

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: P332345-830

Luminaire Tested: **S123RDIP-S1000D805U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332345-830  
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: S123RDIP-S1000D805U830-4F0-1E-UDD-F  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 805 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6600.7 lumens  
Efficiency: N/A  
Efficacy: 121.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: General Diffuse

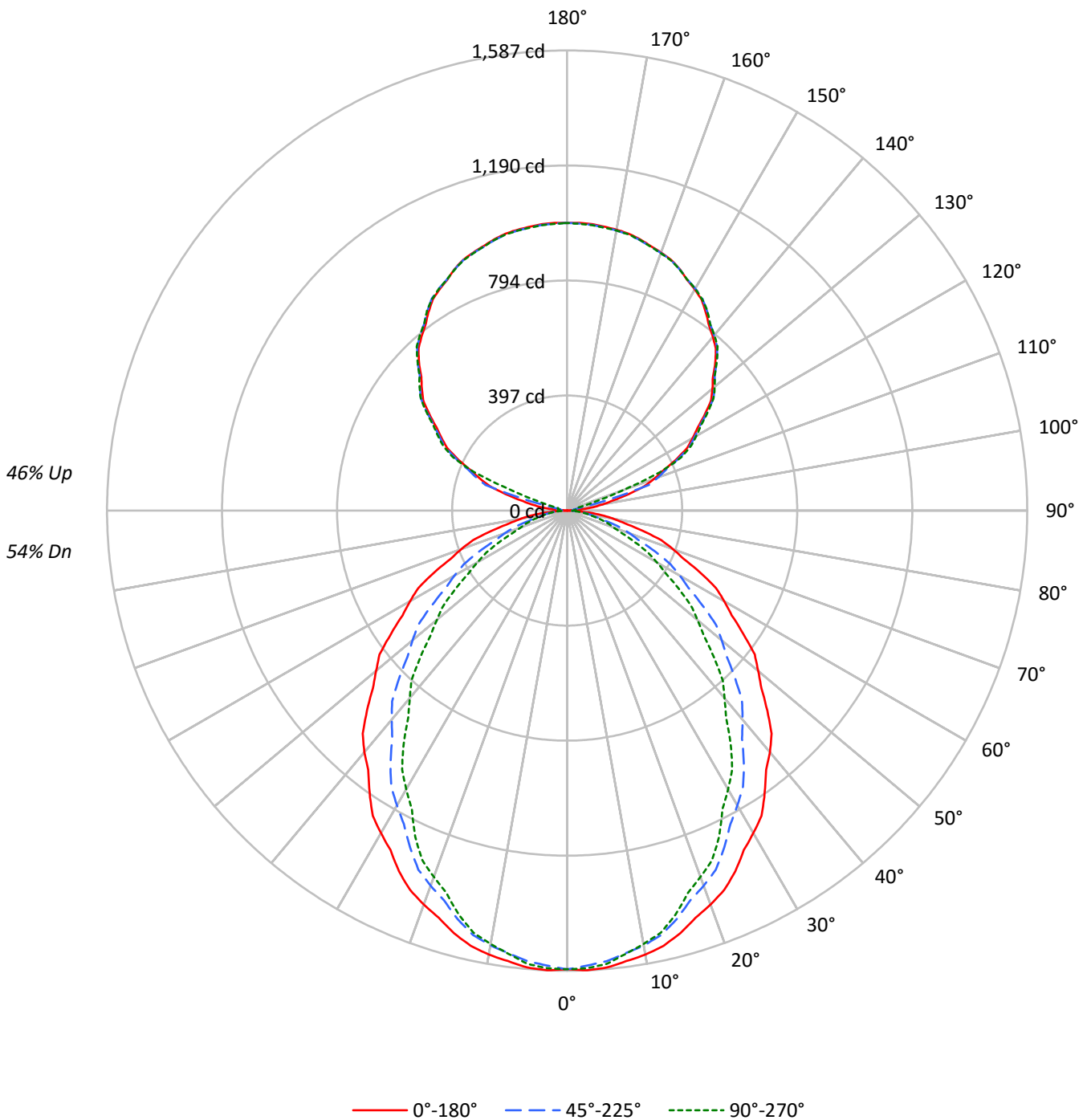
Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54
1	99	95	91	88	92	88	85	82	76	73	71	64	62	61	54	52	51	46
2	90	83	77	72	84	77	72	68	67	63	59	57	54	51	48	46	44	39
3	83	73	66	61	77	68	62	57	59	54	50	50	47	44	42	40	38	34
4	76	65	57	51	70	61	54	49	53	47	43	45	41	38	38	35	33	29
5	70	58	50	44	65	55	47	42	47	42	37	41	36	33	34	31	29	26
6	64	52	44	39	60	49	42	37	43	37	33	37	32	29	31	28	25	23
7	60	47	40	34	55	45	37	32	39	33	29	34	29	26	29	25	23	20
8	55	43	36	30	51	41	34	29	36	30	26	31	26	23	26	23	20	18
9	52	40	32	27	48	37	30	26	33	27	23	28	24	21	24	21	19	16
10	48	36	29	24	45	34	28	23	30	25	21	26	22	19	23	19	17	15

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	17026	17026	17026
5°	17091	16855	16953
10°	16994	16644	16587
15°	16811	16254	16082
20°	16561	15767	15400
25°	16302	15221	14733
30°	15960	14589	13793
35°	15609	13958	12929
40°	15286	13212	11861
45°	14862	12478	10898
50°	14393	11643	9818
55°	13915	10689	8811
60°	13476	9666	7705
65°	12905	8560	6599
70°	12192	7188	5331
75°	11154	5656	5016
80°	9937	5009	4612
85°	8398	4434	4125



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.5	2.3
10°-20°	413.3	6.3
20°-30°	595.1	9.0
30°-40°	670.3	10.2
40°-50°	641.3	9.7
50°-60°	525.1	8.0
60°-70°	354.3	5.4
70°-80°	178.2	2.7
80°-90°	49.9	0.8
90°-100°	36.1	0.5
100°-110°	171.9	2.6
110°-120°	412.8	6.3
120°-130°	525.7	8.0
130°-140°	561.7	8.5
140°-150°	525.2	8.0
150°-160°	423.7	6.4
160°-170°	273.4	4.1
170°-180°	94.2	1.4
0°-30°	1156.9	17.5
0°-40°	1827.2	27.7
