

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: P332339

Luminaire Tested: **S123RDIP-S1000D585U835-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332339  
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-S1000D585U835-4F0-1E-UDD-F  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 585 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6134.4 lumens  
Efficiency: N/A  
Efficacy: 125.7 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: Semi-Direct

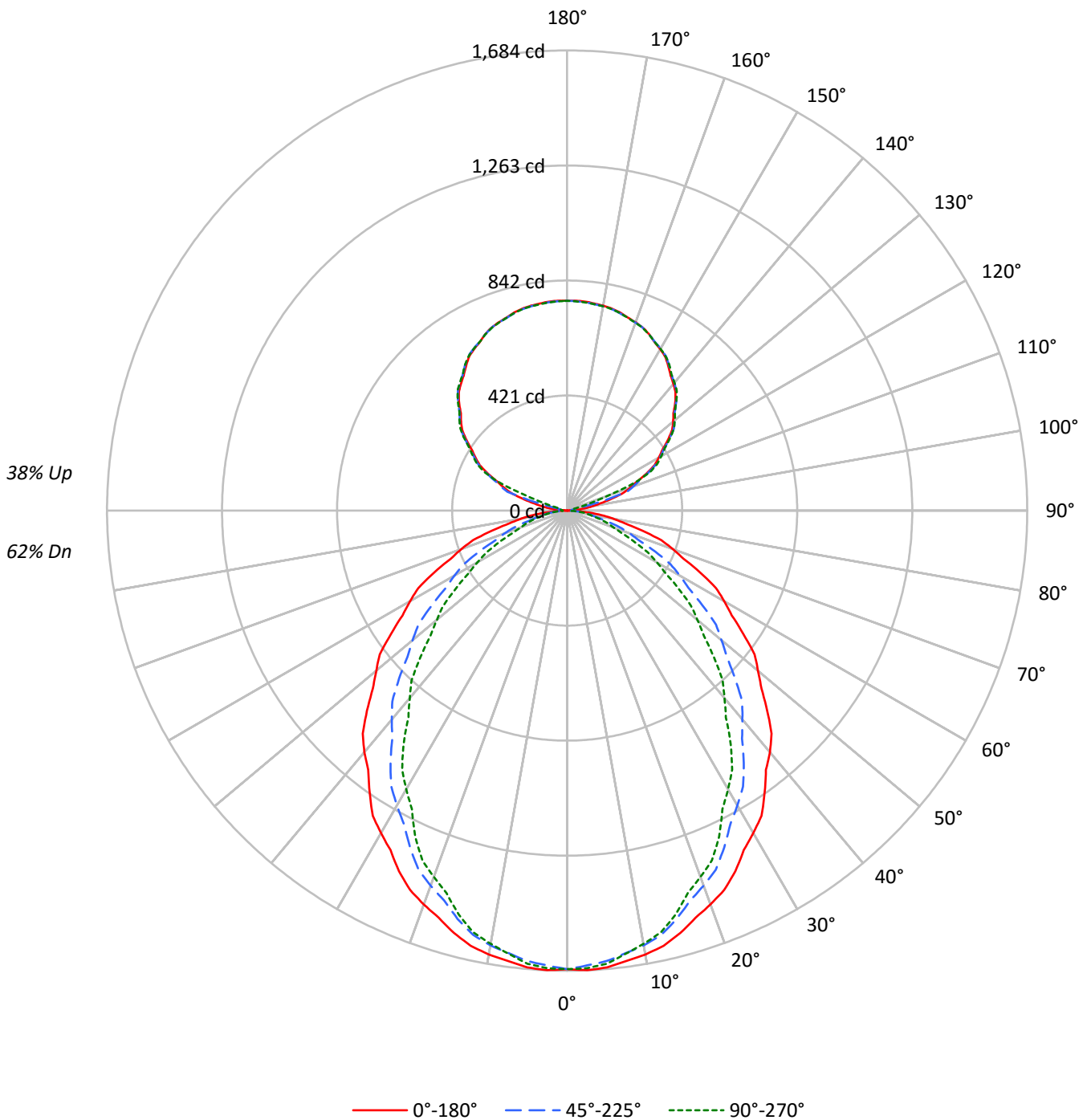
Input Watts (W): 48.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62
1	101	97	93	89	94	91	87	84	80	77	75	69	67	66	60	59	57	53
2	92	85	79	74	86	80	74	70	70	66	63	61	58	56	53	51	49	45
3	84	75	68	62	79	71	64	59	62	57	53	55	51	47	47	45	42	39
4	77	67	59	53	72	63	56	50	56	50	46	49	45	41	43	39	37	33
5	71	60	51	45	67	56	49	44	50	44	40	44	39	36	39	35	32	29
6	66	54	46	40	61	51	43	38	45	39	35	40	35	32	35	31	28	26
7	61	49	41	35	57	46	39	34	41	35	31	37	32	28	32	28	25	23
8	57	44	37	31	53	42	35	30	38	32	28	34	29	25	30	26	23	21
9	53	41	33	28	50	39	32	27	35	29	25	31	26	23	27	24	21	19
10	49	37	30	25	46	36	29	24	32	26	23	29	24	21	26	22	19	17

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

	0°	45°	90°
0°	18064	18064	18064
5°	18133	17882	17986
10°	18030	17658	17598
15°	17836	17245	17063
20°	17570	16728	16339
25°	17296	16149	15631
30°	16933	15479	14633
35°	16561	14808	13717
40°	16218	14018	12584
45°	15767	13239	11561
50°	15270	12353	10416
55°	14763	11340	9348
60°	14299	10256	8174
65°	13692	9082	7002
70°	12935	7626	5655
75°	11832	6001	5319
80°	10544	5312	4891
85°	8904	4705	4372



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	157.6	2.6
10°-20°	438.5	7.1
20°-30°	631.4	10.3
30°-40°	711.2	11.6
40°-50°	680.4	11.1
50°-60°	557.2	9.1
60°-70°	375.9	6.1
70°-80°	189.1	3.1
80°-90°	52.2	0.9
90°-100°	27.9	0.5
100°-110°	133.0	2.2
110°-120°	319.5	5.2
120°-130°	406.9	6.6
130°-140°	434.7	7.1
140°-150°	406.5	6.6
150°-160°	327.9	5.3
160°-170°	211.6	3.5
170°-180°	72.9	1.2
0°-30°	1227.4	20.0
