

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: P331898-930

Luminaire Tested: **S123DIP-S340D1025U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331898-930
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-S340D1025U930-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4493.0 lumens
Efficiency: N/A
Efficacy: 120.5 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

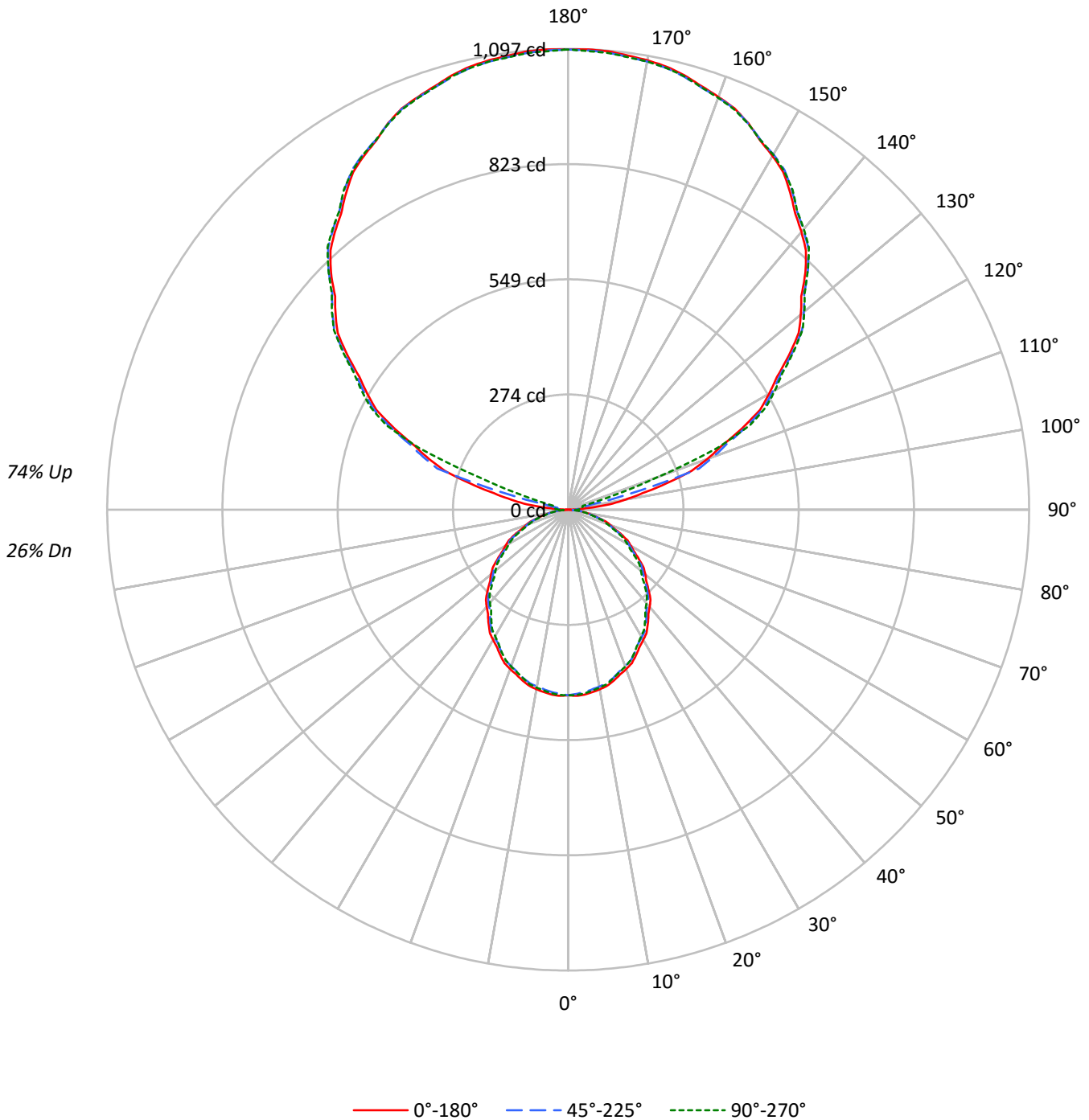
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331898-930

