

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: P331899-935

Luminaire Tested: **S123DIP-S340D1025U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331899-935
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-S340D1025U935-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 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: 4248.7 lumens
Efficiency: N/A
Efficacy: 113.9 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

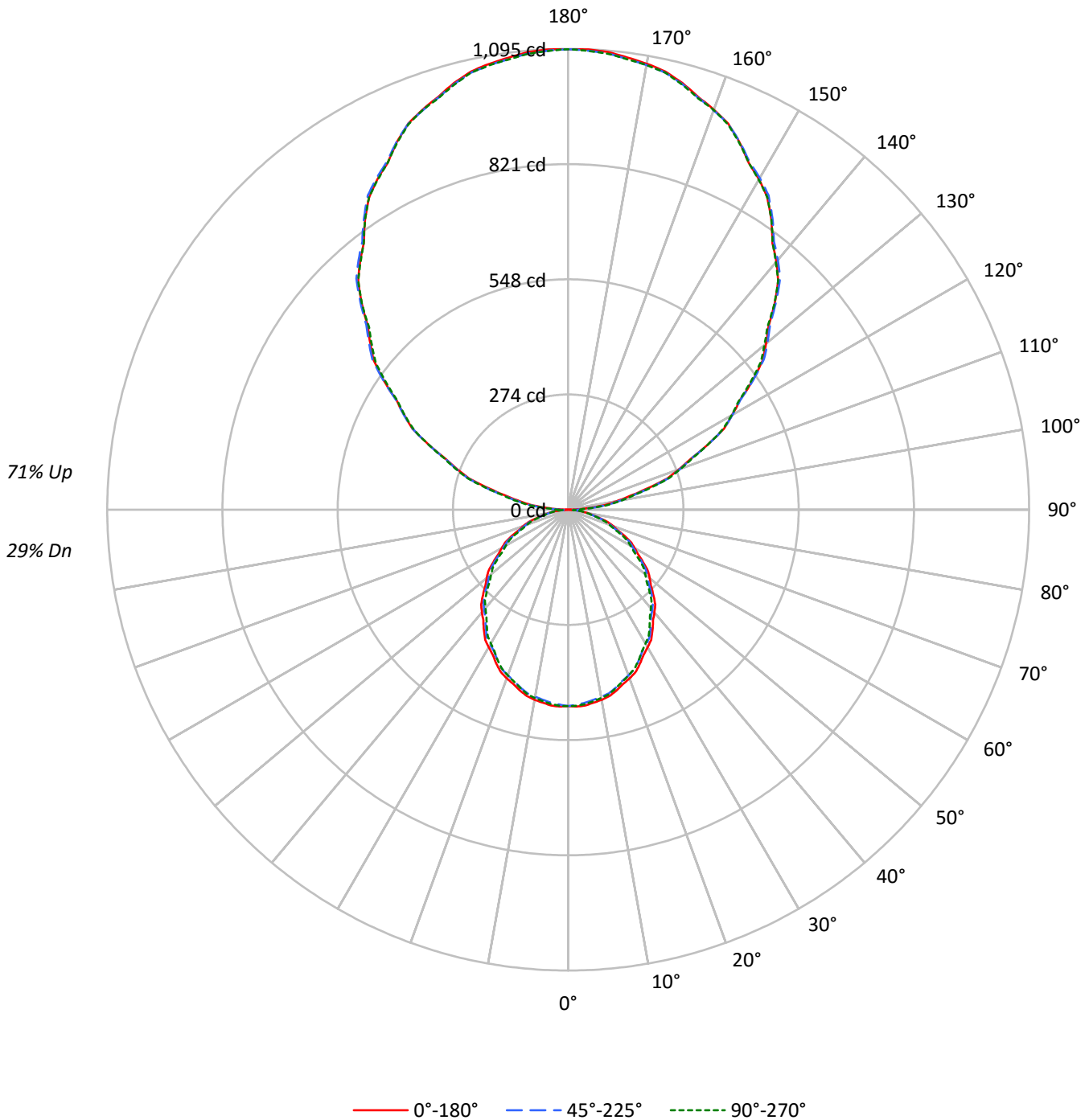
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331899-935