0°-60°	2993.6	45.4
0°-90°	3576.1	54.2
90°-120°	620.7	9.4
90°-150°	2233.3	33.8
90°-180°	3025.0	45.8
0°-180°	6600.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1582	1582	1582	1582	1582	
5°	1582	1575	1560	1571	1569	150
15°	1509	1493	1459	1452	1443	425
25°	1373	1339	1282	1255	1240	631
35°	1188	1140	1062	1009	984	743
45°	976	916	820	749	716	753
55°	742	676	570	498	470	665
65°	507	435	336	276	259	501
75°	268	206	136	124	121	286
85°	68	41	36	34	33	76
90°	1	8	18	21	22	5
95°	45	17	23	28	28	56
105°	220	224	161	38	32	233
115°	412	416	423	430	433	406
125°	581	586	590	591	592	518
135°	723	727	730	732	730	556
145°	834	839	841	842	842	522
155°	919	918	918	921	917	423
165°	969	967	966	971	967	274
175°	992	988	989	993	988	94
180°	992	992	992	992	992	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8
2.5°	1586.9	1585.9	1585.1	1584.1	1583.2	1581.4	1578.7	1575.9	1573.2	1570.5	1572.9
5°	1581.8	1580.3	1578.9	1577.4	1576.0	1573.6	1570.2	1566.8	1563.4	1559.9	1562.5
7.5°	1567.1	1565.6	1564.1	1562.5	1560.9	1557.9	1553.5	1549.1	1544.6	1540.2	1541.6
10°	1554.8	1552.8	1550.8	1548.8	1546.8	1543.2	1538.1	1533.0	1527.9	1522.8	1523.1
12.5°	1537.4	1535.1	1533.0	1530.7	1528.4	1524.2	1518.0	1511.6	1505.4	1499.1	1498.9
15°	1508.6	1505.5	1502.3	1499.2	1496.1	1490.5	1482.5	1474.5	1466.6	1458.6	1457.2
17.5°	1472.4	1468.8	1465.2	1461.5	1457.8	1451.0	1440.8	1430.7	1420.5	1410.3	1407.3
20°	1445.8	1441.2	1436.6	1432.1	1427.5	1419.8	1409.0	1398.2	1387.3	1376.5	1372.8
22.5°	1416.0	1410.8	1405.5	1400.2	1395.1	1386.7	1375.1	1363.6	1352.1	1340.6	1336.0
25°	1372.6	1365.6	1358.4	1351.2	1344.2	1334.0	1320.9	1307.8	1294.7	1281.6	1275.5
27.5°	1320.0	1312.2	1304.3	1296.5	1288.5	1277.3	1262.7	1248.1	1233.5	1219.0	1210.6
30°	1284.1	1275.5	1267.1	1258.5	1249.9	1237.7	1221.7	1205.7	1189.8	1173.8	1164.1
32.5°	1248.2	1238.5	1228.8	1219.1	1209.5	1196.2	1179.3	1162.4	1145.5	1128.6	1118.0
35°	1187.9	1177.6	1167.3	1157.2	1146.9	1132.8	1115.2	1097.5	1079.9	1062.2	1049.9
37.5°	1126.8	1115.4	1104.0	1092.6	1081.2	1066.1	1047.3	1028.3	1009.5	990.6	976.7
