

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: P332006-930

Luminaire Tested: **S123DIP-S1000D365U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332006-930
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-S1000D365U930-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

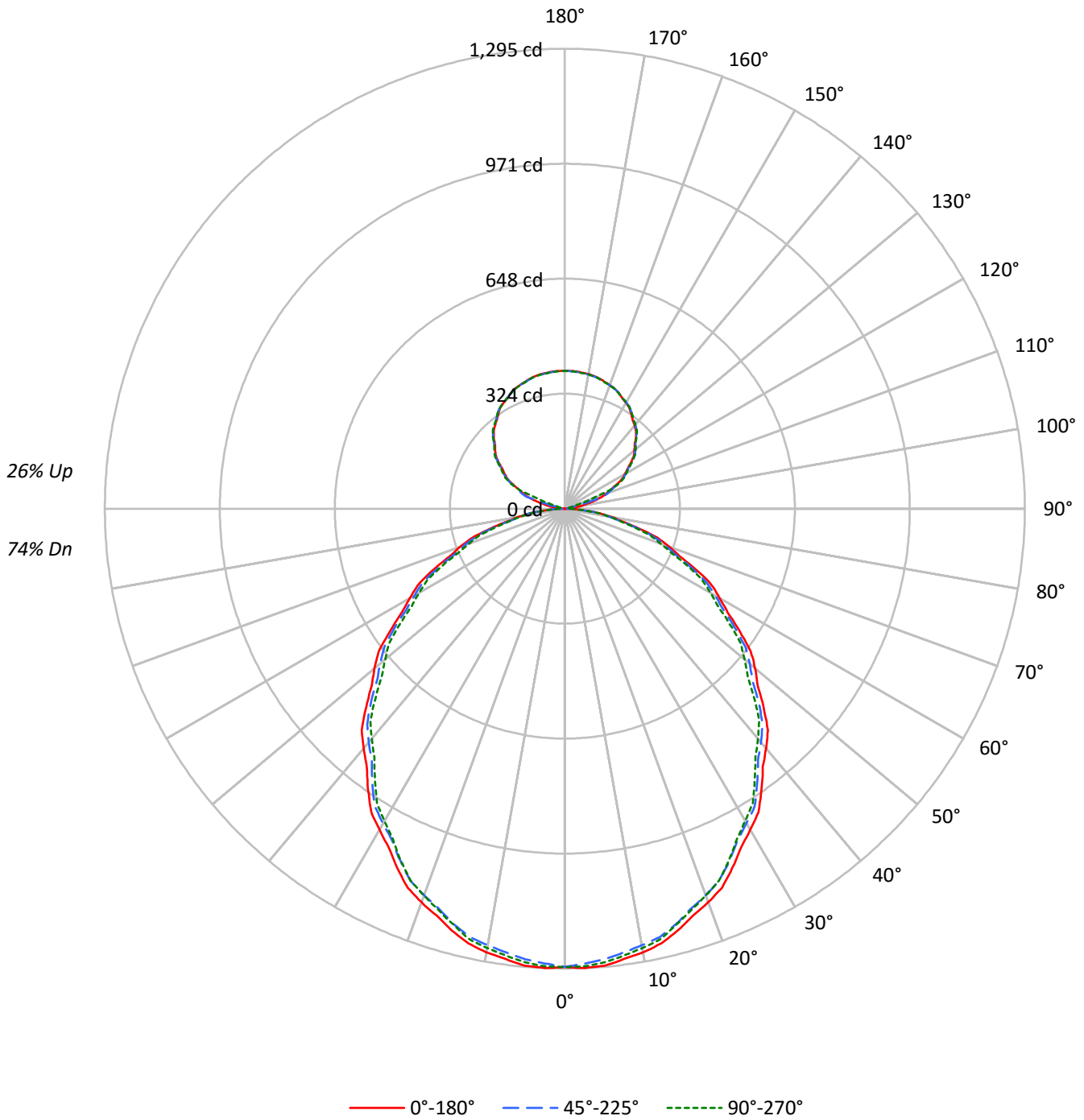
Lumens per Lamp: N/A
Luminaire Lumens: 4541.7 lumens
Efficiency: N/A
Efficacy: 104.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 43.5
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: P332006-930
CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P332006-930