CATALOG NUMBER: S123DIP-S340D1025U935-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





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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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	37	37	37	29
1	93	89	85	82	83	80	76	74	62	60	58	47	45	44	32	31	31	24
2	85	77	71	67	75	69	65	60	55	51	48	41	39	37	28	27	26	20
3	77	68	61	55	69	61	55	50	48	44	40	36	33	31	25	23	22	17
4	70	60	52	47	63	54	47	42	43	38	34	32	29	26	22	20	19	15
5	65	53	45	40	58	48	41	36	38	33	29	29	25	23	20	18	16	13
6	59	48	40	34	53	43	36	31	34	29	26	26	23	20	18	16	14	11
7	55	43	35	30	49	39	32	27	31	26	22	23	20	18	17	14	13	10
8	51	39	31	26	45	35	29	24	28	23	20	21	18	16	15	13	11	9
9	47	35	28	23	42	32	26	21	26	21	18	20	16	14	14	12	10	8
10	44	32	25	21	39	29	23	19	23	19	16	18	15	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5022	5022	5022
5°	5046	4976	5010
10°	5012	4933	4964
15°	4953	4878	4886
20°	4885	4798	4802
25°	4793	4703	4694
30°	4692	4598	4561
35°	4586	4486	4428
40°	4477	4363	4295
45°	4354	4250	4147
50°	4232	4113	3997
55°	4074	3969	3847
60°	3914	3800	3679
65°	3769	3617	3505
70°	3559	3408	3257
75°	3256	3136	3003
80°	2938	2814	2783
85°	2569	2482	2384



TEST NUMBER: P331899-935

CATALOG NUMBER: S123DIP-S340D1025U935-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.0	1.0
10°-20°	124.1	2.9
20°-30°	183.3	4.3
30°-40°	214.1	5.0
40°-50°	215.3	5.1
50°-60°	189.1	4.5
60°-70°	140.9	3.3
70°-80°	80.3	1.9
80°-90°	26.3	0.6
90°-100°	71.3	1.7
100°-110°	213.3	5.0
110°-120°	362.8	8.5
120°-130°	477.3	11.2
130°-140°	536.4	12.6
140°-150°	527.3	12.4
150°-160°	443.9	10.4
160°-170°	295.5	7.0
170°-180°	103.5	2.4
0°-30°	351.4	8.3
0°-40°	565.5	13.3
0°-60°	969.9	22.8
0°-90°	1217.3	28.7
90°-120°	647.5	15.2
90°-150°	2188.5	51.5
90°-180°	3031.0	71.3
0°-180°	4248.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	467	467	467	467	467	
5°	467	465	460	464	464	44
15°	444	443	438	441	438	125
25°	404	401	396	396	395	186
35°	349	346	341	339	337	218
45°	286	284	279	275	272	221
55°	217	216	212	207	205	194
65°	148	146	142	139	138	146
75°	78	77	75	73	72	84
85°	21	20	20	19	19	23
90°	1	10	21	24	26	4
95°	51	57	64	67	67	57
105°	193	195	203	203	205	207
115°	365	368	366	367	366	361
125°	535	537	536	532	529	477
135°	694	698	698	694	693	534
145°	841	843	846	845	841	525
155°	964	964	964	967	962	443
165°	1049	1047	1047	1051	1046	296
175°	1092	1088	1088	1093	1087	104
180°	1094	1094	1094	1094	1094	