0°-40°	1938.6	31.6
0°-60°	3176.1	51.8
0°-90°	3793.3	61.8
90°-120°	480.5	7.8
90°-150°	1728.6	28.2
90°-180°	2341.0	38.2
0°-180°	6134.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1678	1678	1678	1678	1678	
5°	1678	1671	1655	1666	1665	159
15°	1601	1584	1548	1541	1531	451
25°	1456	1421	1360	1332	1316	669
35°	1260	1209	1127	1070	1044	788
45°	1036	972	870	795	760	799
55°	787	717	604	528	498	705
65°	538	461	357	293	275	532
75°	284	219	144	131	128	303
85°	72	44	38	36	35	81
90°	1	6	14	16	17	5
95°	35	13	18	21	22	43
105°	170	173	125	30	25	180
115°	319	322	327	333	335	315
125°	449	454	456	457	459	401
135°	560	563	565	567	565	431
145°	646	650	651	652	652	404
155°	711	710	711	713	710	328
165°	750	748	748	752	748	212
175°	768	765	765	769	765	73
180°	768	768	768	768	768	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2
2.5°	1683.6	1682.6	1681.7	1680.7	1679.7	1677.8	1674.9	1672.0	1669.1	1666.2	1668.8
5°	1678.2	1676.6	1675.1	1673.6	1672.1	1669.5	1665.9	1662.3	1658.7	1655.0	1657.7
7.5°	1662.6	1661.0	1659.4	1657.7	1656.1	1652.9	1648.2	1643.5	1638.8	1634.1	1635.6
10°	1649.6	1647.5	1645.3	1643.2	1641.1	1637.3	1631.9	1626.4	1621.0	1615.6	1615.9
12.5°	1631.1	1628.7	1626.4	1624.0	1621.6	1617.1	1610.5	1603.8	1597.2	1590.5	1590.3
15°	1600.6	1597.3	1593.9	1590.6	1587.3	1581.4	1572.9	1564.4	1556.0	1547.5	1546.0
17.5°	1562.2	1558.3	1554.5	1550.6	1546.7	1539.4	1528.6	1517.9	1507.1	1496.3	1493.1
20°	1533.9	1529.1	1524.2	1519.4	1514.5	1506.4	1494.9	1483.4	1471.9	1460.4	1456.5
22.5°	1502.3	1496.8	1491.2	1485.6	1480.1	1471.2	1458.9	1446.7	1434.5	1422.3	1417.4
25°	1456.3	1448.8	1441.2	1433.6	1426.1	1415.3	1401.4	1387.5	1373.6	1359.7	1353.3
27.5°	1400.5	1392.2	1383.8	1375.5	1367.1	1355.2	1339.7	1324.2	1308.7	1293.3	1284.4
30°	1362.4	1353.3	1344.3	1335.2	1326.1	1313.1	1296.2	1279.2	1262.3	1245.4	1235.1
32.5°	1324.3	1314.0	1303.7	1293.4	1283.2	1269.1	1251.2	1233.3	1215.3	1197.4	1186.2
35°	1260.3	1249.4	1238.5	1227.7	1216.8	1201.9	1183.2	1164.4	1145.7	1126.9	1113.9
37.5°	1195.5	1183.4	1171.3	1159.2	1147.1	1131.1	1111.1	1091.0	1071.0	1051.0	1036.2