40°	1087.9	1075.3	1062.7	1050.2	1037.6	1021.2	1001.1	980.8	960.5	940.3	925.5
42.5°	1043.7	1031.1	1018.6	1006.1	993.5	976.9	955.9	935.0	914.1	893.2	876.9
45°	976.3	963.4	950.6	937.7	924.9	907.6	885.6	863.7	841.7	819.7	803.5
47.5°	908.8	894.7	880.6	866.5	852.4	834.4	812.5	790.5	768.5	746.6	729.0
50°	859.5	846.1	832.7	819.4	805.9	787.7	764.6	741.5	718.4	695.3	677.6
52.5°	815.4	800.9	786.3	771.8	757.2	738.5	715.7	692.8	670.0	647.1	628.7
55°	741.5	727.5	713.5	699.6	685.6	666.5	642.2	618.0	593.8	569.6	553.1
57.5°	673.3	658.0	642.8	627.5	612.4	592.6	568.2	543.8	519.5	495.2	479.6
60°	626.0	610.4	594.7	579.0	563.3	543.7	520.0	496.3	472.7	449.0	433.6
62.5°	578.8	563.2	547.4	531.8	516.1	496.4	472.8	449.1	425.5	401.8	387.3
65°	506.7	491.1	475.3	459.7	444.0	425.1	402.8	380.6	358.4	336.1	322.2
67.5°	434.6	418.8	402.9	387.1	371.3	352.6	331.3	310.0	288.7	267.3	256.9
70°	387.4	372.0	356.7	341.2	325.8	308.2	288.2	268.2	248.3	228.4	218.4
72.5°	340.2	325.1	309.9	294.7	279.6	262.9	244.8	226.7	208.5	190.4	182.2
75°	268.2	254.4	240.7	227.1	213.4	198.7	183.0	167.3	151.7	136.0	133.1
77.5°	202.5	190.0	177.7	165.3	153.0	141.7	131.6	121.5	111.4	101.3	99.8
80°	160.3	148.6	137.0	125.3	113.6	104.8	98.8	92.7	86.8	80.8	79.9
82.5°	120.4	110.3	100.2	90.0	79.9	73.5	70.7	68.0	65.1	62.3	61.5
85°	68.0	61.7	55.4	49.2	42.9	39.3	38.5	37.6	36.8	35.9	35.3
87.5°	24.8	22.6	20.5	18.2	16.0	15.2	15.6	16.0	16.5	16.9	16.8
90°	0.8	2.4	4.1	5.7	7.3	9.1	11.3	13.4	15.6	17.7	18.4
92.5°	13.7	13.3	12.8	12.3	11.9	12.4	14.0	15.6	17.2	18.9	19.9
95°	45.0	38.3	31.5	24.8	18.1	15.6	17.4	19.2	21.0	22.8	24.0
97.5°	90.3	87.4	84.4	81.3	78.3	70.9	59.1	47.3	35.5	23.8	25.1
100°	124.5	127.8	131.1	134.3	137.6	126.5	100.9	75.4	49.9	24.3	25.6
102.5°	163.4	165.8	168.1	170.5	172.9	160.1	132.2	104.2	76.3	48.4	44.4
105°	219.6	221.4	223.2	225.0	226.8	220.4	205.6	190.9	176.1	161.4	132.4
107.5°	278.8	280.3	281.7	283.1	284.6	286.4	288.8	291.2	293.4	295.8	274.6