TEST NUMBER: P331899-935

CATALOG NUMBER: S123DIP-S340D1025U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	466.6	466.6	466.6	466.6	466.6	466.6	466.6	466.6	466.6	466.6	466.6
2.5°	468.2	467.9	467.6	467.4	467.0	466.5	465.7	464.9	464.2	463.4	464.1
5°	467.0	466.5	466.1	465.6	465.2	464.5	463.5	462.5	461.5	460.5	461.4
7.5°	462.4	461.9	461.5	461.1	460.6	459.9	458.9	457.9	456.8	455.8	456.6
10°	458.6	458.1	457.6	457.2	456.8	456.0	454.8	453.7	452.5	451.3	452.1
12.5°	453.4	453.1	452.6	452.3	451.9	451.2	450.1	449.0	447.9	446.9	447.5
15°	444.5	444.2	443.8	443.4	443.1	442.3	441.2	440.0	438.9	437.7	438.4
17.5°	434.1	433.7	433.3	432.7	432.3	431.5	430.3	429.2	428.0	426.9	427.3
20°	426.5	425.9	425.4	424.8	424.3	423.4	422.3	421.1	420.0	418.9	419.2
22.5°	417.8	417.2	416.7	416.2	415.7	414.8	413.6	412.5	411.3	410.2	410.4
25°	403.6	403.0	402.5	402.0	401.5	400.6	399.4	398.3	397.1	396.0	396.1
27.5°	388.4	387.9	387.4	386.8	386.3	385.5	384.3	383.0	381.8	380.5	380.6
30°	377.5	377.0	376.6	376.2	375.7	374.9	373.7	372.4	371.2	369.9	369.9
32.5°	366.6	366.0	365.4	364.8	364.3	363.4	362.5	361.5	360.6	359.6	359.1
35°	349.0	348.5	347.9	347.4	346.9	346.0	344.9	343.7	342.6	341.4	340.9
37.5°	331.1	330.4	329.7	329.0	328.4	327.4	326.2	325.0	323.9	322.7	322.1
40°	318.6	318.0	317.5	316.9	316.4	315.5	314.3	313.0	311.8	310.5	309.8
42.5°	306.0	305.4	304.8	304.2	303.6	302.6	301.4	300.1	298.9	297.6	297.0
45°	286.0	285.7	285.3	285.0	284.6	283.9	282.7	281.5	280.3	279.2	278.2
47.5°	266.2	265.7	265.2	264.7	264.2	263.4	262.3	261.1	260.1	259.0	258.0
50°	252.7	252.3	251.8	251.4	251.0	250.1	249.0	247.9	246.7	245.6	244.5
52.5°	238.6	238.3	238.0	237.7	237.4	236.6	235.4	234.2	233.0	231.7	230.9
55°	217.1	217.0	216.9	216.8	216.7	216.0	214.9	213.7	212.6	211.5	210.4
57.5°	196.5	196.2	195.9	195.6	195.3	194.7	193.7	192.8	191.9	191.0	190.1
60°	181.8	181.7	181.6	181.5	181.4	180.8	179.7	178.7	177.6	176.5	175.7
62.5°	168.6	168.3	168.2	167.9	167.6	167.0	165.9	164.9	163.8	162.7	162.0
65°	148.0	147.6	147.1	146.7	146.3	145.6	144.7	143.8	142.9	142.0	141.3
67.5°	126.3	125.9	125.5	125.1	124.8	124.2	123.6	122.9	122.2	121.5	120.9
70°	113.1	112.6	112.1	111.5	111.0	110.5	109.9	109.3	108.8	108.3	107.7
72.5°	99.4	98.9	98.6	98.2	97.7	97.3	96.7	96.1	95.5	94.9	94.3
75°	78.3	77.8	77.5	77.1	76.8	76.5	76.2	75.9	75.7	75.4	75.0
77.5°	59.5	59.3	59.2	59.0	58.7	58.5	58.2	57.9	57.5	57.2	56.9
80°	47.4	47.1	46.8	46.6	46.2	46.1	45.9	45.7	45.5	45.4	45.2
82.5°	35.5	35.4	35.4	35.3	35.2	35.2	35.1	35.1	35.1	35.0	34.9
85°	20.8	20.7	20.5	20.3	20.1	20.1	20.1	20.1	20.1	20.1	19.9
87.5°	8.5	8.7	8.9	9.0	9.2	9.5	9.9	10.3	10.8	11.2	11.3
90°	0.9	2.8	4.6	6.6	8.5	10.7	13.2	15.7	18.2	20.7	21.4
92.5°	20.8	22.1	23.4	24.7	26.0	27.4	28.8	30.1	31.6	33.0	33.6
95°	50.7	52.0	53.4	54.8	56.1	57.5	59.0	60.5	62.1	63.6	64.4
97.5°	90.1	91.1	92.0	93.1	94.0	95.1	96.2	97.3	98.4	99.5	100.4
100°	116.9	118.0	119.2	120.3	121.5	122.5	123.5	124.4	125.4	126.3	126.9
102.5°	147.8	148.5	149.2	149.9	150.6	151.5	152.8	154.0	155.3	156.6	157.1
105°	193.4	193.7	194.2	194.5	194.9	196.0	197.7	199.4	201.1	202.9	202.9
107.5°	246.3	246.6	246.8	247.0	247.3	247.7	248.4	249.1	249.8	250.5	251.1
110°	279.3	279.7	280.1	280.4	280.9	281.2	281.6	282.0	282.4	282.8	283.5