40°	1154.2	1140.9	1127.5	1114.2	1100.9	1083.5	1062.1	1040.6	1019.1	997.6	981.9
42.5°	1107.3	1094.0	1080.7	1067.4	1054.1	1036.4	1014.2	992.0	969.8	947.6	930.4
45°	1035.8	1022.1	1008.5	994.9	981.3	962.9	939.6	916.3	893.0	869.7	852.5
47.5°	964.2	949.2	934.3	919.3	904.4	885.3	862.0	838.7	815.4	792.1	773.4
50°	911.9	897.7	883.5	869.3	855.0	835.7	811.2	786.7	762.2	737.7	718.9
52.5°	865.1	849.7	834.2	818.8	803.4	783.5	759.3	735.0	710.8	686.5	667.0
55°	786.7	771.9	757.0	742.2	727.4	707.1	681.4	655.7	630.0	604.3	586.8
57.5°	714.3	698.1	682.0	665.8	649.7	628.7	602.8	577.0	551.2	525.4	508.8
60°	664.2	647.6	630.9	614.3	597.6	576.8	551.7	526.6	501.5	476.4	460.0
62.5°	614.1	597.5	580.8	564.2	547.6	526.7	501.6	476.5	451.4	426.3	410.9
65°	537.6	521.0	504.3	487.7	471.1	451.0	427.4	403.8	380.2	356.6	341.8
67.5°	461.1	444.3	427.5	410.7	393.9	374.1	351.5	328.9	306.3	283.6	272.6
70°	411.0	394.7	378.4	362.0	345.7	327.0	305.8	284.6	263.4	242.3	231.7
72.5°	360.9	344.9	328.8	312.7	296.6	278.9	259.7	240.5	221.2	202.0	193.3
75°	284.5	269.9	255.4	240.9	226.4	210.8	194.2	177.5	160.9	144.3	141.2
77.5°	214.8	201.6	188.5	175.4	162.3	150.3	139.6	128.9	118.2	107.5	105.9
80°	170.1	157.7	145.3	132.9	120.5	111.2	104.8	98.4	92.1	85.7	84.8
82.5°	127.7	117.0	106.3	95.5	84.8	78.0	75.0	72.1	69.1	66.1	65.2
85°	72.1	65.5	58.8	52.2	45.5	41.7	40.8	39.9	39.0	38.1	37.5
87.5°	26.2	23.8	21.4	19.0	16.6	15.6	15.9	16.2	16.6	16.9	16.8
90°	0.6	1.8	3.1	4.4	5.6	7.1	8.7	10.4	12.0	13.7	14.2
92.5°	10.6	10.3	9.9	9.5	9.2	9.6	10.9	12.1	13.4	14.6	15.4
95°	34.8	29.6	24.4	19.2	14.0	12.1	13.5	14.9	16.3	17.7	18.6
97.5°	69.9	67.6	65.3	62.9	60.6	54.9	45.7	36.6	27.5	18.4	19.4
100°	96.4	98.9	101.5	104.0	106.5	97.9	78.1	58.4	38.6	18.8	19.8
102.5°	126.5	128.3	130.2	132.0	133.8	123.9	102.3	80.7	59.1	37.5	34.4
105°	170.0	171.4	172.8	174.1	175.5	170.5	159.1	147.7	136.3	124.9	102.5
107.5°	215.8	216.9	218.1	219.2	220.3	221.7	223.5	225.3	227.1	228.9	212.5
