

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: P332341-840

Luminaire Tested: **S123RDIP-S1000D585U840-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332341-840
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: S123RDIP-S1000D585U840-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5971.5 lumens
Efficiency: N/A
Efficacy: 122.4 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

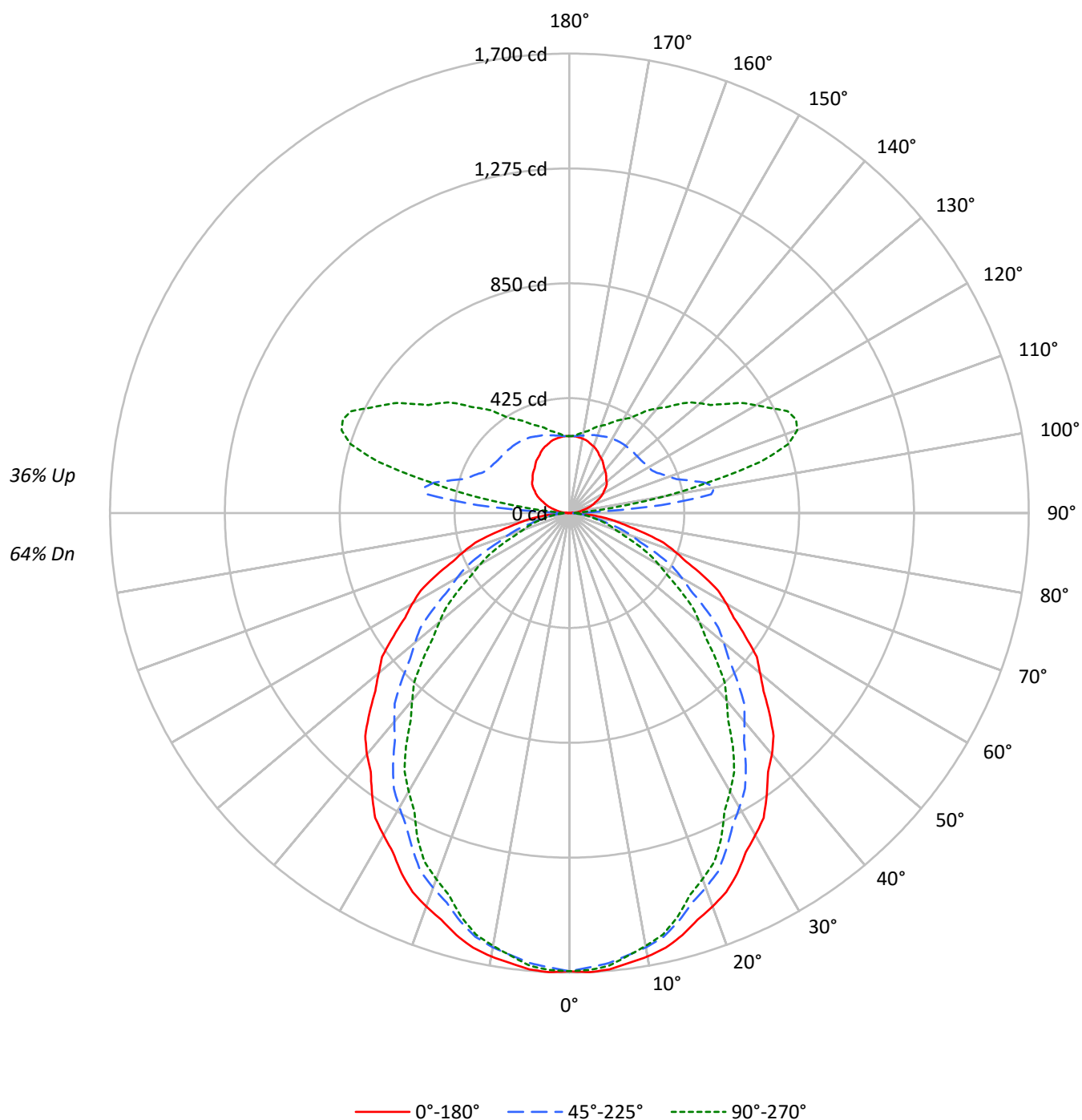
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	0
RCR																				
0	111	111	111	111	104	104	104	104	91	91	91	80	80	80	69	69	69	64		64
1	101	97	93	90	95	91	88	85	81	78	76	71	69	67	62	60	59	55		55
2	93	85	79	74	87	80	75	70	71	67	64	63	60	57	55	53	51	47		47
3	85	75	68	62	79	71	65	59	63	58	54	56	52	49	49	46	43	40		40
4	78	67	59	53	73	63	56	51	56	51	46	50	46	42	44	41	38	35		35
5	72	60	52	46	67	57	49	44	51	45	40	45	40	37	40	36	33	30		30
6	66	54	46	40	62	51	44	38	46	40	35	41	36	32	36	32	29	27		27
7	61	49	41	35	58	47	39	34	42	36	31	37	32	29	33	29	26	24		24
8	57	45	37	31	54	42	35	30	38	32	28	34	29	26	31	27	24	21		21
9	53	41	33	28	50	39	32	27	35	29	25	32	27	23	28	24	21	19		19
10	50	38	30	26	47	36	29	25	33	27	23	29	25	21	26	22	20	18		18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18243	18243	18243
5°	18312	18058	18163
10°	18208	17832	17772
15°	18013	17415	17231
20°	17743	16893	16501
25°	17467	16308	15785
30°	17100	15632	14777
35°	16724	14954	13853
40°	16378	14155	12708
45°	15923	13370	11676
50°	15421	12476	10518
55°	14910	11453	9439
60°	14441	10357	8254
65°	13827	9172	7070
70°	13064	7701	5712
75°	11948	6059	5373
80°	10649	5362	4940
85°	8991	4755	4409

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.1	2.7
10°-20°	442.8	7.4
20°-30°	637.6	10.7
30°-40°	718.2	12.0
40°-50°	687.1	11.5
50°-60°	562.6	9.4
60°-70°	379.6	6.4
70°-80°	191.0	3.2
80°-90°	52.7	0.9
90°-100°	158.3	2.7
100°-110°	448.4	7.5
110°-120°	441.1	7.4
120°-130°	351.8	5.9
130°-140°	277.4	4.6
140°-150°	207.0	3.5
150°-160°	144.3	2.4
160°-170°	84.8	1.4
170°-180°	27.6	0.5
