

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: P332262-840

Luminaire Tested: **S123RDIP-S340D1025U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332262-840
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: S123RDIP-S340D1025U840-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4869.9 lumens
Efficiency: N/A
Efficacy: 130.6 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

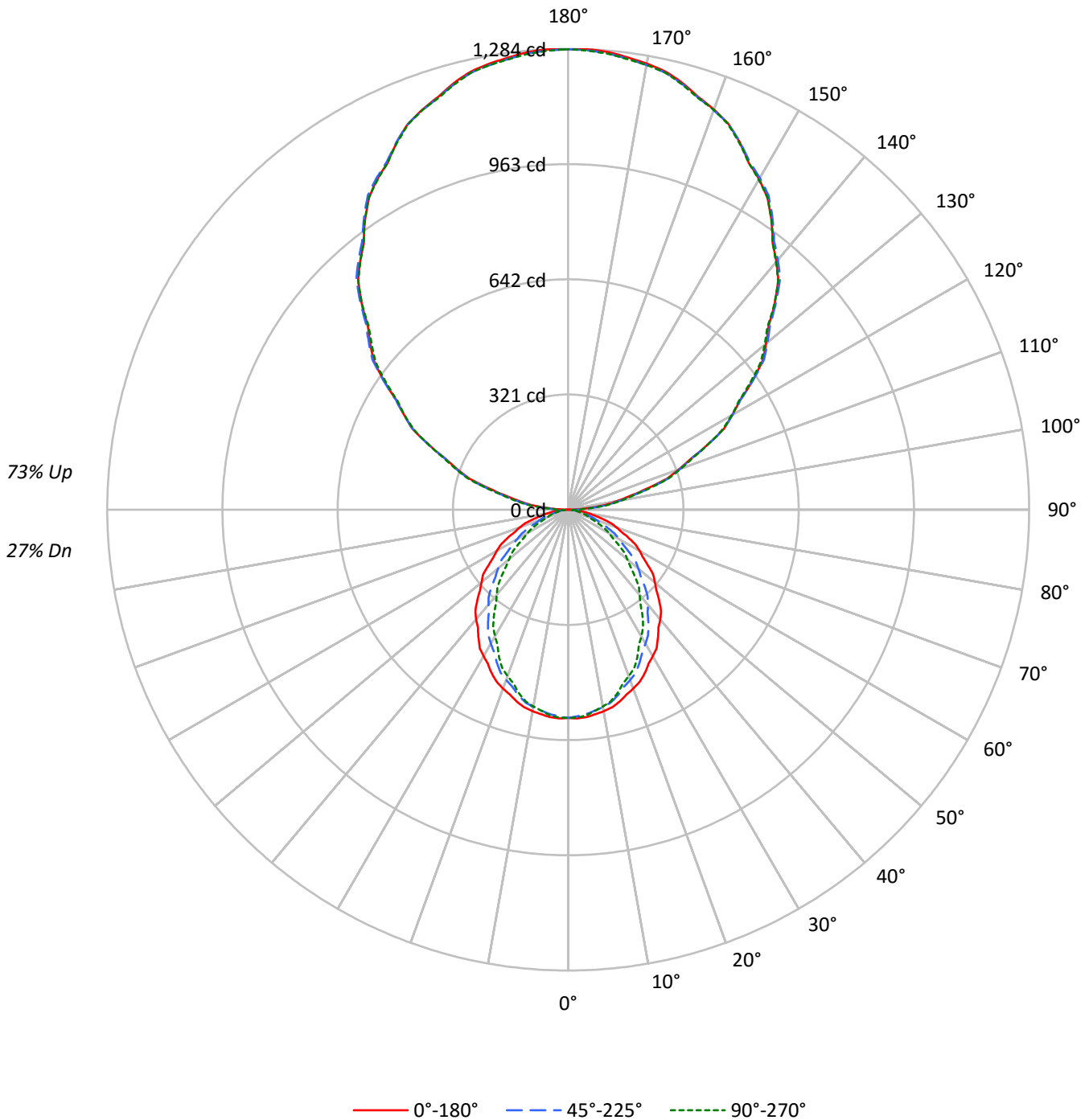
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332262-840