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-F

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	113	113	113	113	107	107	107	107	97	97	97	87	87	87	78	78	78	74
1	103	99	94	91	98	94	90	87	85	82	79	77	74	72	69	67	66	62
2	94	86	80	74	89	82	76	71	74	70	66	67	64	60	61	58	55	52
3	86	76	68	62	81	72	65	60	66	60	55	59	55	51	54	50	47	44
4	78	67	59	52	74	64	56	51	58	52	47	53	48	44	48	44	41	38
5	72	60	51	45	68	57	49	44	52	46	41	48	42	38	43	39	35	33
6	67	54	45	39	63	52	44	38	47	41	36	43	38	33	39	35	31	29
7	62	49	40	35	58	47	39	34	43	36	32	39	34	30	36	31	28	25
8	57	44	36	31	54	43	35	30	39	33	28	36	31	27	33	28	25	23
9	53	41	33	28	51	39	32	27	36	30	25	33	28	24	30	26	23	21
10	50	37	30	25	48	36	29	24	33	27	23	31	25	22	28	24	20	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13891	13891	13891
5°	13956	13765	13861
10°	13864	13645	13729
15°	13701	13490	13515
20°	13512	13270	13283
25°	13258	13007	12981
30°	12978	12716	12619
35°	12686	12408	12248
40°	12381	12067	11880
45°	12044	11756	11469
50°	11707	11372	11055
55°	11265	10975	10640
60°	10820	10512	10176
65°	10427	10004	9694
70°	9847	9429	9010
75°	9000	8675	8305
80°	8114	7773	7705
85°	7126	6854	6570



TEST NUMBER: P332006-930

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.6	2.7
10°-20°	343.3	7.6
20°-30°	507.0	11.2
30°-40°	592.3	13.0
40°-50°	595.5	13.1
50°-60°	523.1	11.5
60°-70°	389.7	8.6
70°-80°	222.0	4.9
80°-90°	64.8	1.4
90°-100°	14.1	0.3
100°-110°	67.2	1.5
110°-120°	161.4	3.6
120°-130°	205.5	4.5
130°-140°	219.6	4.8
140°-150°	205.4	4.5
150°-160°	165.6	3.6
160°-170°	106.9	2.4
170°-180°	36.8	0.8
0°-30°	971.9	21.4
0°-40°	1564.1	34.4
0°-60°	2682.6	59.1
0°-90°	3359.2	74.0
90°-120°	242.7	5.3
90°-150°	873.2	19.2
90°-180°	1183.0	26.0
0°-180°	4541.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1290	1290	1290	1290	1290	
5°	1292	1286	1274	1284	1283	122
15°	1230	1224	1211	1219	1213	346
25°	1116	1109	1095	1096	1093	514
35°	965	958	944	938	932	604
45°	791	786	772	759	753	611
55°	600	598	585	573	567	538
65°	409	404	393	384	381	404
75°	216	212	209	203	200	231
85°	58	56	56	53	53	63
90°	0	3	7	8	9	4
95°	18	7	9	11	11	22
105°	86	87	63	15	13	91
115°	161	163	165	168	169	159
125°	227	229	230	231	232	203
135°	283	284	286	286	286	217
145°	326	328	329	329	329	204
155°	359	359	359	360	359	165
165°	379	378	378	380	378	107
175°	388	386	387	388	386	37
180°	388	388	388	388	388	



