

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: P331506-927

Luminaire Tested: **S122DIW-S485D710U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331506-927
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: S122DIW-S485D710U927-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3515.9 lumens
Efficiency: N/A
Efficacy: 93.5 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

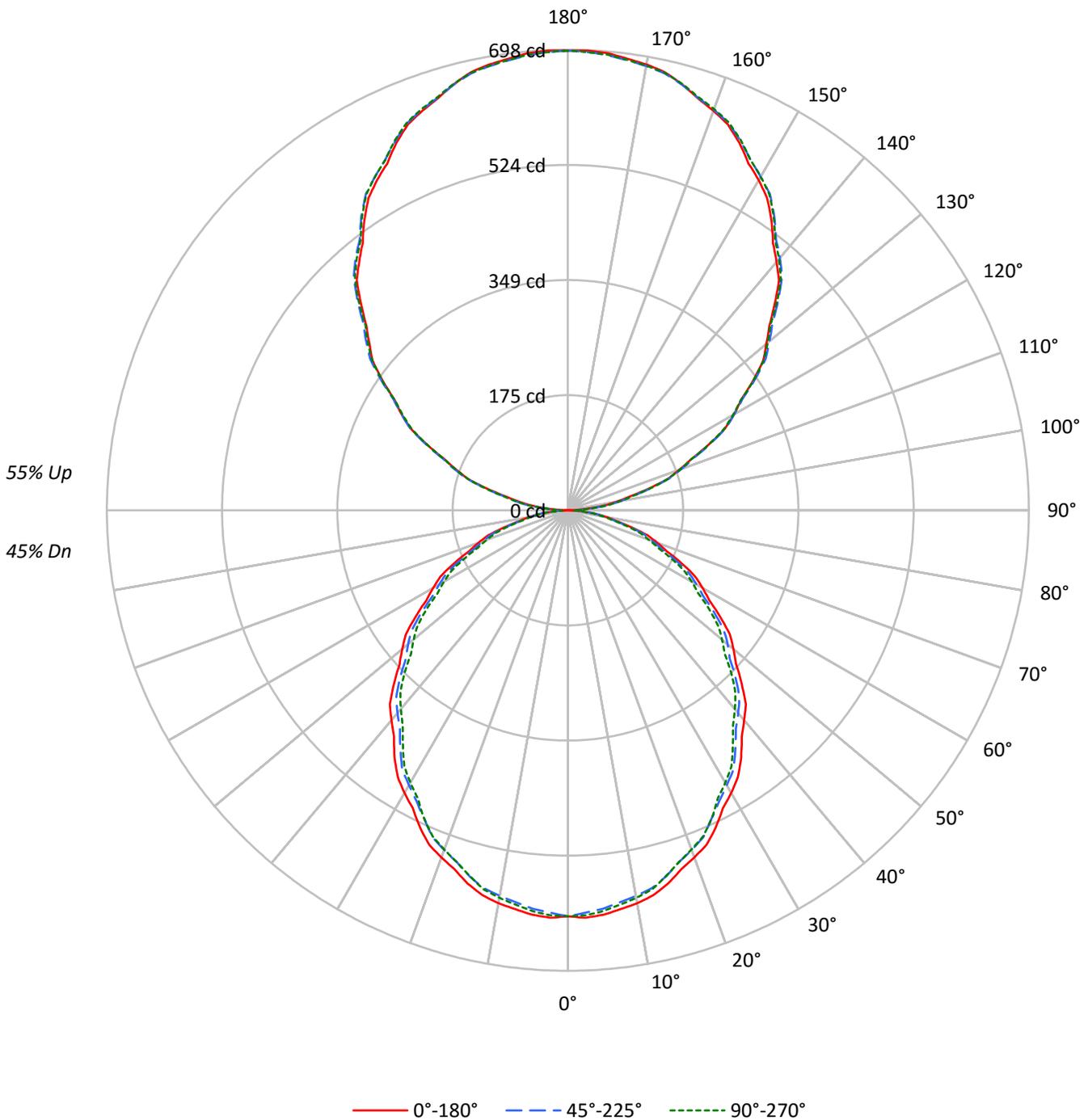
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331506-927

CATALOG NUMBER: S122DIW-S485D710U927-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P331506-927

