

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: P332016-935

Luminaire Tested: **S123DIP-S1000D585U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332016-935
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-S1000D585U935-4F0-1E-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: 5280.3 lumens
Efficiency: N/A
Efficacy: 108.2 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

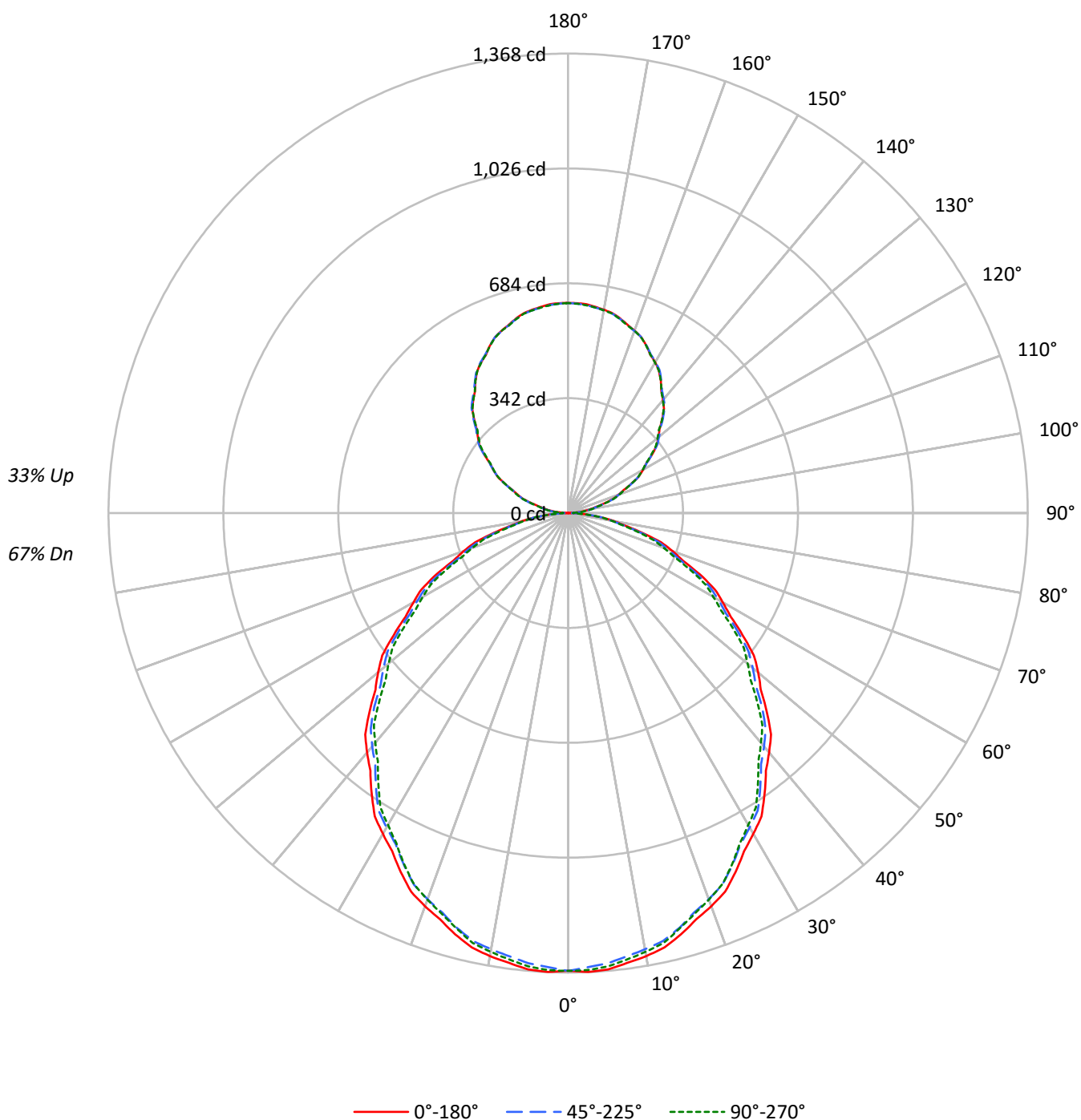
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332016-935

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-F1

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			
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°	14670	14670	14670
5°	14738	14536	14638
10°	14641	14410	14499
15°	14469	14247	14273
20°	14269	14014	14027
25°	14001	13737	13709
30°	13706	13430	13326
35°	13397	13104	12935
40°	13075	12745	12546
45°	12718	12415	12113
50°	12363	12010	11675
55°	11898	11590	11237
60°	11427	11102	10747
65°	11013	10565	10236
70°	10401	9958	9514
75°	9503	9162	8771
80°	8573	8207	8133
85°	7534	7237	6941

