

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: P332023-935

Luminaire Tested: **S123DIP-S1000D805U935-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332023-935
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: S123DIP-S1000D805U935-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6119.4 lumens
Efficiency: N/A
Efficacy: 112.5 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: General Diffuse

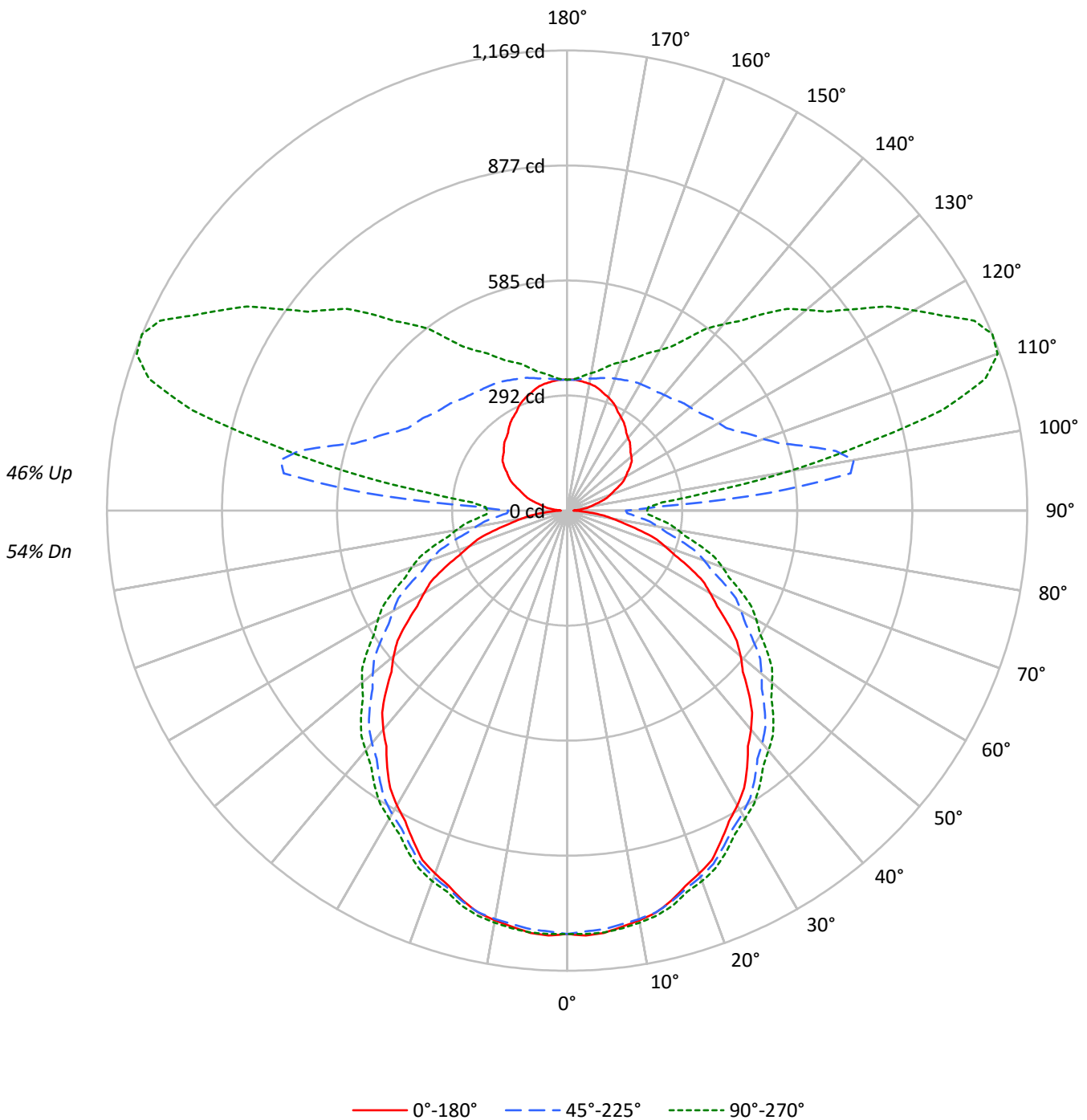
Input Watts (W): 54.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332023-935

