

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: P331905

Luminaire Tested: **S123DIP-S340D1195U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331905  
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-S340D1195U835-4F0-1E-UDD-D1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5539.8 lumens  
Efficiency: N/A  
Efficacy: 131.3 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

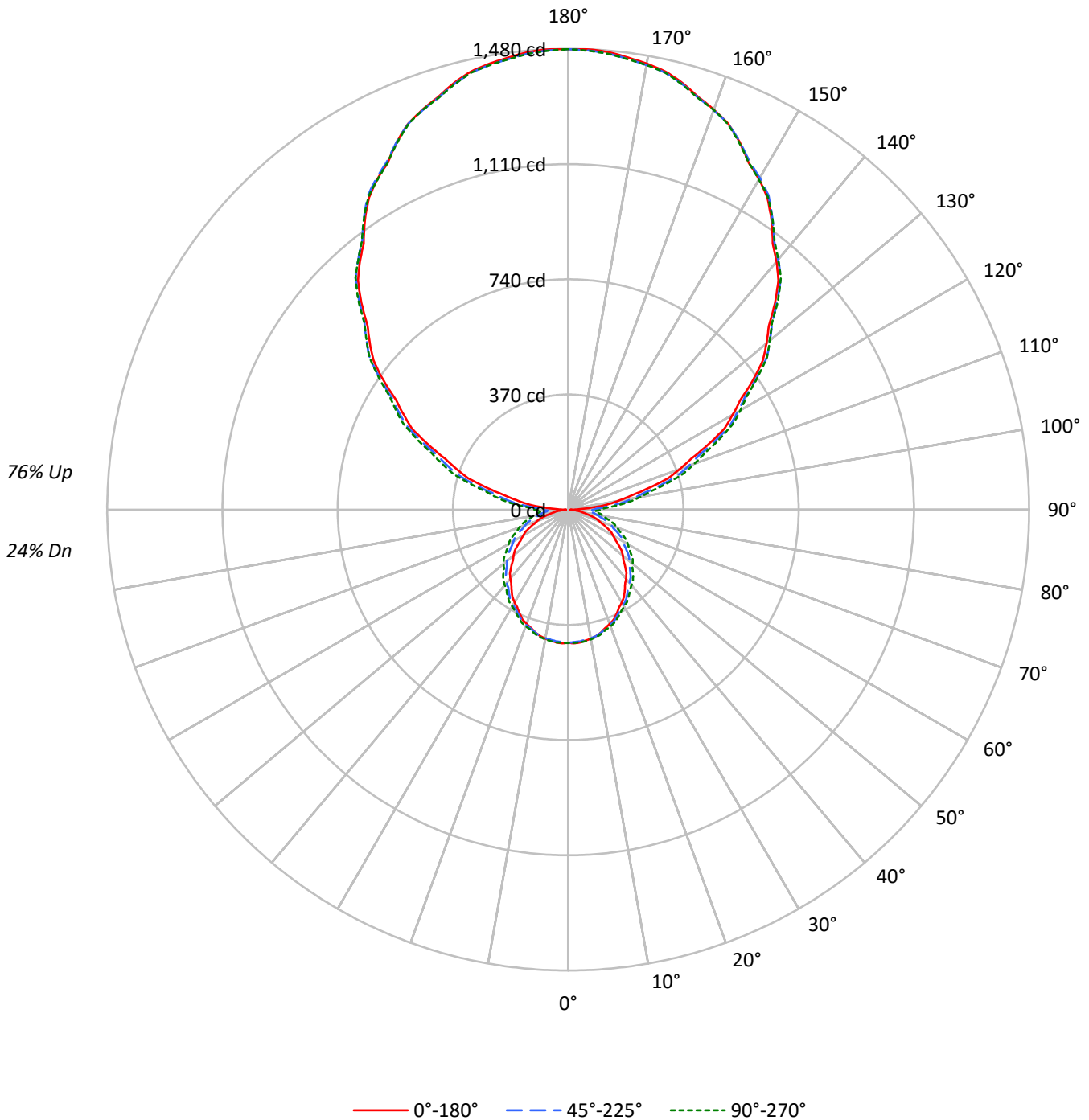
Input Watts (W): 42.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331905

CATALOG NUMBER: S123DIP-S340D1195U835-4F0-1E-UDD-D1

### Luminous Intensity Polar Plot





TEST NUMBER: P331905

CATALOG NUMBER: S123DIP-S340D1195U835-4F0-1E-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	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	23	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°	4604	4604	4604
5°	4618	4488	4490
10°	4577	4385	4363
15°	4518	4267	4223
20°	4434	4133	4070
25°	4330	3980	3908
30°	4224	3841	3744
35°	4103	3694	3614
40°	3990	3560	3474
45°	3864	3432	3362
50°	3739	3305	3239
55°	3601	3175	3128
60°	3466	3044	3015
65°	3328	2903	2878
70°	3120	2744	2740
75°	2859	2565	2600
80°	2556	2387	2438
85°	2274	2264	2344