TEST NUMBER: P332006-930

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5
2.5°	1294.9	1294.2	1293.4	1292.6	1291.8	1290.3	1288.2	1286.0	1283.9	1281.7	1283.6
5°	1291.6	1290.4	1289.2	1287.9	1286.7	1284.7	1282.1	1279.3	1276.6	1273.9	1276.4
7.5°	1279.0	1277.7	1276.5	1275.3	1274.1	1272.0	1269.3	1266.4	1263.6	1260.8	1263.0
10°	1268.4	1267.1	1265.8	1264.6	1263.4	1261.2	1258.0	1254.7	1251.6	1248.4	1250.6
12.5°	1254.1	1253.1	1252.1	1251.0	1250.0	1248.0	1245.0	1241.9	1238.9	1235.9	1237.5
15°	1229.5	1228.5	1227.5	1226.5	1225.6	1223.4	1220.3	1217.1	1213.8	1210.6	1212.6
17.5°	1200.9	1199.5	1198.3	1197.0	1195.7	1193.5	1190.3	1187.1	1183.9	1180.6	1182.0
20°	1179.6	1178.1	1176.6	1175.1	1173.6	1171.3	1168.1	1164.9	1161.7	1158.5	1159.4
22.5°	1155.6	1154.1	1152.7	1151.1	1149.7	1147.4	1144.1	1140.9	1137.8	1134.5	1135.3
25°	1116.3	1114.8	1113.4	1111.9	1110.4	1108.1	1104.8	1101.6	1098.5	1095.2	1095.4
27.5°	1074.4	1072.9	1071.5	1070.1	1068.6	1066.2	1062.7	1059.3	1055.8	1052.4	1052.6
30°	1044.2	1042.9	1041.7	1040.5	1039.3	1036.9	1033.5	1030.0	1026.5	1023.1	1023.1
32.5°	1014.0	1012.4	1010.7	1009.1	1007.5	1005.3	1002.7	1000.0	997.4	994.7	993.3
35°	965.4	963.9	962.5	961.0	959.4	957.2	953.9	950.7	947.5	944.3	942.8
37.5°	915.7	913.8	911.9	910.0	908.2	905.6	902.4	899.1	895.9	892.6	890.8
40°	881.1	879.5	878.1	876.6	875.1	872.7	869.2	865.8	862.3	858.8	856.9
42.5°	846.4	844.7	843.1	841.4	839.8	837.1	833.7	830.3	826.8	823.4	821.4
45°	791.2	790.2	789.2	788.2	787.3	785.1	782.0	778.7	775.5	772.3	769.4
47.5°	736.4	734.9	733.5	732.1	730.7	728.4	725.5	722.4	719.4	716.4	713.5
50°	699.1	697.8	696.6	695.4	694.1	691.9	688.7	685.5	682.3	679.1	676.4
52.5°	660.0	659.2	658.4	657.5	656.6	654.5	651.2	647.8	644.3	640.9	638.6
55°	600.3	600.1	599.8	599.6	599.3	597.6	594.4	591.2	588.0	584.8	582.0
57.5°	543.5	542.7	541.8	541.0	540.1	538.4	535.9	533.3	530.8	528.2	525.8
60°	502.6	502.4	502.1	501.9	501.7	500.1	497.1	494.2	491.2	488.3	486.0
62.5°	466.3	465.6	465.0	464.3	463.7	461.9	458.9	456.0	453.1	450.0	447.8
65°	409.4	408.2	407.0	405.8	404.6	402.7	400.2	397.8	395.3	392.8	390.9
67.5°	349.4	348.2	347.2	346.1	345.0	343.5	341.6	339.7	337.9	336.0	334.3
70°	312.9	311.4	310.0	308.5	307.0	305.5	304.0	302.6	301.1	299.6	297.9
72.5°	274.8	273.7	272.6	271.5	270.4	269.0	267.3	265.7	264.0	262.3	260.8
75°	216.4	215.4	214.4	213.4	212.5	211.6	210.8	210.1	209.4	208.6	207.4
77.5°	164.7	164.1	163.5	163.1	162.5	161.8	160.9	160.0	159.1	158.2	157.4
80°	130.9	130.2	129.5	128.7	128.0	127.3	126.9	126.4	125.9	125.4	125.1
82.5°	98.1	97.9	97.8	97.7	97.5	97.3	97.3	97.2	97.1	97.0	96.5
85°	57.7	57.2	56.7	56.3	55.8	55.5	55.5	55.5	55.5	55.5	55.0
87.5°	23.2	22.7	22.2	21.8	21.3	21.0	21.0	21.0	21.0	21.0	20.8
90°	0.3	0.9	1.5	2.2	2.9	3.6	4.4	5.2	6.1	6.9	7.2
92.5°	5.4	5.2	5.0	4.8	4.6	4.9	5.5	6.1	6.8	7.3	7.7
95°	17.6	14.9	12.3	9.7	7.1	6.1	6.8	7.5	8.2	9.0	9.4
97.5°	35.3	34.2	32.9	31.8	30.6	27.7	23.1	18.5	13.9	9.3	9.8
100°	48.7	50.0	51.3	52.5	53.8	49.5	39.5	29.5	19.5	9.5	10.0
102.5°	63.9	64.8	65.7	66.7	67.6	62.6	51.7	40.8	29.8	19.0	17.4
105°	85.9	86.6	87.2	88.0	88.7	86.2	80.4	74.6	68.9	63.1	51.8
107.5°	109.0	109.6	110.1	110.7	111.3	112.0	112.9	113.8	114.7	115.6	107.3
110°	124.5	125.0	125.5	126.0	126.5	127.1	127.8	128.5	129.2	130.0	127.8



