

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: P331594-940

Luminaire Tested: **S122DIW-S1005D710U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331594-940
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-S1005D710U940-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, DROP 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: 5793.0 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

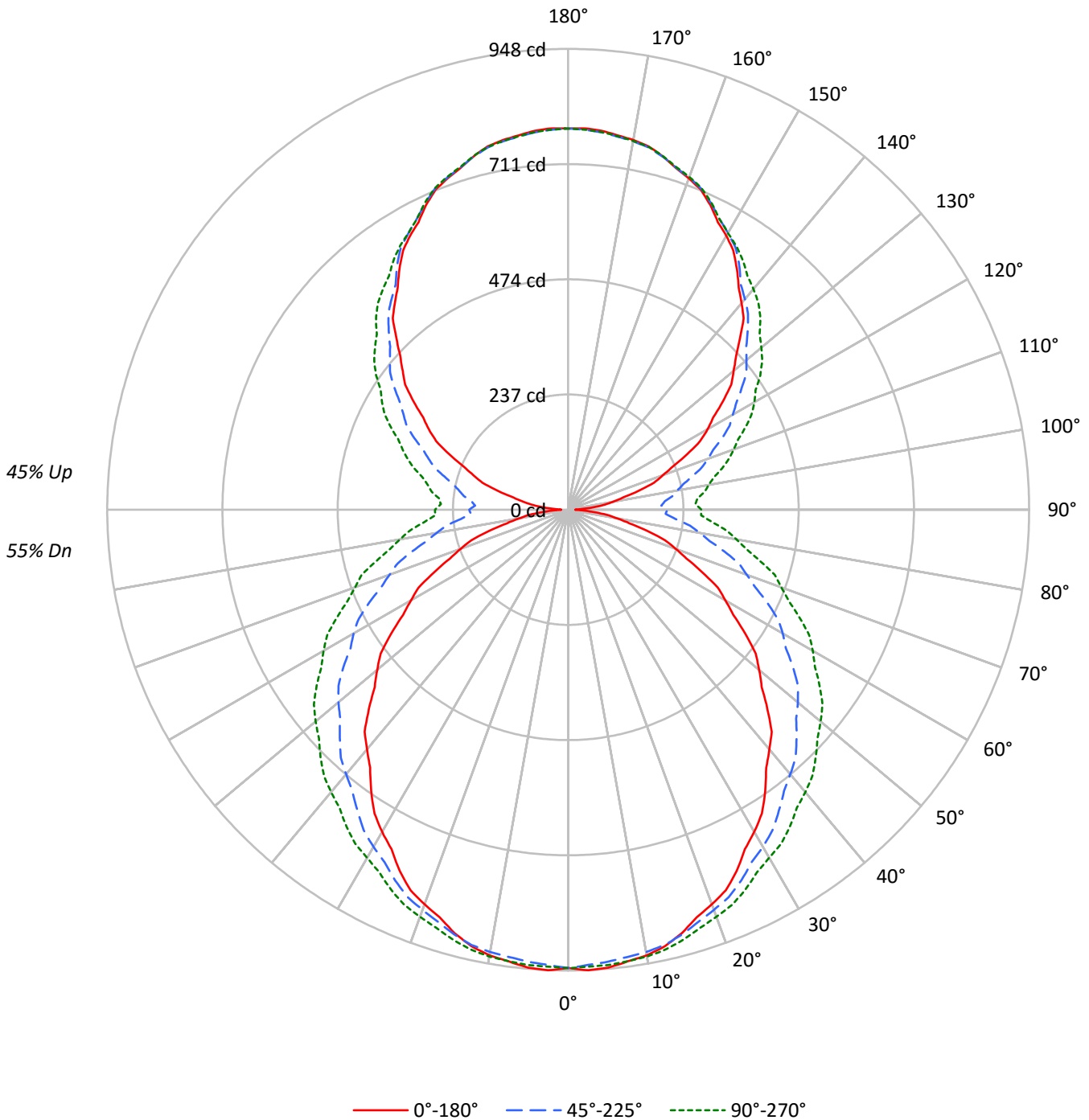
Input Watts (W): 59.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331594-940

CATALOG NUMBER: S122DIW-S1005D710U940-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P331594-940

