8	728.8	729.8	730.0	729.2	728.5	727.8	727.1
167.5°	738.9	739.9	740.9	741.0	740.3	739.5	738.8	738.0
170°	745.0	746.1	747.0	747.1	746.2	745.4	744.5	743.6
172.5°	749.7	750.6	751.7	751.7	750.9	750.0	749.2	748.3
175°	754.6	755.6	756.6	756.6	755.8	755.0	754.1	753.3
177.5°	756.9	757.6	758.3	758.3	757.6	756.9	756.2	755.5
180°	757.1	757.1	757.1	757.1	757.1	757.1	757.1	757.1

(END OF REPORT)