

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: P332012-935

Luminaire Tested: **S123DIP-S1000D585U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332012-935
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-S1000D585U935-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5632.6 lumens
Efficiency: N/A
Efficacy: 115.4 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

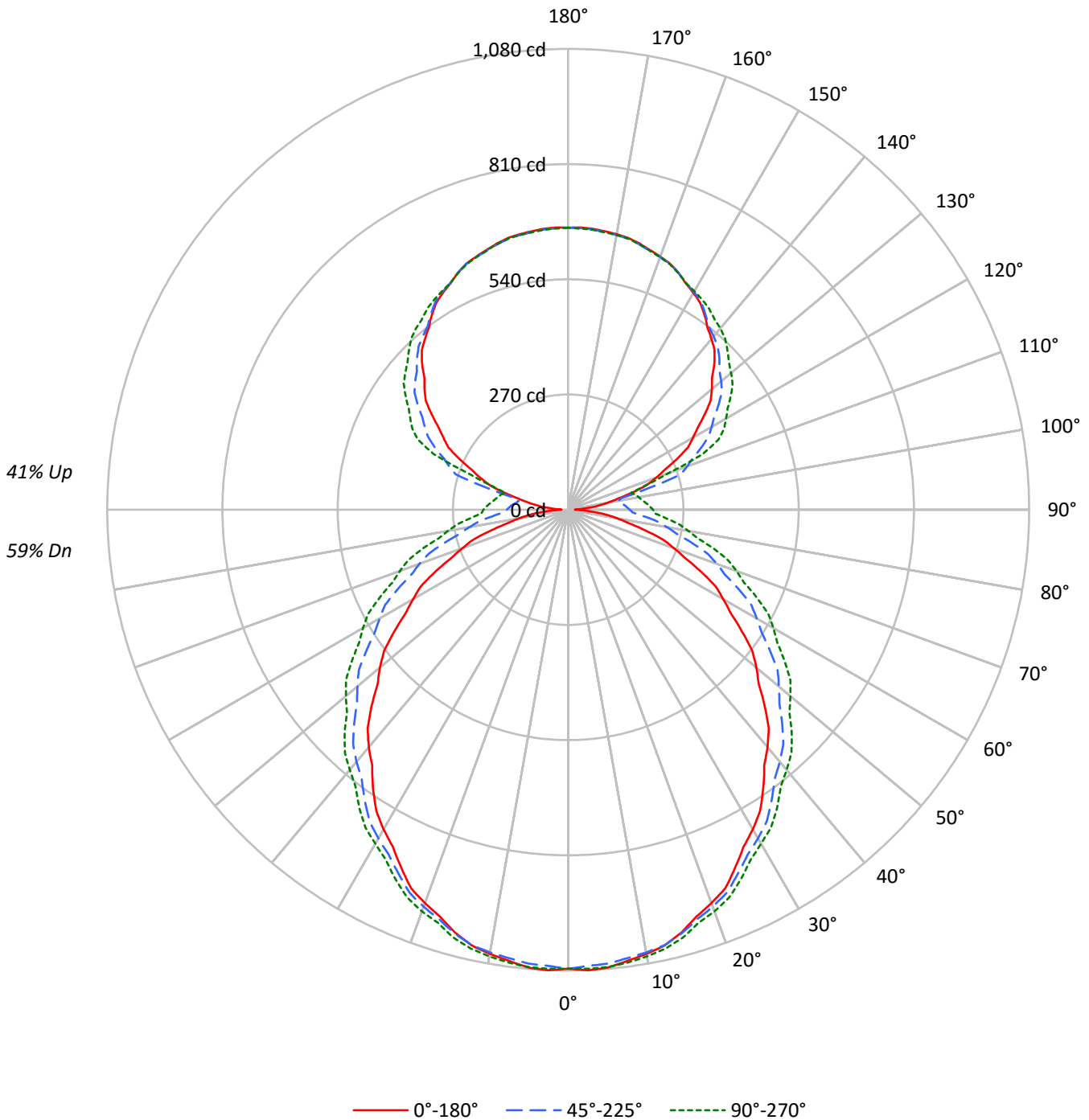
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332012-935

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-D

Luminous Intensity Polar Plot





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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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59
1	99	94	89	85	92	87	83	80	76	73	70	65	63	61	55	53	52	47
2	89	81	74	69	83	76	70	65	66	61	57	56	53	50	48	45	43	38
3	81	71	63	57	75	66	59	53	57	52	47	49	45	41	42	39	36	32
4	74	63	54	48	69	58	51	45	51	45	40	44	39	35	37	33	31	27
5	68	56	47	41	63	52	44	39	45	39	34	39	34	30	33	29	26	23
6	63	50	41	35	58	47	39	33	41	35	30	35	30	26	30	26	23	20
7	58	45	37	31	54	42	35	29	37	31	26	32	27	23	27	24	20	18
8	54	41	33	27	50	38	31	26	34	28	23	29	24	21	25	21	18	16
9	50	37	29	24	46	35	28	23	31	25	21	27	22	19	23	19	16	14
10	47	34	27	22	43	32	25	21	28	23	19	25	20	17	22	18	15	13