CATALOG NUMBER: S122DIW-S1005D710U940-4F0-1E-UDD-D1

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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	97	92	88	84	90	86	82	78	73	70	67	62	60	57	51	50	48	43
2	88	80	73	67	81	74	68	63	63	59	55	53	50	47	44	42	39	35
3	80	69	61	55	74	64	57	52	55	50	45	47	42	39	39	35	33	29
4	73	61	53	46	67	57	49	43	49	43	38	41	37	33	34	31	28	24
5	67	54	46	39	61	50	43	37	43	37	32	37	32	28	31	27	24	21
6	61	49	40	34	57	45	37	32	39	33	28	33	28	24	28	24	21	18
7	57	44	35	29	52	41	33	28	35	29	25	30	25	21	25	21	18	16
8	53	40	32	26	48	37	30	25	32	26	22	27	23	19	23	19	16	14
9	49	36	28	23	45	34	27	22	29	24	19	25	20	17	21	17	15	13
10	46	33	26	21	42	31	24	20	27	21	17	23	19	15	20	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15224	15224	15224
5°	15300	14656	14600
10°	15203	14222	14063
15°	14994	13763	13496
20°	14728	13272	12952
25°	14466	12799	12457
30°	14098	12312	11962
35°	13725	11842	11611
40°	13332	11442	11262
45°	12960	11082	10962
50°	12561	10760	10668
55°	12143	10411	10368
60°	11628	10049	10051
65°	11095	9625	9675
70°	10498	9170	9268
75°	9730	8725	8894
80°	8523	8267	8514
85°	7361	7873	8218



TEST NUMBER: P331594-940

CATALOG NUMBER: S122DIW-S1005D710U940-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.3	1.5
10°-20°	256.2	4.4
20°-30°	388.3	6.7
30°-40°	472.9	8.2
40°-50°	508.8	8.8
50°-60°	494.1	8.5
60°-70°	431.4	7.4
70°-80°	332.1	5.7
80°-90°	226.0	3.9
90°-100°	203.2	3.5
100°-110°	266.5	4.6
110°-120°	337.8	5.8
120°-130°	388.2	6.7
130°-140°	406.7	7.0
140°-150°	384.8	6.6
150°-160°	320.2	5.5
160°-170°	212.4	3.7
170°-180°	74.2	1.3
0°-30°	733.8	12.7
0°-40°	1206.7	20.8
0°-60°	2209.5	38.1
0°-90°	3199.1	55.2
90°-120°	807.5	13.9
90°-150°	1987.2	34.3
90°-180°	2594.0	44.8
0°-180°	5793.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	943	943	943	943	943	
5°	946	941	933	941	940	90
15°	902	904	905	916	916	254
25°	820	830	842	858	862	377
35°	706	730	756	785	795	441
45°	579	617	664	705	720	447
55°	444	495	564	612	631	397
65°	303	371	451	505	525	301
75°	168	245	332	389	409	178
85°	49	134	221	277	298	53
90°	14	102	204	255	274	11
95°	45	117	200	249	266	48
105°	149	192	263	310	327	158
115°	270	291	349	388	403	267
125°	388	396	436	469	482	347
135°	500	507	522	549	559	386
145°	605	609	613	622	626	378
155°	691	693	695	698	697	318
165°	752	752	752	756	753	212
175°	783	781	779	784	780	74
180°	784	784	784	784	784	