TEST NUMBER: P331905

CATALOG NUMBER: S123DIP-S340D1195U835-4F0-1E-UDD-D1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.5	0.7
10°-20°	115.6	2.1
20°-30°	172.9	3.1
30°-40°	206.5	3.7
40°-50°	216.0	3.9
50°-60°	202.7	3.7
60°-70°	169.3	3.1
70°-80°	121.1	2.2
80°-90°	76.6	1.4
90°-100°	141.7	2.6
100°-110°	321.7	5.8
110°-120°	512.8	9.3
120°-130°	657.9	11.9
130°-140°	730.9	13.2
140°-150°	714.1	12.9
150°-160°	600.1	10.8
160°-170°	399.5	7.2
170°-180°	139.9	2.5
0°-30°	329.0	5.9
0°-40°	535.5	9.7
0°-60°	954.2	17.2
0°-90°	1321.3	23.9
90°-120°	976.2	17.6
90°-150°	3079.0	55.6
90°-180°	4219.0	76.2
0°-180°	5539.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	428	428	428	428	428	
5°	428	427	424	428	428	41
15°	408	409	409	413	413	115
25°	368	373	374	380	380	170
35°	317	324	330	337	339	198
45°	259	270	282	290	294	200
55°	198	213	230	242	246	177
65°	136	155	175	189	194	135
75°	74	96	119	134	140	79
85°	23	46	71	86	91	24
90°	7	42	80	100	108	8
95°	74	100	132	150	156	81
105°	265	280	309	322	329	284
115°	496	506	520	531	535	491
125°	724	728	739	744	742	646
135°	939	945	949	953	953	723
145°	1138	1140	1143	1146	1143	710
155°	1302	1303	1304	1308	1300	599
165°	1419	1415	1415	1421	1414	400
175°	1476	1471	1471	1477	1470	140
180°	1479	1479	1479	1479	1479	