110°	246.4	247.4	248.4	249.4	250.4	251.7	253.0	254.4	255.8	257.2	253.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	275.6	276.5	277.4	278.3	279.2	280.4	281.8	283.2	284.6	286.0	286.1
115°	318.8	319.6	320.3	321.1	321.9	322.8	324.0	325.1	326.2	327.4	328.7
117.5°	360.7	361.6	362.6	363.5	364.4	365.2	365.8	366.4	367.0	367.5	368.6
120°	386.7	387.8	389.0	390.1	391.3	392.0	392.4	392.8	393.2	393.5	394.6
122.5°	413.2	414.1	415.0	416.0	416.9	417.6	418.1	418.6	419.1	419.6	420.3
125°	449.4	450.5	451.5	452.5	453.5	454.3	454.8	455.3	455.8	456.3	456.5
127.5°	484.6	485.6	486.6	487.6	488.6	489.4	490.0	490.7	491.3	491.9	492.3
130°	506.5	507.5	508.5	509.5	510.5	511.3	511.8	512.3	512.8	513.3	513.8
132.5°	527.5	528.5	529.5	530.5	531.5	532.2	532.6	533.0	533.4	533.9	534.4
135°	559.5	560.3	561.0	561.8	562.6	563.2	563.7	564.2	564.7	565.2	565.6
137.5°	586.9	587.9	588.8	589.8	590.7	591.4	591.6	591.9	592.2	592.5	593.1
140°	605.1	605.9	606.7	607.4	608.2	608.8	609.1	609.5	609.9	610.3	610.8
142.5°	622.0	622.8	623.6	624.3	625.1	625.6	626.0	626.4	626.8	627.2	627.6
145°	645.6	646.5	647.4	648.3	649.2	649.8	650.0	650.3	650.5	650.8	651.0
147.5°	667.9	668.5	669.1	669.6	670.2	670.6	670.9	671.1	671.4	671.7	671.9
150°	681.6	682.0	682.3	682.7	683.1	683.4	683.7	683.9	684.2	684.4	684.7
152.5°	693.9	694.1	694.2	694.4	694.6	694.8	694.9	695.1	695.2	695.4	695.8
155°	711.2	711.0	710.7	710.5	710.2	710.2	710.3	710.4	710.5	710.7	711.3
157.5°	724.7	724.7	724.6	724.6	724.6	724.5	724.4	724.3	724.1	724.0	724.8
160°	732.9	732.8	732.7	732.5	732.4	732.3	732.1	732.0	731.9	731.8	732.5
162.5°	740.7	740.3	740.0	739.7	739.3	739.1	739.0	738.9	738.7	738.6	739.5
165°	750.0	749.6	749.3	748.9	748.5	748.2	748.1	748.0	747.9	747.7	748.8
167.5°	757.3	756.8	756.3	755.8	755.3	755.0	755.0	755.0	755.0	755.0	756.1
170°	761.4	760.9	760.4	759.9	759.4	759.1	759.1	759.1	759.1	759.1	760.2
172.5°	764.2	763.6	762.9	762.3	761.7	761.5	761.6	761.7	761.8	761.9	762.9
175°	767.7	767.1	766.4	765.8	765.2	764.9	765.0	765.2	765.3	765.4	766.3
177.5°	768.6	768.1	767.6	767.1	766.6	766.4	766.5	766.6	766.7	766.8	767.6