TEST NUMBER: P331899-935

CATALOG NUMBER: S123DIP-S340D1025U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	313.7	313.9	314.2	314.4	314.6	314.8	314.9	315.0	315.0	315.0	316.0
115°	365.2	365.8	366.4	367.0	367.6	367.6	367.3	366.9	366.5	366.1	366.4
117.5°	417.2	417.6	417.9	418.4	418.7	418.6	418.2	417.7	417.2	416.6	416.6
120°	449.5	450.6	451.8	453.0	454.1	454.2	453.2	452.3	451.3	450.4	450.1
122.5°	483.2	484.1	484.8	485.7	486.6	486.7	486.2	485.7	485.3	484.7	484.2
125°	534.6	535.2	535.7	536.3	536.8	537.0	536.6	536.2	535.8	535.5	534.7
127.5°	582.0	583.2	584.4	585.7	586.9	587.3	586.9	586.5	586.1	585.7	584.5
130°	613.6	615.2	616.7	618.2	619.7	620.3	619.7	619.1	618.5	617.9	617.2
132.5°	645.3	646.8	648.3	649.9	651.4	651.9	651.5	651.1	650.7	650.2	649.4
135°	693.6	694.7	695.9	697.0	698.2	698.6	698.4	698.3	698.1	697.8	697.2
137.5°	738.3	739.3	740.2	741.1	742.1	742.8	743.3	743.8	744.3	744.8	744.0
140°	769.2	770.2	771.1	772.1	773.0	773.6	773.8	774.0	774.2	774.4	774.2
142.5°	797.4	798.3	799.4	800.3	801.2	801.8	802.2	802.5	802.9	803.2	803.1
145°	841.4	841.8	842.1	842.6	842.9	843.4	844.0	844.6	845.2	845.7	845.5
147.5°	879.9	880.6	881.3	882.0	882.7	883.3	883.8	884.3	884.8	885.5	885.5
150°	906.7	907.1	907.5	907.8	908.3	908.6	909.0	909.4	909.8	910.2	910.2
152.5°	928.8	929.3	929.8	930.3	930.8	931.3	931.5	931.7	931.9	932.2	932.5
155°	963.5	963.5	963.5	963.5	963.5	963.5	963.7	963.9	964.1	964.3	965.1
157.5°	993.0	992.8	992.6	992.3	992.1	992.0	992.2	992.4	992.6	992.6	993.5
160°	1011.6	1011.2	1010.8	1010.5	1010.0	1009.9	1009.9	1009.9	1009.9	1009.9	1010.8
162.5°	1028.1	1027.5	1027.0	1026.5	1026.0	1025.8	1025.9	1026.1	1026.2	1026.4	1027.3
165°	1049.4	1048.8	1048.3	1047.7	1047.1	1046.8	1046.8	1046.8	1046.8	1046.8	1047.9
167.5°	1066.4	1065.7	1064.9	1064.1	1063.3	1063.1	1063.2	1063.3	1063.5	1063.7	1064.9
170°	1076.1	1075.3	1074.5	1073.8	1073.0	1072.6	1072.6	1072.6	1072.6	1072.6	1073.9
172.5°	1083.6	1082.9	1082.1	1081.3	1080.6	1080.1	1080.1	1080.1	1080.1	1080.1	1081.3
175°	1091.5	1090.7	1089.9	1089.3	1088.5	1088.0	1088.0	1088.0	1088.0	1088.0	1089.3
177.5°	1094.8	1094.2	1093.6	1093.0	1092.4	1092.0	1092.0	1092.0	1092.0	1092.0	1093.0
180°	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1