CATALOG NUMBER: S123DIP-S1000D805U935-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





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CATALOG NUMBER: S123DIP-S1000D805U935-4F0-1E-UDD-D4

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	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54
1	98	93	88	84	90	86	82	79	73	71	68	62	60	58	51	50	48	43
2	88	80	74	68	82	75	69	64	64	59	55	54	50	47	44	42	40	35
3	80	70	62	56	74	65	58	53	56	50	46	47	43	40	39	36	33	29
4	73	62	54	47	68	58	50	44	49	44	39	42	37	34	35	31	29	25
5	67	55	47	40	62	51	44	38	44	38	33	37	33	29	31	28	25	21
6	62	49	41	35	57	46	38	33	40	34	29	34	29	25	28	24	22	19
7	57	44	36	30	53	41	34	29	36	30	25	31	26	22	26	22	19	16
8	53	40	32	27	49	38	30	25	33	27	23	28	23	20	24	20	17	15
9	49	37	29	24	46	34	27	23	30	24	20	26	21	18	22	18	15	13
10	46	34	26	21	43	32	25	20	28	22	18	24	19	16	20	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11579	11579	11579
5°	11615	11288	11294
10°	11511	11028	10973
15°	11363	10732	10622
20°	11151	10395	10235
25°	10888	10007	9829
30°	10621	9658	9417
35°	10321	9289	9089
40°	10033	8953	8737
45°	9715	8630	8455
50°	9402	8312	8146
55°	9056	7985	7866
60°	8718	7655	7580
65°	8372	7303	7241
70°	7847	6904	6893
75°	7189	6449	6538
80°	6431	6003	6131
85°	5726	5695	5898



TEST NUMBER: P332023-935

CATALOG NUMBER: S123DIP-S1000D805U935-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.0	1.7
10°-20°	290.7	4.8
20°-30°	434.8	7.1
30°-40°	519.2	8.5
40°-50°	543.3	8.9
50°-60°	509.8	8.3
60°-70°	425.8	7.0
70°-80°	304.6	5.0
80°-90°	184.2	3.0
90°-100°	299.1	4.9
100°-110°	607.8	9.9
110°-120°	571.4	9.3
120°-130°	443.1	7.2
130°-140°	338.5	5.5
140°-150°	245.0	4.0
150°-160°	168.7	2.8
160°-170°	99.1	1.6
170°-180°	32.2	0.5
0°-30°	827.5	13.5
0°-40°	1346.7	22.0
0°-60°	2399.8	39.2
0°-90°	3314.5	54.2
90°-120°	1478.3	24.2
90°-150°	2505.0	40.9
90°-180°	2805.0	45.8
0°-180°	6119.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1076	1076	1076	1076	1076	
5°	1077	1074	1068	1076	1076	102
15°	1025	1029	1028	1039	1038	289
25°	926	937	941	955	956	426
35°	797	815	831	848	853	498
45°	652	680	709	731	741	502
55°	497	536	578	608	619	445
65°	343	389	441	474	488	339
75°	186	242	300	337	353	199
85°	57	116	178	216	230	60
90°	17	81	149	190	204	12
95°	36	134	515	267	242	35
105°	88	154	629	1066	988	92
115°	144	193	476	997	1141	143
125°	195	232	424	761	892	174
135°	227	270	395	611	707	175
145°	258	294	376	482	534	161
155°	291	314	364	414	431	134
165°	318	327	349	370	376	90
175°	332	332	335	339	339	32
180°	332	332	332	332	332	