TEST NUMBER: P332006-930

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	139.2	139.7	140.1	140.6	141.0	141.6	142.4	143.1	143.7	144.5	144.5
115°	161.0	161.4	161.8	162.2	162.6	163.1	163.6	164.2	164.8	165.3	166.0
117.5°	182.2	182.7	183.1	183.6	184.1	184.5	184.7	185.1	185.4	185.6	186.1
120°	195.3	195.9	196.5	197.1	197.6	198.0	198.2	198.4	198.6	198.8	199.3
122.5°	208.7	209.2	209.6	210.1	210.6	210.9	211.2	211.4	211.7	211.9	212.3
125°	227.1	227.6	228.0	228.5	229.1	229.4	229.8	230.0	230.2	230.5	230.6
127.5°	244.8	245.3	245.8	246.3	246.8	247.2	247.5	247.9	248.2	248.4	248.7
130°	255.8	256.3	256.8	257.4	257.9	258.3	258.5	258.8	259.0	259.3	259.5
132.5°	266.4	266.9	267.5	268.0	268.5	268.8	269.0	269.3	269.5	269.7	269.9
135°	282.7	283.0	283.4	283.8	284.1	284.5	284.7	285.0	285.3	285.5	285.7
137.5°	296.4	296.9	297.4	297.9	298.4	298.7	298.9	299.0	299.1	299.3	299.6
140°	305.7	306.1	306.5	306.8	307.2	307.5	307.7	307.9	308.1	308.3	308.5
142.5°	314.2	314.6	315.0	315.4	315.8	316.0	316.3	316.4	316.6	316.8	317.0
145°	326.1	326.6	327.0	327.5	327.9	328.2	328.3	328.5	328.6	328.7	328.9
147.5°	337.4	337.7	337.9	338.3	338.5	338.8	338.9	339.0	339.2	339.2	339.4
150°	344.3	344.5	344.6	344.9	345.0	345.2	345.4	345.4	345.6	345.7	345.8
152.5°	350.5	350.6	350.7	350.7	350.8	351.0	351.0	351.1	351.1	351.2	351.5
155°	359.3	359.1	359.0	358.9	358.7	358.7	358.8	358.8	358.9	359.0	359.3
157.5°	366.1	366.1	366.1	366.0	366.0	366.0	365.9	365.8	365.7	365.7	366.1
160°	370.2	370.1	370.1	370.0	370.0	369.9	369.8	369.7	369.7	369.7	370.0
162.5°	374.1	374.0	373.8	373.7	373.5	373.3	373.2	373.2	373.2	373.1	373.5
165°	378.9	378.6	378.5	378.3	378.1	378.0	377.9	377.8	377.7	377.7	378.2
167.5°	382.5	382.3	382.0	381.8	381.5	381.4	381.4	381.4	381.4	381.4	381.9
170°	384.6	384.3	384.1	383.8	383.6	383.4	383.4	383.4	383.4	383.4	384.0
172.5°	386.0	385.7	385.4	385.1	384.7	384.7	384.7	384.7	384.8	384.8	385.4
175°	387.8	387.4	387.1	386.9	386.5	386.4	386.5	386.5	386.5	386.6	387.1
177.5°	388.2	388.0	387.8	387.5	387.2	387.1	387.2	387.2	387.3	387.3	387.8
180°	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8