CATALOG NUMBER: S123DIP-S340D1025U930-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P331898-930

CATALOG NUMBER: S123DIP-S340D1025U930-4F0-1E-UDD-F

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	70	70	70	51	51	51	34	34	34	26
1	92	88	84	81	82	79	76	73	61	59	57	45	43	42	30	29	28	22
2	84	77	71	66	75	69	64	60	53	50	47	39	37	35	26	25	24	18
3	77	67	60	55	68	60	54	50	47	43	39	35	32	30	23	22	20	15
4	70	60	52	46	62	53	47	42	42	37	34	31	28	25	21	19	17	13
5	64	53	45	39	57	47	41	36	37	32	29	28	24	22	19	17	15	11
6	59	47	39	34	52	42	36	31	33	28	25	25	22	19	17	15	13	10
7	54	43	35	30	48	38	32	27	30	25	22	22	19	17	15	13	12	9
8	50	38	31	26	45	35	28	24	27	23	19	20	17	15	14	12	10	8
9	47	35	28	23	42	31	25	21	25	20	17	19	16	13	13	11	9	7
10	43	32	25	20	39	29	23	19	23	18	15	17	14	12	12	10	9	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4755	4755	4755
5°	4778	4712	4744
10°	4746	4671	4701
15°	4690	4619	4627
20°	4625	4543	4548
25°	4538	4454	4444
30°	4443	4354	4320
35°	4343	4248	4193
40°	4239	4131	4068
45°	4122	4025	3927
50°	4007	3893	3785
55°	3856	3757	3643
60°	3705	3597	3483
65°	3568	3423	3319
70°	3371	3229	3084
75°	3082	2969	2845
80°	2777	2665	2641
85°	2433	2347	2260



TEST NUMBER: P331898-930

CATALOG NUMBER: S123DIP-S340D1025U930-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.6	0.9
10°-20°	117.5	2.6
20°-30°	173.6	3.9
30°-40°	202.8	4.5
40°-50°	203.9	4.5
50°-60°	179.1	4.0
60°-70°	133.4	3.0
70°-80°	76.0	1.7
80°-90°	24.9	0.6
90°-100°	39.8	0.9
100°-110°	189.8	4.2
110°-120°	455.9	10.1
120°-130°	580.5	12.9
130°-140°	620.3	13.8
140°-150°	580.0	12.9
150°-160°	467.9	10.4
160°-170°	302.0	6.7
170°-180°	104.1	2.3
0°-30°	332.7	7.4
0°-40°	535.5	11.9
0°-60°	918.4	20.4
0°-90°	1152.7	25.7
90°-120°	685.5	15.3
90°-150°	2466.4	54.9
90°-180°	3340.0	74.3
0°-180°	4493.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	442	442	442	442	442	
5°	442	440	436	440	439	42
15°	421	419	414	417	415	119
25°	382	380	375	375	374	176
35°	330	328	323	321	319	207
45°	271	269	264	260	258	209
55°	206	205	200	196	194	184
65°	140	138	134	132	130	138
75°	74	73	71	70	68	79
85°	20	19	19	18	18	22
90°	1	9	20	23	24	3
95°	50	19	25	31	31	61
105°	242	247	178	42	36	257
115°	455	460	467	475	478	449
125°	641	648	651	653	654	572
135°	798	803	806	809	806	614
145°	921	927	928	930	930	576
155°	1015	1013	1014	1018	1013	467
165°	1070	1068	1067	1073	1068	302
175°	1095	1092	1092	1097	1091	104
180°	1095	1095	1095	1095	1095	



