

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: P331896-927

Luminaire Tested: **S123DIP-S340D1025U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331896-927
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-S340D1025U927-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP 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: 3930.7 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

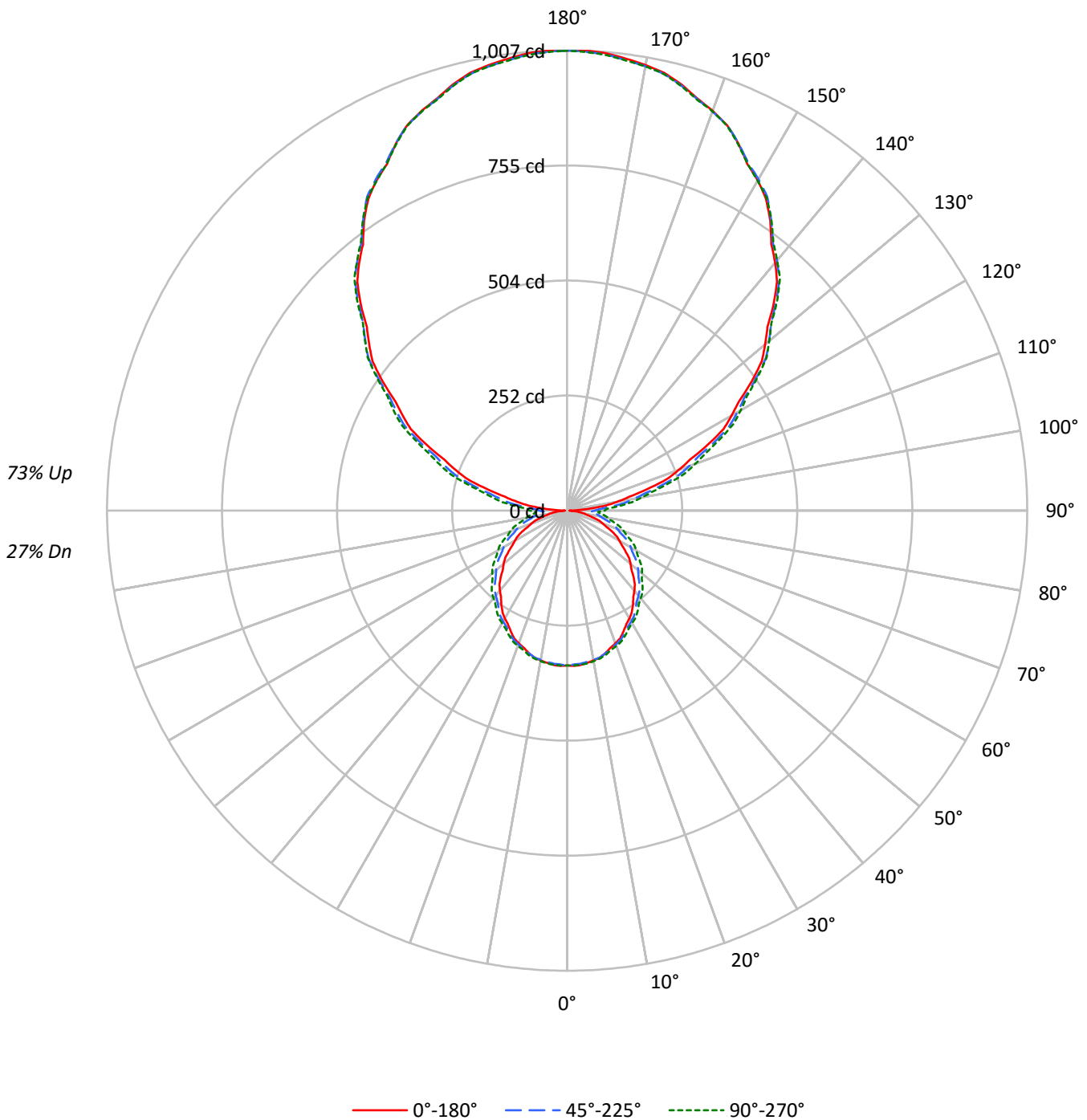
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331896-927

