

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: P331944-930

Luminaire Tested: **S123DIP-S560D1025U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331944-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D1025U930-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4763.5 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

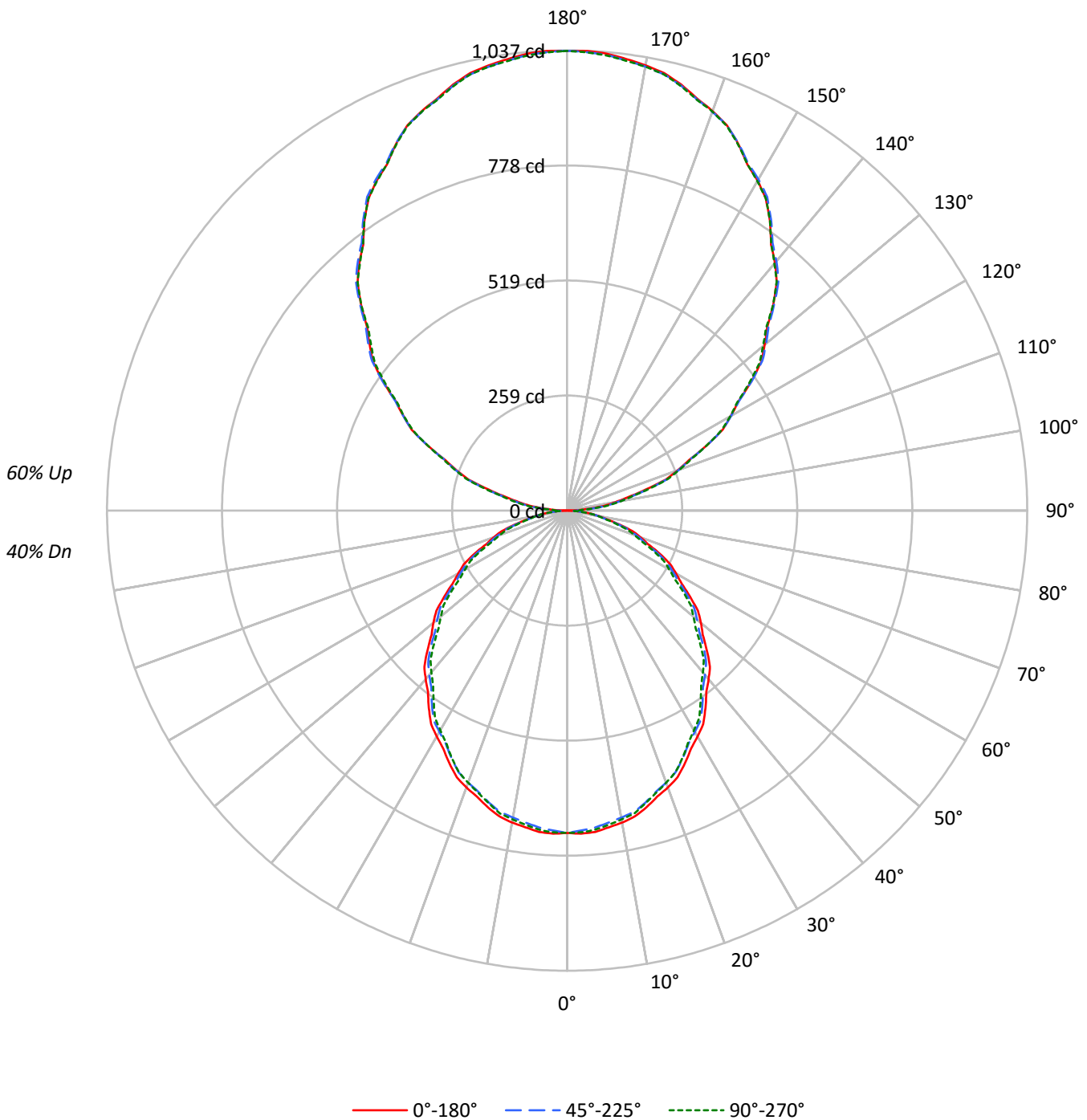
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331944-930

