

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: P331895-927

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331895-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
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-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4387.3 lumens
Efficiency: N/A
Efficacy: 117.6 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

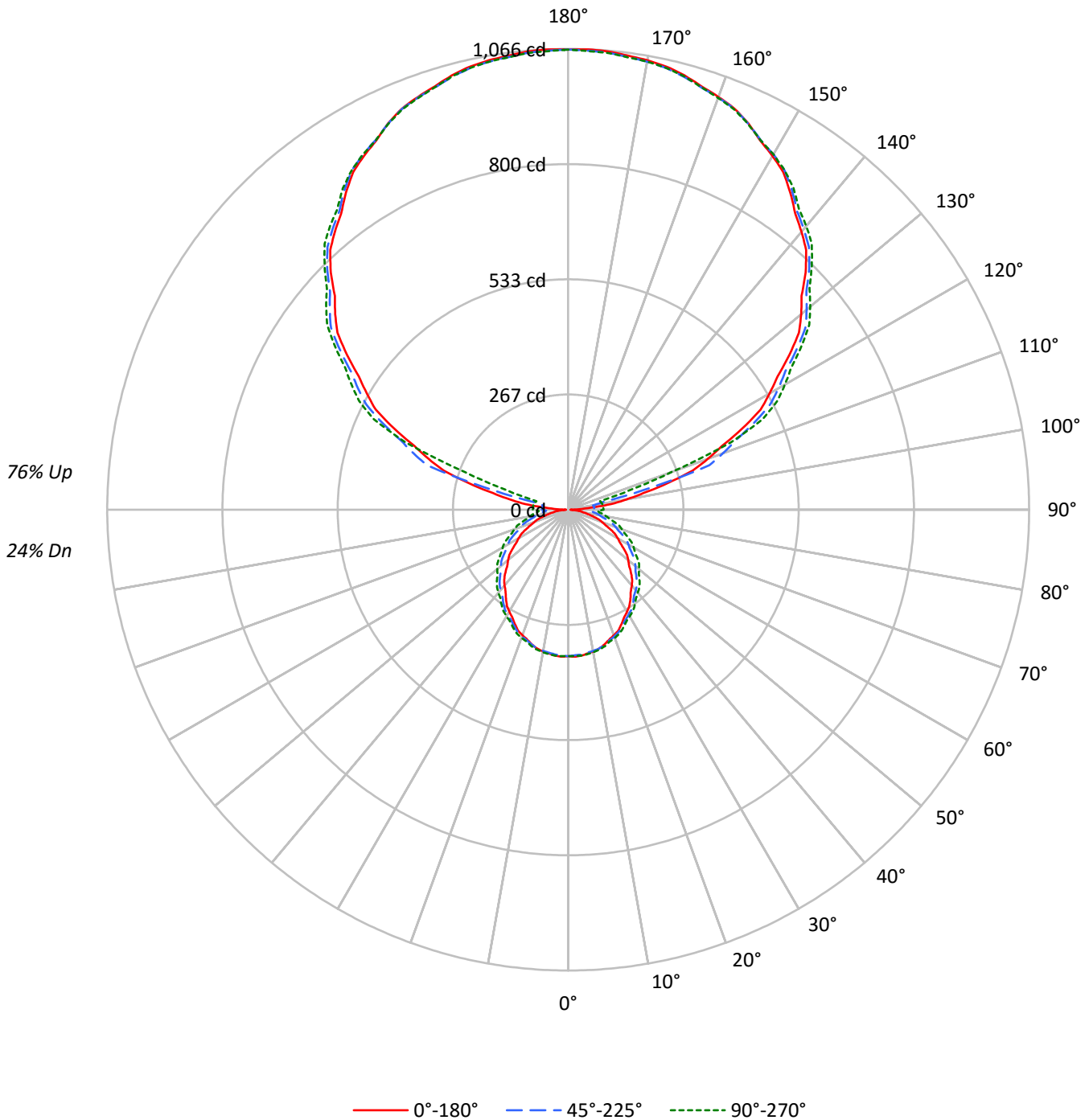
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331895-927

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

Luminous Intensity Polar Plot





TEST NUMBER: P331895-927

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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	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24
1	91	87	83	80	81	77	74	71	59	57	55	43	41	40	27	27	26	19
2	83	76	70	64	73	67	62	58	52	48	45	37	35	33	24	23	21	16
3	76	66	59	53	67	59	53	48	45	41	38	33	30	28	21	19	18	13
4	69	58	51	45	61	52	45	40	40	35	32	29	26	24	19	17	15	11
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9
6	58	46	38	33	51	41	35	30	32	27	23	23	20	17	15	13	12	8
7	53	42	34	28	47	37	30	26	29	24	20	21	18	15	14	12	10	7
8	49	37	30	25	44	34	27	23	26	21	18	19	16	14	13	11	9	6
9	46	34	27	22	41	31	24	20	24	19	16	18	14	12	12	10	8	6
10	43	31	24	19	38	28	22	18	22	17	14	16	13	11	11	9	7	5