CATALOG NUMBER: S123RDIP-S340D1025U840-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P332262-840

CATALOG NUMBER: S123RDIP-S340D1025U840-4F0-1E-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	52	52	52	35	35	35	27
1	93	89	85	82	83	79	76	74	62	60	58	46	45	43	31	30	30	23
2	85	78	72	67	75	70	65	61	54	51	48	40	38	37	28	26	25	20
3	77	68	61	56	69	61	55	51	48	44	41	36	33	31	25	23	22	17
4	71	60	53	47	63	54	48	43	43	38	35	32	29	27	22	20	19	15
5	65	54	46	40	58	48	42	37	38	33	30	29	26	23	20	18	16	13
6	60	48	40	35	53	43	37	32	34	30	26	26	23	20	18	16	15	11
7	55	43	36	30	49	39	33	28	31	26	23	24	20	18	17	14	13	10
8	51	39	32	27	45	35	29	25	28	24	20	22	18	16	15	13	12	9
9	47	36	29	24	42	32	26	22	26	21	18	20	17	14	14	12	10	8
10	44	33	26	21	39	30	24	19	24	19	16	18	15	13	13	11	10	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6245	6245	6245
5°	6269	6183	6218
10°	6233	6105	6084
15°	6167	5962	5899
20°	6074	5783	5648
25°	5980	5583	5404
30°	5854	5351	5059
35°	5727	5119	4742
40°	5606	4846	4350
45°	5451	4576	3997
50°	5280	4270	3600
55°	5104	3920	3232
60°	4943	3546	2827
65°	4735	3140	2420
70°	4472	2634	1954
75°	4092	2075	1838
80°	3645	1841	1692
85°	3075	1618	1507



TEST NUMBER: P332262-840

CATALOG NUMBER: S123RDIP-S340D1025U840-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.5	1.1
10°-20°	151.6	3.1
20°-30°	218.3	4.5
30°-40°	245.9	5.0
40°-50°	235.2	4.8
50°-60°	192.6	4.0
60°-70°	130.0	2.7
70°-80°	65.4	1.3
80°-90°	21.1	0.4
90°-100°	83.6	1.7
100°-110°	250.2	5.1
110°-120°	425.6	8.7
120°-130°	559.8	11.5
130°-140°	629.2	12.9
140°-150°	618.5	12.7
150°-160°	520.7	10.7
160°-170°	346.6	7.1
170°-180°	121.4	2.5
0°-30°	424.3	8.7
0°-40°	670.2	13.8
0°-60°	1098.1	22.5
0°-90°	1314.5	27.0
90°-120°	759.4	15.6
90°-150°	2566.9	52.7
90°-180°	3555.0	73.0
0°-180°	4869.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	580	580	580	580	580	
5°	580	578	572	576	576	55
15°	553	548	535	533	529	156
25°	504	491	470	460	455	231
35°	436	418	390	370	361	273
45°	358	336	301	275	263	276
55°	272	248	209	183	172	244
65°	186	159	123	101	95	184
75°	98	76	50	45	44	105
85°	25	15	13	12	12	28
90°	1	11	24	28	30	5
95°	60	67	75	78	79	67
105°	227	229	238	238	240	243
115°	428	431	429	430	429	424
125°	627	630	628	624	620	559
135°	814	819	818	815	812	627
145°	987	989	992	991	987	616
155°	1130	1130	1131	1134	1128	520
165°	1231	1228	1228	1233	1227	347
175°	1280	1276	1276	1282	1275	122
180°	1283	1283	1283	1283	1283	