CATALOG NUMBER: S123DIP-S560D1025U930-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





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CATALOG NUMBER: S123DIP-S560D1025U930-4F0-1E-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	0
RCR																		
0	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	95	91	87	84	87	83	80	77	68	66	64	54	52	51	41	40	39	33
2	87	80	73	68	79	73	67	63	59	56	53	47	45	43	36	35	33	28
3	79	70	63	57	72	64	58	53	52	48	44	42	39	36	32	30	28	24
4	72	62	54	48	66	56	50	44	46	41	37	37	34	31	29	26	24	20
5	66	55	47	41	60	50	43	38	42	36	32	33	30	27	26	23	21	18
6	61	49	41	35	55	45	38	33	37	32	28	30	26	23	23	21	18	15
7	56	44	36	31	51	41	34	29	34	29	25	27	23	20	21	19	16	14
8	52	40	33	27	47	37	30	25	31	26	22	25	21	18	20	17	15	12
9	49	37	29	24	44	34	27	23	28	23	19	23	19	16	18	15	13	11
10	45	34	26	22	41	31	25	20	26	21	17	21	17	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7819	7819	7819
5°	7854	7747	7800
10°	7803	7679	7726
15°	7710	7592	7608
20°	7605	7468	7475
25°	7462	7321	7305
30°	7305	7157	7102
35°	7139	6984	6893
40°	6968	6792	6687
45°	6779	6616	6454
50°	6589	6400	6223
55°	6341	6176	5988
60°	6090	5916	5726
65°	5871	5631	5456
70°	5542	5306	5070
75°	5065	4882	4675
80°	4568	4376	4339
85°	4001	3853	3705



TEST NUMBER: P331944-930

CATALOG NUMBER: S123DIP-S560D1025U930-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.4	1.4
10°-20°	193.2	4.1
20°-30°	285.4	6.0
30°-40°	333.3	7.0
40°-50°	335.1	7.0
50°-60°	294.4	6.2
60°-70°	219.3	4.6
70°-80°	124.9	2.6
80°-90°	38.9	0.8
90°-100°	67.5	1.4
100°-110°	202.0	4.2
110°-120°	343.6	7.2
120°-130°	451.9	9.5
130°-140°	508.0	10.7
140°-150°	499.3	10.5
150°-160°	420.4	8.8
160°-170°	279.8	5.9
170°-180°	98.0	2.1
0°-30°	547.0	11.5
0°-40°	880.3	18.5
0°-60°	1509.9	31.7
0°-90°	1893.1	39.7
90°-120°	613.1	12.9
90°-150°	2072.3	43.5
90°-180°	2870.0	60.2
0°-180°	4763.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	726	726	726	726	726	
5°	727	724	717	723	722	69
15°	692	689	681	686	683	195
25°	628	624	616	617	615	289
35°	543	539	532	528	525	340
45°	445	442	435	427	424	344
55°	338	337	329	322	319	303
65°	230	227	221	216	214	227
75°	122	119	117	114	112	130
85°	32	31	31	30	30	36
90°	1	9	20	23	24	5
95°	48	54	60	63	64	54
105°	183	185	192	192	194	196
115°	346	348	347	347	347	342
125°	506	508	507	504	500	451
135°	657	661	661	658	656	506
145°	797	798	801	800	797	497
155°	912	912	913	916	911	420
165°	994	991	991	996	990	280
175°	1034	1030	1030	1035	1030	98
180°	1036	1036	1036	1036	1036	