TEST NUMBER: P332006-930

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5	1290.5
2.5°	1285.6	1287.6	1289.6	1290.5	1290.2	1290.0	1289.8	1289.6
5°	1278.8	1281.2	1283.8	1284.7	1284.3	1283.8	1283.3	1282.8
7.5°	1265.3	1267.5	1269.7	1270.6	1270.3	1270.1	1269.7	1269.4
10°	1252.8	1255.0	1257.3	1258.1	1257.6	1257.1	1256.6	1256.1
12.5°	1239.2	1240.8	1242.4	1243.1	1242.8	1242.5	1242.2	1241.9
15°	1214.6	1216.5	1218.5	1218.8	1217.3	1215.8	1214.3	1212.8
17.5°	1183.4	1184.8	1186.2	1186.6	1186.1	1185.5	1185.0	1184.5
20°	1160.4	1161.5	1162.5	1162.5	1161.8	1161.1	1160.3	1159.6
22.5°	1136.1	1136.9	1137.7	1137.6	1136.7	1135.7	1134.8	1133.8
25°	1095.7	1096.0	1096.3	1096.0	1095.2	1094.5	1093.7	1093.0
27.5°	1052.8	1053.0	1053.2	1052.8	1051.9	1050.9	1050.0	1049.0
30°	1023.1	1023.1	1023.1	1022.2	1020.5	1018.8	1017.1	1015.3
32.5°	991.9	990.6	989.2	988.0	987.1	986.1	985.2	984.2
35°	941.3	939.9	938.4	937.0	935.8	934.6	933.4	932.1
37.5°	889.1	887.3	885.5	884.2	883.5	882.6	881.8	881.1
40°	854.9	853.0	851.0	849.5	848.5	847.5	846.5	845.5
42.5°	819.4	817.4	815.5	814.0	813.0	812.0	811.1	810.1
45°	766.4	763.4	760.5	758.4	757.2	755.9	754.7	753.4
47.5°	710.5	707.7	704.7	702.8	701.6	700.6	699.5	698.4
50°	673.7	671.0	668.2	666.2	664.7	663.2	661.7	660.2
52.5°	636.3	634.0	631.7	629.7	628.3	626.8	625.3	623.9
55°	579.4	576.7	574.0	571.9	570.7	569.5	568.3	567.0
57.5°	523.3	521.0	518.5	516.6	515.2	513.7	512.3	510.9
60°	483.8	481.6	479.4	477.7	476.4	475.2	473.9	472.7
62.5°	445.6	443.4	441.2	439.7	438.8	438.0	437.2	436.3
65°	388.9	386.9	384.9	383.6	382.9	382.1	381.3	380.6
67.5°	332.6	330.8	329.1	327.8	326.7	325.6	324.6	323.6
70°	296.1	294.4	292.7	291.2	290.0	288.8	287.6	286.3
72.5°	259.3	257.7	256.2	255.1	254.5	253.8	253.2	252.6
75°	206.2	204.9	203.7	202.7	201.9	201.2	200.5	199.7
77.5°	156.5	155.7	154.9	154.5	154.5	154.5	154.5	154.5
80°	124.9	124.7	124.4	124.3	124.3	124.3	124.3	124.3
82.5°	96.1	95.6	95.2	94.9	94.7	94.5	94.3	94.1
85°	54.5	54.0	53.5	53.2	53.2	53.2	53.2	53.2
87.5°	20.6	20.5	20.3	20.3	20.3	20.3	20.4	20.4
90°	7.4	7.7	7.9	8.2	8.2	8.4	8.5	8.6
92.5°	8.2	8.6	9.0	9.3	9.3	9.4	9.5	9.5
95°	9.9	10.3	10.8	10.9	10.9	10.9	10.9	10.9
97.5°	10.3	10.8	11.3	11.6	11.7	11.7	11.8	11.9
100°	10.5	11.0	11.6	11.8	11.9	12.0	12.1	12.1
102.5°	15.8	14.2	12.6	11.9	12.0	12.1	12.2	12.3
105°	40.4	29.1	17.8	12.1	12.3	12.4	12.6	12.6
107.5°	99.1	90.7	82.4	73.9	65.5	56.9	48.3	39.8
110°	125.7	123.6	121.5	115.9	106.7	97.5	88.4	79.2