TEST NUMBER: P332023-935

CATALOG NUMBER: S123DIP-S1000D805U935-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1080.5	1079.9	1079.2	1078.6	1078.0	1076.8	1075.1	1073.5	1071.8	1070.1	1071.8
5°	1076.9	1076.4	1075.9	1075.4	1074.9	1073.8	1072.3	1070.7	1069.1	1067.6	1069.6
7.5°	1066.3	1066.5	1066.6	1066.7	1066.8	1066.1	1064.6	1063.1	1061.5	1060.1	1062.6
10°	1057.0	1057.6	1058.1	1058.6	1059.1	1058.7	1057.4	1056.1	1054.8	1053.5	1056.1
12.5°	1045.8	1046.5	1047.2	1047.9	1048.7	1048.6	1047.8	1046.8	1045.9	1045.1	1047.5
15°	1025.4	1026.1	1026.9	1027.7	1028.5	1028.7	1028.5	1028.2	1027.9	1027.7	1030.4
17.5°	999.6	1001.2	1002.7	1004.3	1005.8	1006.6	1006.5	1006.3	1006.3	1006.2	1008.5
20°	980.9	982.4	984.0	985.5	987.1	988.2	988.7	989.2	989.7	990.2	992.6
22.5°	961.1	962.7	964.3	965.9	967.4	968.5	969.3	970.0	970.8	971.5	974.4
25°	925.7	928.3	931.0	933.6	936.2	937.9	938.7	939.4	940.2	941.0	944.3
27.5°	890.1	893.1	896.0	899.1	902.0	904.3	906.0	907.7	909.3	911.0	914.0
30°	864.8	868.2	871.6	874.9	878.4	881.1	883.2	885.3	887.3	889.4	892.6
32.5°	836.7	840.5	844.3	848.1	851.9	855.1	857.9	860.6	863.3	866.0	869.4
35°	796.9	801.0	805.2	809.3	813.6	817.3	820.7	824.1	827.4	830.9	834.7
37.5°	754.7	759.4	764.1	768.7	773.4	777.8	782.0	786.2	790.3	794.5	798.9
40°	726.5	731.2	735.9	740.6	745.3	750.3	755.4	760.7	765.9	771.1	775.5
42.5°	695.6	701.4	707.1	712.8	718.5	724.1	729.5	734.9	740.4	745.8	750.6
45°	651.5	657.8	664.1	670.3	676.6	682.9	689.4	695.9	702.5	708.9	713.9
47.5°	605.4	612.4	619.6	626.6	633.7	641.0	648.4	655.9	663.3	670.8	676.3
50°	575.4	582.6	590.0	597.3	604.5	612.3	620.3	628.4	636.5	644.5	650.5
52.5°	543.5	551.2	559.0	566.6	574.4	582.6	591.6	600.5	609.3	618.3	624.5
55°	496.9	505.5	514.0	522.6	531.2	540.2	549.6	559.0	568.3	577.7	584.8
57.5°	451.4	460.4	469.3	478.3	487.2	496.9	507.1	517.4	527.6	537.9	544.9
60°	419.6	428.9	438.2	447.6	457.0	467.0	477.7	488.4	499.1	509.8	517.0
62.5°	389.5	399.1	408.7	418.3	427.8	438.3	449.6	460.9	472.2	483.5	490.8
65°	343.4	353.5	363.7	373.8	384.0	394.8	406.2	417.7	429.1	440.7	448.4
67.5°	296.4	307.3	318.1	328.8	339.6	350.9	362.5	374.2	385.8	397.5	406.0
70°	263.6	274.8	286.0	297.3	308.5	320.3	332.8	345.3	357.8	370.3	378.7
72.5°	233.7	244.9	256.1	267.3	278.4	290.5	303.4	316.3	329.2	342.2	350.7
75°	186.3	198.5	210.8	223.1	235.3	247.9	261.0	274.0	287.0	300.0	308.6
77.5°	145.1	157.4	169.8	182.1	194.4	207.2	220.3	233.4	246.6	259.7	268.7
80°	116.0	128.8	141.5	154.3	167.0	180.2	193.7	207.3	220.8	234.4	243.2
82.5°	90.7	103.7	116.7	129.6	142.6	155.9	169.7	183.4	197.2	210.9	219.8
85°	57.4	70.4	83.4	96.5	109.5	123.0	136.7	150.5	164.3	178.1	187.0
87.5°	31.4	44.7	57.9	71.3	84.6	97.9	111.6	125.3	139.0	152.7	161.4
90°	16.6	30.7	44.8	59.6	73.7	88.1	103.3	118.6	134.0	149.2	157.4
92.5°	22.6	38.2	55.4	72.2	89.3	111.5	142.2	184.3	225.8	228.4	211.6
95°	35.8	48.0	65.5	87.1	114.8	152.5	222.5	335.5	458.7	515.2	447.9
97.5°	50.5	60.4	75.3	94.5	120.9	160.0	226.8	352.1	548.3	726.2	777.1
100°	60.4	69.4	82.4	100.1	124.7	161.1	220.2	331.7	520.8	739.4	879.6
102.5°	70.7	79.5	91.1	107.5	129.6	163.2	217.3	313.7	483.0	698.8	879.2
105°	87.5	95.7	106.0	120.4	139.4	169.0	216.5	297.0	435.5	629.1	829.6
107.5°	104.1	111.4	120.6	133.9	151.2	178.6	221.1	289.3	402.5	566.8	749.2
110°	116.1	122.8	130.9	142.9	159.0	185.5	226.2	287.7	388.4	531.4	699.0