0°-30°	1239.5	20.8
0°-40°	1957.7	32.8
0°-60°	3207.4	53.7
0°-90°	3830.7	64.2
90°-120°	1047.8	17.5
90°-150°	1884.1	31.6
90°-180°	2141.0	35.9
0°-180°	5971.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1695	1695	1695	1695	1695	
5°	1695	1687	1671	1683	1681	161
15°	1616	1600	1563	1556	1546	455
25°	1471	1435	1373	1345	1329	676
35°	1273	1221	1138	1081	1054	796
45°	1046	982	878	802	767	807
55°	794	724	610	533	503	712
65°	543	466	360	296	278	537
75°	287	221	146	133	129	306
85°	73	44	38	36	36	82
90°	1	7	14	16	17	5
95°	20	64	342	100	67	21
105°	67	99	463	810	733	71
115°	118	147	354	777	891	117
125°	164	194	331	599	703	146
135°	192	230	326	493	570	149
145°	219	251	322	405	445	138
155°	249	269	312	354	369	115
165°	272	280	298	316	322	77
175°	284	284	286	290	290	27
180°	285	285	285	285	285	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1694.8	1694.8	1694.8	1694.8	1694.8	1694.8	1694.8	1694.8	1694.8	1694.8	1694.8
2.5°	1700.2	1699.2	1698.3	1697.3	1696.3	1694.4	1691.4	1688.5	1685.6	1682.6	1685.3
5°	1694.8	1693.1	1691.6	1690.1	1688.6	1686.0	1682.3	1678.7	1675.1	1671.3	1674.1
7.5°	1679.0	1677.4	1675.8	1674.1	1672.4	1669.2	1664.5	1659.7	1655.0	1650.2	1651.7
10°	1665.9	1663.8	1661.5	1659.4	1657.3	1653.5	1648.0	1642.4	1637.0	1631.5	1631.8
12.5°	1647.2	1644.8	1642.4	1640.0	1637.6	1633.1	1626.4	1619.6	1613.0	1606.2	1606.0
15°	1616.4	1613.1	1609.6	1606.3	1603.0	1597.0	1588.4	1579.8	1571.3	1562.8	1561.3
17.5°	1577.6	1573.7	1569.8	1565.9	1562.0	1554.6	1543.7	1532.9	1522.0	1511.1	1507.8
20°	1549.0	1544.2	1539.2	1534.4	1529.4	1521.3	1509.6	1498.0	1486.4	1474.8	1470.9
22.5°	1517.1	1511.6	1505.9	1500.3	1494.7	1485.7	1473.3	1461.0	1448.7	1436.3	1431.4
25°	1470.7	1463.1	1455.4	1447.7	1440.2	1429.3	1415.2	1401.2	1387.2	1373.1	1366.7
27.5°	1414.3	1405.9	1397.5	1389.1	1380.6	1368.6	1352.9	1337.3	1321.6	1306.1	1297.1
30°	1375.8	1366.7	1357.6	1348.4	1339.2	1326.1	1309.0	1291.8	1274.8	1257.7	1247.3
32.5°	1337.4	1327.0	1316.6	1306.2	1295.9	1281.6	1263.5	1245.5	1227.3	1209.2	1197.9