110°	318.3	319.6	320.9	322.3	323.6	325.1	327.0	328.8	330.5	332.3	327.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	356.1	357.2	358.4	359.6	360.8	362.2	364.1	365.9	367.7	369.5	369.6
115°	411.9	412.9	413.9	414.9	415.8	417.1	418.6	420.0	421.5	423.0	424.6
117.5°	466.0	467.2	468.4	469.7	470.8	471.8	472.6	473.3	474.1	474.9	476.2
120°	499.6	501.1	502.6	504.0	505.5	506.5	507.0	507.5	507.9	508.4	509.7
122.5°	533.8	535.0	536.2	537.4	538.7	539.5	540.2	540.8	541.4	542.1	543.0
125°	580.7	581.9	583.2	584.6	585.9	586.9	587.6	588.1	588.8	589.5	589.8
127.5°	626.0	627.4	628.7	630.0	631.3	632.4	633.1	634.0	634.7	635.5	636.0
130°	654.3	655.6	657.0	658.3	659.6	660.5	661.2	661.9	662.5	663.2	663.8
132.5°	681.5	682.8	684.1	685.4	686.7	687.6	688.2	688.6	689.2	689.8	690.4
135°	722.8	723.9	724.8	725.9	726.8	727.6	728.3	729.0	729.6	730.3	730.8
137.5°	758.3	759.5	760.7	762.0	763.2	764.0	764.4	764.8	765.1	765.4	766.3
140°	781.8	782.8	783.8	784.8	785.8	786.5	787.0	787.5	788.0	788.4	789.1
142.5°	803.6	804.6	805.6	806.6	807.6	808.3	808.8	809.3	809.7	810.3	810.8
145°	834.2	835.3	836.4	837.5	838.8	839.4	839.8	840.1	840.5	840.7	841.1
147.5°	862.9	863.7	864.4	865.2	865.9	866.5	866.8	867.0	867.4	867.7	868.1
150°	880.5	881.1	881.6	882.0	882.5	883.0	883.3	883.6	883.9	884.3	884.6
152.5°	896.5	896.7	896.9	897.2	897.4	897.6	897.8	898.0	898.2	898.4	899.0
155°	918.9	918.6	918.2	917.9	917.6	917.5	917.7	917.8	917.9	918.1	919.0
157.5°	936.2	936.2	936.2	936.1	936.1	936.0	935.9	935.8	935.6	935.4	936.4
160°	946.9	946.7	946.6	946.4	946.2	946.0	945.9	945.7	945.6	945.4	946.4
162.5°	956.9	956.5	956.0	955.6	955.2	954.9	954.7	954.6	954.4	954.2	955.4
165°	969.0	968.5	968.0	967.5	967.0	966.7	966.6	966.4	966.2	966.0	967.3
167.5°	978.5	977.8	977.1	976.5	975.8	975.4	975.4	975.4	975.4	975.4	976.8
170°	983.7	983.1	982.4	981.8	981.1	980.8	980.8	980.8	980.8	980.8	982.1
172.5°	987.2	986.5	985.7	984.9	984.1	983.8	983.9	984.0	984.2	984.3	985.6
175°	991.8	991.0	990.2	989.4	988.5	988.3	988.4	988.5	988.7	988.9	990.0
177.5°	993.0	992.4	991.7	991.1	990.4	990.1	990.2	990.4	990.5	990.6	991.7
180°	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8	1581.8
