

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: P332263-930

Luminaire Tested: **S123RDIP-S340D1025U930-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332263-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S340D1025U930-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4085.9 lumens
Efficiency: N/A
Efficacy: 109.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

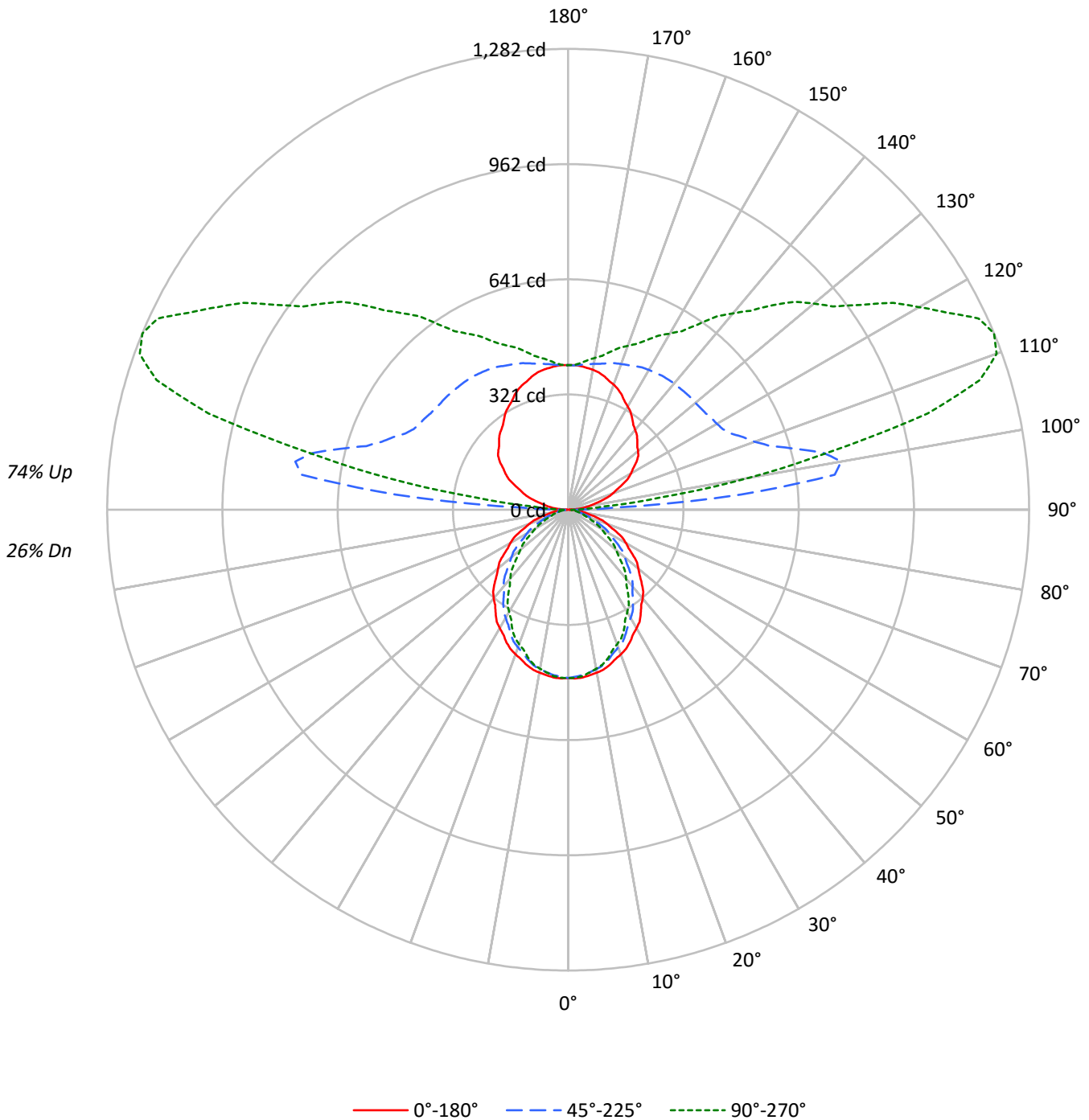
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332263-930