TEST NUMBER: P331905

CATALOG NUMBER: S123DIP-S340D1195U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7
2.5°	429.6	429.4	429.1	428.9	428.6	428.2	427.5	426.8	426.2	425.5	426.2
5°	428.2	428.0	427.8	427.6	427.4	427.0	426.3	425.7	425.1	424.5	425.3
7.5°	424.0	424.1	424.1	424.1	424.2	423.9	423.3	422.7	422.1	421.5	422.5
10°	420.3	420.5	420.7	420.9	421.1	421.0	420.4	419.9	419.4	418.9	419.9
12.5°	415.8	416.1	416.4	416.7	417.0	416.9	416.6	416.2	415.9	415.5	416.5
15°	407.7	408.0	408.3	408.6	408.9	409.1	408.9	408.8	408.7	408.6	409.7
17.5°	397.5	398.1	398.7	399.3	399.9	400.2	400.2	400.1	400.1	400.1	401.0
20°	390.0	390.6	391.2	391.9	392.5	392.9	393.1	393.3	393.5	393.7	394.7
22.5°	382.2	382.8	383.4	384.0	384.7	385.1	385.4	385.7	386.0	386.3	387.5
25°	368.1	369.1	370.2	371.2	372.2	372.9	373.2	373.5	373.8	374.2	375.5
27.5°	353.9	355.1	356.3	357.5	358.7	359.6	360.2	360.9	361.6	362.2	363.4
30°	343.9	345.2	346.6	347.9	349.3	350.3	351.2	352.0	352.8	353.7	354.9
32.5°	332.7	334.2	335.7	337.2	338.7	340.0	341.1	342.2	343.3	344.3	345.7
35°	316.8	318.5	320.2	321.8	323.5	325.0	326.3	327.7	329.0	330.4	331.9
37.5°	300.1	301.9	303.8	305.7	307.5	309.3	310.9	312.6	314.3	315.9	317.7
40°	288.9	290.8	292.6	294.5	296.3	298.3	300.4	302.5	304.5	306.6	308.4
42.5°	276.6	278.9	281.1	283.4	285.7	287.9	290.1	292.2	294.4	296.5	298.5
45°	259.1	261.6	264.0	266.5	269.0	271.5	274.1	276.7	279.3	281.9	283.9
47.5°	240.7	243.5	246.3	249.2	252.0	254.9	257.8	260.8	263.7	266.7	268.9
50°	228.8	231.7	234.6	237.5	240.4	243.4	246.6	249.9	253.1	256.3	258.7
52.5°	216.1	219.2	222.2	225.3	228.4	231.7	235.2	238.8	242.3	245.8	248.3
55°	197.6	201.0	204.4	207.8	211.2	214.8	218.5	222.3	226.0	229.7	232.5
57.5°	179.5	183.0	186.6	190.2	193.7	197.6	201.6	205.7	209.8	213.9	216.7
60°	166.8	170.5	174.3	178.0	181.7	185.7	190.0	194.2	198.4	202.7	205.6
62.5°	154.9	158.7	162.5	166.3	170.1	174.3	178.8	183.3	187.8	192.3	195.1
65°	136.5	140.6	144.6	148.6	152.7	157.0	161.5	166.1	170.6	175.2	178.3
67.5°	117.9	122.2	126.5	130.7	135.0	139.5	144.1	148.8	153.4	158.1	161.4
70°	104.8	109.3	113.7	118.2	122.6	127.4	132.3	137.3	142.3	147.2	150.6
72.5°	92.9	97.4	101.8	106.3	110.7	115.5	120.6	125.8	130.9	136.1	139.5
75°	74.1	79.0	83.8	88.7	93.6	98.6	103.8	108.9	114.1	119.3	122.7
77.5°	57.7	62.6	67.5	72.4	77.3	82.4	87.6	92.8	98.0	103.3	106.9
80°	46.1	51.2	56.3	61.4	66.4	71.7	77.0	82.4	87.8	93.2	96.7
82.5°	36.1	41.2	46.4	51.5	56.7	62.0	67.5	72.9	78.4	83.9	87.4
85°	22.8	28.0	33.2	38.4	43.5	48.9	54.4	59.8	65.3	70.8	74.3
87.5°	12.6	18.3	24.0	29.6	35.3	41.1	47.1	53.0	59.0	64.9	68.7
90°	7.2	14.9	22.5	30.2	37.8	46.0	54.6	63.3	71.9	80.5	85.1
92.5°	33.8	40.1	46.5	52.8	59.1	65.9	73.0	80.1	87.2	94.3	98.6
95°	73.7	79.5	85.4	91.2	97.1	103.6	110.7	117.8	125.0	132.1	136.4
97.5°	126.3	131.3	136.3	141.3	146.3	151.9	158.3	164.6	171.0	177.3	181.6
100°	162.2	167.1	171.9	176.8	181.7	187.1	193.2	199.2	205.3	211.3	215.1
102.5°	203.7	207.6	211.5	215.4	219.3	224.5	230.8	237.2	243.6	250.0	253.7
105°	265.2	268.2	271.2	274.2	277.2	282.0	288.8	295.6	302.4	309.2	312.0
107.5°	336.2	338.6	341.0	343.4	345.9	349.6	354.8	359.9	365.1	370.3	373.9
110°	380.4	382.8	385.2	387.5	389.9	393.4	398.1	402.8	407.4	412.1	415.8