TEST NUMBER: P331899-935

CATALOG NUMBER: S123DIP-S340D1025U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	466.6	466.6	466.6	466.6	466.6	466.6	466.6	466.6
2.5°	464.8	465.5	466.2	466.6	466.5	466.4	466.3	466.2
5°	462.4	463.2	464.2	464.5	464.3	464.2	463.9	463.7
7.5°	457.4	458.2	459.0	459.3	459.3	459.2	459.1	458.9
10°	453.0	453.7	454.5	454.9	454.7	454.5	454.3	454.2
12.5°	448.0	448.6	449.2	449.4	449.4	449.2	449.1	449.0
15°	439.1	439.8	440.6	440.7	440.1	439.5	439.0	438.5
17.5°	427.8	428.3	428.9	429.0	428.8	428.6	428.4	428.3
20°	419.6	419.9	420.3	420.3	420.0	419.7	419.5	419.2
22.5°	410.7	411.0	411.3	411.3	411.0	410.6	410.3	409.9
25°	396.1	396.2	396.3	396.2	396.0	395.7	395.5	395.2
27.5°	380.6	380.7	380.7	380.6	380.3	380.0	379.6	379.3
30°	369.9	369.9	369.9	369.5	368.9	368.3	367.7	367.0
32.5°	358.6	358.1	357.7	357.2	356.9	356.5	356.2	355.9
35°	340.4	339.8	339.2	338.8	338.4	337.9	337.4	337.0
37.5°	321.4	320.8	320.1	319.7	319.4	319.1	318.8	318.6
40°	309.1	308.4	307.6	307.1	306.8	306.4	306.1	305.7
42.5°	296.3	295.5	294.8	294.3	293.9	293.6	293.3	292.8
45°	277.1	276.0	274.9	274.2	273.7	273.3	272.9	272.4
47.5°	256.9	255.9	254.8	254.1	253.7	253.3	252.9	252.5
50°	243.6	242.5	241.6	240.8	240.3	239.8	239.3	238.7
52.5°	230.1	229.2	228.3	227.6	227.1	226.6	226.1	225.6
55°	209.5	208.4	207.5	206.8	206.4	205.9	205.4	205.0
57.5°	189.2	188.3	187.4	186.8	186.2	185.7	185.2	184.7
60°	175.0	174.1	173.3	172.7	172.2	171.8	171.3	170.9
62.5°	161.1	160.3	159.5	158.9	158.7	158.3	158.1	157.7
65°	140.6	139.9	139.1	138.7	138.4	138.1	137.8	137.6
67.5°	120.2	119.6	119.0	118.5	118.1	117.7	117.4	117.0
70°	107.1	106.4	105.8	105.3	104.9	104.4	103.9	103.5
72.5°	93.8	93.2	92.6	92.2	92.0	91.8	91.5	91.3
75°	74.6	74.0	73.6	73.3	73.0	72.8	72.5	72.2
77.5°	56.6	56.3	56.0	55.9	55.9	55.9	55.9	55.9
80°	45.1	45.0	44.9	44.9	44.9	44.9	44.9	44.9
82.5°	34.8	34.6	34.4	34.3	34.3	34.2	34.1	34.0
85°	19.7	19.5	19.4	19.3	19.3	19.3	19.3	19.3
87.5°	11.4	11.5	11.5	11.6	11.7	11.7	11.8	11.9
90°	22.1	22.9	23.7	24.3	24.6	25.1	25.4	25.7
92.5°	34.3	34.9	35.5	35.6	35.4	35.2	35.0	34.7
95°	65.1	65.9	66.6	67.1	67.1	67.1	67.1	67.1
97.5°	101.3	102.2	103.1	103.4	103.4	103.3	103.2	103.1
100°	127.5	128.0	128.6	129.2	129.5	129.8	130.3	130.6
102.5°	157.7	158.3	158.9	159.1	159.0	158.9	158.9	158.9
105°	202.9	202.9	202.9	203.0	203.4	203.8	204.1	204.6
107.5°	251.7	252.3	252.9	253.0	252.9	252.6	252.4	252.2
110°	284.3	285.1	285.9	286.0	285.6	285.2	284.9	284.5