CATALOG NUMBER: S123RDIP-S340D1025U930-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





TEST NUMBER: P332263-930

CATALOG NUMBER: S123RDIP-S340D1025U930-4F0-1E-UDD-F4

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	93	88	85	81	82	79	76	73	61	59	58	45	44	43	30	30	29	22
2	84	77	72	67	75	69	64	60	54	51	48	40	38	36	27	26	25	19
3	77	68	61	56	68	61	55	50	48	44	40	35	33	31	24	22	21	16
4	70	60	53	47	63	54	48	43	42	38	34	32	29	26	21	20	18	14
5	65	54	46	40	57	48	42	37	38	33	30	28	25	23	19	17	16	12
6	59	48	40	35	53	43	37	32	34	29	26	26	22	20	18	16	14	11
7	55	43	36	30	49	39	32	28	31	26	23	23	20	18	16	14	13	10
8	51	39	32	27	45	35	29	24	28	23	20	21	18	16	15	13	11	9
9	47	36	28	24	42	32	26	22	26	21	18	19	16	14	14	12	10	8
10	44	32	26	21	39	29	23	19	23	19	16	18	15	13	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5042	5042	5042
5°	5061	4991	5020
10°	5032	4928	4912
15°	4979	4813	4763
20°	4904	4669	4560
25°	4828	4507	4363
30°	4727	4320	4084
35°	4623	4133	3829
40°	4526	3912	3513
45°	4401	3694	3227
50°	4262	3448	2907
55°	4121	3166	2609
60°	3991	2863	2282
65°	3823	2534	1954
70°	3610	2127	1577
75°	3302	1676	1485
80°	2944	1488	1364
85°	2482	1309	1223



TEST NUMBER: P332263-930

CATALOG NUMBER: S123RDIP-S340D1025U930-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.0	1.1
10°-20°	122.4	3.0
20°-30°	176.2	4.3
30°-40°	198.5	4.9
40°-50°	189.9	4.6
50°-60°	155.5	3.8
60°-70°	104.9	2.6
70°-80°	52.8	1.3
80°-90°	17.1	0.4
90°-100°	223.7	5.5
100°-110°	633.5	15.5
110°-120°	623.2	15.3
120°-130°	497.1	12.2
130°-140°	391.9	9.6
140°-150°	292.5	7.2
150°-160°	203.9	5.0
160°-170°	119.8	2.9
170°-180°	39.0	1.0
0°-30°	342.6	8.4
0°-40°	541.1	13.2
0°-60°	886.5	21.7
0°-90°	1061.3	26.0
90°-120°	1480.5	36.2
90°-150°	2662.0	65.2
90°-180°	3025.0	74.0
0°-180°	4085.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	468	468	468	468	468	
5°	468	466	462	465	465	44
15°	447	442	432	430	427	126
25°	406	396	380	372	367	187
35°	352	338	314	299	291	220
45°	289	271	243	222	212	223
55°	220	200	169	147	139	197
65°	150	129	100	82	77	148
75°	79	61	40	37	36	85
85°	20	12	11	10	10	23
90°	2	10	20	23	24	3
95°	28	90	483	141	94	30
105°	94	140	654	1144	1035	100
115°	167	208	500	1097	1259	165
125°	232	274	467	846	993	206
135°	272	324	461	697	805	210
145°	310	355	455	572	629	194
155°	352	380	440	500	522	162
165°	385	396	422	447	455	108
175°	401	402	404	410	409	38
180°	402	402	402	402	402	