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: P332012-935

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.0	1.8
10°-20°	290.7	5.2
20°-30°	434.8	7.7
30°-40°	519.2	9.2
40°-50°	543.3	9.6
50°-60°	509.8	9.1
60°-70°	425.8	7.6
70°-80°	304.6	5.4
80°-90°	183.5	3.3
90°-100°	138.0	2.5
100°-110°	198.3	3.5
110°-120°	331.0	5.9
120°-130°	382.3	6.8
130°-140°	388.7	6.9
140°-150°	353.1	6.3
150°-160°	282.4	5.0
160°-170°	182.2	3.2
170°-180°	62.8	1.1
0°-30°	827.5	14.7
0°-40°	1346.7	23.9
0°-60°	2399.8	42.6
0°-90°	3313.8	58.8
90°-120°	667.4	11.8
90°-150°	1791.4	31.8
90°-180°	2319.0	41.2
0°-180°	5632.6	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°	16	78	144	184	199	12
95°	43	70	131	169	183	47
105°	156	188	195	145	153	165
115°	280	299	344	376	388	277
125°	390	396	430	455	465	349
135°	484	487	501	522	528	373
145°	557	559	560	570	575	348
155°	612	612	612	614	611	282
165°	646	644	644	647	644	182
175°	661	659	659	662	658	63
180°	661	661	661	661	661	



TEST NUMBER: P332012-935

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-D

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°	31.3	44.4	57.6	70.9	84.0	97.4	111.0	124.5	138.1	151.6	160.6
90°	15.8	29.6	43.4	57.3	71.1	85.4	100.1	114.8	129.5	144.2	153.5
92.5°	23.4	34.6	45.8	57.1	68.3	80.9	95.1	109.2	123.4	137.5	146.8
95°	42.9	48.6	54.2	59.9	65.6	75.4	89.4	103.3	117.3	131.2	140.1
97.5°	71.7	78.9	86.0	93.2	100.3	106.1	110.4	114.8	119.1	123.4	132.0
100°	93.5	104.1	114.6	125.1	135.6	138.4	133.3	128.3	123.2	118.1	126.6
102.5°	118.6	127.6	136.6	145.8	154.8	155.9	149.1	142.3	135.4	128.6	133.3
105°	155.8	163.2	170.7	178.1	185.5	189.9	191.3	192.7	194.1	195.4	183.4
107.5°	193.8	200.1	206.3	212.6	218.9	228.1	240.3	252.4	264.7	276.8	269.6
110°	219.2	224.7	230.3	235.8	241.4	250.0	261.7	273.3	284.8	296.4	299.6



TEST NUMBER: P332012-935

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	244.4	249.0	253.6	258.2	262.9	270.8	282.0	293.2	304.4	315.6	322.2
115°	280.3	284.1	287.9	291.7	295.5	302.6	312.9	323.3	333.6	344.0	351.3
117.5°	316.2	318.9	321.7	324.4	327.1	333.1	342.4	351.7	361.0	370.3	377.5
120°	337.6	339.9	342.2	344.5	346.8	352.4	361.3	370.2	379.1	388.1	394.9
122.5°	360.4	361.9	363.4	364.9	366.4	371.4	380.0	388.6	397.2	405.8	412.2
125°	390.5	391.3	392.3	393.1	394.0	398.4	406.4	414.4	422.4	430.3	436.0
127.5°	420.8	421.4	422.0	422.6	423.2	426.9	433.7	440.4	447.2	454.0	459.5
130°	439.6	440.2	440.8	441.4	442.0	445.1	450.8	456.5	462.1	467.8	473.1
132.5°	456.8	457.5	458.4	459.2	460.0	462.7	467.2	471.7	476.2	480.8	485.9
135°	484.1	484.5	484.9	485.3	485.7	487.5	490.9	494.1	497.4	500.8	505.8
137.5°	507.4	508.1	508.7	509.3	509.9	511.2	513.0	514.9	516.7	518.6	523.2
140°	522.2	522.9	523.5	524.2	524.9	525.7	526.8	527.9	529.0	530.1	534.5
142.5°	536.7	537.2	537.6	538.0	538.6	539.0	539.5	539.9	540.4	541.0	544.8
145°	557.1	557.6	558.1	558.6	559.0	559.5	559.6	559.9	560.1	560.3	562.6
147.5°	575.1	575.6	576.1	576.5	577.0	577.4	577.6	577.8	578.1	578.3	579.1
150°	586.9	587.2	587.5	587.8	588.1	588.4	588.7	588.8	589.1	589.3	589.5
152.5°	597.4	597.6	597.7	597.9	598.1	598.2	598.3	598.5	598.6	598.7	599.1
155°	612.3	612.2	611.9	611.7	611.5	611.5	611.6	611.7	611.7	611.9	612.4
157.5°	624.0	624.0	623.9	623.9	623.9	623.8	623.7	623.6	623.5	623.4	624.1
160°	631.0	630.9	630.9	630.7	630.6	630.5	630.3	630.3	630.2	630.1	630.7
162.5°	637.7	637.4	637.1	636.9	636.5	636.4	636.3	636.2	636.0	635.9	636.7
165°	645.8	645.4	645.1	644.8	644.5	644.2	644.1	644.0	643.9	643.8	644.7
167.5°	652.0	651.6	651.2	650.7	650.3	650.1	650.1	650.1	650.1	650.1	651.0
170°	655.6	655.1	654.7	654.3	653.8	653.6	653.6	653.6	653.6	653.6	654.5
172.5°	658.0	657.5	656.9	656.3	655.8	655.7	655.7	655.8	655.9	656.0	656.9
175°	661.0	660.5	659.9	659.4	658.8	658.6	658.7	658.8	658.9	659.0	659.8
177.5°	661.8	661.3	660.9	660.5	660.0	659.9	660.0	660.0	660.1	660.2	660.9
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0