TEST NUMBER: P331899-935

CATALOG NUMBER: S123DIP-S340D1025U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	316.9	317.8	318.7	319.2	319.1	319.0	318.9	318.8
115°	366.5	366.7	366.9	366.9	366.7	366.5	366.4	366.1
117.5°	416.6	416.6	416.6	416.2	415.7	415.2	414.7	414.1
120°	450.0	449.8	449.6	449.3	448.9	448.6	448.2	447.8
122.5°	483.7	483.3	482.8	482.2	481.7	481.1	480.6	480.1
125°	533.9	533.1	532.4	531.6	530.9	530.1	529.3	528.6
127.5°	583.5	582.5	581.3	580.4	579.5	578.6	577.7	576.9
130°	616.4	615.6	614.9	613.8	612.5	611.1	609.8	608.5
132.5°	648.4	647.6	646.6	645.7	644.6	643.6	642.6	641.5
135°	696.4	695.6	694.8	694.2	693.9	693.4	693.1	692.8
137.5°	743.2	742.4	741.6	740.8	740.1	739.3	738.7	738.0
140°	774.0	773.8	773.6	772.8	771.5	770.2	768.9	767.5
142.5°	802.9	802.7	802.5	801.8	800.8	799.8	798.7	797.7
145°	845.3	845.2	844.9	844.5	843.7	842.9	842.1	841.4
147.5°	885.5	885.5	885.5	884.8	883.7	882.5	881.4	880.3
150°	910.2	910.2	910.2	909.6	908.4	907.3	906.1	905.0
152.5°	932.8	933.1	933.4	933.1	932.0	931.1	930.1	929.1
155°	965.9	966.6	967.3	967.1	965.8	964.4	963.0	961.7
157.5°	994.3	995.1	995.9	995.7	994.7	993.6	992.6	991.4
160°	1011.8	1012.7	1013.7	1013.7	1013.1	1012.3	1011.5	1010.7
162.5°	1028.3	1029.2	1030.2	1030.0	1028.8	1027.6	1026.4	1025.2
165°	1049.1	1050.2	1051.4	1051.3	1050.0	1048.6	1047.3	1045.9
167.5°	1066.0	1067.2	1068.4	1068.4	1067.2	1066.0	1064.9	1063.7
170°	1075.3	1076.6	1078.0	1078.0	1076.6	1075.3	1073.9	1072.6
172.5°	1082.5	1083.7	1084.9	1084.9	1083.5	1082.2	1080.8	1079.4
175°	1090.4	1091.5	1092.7	1092.5	1091.2	1089.9	1088.6	1087.2
177.5°	1093.9	1094.8	1095.7	1095.6	1094.6	1093.5	1092.4	1091.3
180°	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1	1094.1

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