TEST NUMBER: P332262-840

CATALOG NUMBER: S123RDIP-S340D1025U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	580.2	580.2	580.2	580.2	580.2	580.2	580.2	580.2	580.2	580.2	580.2
2.5°	582.1	581.7	581.4	581.1	580.8	580.1	579.1	578.0	577.0	576.0	576.9
5°	580.2	579.7	579.2	578.7	578.0	577.2	575.9	574.7	573.4	572.2	573.1
7.5°	574.8	574.2	573.7	573.1	572.6	571.5	569.9	568.3	566.5	564.9	565.4
10°	570.3	569.6	568.9	568.2	567.3	566.0	564.2	562.3	560.4	558.6	558.7
12.5°	563.9	563.1	562.3	561.5	560.7	559.1	556.7	554.5	552.2	549.9	549.8
15°	553.4	552.2	551.1	549.9	548.8	546.7	543.8	540.9	538.0	535.0	534.5
17.5°	540.1	538.8	537.5	536.0	534.7	532.2	528.5	524.7	521.1	517.4	516.2
20°	530.3	528.7	526.9	525.3	523.6	520.8	516.8	512.8	508.9	504.9	503.5
22.5°	519.4	517.5	515.5	513.6	511.7	508.7	504.4	500.2	495.9	491.7	490.0
25°	503.5	500.9	498.3	495.6	493.0	489.3	484.5	479.7	474.8	470.1	467.9
27.5°	484.2	481.3	478.4	475.5	472.6	468.6	463.2	457.8	452.4	447.1	444.0
30°	471.0	467.9	464.7	461.6	458.5	453.9	448.1	442.2	436.4	430.5	427.0
32.5°	457.9	454.2	450.7	447.2	443.6	438.8	432.5	426.4	420.2	413.9	410.1
35°	435.8	431.9	428.2	424.4	420.7	415.6	409.1	402.5	396.1	389.6	385.2
37.5°	413.3	409.1	405.0	400.8	396.6	391.0	384.2	377.2	370.3	363.3	358.3
40°	399.0	394.5	389.8	385.3	380.6	374.6	367.2	359.7	352.3	344.9	339.5
42.5°	382.8	378.2	373.7	369.0	364.5	358.3	350.6	343.0	335.3	327.6	321.6
45°	358.1	353.4	348.7	344.0	339.2	332.9	324.9	316.8	308.7	300.6	294.7
47.5°	333.4	328.2	323.0	317.8	312.7	306.1	298.0	289.9	282.0	273.9	267.4
50°	315.3	310.3	305.5	300.5	295.6	288.9	280.4	272.0	263.5	255.0	248.5
52.5°	299.1	293.8	288.4	283.1	277.7	270.8	262.5	254.1	245.7	237.3	230.7
55°	272.0	266.8	261.8	256.6	251.5	244.5	235.6	226.7	217.8	208.9	202.9
57.5°	246.9	241.4	235.8	230.1	224.6	217.3	208.4	199.4	190.6	181.7	175.9
60°	229.6	223.9	218.1	212.4	206.6	199.4	190.8	182.1	173.4	164.7	159.1
62.5°	212.3	206.5	200.8	195.1	189.3	182.1	173.4	164.7	156.0	147.3	142.1
65°	185.9	180.2	174.4	168.6	162.9	155.9	147.7	139.6	131.5	123.3	118.2
67.5°	159.5	153.6	147.7	142.0	136.1	129.4	121.5	113.7	105.8	98.1	94.2
70°	142.1	136.4	130.8	125.1	119.6	113.0	105.7	98.4	91.1	83.7	80.1
72.5°	124.8	119.3	113.7	108.1	102.5	96.4	89.8	83.1	76.4	69.8	66.9
75°	98.4	93.3	88.3	83.3	78.3	72.9	67.2	61.4	55.6	49.9	48.9
77.5°	74.2	69.7	65.1	60.6	56.1	52.0	48.3	44.5	40.9	37.2	36.7
80°	58.8	54.5	50.3	45.9	41.7	38.5	36.3	34.0	31.8	29.7	29.3
82.5°	44.1	40.4	36.8	33.0	29.3	27.0	26.0	24.9	23.9	22.8	22.5
85°	24.9	22.6	20.3	18.1	15.8	14.4	14.1	13.8	13.5	13.1	12.9
87.5°	9.2	8.8	8.3	7.8	7.4	7.4	8.0	8.6	9.2	9.7	9.8
90°	1.0	3.2	5.5	7.8	10.0	12.5	15.5	18.4	21.3	24.2	25.0
92.5°	24.4	26.0	27.5	29.0	30.5	32.1	33.7	35.3	37.1	38.7	39.4
95°	59.5	61.0	62.6	64.2	65.7	67.5	69.2	71.0	72.8	74.6	75.5
97.5°	105.6	106.8	108.0	109.2	110.3	111.5	112.8	114.1	115.4	116.7	117.8
100°	137.1	138.5	139.8	141.1	142.5	143.7	144.8	145.9	147.0	148.1	148.9
102.5°	173.4	174.2	175.0	175.8	176.6	177.7	179.3	180.7	182.2	183.7	184.3
105°	226.8	227.2	227.7	228.1	228.6	229.8	231.9	233.9	235.9	237.9	237.9
107.5°	288.9	289.2	289.4	289.7	290.0	290.5	291.3	292.2	293.0	293.8	294.5
110°	327.6	328.1	328.5	328.9	329.4	329.8	330.3	330.7	331.2	331.6	332.5