CATALOG NUMBER: S123DIP-S340D1025U927-4F0-1E-UDD-D1

Luminous Intensity Polar Plot





TEST NUMBER: P331896-927

CATALOG NUMBER: S123DIP-S340D1025U927-4F0-1E-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	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35	27
1	92	88	84	80	82	78	75	72	61	58	56	45	43	42	30	29	28	21
2	83	76	70	65	74	68	63	58	53	49	46	39	36	34	26	24	23	17
3	76	67	59	54	67	60	53	48	46	42	38	34	31	29	23	21	19	14
4	69	59	51	45	61	53	46	41	41	36	32	30	27	24	20	18	17	12
5	63	52	44	38	56	47	40	35	36	32	28	27	24	21	18	16	14	11
6	58	46	39	33	52	42	35	30	33	28	24	24	21	18	16	14	13	9
7	54	42	34	29	48	38	31	26	29	25	21	22	18	16	15	13	11	8
8	50	38	30	25	44	34	27	23	27	22	18	20	17	14	14	11	10	7
9	46	34	27	22	41	31	25	20	24	20	16	18	15	13	12	10	9	6
10	43	31	24	20	38	28	22	18	22	18	15	17	14	11	12	9	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3647	3647	3647
5°	3658	3556	3557
10°	3626	3473	3456
15°	3579	3380	3345
20°	3513	3274	3224
25°	3430	3152	3096
30°	3345	3043	2966
35°	3251	2926	2863
40°	3161	2820	2752
45°	3061	2718	2664
50°	2962	2618	2566
55°	2852	2516	2478
60°	2745	2411	2388
65°	2636	2300	2280
70°	2471	2174	2170
75°	2265	2031	2059
80°	2023	1890	1932
85°	1805	1794	1856



TEST NUMBER: P331896-927

CATALOG NUMBER: S123DIP-S340D1025U927-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.1	0.8
10°-20°	91.6	2.3
20°-30°	137.0	3.5
30°-40°	163.6	4.2
40°-50°	171.1	4.4
50°-60°	160.6	4.1
60°-70°	134.1	3.4
70°-80°	96.0	2.4
80°-90°	60.2	1.5
90°-100°	101.5	2.6
100°-110°	222.7	5.7
110°-120°	351.5	8.9
120°-130°	449.2	11.4
130°-140°	498.1	12.7
140°-150°	486.1	12.4
150°-160°	408.4	10.4
160°-170°	271.9	6.9
170°-180°	95.2	2.4
0°-30°	260.6	6.6
0°-40°	424.2	10.8
0°-60°	755.9	19.2
0°-90°	1046.2	26.6
90°-120°	675.6	17.2
90°-150°	2109.0	53.7
90°-180°	2885.0	73.4
0°-180°	3930.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	339	339	339	339	339	
5°	339	338	336	339	339	32
15°	323	324	324	327	327	91
25°	292	295	296	301	301	134
35°	251	257	262	267	269	157
45°	205	214	223	230	233	158
55°	156	169	182	192	195	140
65°	108	123	139	149	154	107
75°	59	76	94	106	111	63
85°	18	37	56	68	72	19
90°	6	32	61	76	82	6
95°	51	71	95	109	113	56
105°	181	192	214	224	230	194
115°	338	345	356	366	368	334
125°	493	496	504	509	508	440
135°	639	643	646	650	650	492
145°	774	776	778	780	779	484
155°	886	886	887	890	885	408
165°	966	963	963	967	962	272
175°	1004	1001	1001	1005	1000	95
180°	1007	1007	1007	1007	1007	



