

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: P331505-930

Luminaire Tested: **S122DIW-S485D710U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331505-930
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: S122DIW-S485D710U930-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3924.5 lumens
Efficiency: N/A
Efficacy: 104.4 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: General Diffuse

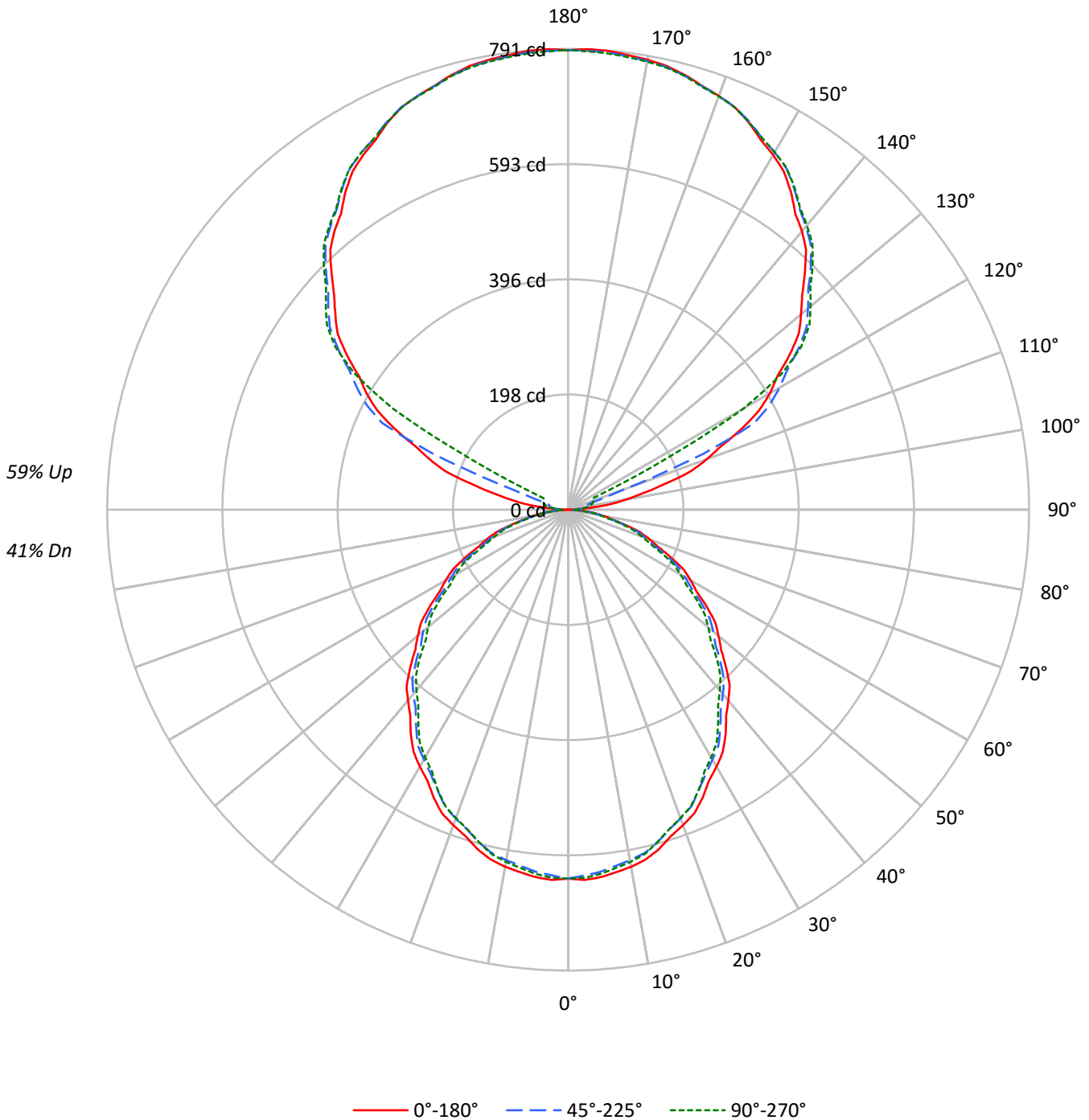
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331505-930

CATALOG NUMBER: S122DIW-S485D710U930-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P331505-930