TEST NUMBER: P331594-940

CATALOG NUMBER: S122DIW-S1005D710U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9
2.5°	948.4	947.7	946.9	946.2	945.5	944.2	942.5	940.8	939.1	937.5	938.7
5°	945.7	944.8	943.9	942.9	942.0	940.7	938.9	937.0	935.2	933.4	935.2
7.5°	937.2	936.6	935.9	935.4	934.8	933.8	932.4	930.9	929.6	928.2	930.3
10°	930.7	930.1	929.4	928.8	928.2	927.5	926.6	925.6	924.7	923.8	926.2
12.5°	919.7	919.8	920.0	920.1	920.2	919.9	919.3	918.6	917.9	917.2	919.7
15°	902.0	902.6	903.1	903.7	904.4	904.6	904.6	904.6	904.6	904.6	907.4
17.5°	879.0	880.3	881.5	882.8	884.0	885.2	886.2	887.2	888.1	889.1	892.0
20°	863.7	865.2	866.7	868.3	869.8	871.1	872.4	873.5	874.8	876.0	879.3
22.5°	847.3	849.0	850.8	852.6	854.3	856.0	857.7	859.4	861.1	862.8	866.2
25°	819.9	822.1	824.2	826.3	828.5	830.9	833.6	836.3	839.1	841.8	845.4
27.5°	787.1	790.6	794.1	797.5	801.0	804.3	807.5	810.7	814.0	817.3	821.8
30°	765.3	769.2	773.2	777.1	781.0	785.1	789.0	792.9	796.8	800.8	805.7
32.5°	741.2	745.6	750.1	754.6	758.9	763.5	768.2	772.8	777.6	782.2	787.8
35°	706.5	711.7	716.8	722.0	727.2	732.6	738.4	744.1	749.9	755.7	762.4
37.5°	668.8	674.8	680.7	686.6	692.6	699.3	706.8	714.3	721.8	729.2	736.6
40°	643.6	650.3	657.0	663.7	670.4	677.8	686.0	694.2	702.4	710.6	718.5
42.5°	619.6	626.2	632.9	639.6	646.3	654.3	663.8	673.2	682.6	692.1	700.6
45°	579.4	587.6	595.8	604.0	612.2	621.6	632.3	642.9	653.5	664.1	673.6
47.5°	539.8	548.8	557.7	566.6	575.5	586.2	598.7	611.1	623.6	636.0	645.9
50°	512.5	521.9	531.3	540.7	550.1	561.7	575.3	589.0	602.6	616.4	626.7
52.5°	486.2	496.1	506.0	515.9	525.8	538.0	552.3	566.8	581.1	595.6	606.1
55°	444.2	455.0	466.0	477.0	487.9	501.2	517.0	532.8	548.6	564.4	575.3
57.5°	402.6	414.9	427.2	439.6	451.9	466.1	482.2	498.3	514.4	530.5	542.2
60°	373.1	386.1	399.2	412.2	425.3	440.5	457.8	475.1	492.4	509.7	521.3
62.5°	346.9	360.3	373.9	387.4	401.0	416.4	433.7	451.0	468.4	485.7	497.9
65°	303.4	318.3	333.1	348.0	362.9	379.3	397.3	415.1	433.0	450.9	463.4
67.5°	263.5	279.0	294.5	310.1	325.7	342.6	361.0	379.3	397.6	416.0	428.6
70°	235.1	250.8	266.6	282.4	298.2	315.5	334.4	353.2	372.0	390.8	403.9
72.5°	208.8	225.1	241.4	257.6	273.9	291.6	310.7	329.8	348.8	367.9	380.7
75°	168.1	185.1	202.1	219.1	236.1	254.3	273.8	293.2	312.6	332.1	345.1
77.5°	128.8	146.5	164.3	182.1	199.9	218.6	238.4	258.2	277.9	297.7	310.7
80°	102.5	121.0	139.6	158.1	176.6	195.7	215.4	235.2	254.9	274.6	287.4
82.5°	80.6	98.9	117.2	135.5	153.7	172.9	192.9	212.9	232.8	252.8	265.6
85°	49.2	68.0	86.9	105.7	124.5	143.7	163.1	182.5	202.0	221.4	234.2
87.5°	26.9	45.4	63.8	82.3	100.8	120.0	140.1	160.2	180.2	200.4	212.7
90°	14.4	33.7	53.1	72.5	91.8	112.9	135.5	158.2	180.8	203.6	215.4
92.5°	24.3	42.0	59.7	77.4	95.1	113.7	133.1	152.7	172.1	191.6	203.6
95°	45.3	61.1	76.9	92.6	108.3	125.5	143.9	162.5	181.0	199.5	211.1
97.5°	72.4	86.4	100.4	114.4	128.4	144.4	162.5	180.5	198.6	216.6	227.8
100°	93.6	106.0	118.4	130.8	143.2	158.2	175.7	193.1	210.5	228.0	239.2
102.5°	114.8	125.9	137.1	148.4	159.5	173.7	190.8	207.9	225.0	242.0	253.2
105°	149.1	158.4	167.6	176.8	186.1	198.8	214.8	231.0	247.0	263.1	274.0
107.5°	185.1	192.8	200.5	208.1	215.9	227.3	242.4	257.5	272.6	287.8	298.1
110°	207.3	214.3	221.2	228.2	235.1	246.0	260.9	275.8	290.7	305.6	315.3