TEST NUMBER: P332262-840

CATALOG NUMBER: S123RDIP-S340D1025U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	367.9	368.2	368.5	368.7	369.0	369.2	369.3	369.4	369.5	369.5	370.6
115°	428.4	429.1	429.8	430.4	431.1	431.2	430.8	430.3	429.9	429.4	429.7
117.5°	489.3	489.8	490.2	490.7	491.1	491.0	490.5	489.9	489.3	488.7	488.7
120°	527.3	528.6	529.9	531.3	532.6	532.7	531.6	530.5	529.4	528.3	528.0
122.5°	566.7	567.7	568.7	569.7	570.7	570.9	570.3	569.7	569.2	568.6	567.9
125°	627.0	627.7	628.3	629.0	629.7	629.9	629.3	628.9	628.4	628.0	627.1
127.5°	682.7	684.1	685.5	686.9	688.4	688.8	688.3	687.9	687.4	686.9	685.6
130°	719.7	721.5	723.4	725.1	726.9	727.5	726.8	726.1	725.5	724.8	723.9
132.5°	756.9	758.6	760.4	762.2	764.1	764.7	764.2	763.7	763.2	762.7	761.6
135°	813.5	814.9	816.2	817.5	818.9	819.4	819.2	819.0	818.8	818.5	817.7
137.5°	866.0	867.1	868.2	869.3	870.4	871.2	871.8	872.4	873.0	873.5	872.6
140°	902.2	903.3	904.4	905.5	906.7	907.4	907.6	907.8	908.1	908.3	908.1
142.5°	935.2	936.3	937.6	938.7	939.8	940.5	940.9	941.3	941.7	942.1	941.9
145°	986.8	987.3	987.7	988.3	988.7	989.3	989.9	990.6	991.3	991.9	991.7
147.5°	1032.1	1032.9	1033.7	1034.5	1035.3	1036.0	1036.6	1037.2	1037.8	1038.5	1038.5
150°	1063.5	1064.0	1064.4	1064.8	1065.3	1065.7	1066.2	1066.6	1067.1	1067.5	1067.5
152.5°	1089.3	1089.9	1090.6	1091.2	1091.8	1092.3	1092.6	1092.8	1093.1	1093.4	1093.7
155°	1130.0	1130.0	1130.0	1130.0	1130.0	1130.1	1130.3	1130.5	1130.8	1131.0	1132.0
157.5°	1164.7	1164.5	1164.2	1163.9	1163.7	1163.6	1163.8	1164.0	1164.2	1164.3	1165.3
160°	1186.5	1186.0	1185.6	1185.2	1184.7	1184.5	1184.5	1184.5	1184.5	1184.5	1185.6
162.5°	1205.9	1205.2	1204.6	1204.0	1203.4	1203.2	1203.3	1203.5	1203.7	1203.9	1205.0
165°	1230.8	1230.1	1229.5	1228.8	1228.2	1227.8	1227.8	1227.8	1227.8	1227.8	1229.1
167.5°	1250.8	1249.9	1249.0	1248.1	1247.2	1246.9	1247.1	1247.2	1247.4	1247.6	1249.0
170°	1262.1	1261.2	1260.3	1259.4	1258.5	1258.1	1258.1	1258.1	1258.1	1258.1	1259.6
172.5°	1270.9	1270.1	1269.2	1268.3	1267.4	1266.9	1266.9	1266.9	1266.9	1266.9	1268.3
175°	1280.2	1279.3	1278.4	1277.6	1276.7	1276.2	1276.2	1276.2	1276.2	1276.2	1277.6
177.5°	1284.0	1283.3	1282.6	1281.9	1281.2	1280.8	1280.8	1280.8	1280.8	1280.8	1281.9
180°	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2