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: P331895-927

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.1	0.7
10°-20°	91.6	2.1
20°-30°	137.0	3.1
30°-40°	163.6	3.7
40°-50°	171.1	3.9
50°-60°	160.6	3.7
60°-70°	134.1	3.1
70°-80°	96.0	2.2
80°-90°	60.2	1.4
90°-100°	74.6	1.7
100°-110°	210.8	4.8
110°-120°	460.6	10.5
120°-130°	574.2	13.1
130°-140°	607.2	13.8
140°-150°	564.6	12.9
150°-160°	454.6	10.4
160°-170°	293.4	6.7
170°-180°	101.1	2.3
0°-30°	260.6	5.9
0°-40°	424.2	9.7
0°-60°	755.9	17.2
0°-90°	1046.2	23.8
90°-120°	746.0	17.0
90°-150°	2491.9	56.8
90°-180°	3341.0	76.2
0°-180°	4387.3	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°	52	37	61	77	82	63
105°	239	252	201	79	76	253
115°	444	454	473	490	496	438
125°	624	631	644	653	658	557
135°	776	781	788	797	796	597
145°	896	900	902	907	908	560
155°	986	985	985	989	984	454
165°	1040	1038	1037	1042	1037	294
175°	1064	1061	1061	1066	1060	101
180°	1064	1064	1064	1064	1064	



TEST NUMBER: P331895-927

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

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°	19.3	22.3	25.5	28.6	31.8	36.2	42.1	47.9	53.8	59.6	63.5
95°	52.3	48.3	44.3	40.2	36.3	37.2	43.2	49.1	55.1	61.1	64.8
97.5°	100.5	100.2	99.9	99.5	99.2	94.6	85.8	77.0	68.1	59.3	63.2
100°	137.0	143.1	149.2	155.3	161.5	152.7	129.1	105.5	81.8	58.2	62.0
102.5°	178.4	183.3	188.2	193.1	198.0	187.3	161.1	134.8	108.6	82.4	80.3
105°	238.6	242.5	246.4	250.3	254.2	250.0	237.7	225.5	213.2	200.8	172.1
107.5°	301.7	304.9	308.2	311.4	314.6	319.1	325.0	330.8	336.7	342.5	321.9
110°	343.8	346.7	349.6	352.4	355.3	359.4	364.6	369.8	375.0	380.2	376.6



TEST NUMBER: P331895-927

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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	384.3	386.7	389.3	391.7	394.2	398.0	403.1	408.1	413.2	418.4	420.5
115°	443.9	445.9	447.9	450.0	452.0	455.3	459.9	464.4	468.9	473.4	477.1
117.5°	501.8	503.7	505.6	507.6	509.5	512.2	515.8	519.4	522.9	526.5	529.9
120°	537.6	539.6	541.5	543.5	545.6	548.2	551.4	554.6	557.9	561.1	564.4
122.5°	574.3	575.8	577.3	578.8	580.4	582.7	586.0	589.2	592.4	595.6	598.5
125°	624.2	625.6	627.0	628.4	629.8	632.1	635.2	638.2	641.3	644.4	646.4
127.5°	672.9	674.2	675.6	676.8	678.2	680.2	683.1	685.9	688.7	691.5	693.7
130°	703.3	704.6	705.9	707.3	708.5	710.4	712.7	715.1	717.4	719.8	722.0
132.5°	732.1	733.5	734.8	736.3	737.6	739.3	741.2	743.0	744.9	746.8	748.9
135°	776.4	777.4	778.4	779.3	780.3	781.6	783.2	784.8	786.4	788.1	790.0
137.5°	814.3	815.6	816.8	818.1	819.4	820.5	821.3	822.3	823.2	824.0	826.2
140°	839.3	840.3	841.5	842.5	843.5	844.5	845.3	846.0	846.8	847.6	849.5
142.5°	862.7	863.7	864.7	865.7	866.6	867.4	868.1	868.6	869.2	869.7	871.4
145°	895.5	896.6	897.8	898.9	900.1	900.8	901.2	901.5	901.8	902.2	903.2
147.5°	925.9	926.8	927.6	928.4	929.2	929.7	930.1	930.4	930.8	931.1	931.7
150°	944.9	945.5	945.9	946.5	947.0	947.5	947.8	948.2	948.5	948.9	949.2
152.5°	961.9	962.3	962.5	962.7	963.0	963.2	963.4	963.6	963.8	964.0	964.6
155°	986.0	985.6	985.3	985.0	984.6	984.5	984.7	984.8	985.1	985.2	986.1
157.5°	1004.6	1004.6	1004.6	1004.6	1004.6	1004.4	1004.2	1004.1	1003.9	1003.7	1004.8
160°	1016.1	1015.9	1015.7	1015.6	1015.3	1015.2	1015.0	1014.9	1014.6	1014.5	1015.6
162.5°	1026.8	1026.4	1025.9	1025.5	1025.0	1024.7	1024.5	1024.3	1024.1	1024.0	1025.2
165°	1039.8	1039.3	1038.7	1038.2	1037.7	1037.4	1037.1	1037.0	1036.8	1036.6	1038.0
167.5°	1049.9	1049.2	1048.5	1047.8	1047.1	1046.7	1046.7	1046.7	1046.7	1046.7	1048.1
170°	1055.6	1054.9	1054.2	1053.5	1052.8	1052.4	1052.4	1052.4	1052.4	1052.4	1053.8
172.5°	1059.4	1058.6	1057.7	1056.9	1056.1	1055.7	1055.8	1056.0	1056.1	1056.2	1057.6
175°	1064.3	1063.4	1062.6	1061.7	1060.8	1060.4	1060.6	1060.8	1061.0	1061.1	1062.4
177.5°	1065.6	1064.9	1064.1	1063.4	1062.8	1062.5	1062.6	1062.8	1062.9	1063.0	1064.1
180°	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3



