

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: P332016-930

Luminaire Tested: **S123DIP-S1000D585U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332016-930
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: S123DIP-S1000D585U930-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

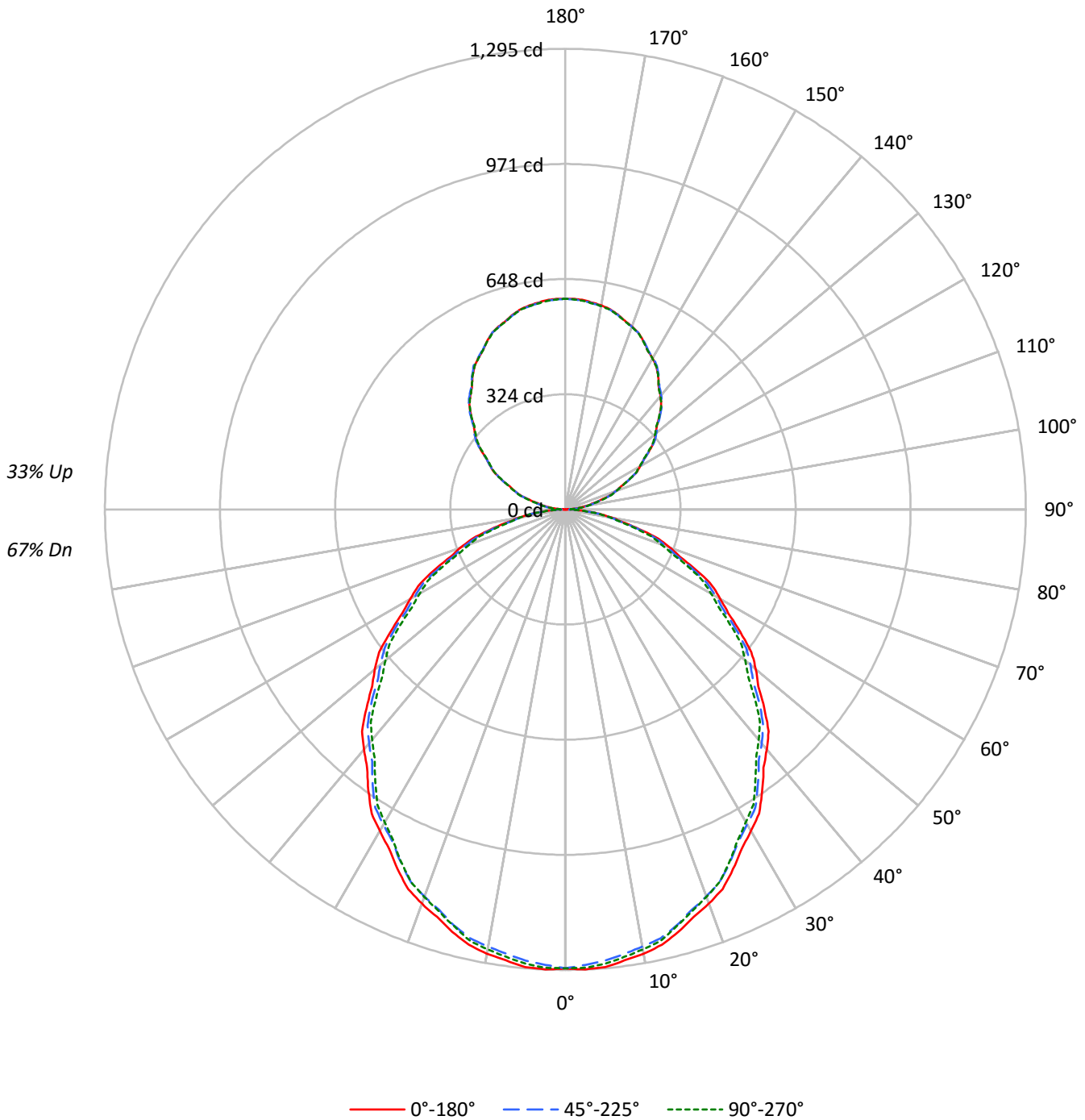
Lumens per Lamp: N/A
Luminaire Lumens: 5000.0 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 48.8
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



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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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	102	97	93	89	96	92	88	85	81	79	76	72	70	68	63	62	61	56
2	92	85	78	73	87	80	74	70	71	67	63	63	60	57	56	53	51	47
3	84	75	67	61	79	70	64	58	63	58	53	56	52	48	49	46	43	40
4	77	66	58	52	72	63	55	49	56	50	45	50	45	41	44	40	37	34
5	71	59	50	44	67	56	48	43	50	44	39	45	40	36	40	36	33	30
6	65	53	45	39	61	50	43	37	45	39	34	41	35	31	36	32	29	26
7	61	48	40	34	57	46	38	33	41	35	30	37	32	28	33	29	26	23
8	56	44	36	30	53	42	34	29	38	31	27	34	29	25	30	26	23	21
9	53	40	32	27	49	38	31	26	34	28	24	31	26	22	28	24	21	19
10	49	37	29	24	46	35	28	23	32	26	22	29	24	20	26	22	19	17

