

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: P331899-830

Luminaire Tested: **S123DIP-S340D1025U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331899-830
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-S340D1025U830-4F0-1E-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: 4651.0 lumens
Efficiency: N/A
Efficacy: 124.7 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

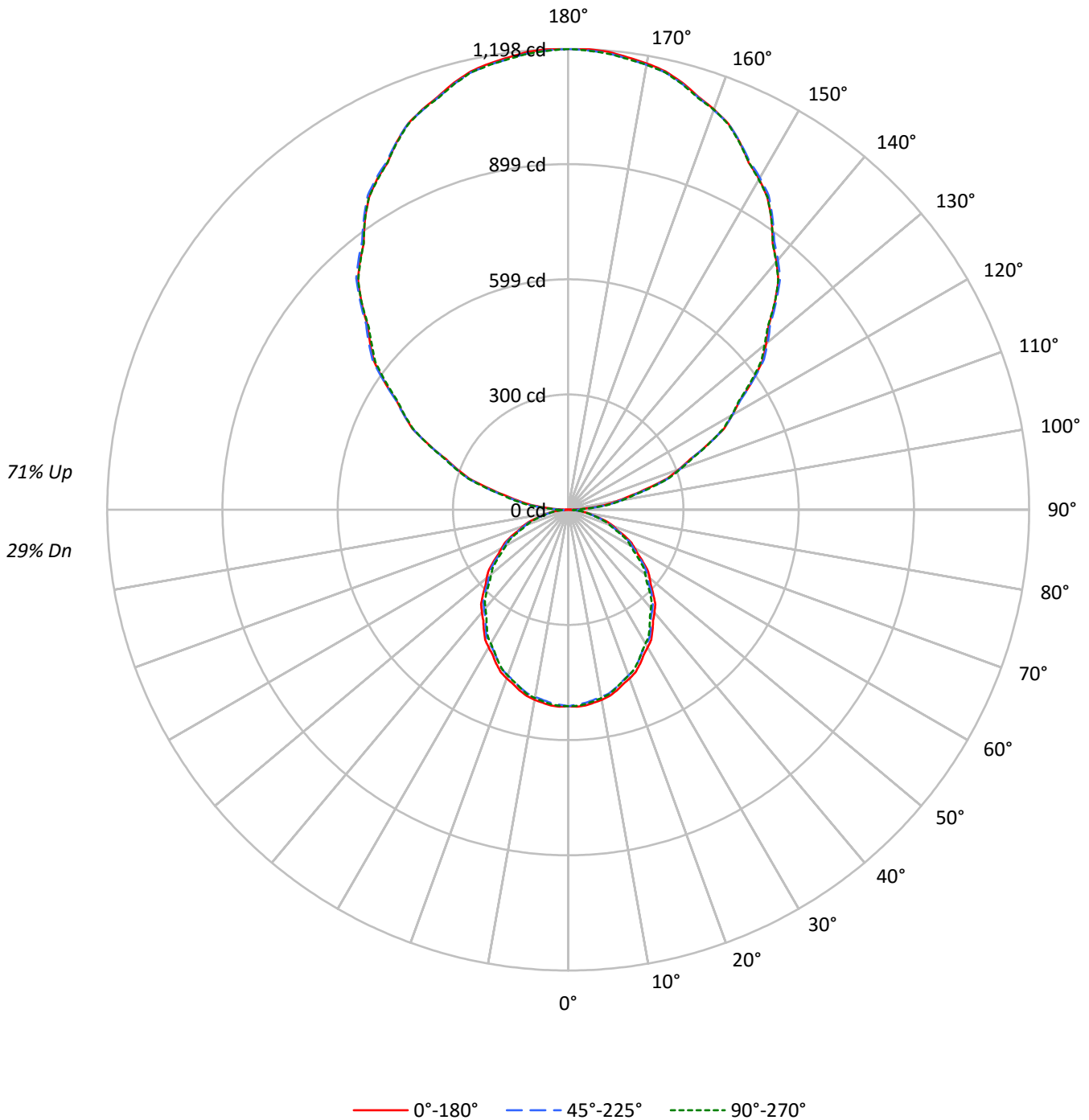
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331899-830

CATALOG NUMBER: S123DIP-S340D1025U830-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P331899-830

CATALOG NUMBER: S123DIP-S340D1025U830-4F0-1E-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	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°	5498	5498	5498
5°	5524	5448	5486
10°	5487	5400	5434
15°	5422	5340	5349
20°	5347	5252	5257
25°	5247	5149	5138
30°	5137	5033	4994
35°	5021	4911	4847
40°	4900	4776	4703
45°	4766	4654	4539
50°	4632	4501	4376
55°	4459	4344	4211
60°	4284	4159	4028
65°	4126	3958	3836
70°	3899	3733	3566
75°	3564	3435	3290
80°	3211	3081	3050
85°	2816	2717	2606



