

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: P332026-935

Luminaire Tested: **S123DIP-S1000D805U935-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332026-935  
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-F4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6050.7 lumens  
Efficiency: N/A  
Efficacy: 111.2 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: General Diffuse

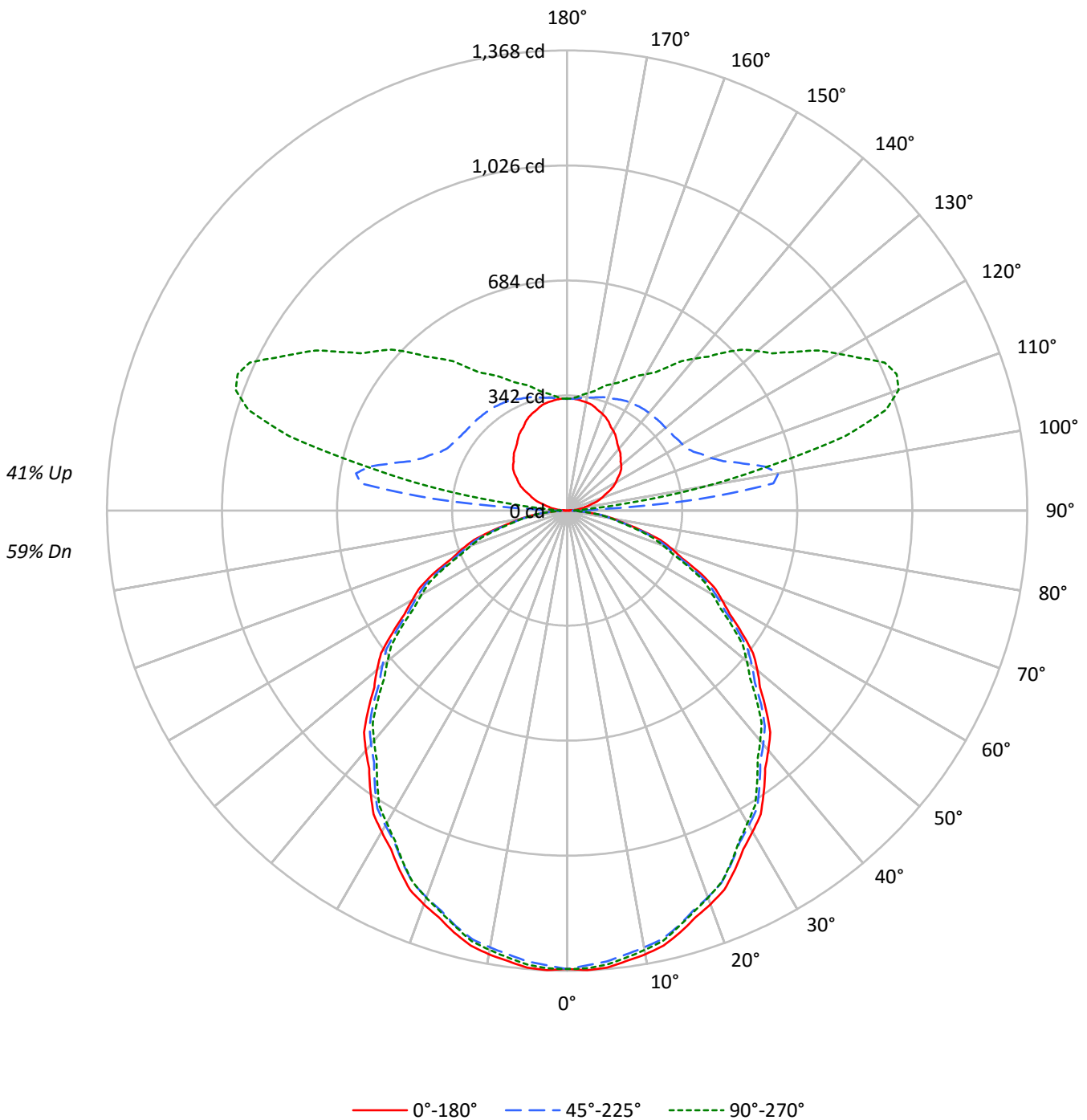
Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59
1	100	95	91	88	93	89	86	82	77	75	72	66	65	63	57	55	54	49
2	91	83	77	72	84	78	72	68	68	63	60	58	55	52	50	47	45	41
3	83	73	66	60	77	68	62	56	60	55	50	52	48	44	44	41	39	35
4	76	65	57	50	70	61	53	48	53	47	43	46	42	38	39	36	33	30
5	70	58	49	43	65	54	47	41	47	42	37	41	37	33	35	32	29	26
6	64	52	44	38	60	49	41	36	43	37	32	37	33	29	32	28	26	23
7	59	47	39	33	55	44	37	31	39	33	29	34	29	26	29	26	23	20
8	55	43	35	29	51	40	33	28	35	30	25	31	26	23	27	23	20	18
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	21	18	16
10	48	36	28	23	45	34	27	22	30	24	21	26	22	19	23	19	17	15