TEST NUMBER: P331594-940

CATALOG NUMBER: S122DIW-S1005D710U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	232.7	238.7	244.7	250.7	256.6	266.6	280.7	294.7	308.7	322.8	332.2
115°	270.2	274.4	278.6	282.9	287.0	295.9	309.2	322.5	335.9	349.3	358.3
117.5°	306.1	309.4	312.8	316.2	319.6	327.2	338.9	350.7	362.6	374.3	383.0
120°	331.0	333.4	335.7	338.1	340.5	347.2	358.2	369.2	380.1	391.1	399.6
122.5°	353.7	355.6	357.6	359.4	361.3	367.6	378.2	388.8	399.4	409.9	417.9
125°	387.8	389.1	390.5	391.8	393.2	398.4	407.7	417.0	426.2	435.5	443.3
127.5°	422.4	423.7	425.2	426.5	427.8	432.2	439.5	446.8	454.1	461.5	468.4
130°	444.1	445.7	447.3	448.9	450.5	454.3	460.5	466.5	472.6	478.7	485.7
132.5°	468.4	469.7	470.9	472.2	473.4	476.5	481.5	486.5	491.5	496.5	502.9
135°	499.6	501.2	502.8	504.4	506.1	508.5	511.9	515.2	518.5	521.9	528.2
137.5°	533.9	535.2	536.5	537.7	539.0	540.5	542.2	543.9	545.6	547.3	552.8
140°	554.6	555.5	556.6	557.6	558.7	559.8	561.2	562.5	563.8	565.2	570.1
142.5°	575.7	576.8	577.7	578.8	579.8	580.6	581.2	581.8	582.5	583.1	587.1
145°	604.8	605.8	606.8	607.9	608.9	609.8	610.7	611.6	612.5	613.4	615.4
147.5°	632.0	633.1	634.4	635.6	636.9	637.8	638.4	638.9	639.5	640.2	640.7
150°	650.4	651.3	652.2	653.1	654.0	654.7	655.3	655.9	656.5	657.1	657.5
152.5°	666.8	667.7	668.6	669.5	670.4	671.2	671.9	672.6	673.3	674.0	674.6
155°	691.4	691.9	692.3	692.8	693.2	693.7	694.1	694.6	695.0	695.4	696.2
157.5°	712.5	712.8	713.1	713.4	713.7	714.0	714.3	714.5	714.8	715.1	716.0
160°	725.2	725.5	725.8	726.1	726.4	726.7	726.7	726.9	727.0	727.2	728.1
162.5°	736.8	736.9	737.0	737.0	737.1	737.2	737.4	737.5	737.6	737.8	738.8
165°	752.3	752.2	752.1	751.9	751.8	751.7	751.7	751.7	751.7	751.7	752.7
167.5°	765.4	764.9	764.5	764.0	763.6	763.3	763.3	763.2	763.2	763.2	764.2
170°	772.2	771.8	771.3	770.9	770.4	770.2	770.0	769.8	769.7	769.5	770.6
172.5°	776.9	776.5	776.1	775.6	775.2	774.9	774.7	774.6	774.5	774.3	775.3
175°	782.7	782.4	781.9	781.5	781.0	780.7	780.3	780.1	779.8	779.4	780.5
177.5°	785.2	784.8	784.4	784.1	783.7	783.5	783.2	783.0	782.7	782.5	783.2
180°	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1