TEST NUMBER: P331895-927

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

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°	67.3	71.1	75.0	77.4	78.3	79.3	80.2	81.3
95°	68.6	72.4	76.1	78.4	79.3	80.1	80.9	81.8
97.5°	67.0	70.9	74.8	77.2	78.2	79.1	80.2	81.1
100°	65.8	69.6	73.4	75.7	76.8	77.7	78.7	79.7
102.5°	78.3	76.2	74.2	73.8	74.9	76.0	77.2	78.3
105°	143.2	114.5	85.6	71.8	72.9	74.0	75.0	76.1
107.5°	301.3	280.7	260.1	238.4	215.7	193.0	170.2	147.5
110°	372.9	369.2	365.6	351.5	327.0	302.5	278.1	253.7



TEST NUMBER: P331895-927

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	422.6	424.8	427.0	425.8	421.2	416.6	412.0	407.5
115°	480.9	484.6	488.3	490.9	492.3	493.6	495.0	496.3
117.5°	533.2	536.6	540.0	542.0	542.8	543.6	544.4	545.1
120°	567.7	571.0	574.3	576.2	576.8	577.3	577.9	578.5
122.5°	601.3	604.1	606.9	608.6	609.3	610.1	610.8	611.5
125°	648.6	650.6	652.7	654.2	655.1	656.0	657.0	657.9
127.5°	695.9	698.1	700.3	701.5	701.6	701.9	702.0	702.3
130°	724.3	726.5	728.8	730.0	730.2	730.3	730.5	730.6
132.5°	751.1	753.4	755.5	756.7	756.7	756.8	756.9	756.9
135°	792.0	794.0	796.1	797.0	796.9	796.8	796.6	796.5
137.5°	828.3	830.4	832.6	833.7	833.8	833.9	833.9	833.9
140°	851.4	853.3	855.2	856.3	856.3	856.3	856.4	856.5
142.5°	873.1	874.7	876.4	877.2	877.1	877.0	876.9	876.9
145°	904.2	905.2	906.3	906.9	907.2	907.5	907.9	908.2
147.5°	932.2	932.8	933.3	933.3	932.9	932.3	931.8	931.3
150°	949.6	949.9	950.3	950.2	949.9	949.5	949.2	948.8
152.5°	965.3	965.9	966.5	966.5	965.7	965.0	964.2	963.4
155°	987.0	987.9	988.7	988.6	987.6	986.6	985.5	984.4
157.5°	1005.8	1006.9	1008.0	1007.8	1006.4	1005.0	1003.7	1002.3
160°	1016.6	1017.6	1018.7	1018.6	1017.4	1016.1	1014.9	1013.7
162.5°	1026.4	1027.5	1028.7	1028.8	1027.7	1026.6	1025.6	1024.5
165°	1039.4	1040.8	1042.3	1042.4	1041.1	1039.9	1038.6	1037.4
167.5°	1049.6	1051.0	1052.3	1052.3	1051.0	1049.6	1048.1	1046.7
170°	1055.3	1056.7	1058.0	1058.0	1056.7	1055.3	1053.8	1052.4
172.5°	1059.1	1060.4	1061.8	1061.8	1060.3	1058.7	1057.2	1055.6
175°	1063.6	1064.9	1066.0	1066.0	1064.5	1063.2	1061.8	1060.3
177.5°	1065.2	1066.4	1067.5	1067.4	1066.0	1064.6	1063.2	1061.8
180°	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3

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