TEST NUMBER: P331944-930

CATALOG NUMBER: S123DIP-S560D1025U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4
2.5°	728.8	728.4	728.0	727.5	727.1	726.2	725.0	723.7	722.6	721.4	722.4
5°	726.9	726.3	725.5	724.9	724.1	723.1	721.5	720.0	718.5	717.0	718.4
7.5°	719.8	719.2	718.4	717.8	717.1	715.9	714.4	712.7	711.2	709.6	710.9
10°	713.9	713.1	712.5	711.8	711.1	709.8	708.0	706.2	704.4	702.6	703.8
12.5°	705.9	705.2	704.7	704.1	703.5	702.4	700.7	699.0	697.3	695.6	696.5
15°	691.9	691.5	690.9	690.3	689.7	688.6	686.8	685.0	683.1	681.3	682.5
17.5°	675.9	675.1	674.4	673.7	672.9	671.7	669.9	668.1	666.3	664.5	665.3
20°	663.9	663.1	662.2	661.4	660.6	659.3	657.5	655.7	653.8	652.0	652.6
22.5°	650.4	649.5	648.7	647.9	647.0	645.7	643.9	642.1	640.3	638.5	639.0
25°	628.3	627.5	626.6	625.8	624.9	623.6	621.8	620.0	618.2	616.4	616.5
27.5°	604.7	603.9	603.1	602.3	601.4	600.1	598.1	596.2	594.3	592.3	592.4
30°	587.7	587.0	586.3	585.6	584.9	583.6	581.6	579.7	577.8	575.8	575.8
32.5°	570.7	569.8	568.8	567.9	567.0	565.8	564.4	562.8	561.3	559.9	559.1
35°	543.3	542.5	541.7	540.9	540.1	538.7	536.9	535.1	533.3	531.5	530.7
37.5°	515.4	514.3	513.2	512.2	511.1	509.7	507.8	506.1	504.2	502.4	501.4
40°	495.9	495.0	494.2	493.4	492.5	491.1	489.2	487.3	485.3	483.4	482.2
42.5°	476.4	475.5	474.5	473.5	472.6	471.2	469.2	467.3	465.4	463.4	462.3
45°	445.3	444.7	444.2	443.6	443.0	441.9	440.1	438.3	436.5	434.6	433.0
47.5°	414.4	413.6	412.9	412.1	411.2	409.9	408.3	406.6	404.9	403.2	401.5
50°	393.5	392.7	392.1	391.3	390.7	389.5	387.6	385.8	384.0	382.2	380.7
52.5°	371.5	371.0	370.6	370.1	369.6	368.4	366.5	364.6	362.6	360.8	359.5
55°	337.9	337.7	337.6	337.5	337.3	336.3	334.5	332.7	330.9	329.1	327.6
57.5°	305.9	305.4	304.9	304.5	304.0	303.0	301.6	300.2	298.7	297.3	296.0
60°	282.9	282.7	282.7	282.5	282.3	281.4	279.8	278.1	276.5	274.8	273.5
62.5°	262.4	262.0	261.7	261.4	261.0	260.0	258.3	256.7	254.9	253.3	252.1
65°	230.5	229.8	229.1	228.4	227.7	226.7	225.3	223.9	222.5	221.1	220.0
67.5°	196.6	196.0	195.3	194.8	194.1	193.3	192.2	191.2	190.1	189.1	188.2
70°	176.1	175.3	174.5	173.7	172.8	171.9	171.1	170.3	169.4	168.6	167.6
72.5°	154.7	154.0	153.4	152.8	152.2	151.4	150.5	149.5	148.5	147.7	146.8
75°	121.8	121.2	120.7	120.1	119.6	119.1	118.6	118.2	117.8	117.4	116.8
77.5°	92.7	92.4	92.0	91.8	91.5	91.1	90.6	90.1	89.5	89.0	88.6
80°	73.7	73.3	72.9	72.5	72.0	71.7	71.4	71.1	70.8	70.6	70.4
82.5°	55.2	55.1	55.0	55.0	54.9	54.8	54.8	54.7	54.6	54.6	54.3
85°	32.4	32.2	32.0	31.6	31.4	31.2	31.2	31.2	31.2	31.2	31.0
87.5°	13.1	13.2	13.2	13.2	13.3	13.5	13.9	14.2	14.5	14.9	14.9
90°	0.8	2.6	4.4	6.3	8.1	10.1	12.5	14.8	17.2	19.6	20.2
92.5°	19.7	21.0	22.2	23.4	24.6	25.9	27.2	28.5	29.9	31.2	31.8
95°	48.0	49.2	50.5	51.9	53.1	54.5	55.8	57.3	58.8	60.3	61.0
97.5°	85.3	86.3	87.2	88.1	89.0	90.0	91.1	92.1	93.2	94.2	95.1
100°	110.7	111.8	112.8	113.9	115.0	116.0	116.9	117.8	118.7	119.6	120.2
102.5°	140.0	140.6	141.3	141.9	142.6	143.5	144.7	145.9	147.1	148.3	148.8
105°	183.1	183.4	183.8	184.2	184.6	185.6	187.2	188.8	190.5	192.1	192.1
107.5°	233.3	233.5	233.7	233.9	234.2	234.6	235.2	235.9	236.5	237.2	237.7
110°	264.5	264.9	265.2	265.5	266.0	266.3	266.7	267.0	267.4	267.7	268.5