TEST NUMBER: P332016-935

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.4	2.4
10°-20°	362.5	6.9
20°-30°	535.5	10.1
30°-40°	625.5	11.8
40°-50°	628.8	11.9
50°-60°	552.4	10.5
60°-70°	411.5	7.8
70°-80°	234.5	4.4
80°-90°	69.1	1.3
90°-100°	40.7	0.8
100°-110°	121.9	2.3
110°-120°	207.3	3.9
120°-130°	272.7	5.2
130°-140°	306.5	5.8
140°-150°	301.3	5.7
150°-160°	253.7	4.8
160°-170°	168.9	3.2
170°-180°	59.1	1.1
0°-30°	1026.3	19.4
0°-40°	1651.8	31.3
0°-60°	2833.0	53.7
0°-90°	3548.1	67.2
90°-120°	370.0	7.0
90°-150°	1250.5	23.7
90°-180°	1732.0	32.8
0°-180°	5280.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1363	1363	1363	1363	1363	
5°	1364	1358	1345	1356	1355	129
15°	1298	1293	1278	1287	1281	366
25°	1179	1171	1157	1158	1154	543
35°	1020	1012	997	990	984	638
45°	836	830	816	802	796	645
55°	634	632	618	605	599	568
65°	432	426	415	406	402	427
75°	228	224	220	215	211	244
85°	61	59	59	56	56	67
90°	0	5	12	14	15	5
95°	29	32	36	38	38	33
105°	110	112	116	116	117	118
115°	209	210	209	210	209	206
125°	306	307	306	304	302	272
135°	396	399	399	397	396	305
145°	481	482	483	483	481	300
155°	550	551	551	553	550	253
165°	600	598	598	601	598	169
175°	624	622	622	624	621	59
180°	625	625	625	625	625	