TEST NUMBER: P331899-830

CATALOG NUMBER: S123DIP-S340D1025U830-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.1	1.0
10°-20°	135.9	2.9
20°-30°	200.7	4.3
30°-40°	234.4	5.0
40°-50°	235.7	5.1
50°-60°	207.0	4.5
60°-70°	154.2	3.3
70°-80°	87.9	1.9
80°-90°	28.8	0.6
90°-100°	78.0	1.7
100°-110°	233.5	5.0
110°-120°	397.2	8.5
120°-130°	522.5	11.2
130°-140°	587.2	12.6
140°-150°	577.2	12.4
150°-160°	486.0	10.4
160°-170°	323.5	7.0
170°-180°	113.3	2.4
0°-30°	384.6	8.3
0°-40°	619.1	13.3
0°-60°	1061.7	22.8
0°-90°	1332.6	28.7
90°-120°	708.8	15.2
90°-150°	2395.7	51.5
90°-180°	3318.0	71.3
0°-180°	4651.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	511	511	511	511	511	
5°	511	509	504	508	508	48
15°	487	485	479	482	480	137
25°	442	439	434	434	433	203
35°	382	379	374	371	369	239
45°	313	311	306	301	298	242
55°	238	237	232	227	224	213
65°	162	160	155	152	151	160
75°	86	84	83	80	79	92
85°	23	22	22	21	21	25
90°	1	10	23	26	28	5
95°	56	62	70	73	73	62
105°	212	214	222	222	224	227
115°	400	402	401	402	401	395
125°	585	588	586	582	579	522
135°	759	765	764	760	758	585
145°	921	923	926	925	921	575
155°	1055	1055	1056	1059	1053	485
165°	1149	1146	1146	1151	1145	324
175°	1195	1191	1191	1196	1190	113
180°	1198	1198	1198	1198	1198	