TEST NUMBER: P331944-930

CATALOG NUMBER: S123DIP-S560D1025U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	297.0	297.3	297.5	297.7	297.9	298.1	298.2	298.2	298.3	298.3	299.2
115°	345.8	346.4	347.0	347.5	348.1	348.1	347.8	347.4	347.1	346.7	346.9
117.5°	395.0	395.4	395.7	396.2	396.5	396.4	396.0	395.5	395.0	394.5	394.5
120°	425.7	426.7	427.8	428.9	430.0	430.1	429.2	428.3	427.4	426.5	426.2
122.5°	457.5	458.4	459.1	459.9	460.7	460.9	460.4	459.9	459.5	459.0	458.5
125°	506.2	506.8	507.3	507.8	508.3	508.5	508.1	507.8	507.4	507.0	506.3
127.5°	551.1	552.3	553.4	554.6	555.8	556.1	555.7	555.4	555.0	554.6	553.5
130°	581.1	582.5	584.0	585.4	586.9	587.3	586.8	586.2	585.7	585.1	584.4
132.5°	611.1	612.5	613.9	615.4	616.9	617.3	616.9	616.5	616.1	615.7	614.9
135°	656.8	657.9	658.9	660.0	661.1	661.5	661.4	661.2	661.0	660.8	660.1
137.5°	699.1	700.0	700.9	701.8	702.7	703.4	703.8	704.3	704.8	705.2	704.5
140°	728.4	729.3	730.2	731.1	732.0	732.5	732.7	732.9	733.1	733.3	733.1
142.5°	755.0	755.9	756.9	757.8	758.7	759.3	759.6	759.9	760.3	760.6	760.4
145°	796.7	797.1	797.4	797.9	798.2	798.7	799.2	799.7	800.3	800.8	800.6
147.5°	833.2	833.9	834.5	835.2	835.8	836.4	836.9	837.4	837.9	838.5	838.5
150°	858.6	859.0	859.3	859.7	860.1	860.4	860.8	861.1	861.5	861.9	861.9
152.5°	879.5	880.0	880.4	880.9	881.4	881.8	882.1	882.2	882.5	882.7	883.0
155°	912.3	912.3	912.3	912.3	912.3	912.4	912.6	912.7	913.0	913.1	913.9
157.5°	940.3	940.1	939.9	939.6	939.5	939.4	939.6	939.7	939.9	940.0	940.8
160°	957.9	957.5	957.2	956.8	956.4	956.3	956.3	956.3	956.3	956.3	957.2
162.5°	973.5	973.0	972.5	972.0	971.5	971.3	971.4	971.6	971.8	971.9	972.8
165°	993.7	993.1	992.6	992.1	991.6	991.2	991.2	991.2	991.2	991.2	992.3
167.5°	1009.8	1009.1	1008.4	1007.6	1006.9	1006.7	1006.8	1006.9	1007.1	1007.2	1008.4
170°	1019.0	1018.2	1017.5	1016.8	1016.0	1015.7	1015.7	1015.7	1015.7	1015.7	1016.9
172.5°	1026.1	1025.4	1024.7	1023.9	1023.2	1022.8	1022.8	1022.8	1022.8	1022.8	1023.9
175°	1033.6	1032.8	1032.1	1031.4	1030.7	1030.3	1030.3	1030.3	1030.3	1030.3	1031.4
177.5°	1036.7	1036.1	1035.5	1034.9	1034.4	1034.0	1034.0	1034.0	1034.0	1034.0	1034.9
180°	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0