TEST NUMBER: P332023-935

CATALOG NUMBER: S123DIP-S1000D805U935-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	127.9	133.8	141.0	152.3	167.6	192.8	230.9	288.3	377.8	505.3	653.9
115°	143.9	149.6	156.9	166.7	181.2	205.7	240.6	291.1	369.1	476.1	598.8
117.5°	160.7	165.7	171.0	179.2	193.9	216.0	250.2	295.6	362.7	455.0	561.9
120°	171.6	175.0	179.6	187.6	201.7	223.5	256.3	300.0	360.3	444.4	541.9
122.5°	181.8	184.6	188.6	196.6	209.5	231.8	263.6	304.2	359.9	435.9	524.6
125°	195.4	196.7	200.8	208.2	220.9	242.9	274.0	311.2	359.1	423.9	501.4
127.5°	206.6	208.3	213.0	220.3	234.2	255.4	284.3	317.3	359.8	414.4	480.0
130°	213.5	215.3	221.1	228.9	242.8	263.5	290.8	321.7	360.5	408.1	467.6
132.5°	218.0	220.5	227.0	236.7	250.7	270.4	296.3	325.5	360.1	402.9	455.7
135°	227.1	229.6	236.8	246.6	260.5	279.9	303.7	329.4	359.2	395.0	439.5
137.5°	235.8	238.4	245.5	256.1	269.8	287.4	309.1	332.5	358.1	388.0	425.3
140°	240.8	244.2	250.9	261.7	275.2	292.4	312.6	333.6	357.3	383.7	416.6
142.5°	247.3	249.9	256.9	266.5	279.7	295.4	314.5	334.4	355.8	378.8	408.0
145°	257.6	259.4	265.2	275.0	286.2	301.6	319.1	337.3	356.1	376.3	399.9
147.5°	267.0	268.2	274.1	282.8	293.9	307.1	323.1	339.4	356.1	373.8	392.8
150°	274.0	274.7	280.0	288.8	298.2	310.3	325.8	339.9	356.1	371.6	388.4
152.5°	280.9	281.1	286.5	294.2	302.5	314.1	327.4	341.0	354.5	368.9	384.1
155°	291.4	291.4	295.5	302.2	309.6	319.1	330.5	341.3	352.8	364.2	377.6
157.5°	299.8	300.3	303.6	309.5	315.8	323.1	332.3	342.0	350.4	360.0	370.4
160°	306.3	306.3	309.0	314.4	319.1	325.8	333.9	342.0	349.4	356.8	365.5
162.5°	311.2	311.2	313.3	317.6	321.8	327.4	334.4	341.4	347.2	353.5	360.7
165°	318.4	317.7	319.1	322.4	325.1	329.8	335.2	339.9	344.0	348.7	354.0
167.5°	323.9	323.1	323.8	326.3	328.2	331.2	335.1	338.9	340.8	343.9	347.8
170°	327.2	325.8	326.5	328.5	329.8	331.2	334.6	337.3	338.6	340.6	344.0
172.5°	329.3	328.5	328.6	330.1	330.9	331.7	334.6	336.7	337.0	337.9	340.2
175°	331.8	331.2	330.5	331.8	331.8	332.5	333.9	335.2	334.6	334.6	335.9
177.5°	333.0	332.5	332.0	332.5	332.5	332.5	333.0	334.2	333.0	332.5	333.0
180°	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5