TEST NUMBER: P331905

CATALOG NUMBER: S123DIP-S340D1195U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	426.9	428.7	430.6	432.4	434.3	437.2	441.3	445.4	449.5	453.5	457.4
115°	496.1	498.1	500.2	502.2	504.2	506.8	510.0	513.2	516.4	519.7	522.4
117.5°	566.2	567.5	568.8	570.1	571.3	573.4	576.2	579.1	581.9	584.7	587.1
120°	609.5	611.6	613.7	615.7	617.8	619.9	622.0	624.1	626.3	628.4	630.5
122.5°	655.1	656.5	657.9	659.3	660.7	662.7	665.3	667.8	670.4	673.0	674.6
125°	724.1	724.9	725.6	726.4	727.2	728.8	731.3	733.8	736.3	738.8	739.9
127.5°	788.2	789.8	791.3	792.9	794.4	796.2	798.1	800.0	801.9	803.8	804.4
130°	831.0	832.9	834.9	836.9	838.8	840.5	841.8	843.1	844.3	845.6	846.6
132.5°	873.4	875.4	877.5	879.5	881.5	883.1	884.2	885.3	886.4	887.5	888.1
135°	938.6	940.0	941.5	942.9	944.4	945.5	946.4	947.3	948.2	949.0	949.9
137.5°	998.9	1000.1	1001.3	1002.5	1003.7	1005.0	1006.3	1007.6	1008.9	1010.2	1010.8
140°	1040.3	1041.6	1042.9	1044.2	1045.5	1046.4	1047.0	1047.6	1048.2	1048.7	1050.0
142.5°	1078.5	1079.7	1080.9	1082.1	1083.3	1084.2	1084.7	1085.2	1085.7	1086.3	1087.4
145°	1137.9	1138.4	1138.8	1139.2	1139.6	1140.2	1141.0	1141.7	1142.5	1143.3	1143.9
147.5°	1189.5	1190.5	1191.4	1192.3	1193.3	1194.1	1194.8	1195.5	1196.2	1197.0	1197.2
150°	1225.8	1226.3	1226.8	1227.3	1227.9	1228.4	1228.9	1229.4	1229.9	1230.4	1230.4
152.5°	1255.5	1256.3	1257.0	1257.7	1258.4	1258.9	1259.2	1259.6	1259.9	1260.2	1260.6
155°	1302.5	1302.5	1302.5	1302.5	1302.5	1302.6	1302.9	1303.1	1303.4	1303.6	1304.7
157.5°	1342.4	1342.1	1341.8	1341.5	1341.2	1341.1	1341.4	1341.6	1341.8	1342.0	1343.1
160°	1367.5	1367.0	1366.5	1366.0	1365.5	1365.2	1365.2	1365.2	1365.2	1365.2	1366.5
162.5°	1389.8	1389.1	1388.4	1387.7	1387.0	1386.7	1386.9	1387.1	1387.3	1387.5	1388.8
165°	1418.7	1417.9	1417.1	1416.3	1415.6	1415.2	1415.2	1415.2	1415.2	1415.2	1416.7
167.5°	1441.7	1440.6	1439.6	1438.6	1437.5	1437.1	1437.3	1437.5	1437.7	1437.9	1439.5
170°	1454.7	1453.6	1452.6	1451.6	1450.5	1450.0	1450.0	1450.0	1450.0	1450.0	1451.8
172.5°	1464.9	1463.9	1462.8	1461.8	1460.8	1460.3	1460.3	1460.3	1460.3	1460.3	1461.9
175°	1475.6	1474.6	1473.5	1472.5	1471.5	1470.9	1470.9	1470.9	1470.9	1470.9	1472.5
177.5°	1480.0	1479.2	1478.4	1477.5	1476.7	1476.3	1476.3	1476.3	1476.3	1476.3	1477.5
180°	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1



TEST NUMBER: P331905

CATALOG NUMBER: S123DIP-S340D1195U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7
2.5°	426.8	427.5	428.2	428.4	428.4	428.3	428.2	428.1
5°	426.1	427.0	427.8	428.2	428.1	427.9	427.8	427.7
7.5°	423.6	424.6	425.6	426.1	426.0	425.8	425.7	425.6
10°	421.0	422.0	423.0	423.4	423.2	423.0	422.8	422.6
12.5°	417.4	418.4	419.3	419.7	419.5	419.3	419.1	418.9
15°	410.7	411.7	412.8	413.2	413.1	413.0	412.9	412.8
17.5°	401.9	402.9	403.8	404.2	404.0	403.9	403.8	403.6
20°	395.6	396.5	397.5	398.0	398.1	398.2	398.3	398.4
22.5°	388.6	389.8	391.0	391.6	391.5	391.4	391.4	391.3
25°	376.8	378.2	379.5	380.2	380.2	380.2	380.2	380.2
27.5°	364.5	365.7	366.9	367.5	367.6	367.7	367.7	367.8
30°	356.1	357.4	358.6	359.2	359.2	359.2	359.2	359.2
32.5°	347.0	348.3	349.6	350.4	350.7	350.9	351.2	351.4
35°	333.5	335.0	336.6	337.6	338.0	338.4	338.8	339.2
37.5°	319.4	321.2	323.0	324.0	324.3	324.7	325.0	325.3
40°	310.1	311.9	313.6	314.7	315.1	315.6	316.0	316.4
42.5°	300.4	302.3	304.2	305.5	306.1	306.6	307.2	307.8
45°	285.8	287.8	289.8	291.2	292.0	292.8	293.7	294.5
47.5°	271.1	273.4	275.6	277.0	277.6	278.3	278.9	279.6
50°	261.0	263.4	265.8	267.4	268.1	268.8	269.5	270.3
52.5°	250.8	253.2	255.7	257.4	258.3	259.2	260.0	260.9
55°	235.3	238.1	240.9	242.7	243.5	244.4	245.2	246.0
57.5°	219.5	222.3	225.1	227.0	228.0	229.0	230.0	230.9
60°	208.5	211.4	214.3	216.3	217.4	218.6	219.7	220.9
62.5°	198.0	200.9	203.8	205.8	206.9	207.9	209.0	210.1
65°	181.4	184.5	187.6	189.7	190.7	191.8	192.8	193.8
67.5°	164.8	168.2	171.6	173.8	174.6	175.5	176.4	177.2
70°	153.9	157.2	160.5	162.7	163.7	164.7	165.8	166.8
72.5°	142.8	146.2	149.6	151.9	152.9	153.9	155.0	156.0
75°	126.1	129.5	133.0	135.3	136.5	137.8	139.0	140.3
77.5°	110.5	114.1	117.7	119.9	120.9	121.9	122.8	123.8
80°	100.2	103.8	107.3	109.5	110.6	111.6	112.7	113.7
82.5°	90.9	94.4	98.0	100.2	101.3	102.3	103.3	104.4
85°	77.9	81.4	84.9	87.2	88.2	89.3	90.3	91.3
87.5°	72.4	76.1	79.8	82.3	83.4	84.6	85.7	86.8
90°	89.6	94.2	98.8	101.8	103.4	104.9	106.5	108.0
92.5°	102.8	107.1	111.3	113.8	114.4	115.1	115.7	116.4
95°	140.6	144.8	149.1	151.7	152.8	153.8	154.8	155.9
97.5°	185.9	190.1	194.4	197.0	197.9	198.9	199.8	200.7
100°	218.9	222.7	226.4	229.1	230.7	232.2	233.8	235.3
102.5°	257.4	261.1	264.8	267.1	268.0	269.0	269.9	270.8
105°	314.9	317.8	320.7	322.9	324.4	325.8	327.3	328.7
107.5°	377.5	381.1	384.7	386.8	387.4	388.0	388.6	389.2
110°	419.5	423.3	427.0	429.0	429.3	429.6	429.9	430.2