TEST NUMBER: P331899-830

CATALOG NUMBER: S123DIP-S340D1025U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	510.8	510.8	510.8	510.8	510.8	510.8	510.8	510.8	510.8	510.8	510.8
2.5°	512.6	512.2	511.9	511.6	511.2	510.7	509.8	509.0	508.1	507.3	508.0
5°	511.2	510.7	510.2	509.7	509.3	508.5	507.4	506.3	505.2	504.2	505.1
7.5°	506.2	505.7	505.2	504.7	504.3	503.4	502.4	501.2	500.1	499.0	499.8
10°	502.0	501.5	501.0	500.5	500.0	499.2	497.9	496.6	495.3	494.1	494.9
12.5°	496.3	496.0	495.5	495.1	494.7	493.9	492.8	491.5	490.3	489.2	489.8
15°	486.6	486.3	485.8	485.4	485.0	484.2	483.0	481.6	480.4	479.2	479.9
17.5°	475.2	474.8	474.3	473.7	473.3	472.4	471.1	469.9	468.5	467.3	467.8
20°	466.8	466.3	465.7	465.1	464.5	463.5	462.3	461.0	459.8	458.5	458.9
22.5°	457.3	456.8	456.2	455.6	455.1	454.1	452.8	451.6	450.3	449.0	449.3
25°	441.8	441.2	440.6	440.1	439.5	438.6	437.2	436.0	434.7	433.5	433.6
27.5°	425.2	424.6	424.0	423.5	422.9	422.0	420.7	419.2	417.9	416.5	416.6
30°	413.3	412.7	412.3	411.8	411.3	410.4	409.1	407.6	406.3	404.9	404.9
32.5°	401.3	400.7	400.0	399.4	398.8	397.8	396.8	395.8	394.7	393.7	393.1
35°	382.1	381.5	380.9	380.3	379.8	378.8	377.6	376.3	375.0	373.7	373.2
37.5°	362.4	361.7	360.9	360.1	359.5	358.4	357.1	355.8	354.6	353.3	352.6
40°	348.7	348.1	347.5	346.9	346.4	345.3	344.0	342.6	341.3	339.9	339.1
42.5°	335.0	334.3	333.7	333.0	332.3	331.3	330.0	328.6	327.3	325.8	325.1
45°	313.1	312.7	312.4	312.0	311.6	310.8	309.4	308.2	306.9	305.7	304.5
47.5°	291.4	290.9	290.3	289.7	289.2	288.3	287.1	285.9	284.7	283.5	282.4
50°	276.6	276.2	275.7	275.2	274.8	273.8	272.6	271.4	270.0	268.8	267.7
52.5°	261.2	260.9	260.5	260.2	259.9	259.0	257.7	256.4	255.1	253.6	252.8
55°	237.6	237.5	237.4	237.3	237.2	236.5	235.3	233.9	232.7	231.5	230.4
57.5°	215.1	214.8	214.4	214.1	213.8	213.1	212.1	211.0	210.1	209.1	208.1
60°	199.0	198.9	198.8	198.7	198.6	197.9	196.7	195.6	194.4	193.2	192.4
62.5°	184.5	184.3	184.1	183.8	183.5	182.9	181.6	180.5	179.3	178.1	177.3
65°	162.0	161.6	161.1	160.6	160.1	159.4	158.4	157.4	156.5	155.4	154.7
67.5°	138.3	137.8	137.4	137.0	136.6	135.9	135.3	134.5	133.7	133.0	132.3
70°	123.9	123.3	122.7	122.1	121.5	120.9	120.4	119.7	119.1	118.6	117.9
72.5°	108.8	108.3	107.9	107.4	107.0	106.5	105.8	105.2	104.5	103.9	103.2
75°	85.7	85.2	84.8	84.5	84.1	83.7	83.4	83.1	82.8	82.6	82.1
77.5°	65.1	64.9	64.8	64.6	64.3	64.0	63.7	63.3	63.0	62.6	62.3
80°	51.8	51.6	51.3	51.0	50.6	50.4	50.2	50.0	49.9	49.7	49.5
82.5°	38.8	38.7	38.7	38.6	38.5	38.5	38.5	38.5	38.5	38.4	38.2
85°	22.8	22.6	22.4	22.2	22.1	22.0	22.0	22.0	22.0	22.0	21.8
87.5°	9.3	9.5	9.7	9.9	10.1	10.4	10.8	11.3	11.8	12.3	12.3
90°	0.9	3.0	5.1	7.3	9.3	11.7	14.4	17.2	19.9	22.6	23.4
92.5°	22.8	24.2	25.6	27.1	28.5	30.0	31.5	33.0	34.6	36.1	36.8
95°	55.5	56.9	58.4	59.9	61.4	63.0	64.6	66.3	68.0	69.7	70.5
97.5°	98.6	99.7	100.8	101.9	102.9	104.1	105.3	106.5	107.7	109.0	109.9
100°	128.0	129.2	130.4	131.7	133.0	134.1	135.2	136.2	137.2	138.3	138.9
102.5°	161.8	162.6	163.3	164.1	164.9	165.9	167.3	168.6	170.0	171.4	172.0
105°	211.7	212.1	212.5	212.9	213.4	214.5	216.4	218.3	220.2	222.1	222.1
107.5°	269.7	269.9	270.1	270.4	270.7	271.2	271.9	272.7	273.4	274.2	274.8
110°	305.8	306.2	306.6	307.0	307.5	307.8	308.3	308.7	309.2	309.5	310.4