TEST NUMBER: P332016-935

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9
2.5°	1367.5	1366.8	1365.9	1365.0	1364.3	1362.6	1360.4	1358.1	1355.8	1353.5	1355.6
5°	1364.0	1362.7	1361.4	1360.1	1358.8	1356.8	1353.9	1351.0	1348.2	1345.3	1347.9
7.5°	1350.7	1349.4	1348.1	1346.8	1345.5	1343.3	1340.4	1337.4	1334.5	1331.5	1333.8
10°	1339.5	1338.2	1336.8	1335.5	1334.2	1331.9	1328.5	1325.1	1321.7	1318.4	1320.7
12.5°	1324.4	1323.4	1322.2	1321.1	1320.1	1317.9	1314.7	1311.6	1308.4	1305.2	1306.9
15°	1298.4	1297.4	1296.3	1295.3	1294.3	1292.0	1288.7	1285.3	1281.9	1278.5	1280.6
17.5°	1268.2	1266.8	1265.5	1264.1	1262.7	1260.4	1257.0	1253.6	1250.3	1246.8	1248.3
20°	1245.7	1244.1	1242.6	1241.0	1239.4	1236.9	1233.6	1230.2	1226.8	1223.4	1224.4
22.5°	1220.4	1218.8	1217.3	1215.6	1214.1	1211.7	1208.2	1204.9	1201.5	1198.1	1198.9
25°	1178.9	1177.3	1175.8	1174.2	1172.6	1170.2	1166.7	1163.4	1160.0	1156.6	1156.8
27.5°	1134.6	1133.1	1131.5	1130.1	1128.5	1125.9	1122.3	1118.7	1115.0	1111.4	1111.6
30°	1102.7	1101.4	1100.1	1098.8	1097.5	1095.0	1091.4	1087.7	1084.1	1080.5	1080.5
32.5°	1070.8	1069.1	1067.4	1065.7	1063.9	1061.7	1058.9	1056.1	1053.3	1050.4	1049.0
35°	1019.5	1018.0	1016.4	1014.9	1013.2	1010.8	1007.4	1004.0	1000.7	997.2	995.7
37.5°	967.0	965.0	963.0	961.0	959.1	956.4	953.0	949.5	946.1	942.6	940.7
40°	930.5	928.8	927.3	925.7	924.2	921.6	917.9	914.3	910.7	907.0	904.9
42.5°	893.9	892.1	890.4	888.6	886.8	884.1	880.5	876.8	873.1	869.5	867.5
45°	835.5	834.5	833.4	832.4	831.4	829.1	825.8	822.3	819.0	815.6	812.5
47.5°	777.7	776.1	774.6	773.1	771.6	769.2	766.1	762.9	759.7	756.6	753.5
50°	738.3	736.9	735.6	734.3	733.1	730.7	727.3	723.9	720.6	717.2	714.3
52.5°	697.0	696.1	695.3	694.4	693.4	691.2	687.7	684.1	680.4	676.8	674.4
55°	634.0	633.7	633.4	633.2	632.9	631.1	627.8	624.3	621.0	617.6	614.7
57.5°	573.9	573.1	572.2	571.4	570.4	568.6	565.9	563.2	560.5	557.8	555.3
60°	530.8	530.5	530.3	530.0	529.8	528.1	525.0	521.9	518.8	515.7	513.2
62.5°	492.4	491.7	491.0	490.3	489.7	487.8	484.7	481.6	478.5	475.3	472.9
65°	432.4	431.1	429.8	428.5	427.2	425.2	422.7	420.1	417.4	414.8	412.8
67.5°	368.9	367.7	366.6	365.5	364.3	362.7	360.8	358.8	356.8	354.8	353.0
70°	330.5	328.9	327.4	325.8	324.3	322.6	321.1	319.5	318.0	316.4	314.6
72.5°	290.2	289.0	287.8	286.7	285.6	284.1	282.3	280.6	278.8	277.0	275.4
75°	228.5	227.5	226.4	225.4	224.4	223.4	222.7	221.9	221.1	220.3	219.0
77.5°	173.9	173.3	172.7	172.2	171.6	170.8	170.0	169.0	168.1	167.1	166.3
80°	138.3	137.5	136.7	136.0	135.2	134.5	134.0	133.5	132.9	132.4	132.2
82.5°	103.6	103.4	103.3	103.1	103.0	102.8	102.7	102.6	102.5	102.5	101.9
85°	61.0	60.4	59.9	59.4	58.9	58.6	58.6	58.6	58.6	58.6	58.0
87.5°	24.5	24.1	23.7	23.2	22.8	22.6	22.7	22.8	22.9	23.0	22.9
90°	0.5	1.5	2.7	3.8	4.8	6.1	7.5	9.0	10.3	11.8	12.2
92.5°	11.9	12.7	13.3	14.1	14.9	15.7	16.4	17.2	18.1	18.9	19.2
95°	29.0	29.7	30.5	31.3	32.0	32.9	33.8	34.6	35.5	36.3	36.8
97.5°	51.5	52.0	52.6	53.2	53.7	54.3	54.9	55.6	56.2	56.9	57.3
100°	66.8	67.4	68.1	68.8	69.4	70.0	70.5	71.1	71.6	72.2	72.5
102.5°	84.5	84.9	85.2	85.7	86.0	86.6	87.3	88.1	88.8	89.5	89.8
105°	110.5	110.7	110.9	111.2	111.4	111.9	113.0	113.9	114.9	115.9	115.9
107.5°	140.8	140.9	141.0	141.1	141.3	141.5	141.9	142.3	142.8	143.1	143.4
110°	159.6	159.8	160.1	160.2	160.5	160.7	160.9	161.2	161.4	161.6	162.0