TEST NUMBER: P331594-940

CATALOG NUMBER: S122DIW-S1005D710U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9
2.5°	939.9	941.1	942.4	942.7	942.2	941.7	941.2	940.8
5°	937.0	938.9	940.7	941.4	941.1	940.8	940.5	940.2
7.5°	932.6	934.8	936.9	937.9	937.5	937.3	936.9	936.7
10°	928.6	931.1	933.5	934.6	934.2	934.0	933.7	933.4
12.5°	922.1	924.5	926.9	928.0	927.7	927.4	927.1	926.8
15°	910.2	912.8	915.6	916.9	916.5	916.2	915.9	915.6
17.5°	894.8	897.7	900.5	902.0	902.0	902.0	902.0	902.0
20°	882.6	886.0	889.3	891.0	891.0	891.0	891.0	891.0
22.5°	869.5	872.9	876.2	878.2	878.6	879.1	879.6	880.1
25°	849.1	852.7	856.4	858.6	859.6	860.5	861.4	862.3
27.5°	826.4	831.1	835.7	838.3	839.0	839.6	840.3	841.0
30°	810.6	815.4	820.3	823.1	824.0	824.9	825.9	826.8
32.5°	793.4	799.0	804.6	808.2	809.9	811.5	813.2	814.8
35°	769.1	775.8	782.5	786.8	789.0	791.1	793.3	795.3
37.5°	744.0	751.4	758.8	763.7	765.9	768.2	770.4	772.7
40°	726.4	734.3	742.2	747.5	750.3	753.0	755.7	758.5
42.5°	709.3	717.9	726.6	732.2	734.9	737.7	740.4	743.2
45°	683.0	692.4	701.8	708.0	711.1	714.1	717.1	720.1
47.5°	655.7	665.5	675.4	682.0	685.3	688.7	692.0	695.4
50°	636.9	647.3	657.6	664.5	667.8	671.1	674.5	677.8
52.5°	616.7	627.2	637.8	644.9	648.5	652.1	655.7	659.2
55°	586.3	597.2	608.1	615.5	619.5	623.5	627.4	631.3
57.5°	554.1	565.9	577.7	585.5	589.5	593.5	597.5	601.5
60°	532.8	544.4	555.9	563.8	568.0	572.3	576.6	580.8
62.5°	510.2	522.5	534.8	542.9	546.9	550.9	554.9	558.9
65°	475.9	488.3	500.8	509.0	512.9	516.8	520.8	524.8
67.5°	441.1	453.7	466.3	474.7	478.8	482.9	487.1	491.2
70°	417.0	430.0	443.1	451.4	455.0	458.7	462.4	466.0
72.5°	393.5	406.4	419.1	427.8	432.1	436.5	440.9	445.2
75°	358.2	371.2	384.3	392.8	396.7	400.7	404.7	408.6
77.5°	323.6	336.6	349.6	358.3	362.5	366.8	371.0	375.2
80°	300.1	313.0	325.7	334.2	338.5	342.7	347.0	351.2
82.5°	278.3	291.1	303.8	312.2	316.2	320.2	324.2	328.2
85°	246.9	259.7	272.4	280.9	285.2	289.4	293.6	297.9
87.5°	225.0	237.3	249.7	257.8	261.7	265.6	269.6	273.4
90°	227.3	239.1	250.9	258.8	262.6	266.4	270.2	273.9
92.5°	215.5	227.5	239.4	247.3	250.9	254.6	258.2	262.0
95°	222.6	234.2	245.7	253.1	256.5	259.8	263.1	266.5
97.5°	239.1	250.3	261.5	268.9	272.5	276.1	279.6	283.1
100°	250.5	261.7	273.0	280.2	283.3	286.5	289.7	292.9
102.5°	264.2	275.4	286.5	293.6	296.9	300.0	303.2	306.4
105°	284.9	295.9	306.7	313.9	317.3	320.6	324.0	327.3
107.5°	308.4	318.7	329.0	335.6	338.2	340.9	343.5	346.2
110°	324.9	334.7	344.4	350.7	353.7	356.5	359.4	362.3



TEST NUMBER: P331594-940

CATALOG NUMBER: S122DIW-S1005D710U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	341.5	350.9	360.3	366.4	369.4	372.5	375.5	378.5
115°	367.2	376.2	385.1	391.1	394.0	396.9	399.8	402.7
117.5°	391.6	400.3	408.9	414.6	417.2	419.9	422.5	425.2
120°	408.1	416.6	425.1	430.8	433.7	436.6	439.5	442.4
122.5°	425.8	433.6	441.6	446.8	449.3	451.8	454.4	456.9
125°	451.0	458.8	466.5	471.7	474.3	476.9	479.5	482.1
127.5°	475.5	482.4	489.5	494.0	496.2	498.5	500.6	502.8
130°	492.7	499.7	506.7	511.1	512.9	514.8	516.6	518.4
132.5°	509.3	515.7	522.1	526.3	528.2	530.2	532.2	534.1
135°	534.3	540.6	546.8	550.9	552.9	554.9	556.9	558.8
137.5°	558.2	563.7	569.2	572.7	574.2	575.6	577.1	578.5
140°	574.9	579.8	584.6	587.6	588.9	590.1	591.4	592.6
142.5°	591.1	595.1	599.1	601.6	602.6	603.6	604.6	605.6
145°	617.3	619.3	621.3	622.7	623.7	624.6	625.5	626.4
147.5°	641.2	641.9	642.4	642.7	642.9	643.1	643.3	643.5
150°	657.9	658.4	658.8	658.8	658.4	657.9	657.5	657.1
152.5°	675.1	675.6	676.3	676.3	675.6	675.1	674.6	674.0
155°	696.9	697.7	698.4	698.6	698.1	697.7	697.2	696.8
157.5°	717.0	718.0	719.0	719.2	718.5	717.7	717.0	716.3
160°	729.0	729.9	730.8	730.8	730.3	729.7	729.2	728.5
162.5°	739.8	740.8	741.8	741.9	741.2	740.6	739.9	739.1
165°	753.8	754.7	755.8	756.0	755.2	754.5	753.8	753.0
167.5°	765.3	766.2	767.3	767.4	766.7	765.9	765.2	764.4
170°	771.6	772.7	773.6	773.7	772.8	772.0	771.1	770.2
172.5°	776.4	777.4	778.5	778.5	777.7	776.8	775.9	775.0
175°	781.5	782.6	783.6	783.6	782.7	781.9	781.0	780.2
177.5°	783.9	784.6	785.3	785.3	784.6	783.9	783.2	782.5
180°	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1

(END OF REPORT)