2.5°	1575.5	1578.0	1580.5	1581.5	1581.0	1580.6	1580.2	1579.7
5°	1565.1	1567.6	1570.2	1571.2	1570.7	1570.1	1569.5	1569.0
7.5°	1543.0	1544.5	1545.9	1546.1	1545.1	1544.2	1543.2	1542.2
10°	1523.3	1523.6	1523.9	1523.3	1521.8	1520.4	1519.0	1517.6
12.5°	1498.7	1498.6	1498.5	1497.5	1495.9	1494.2	1492.6	1490.9
15°	1455.8	1454.3	1452.9	1451.1	1449.2	1447.2	1445.2	1443.2
17.5°	1404.3	1401.3	1398.3	1395.2	1392.3	1389.3	1386.4	1383.4
20°	1369.0	1365.4	1361.7	1358.1	1354.7	1351.2	1347.8	1344.4
22.5°	1331.3	1326.7	1322.1	1318.1	1315.0	1311.8	1308.6	1305.4
25°	1269.6	1263.6	1257.6	1253.0	1249.9	1246.8	1243.7	1240.5
27.5°	1202.3	1194.0	1185.6	1179.1	1174.3	1169.5	1164.7	1160.0
30°	1154.4	1144.7	1135.0	1127.9	1123.3	1118.8	1114.2	1109.7
32.5°	1107.4	1096.8	1086.2	1078.6	1073.7	1068.9	1064.1	1059.3
35°	1037.6	1025.4	1013.1	1004.5	999.4	994.2	989.1	983.9
37.5°	962.8	948.9	935.0	924.8	918.5	912.2	905.9	899.6
40°	910.7	895.9	881.0	870.3	863.7	857.2	850.6	844.1
42.5°	860.7	844.5	828.3	817.3	811.4	805.6	799.7	793.8
45°	787.2	771.0	754.7	743.2	736.3	729.5	722.6	715.9
47.5°	711.2	693.6	675.9	664.0	657.9	651.9	645.7	639.6
50°	660.0	642.2	624.6	612.5	606.0	599.4	592.9	586.3
52.5°	610.4	592.0	573.6	561.5	555.6	549.8	543.9	538.0
55°	536.5	520.0	503.4	492.3	486.6	480.9	475.2	469.5
57.5°	463.9	448.3	432.7	422.4	417.6	412.7	407.9	403.0
60°	418.2	402.8	387.4	377.3	372.5	367.6	362.8	357.9
62.5°	372.8	358.4	343.8	334.0	329.0	324.0	318.9	313.8
65°	308.2	294.2	280.2	271.6	268.5	265.4	262.3	259.1
67.5°	246.5	236.0	225.6	218.7	215.4	212.0	208.6	205.3
70°	208.4	198.4	188.4	181.9	178.7	175.6	172.5	169.4
72.5°	174.1	165.9	157.8	153.1	151.7	150.4	149.1	147.8
75°	130.3	127.4	124.6	122.9	122.3	121.7	121.1	120.6
77.5°	98.3	96.7	95.2	94.2	93.6	93.0	92.5	91.9
80°	79.1	78.2	77.4	76.7	76.2	75.6	74.9	74.4
82.5°	60.6	59.8	58.9	58.4	58.3	58.2	58.1	58.0
85°	34.8	34.2	33.6	33.4	33.4	33.4	33.4	33.4
87.5°	16.7	16.6	16.5	16.4	16.2	16.0	15.8	15.7
90°	19.0	19.6	20.3	20.8	21.1	21.5	21.8	22.1