TEST NUMBER: P331896-927

CATALOG NUMBER: S123DIP-S340D1025U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	340.3	340.2	339.9	339.8	339.5	339.2	338.7	338.1	337.6	337.1	337.6
5°	339.2	339.1	338.9	338.7	338.6	338.3	337.7	337.2	336.8	336.3	336.9
7.5°	335.9	336.0	336.0	336.0	336.0	335.8	335.3	334.9	334.4	333.9	334.7
10°	333.0	333.1	333.3	333.4	333.6	333.5	333.0	332.6	332.2	331.8	332.6
12.5°	329.4	329.6	329.9	330.1	330.3	330.3	330.0	329.7	329.5	329.2	329.9
15°	323.0	323.2	323.4	323.7	323.9	324.1	323.9	323.8	323.8	323.7	324.6
17.5°	314.9	315.4	315.8	316.3	316.8	317.0	317.0	317.0	317.0	317.0	317.7
20°	309.0	309.4	309.9	310.5	310.9	311.2	311.4	311.6	311.7	311.9	312.7
22.5°	302.8	303.2	303.7	304.2	304.8	305.1	305.3	305.5	305.8	306.0	307.0
25°	291.6	292.4	293.3	294.1	294.9	295.4	295.6	295.9	296.1	296.4	297.5
27.5°	280.4	281.3	282.3	283.2	284.2	284.9	285.3	285.9	286.5	286.9	287.9
30°	272.4	273.5	274.6	275.6	276.7	277.5	278.2	278.8	279.5	280.2	281.1
32.5°	263.6	264.7	265.9	267.1	268.3	269.3	270.2	271.1	272.0	272.7	273.9
35°	251.0	252.3	253.7	254.9	256.3	257.5	258.5	259.6	260.6	261.7	262.9
37.5°	237.7	239.2	240.7	242.2	243.6	245.0	246.3	247.6	249.0	250.3	251.7
40°	228.9	230.4	231.8	233.3	234.7	236.3	238.0	239.6	241.2	242.9	244.3
42.5°	219.1	220.9	222.7	224.5	226.3	228.1	229.8	231.5	233.2	234.9	236.5
45°	205.3	207.2	209.1	211.1	213.1	215.1	217.1	219.2	221.3	223.3	224.9
47.5°	190.7	192.9	195.1	197.4	199.6	201.9	204.2	206.6	208.9	211.3	213.0
50°	181.3	183.5	185.8	188.1	190.4	192.8	195.4	198.0	200.5	203.0	204.9
52.5°	171.2	173.6	176.0	178.5	180.9	183.5	186.3	189.2	191.9	194.7	196.7
55°	156.5	159.2	161.9	164.6	167.3	170.2	173.1	176.1	179.0	182.0	184.2
57.5°	142.2	145.0	147.8	150.7	153.4	156.5	159.7	163.0	166.2	169.4	171.7
60°	132.1	135.1	138.1	141.0	143.9	147.1	150.5	153.8	157.2	160.6	162.9
62.5°	122.7	125.7	128.7	131.7	134.8	138.1	141.6	145.2	148.8	152.3	154.6
65°	108.1	111.4	114.5	117.7	121.0	124.4	127.9	131.6	135.1	138.8	141.2
67.5°	93.4	96.8	100.2	103.5	106.9	110.5	114.2	117.9	121.5	125.2	127.9
70°	83.0	86.6	90.1	93.6	97.1	100.9	104.8	108.8	112.7	116.6	119.3
72.5°	73.6	77.2	80.6	84.2	87.7	91.5	95.5	99.7	103.7	107.8	110.5
75°	58.7	62.6	66.4	70.3	74.1	78.1	82.2	86.3	90.4	94.5	97.2
77.5°	45.7	49.6	53.5	57.4	61.2	65.3	69.4	73.5	77.6	81.8	84.7
80°	36.5	40.6	44.6	48.6	52.6	56.8	61.0	65.3	69.6	73.8	76.6
82.5°	28.6	32.6	36.8	40.8	44.9	49.1	53.5	57.8	62.1	66.5	69.2
85°	18.1	22.2	26.3	30.4	34.5	38.7	43.1	47.4	51.7	56.1	58.9
87.5°	10.0	14.4	18.9	23.3	27.7	32.2	36.9	41.5	46.2	50.9	53.8
90°	5.6	11.3	17.1	22.9	28.7	34.9	41.3	47.8	54.2	60.7	64.2
92.5°	23.6	28.4	33.3	38.1	42.9	48.0	53.5	58.9	64.3	69.7	73.0
95°	50.7	55.1	59.6	64.0	68.4	73.4	78.8	84.2	89.6	95.1	98.3
97.5°	86.5	90.3	94.1	97.9	101.7	106.0	110.9	115.7	120.6	125.5	128.7
100°	110.8	114.5	118.2	121.9	125.6	129.8	134.4	139.0	143.7	148.4	151.2
102.5°	139.0	142.0	145.0	148.1	151.0	155.0	159.8	164.7	169.5	174.4	177.3
105°	180.9	183.2	185.5	187.8	190.1	193.8	199.0	204.1	209.2	214.3	216.6
107.5°	229.2	231.0	232.9	234.8	236.7	239.6	243.6	247.6	251.5	255.6	258.3
110°	259.2	261.0	262.8	264.7	266.5	269.3	272.9	276.6	280.1	283.8	286.6