**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



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.4	2.1
10°-20°	362.5	6.0
20°-30°	535.5	8.8
30°-40°	625.5	10.3
40°-50°	628.8	10.4
50°-60°	552.4	9.1
60°-70°	411.5	6.8
70°-80°	234.5	3.9
80°-90°	69.9	1.2
90°-100°	185.1	3.1
100°-110°	524.0	8.7
110°-120°	515.5	8.5
120°-130°	411.2	6.8
130°-140°	324.2	5.4
140°-150°	242.0	4.0
150°-160°	168.6	2.8
160°-170°	99.1	1.6
170°-180°	32.2	0.5
0°-30°	1026.3	17.0
0°-40°	1651.8	27.3
0°-60°	2833.0	46.8
0°-90°	3548.9	58.7
90°-120°	1224.6	20.2
90°-150°	2201.9	36.4
90°-180°	2502.0	41.4
0°-180°	6050.7	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°	1	8	17	19	20	5
95°	23	74	399	116	78	25
105°	78	115	541	946	856	83
115°	138	172	414	908	1041	137
125°	192	226	386	700	821	170
135°	225	268	381	576	666	174
145°	256	294	376	473	520	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	



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**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°	24.6	24.3	23.9	23.7	23.3	23.2	23.4	23.6	23.8	24.0	23.7
90°	1.4	2.7	4.0	6.0	7.4	8.8	10.8	12.8	14.8	16.8	16.2
92.5°	8.4	12.4	18.1	23.3	28.9	38.9	56.6	85.5	113.9	103.5	78.1
95°	22.9	24.9	32.3	43.7	61.2	87.5	144.7	245.0	355.4	399.2	323.8
97.5°	39.0	39.7	45.5	55.4	72.7	101.1	155.8	268.9	452.9	618.6	661.9
100°	49.9	50.5	55.2	64.7	80.8	107.0	154.1	253.7	430.8	637.5	770.1
102.5°	61.1	62.3	66.5	75.4	90.0	114.0	156.3	240.8	398.5	602.4	775.5
105°	78.1	80.1	84.1	92.2	105.0	125.9	162.2	231.5	358.8	541.2	734.4
107.5°	96.1	98.2	102.0	109.9	122.0	141.4	173.2	230.9	333.5	487.1	662.5
110°	109.1	111.1	114.4	121.8	133.3	152.1	182.4	233.6	323.8	456.4	617.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	120.9	123.0	126.3	133.7	145.2	163.4	191.6	238.9	318.4	435.9	578.0
115°	138.0	140.7	144.7	151.4	162.9	181.1	206.6	247.7	316.4	414.0	530.5
117.5°	155.1	158.2	161.5	167.7	180.6	197.3	222.7	259.3	317.6	401.1	501.8
120°	166.9	168.9	172.3	179.1	191.8	208.7	232.9	267.9	319.8	395.1	486.7
122.5°	177.2	179.2	182.5	189.9	202.1	220.0	243.7	276.0	323.5	391.4	474.3
125°	191.8	193.2	197.3	204.7	217.4	235.6	259.2	288.8	329.2	386.4	458.4
127.5°	203.0	205.0	210.0	217.6	231.7	249.9	272.6	299.3	335.6	384.0	444.4
130°	210.0	212.1	218.1	226.2	240.3	258.5	280.7	306.3	339.9	382.4	436.9
132.5°	215.4	218.0	224.5	234.3	248.4	266.0	287.7	312.7	343.2	381.8	429.9
135°	224.8	227.6	235.0	245.0	259.2	277.3	298.2	321.1	348.0	381.0	420.7
137.5°	233.7	236.5	243.8	254.6	268.5	285.4	305.5	327.3	351.3	379.5	412.8
140°	239.6	243.0	249.8	260.5	274.0	290.8	310.3	330.5	353.4	379.0	407.9
142.5°	246.1	248.9	256.2	265.9	279.4	295.1	314.1	333.7	355.0	377.9	403.6
145°	256.5	258.5	264.6	274.7	286.1	301.6	319.1	337.3	356.1	376.3	397.9
147.5°	267.0	268.2	274.1	282.8	293.9	307.1	323.1	339.4	356.1	373.8	392.2
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