92.5°	20.9	22.0	23.1	23.7	23.8	24.0	24.2	24.5
95°	25.2	26.3	27.4	28.0	28.0	28.0	28.0	28.0
97.5°	26.4	27.6	28.9	29.7	29.9	30.1	30.2	30.3
100°	27.0	28.3	29.6	30.3	30.4	30.6	30.8	30.9
102.5°	40.3	36.3	32.2	30.3	30.6	30.9	31.2	31.6
105°	103.4	74.5	45.4	31.1	31.5	31.8	32.1	32.4
107.5°	253.3	232.1	210.8	189.2	167.4	145.5	123.7	101.8
110°	321.5	316.1	310.8	296.3	272.9	249.5	226.0	202.6





TEST NUMBER: P332345-830

CATALOG NUMBER: S123RDIP-S1000D805U830-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	369.7	369.8	369.9	367.4	362.5	357.5	352.6	347.7
115°	426.2	427.9	429.5	430.6	431.3	432.0	432.6	433.3
117.5°	477.5	478.8	480.0	480.8	481.0	481.1	481.2	481.4
120°	511.0	512.4	513.7	514.3	514.3	514.3	514.3	514.3
122.5°	543.8	544.8	545.7	546.2	546.4	546.5	546.7	546.8
125°	590.1	590.5	590.8	591.2	591.4	591.8	592.1	592.5
127.5°	636.5	637.1	637.5	637.6	637.3	637.1	636.7	636.4
130°	664.5	665.2	665.8	666.0	665.6	665.3	665.0	664.7
132.5°	691.0	691.6	692.3	692.4	692.0	691.5	691.1	690.6
135°	731.2	731.7	732.2	732.2	731.7	731.2	730.8	730.3
137.5°	767.0	767.8	768.6	768.8	768.5	768.2	767.9	767.5
140°	789.8	790.4	791.1	791.3	790.9	790.6	790.2	789.9
142.5°	811.3	811.8	812.4	812.4	811.9	811.4	811.1	810.6
145°	841.4	841.8	842.1	842.3	842.3	842.3	842.3	842.3
147.5°	868.4	868.7	869.0	868.8	868.1	867.3	866.6	865.8
150°	884.9	885.2	885.5	885.5	885.0	884.5	884.0	883.5
152.5°	899.6	900.1	900.8	900.7	899.9	899.2	898.4	897.7
155°	919.8	920.6	921.4	921.3	920.4	919.4	918.4	917.4
157.5°	937.4	938.3	939.3	939.1	937.9	936.6	935.4	934.1
160°	947.3	948.4	949.3	949.2	948.1	947.0	945.8	944.7
162.5°	956.5	957.6	958.7	958.8	957.7	956.7	955.7	954.7
165°	968.7	970.0	971.3	971.4	970.3	969.0	967.9	966.8
167.5°	978.1	979.4	980.7	980.7	979.4	978.1	976.8	975.4
170°	983.4	984.7	986.0	986.0	984.7	983.4	982.1	980.8
172.5°	986.9	988.3	989.6	989.5	988.1	986.7	985.1	983.7
175°	991.2	992.3	993.4	993.3	992.1	990.8	989.5	988.2
177.5°	992.8	993.8	994.9	994.8	993.4	992.1	990.8	989.5
180°	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8

(END OF REPORT)