TEST NUMBER: P331898-930

CATALOG NUMBER: S123DIP-S340D1025U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8
2.5°	443.4	443.0	442.8	442.5	442.2	441.7	441.0	440.3	439.5	438.8	439.4
5°	442.2	441.7	441.3	440.9	440.5	439.9	438.9	438.0	437.0	436.1	436.9
7.5°	437.9	437.4	437.0	436.6	436.2	435.5	434.6	433.6	432.6	431.6	432.4
10°	434.2	433.8	433.3	432.9	432.5	431.8	430.6	429.6	428.4	427.4	428.1
12.5°	429.3	429.0	428.6	428.3	428.0	427.2	426.2	425.2	424.1	423.1	423.7
15°	420.9	420.6	420.2	419.9	419.6	418.8	417.8	416.6	415.6	414.5	415.2
17.5°	411.1	410.7	410.3	409.8	409.4	408.6	407.5	406.4	405.3	404.2	404.6
20°	403.8	403.3	402.8	402.3	401.8	401.0	399.9	398.8	397.7	396.6	397.0
22.5°	395.6	395.1	394.6	394.1	393.6	392.8	391.7	390.6	389.5	388.4	388.7
25°	382.1	381.6	381.2	380.7	380.2	379.4	378.2	377.2	376.0	375.0	375.0
27.5°	367.8	367.3	366.8	366.3	365.8	365.0	363.9	362.6	361.5	360.3	360.4
30°	357.5	357.0	356.6	356.2	355.8	355.0	353.8	352.6	351.5	350.3	350.3
32.5°	347.2	346.6	346.0	345.4	345.0	344.1	343.2	342.3	341.4	340.6	340.1
35°	330.5	330.0	329.5	329.0	328.5	327.7	326.6	325.5	324.4	323.3	322.8
37.5°	313.5	312.8	312.2	311.5	311.0	310.1	308.9	307.8	306.7	305.6	305.0
40°	301.7	301.1	300.6	300.1	299.6	298.7	297.6	296.4	295.2	294.0	293.3
42.5°	289.8	289.2	288.6	288.0	287.5	286.6	285.4	284.2	283.1	281.8	281.2
45°	270.8	270.5	270.2	269.9	269.5	268.8	267.7	266.6	265.5	264.4	263.4
47.5°	252.1	251.6	251.1	250.6	250.1	249.4	248.3	247.3	246.3	245.2	244.3
50°	239.3	238.9	238.5	238.1	237.7	236.8	235.8	234.7	233.6	232.5	231.5
52.5°	225.9	225.7	225.3	225.1	224.8	224.0	222.9	221.8	220.6	219.4	218.7
55°	205.5	205.5	205.4	205.3	205.2	204.6	203.5	202.4	201.3	200.2	199.3
57.5°	186.1	185.8	185.5	185.2	184.9	184.3	183.4	182.5	181.7	180.8	180.0
60°	172.1	172.0	171.9	171.9	171.8	171.2	170.2	169.2	168.2	167.1	166.4
62.5°	159.6	159.4	159.2	159.0	158.7	158.2	157.1	156.1	155.1	154.1	153.4
65°	140.1	139.7	139.3	138.9	138.5	137.9	137.1	136.2	135.3	134.4	133.8
67.5°	119.6	119.2	118.9	118.5	118.1	117.6	117.0	116.3	115.7	115.0	114.5
70°	107.1	106.6	106.2	105.6	105.1	104.6	104.1	103.5	103.1	102.6	102.0
72.5°	94.1	93.7	93.4	92.9	92.5	92.1	91.6	91.0	90.4	89.8	89.3
75°	74.1	73.7	73.4	73.1	72.7	72.4	72.2	71.9	71.7	71.4	71.0
77.5°	56.3	56.2	56.0	55.8	55.6	55.4	55.1	54.8	54.5	54.1	53.9
80°	44.8	44.6	44.4	44.1	43.8	43.6	43.5	43.3	43.1	43.0	42.8
82.5°	33.6	33.5	33.5	33.4	33.3	33.3	33.3	33.3	33.3	33.2	33.0
85°	19.7	19.6	19.4	19.2	19.1	19.0	19.0	19.0	19.0	19.0	18.8
87.5°	8.1	8.2	8.4	8.6	8.7	9.0	9.4	9.8	10.2	10.6	10.7
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°	15.2	14.6	14.1	13.6	13.1	13.8	15.5	17.3	19.1	20.9	22.0
95°	49.7	42.2	34.8	27.4	20.0	17.3	19.2	21.3	23.2	25.2	26.5
97.5°	99.8	96.4	93.1	89.8	86.4	78.3	65.3	52.3	39.2	26.2	27.6
100°	137.5	141.1	144.8	148.4	152.0	139.7	111.5	83.2	55.0	26.8	28.3
102.5°	180.5	183.1	185.7	188.3	190.9	176.8	146.0	115.2	84.4	53.6	49.1
105°	242.5	244.5	246.5	248.5	250.5	243.3	227.1	210.8	194.5	178.2	146.2
107.5°	307.9	309.6	311.1	312.7	314.3	316.4	318.9	321.6	324.1	326.7	303.2
110°	351.6	353.0	354.4	355.9	357.3	359.1	361.0	363.1	365.0	367.0	361.0