TEST NUMBER: P332016-935

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	179.3	179.3	179.5	179.6	179.8	179.9	179.9	179.9	180.0	180.0	180.6
115°	208.7	209.1	209.4	209.7	210.0	210.1	209.8	209.7	209.4	209.2	209.3
117.5°	238.4	238.6	238.8	239.0	239.3	239.2	238.9	238.7	238.4	238.1	238.1
120°	256.8	257.5	258.1	258.8	259.5	259.5	259.0	258.5	257.9	257.4	257.3
122.5°	276.1	276.6	277.1	277.5	278.0	278.1	277.8	277.6	277.2	277.0	276.7
125°	305.5	305.8	306.1	306.4	306.8	306.9	306.6	306.4	306.2	306.0	305.5
127.5°	332.6	333.3	334.0	334.7	335.4	335.6	335.4	335.1	334.8	334.7	334.1
130°	350.7	351.5	352.4	353.3	354.1	354.4	354.1	353.8	353.4	353.1	352.7
132.5°	368.7	369.6	370.5	371.3	372.2	372.6	372.3	372.0	371.8	371.6	371.0
135°	396.3	397.0	397.6	398.3	398.9	399.2	399.1	399.0	398.9	398.8	398.4
137.5°	421.9	422.4	422.9	423.5	424.0	424.5	424.7	425.0	425.3	425.6	425.2
140°	439.5	440.1	440.7	441.2	441.7	442.0	442.1	442.3	442.4	442.5	442.4
142.5°	455.6	456.2	456.8	457.3	457.8	458.2	458.4	458.6	458.8	459.0	458.9
145°	480.8	481.0	481.2	481.5	481.6	481.9	482.2	482.6	482.9	483.3	483.1
147.5°	502.8	503.2	503.6	503.9	504.4	504.7	505.1	505.3	505.7	505.9	505.9
150°	518.1	518.3	518.6	518.8	519.0	519.2	519.4	519.6	519.9	520.0	520.0
152.5°	530.7	531.0	531.3	531.6	531.9	532.1	532.3	532.4	532.5	532.6	532.8
155°	550.5	550.5	550.5	550.5	550.5	550.6	550.7	550.8	551.0	551.0	551.5
157.5°	567.4	567.3	567.1	567.1	566.9	566.9	567.0	567.1	567.1	567.2	567.7
160°	578.0	577.8	577.6	577.4	577.1	577.0	577.0	577.0	577.0	577.0	577.6
162.5°	587.5	587.1	586.9	586.5	586.3	586.2	586.3	586.3	586.4	586.5	587.0
165°	599.6	599.3	599.0	598.7	598.3	598.1	598.1	598.1	598.1	598.1	598.8
167.5°	609.3	608.9	608.5	608.0	607.6	607.4	607.5	607.6	607.7	607.8	608.5
170°	614.8	614.4	614.0	613.5	613.1	612.9	612.9	612.9	612.9	612.9	613.6
172.5°	619.1	618.7	618.3	617.9	617.4	617.3	617.3	617.3	617.3	617.3	617.9
175°	623.7	623.3	622.8	622.4	622.0	621.7	621.7	621.7	621.7	621.7	622.4
177.5°	625.6	625.3	624.9	624.5	624.1	624.0	624.0	624.0	624.0	624.0	624.5
180°	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2

TEST NUMBER: P332016-935

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9	1362.9
2.5°	1357.6	1359.8	1361.8	1362.8	1362.5	1362.4	1362.1	1361.9
5°	1350.5	1353.1	1355.7	1356.8	1356.2	1355.7	1355.2	1354.7
7.5°	1336.2	1338.5	1340.8	1341.9	1341.5	1341.3	1340.9	1340.6
10°	1323.0	1325.3	1327.7	1328.6	1328.1	1327.6	1327.1	1326.5
12.5°	1308.6	1310.4	1312.1	1312.8	1312.5	1312.2	1311.8	1311.6
15°	1282.6	1284.7	1286.9	1287.1	1285.6	1283.9	1282.4	1280.8
17.5°	1249.7	1251.2	1252.7	1253.1	1252.6	1252.0	1251.4	1250.9
20°	1225.5	1226.6	1227.6	1227.7	1226.9	1226.2	1225.4	1224.6
22.5°	1199.8	1200.6	1201.4	1201.4	1200.4	1199.4	1198.4	1197.4
25°	1157.1	1157.4	1157.7	1157.4	1156.6	1155.8	1155.0	1154.3
27.5°	1111.8	1112.0	1112.2	1111.8	1110.9	1109.8	1108.9	1107.8
30°	1080.5	1080.5	1080.5	1079.5	1077.7	1075.9	1074.1	1072.2
32.5°	1047.5	1046.1	1044.7	1043.4	1042.4	1041.4	1040.4	1039.4
35°	994.1	992.6	991.0	989.5	988.3	987.0	985.7	984.4
37.5°	938.9	937.0	935.1	933.8	933.0	932.1	931.3	930.5
40°	902.8	900.8	898.7	897.1	896.0	895.0	894.0	892.9
42.5°	865.3	863.2	861.2	859.6	858.6	857.6	856.5	855.5
45°	809.3	806.2	803.1	800.9	799.6	798.3	797.0	795.7
47.5°	750.4	747.3	744.2	742.2	741.0	739.9	738.7	737.5
50°	711.4	708.6	705.7	703.5	702.0	700.3	698.8	697.2
52.5°	671.9	669.5	667.1	665.0	663.5	661.9	660.4	658.8
55°	611.8	609.0	606.1	604.0	602.7	601.4	600.1	598.8
57.5°	552.7	550.2	547.6	545.5	544.1	542.5	541.1	539.5
60°	510.9	508.6	506.3	504.5	503.1	501.8	500.5	499.2
62.5°	470.6	468.3	465.9	464.3	463.4	462.5	461.7	460.8
65°	410.7	408.5	406.5	405.1	404.3	403.6	402.7	401.9
67.5°	351.2	349.4	347.6	346.1	345.0	343.9	342.8	341.7
70°	312.7	310.9	309.1	307.5	306.3	305.0	303.7	302.3
72.5°	273.8	272.2	270.5	269.4	268.7	268.0	267.4	266.7
75°	217.7	216.4	215.1	214.0	213.3	212.5	211.7	210.9
77.5°	165.3	164.5	163.6	163.2	163.2	163.2	163.2	163.2
80°	131.9	131.6	131.4	131.2	131.2	131.2	131.2	131.2
82.5°	101.5	101.0	100.6	100.2	100.0	99.8	99.6	99.4
85°	57.5	57.0	56.5	56.2	56.2	56.2	56.2	56.2
87.5°	22.7	22.6	22.5	22.5	22.5	22.6	22.6	22.6
90°	12.7	13.1	13.5	13.9	14.1	14.3	14.6	14.7
92.5°	19.5	19.9	20.2	20.4	20.2	20.1	20.0	19.8
95°	37.2	37.6	38.1	38.3	38.3	38.3	38.3	38.3
97.5°	57.9	58.4	58.9	59.1	59.1	59.0	59.0	58.9
100°	72.8	73.2	73.5	73.8	74.0	74.2	74.4	74.6
102.5°	90.1	90.5	90.7	90.9	90.9	90.8	90.8	90.7
105°	115.9	115.9	115.9	116.0	116.2	116.4	116.7	116.9
107.5°	143.8	144.1	144.5	144.6	144.5	144.4	144.2	144.1
110°	162.5	162.9	163.3	163.4	163.2	163.0	162.8	162.6