TEST NUMBER: P332023-935

CATALOG NUMBER: S123DIP-S1000D805U935-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7	1075.7
2.5°	1073.5	1075.1	1076.8	1077.5	1077.3	1077.1	1076.9	1076.7
5°	1071.7	1073.8	1075.9	1076.8	1076.5	1076.2	1076.0	1075.7
7.5°	1065.2	1067.9	1070.5	1071.6	1071.3	1071.0	1070.7	1070.4
10°	1058.7	1061.3	1063.9	1065.0	1064.5	1063.9	1063.4	1062.9
12.5°	1049.8	1052.2	1054.6	1055.6	1055.1	1054.6	1054.0	1053.5
15°	1032.9	1035.5	1038.1	1039.3	1039.1	1038.8	1038.5	1038.3
17.5°	1010.8	1013.2	1015.5	1016.5	1016.2	1015.8	1015.5	1015.0
20°	994.9	997.2	999.6	1000.9	1001.2	1001.4	1001.7	1001.9
22.5°	977.4	980.3	983.3	984.7	984.6	984.5	984.3	984.1
25°	947.8	951.1	954.5	956.2	956.2	956.2	956.2	956.2
27.5°	916.8	919.7	922.6	924.2	924.5	924.6	924.9	925.1
30°	895.7	898.8	901.9	903.5	903.5	903.5	903.5	903.5
32.5°	872.7	876.0	879.3	881.3	881.9	882.5	883.2	883.8
35°	838.6	842.6	846.4	848.9	850.0	851.0	852.0	853.1
37.5°	803.4	807.8	812.3	814.9	815.7	816.5	817.3	818.2
40°	779.9	784.4	788.8	791.5	792.6	793.6	794.6	795.7
42.5°	755.4	760.3	765.2	768.3	769.7	771.2	772.7	774.1
45°	718.8	723.8	728.8	732.3	734.3	736.4	738.6	740.6
47.5°	681.9	687.5	693.0	696.6	698.3	699.9	701.5	703.1
50°	656.5	662.5	668.5	672.4	674.2	676.1	677.9	679.7
52.5°	630.7	636.9	643.1	647.3	649.5	651.8	654.0	656.3
55°	591.8	598.8	605.9	610.4	612.5	614.6	616.6	618.7
57.5°	552.1	559.1	566.2	571.0	573.4	575.8	578.3	580.7
60°	524.3	531.7	538.9	544.0	546.9	549.7	552.6	555.4
62.5°	498.1	505.4	512.6	517.6	520.3	523.0	525.6	528.3
65°	456.2	464.1	471.8	477.1	479.7	482.2	484.9	487.5
67.5°	414.6	423.1	431.6	437.0	439.2	441.4	443.6	445.7
70°	386.9	395.3	403.6	409.1	411.7	414.3	416.9	419.6
72.5°	359.3	367.8	376.3	381.9	384.5	387.1	389.8	392.4
75°	317.2	325.8	334.3	340.3	343.4	346.5	349.6	352.8
77.5°	277.8	286.9	295.9	301.7	304.0	306.4	308.8	311.3
80°	252.1	261.0	269.8	275.5	278.1	280.7	283.4	285.9
82.5°	228.7	237.5	246.3	252.1	254.7	257.3	259.8	262.5
85°	195.8	204.7	213.5	219.3	221.9	224.5	227.0	229.7
87.5°	170.4	179.3	188.4	194.3	196.8	199.6	202.2	204.7
90°	166.9	176.5	186.0	193.1	195.0	198.3	201.6	203.5
92.5°	198.9	195.8	199.2	201.2	202.4	202.8	205.9	207.1
95°	374.5	304.4	276.9	258.0	247.8	244.4	242.2	242.1
97.5°	727.2	614.8	535.6	460.3	413.3	385.6	370.0	366.8
100°	910.7	863.8	792.6	702.0	636.6	590.1	566.5	569.7
102.5°	967.7	973.3	934.7	879.1	828.8	792.5	773.1	760.3
105°	977.6	1052.1	1072.3	1059.5	1031.0	1007.7	988.5	987.5
107.5°	915.7	1032.0	1097.9	1126.5	1129.4	1123.0	1118.1	1114.1
110°	860.0	990.6	1082.2	1133.8	1154.7	1162.1	1162.9	1163.6