TEST NUMBER: P332012-935

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-D

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°	169.5	178.5	187.4	193.2	195.9	198.5	201.1	203.8
90°	162.8	172.1	181.3	187.4	190.3	193.0	195.9	198.7
92.5°	156.2	165.5	174.9	180.8	183.3	185.9	188.4	190.9
95°	149.0	157.7	166.6	172.3	174.9	177.5	180.1	182.7
97.5°	140.7	149.3	157.9	163.6	166.3	169.0	171.8	174.4
100°	135.0	143.4	151.9	157.4	160.1	162.8	165.6	168.2
102.5°	137.9	142.6	147.2	150.9	153.7	156.5	159.3	162.1
105°	171.4	159.4	147.3	142.6	145.2	147.7	150.3	152.8
107.5°	262.4	255.3	248.1	238.3	226.1	213.8	201.6	189.2
110°	302.8	306.0	309.2	303.9	290.4	276.9	263.4	249.9



TEST NUMBER: P332012-935

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	328.8	335.4	342.1	344.9	343.9	342.9	341.9	340.9
115°	358.7	366.0	373.3	378.3	380.8	383.3	385.8	388.4
117.5°	384.5	391.6	398.6	403.2	405.4	407.5	409.6	411.7
120°	401.7	408.6	415.5	419.8	421.7	423.5	425.3	427.1
122.5°	418.5	424.9	431.4	435.5	437.4	439.3	441.2	443.2
125°	441.7	447.5	453.1	456.9	459.0	461.1	463.1	465.1
127.5°	464.9	470.5	476.0	479.5	481.0	482.6	484.1	485.7
130°	478.5	483.9	489.3	492.7	494.0	495.3	496.7	498.0
132.5°	491.1	496.3	501.4	504.8	506.3	507.7	509.2	510.7
135°	510.7	515.7	520.8	523.7	524.8	525.7	526.7	527.7
137.5°	527.9	532.4	537.1	540.0	541.1	542.2	543.2	544.3
140°	538.8	543.2	547.5	550.3	551.3	552.4	553.5	554.6
142.5°	548.6	552.4	556.3	558.7	559.7	560.7	561.7	562.7
145°	564.9	567.2	569.6	571.2	572.2	573.3	574.3	575.3
147.5°	580.0	580.8	581.7	582.3	582.7	583.2	583.6	584.0
150°	589.7	590.0	590.1	590.4	590.6	590.7	591.0	591.2
152.5°	599.5	599.9	600.3	600.3	599.9	599.5	599.1	598.7
155°	612.9	613.5	614.1	614.0	613.4	612.7	612.1	611.4
157.5°	624.7	625.3	626.0	625.9	625.0	624.2	623.4	622.5
160°	631.4	632.0	632.7	632.6	631.9	631.1	630.3	629.6
162.5°	637.4	638.2	638.9	638.9	638.3	637.6	636.9	636.3
165°	645.6	646.4	647.3	647.4	646.6	645.8	645.1	644.3
167.5°	651.9	652.7	653.6	653.6	652.7	651.9	651.0	650.1
170°	655.4	656.3	657.1	657.1	656.3	655.4	654.5	653.6
172.5°	657.7	658.6	659.4	659.4	658.5	657.5	656.5	655.6
175°	660.6	661.3	662.1	662.0	661.2	660.3	659.4	658.5
177.5°	661.6	662.3	663.0	662.9	662.0	661.2	660.3	659.4
180°	661.0	661.0	661.0	661.0	661.0	661.0	661.0	661.0

(END OF REPORT)