TEST NUMBER: P332262-840

CATALOG NUMBER: S123RDIP-S340D1025U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	580.2	580.2	580.2	580.2	580.2	580.2	580.2	580.2
2.5°	577.8	578.8	579.8	580.1	580.0	579.8	579.6	579.5
5°	574.1	575.0	575.9	576.3	576.1	575.9	575.7	575.5
7.5°	566.0	566.5	567.0	567.1	566.7	566.4	566.0	565.7
10°	558.8	558.9	559.0	558.8	558.3	557.7	557.1	556.6
12.5°	549.8	549.7	549.7	549.3	548.7	548.1	547.4	546.8
15°	533.9	533.4	532.9	532.3	531.6	530.8	530.1	529.4
17.5°	515.1	514.0	512.9	511.8	510.7	509.6	508.6	507.5
20°	502.2	500.8	499.5	498.2	496.9	495.6	494.4	493.1
22.5°	488.4	486.7	484.9	483.5	482.3	481.2	480.0	478.9
25°	465.6	463.5	461.3	459.6	458.5	457.4	456.2	455.0
27.5°	441.0	438.0	434.9	432.5	430.7	429.0	427.3	425.5
30°	423.4	419.9	416.4	413.7	412.0	410.4	408.7	407.0
32.5°	406.2	402.3	398.4	395.6	393.8	392.1	390.3	388.6
35°	380.6	376.1	371.6	368.4	366.6	364.7	362.7	360.9
37.5°	353.1	348.0	343.0	339.2	336.9	334.6	332.2	329.9
40°	334.1	328.6	323.2	319.2	316.8	314.5	312.0	309.6
42.5°	315.7	309.8	303.9	299.8	297.6	295.5	293.4	291.1
45°	288.7	282.8	276.8	272.6	270.1	267.6	265.1	262.6
47.5°	260.8	254.4	247.9	243.6	241.4	239.1	236.8	234.6
50°	242.1	235.6	229.1	224.7	222.3	219.8	217.4	215.0
52.5°	223.9	217.1	210.5	206.0	203.8	201.7	199.5	197.3
55°	196.8	190.8	184.7	180.6	178.5	176.4	174.3	172.2
57.5°	170.2	164.4	158.8	154.9	153.2	151.4	149.7	147.8
60°	153.4	147.7	142.1	138.4	136.6	134.8	133.1	131.3
62.5°	136.7	131.5	126.1	122.5	120.7	118.9	116.9	115.1
65°	113.0	108.0	102.8	99.7	98.5	97.4	96.2	95.0
67.5°	90.4	86.5	82.7	80.2	79.0	77.8	76.5	75.3
70°	76.4	72.8	69.1	66.8	65.5	64.4	63.2	62.1
72.5°	63.8	60.9	57.9	56.1	55.6	55.1	54.7	54.2
75°	47.8	46.8	45.6	45.0	44.8	44.6	44.4	44.2
77.5°	36.1	35.4	34.9	34.5	34.3	34.1	33.9	33.7
80°	29.0	28.7	28.4	28.2	27.9	27.7	27.5	27.3
82.5°	22.2	21.9	21.6	21.4	21.4	21.3	21.3	21.3
85°	12.7	12.5	12.3	12.2	12.2	12.2	12.2	12.2
87.5°	9.9	10.0	10.1	10.2	10.2	10.2	10.2	10.2
90°	26.0	26.9	27.8	28.5	28.9	29.4	29.8	30.2
92.5°	40.2	40.9	41.6	41.8	41.5	41.3	41.0	40.7
95°	76.3	77.3	78.2	78.7	78.7	78.7	78.7	78.7
97.5°	118.8	119.9	120.9	121.3	121.3	121.2	121.1	121.0
100°	149.6	150.2	150.9	151.5	151.9	152.3	152.8	153.2
102.5°	185.0	185.7	186.3	186.6	186.5	186.4	186.4	186.3
105°	237.9	237.9	237.9	238.1	238.5	239.0	239.4	239.9
107.5°	295.2	295.9	296.6	296.8	296.6	296.3	296.0	295.8
110°	333.5	334.4	335.3	335.5	335.0	334.6	334.2	333.7