180°	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2	1678.2
2.5°	1671.5	1674.2	1676.8	1677.9	1677.4	1677.0	1676.5	1676.0
5°	1660.5	1663.2	1665.9	1667.0	1666.4	1665.8	1665.2	1664.6
7.5°	1637.1	1638.6	1640.1	1640.4	1639.3	1638.3	1637.3	1636.2
10°	1616.2	1616.5	1616.8	1616.2	1614.6	1613.1	1611.6	1610.1
12.5°	1590.1	1590.0	1589.8	1588.8	1587.1	1585.3	1583.6	1581.8
15°	1544.5	1543.0	1541.5	1539.6	1537.5	1535.4	1533.3	1531.2
17.5°	1489.9	1486.7	1483.5	1480.3	1477.2	1474.0	1470.9	1467.7
20°	1452.5	1448.6	1444.7	1440.9	1437.3	1433.6	1430.0	1426.4
22.5°	1412.5	1407.6	1402.7	1398.5	1395.2	1391.8	1388.4	1385.0
25°	1347.0	1340.6	1334.3	1329.4	1326.1	1322.8	1319.5	1316.1
27.5°	1275.6	1266.8	1257.9	1251.0	1245.9	1240.8	1235.7	1230.7
30°	1224.8	1214.5	1204.2	1196.7	1191.8	1187.0	1182.1	1177.3
32.5°	1174.9	1163.7	1152.4	1144.3	1139.2	1134.1	1129.0	1123.9
35°	1100.9	1087.9	1074.9	1065.7	1060.3	1054.8	1049.4	1043.9
37.5°	1021.5	1006.7	992.0	981.2	974.5	967.8	961.1	954.4
40°	966.2	950.5	934.7	923.4	916.4	909.5	902.5	895.6
42.5°	913.2	896.0	878.8	867.1	860.9	854.7	848.4	842.2
45°	835.2	818.0	800.7	788.5	781.2	774.0	766.7	759.5
47.5°	754.6	735.9	717.1	704.5	698.0	691.6	685.1	678.6
50°	700.2	681.4	662.7	649.8	642.9	635.9	629.0	622.0
52.5°	647.6	628.1	608.6	595.7	589.5	583.3	577.1	570.8
55°	569.2	551.7	534.1	522.3	516.3	510.2	504.2	498.1
57.5°	492.2	475.6	459.1	448.2	443.1	437.9	432.8	427.6
60°	443.7	427.4	411.0	400.3	395.2	390.0	384.9	379.7
62.5°	395.5	380.2	364.8	354.4	349.1	343.7	338.3	332.9
65°	327.0	312.1	297.3	288.2	284.9	281.6	278.3	274.9
67.5°	261.5	250.4	239.4	232.0	228.5	224.9	221.3	217.8
70°	221.1	210.5	199.9	193.0	189.6	186.3	183.0	179.7
72.5°	184.7	176.0	167.4	162.4	161.0	159.6	158.2	156.8
75°	138.2	135.2	132.2	130.4	129.8	129.1	128.5	127.9
77.5°	104.3	102.6	101.0	99.9	99.3	98.7	98.1	97.5
80°	83.9	83.0	82.1	81.4	80.8	80.2	79.5	78.9
82.5°	64.3	63.4	62.5	62.0	61.9	61.8	61.6	61.5
85°	36.9	36.3	35.7	35.4	35.4	35.4	35.4	35.4
87.5°	16.6	16.5	16.3	16.2	16.0	15.8	15.6	15.4
90°	14.7	15.2	15.7	16.1	16.4	16.6	16.9	17.1