CATALOG NUMBER: S122DIW-S485D710U930-4F0-1E-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	105	105	105	105	96	96	96	96	78	78	78	63	63	63	48	48	48	41
1	96	92	88	84	87	84	80	77	69	66	64	55	53	52	42	41	40	35
2	87	80	74	69	79	73	68	63	60	56	53	48	46	43	37	36	34	29
3	80	70	63	57	72	64	58	53	53	48	45	43	39	37	33	31	29	25
4	73	62	54	48	66	57	50	45	47	42	38	38	34	31	30	27	25	21
5	67	55	47	41	61	51	44	38	42	37	33	34	30	27	27	24	22	18
6	61	50	42	36	56	45	38	33	38	33	29	31	27	24	24	21	19	16
7	57	45	37	31	52	41	34	29	34	29	25	28	24	21	22	19	17	14
8	53	40	33	28	48	37	31	26	31	26	22	26	22	19	20	17	15	13
9	49	37	30	25	45	34	27	23	29	23	20	23	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	26	21	18	22	18	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10224	10224	10224
5°	10263	10115	10175
10°	10203	10012	10063
15°	10076	9884	9872
20°	9897	9689	9677
25°	9720	9449	9449
30°	9491	9229	9148
35°	9278	8966	8834
40°	9010	8703	8534
45°	8745	8439	8229
50°	8457	8166	7877
55°	8158	7848	7561
60°	7824	7472	7195
65°	7465	7095	6770
70°	7010	6637	6326
75°	6382	6114	5964
80°	5662	5486	5207
85°	4613	4390	3946



TEST NUMBER: P331505-930

CATALOG NUMBER: S122DIW-S485D710U930-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	1.5
10°-20°	167.6	4.3
20°-30°	246.3	6.3
30°-40°	286.1	7.3
40°-50°	285.8	7.3
50°-60°	249.2	6.3
60°-70°	184.3	4.7
70°-80°	104.4	2.7
80°-90°	30.0	0.8
90°-100°	26.3	0.7
100°-110°	96.5	2.5
110°-120°	257.9	6.6
120°-130°	425.7	10.8
130°-140°	452.8	11.5
140°-150°	420.8	10.7
150°-160°	338.4	8.6
160°-170°	218.0	5.6
170°-180°	75.1	1.9
0°-30°	473.4	12.1
0°-40°	759.4	19.4
0°-60°	1294.4	33.0
0°-90°	1613.0	41.1
90°-120°	380.7	9.7
90°-150°	1680.1	42.8
90°-180°	2312.0	58.9
0°-180°	3924.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	633	633	633	633	633	
5°	633	631	624	629	628	60
15°	603	599	591	593	591	170
25°	546	540	530	531	530	251
35°	471	464	455	451	448	294
45°	383	378	370	363	360	295
55°	290	286	279	272	269	259
65°	195	192	186	180	177	193
75°	102	101	98	95	96	109
85°	25	24	24	22	21	29
90°	1	7	11	14	15	3
95°	37	20	22	25	24	45
105°	174	181	35	41	43	185
115°	328	338	352	100	47	323
125°	464	472	482	486	488	414
135°	574	583	588	594	593	443
145°	666	666	675	679	676	416
155°	733	729	735	738	734	338
165°	773	770	771	775	771	218
175°	790	787	788	791	786	75
180°	789	789	789	789	789	