TEST NUMBER: P332262-840

CATALOG NUMBER: S123RDIP-S340D1025U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	371.7	372.7	373.9	374.4	374.3	374.2	374.1	374.0
115°	429.9	430.1	430.3	430.3	430.1	429.9	429.7	429.4
117.5°	488.6	488.6	488.6	488.2	487.6	487.0	486.4	485.6
120°	527.8	527.6	527.4	526.9	526.5	526.1	525.6	525.2
122.5°	567.3	566.8	566.2	565.6	565.0	564.3	563.7	563.1
125°	626.2	625.3	624.4	623.5	622.7	621.8	620.9	620.0
127.5°	684.4	683.2	681.9	680.8	679.7	678.6	677.6	676.6
130°	723.0	722.1	721.2	719.9	718.4	716.8	715.3	713.7
132.5°	760.5	759.5	758.4	757.3	756.1	754.9	753.7	752.5
135°	816.8	815.9	815.0	814.3	813.9	813.3	812.9	812.5
137.5°	871.7	870.8	869.8	868.9	868.1	867.2	866.4	865.6
140°	907.8	907.6	907.4	906.5	904.9	903.3	901.8	900.2
142.5°	941.7	941.5	941.2	940.5	939.3	938.1	936.9	935.6
145°	991.5	991.3	991.0	990.5	989.6	988.7	987.7	986.8
147.5°	1038.5	1038.5	1038.5	1037.8	1036.5	1035.1	1033.8	1032.5
150°	1067.5	1067.5	1067.5	1066.8	1065.5	1064.2	1062.8	1061.5
152.5°	1094.1	1094.4	1094.8	1094.4	1093.2	1092.1	1090.9	1089.7
155°	1132.9	1133.8	1134.6	1134.3	1132.8	1131.1	1129.5	1128.0
157.5°	1166.2	1167.1	1168.1	1167.9	1166.7	1165.4	1164.2	1162.9
160°	1186.7	1187.8	1188.9	1189.0	1188.2	1187.3	1186.4	1185.5
162.5°	1206.1	1207.2	1208.3	1208.1	1206.7	1205.3	1203.9	1202.4
165°	1230.5	1231.8	1233.1	1233.0	1231.5	1229.9	1228.4	1226.8
167.5°	1250.3	1251.7	1253.1	1253.1	1251.7	1250.3	1249.0	1247.6
170°	1261.2	1262.7	1264.4	1264.4	1262.7	1261.2	1259.6	1258.1
172.5°	1269.7	1271.1	1272.4	1272.4	1270.8	1269.3	1267.7	1266.1
175°	1278.9	1280.2	1281.6	1281.4	1279.9	1278.3	1276.8	1275.2
177.5°	1283.0	1284.0	1285.2	1285.1	1283.8	1282.5	1281.3	1280.0
180°	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2	1283.2

(END OF REPORT)