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.6	2.4
10°-20°	343.3	6.9
20°-30°	507.0	10.1
30°-40°	592.3	11.8
40°-50°	595.5	11.9
50°-60°	523.1	10.5
60°-70°	389.7	7.8
70°-80°	222.0	4.4
80°-90°	65.5	1.3
90°-100°	38.6	0.8
100°-110°	115.4	2.3
110°-120°	196.3	3.9
120°-130°	258.2	5.2
130°-140°	290.3	5.8
140°-150°	285.3	5.7
150°-160°	240.2	4.8
160°-170°	159.9	3.2
170°-180°	56.0	1.1
0°-30°	971.9	19.4
0°-40°	1564.1	31.3
0°-60°	2682.6	53.7
0°-90°	3359.8	67.2
90°-120°	350.3	7.0
90°-150°	1184.1	23.7
90°-180°	1640.0	32.8
0°-180°	5000.0	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	5	11	13	14	5
95°	28	31	34	36	36	31
105°	105	106	110	110	111	112
115°	198	199	198	198	198	195
125°	289	291	290	288	286	258
135°	375	378	378	376	375	289
145°	455	456	458	457	455	284
155°	521	521	522	523	520	240
165°	568	566	566	569	566	160
175°	591	589	589	591	588	56
180°	592	592	592	592	592	



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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	22.8	22.4	22.0	21.6	21.4	21.5	21.6	21.7	21.8	21.7
90°	0.5	1.5	2.5	3.6	4.6	5.8	7.1	8.5	9.8	11.2	11.6
92.5°	11.3	12.0	12.6	13.4	14.1	14.8	15.6	16.3	17.1	17.9	18.2
95°	27.5	28.1	28.9	29.6	30.3	31.1	32.0	32.8	33.6	34.4	34.8
97.5°	48.8	49.2	49.8	50.4	50.9	51.4	52.0	52.7	53.2	53.9	54.3
100°	63.3	63.8	64.5	65.1	65.7	66.3	66.8	67.3	67.8	68.3	68.6
102.5°	80.0	80.4	80.7	81.1	81.4	82.0	82.7	83.4	84.1	84.7	85.0
105°	104.6	104.8	105.0	105.3	105.5	106.0	107.0	107.9	108.8	109.7	109.7
107.5°	133.3	133.4	133.5	133.6	133.8	134.0	134.4	134.8	135.2	135.5	135.8
110°	151.2	151.3	151.6	151.7	152.0	152.1	152.4	152.6	152.8	153.0	153.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	169.7	169.8	170.0	170.1	170.2	170.3	170.4	170.4	170.5	170.5	171.0
115°	197.6	198.0	198.3	198.6	198.9	198.9	198.7	198.5	198.3	198.1	198.2
117.5°	225.8	225.9	226.2	226.3	226.6	226.5	226.2	226.0	225.8	225.4	225.4
120°	243.2	243.9	244.4	245.1	245.7	245.7	245.2	244.8	244.2	243.7	243.6
122.5°	261.5	261.9	262.4	262.8	263.3	263.3	263.1	262.9	262.5	262.3	262.0
125°	289.3	289.6	289.8	290.2	290.5	290.6	290.3	290.2	289.9	289.8	289.3
127.5°	315.0	315.6	316.3	316.9	317.6	317.8	317.6	317.3	317.1	316.9	316.3
130°	332.1	332.9	333.7	334.5	335.3	335.6	335.3	335.0	334.7	334.4	333.9
132.5°	349.1	350.0	350.8	351.6	352.5	352.8	352.5	352.3	352.0	351.9	351.3
135°	375.3	375.9	376.5	377.2	377.7	378.1	377.9	377.8	377.7	377.6	377.2
137.5°	399.5	400.0	400.5	401.0	401.5	401.9	402.2	402.4	402.8	403.0	402.6
140°	416.2	416.7	417.3	417.8	418.2	418.6	418.7	418.8	418.9	419.0	418.9
142.5°	431.5	431.9	432.5	433.0	433.5	433.9	434.1	434.2	434.5	434.6	434.6
145°	455.3	455.5	455.7	455.9	456.1	456.3	456.6	457.0	457.3	457.6	457.5
147.5°	476.1	476.5	476.9	477.2	477.6	477.9	478.3	478.5	478.8	479.1	479.1
150°	490.6	490.8	491.1	491.2	491.5	491.6	491.9	492.0	492.3	492.4	492.4
152.5°	502.6	502.8	503.1	503.4	503.7	503.9	504.0	504.1	504.3	504.3	504.5
155°	521.3	521.3	521.3	521.3	521.3	521.4	521.5	521.5	521.7	521.8	522.2
157.5°	537.3	537.2	537.0	537.0	536.8	536.8	536.9	537.0	537.0	537.1	537.5
160°	547.3	547.1	546.9	546.7	546.5	546.4	546.4	546.4	546.4	546.4	546.9
162.5°	556.3	556.0	555.7	555.4	555.1	555.1	555.1	555.2	555.3	555.4	555.9
165°	567.8	567.5	567.2	566.9	566.6	566.4	566.4	566.4	566.4	566.4	567.0
167.5°	577.0	576.6	576.2	575.8	575.4	575.2	575.3	575.4	575.4	575.5	576.2
170°	582.2	581.8	581.4	581.0	580.6	580.3	580.3	580.3	580.3	580.3	581.1
172.5°	586.3	585.9	585.5	585.1	584.7	584.5	584.5	584.5	584.5	584.5	585.1
175°	590.6	590.2	589.8	589.4	589.0	588.7	588.7	588.7	588.7	588.7	589.4
177.5°	592.4	592.1	591.7	591.3	591.0	590.8	590.8	590.8	590.8	590.8	591.3
180°	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0