TEST NUMBER: P331896-927

CATALOG NUMBER: S123DIP-S340D1025U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	290.8	292.2	293.7	295.1	296.5	298.9	302.1	305.3	308.6	311.7	314.7
115°	337.9	339.5	341.0	342.5	344.0	346.0	348.6	351.3	353.8	356.4	358.5
117.5°	385.6	386.6	387.5	388.5	389.4	391.1	393.4	395.7	398.0	400.4	402.3
120°	415.0	416.5	418.0	419.5	420.9	422.6	424.4	426.2	428.0	429.8	431.6
122.5°	446.1	447.0	448.0	449.0	450.0	451.5	453.7	455.7	457.9	460.0	461.4
125°	493.0	493.5	494.0	494.6	495.0	496.4	498.4	500.4	502.4	504.5	505.5
127.5°	536.6	537.7	538.7	539.7	540.7	542.1	543.7	545.3	546.8	548.4	549.1
130°	565.7	567.0	568.4	569.7	571.0	572.2	573.3	574.5	575.6	576.7	577.5
132.5°	594.5	595.9	597.3	598.7	600.1	601.3	602.1	603.1	604.0	604.9	605.6
135°	638.9	639.8	640.8	641.8	642.8	643.6	644.4	645.1	645.8	646.5	647.3
137.5°	679.9	680.7	681.6	682.4	683.2	684.0	685.0	686.0	687.0	687.9	688.5
140°	708.1	709.0	709.9	710.7	711.6	712.3	712.7	713.1	713.5	713.9	715.0
142.5°	734.0	734.8	735.7	736.5	737.3	737.9	738.2	738.6	738.9	739.3	740.3
145°	774.5	774.8	775.1	775.3	775.6	776.0	776.5	777.1	777.6	778.1	778.6
147.5°	809.6	810.2	810.9	811.5	812.1	812.7	813.2	813.7	814.1	814.7	814.8
150°	834.2	834.6	835.0	835.3	835.7	836.0	836.4	836.7	837.1	837.4	837.4
152.5°	854.5	855.0	855.5	856.0	856.4	856.8	857.1	857.2	857.5	857.7	857.9
155°	886.5	886.5	886.5	886.5	886.5	886.5	886.7	886.8	887.1	887.2	888.0
157.5°	913.6	913.5	913.2	913.0	912.8	912.8	912.9	913.1	913.2	913.3	914.1
160°	930.7	930.3	930.0	929.7	929.3	929.2	929.2	929.2	929.2	929.2	930.0
162.5°	945.9	945.4	944.9	944.4	944.0	943.8	943.9	944.0	944.2	944.4	945.2
165°	965.5	965.0	964.5	963.9	963.5	963.1	963.1	963.1	963.1	963.1	964.2
167.5°	981.2	980.5	979.8	979.1	978.3	978.1	978.3	978.3	978.5	978.7	979.8
170°	990.1	989.4	988.6	987.9	987.2	986.9	986.9	986.9	986.9	986.9	988.1
172.5°	997.0	996.3	995.6	994.9	994.2	993.8	993.8	993.8	993.8	993.8	994.9
175°	1004.2	1003.5	1002.8	1002.2	1001.5	1001.1	1001.1	1001.1	1001.1	1001.1	1002.2
177.5°	1007.3	1006.7	1006.2	1005.6	1005.0	1004.7	1004.7	1004.7	1004.7	1004.7	1005.6
180°	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6



TEST NUMBER: P331896-927

CATALOG NUMBER: S123DIP-S340D1025U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	338.1	338.7	339.2	339.4	339.4	339.3	339.2	339.1
5°	337.5	338.3	338.9	339.2	339.1	339.0	338.9	338.8
7.5°	335.6	336.4	337.2	337.5	337.5	337.3	337.2	337.2
10°	333.5	334.3	335.1	335.4	335.3	335.1	334.9	334.8
12.5°	330.7	331.4	332.2	332.5	332.3	332.2	332.0	331.8
15°	325.3	326.1	327.0	327.3	327.3	327.2	327.1	327.0
17.5°	318.4	319.2	319.9	320.2	320.0	320.0	319.9	319.7
20°	313.4	314.1	314.9	315.3	315.4	315.4	315.5	315.6
22.5°	307.8	308.8	309.7	310.2	310.1	310.1	310.1	310.0
25°	298.5	299.6	300.6	301.2	301.2	301.2	301.2	301.2
27.5°	288.8	289.7	290.7	291.1	291.2	291.3	291.3	291.4
30°	282.1	283.1	284.1	284.6	284.6	284.6	284.6	284.6
32.5°	274.9	275.9	276.9	277.6	277.8	278.0	278.2	278.4
35°	264.2	265.4	266.6	267.4	267.8	268.1	268.4	268.7
37.5°	253.0	254.4	255.9	256.7	256.9	257.2	257.5	257.7
40°	245.7	247.1	248.4	249.3	249.6	250.0	250.3	250.6
42.5°	238.0	239.5	241.0	242.0	242.5	242.9	243.4	243.8
45°	226.4	228.0	229.6	230.7	231.3	232.0	232.7	233.3
47.5°	214.8	216.6	218.3	219.4	219.9	220.5	220.9	221.5
50°	206.8	208.7	210.6	211.8	212.4	212.9	213.5	214.1
52.5°	198.7	200.6	202.6	203.9	204.6	205.3	206.0	206.7
55°	186.4	188.6	190.8	192.3	192.9	193.6	194.2	194.9
57.5°	173.9	176.1	178.3	179.8	180.6	181.4	182.2	182.9
60°	165.2	167.5	169.8	171.3	172.2	173.2	174.0	175.0
62.5°	156.9	159.1	161.4	163.0	163.9	164.7	165.6	166.4
65°	143.7	146.2	148.6	150.3	151.1	151.9	152.7	153.5
67.5°	130.6	133.2	135.9	137.7	138.3	139.0	139.7	140.4
70°	121.9	124.5	127.1	128.9	129.7	130.5	131.3	132.1
72.5°	113.1	115.8	118.5	120.3	121.1	121.9	122.8	123.6
75°	99.9	102.6	105.4	107.2	108.1	109.2	110.1	111.1
77.5°	87.5	90.4	93.2	95.0	95.8	96.6	97.3	98.1
80°	79.4	82.2	85.0	86.7	87.6	88.4	89.3	90.1
82.5°	72.0	74.8	77.6	79.4	80.2	81.0	81.8	82.7
85°	61.7	64.5	67.3	69.1	69.9	70.7	71.5	72.3
87.5°	56.6	59.6	62.5	64.5	65.4	66.2	67.1	68.0
90°	67.7	71.1	74.6	77.0	78.2	79.3	80.5	81.7
92.5°	76.3	79.5	82.9	84.8	85.3	85.9	86.4	87.0
95°	101.6	104.8	108.1	110.1	110.9	111.7	112.6	113.4
97.5°	132.0	135.2	138.5	140.5	141.2	142.0	142.8	143.5
100°	154.2	157.1	159.9	162.0	163.2	164.4	165.6	166.7
102.5°	180.1	182.9	185.8	187.6	188.3	189.1	189.8	190.6
105°	218.9	221.2	223.5	225.2	226.2	227.4	228.5	229.6
107.5°	261.0	263.8	266.6	268.2	268.7	269.3	269.7	270.2
110°	289.5	292.3	295.1	296.7	297.0	297.3	297.6	297.9