CATALOG NUMBER: S122DIW-S485D710U927-4F0-1E-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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45				
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43	38				
2	88	81	74	69	80	74	69	64	62	58	55	50	48	45	40	38	36	31				
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	35	33	31	27				
4	73	63	55	49	67	58	51	45	48	43	39	40	36	33	31	29	27	23				
5	67	56	48	42	61	51	44	39	43	38	34	36	32	28	28	26	23	20				
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20	17				
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15				
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14				
9	49	37	30	25	45	35	28	23	29	24	20	25	20	18	20	17	15	12				
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	18	15	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9935	9935	9935
5°	9972	9828	9887
10°	9914	9729	9778
15°	9790	9603	9593
20°	9617	9414	9402
25°	9444	9180	9180
30°	9221	8968	8889
35°	9014	8712	8584
40°	8753	8456	8292
45°	8499	8200	7996
50°	8219	7935	7654
55°	7927	7626	7344
60°	7601	7259	6991
65°	7255	6896	6575
70°	6812	6453	6146
75°	6201	5939	5795
80°	5504	5337	5058
85°	4483	4279	3835



TEST NUMBER: P331506-927

CATALOG NUMBER: S122DIW-S485D710U927-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.9	1.6
10°-20°	162.8	4.6
20°-30°	239.3	6.8
30°-40°	278.0	7.9
40°-50°	277.7	7.9
50°-60°	242.1	6.9
60°-70°	179.0	5.1
70°-80°	101.4	2.9
80°-90°	30.1	0.9
90°-100°	44.1	1.3
100°-110°	137.1	3.9
110°-120°	234.3	6.7
120°-130°	308.1	8.8
130°-140°	345.9	9.8
140°-150°	339.1	9.6
150°-160°	284.5	8.1
160°-170°	188.7	5.4
170°-180°	65.9	1.9
0°-30°	459.9	13.1
0°-40°	737.9	21.0
0°-60°	1257.7	35.8
0°-90°	1568.2	44.6
90°-120°	415.5	11.8
90°-150°	1408.7	40.1
90°-180°	1948.0	55.4
0°-180°	3515.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	615	615	615	615	615	
5°	615	613	606	611	610	58
15°	586	582	574	577	574	165
25°	530	525	515	516	515	244
35°	457	451	442	438	436	285
45°	372	368	359	353	350	287
55°	282	278	271	264	261	252
65°	190	186	180	175	172	188
75°	99	98	95	92	93	106
85°	24	24	23	21	21	28
90°	1	8	21	20	20	3
95°	31	36	38	38	36	35
105°	126	128	129	130	130	133
115°	235	238	238	237	235	233
125°	342	347	346	344	343	306
135°	443	449	450	450	448	342
145°	537	541	545	545	543	336
155°	614	616	618	620	619	283
165°	668	668	668	672	669	188
175°	695	694	692	696	693	66
180°	697	697	697	697	697	