TEST NUMBER: P332263-930

CATALOG NUMBER: S123RDIP-S340D1025U930-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4
2.5°	469.9	469.6	469.4	469.1	468.9	468.3	467.5	466.7	465.9	465.0	465.8
5°	468.4	468.0	467.6	467.2	466.7	466.0	465.0	464.0	462.9	461.9	462.7
7.5°	464.1	463.6	463.2	462.7	462.3	461.4	460.1	458.8	457.4	456.1	456.5
10°	460.4	459.8	459.3	458.7	458.0	457.0	455.5	454.0	452.4	450.9	451.0
12.5°	455.3	454.6	454.0	453.3	452.7	451.3	449.5	447.7	445.8	443.9	443.8
15°	446.8	445.8	444.9	443.9	443.0	441.4	439.0	436.7	434.3	431.9	431.5
17.5°	436.0	435.0	433.9	432.8	431.7	429.7	426.6	423.6	420.7	417.7	416.8
20°	428.1	426.8	425.4	424.1	422.7	420.4	417.3	414.0	410.8	407.6	406.5
22.5°	419.3	417.8	416.2	414.7	413.1	410.7	407.2	403.8	400.4	397.0	395.6
25°	406.5	404.4	402.3	400.1	398.0	395.0	391.2	387.3	383.4	379.5	377.7
27.5°	390.9	388.6	386.2	383.9	381.6	378.3	374.0	369.6	365.3	360.9	358.5
30°	380.3	377.7	375.2	372.7	370.1	366.5	361.7	357.0	352.3	347.6	344.7
32.5°	369.7	366.7	363.9	361.0	358.2	354.2	349.2	344.2	339.2	334.2	331.1
35°	351.8	348.7	345.7	342.7	339.7	335.5	330.3	325.0	319.8	314.5	311.0
37.5°	333.7	330.3	326.9	323.6	320.2	315.7	310.1	304.5	299.0	293.3	289.3
40°	322.1	318.5	314.7	311.0	307.3	302.4	296.4	290.4	284.5	278.4	274.1
42.5°	309.1	305.3	301.7	297.9	294.2	289.3	283.1	276.9	270.7	264.5	259.7
45°	289.1	285.3	281.5	277.7	273.9	268.7	262.3	255.8	249.2	242.7	237.9
47.5°	269.1	265.0	260.7	256.6	252.4	247.1	240.6	234.1	227.6	221.1	215.9
50°	254.5	250.5	246.6	242.6	238.6	233.3	226.4	219.6	212.7	205.9	200.6
52.5°	241.5	237.2	232.8	228.5	224.2	218.7	211.9	205.1	198.4	191.6	186.2
55°	219.6	215.4	211.3	207.2	203.0	197.4	190.2	183.0	175.9	168.7	163.8
57.5°	199.3	194.9	190.4	185.8	181.3	175.5	168.3	161.0	153.8	146.7	142.0
60°	185.4	180.8	176.1	171.5	166.8	161.0	154.0	147.0	140.0	133.0	128.4
62.5°	171.4	166.7	162.1	157.5	152.9	147.0	140.0	133.0	126.0	119.0	114.7
65°	150.1	145.4	140.8	136.2	131.5	125.9	119.3	112.7	106.2	99.5	95.4
67.5°	128.7	124.0	119.3	114.6	109.9	104.4	98.1	91.8	85.4	79.2	76.1
70°	114.7	110.1	105.6	101.0	96.5	91.2	85.4	79.4	73.5	67.6	64.7
72.5°	100.8	96.3	91.8	87.2	82.8	77.9	72.5	67.1	61.7	56.3	54.0
75°	79.4	75.3	71.3	67.3	63.2	58.9	54.2	49.6	44.9	40.3	39.5
77.5°	59.9	56.3	52.6	48.9	45.3	42.0	39.0	36.0	33.0	30.0	29.6
80°	47.5	44.0	40.6	37.1	33.7	31.1	29.3	27.5	25.7	24.0	23.6
82.5°	35.6	32.6	29.7	26.7	23.6	21.8	21.0	20.1	19.3	18.4	18.2
85°	20.1	18.3	16.4	14.6	12.7	11.7	11.4	11.2	10.9	10.6	10.4
87.5°	7.6	7.2	6.8	6.5	6.1	6.0	6.5	7.0	7.5	8.0	7.8
90°	1.6	3.3	4.9	7.3	9.0	10.6	13.0	15.5	17.9	20.4	19.6
92.5°	10.1	15.0	21.9	28.1	35.0	47.0	68.3	103.4	137.7	125.1	94.4
95°	27.6	30.1	39.1	52.9	74.0	105.8	175.0	296.2	429.7	482.6	391.4
97.5°	47.2	48.0	55.0	67.0	87.9	122.2	188.3	325.1	547.6	747.9	800.1
100°	60.3	61.1	66.8	78.1	97.7	129.4	186.4	306.8	520.8	770.7	931.0
102.5°	73.9	75.3	80.4	91.2	108.8	137.9	189.0	291.1	481.8	728.4	937.5
105°	94.4	96.9	101.7	111.5	126.9	152.2	196.2	280.0	433.7	654.3	887.9
107.5°	116.2	118.6	123.4	133.0	147.5	170.9	209.5	279.2	403.2	588.9	801.0
110°	131.8	134.3	138.4	147.3	161.1	183.9	220.5	282.4	391.4	551.8	746.2