TEST NUMBER: P331896-927

CATALOG NUMBER: S123DIP-S340D1025U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	317.6	320.4	323.4	325.2	325.8	326.5	327.1	327.8
115°	360.7	362.9	365.0	366.3	366.8	367.3	367.7	368.2
117.5°	404.2	406.1	408.0	409.0	409.2	409.3	409.5	409.6
120°	433.3	435.0	436.7	437.7	437.9	438.2	438.3	438.6
122.5°	462.7	464.1	465.5	466.2	466.3	466.4	466.4	466.5
125°	506.5	507.6	508.5	509.0	508.8	508.7	508.6	508.5
127.5°	549.7	550.3	551.0	551.2	551.0	550.6	550.4	550.2
130°	578.4	579.2	580.1	580.2	579.4	578.7	578.0	577.2
132.5°	606.3	606.9	607.5	607.7	607.3	606.9	606.5	606.1
135°	648.1	648.9	649.6	650.1	650.1	650.1	650.2	650.3
137.5°	689.0	689.6	690.1	690.3	690.1	689.8	689.5	689.3
140°	716.1	717.1	718.2	718.3	717.5	716.7	715.8	715.0
142.5°	741.2	742.1	743.1	743.2	742.7	742.1	741.6	741.1
145°	779.0	779.6	780.1	780.1	779.7	779.3	779.0	778.6
147.5°	815.1	815.2	815.4	815.2	814.4	813.7	812.9	812.1
150°	837.4	837.4	837.4	836.9	836.1	835.2	834.3	833.4
152.5°	858.3	858.5	858.8	858.5	857.6	856.7	855.9	854.9
155°	888.7	889.4	890.0	889.8	888.6	887.3	886.1	884.9
157.5°	914.8	915.5	916.3	916.2	915.2	914.2	913.2	912.2
160°	930.9	931.8	932.6	932.7	932.1	931.4	930.7	929.9
162.5°	946.1	947.0	947.8	947.7	946.6	945.5	944.4	943.3
165°	965.3	966.3	967.3	967.3	966.1	964.8	963.6	962.3
167.5°	980.8	981.9	983.0	983.0	981.9	980.8	979.8	978.7
170°	989.4	990.5	991.8	991.8	990.5	989.4	988.1	986.9
172.5°	996.0	997.1	998.1	998.1	996.9	995.7	994.4	993.2
175°	1003.2	1004.2	1005.4	1005.2	1004.0	1002.7	1001.6	1000.3
177.5°	1006.5	1007.3	1008.1	1008.1	1007.1	1006.1	1005.1	1004.1
180°	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6	1006.6

(END OF REPORT)