TEST NUMBER: P331899-830

CATALOG NUMBER: S123DIP-S340D1025U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	343.4	343.7	343.9	344.1	344.4	344.6	344.7	344.8	344.9	344.9	345.9
115°	399.8	400.5	401.1	401.7	402.4	402.5	402.1	401.6	401.2	400.8	401.1
117.5°	456.7	457.1	457.5	458.0	458.4	458.3	457.8	457.2	456.7	456.1	456.1
120°	492.1	493.3	494.6	495.9	497.1	497.2	496.2	495.1	494.1	493.0	492.8
122.5°	529.0	529.9	530.7	531.7	532.6	532.8	532.3	531.7	531.2	530.7	530.1
125°	585.2	585.9	586.4	587.1	587.7	587.9	587.4	587.0	586.5	586.2	585.3
127.5°	637.2	638.5	639.8	641.1	642.5	642.9	642.4	642.1	641.6	641.1	639.9
130°	671.8	673.4	675.1	676.7	678.4	679.0	678.3	677.7	677.1	676.5	675.6
132.5°	706.4	708.0	709.7	711.4	713.1	713.7	713.2	712.8	712.3	711.8	710.9
135°	759.3	760.5	761.8	763.0	764.3	764.8	764.6	764.4	764.2	763.9	763.2
137.5°	808.2	809.3	810.3	811.3	812.4	813.1	813.7	814.3	814.8	815.3	814.5
140°	842.1	843.1	844.1	845.2	846.2	846.9	847.1	847.3	847.5	847.7	847.5
142.5°	872.9	873.9	875.1	876.1	877.1	877.8	878.2	878.5	878.9	879.3	879.1
145°	921.1	921.5	921.9	922.4	922.7	923.3	923.9	924.5	925.2	925.8	925.6
147.5°	963.3	964.0	964.8	965.5	966.3	967.0	967.5	968.1	968.7	969.3	969.3
150°	992.6	993.1	993.4	993.8	994.3	994.7	995.1	995.5	996.0	996.4	996.4
152.5°	1016.7	1017.3	1017.9	1018.4	1019.0	1019.5	1019.7	1019.9	1020.2	1020.5	1020.8
155°	1054.7	1054.7	1054.7	1054.7	1054.7	1054.8	1055.0	1055.2	1055.5	1055.6	1056.5
157.5°	1087.0	1086.8	1086.6	1086.3	1086.1	1086.0	1086.2	1086.4	1086.6	1086.7	1087.6
160°	1107.4	1106.9	1106.5	1106.2	1105.7	1105.5	1105.5	1105.5	1105.5	1105.5	1106.5
162.5°	1125.5	1124.8	1124.3	1123.7	1123.1	1122.9	1123.0	1123.2	1123.4	1123.6	1124.6
165°	1148.8	1148.1	1147.5	1146.9	1146.3	1145.9	1145.9	1145.9	1145.9	1145.9	1147.2
167.5°	1167.4	1166.6	1165.7	1164.9	1164.0	1163.8	1163.9	1164.0	1164.2	1164.4	1165.7
170°	1178.0	1177.1	1176.3	1175.4	1174.6	1174.2	1174.2	1174.2	1174.2	1174.2	1175.6
172.5°	1186.2	1185.4	1184.6	1183.7	1182.9	1182.4	1182.4	1182.4	1182.4	1182.4	1183.7
175°	1194.9	1194.0	1193.2	1192.4	1191.6	1191.1	1191.1	1191.1	1191.1	1191.1	1192.4
177.5°	1198.4	1197.8	1197.1	1196.5	1195.8	1195.4	1195.4	1195.4	1195.4	1195.4	1196.5
180°	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7



TEST NUMBER: P331899-830

CATALOG NUMBER: S123DIP-S340D1025U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	510.8	510.8	510.8	510.8	510.8	510.8	510.8	510.8
2.5°	508.8	509.6	510.4	510.8	510.7	510.6	510.5	510.4
5°	506.1	507.1	508.1	508.5	508.3	508.1	507.8	507.7
7.5°	500.8	501.6	502.5	502.8	502.8	502.7	502.6	502.4
10°	495.9	496.7	497.6	497.9	497.8	497.6	497.4	497.2
12.5°	490.4	491.1	491.7	492.0	491.9	491.7	491.6	491.5
15°	480.7	481.5	482.3	482.4	481.7	481.2	480.6	480.0
17.5°	468.3	468.9	469.5	469.7	469.4	469.2	469.0	468.8
20°	459.3	459.7	460.1	460.1	459.8	459.5	459.2	458.9
22.5°	449.6	450.0	450.3	450.3	449.9	449.5	449.1	448.7
25°	433.7	433.8	433.9	433.8	433.5	433.2	432.9	432.6
27.5°	416.7	416.8	416.8	416.7	416.3	415.9	415.6	415.2
30°	404.9	404.9	404.9	404.5	403.9	403.2	402.6	401.8
32.5°	392.6	392.0	391.5	391.1	390.7	390.3	389.9	389.6
35°	372.6	372.0	371.4	370.9	370.4	369.9	369.4	368.9
37.5°	351.9	351.2	350.4	350.0	349.7	349.3	349.0	348.7
40°	338.4	337.6	336.8	336.2	335.8	335.5	335.1	334.7
42.5°	324.3	323.5	322.7	322.2	321.8	321.4	321.0	320.6
45°	303.3	302.2	301.0	300.2	299.6	299.2	298.7	298.2
47.5°	281.3	280.1	278.9	278.1	277.7	277.3	276.8	276.4
50°	266.6	265.5	264.5	263.6	263.1	262.5	261.9	261.3
52.5°	251.8	250.9	250.0	249.2	248.6	248.1	247.5	246.9
55°	229.3	228.2	227.2	226.4	225.9	225.4	224.9	224.4
57.5°	207.2	206.1	205.2	204.4	203.9	203.3	202.7	202.2
60°	191.5	190.6	189.7	189.1	188.5	188.0	187.6	187.1
62.5°	176.3	175.5	174.7	174.0	173.7	173.3	173.1	172.7
65°	153.9	153.2	152.3	151.8	151.6	151.2	150.9	150.6
67.5°	131.6	130.9	130.3	129.7	129.3	128.8	128.5	128.1
70°	117.3	116.5	115.8	115.3	114.8	114.3	113.8	113.3
72.5°	102.6	102.0	101.4	100.9	100.8	100.5	100.2	99.9
75°	81.6	81.1	80.6	80.2	79.9	79.6	79.4	79.1
77.5°	61.9	61.6	61.3	61.2	61.2	61.2	61.2	61.2
80°	49.4	49.3	49.2	49.2	49.2	49.2	49.2	49.2
82.5°	38.1	37.9	37.7	37.5	37.5	37.4	37.3	37.2
85°	21.6	21.4	21.2	21.1	21.1	21.1	21.1	21.1
87.5°	12.4	12.5	12.6	12.7	12.8	12.8	12.9	13.0
90°	24.2	25.1	25.9	26.6	27.0	27.4	27.8	28.2
92.5°	37.5	38.2	38.8	39.0	38.7	38.5	38.3	38.0
95°	71.3	72.1	73.0	73.4	73.4	73.4	73.4	73.4
97.5°	110.8	111.9	112.8	113.2	113.2	113.1	113.0	112.9
100°	139.6	140.2	140.8	141.4	141.8	142.1	142.6	143.0
102.5°	172.7	173.3	173.9	174.2	174.1	174.0	174.0	173.9
105°	222.1	222.1	222.1	222.3	222.6	223.1	223.5	223.9
107.5°	275.5	276.2	276.8	277.0	276.8	276.5	276.3	276.1
110°	311.2	312.1	312.9	313.1	312.6	312.3	311.9	311.4