TEST NUMBER: P331898-930

CATALOG NUMBER: S123DIP-S340D1025U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	393.2	394.5	395.8	397.1	398.4	400.1	402.1	404.1	406.0	408.1	408.1
115°	454.9	456.0	457.1	458.2	459.3	460.6	462.2	463.8	465.5	467.1	469.0
117.5°	514.6	516.0	517.3	518.7	520.0	521.1	521.9	522.8	523.6	524.4	525.9
120°	551.7	553.3	555.0	556.6	558.2	559.4	559.9	560.4	561.0	561.5	563.0
122.5°	589.5	590.8	592.2	593.5	594.8	595.9	596.6	597.3	597.9	598.6	599.7
125°	641.2	642.7	644.2	645.6	647.0	648.2	648.9	649.5	650.3	651.0	651.4
127.5°	691.4	692.8	694.3	695.7	697.2	698.3	699.2	700.1	700.9	701.8	702.4
130°	722.7	724.1	725.5	727.0	728.5	729.5	730.3	731.0	731.6	732.4	733.1
132.5°	752.6	754.1	755.5	756.9	758.4	759.4	759.9	760.5	761.2	761.7	762.5
135°	798.3	799.4	800.5	801.6	802.7	803.6	804.3	805.0	805.8	806.5	807.0
137.5°	837.4	838.8	840.2	841.6	842.9	843.8	844.2	844.6	845.0	845.4	846.2
140°	863.4	864.5	865.6	866.7	867.8	868.6	869.1	869.7	870.3	870.7	871.5
142.5°	887.5	888.6	889.7	890.8	891.9	892.7	893.2	893.7	894.3	894.9	895.4
145°	921.2	922.5	923.7	925.0	926.3	927.1	927.5	927.8	928.1	928.5	928.9
147.5°	952.9	953.8	954.6	955.4	956.3	956.8	957.2	957.6	958.0	958.3	958.7
150°	972.5	973.1	973.5	974.1	974.6	975.1	975.4	975.8	976.2	976.6	976.9
152.5°	990.0	990.3	990.6	990.8	991.1	991.3	991.5	991.7	992.0	992.1	992.8
155°	1014.8	1014.4	1014.1	1013.7	1013.3	1013.3	1013.4	1013.6	1013.8	1014.0	1014.9
157.5°	1034.0	1034.0	1034.0	1033.9	1033.9	1033.7	1033.6	1033.4	1033.2	1033.0	1034.1
160°	1045.7	1045.5	1045.4	1045.2	1045.0	1044.8	1044.6	1044.5	1044.2	1044.1	1045.2
162.5°	1056.8	1056.3	1055.8	1055.4	1054.9	1054.6	1054.4	1054.2	1054.0	1053.9	1055.1
165°	1070.2	1069.6	1069.0	1068.5	1068.0	1067.6	1067.4	1067.2	1067.1	1066.9	1068.3
167.5°	1080.5	1079.9	1079.1	1078.4	1077.7	1077.3	1077.3	1077.3	1077.3	1077.3	1078.7
170°	1086.4	1085.7	1085.0	1084.3	1083.5	1083.1	1083.1	1083.1	1083.1	1083.1	1084.6
172.5°	1090.3	1089.5	1088.6	1087.7	1086.9	1086.5	1086.6	1086.8	1086.9	1087.0	1088.5
175°	1095.4	1094.5	1093.6	1092.7	1091.8	1091.4	1091.5	1091.8	1091.9	1092.1	1093.4
177.5°	1096.7	1095.9	1095.2	1094.5	1093.8	1093.5	1093.6	1093.8	1093.9	1094.1	1095.2
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4