TEST NUMBER: P331944-930

CATALOG NUMBER: S123DIP-S560D1025U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4
2.5°	723.6	724.6	725.8	726.3	726.2	726.0	725.9	725.9
5°	719.7	721.1	722.5	723.1	722.8	722.5	722.3	721.9
7.5°	712.1	713.3	714.6	715.1	714.9	714.8	714.6	714.4
10°	705.1	706.4	707.6	708.1	707.8	707.5	707.3	706.9
12.5°	697.4	698.4	699.3	699.6	699.4	699.3	699.1	699.0
15°	683.6	684.7	685.8	685.9	685.1	684.3	683.5	682.7
17.5°	666.1	666.8	667.6	667.8	667.6	667.2	666.9	666.6
20°	653.1	653.7	654.2	654.3	653.9	653.5	653.1	652.6
22.5°	639.4	639.8	640.3	640.3	639.8	639.2	638.7	638.1
25°	616.7	616.9	616.9	616.9	616.4	616.0	615.6	615.1
27.5°	592.6	592.6	592.7	592.6	592.0	591.5	590.9	590.4
30°	575.8	575.8	575.8	575.4	574.4	573.4	572.4	571.4
32.5°	558.3	557.5	556.7	556.0	555.5	555.1	554.5	554.0
35°	529.8	529.0	528.2	527.4	526.7	526.0	525.3	524.6
37.5°	500.3	499.4	498.4	497.7	497.3	496.8	496.4	495.9
40°	481.2	480.0	479.0	478.1	477.5	477.0	476.5	475.9
42.5°	461.2	460.1	458.9	458.1	457.5	457.1	456.5	455.9
45°	431.4	429.7	428.0	426.8	426.2	425.4	424.8	424.0
47.5°	399.9	398.3	396.6	395.5	394.9	394.3	393.7	393.1
50°	379.2	377.6	376.1	375.0	374.1	373.2	372.4	371.6
52.5°	358.2	356.9	355.6	354.4	353.6	352.8	352.0	351.1
55°	326.0	324.6	323.0	321.9	321.2	320.5	319.8	319.1
57.5°	294.6	293.2	291.9	290.7	289.9	289.2	288.4	287.6
60°	272.3	271.1	269.8	268.8	268.2	267.4	266.8	266.0
62.5°	250.8	249.6	248.3	247.4	247.0	246.5	246.1	245.6
65°	218.8	217.8	216.6	215.9	215.5	215.1	214.7	214.2
67.5°	187.2	186.2	185.2	184.4	183.8	183.3	182.7	182.1
70°	166.6	165.8	164.8	163.9	163.2	162.5	161.8	161.1
72.5°	145.9	145.0	144.2	143.6	143.2	142.8	142.5	142.1
75°	116.0	115.4	114.6	114.1	113.7	113.2	112.8	112.4
77.5°	88.1	87.6	87.2	86.9	86.9	86.9	86.9	86.9
80°	70.3	70.1	70.0	70.0	70.0	70.0	70.0	70.0
82.5°	54.1	53.8	53.6	53.4	53.3	53.2	53.1	53.0
85°	30.7	30.4	30.1	30.0	30.0	30.0	30.0	30.0
87.5°	15.0	15.0	15.0	15.1	15.2	15.2	15.3	15.4
90°	21.0	21.7	22.4	23.0	23.3	23.7	24.1	24.4
92.5°	32.4	33.0	33.6	33.8	33.5	33.3	33.1	32.9
95°	61.6	62.4	63.1	63.5	63.5	63.5	63.5	63.5
97.5°	95.9	96.8	97.6	97.9	97.9	97.8	97.8	97.7
100°	120.7	121.2	121.8	122.3	122.6	122.9	123.4	123.7
102.5°	149.4	149.9	150.4	150.7	150.6	150.5	150.5	150.4
105°	192.1	192.1	192.1	192.2	192.6	193.0	193.3	193.7
107.5°	238.3	238.9	239.5	239.6	239.5	239.2	239.0	238.8
110°	269.2	269.9	270.7	270.8	270.4	270.1	269.8	269.4