TEST NUMBER: P332016-935

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	181.1	181.6	182.1	182.4	182.4	182.3	182.3	182.2
115°	209.4	209.6	209.7	209.7	209.6	209.4	209.3	209.2
117.5°	238.1	238.0	238.0	237.8	237.5	237.2	236.9	236.6
120°	257.1	257.0	256.9	256.8	256.5	256.3	256.1	255.9
122.5°	276.4	276.1	275.9	275.5	275.3	274.9	274.7	274.3
125°	305.1	304.6	304.2	303.8	303.3	302.9	302.5	302.0
127.5°	333.4	332.8	332.2	331.7	331.1	330.6	330.1	329.6
130°	352.2	351.8	351.4	350.8	350.0	349.2	348.4	347.7
132.5°	370.5	370.0	369.5	368.9	368.3	367.7	367.1	366.5
135°	397.9	397.4	397.0	396.7	396.5	396.2	396.1	395.8
137.5°	424.6	424.2	423.8	423.4	422.9	422.5	422.1	421.6
140°	442.3	442.1	442.0	441.6	440.8	440.1	439.3	438.6
142.5°	458.7	458.7	458.6	458.2	457.6	457.0	456.4	455.8
145°	483.0	482.9	482.8	482.5	482.1	481.6	481.2	480.8
147.5°	505.9	505.9	505.9	505.6	505.0	504.3	503.7	503.0
150°	520.0	520.0	520.0	519.8	519.1	518.4	517.8	517.1
152.5°	533.0	533.2	533.4	533.1	532.6	532.0	531.5	530.9
155°	551.9	552.3	552.8	552.6	551.8	551.0	550.4	549.6
157.5°	568.2	568.6	569.0	568.9	568.3	567.7	567.1	566.5
160°	578.2	578.7	579.2	579.3	578.9	578.4	578.0	577.6
162.5°	587.5	588.1	588.7	588.6	587.9	587.2	586.5	585.8
165°	599.5	600.1	600.8	600.7	599.9	599.2	598.5	597.7
167.5°	609.2	609.8	610.5	610.5	609.8	609.2	608.5	607.8
170°	614.4	615.2	616.0	616.0	615.2	614.4	613.6	612.9
172.5°	618.5	619.2	619.9	619.9	619.1	618.4	617.6	616.8
175°	623.0	623.7	624.4	624.3	623.5	622.8	622.0	621.2
177.5°	625.1	625.6	626.1	626.0	625.4	624.8	624.2	623.6
180°	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2

(END OF REPORT)