TEST NUMBER: P332263-930

CATALOG NUMBER: S123RDIP-S340D1025U930-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	146.2	148.6	152.7	161.6	175.5	197.6	231.6	288.9	384.9	527.0	698.7
115°	166.8	170.1	175.0	183.1	197.0	218.9	249.8	299.5	382.5	500.5	641.3
117.5°	187.5	191.3	195.3	202.8	218.3	238.6	269.2	313.5	383.9	484.9	606.6
120°	201.8	204.2	208.3	216.5	232.0	252.3	281.6	323.9	386.5	477.7	588.4
122.5°	214.2	216.6	220.7	229.5	244.3	266.0	294.6	333.7	391.1	473.1	573.4
125°	232.0	233.6	238.5	247.4	262.9	284.9	313.3	349.1	397.9	467.2	554.2
127.5°	245.5	247.9	253.9	263.0	280.1	302.1	329.6	361.8	405.8	464.2	537.3
130°	253.9	256.3	263.7	273.5	290.5	312.5	339.3	370.3	411.0	462.3	528.2
132.5°	260.4	263.5	271.5	283.2	300.3	321.6	347.8	378.1	414.9	461.6	519.7
135°	271.8	275.1	284.1	296.2	313.3	335.3	360.5	388.2	420.8	460.6	508.7
137.5°	282.6	286.0	294.7	307.8	324.7	345.0	369.3	395.7	424.6	458.9	499.0
140°	289.8	293.8	301.9	315.0	331.3	351.6	375.2	399.6	427.2	458.2	493.2
142.5°	297.5	300.9	309.7	321.5	337.7	356.8	379.8	403.5	429.2	456.9	488.0
145°	310.1	312.5	319.8	332.1	345.8	364.6	385.7	407.7	430.5	454.9	480.9
147.5°	322.8	324.2	331.4	341.9	355.3	371.3	390.6	410.3	430.5	451.8	474.1
150°	331.3	332.1	338.5	349.1	360.5	375.2	393.9	411.0	430.5	449.2	469.5
152.5°	339.7	339.8	346.3	355.6	365.7	379.8	395.8	412.3	428.5	446.0	464.4
155°	352.4	352.4	357.3	365.4	374.4	385.7	399.6	412.6	426.4	440.3	456.6
157.5°	362.5	363.1	367.0	374.2	381.8	390.6	401.7	413.4	423.7	435.2	447.8
160°	370.3	370.3	373.6	380.0	385.7	393.9	403.7	413.4	422.4	431.3	441.9
162.5°	376.2	376.2	378.8	383.9	389.0	395.8	404.3	412.8	419.8	427.4	436.0
165°	384.9	384.1	385.7	389.8	393.1	398.8	405.3	411.0	415.9	421.6	428.0
167.5°	391.6	390.6	391.4	394.5	396.8	400.4	405.1	409.7	412.0	415.7	420.4
170°	395.5	393.9	394.7	397.1	398.8	400.4	404.5	407.7	409.4	411.8	415.9
172.5°	398.1	397.1	397.3	399.1	400.1	401.0	404.5	407.1	407.4	408.5	411.3
175°	401.2	400.4	399.6	401.2	401.2	402.0	403.7	405.3	404.5	404.5	406.1
177.5°	402.7	402.0	401.4	402.0	402.0	402.0	402.7	404.0	402.7	402.0	402.7
180°	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0