TEST NUMBER: P332006-930

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	144.6	144.6	144.6	143.7	141.7	139.8	137.9	135.9
115°	166.6	167.3	168.0	168.4	168.6	168.9	169.2	169.4
117.5°	186.7	187.2	187.7	188.0	188.0	188.1	188.2	188.2
120°	199.8	200.3	200.8	201.1	201.1	201.1	201.1	201.1
122.5°	212.6	213.0	213.4	213.5	213.6	213.7	213.7	213.8
125°	230.7	230.9	231.0	231.1	231.2	231.4	231.5	231.6
127.5°	248.8	249.1	249.3	249.3	249.2	249.1	248.9	248.8
130°	259.8	260.1	260.3	260.4	260.2	260.2	260.0	259.8
132.5°	270.2	270.4	270.7	270.8	270.5	270.4	270.2	270.0
135°	285.9	286.1	286.3	286.3	286.1	285.9	285.7	285.5
137.5°	299.9	300.2	300.5	300.6	300.4	300.4	300.2	300.1
140°	308.8	309.0	309.3	309.3	309.2	309.1	309.0	308.8
142.5°	317.2	317.4	317.6	317.6	317.5	317.2	317.1	316.9
145°	329.0	329.1	329.2	329.3	329.3	329.3	329.3	329.3
147.5°	339.5	339.7	339.8	339.7	339.4	339.1	338.8	338.5
150°	346.0	346.1	346.3	346.2	346.0	345.8	345.6	345.4
152.5°	351.7	352.0	352.2	352.1	351.9	351.6	351.2	351.0
155°	359.6	360.0	360.3	360.2	359.9	359.5	359.1	358.7
157.5°	366.5	366.9	367.3	367.2	366.7	366.2	365.7	365.2
160°	370.4	370.8	371.2	371.1	370.7	370.2	369.8	369.3
162.5°	374.0	374.4	374.8	374.9	374.5	374.1	373.7	373.2
165°	378.7	379.3	379.8	379.8	379.4	378.9	378.5	378.0
167.5°	382.4	382.9	383.4	383.4	382.9	382.4	381.9	381.4
170°	384.5	385.0	385.5	385.5	385.0	384.5	384.0	383.4
172.5°	385.9	386.4	386.9	386.9	386.3	385.7	385.1	384.6
175°	387.5	388.0	388.4	388.4	387.9	387.3	386.9	386.4
177.5°	388.2	388.6	389.0	388.9	388.4	387.9	387.3	386.9
180°	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8

(END OF REPORT)