TEST NUMBER: P331506-927

CATALOG NUMBER: S122DIW-S485D710U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3
2.5°	618.1	617.6	617.1	616.6	616.0	615.2	614.0	612.9	611.7	610.5	611.6
5°	615.3	614.7	614.3	613.7	613.2	612.2	610.8	609.3	607.8	606.4	607.4
7.5°	609.8	609.0	608.2	607.4	606.6	605.5	604.0	602.5	601.0	599.5	600.6
10°	604.7	603.7	602.8	601.9	600.9	599.7	598.1	596.6	595.0	593.4	594.5
12.5°	597.5	596.8	595.9	595.1	594.3	593.1	591.5	589.9	588.4	586.8	587.5
15°	585.7	584.9	584.2	583.4	582.6	581.3	579.6	577.9	576.2	574.5	575.0
17.5°	570.5	569.8	569.0	568.2	567.4	566.2	564.4	562.7	560.9	559.2	559.8
20°	559.7	558.9	558.1	557.3	556.5	555.2	553.3	551.5	549.7	547.9	548.3
22.5°	548.8	547.7	546.6	545.5	544.4	543.0	541.2	539.5	537.7	536.0	536.1
25°	530.1	529.0	528.0	527.0	525.9	524.3	522.0	519.8	517.5	515.3	515.6
27.5°	508.8	507.9	506.9	506.0	505.0	503.7	501.9	500.1	498.4	496.6	496.2
30°	494.6	493.5	492.5	491.5	490.4	488.9	486.9	485.0	483.0	481.0	480.6
32.5°	479.4	478.6	477.8	476.9	476.1	474.6	472.5	470.5	468.4	466.4	465.6
35°	457.3	456.0	454.7	453.4	452.1	450.4	448.3	446.2	444.0	442.0	441.2
37.5°	432.4	431.2	430.1	428.9	427.7	426.1	424.0	421.9	419.8	417.7	416.7
40°	415.3	414.2	413.2	412.2	411.1	409.6	407.4	405.4	403.2	401.2	400.0
42.5°	398.8	397.7	396.6	395.6	394.6	393.0	390.9	388.8	386.7	384.5	383.3
45°	372.2	371.2	370.3	369.4	368.4	367.0	365.0	363.1	361.1	359.1	357.7
47.5°	345.6	344.8	343.9	343.0	342.1	340.7	338.7	336.6	334.5	332.5	331.0
50°	327.2	326.5	325.8	325.2	324.6	323.3	321.5	319.6	317.7	315.9	314.1
52.5°	309.2	308.3	307.4	306.6	305.7	304.4	302.7	301.0	299.2	297.5	296.0
55°	281.6	280.8	280.0	279.2	278.5	277.3	275.7	274.1	272.5	270.9	269.4
57.5°	253.9	253.3	252.6	252.1	251.4	250.3	248.5	246.8	245.0	243.3	241.7
60°	235.4	235.0	234.4	233.9	233.4	232.2	230.4	228.5	226.6	224.8	223.4
62.5°	217.5	216.7	215.8	214.9	214.1	213.0	211.6	210.2	208.7	207.3	206.0
65°	189.9	189.1	188.3	187.5	186.8	185.7	184.4	183.1	181.7	180.5	179.3
67.5°	161.8	161.2	160.6	159.9	159.3	158.4	157.2	156.1	154.9	153.7	152.8
70°	144.3	143.9	143.3	142.8	142.3	141.4	140.2	139.0	137.8	136.7	135.8
72.5°	126.4	125.9	125.3	124.8	124.3	123.7	122.9	122.1	121.4	120.6	119.6
75°	99.4	99.1	98.9	98.6	98.3	97.9	97.2	96.6	95.9	95.2	94.4
77.5°	75.3	74.8	74.4	73.9	73.4	73.1	72.9	72.6	72.3	72.1	71.7
80°	59.2	59.0	58.9	58.8	58.6	58.5	58.1	57.9	57.7	57.4	57.0
82.5°	44.0	44.0	44.0	44.0	43.9	43.8	43.6	43.5	43.3	43.2	42.7
85°	24.2	24.2	24.0	23.8	23.8	23.6	23.4	23.4	23.2	23.1	22.7
87.5°	8.6	8.7	8.9	9.0	9.0	9.3	9.7	10.0	10.4	10.8	10.4
90°	0.6	2.1	3.7	5.3	6.9	9.1	12.0	14.8	17.7	20.6	20.3
92.5°	10.5	11.6	12.8	13.9	15.1	16.0	16.6	17.3	18.0	18.7	18.8
95°	30.6	31.8	33.2	34.5	35.8	36.6	36.8	37.1	37.4	37.6	37.6
97.5°	55.8	57.0	58.1	59.3	60.4	61.2	61.8	62.3	62.7	63.2	63.2
100°	74.6	75.7	76.8	77.8	78.8	79.5	79.9	80.3	80.7	81.1	81.1
102.5°	94.4	95.2	96.1	96.9	97.8	98.4	98.9	99.4	99.9	100.4	100.5
105°	126.4	126.7	127.1	127.5	127.9	128.3	128.6	128.8	129.0	129.4	129.6
107.5°	158.6	159.1	159.8	160.3	160.9	161.2	161.2	161.2	161.2	161.2	161.3
110°	179.3	180.1	180.9	181.6	182.4	182.8	182.8	182.8	182.8	182.8	182.8