TEST NUMBER: P331505-930

CATALOG NUMBER: S122DIW-S485D710U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	636.2	635.6	635.1	634.5	634.0	633.2	631.9	630.8	629.6	628.4	629.5
5°	633.2	632.7	632.2	631.6	631.1	630.1	628.6	627.1	625.6	624.1	625.2
7.5°	627.6	626.8	626.0	625.1	624.3	623.1	621.6	620.1	618.6	617.0	618.2
10°	622.3	621.3	620.4	619.5	618.5	617.2	615.6	614.0	612.4	610.7	611.8
12.5°	615.0	614.2	613.3	612.5	611.6	610.4	608.8	607.2	605.5	603.9	604.6
15°	602.8	602.0	601.2	600.4	599.6	598.3	596.5	594.8	593.0	591.3	591.7
17.5°	587.2	586.4	585.6	584.8	584.0	582.7	580.9	579.1	577.3	575.5	576.2
20°	576.0	575.2	574.4	573.6	572.7	571.4	569.5	567.6	565.7	563.9	564.3
22.5°	564.8	563.7	562.6	561.4	560.3	558.8	557.0	555.2	553.4	551.6	551.7
25°	545.6	544.5	543.4	542.3	541.3	539.6	537.3	534.9	532.6	530.4	530.6
27.5°	523.7	522.7	521.7	520.7	519.8	518.4	516.6	514.7	512.9	511.1	510.7
30°	509.1	507.9	506.9	505.8	504.7	503.1	501.1	499.1	497.1	495.0	494.6
32.5°	493.4	492.6	491.7	490.8	490.0	488.4	486.3	484.2	482.1	480.0	479.2
35°	470.7	469.3	468.0	466.6	465.3	463.5	461.4	459.2	457.0	454.9	454.0
37.5°	445.0	443.8	442.6	441.4	440.2	438.5	436.3	434.2	432.0	429.9	428.8
40°	427.5	426.3	425.3	424.2	423.1	421.5	419.3	417.2	415.0	412.9	411.6
42.5°	410.4	409.3	408.2	407.2	406.1	404.5	402.3	400.1	397.9	395.7	394.4
45°	383.0	382.0	381.1	380.2	379.2	377.7	375.7	373.7	371.6	369.6	368.1
47.5°	355.7	354.8	353.9	353.0	352.1	350.7	348.5	346.4	344.3	342.2	340.6
50°	336.7	336.1	335.3	334.7	334.0	332.7	330.8	329.0	327.0	325.1	323.3
52.5°	318.2	317.3	316.4	315.5	314.6	313.3	311.5	309.7	307.9	306.1	304.6
55°	289.8	289.0	288.2	287.4	286.6	285.4	283.7	282.1	280.5	278.8	277.3
57.5°	261.3	260.7	260.0	259.4	258.8	257.6	255.8	254.0	252.2	250.4	248.7
60°	242.3	241.8	241.2	240.7	240.2	239.0	237.1	235.1	233.3	231.4	229.9
62.5°	223.8	223.0	222.1	221.2	220.4	219.2	217.8	216.3	214.8	213.4	212.0
65°	195.4	194.6	193.8	193.0	192.2	191.1	189.8	188.4	187.0	185.7	184.5
67.5°	166.6	165.9	165.3	164.6	164.0	163.1	161.8	160.6	159.4	158.2	157.3
70°	148.5	148.1	147.5	146.9	146.4	145.5	144.3	143.1	141.9	140.6	139.7
72.5°	130.0	129.6	129.0	128.4	127.9	127.3	126.5	125.6	124.9	124.1	123.1
75°	102.3	102.0	101.7	101.5	101.2	100.8	100.0	99.4	98.7	98.0	97.2
77.5°	77.5	77.0	76.6	76.1	75.6	75.3	75.0	74.7	74.4	74.2	73.8
80°	60.9	60.7	60.7	60.5	60.3	60.2	59.8	59.6	59.4	59.0	58.6
82.5°	45.3	45.2	45.2	45.2	45.2	45.1	44.9	44.8	44.6	44.4	43.9
85°	24.9	24.9	24.7	24.5	24.5	24.3	24.1	24.1	23.9	23.7	23.3
87.5°	8.9	9.0	9.0	9.0	9.1	9.1	9.1	9.1	9.1	9.1	8.9
90°	0.6	2.0	3.3	4.7	6.1	7.3	8.4	9.4	10.4	11.4	12.1
92.5°	11.5	11.4	11.3	11.2	11.0	11.3	11.7	12.2	12.7	13.2	13.5
95°	37.1	32.9	28.7	24.5	20.4	18.7	19.6	20.5	21.4	22.3	22.9
97.5°	73.6	61.8	50.1	38.2	26.4	21.6	23.6	25.7	27.7	29.8	30.3
100°	101.0	83.6	66.3	48.9	31.6	23.9	26.1	28.2	30.4	32.5	33.5
102.5°	131.2	127.5	123.8	120.1	116.4	105.6	87.6	69.5	51.4	33.4	34.7
105°	173.5	177.3	181.2	184.9	188.7	173.3	138.7	104.0	69.5	34.8	36.2
107.5°	221.8	224.9	228.0	231.0	234.1	214.8	173.3	131.8	90.3	48.8	47.3
110°	252.8	255.5	258.2	260.8	263.5	246.5	209.9	173.2	136.6	99.9	87.2