92.5°	16.2	17.0	17.8	18.3	18.5	18.6	18.8	18.9
95°	19.5	20.3	21.2	21.7	21.7	21.7	21.7	21.7
97.5°	20.4	21.4	22.4	23.0	23.1	23.2	23.4	23.5
100°	20.8	21.9	22.9	23.4	23.6	23.7	23.8	24.0
102.5°	31.2	28.1	25.0	23.5	23.7	24.0	24.2	24.4
105°	80.0	57.6	35.2	24.1	24.3	24.6	24.8	25.1
107.5°	196.0	179.6	163.1	146.5	129.5	112.6	95.7	78.8
110°	248.9	244.7	240.5	229.3	211.2	193.1	175.0	156.8





TEST NUMBER: P332339

CATALOG NUMBER: S123RDIP-S1000D585U835-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	286.1	286.2	286.3	284.4	280.6	276.7	272.9	269.1
115°	329.9	331.2	332.5	333.3	333.8	334.4	334.9	335.4
117.5°	369.6	370.6	371.6	372.2	372.3	372.4	372.5	372.6
120°	395.6	396.6	397.6	398.1	398.1	398.1	398.1	398.1
122.5°	421.0	421.7	422.4	422.8	422.9	423.0	423.1	423.2
125°	456.8	457.0	457.3	457.6	457.8	458.1	458.3	458.6
127.5°	492.7	493.1	493.5	493.6	493.3	493.1	492.8	492.6
130°	514.3	514.8	515.3	515.5	515.2	515.0	514.7	514.5
132.5°	534.9	535.4	535.9	536.0	535.6	535.2	534.9	534.5
135°	566.0	566.4	566.7	566.7	566.4	566.0	565.6	565.2
137.5°	593.7	594.3	594.9	595.1	594.8	594.6	594.3	594.1
140°	611.3	611.8	612.3	612.4	612.2	611.9	611.7	611.4
142.5°	628.0	628.4	628.8	628.8	628.5	628.1	627.7	627.4
145°	651.3	651.5	651.8	651.9	651.9	651.9	651.9	651.9
147.5°	672.2	672.4	672.7	672.5	671.9	671.3	670.8	670.2
150°	684.9	685.2	685.4	685.4	685.0	684.6	684.2	683.9
152.5°	696.3	696.7	697.2	697.1	696.6	696.0	695.4	694.8
155°	711.9	712.6	713.2	713.1	712.4	711.6	710.9	710.1
157.5°	725.5	726.3	727.1	726.9	725.9	725.0	724.0	723.0
160°	733.3	734.0	734.8	734.7	733.9	733.0	732.1	731.2
162.5°	740.3	741.2	742.1	742.1	741.3	740.5	739.7	739.0
165°	749.8	750.8	751.8	751.9	751.0	750.1	749.2	748.3
167.5°	757.1	758.1	759.1	759.1	758.1	757.1	756.1	755.0
170°	761.2	762.2	763.2	763.2	762.2	761.2	760.2	759.1
172.5°	763.9	764.9	765.9	765.9	764.8	763.7	762.5	761.4
175°	767.2	768.1	769.0	768.9	767.9	766.9	765.9	764.8
177.5°	768.4	769.2	770.0	769.9	768.9	767.9	766.9	765.9
180°	767.7	767.7	767.7	767.7	767.7	767.7	767.7	767.7

(END OF REPORT)