TEST NUMBER: P331905

CATALOG NUMBER: S123DIP-S340D1195U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	461.2	465.1	468.9	471.3	472.1	472.9	473.7	474.5
115°	525.1	527.9	530.6	532.3	532.9	533.4	534.0	534.6
117.5°	589.5	592.0	594.4	595.6	595.7	595.8	595.9	596.0
120°	632.6	634.8	636.9	638.1	638.3	638.5	638.7	638.9
122.5°	676.3	677.9	679.5	680.3	680.3	680.3	680.3	680.3
125°	741.0	742.2	743.3	743.7	743.4	743.1	742.8	742.5
127.5°	805.0	805.6	806.2	806.3	805.8	805.3	804.8	804.4
130°	847.5	848.4	849.4	849.3	848.1	846.9	845.7	844.5
132.5°	888.8	889.4	890.0	890.0	889.3	888.6	888.0	887.3
135°	950.7	951.5	952.4	952.8	952.8	952.8	952.8	952.8
137.5°	1011.3	1011.9	1012.4	1012.5	1012.0	1011.6	1011.1	1010.6
140°	1051.3	1052.6	1053.9	1053.9	1052.6	1051.3	1050.0	1048.7
142.5°	1088.5	1089.7	1090.8	1090.9	1090.0	1089.2	1088.3	1087.4
145°	1144.4	1145.0	1145.6	1145.5	1144.9	1144.3	1143.7	1143.1
147.5°	1197.5	1197.7	1198.0	1197.5	1196.3	1195.1	1194.0	1192.8
150°	1230.4	1230.4	1230.4	1229.8	1228.4	1227.1	1225.7	1224.4
152.5°	1261.0	1261.4	1261.8	1261.4	1260.1	1258.8	1257.5	1256.2
155°	1305.7	1306.7	1307.8	1307.4	1305.6	1303.8	1302.0	1300.1
157.5°	1344.1	1345.2	1346.3	1346.1	1344.7	1343.2	1341.8	1340.3
160°	1367.8	1369.1	1370.4	1370.5	1369.5	1368.4	1367.4	1366.4
162.5°	1390.1	1391.4	1392.7	1392.5	1390.8	1389.2	1387.5	1385.9
165°	1418.3	1419.8	1421.4	1421.2	1419.4	1417.6	1415.8	1414.0
167.5°	1441.1	1442.7	1444.3	1444.3	1442.7	1441.1	1439.5	1437.9
170°	1453.6	1455.5	1457.3	1457.3	1455.5	1453.6	1451.8	1450.0
172.5°	1463.5	1465.1	1466.7	1466.6	1464.7	1462.9	1461.1	1459.3
175°	1474.0	1475.6	1477.1	1477.0	1475.2	1473.4	1471.6	1469.8
177.5°	1478.8	1480.0	1481.2	1481.1	1479.7	1478.2	1476.8	1475.4
180°	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1	1479.1

(END OF REPORT)