TEST NUMBER: P331505-930

CATALOG NUMBER: S122DIW-S485D710U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	282.1	284.5	286.8	289.1	291.5	288.1	279.1	270.0	261.0	251.9	205.7
115°	328.2	330.4	332.5	334.7	336.8	339.5	342.7	345.8	348.9	352.1	293.4
117.5°	369.4	371.8	374.2	376.6	379.0	381.3	383.5	385.7	387.8	390.0	375.9
120°	399.5	401.5	403.3	405.2	407.2	409.2	411.5	413.8	416.0	418.3	419.9
122.5°	425.1	427.1	429.1	431.1	433.1	435.4	437.8	440.3	442.8	445.3	446.2
125°	464.0	465.7	467.3	469.0	470.6	472.6	475.1	477.4	479.9	482.2	483.1
127.5°	499.3	501.1	503.0	504.8	506.6	508.4	510.2	512.0	513.8	515.6	516.9
130°	521.6	523.7	525.7	527.7	529.8	531.5	532.9	534.3	535.7	537.1	538.5
132.5°	544.5	546.3	548.0	549.7	551.4	552.9	554.3	555.7	557.2	558.6	559.7
135°	574.2	576.2	578.2	580.2	582.3	583.9	585.1	586.2	587.3	588.5	589.7
137.5°	604.2	605.6	607.1	608.5	609.8	611.2	612.5	613.8	615.1	616.4	617.7
140°	623.9	624.8	625.8	626.9	627.9	629.1	630.5	631.9	633.2	634.7	635.9
142.5°	640.3	641.2	642.1	643.0	643.9	645.1	646.8	648.4	650.0	651.6	652.6
145°	666.1	665.9	665.9	665.7	665.5	666.6	668.7	670.9	673.0	675.2	676.1
147.5°	688.5	688.1	687.6	687.1	686.6	687.5	689.6	691.7	693.8	695.9	696.7
150°	703.2	702.3	701.4	700.5	699.6	700.2	702.2	704.3	706.3	708.3	709.1
152.5°	715.5	714.5	713.5	712.5	711.5	712.0	714.0	715.8	717.8	719.7	720.5
155°	733.4	732.3	731.2	730.0	728.9	729.0	730.6	732.1	733.6	735.2	735.9
157.5°	747.5	746.5	745.5	744.5	743.6	743.6	744.7	745.8	746.8	747.9	748.8
160°	755.7	754.9	754.2	753.4	752.6	752.6	753.4	754.2	754.9	755.7	756.4
162.5°	763.0	762.2	761.5	760.7	759.9	759.9	760.5	761.2	761.9	762.5	763.4
165°	772.8	772.0	771.3	770.5	769.7	769.6	770.0	770.3	770.7	771.1	772.0
167.5°	780.1	779.3	778.6	777.8	777.1	776.9	777.2	777.6	778.0	778.3	779.2
170°	784.2	783.4	782.7	782.0	781.1	780.9	781.1	781.5	781.7	782.0	782.9
172.5°	786.9	786.2	785.5	784.6	783.9	783.7	783.9	784.2	784.4	784.6	785.5
175°	790.5	789.6	788.7	787.8	786.9	786.6	786.8	787.2	787.4	787.7	788.6
177.5°	791.1	790.4	789.6	789.0	788.2	787.9	788.0	788.1	788.2	788.3	789.0
180°	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8