TEST NUMBER: P331944-930

CATALOG NUMBER: S123DIP-S560D1025U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	300.1	300.9	301.8	302.2	302.1	302.1	302.0	301.9
115°	347.1	347.2	347.4	347.4	347.2	347.1	346.9	346.7
117.5°	394.4	394.4	394.4	394.1	393.6	393.1	392.6	392.1
120°	426.1	425.9	425.7	425.4	425.1	424.8	424.4	424.0
122.5°	458.0	457.6	457.1	456.6	456.2	455.6	455.1	454.6
125°	505.6	504.8	504.1	503.4	502.7	502.0	501.2	500.5
127.5°	552.5	551.5	550.5	549.6	548.8	547.9	547.1	546.3
130°	583.7	582.9	582.3	581.2	580.0	578.7	577.5	576.2
132.5°	614.0	613.2	612.3	611.4	610.4	609.4	608.5	607.5
135°	659.4	658.7	657.9	657.4	657.0	656.6	656.3	656.0
137.5°	703.8	703.0	702.2	701.5	700.8	700.1	699.4	698.8
140°	732.9	732.7	732.5	731.8	730.6	729.3	728.1	726.8
142.5°	760.3	760.1	759.9	759.3	758.3	757.3	756.4	755.4
145°	800.5	800.3	800.1	799.6	798.9	798.2	797.4	796.7
147.5°	838.5	838.5	838.5	837.9	836.8	835.7	834.6	833.6
150°	861.9	861.9	861.9	861.3	860.2	859.2	858.0	857.0
152.5°	883.3	883.5	883.9	883.5	882.6	881.7	880.7	879.8
155°	914.6	915.3	916.0	915.7	914.5	913.2	911.9	910.7
157.5°	941.5	942.2	943.1	942.9	941.9	940.9	939.9	938.8
160°	958.1	959.0	959.9	959.9	959.3	958.5	957.8	957.1
162.5°	973.7	974.6	975.5	975.3	974.2	973.1	971.9	970.8
165°	993.4	994.5	995.6	995.5	994.3	993.0	991.7	990.4
167.5°	1009.4	1010.6	1011.7	1011.7	1010.6	1009.4	1008.4	1007.2
170°	1018.2	1019.5	1020.8	1020.8	1019.5	1018.2	1016.9	1015.7
172.5°	1025.1	1026.2	1027.3	1027.3	1026.0	1024.7	1023.4	1022.1
175°	1032.5	1033.6	1034.7	1034.5	1033.3	1032.0	1030.8	1029.5
177.5°	1035.8	1036.7	1037.5	1037.5	1036.5	1035.4	1034.5	1033.4
180°	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0

(END OF REPORT)