TEST NUMBER: P331898-930

CATALOG NUMBER: S123DIP-S340D1025U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8
2.5°	440.1	440.8	441.5	441.8	441.7	441.6	441.6	441.5
5°	437.8	438.6	439.5	439.9	439.7	439.5	439.3	439.1
7.5°	433.2	433.9	434.6	435.0	434.9	434.8	434.7	434.6
10°	428.9	429.7	430.4	430.7	430.6	430.4	430.2	430.1
12.5°	424.2	424.8	425.3	425.6	425.5	425.3	425.3	425.2
15°	415.8	416.5	417.2	417.3	416.7	416.2	415.7	415.2
17.5°	405.1	405.6	406.1	406.3	406.0	405.9	405.7	405.5
20°	397.3	397.6	397.9	398.0	397.7	397.5	397.2	397.0
22.5°	388.9	389.2	389.5	389.5	389.1	388.8	388.5	388.2
25°	375.1	375.2	375.3	375.2	375.0	374.7	374.5	374.2
27.5°	360.4	360.5	360.5	360.4	360.1	359.8	359.5	359.1
30°	350.3	350.3	350.3	349.9	349.4	348.8	348.2	347.6
32.5°	339.6	339.1	338.7	338.3	337.9	337.6	337.3	337.0
35°	322.3	321.8	321.2	320.8	320.4	319.9	319.5	319.1
37.5°	304.4	303.8	303.1	302.7	302.5	302.1	301.9	301.7
40°	292.7	292.0	291.3	290.8	290.5	290.2	289.8	289.5
42.5°	280.5	279.8	279.2	278.7	278.3	278.0	277.7	277.3
45°	262.4	261.4	260.3	259.7	259.2	258.8	258.4	258.0
47.5°	243.3	242.3	241.2	240.6	240.2	239.9	239.5	239.1
50°	230.6	229.7	228.8	228.0	227.6	227.1	226.6	226.0
52.5°	217.8	217.0	216.2	215.6	215.1	214.6	214.1	213.6
55°	198.4	197.4	196.5	195.8	195.4	194.9	194.5	194.1
57.5°	179.2	178.3	177.5	176.8	176.3	175.9	175.4	174.9
60°	165.7	164.9	164.1	163.5	163.1	162.7	162.2	161.8
62.5°	152.5	151.8	151.1	150.5	150.3	149.9	149.7	149.4
65°	133.1	132.5	131.8	131.3	131.1	130.8	130.5	130.3
67.5°	113.8	113.2	112.7	112.2	111.9	111.5	111.1	110.8
70°	101.4	100.8	100.2	99.7	99.3	98.9	98.4	98.0
72.5°	88.8	88.2	87.7	87.3	87.2	86.9	86.7	86.4
75°	70.6	70.1	69.7	69.4	69.1	68.9	68.6	68.4
77.5°	53.6	53.3	53.0	52.9	52.9	52.9	52.9	52.9
80°	42.7	42.6	42.6	42.6	42.6	42.6	42.6	42.6
82.5°	32.9	32.8	32.6	32.4	32.4	32.4	32.3	32.2
85°	18.7	18.5	18.3	18.3	18.3	18.3	18.3	18.3
87.5°	10.8	10.8	10.9	11.0	11.1	11.1	11.2	11.3
90°	21.0	21.7	22.4	23.0	23.3	23.7	24.1	24.4
92.5°	23.2	24.3	25.4	26.2	26.3	26.6	26.8	27.0
95°	27.7	29.0	30.3	30.9	30.9	30.9	30.9	30.9
97.5°	29.1	30.6	32.0	32.8	33.0	33.2	33.3	33.5
100°	29.8	31.2	32.6	33.4	33.7	33.8	34.0	34.2
102.5°	44.6	40.1	35.6	33.5	33.8	34.2	34.5	34.8
105°	114.2	82.2	50.2	34.3	34.7	35.1	35.5	35.8
107.5°	279.7	256.2	232.8	209.0	184.8	160.7	136.6	112.4
110°	355.1	349.1	343.2	327.3	301.3	275.5	249.6	223.8