TEST NUMBER: P331899-830

CATALOG NUMBER: S123DIP-S340D1025U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	346.9	347.9	348.9	349.4	349.3	349.2	349.1	349.0
115°	401.2	401.4	401.6	401.6	401.4	401.2	401.1	400.8
117.5°	456.0	456.0	456.0	455.6	455.1	454.5	453.9	453.3
120°	492.6	492.4	492.2	491.8	491.4	491.1	490.6	490.2
122.5°	529.5	529.0	528.5	527.9	527.4	526.7	526.1	525.6
125°	584.5	583.6	582.8	581.9	581.2	580.3	579.5	578.6
127.5°	638.8	637.6	636.4	635.4	634.4	633.4	632.4	631.5
130°	674.8	673.9	673.2	671.9	670.5	669.0	667.6	666.1
132.5°	709.8	708.9	707.8	706.8	705.7	704.6	703.4	702.3
135°	762.3	761.5	760.6	760.0	759.6	759.1	758.7	758.4
137.5°	813.6	812.8	811.8	811.0	810.2	809.4	808.6	807.9
140°	847.3	847.1	846.9	846.0	844.6	843.1	841.7	840.2
142.5°	878.9	878.7	878.4	877.8	876.7	875.5	874.4	873.3
145°	925.4	925.2	924.9	924.4	923.6	922.7	921.9	921.1
147.5°	969.3	969.3	969.3	968.7	967.4	966.1	964.9	963.7
150°	996.4	996.4	996.4	995.7	994.5	993.3	991.9	990.7
152.5°	1021.2	1021.4	1021.8	1021.4	1020.3	1019.3	1018.1	1017.1
155°	1057.3	1058.2	1058.9	1058.7	1057.2	1055.7	1054.2	1052.8
157.5°	1088.4	1089.3	1090.2	1090.1	1088.9	1087.7	1086.6	1085.3
160°	1107.6	1108.6	1109.7	1109.7	1109.0	1108.1	1107.3	1106.5
162.5°	1125.7	1126.7	1127.8	1127.6	1126.2	1124.9	1123.6	1122.3
165°	1148.5	1149.7	1150.9	1150.8	1149.4	1147.9	1146.5	1145.0
167.5°	1167.0	1168.3	1169.6	1169.6	1168.3	1167.0	1165.7	1164.4
170°	1177.1	1178.6	1180.1	1180.1	1178.6	1177.1	1175.6	1174.2
172.5°	1185.1	1186.4	1187.6	1187.6	1186.1	1184.7	1183.2	1181.7
175°	1193.6	1194.9	1196.2	1196.0	1194.6	1193.1	1191.7	1190.1
177.5°	1197.5	1198.4	1199.5	1199.4	1198.3	1197.0	1195.9	1194.7
180°	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7

(END OF REPORT)