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**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°	23.6	23.5	23.4	23.6	23.4	23.6	23.8	23.6
90°	16.8	17.5	18.2	19.5	18.9	19.5	20.2	19.5
92.5°	56.7	44.9	39.7	36.2	35.0	33.0	33.7	32.5
95°	242.4	164.3	128.5	104.4	91.5	85.5	80.8	78.1
97.5°	604.1	483.9	397.0	316.5	266.8	236.5	218.3	212.6
100°	793.7	739.1	660.4	564.7	496.8	447.6	421.4	422.1
102.5°	856.6	854.9	809.0	748.4	695.5	656.6	634.6	619.1
105°	875.1	942.4	955.2	937.7	906.7	881.1	859.6	856.3
107.5°	822.1	931.3	990.3	1014.3	1014.9	1006.3	998.9	992.7
110°	771.5	895.3	980.1	1027.3	1046.0	1051.5	1050.1	1048.8





TEST NUMBER: P332026-935

CATALOG NUMBER: S123DIP-S1000D805U935-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	721.3	847.9	943.0	1003.5	1038.0	1054.7	1059.8	1060.1
115°	655.0	772.1	871.1	944.4	994.9	1024.5	1038.0	1041.4
117.5°	606.9	708.0	796.9	871.3	923.9	957.9	977.2	981.9
120°	581.6	672.4	753.3	821.2	874.4	912.1	928.2	932.3
122.5°	561.7	643.9	718.8	782.0	829.1	863.1	880.9	886.0
125°	535.1	608.6	673.1	727.0	770.1	799.7	816.5	821.2
127.5°	512.0	577.4	635.8	684.8	723.1	748.4	763.6	767.9
130°	497.5	558.0	612.6	658.3	694.1	718.2	732.4	737.8
132.5°	484.0	539.8	590.5	634.1	667.6	691.9	704.4	708.2
135°	465.8	513.6	557.3	595.7	628.7	648.9	661.0	665.7
137.5°	449.3	488.4	526.2	559.4	587.1	607.6	617.9	621.0
140°	439.5	473.9	506.2	535.1	560.8	579.5	590.4	589.7
142.5°	430.4	459.9	487.9	513.1	534.9	551.6	561.3	560.6
145°	419.4	441.6	463.1	482.7	499.5	513.6	519.0	520.3
147.5°	410.4	428.0	445.4	459.3	472.0	481.6	486.7	487.2
150°	403.9	419.4	433.5	446.3	456.4	463.8	467.9	467.9
152.5°	398.0	411.3	423.8	434.5	442.4	449.3	451.7	451.7
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)