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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°	21.5	21.4	21.3	21.3	21.3	21.4	21.4	21.4
90°	12.0	12.4	12.8	13.1	13.4	13.5	13.8	13.9
92.5°	18.5	18.8	19.2	19.3	19.2	19.0	18.9	18.8
95°	35.2	35.6	36.0	36.3	36.3	36.3	36.3	36.3
97.5°	54.8	55.3	55.8	55.9	55.9	55.8	55.8	55.8
100°	69.0	69.3	69.6	69.9	70.0	70.3	70.4	70.7
102.5°	85.4	85.7	85.9	86.1	86.1	86.0	86.0	85.9
105°	109.7	109.7	109.7	109.8	110.1	110.2	110.5	110.7
107.5°	136.2	136.5	136.8	137.0	136.8	136.7	136.6	136.5
110°	153.8	154.3	154.7	154.7	154.6	154.3	154.2	153.9



TEST NUMBER: P332016-930

CATALOG NUMBER: S123DIP-S1000D585U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	171.5	171.9	172.4	172.7	172.7	172.6	172.6	172.5
115°	198.3	198.4	198.5	198.5	198.4	198.3	198.2	198.1
117.5°	225.4	225.3	225.3	225.2	224.9	224.6	224.4	224.0
120°	243.4	243.4	243.3	243.1	242.9	242.7	242.5	242.3
122.5°	261.7	261.5	261.2	260.9	260.7	260.3	260.1	259.8
125°	288.9	288.5	288.0	287.6	287.2	286.8	286.4	286.0
127.5°	315.7	315.1	314.5	314.1	313.6	313.1	312.6	312.1
130°	333.5	333.1	332.7	332.2	331.4	330.7	330.0	329.2
132.5°	350.8	350.3	349.8	349.4	348.8	348.2	347.6	347.1
135°	376.7	376.3	375.9	375.6	375.4	375.2	375.0	374.8
137.5°	402.1	401.7	401.3	400.9	400.5	400.1	399.7	399.3
140°	418.8	418.7	418.6	418.2	417.4	416.7	416.0	415.3
142.5°	434.4	434.3	434.2	433.9	433.3	432.8	432.2	431.6
145°	457.4	457.3	457.2	456.9	456.5	456.1	455.7	455.3
147.5°	479.1	479.1	479.1	478.7	478.2	477.5	477.0	476.3
150°	492.4	492.4	492.4	492.2	491.5	490.9	490.3	489.7
152.5°	504.8	504.9	505.1	504.8	504.3	503.8	503.3	502.7
155°	522.6	523.0	523.4	523.3	522.5	521.8	521.1	520.4
157.5°	538.0	538.4	538.8	538.7	538.2	537.6	537.0	536.5
160°	547.5	548.0	548.5	548.5	548.1	547.7	547.3	546.9
162.5°	556.4	556.9	557.4	557.3	556.7	556.0	555.4	554.7
165°	567.7	568.3	568.9	568.8	568.1	567.4	566.7	566.0
167.5°	576.8	577.5	578.1	578.1	577.5	576.8	576.2	575.5
170°	581.8	582.5	583.3	583.3	582.5	581.8	581.1	580.3
172.5°	585.7	586.4	587.0	587.0	586.3	585.5	584.8	584.1
175°	590.0	590.6	591.3	591.2	590.4	589.7	589.0	588.2
177.5°	591.9	592.4	592.9	592.8	592.2	591.7	591.1	590.5
180°	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0

(END OF REPORT)