TEST NUMBER: P332023-935

CATALOG NUMBER: S123DIP-S1000D805U935-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	803.8	936.9	1038.5	1103.5	1140.3	1159.3	1166.7	1169.3
115°	729.6	853.0	958.1	1035.7	1088.3	1120.0	1135.5	1141.0
117.5°	673.2	780.5	875.6	954.2	1008.8	1044.7	1066.2	1072.8
120°	642.8	739.7	826.4	898.3	953.3	992.8	1010.8	1016.7
122.5°	617.8	705.8	786.4	853.4	902.5	938.2	957.8	964.8
125°	583.6	662.5	732.5	790.1	834.9	866.3	885.0	891.6
127.5°	552.8	623.4	686.8	739.3	779.5	806.5	823.5	829.6
130°	533.1	598.7	658.1	707.1	744.4	770.2	785.9	792.8
132.5°	514.5	575.1	630.5	677.4	712.7	738.7	753.0	758.5
135°	489.2	541.7	590.2	631.5	665.8	687.3	700.8	706.8
137.5°	465.9	509.2	551.0	587.0	616.0	637.8	649.4	653.8
140°	452.0	490.3	526.5	558.1	585.0	605.1	617.2	617.8
142.5°	438.3	471.3	502.8	530.4	553.5	571.4	582.5	583.1
145°	423.5	447.8	471.5	492.6	510.4	525.6	532.0	534.4
147.5°	411.6	429.9	447.9	462.5	476.2	486.7	492.8	494.2
150°	403.9	419.4	433.5	446.5	457.2	465.1	469.7	470.2
152.5°	398.0	411.3	423.8	434.5	442.6	449.5	452.0	452.1
155°	389.1	399.8	409.9	418.0	424.0	429.5	430.8	431.4
157.5°	379.6	388.7	396.5	402.8	408.0	412.1	413.2	413.0
160°	374.3	381.7	388.4	393.1	397.9	401.8	401.8	401.2
162.5°	367.8	374.1	380.3	384.5	387.6	391.1	391.1	390.5
165°	359.5	363.5	368.2	371.6	374.3	376.9	376.3	376.3
167.5°	352.1	355.2	358.0	360.4	361.6	363.5	362.8	362.8
170°	347.3	349.4	352.1	353.4	354.0	355.4	354.7	354.7
172.5°	343.0	344.5	346.6	347.5	347.6	349.0	347.8	347.2
175°	337.3	337.9	339.2	339.2	339.2	339.9	339.2	338.6
177.5°	333.6	334.2	334.7	334.7	334.2	334.7	333.6	333.6
180°	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5

(END OF REPORT)