TEST NUMBER: P332263-930

CATALOG NUMBER: S123RDIP-S340D1025U930-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4
2.5°	466.5	467.2	468.1	468.3	468.2	468.1	467.9	467.8
5°	463.5	464.2	465.0	465.3	465.1	465.0	464.8	464.6
7.5°	457.0	457.4	457.8	457.9	457.5	457.3	457.0	456.7
10°	451.1	451.2	451.3	451.1	450.7	450.3	449.8	449.4
12.5°	443.8	443.8	443.8	443.4	443.0	442.5	442.0	441.5
15°	431.0	430.6	430.2	429.7	429.2	428.5	428.0	427.4
17.5°	415.9	415.0	414.1	413.2	412.3	411.4	410.6	409.7
20°	405.4	404.3	403.2	402.2	401.1	400.1	399.2	398.1
22.5°	394.3	392.9	391.5	390.4	389.4	388.5	387.5	386.6
25°	375.9	374.2	372.4	371.0	370.1	369.2	368.3	367.4
27.5°	356.0	353.6	351.1	349.2	347.7	346.3	345.0	343.5
30°	341.9	339.0	336.1	334.0	332.6	331.3	330.0	328.6
32.5°	327.9	324.8	321.6	319.4	318.0	316.6	315.1	313.7
35°	307.3	303.6	300.0	297.4	296.0	294.4	292.9	291.4
37.5°	285.1	281.0	276.9	273.9	272.0	270.1	268.2	266.4
40°	269.7	265.3	260.9	257.7	255.8	253.9	251.9	250.0
42.5°	254.9	250.1	245.3	242.1	240.3	238.6	236.8	235.1
45°	233.1	228.3	223.5	220.0	218.1	216.1	214.0	212.0
47.5°	210.6	205.4	200.2	196.7	194.9	193.1	191.2	189.4
50°	195.4	190.2	185.0	181.4	179.4	177.5	175.5	173.6
52.5°	180.8	175.3	169.9	166.3	164.5	162.8	161.1	159.3
55°	158.9	154.0	149.1	145.8	144.1	142.4	140.7	139.0
57.5°	137.4	132.7	128.2	125.1	123.7	122.2	120.8	119.4
60°	123.8	119.3	114.7	111.7	110.3	108.8	107.5	106.0
62.5°	110.4	106.2	101.8	98.9	97.4	96.0	94.4	92.9
65°	91.2	87.2	83.0	80.5	79.5	78.6	77.7	76.7
67.5°	73.0	69.9	66.8	64.7	63.8	62.8	61.8	60.8
70°	61.7	58.8	55.8	53.9	52.9	52.0	51.0	50.1
72.5°	51.5	49.2	46.7	45.3	44.9	44.5	44.2	43.8
75°	38.6	37.7	36.9	36.4	36.2	36.0	35.9	35.7
77.5°	29.1	28.6	28.2	27.9	27.7	27.6	27.4	27.2
80°	23.4	23.2	22.9	22.7	22.5	22.3	22.2	22.0
82.5°	17.9	17.7	17.4	17.3	17.3	17.2	17.2	17.2
85°	10.3	10.1	9.9	9.9	9.9	9.9	9.9	9.9
87.5°	7.9	8.0	8.1	8.3	8.1	8.2	8.3	8.1
90°	20.4	21.2	22.0	23.6	22.7	23.6	24.4	23.6
92.5°	68.5	54.4	48.0	43.8	42.3	39.9	40.7	39.2
95°	292.9	198.6	155.5	126.1	110.7	103.4	97.7	94.4
97.5°	730.3	585.0	480.0	382.6	322.6	286.0	264.0	257.0
100°	959.5	893.6	798.3	682.8	600.6	541.2	509.5	510.3
102.5°	1035.7	1033.6	978.0	904.8	840.8	793.8	767.3	748.5
105°	1057.9	1139.4	1154.8	1133.7	1096.2	1065.3	1039.3	1035.2
107.5°	993.8	1126.0	1197.3	1226.3	1226.9	1216.5	1207.7	1200.2
110°	932.6	1082.4	1184.9	1241.9	1264.7	1271.2	1269.6	1268.0