TEST NUMBER: P331506-927

CATALOG NUMBER: S122DIW-S485D710U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	201.8	202.6	203.4	204.2	205.0	205.3	205.3	205.1	205.0	204.9	204.6
115°	235.1	235.9	236.7	237.5	238.3	238.5	238.3	238.0	237.7	237.5	237.3
117.5°	268.3	269.3	270.4	271.4	272.4	272.6	271.9	271.2	270.5	269.7	269.4
120°	290.4	291.4	292.5	293.5	294.5	294.5	293.5	292.5	291.4	290.4	290.4
122.5°	310.6	311.9	313.1	314.3	315.6	315.9	315.1	314.4	313.7	313.0	312.7
125°	342.1	343.3	344.4	345.6	346.8	347.2	346.8	346.4	346.0	345.6	345.2
127.5°	372.8	374.3	375.8	377.2	378.7	379.3	378.8	378.3	377.9	377.4	376.9
130°	392.1	393.8	395.5	397.2	398.9	399.6	399.3	399.1	398.8	398.5	398.3
132.5°	413.8	415.1	416.5	417.9	419.2	420.0	420.0	420.1	420.2	420.2	419.6
135°	442.7	444.1	445.5	446.9	448.4	449.2	449.5	449.8	450.0	450.3	450.1
137.5°	473.1	474.3	475.5	476.7	477.8	478.6	478.9	479.3	479.6	479.9	479.8
140°	491.5	492.6	493.8	495.0	496.1	497.0	497.7	498.4	499.0	499.6	499.6
142.5°	510.2	511.4	512.6	513.8	514.9	515.8	516.2	516.7	517.1	517.5	517.6
145°	537.3	538.2	539.1	540.0	541.0	541.8	542.6	543.4	544.2	544.9	545.0
147.5°	561.4	562.4	563.6	564.7	565.8	566.6	567.1	567.6	568.2	568.7	568.9
150°	577.8	578.6	579.4	580.2	581.0	581.6	582.2	582.7	583.2	583.8	584.2
152.5°	592.4	593.2	594.0	594.8	595.6	596.3	596.9	597.5	598.2	598.8	599.3
155°	614.3	614.7	615.1	615.4	615.8	616.2	616.6	617.0	617.4	617.8	618.5
157.5°	633.0	633.3	633.5	633.7	634.1	634.3	634.5	634.8	635.0	635.3	636.1
160°	644.3	644.5	644.8	645.1	645.3	645.5	645.6	645.8	645.9	646.0	646.8
162.5°	654.6	654.7	654.7	654.7	654.8	654.9	655.1	655.2	655.3	655.5	656.3
165°	668.4	668.2	668.1	668.0	667.9	667.8	667.8	667.8	667.8	667.8	668.7
167.5°	679.9	679.5	679.1	678.7	678.3	678.1	678.1	678.0	678.0	678.0	678.9
170°	686.0	685.6	685.2	684.8	684.4	684.2	684.0	683.9	683.8	683.7	684.6
172.5°	690.2	689.8	689.4	689.0	688.6	688.4	688.2	688.2	688.0	687.9	688.8
175°	695.4	695.1	694.7	694.3	693.9	693.6	693.2	693.0	692.8	692.4	693.4
177.5°	697.5	697.2	696.9	696.6	696.2	696.0	695.8	695.6	695.4	695.1	695.8
180°	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6



TEST NUMBER: P331506-927

CATALOG NUMBER: S122DIW-S485D710U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3
2.5°	612.7	613.7	614.7	615.2	615.0	614.7	614.6	614.3
5°	608.6	609.6	610.6	611.0	610.8	610.5	610.2	610.0
7.5°	601.7	602.7	603.8	604.1	603.9	603.6	603.2	603.0
10°	595.5	596.6	597.6	597.9	597.5	597.1	596.8	596.4
12.5°	588.3	589.0	589.7	589.9	589.6	589.4	589.1	588.7
15°	575.5	576.1	576.6	576.5	575.8	575.2	574.6	573.9
17.5°	560.4	561.0	561.7	561.6	560.9	560.4	559.8	559.1
20°	548.7	549.1	549.5	549.4	548.8	548.3	547.8	547.2
22.5°	536.1	536.2	536.3	536.2	535.9	535.6	535.3	535.0
25°	515.9	516.1	516.3	516.3	516.1	515.9	515.6	515.3
27.5°	495.8	495.4	495.0	494.6	493.9	493.3	492.7	492.0
30°	480.2	479.8	479.4	479.0	478.4	477.9	477.4	476.8
32.5°	464.9	464.2	463.5	462.9	462.3	461.8	461.3	460.7
35°	440.4	439.6	438.8	438.1	437.4	436.7	436.1	435.5
37.5°	415.7	414.8	413.8	413.0	412.3	411.7	411.1	410.5
40°	398.8	397.6	396.4	395.5	395.0	394.5	394.0	393.4
42.5°	382.0	380.7	379.4	378.4	377.6	376.9	376.2	375.4
45°	356.2	354.8	353.3	352.4	351.8	351.3	350.8	350.2
47.5°	329.5	327.9	326.4	325.3	324.5	323.8	323.0	322.2
50°	312.3	310.4	308.6	307.3	306.7	306.0	305.3	304.7
52.5°	294.5	292.9	291.4	290.2	289.3	288.4	287.6	286.7
55°	267.8	266.3	264.7	263.6	262.8	262.2	261.6	260.9
57.5°	240.2	238.6	237.1	236.1	235.5	235.0	234.6	234.0
60°	221.9	220.5	219.0	218.1	217.7	217.3	216.9	216.5
62.5°	204.6	203.3	201.9	201.1	200.5	200.0	199.6	199.0
65°	178.1	176.9	175.7	174.8	174.1	173.5	172.9	172.1
67.5°	151.9	150.9	150.0	149.3	148.8	148.2	147.7	147.2
70°	134.8	133.9	133.0	132.3	131.7	131.2	130.7	130.2
72.5°	118.7	117.8	116.9	116.2	115.8	115.3	114.9	114.5
75°	93.6	92.9	92.1	91.8	92.1	92.4	92.6	92.9
77.5°	71.3	70.9	70.5	70.1	69.7	69.4	69.0	68.6
80°	56.6	56.2	55.8	55.5	55.2	55.0	54.7	54.4
82.5°	42.2	41.7	41.2	40.9	40.9	40.8	40.7	40.7
85°	22.3	21.9	21.5	21.2	21.1	21.0	20.8	20.7
87.5°	10.0	9.7	9.3	9.0	9.0	8.9	8.8	8.7
90°	20.0	19.8	19.6	19.5	19.6	19.7	19.9	20.0
92.5°	18.8	18.9	18.9	18.9	18.9	19.0	19.0	19.0
95°	37.6	37.6	37.6	37.5	37.2	37.0	36.7	36.4
97.5°	63.2	63.2	63.2	63.2	63.2	63.2	63.1	63.1
100°	81.1	81.1	81.1	81.0	81.0	80.8	80.6	80.6
102.5°	100.6	100.7	100.8	100.8	100.7	100.5	100.4	100.3
105°	129.8	130.1	130.4	130.5	130.5	130.5	130.5	130.5
107.5°	161.4	161.5	161.6	161.4	160.7	160.2	159.5	159.0
110°	182.8	182.8	182.8	182.6	182.2	181.8	181.4	181.1