TEST NUMBER: P331898-930

CATALOG NUMBER: S123DIP-S340D1025U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	408.2	408.4	408.5	405.8	400.3	394.8	389.4	383.9
115°	470.8	472.5	474.3	475.6	476.3	477.0	477.8	478.5
117.5°	527.3	528.7	530.2	531.0	531.2	531.2	531.4	531.6
120°	564.4	565.8	567.3	568.0	568.0	568.0	568.0	568.0
122.5°	600.6	601.7	602.7	603.2	603.4	603.6	603.6	603.8
125°	651.8	652.1	652.5	652.8	653.2	653.5	654.0	654.3
127.5°	703.0	703.5	704.1	704.3	703.8	703.5	703.1	702.8
130°	733.9	734.6	735.3	735.5	735.2	734.7	734.4	734.0
132.5°	763.1	763.9	764.6	764.7	764.2	763.7	763.2	762.7
135°	807.6	808.1	808.6	808.6	808.1	807.6	807.0	806.5
137.5°	847.1	848.0	848.8	849.1	848.7	848.4	848.0	847.7
140°	872.2	872.9	873.7	873.8	873.4	873.1	872.8	872.4
142.5°	896.0	896.6	897.2	897.2	896.7	896.2	895.7	895.2
145°	929.3	929.6	930.0	930.2	930.2	930.2	930.2	930.2
147.5°	959.0	959.4	959.8	959.5	958.7	957.9	957.0	956.2
150°	977.3	977.6	978.0	977.9	977.4	976.8	976.2	975.8
152.5°	993.4	994.1	994.7	994.7	993.8	993.0	992.2	991.3
155°	1015.8	1016.7	1017.6	1017.5	1016.4	1015.4	1014.2	1013.2
157.5°	1035.2	1036.2	1037.4	1037.2	1035.8	1034.4	1033.0	1031.6
160°	1046.3	1047.3	1048.4	1048.3	1047.1	1045.8	1044.6	1043.3
162.5°	1056.3	1057.5	1058.7	1058.8	1057.7	1056.5	1055.5	1054.3
165°	1069.8	1071.2	1072.7	1072.8	1071.5	1070.2	1068.9	1067.7
167.5°	1080.2	1081.7	1083.0	1083.0	1081.7	1080.2	1078.7	1077.3
170°	1086.1	1087.5	1088.9	1088.9	1087.5	1086.1	1084.6	1083.1
172.5°	1090.0	1091.4	1092.8	1092.7	1091.2	1089.6	1088.0	1086.4
175°	1094.6	1095.9	1097.1	1097.1	1095.6	1094.2	1092.7	1091.3
177.5°	1096.3	1097.6	1098.7	1098.5	1097.1	1095.7	1094.2	1092.7
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4

(END OF REPORT)