TEST NUMBER: P331505-930

CATALOG NUMBER: S122DIW-S485D710U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	630.6	631.6	632.7	633.2	632.9	632.7	632.5	632.3
5°	626.3	627.4	628.4	628.8	628.6	628.3	628.0	627.8
7.5°	619.2	620.3	621.4	621.7	621.5	621.2	620.9	620.6
10°	612.9	614.0	615.1	615.4	615.0	614.6	614.2	613.8
12.5°	605.4	606.2	606.9	607.2	606.8	606.6	606.3	605.9
15°	592.3	592.9	593.4	593.3	592.6	592.0	591.3	590.6
17.5°	576.7	577.4	578.0	578.0	577.3	576.7	576.1	575.4
20°	564.7	565.1	565.5	565.4	564.8	564.3	563.8	563.2
22.5°	551.8	551.9	552.0	551.9	551.5	551.2	550.9	550.6
25°	530.9	531.2	531.4	531.4	531.2	530.9	530.6	530.4
27.5°	510.3	509.9	509.5	509.0	508.3	507.7	507.0	506.4
30°	494.2	493.8	493.4	492.9	492.4	491.9	491.3	490.7
32.5°	478.5	477.8	477.0	476.4	475.8	475.3	474.7	474.2
35°	453.2	452.4	451.6	450.9	450.2	449.5	448.8	448.2
37.5°	427.9	426.9	425.9	425.0	424.4	423.7	423.1	422.5
40°	410.4	409.2	408.0	407.1	406.5	406.0	405.4	404.9
42.5°	393.1	391.8	390.4	389.5	388.7	387.9	387.2	386.4
45°	366.6	365.2	363.6	362.6	362.1	361.6	361.0	360.4
47.5°	339.1	337.5	335.9	334.8	333.9	333.2	332.4	331.6
50°	321.4	319.4	317.6	316.3	315.6	315.0	314.2	313.6
52.5°	303.0	301.4	299.9	298.6	297.7	296.9	296.0	295.1
55°	275.7	274.0	272.4	271.3	270.5	269.9	269.2	268.6
57.5°	247.2	245.6	244.0	243.0	242.4	241.9	241.4	240.8
60°	228.4	226.9	225.4	224.5	224.0	223.6	223.2	222.8
62.5°	210.6	209.2	207.8	206.9	206.4	205.9	205.4	204.8
65°	183.3	182.1	180.8	179.9	179.2	178.6	177.9	177.2
67.5°	156.3	155.3	154.4	153.7	153.1	152.5	152.1	151.5
70°	138.8	137.8	136.9	136.2	135.6	135.0	134.5	134.0
72.5°	122.2	121.2	120.3	119.6	119.2	118.7	118.3	117.9
75°	96.4	95.6	94.8	94.5	94.8	95.1	95.3	95.6
77.5°	73.4	73.0	72.6	72.2	71.7	71.4	71.0	70.6
80°	58.2	57.8	57.5	57.1	56.8	56.6	56.3	56.0
82.5°	43.5	42.9	42.4	42.1	42.1	42.0	41.9	41.9
85°	22.9	22.5	22.1	21.9	21.7	21.6	21.4	21.3
87.5°	8.7	8.5	8.3	8.2	8.2	8.1	8.0	8.0
90°	12.7	13.3	13.9	14.4	14.7	14.9	15.2	15.4
92.5°	13.9	14.3	14.6	14.8	14.9	15.1	15.2	15.4
95°	23.6	24.1	24.8	25.0	24.9	24.8	24.7	24.5
97.5°	30.8	31.3	31.8	32.1	32.3	32.4	32.6	32.8
100°	34.6	35.5	36.6	37.3	37.5	37.7	38.0	38.2
102.5°	36.1	37.4	38.7	39.5	39.9	40.3	40.6	41.0
105°	37.6	39.0	40.4	41.3	41.8	42.4	42.9	43.4
107.5°	45.9	44.5	43.0	42.6	43.1	43.6	44.1	44.6
110°	74.5	61.8	49.2	43.0	43.5	44.1	44.6	45.1



TEST NUMBER: P331505-930

CATALOG NUMBER: S122DIW-S485D710U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	159.4	113.2	66.9	43.9	44.4	44.8	45.2	45.6
115°	234.7	175.9	117.2	83.3	74.2	65.1	55.9	46.8
117.5°	361.7	347.4	333.2	311.1	281.1	251.1	221.1	191.1
120°	421.4	422.9	424.4	416.6	399.5	382.4	365.3	348.1
122.5°	447.1	448.0	449.0	447.8	444.4	441.1	437.8	434.5
125°	484.0	484.9	485.8	486.5	486.8	487.2	487.6	488.0
127.5°	518.2	519.5	520.8	521.5	521.5	521.6	521.7	521.8
130°	539.9	541.3	542.7	543.3	543.2	543.1	542.9	542.8
132.5°	560.9	562.1	563.3	563.9	563.7	563.6	563.5	563.4
135°	591.0	592.2	593.5	594.0	593.8	593.5	593.3	593.0
137.5°	618.9	620.1	621.4	621.8	621.3	620.9	620.5	620.0
140°	637.0	638.1	639.3	639.5	638.9	638.2	637.6	637.0
142.5°	653.6	654.7	655.7	655.9	655.3	654.7	654.0	653.4
145°	676.9	677.8	678.7	678.9	678.2	677.6	676.9	676.4
147.5°	697.3	698.0	698.6	698.7	698.1	697.7	697.1	696.5
150°	709.8	710.6	711.3	711.4	710.8	710.1	709.5	708.9
152.5°	721.2	722.0	722.8	722.8	721.9	721.1	720.2	719.3
155°	736.6	737.4	738.2	738.0	737.0	736.1	735.0	734.0
157.5°	749.7	750.5	751.4	751.3	750.3	749.3	748.4	747.3
160°	757.2	758.0	758.7	758.6	757.7	756.8	756.0	755.1
162.5°	764.3	765.1	766.0	765.9	764.8	763.7	762.5	761.5
165°	772.9	773.7	774.6	774.6	773.7	772.9	772.0	771.1
167.5°	780.1	781.0	781.8	781.7	780.6	779.4	778.3	777.1
170°	783.7	784.6	785.5	785.4	784.2	783.1	782.0	780.8
172.5°	786.4	787.3	788.2	788.1	786.9	785.8	784.6	783.5
175°	789.5	790.3	791.2	791.0	789.7	788.5	787.2	785.9
177.5°	789.8	790.4	791.2	791.1	790.2	789.2	788.3	787.4
180°	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8

(END OF REPORT)