TEST NUMBER: P331506-927

CATALOG NUMBER: S122DIW-S485D710U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	204.3	204.0	203.7	203.4	203.1	202.8	202.5	202.2
115°	237.3	237.1	236.9	236.7	236.3	235.9	235.5	235.1
117.5°	269.1	268.8	268.5	268.1	267.7	267.3	266.9	266.5
120°	290.4	290.4	290.4	290.2	289.8	289.4	289.0	288.6
122.5°	312.4	312.0	311.7	311.4	311.1	310.9	310.5	310.3
125°	344.8	344.4	344.0	343.8	343.7	343.6	343.4	343.3
127.5°	376.4	376.0	375.5	375.1	374.6	374.2	373.8	373.4
130°	398.1	397.8	397.5	397.1	396.6	396.1	395.5	395.1
132.5°	419.1	418.4	417.9	417.4	417.0	416.5	416.1	415.7
135°	450.0	449.9	449.8	449.5	449.1	448.7	448.3	447.9
137.5°	479.7	479.6	479.5	479.2	478.6	478.2	477.6	477.1
140°	499.6	499.6	499.6	499.4	498.9	498.4	497.8	497.3
142.5°	517.8	517.8	517.9	517.8	517.2	516.7	516.2	515.6
145°	545.2	545.3	545.4	545.3	544.7	544.2	543.7	543.2
147.5°	569.3	569.5	569.8	569.7	569.3	568.7	568.2	567.8
150°	584.5	584.9	585.3	585.3	584.9	584.5	584.2	583.8
152.5°	599.8	600.2	600.8	600.8	600.2	599.8	599.3	598.8
155°	619.1	619.8	620.4	620.6	620.2	619.8	619.4	619.0
157.5°	637.0	637.9	638.7	638.9	638.3	637.6	637.0	636.4
160°	647.6	648.4	649.2	649.3	648.8	648.2	647.8	647.2
162.5°	657.2	658.1	659.0	659.1	658.5	657.9	657.3	656.6
165°	669.6	670.5	671.5	671.6	670.9	670.3	669.6	669.0
167.5°	679.9	680.7	681.7	681.8	681.1	680.4	679.8	679.1
170°	685.5	686.4	687.3	687.4	686.6	685.8	685.0	684.2
172.5°	689.8	690.6	691.6	691.6	690.9	690.1	689.3	688.5
175°	694.3	695.2	696.2	696.2	695.4	694.7	693.9	693.1
177.5°	696.4	697.0	697.7	697.7	697.0	696.4	695.8	695.1
180°	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6

(END OF REPORT)