TEST NUMBER: P332263-930

CATALOG NUMBER: S123RDIP-S340D1025U930-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	872.0	1025.1	1140.0	1213.2	1254.9	1275.0	1281.2	1281.6
115°	791.8	933.4	1053.0	1141.7	1202.8	1238.6	1254.9	1259.0
117.5°	733.8	856.0	963.4	1053.4	1117.0	1158.1	1181.5	1187.0
120°	703.1	813.0	910.7	992.9	1057.1	1102.7	1122.3	1127.2
122.5°	679.1	778.5	869.0	945.3	1002.5	1043.5	1064.9	1071.1
125°	647.0	735.7	813.8	878.9	931.0	966.8	987.2	992.9
127.5°	619.0	698.1	768.6	827.8	874.2	904.8	923.2	928.4
130°	601.4	674.7	740.5	795.9	839.0	868.4	885.4	891.9
132.5°	585.1	652.5	713.9	766.6	807.1	836.4	851.6	856.1
135°	563.1	620.9	673.8	720.2	760.1	784.5	799.2	804.9
137.5°	543.2	590.5	636.1	676.3	709.8	734.6	746.9	750.6
140°	531.4	572.9	612.0	647.0	677.9	700.7	713.7	712.9
142.5°	520.3	556.0	589.9	620.3	646.7	666.8	678.6	677.8
145°	507.0	533.9	559.9	583.5	603.8	620.9	627.5	629.1
147.5°	496.1	517.4	538.4	555.2	570.6	582.2	588.4	589.1
150°	488.3	507.0	524.1	539.6	551.8	560.7	565.6	565.6
152.5°	481.1	497.3	512.4	525.2	534.8	543.2	546.1	546.1
155°	470.3	483.4	495.6	505.4	512.7	519.2	520.8	521.6
157.5°	459.0	469.9	479.3	487.0	493.3	498.2	499.5	499.4
160°	452.5	461.5	469.5	475.2	480.9	485.8	485.8	485.0
162.5°	444.7	452.3	459.8	464.9	468.6	472.8	472.8	472.0
165°	434.6	439.4	445.2	449.2	452.5	455.8	454.9	454.9
167.5°	425.7	429.5	432.8	435.7	437.2	439.4	438.6	438.6
170°	420.0	422.4	425.6	427.2	428.0	429.7	428.8	428.8
172.5°	414.7	416.5	419.1	420.1	420.3	421.9	420.4	419.8
175°	407.7	408.5	410.2	410.2	410.2	411.0	410.2	409.4
177.5°	403.3	404.0	404.6	404.6	404.0	404.6	403.3	403.3
180°	402.0	402.0	402.0	402.0	402.0	402.0	402.0	402.0

(END OF REPORT)