35°	1272.7	1261.7	1250.7	1239.8	1228.8	1213.8	1194.9	1175.9	1157.0	1138.0	1124.9
37.5°	1207.3	1195.1	1182.9	1170.6	1158.4	1142.3	1122.1	1101.8	1081.6	1061.4	1046.4
40°	1165.6	1152.2	1138.6	1125.2	1111.8	1094.2	1072.6	1050.9	1029.2	1007.4	991.6
42.5°	1118.2	1104.8	1091.4	1077.9	1064.5	1046.6	1024.2	1001.8	979.4	956.9	939.6
45°	1046.0	1032.2	1018.4	1004.7	991.0	972.4	948.9	925.3	901.8	878.3	860.9
47.5°	973.7	958.6	943.5	928.4	913.3	894.0	870.5	847.0	823.4	799.9	781.0
50°	920.9	906.6	892.2	877.9	863.4	843.9	819.2	794.5	769.7	745.0	726.0
52.5°	873.6	858.1	842.4	826.9	811.3	791.2	766.8	742.3	717.8	693.3	673.6
55°	794.5	779.5	764.5	749.5	734.6	714.1	688.1	662.2	636.2	610.3	592.6
57.5°	721.3	705.0	688.7	672.4	656.1	634.9	608.7	582.7	556.6	530.6	513.8
60°	670.8	654.0	637.1	620.4	603.5	582.5	557.1	531.8	506.4	481.1	464.5
62.5°	620.2	603.4	586.5	569.8	553.0	531.9	506.5	481.2	455.9	430.5	415.0
65°	542.9	526.1	509.3	492.5	475.7	455.4	431.6	407.8	384.0	360.1	345.2
67.5°	465.6	448.7	431.7	414.8	397.8	377.8	355.0	332.1	309.3	286.4	275.3
70°	415.1	398.6	382.1	365.6	349.1	330.2	308.8	287.4	266.0	244.7	234.0
72.5°	364.5	348.3	332.0	315.8	299.5	281.7	262.3	242.9	223.4	204.0	195.2
75°	287.3	272.6	257.9	243.3	228.6	212.9	196.1	179.3	162.5	145.7	142.6
77.5°	216.9	203.6	190.4	177.1	163.9	151.8	141.0	130.2	119.4	108.6	106.9
80°	171.8	159.3	146.7	134.2	121.7	112.3	105.8	99.4	93.0	86.5	85.6
82.5°	129.0	118.2	107.3	96.4	85.6	78.8	75.7	72.8	69.8	66.8	65.8
85°	72.8	66.1	59.4	52.7	45.9	42.1	41.2	40.3	39.4	38.5	37.9
87.5°	26.7	24.1	21.7	19.4	16.9	15.8	16.2	16.5	16.9	17.2	16.9
90°	1.1	2.3	3.4	5.2	6.4	7.5	9.2	10.9	12.6	14.4	13.8
92.5°	7.2	10.6	15.5	19.9	24.7	33.3	48.4	73.1	97.5	88.6	66.9
95°	19.6	21.3	27.7	37.5	52.4	74.8	123.8	209.6	304.2	341.5	277.0
97.5°	33.4	34.0	39.0	47.5	62.2	86.5	133.3	230.0	387.5	529.4	566.3
100°	42.6	43.2	47.3	55.3	69.1	91.6	131.9	217.1	368.6	545.4	658.9
102.5°	52.3	53.3	57.0	64.5	77.0	97.6	133.7	206.1	341.0	515.5	663.6
105°	66.9	68.6	72.0	78.9	89.9	107.8	138.9	198.1	307.0	463.1	628.4
107.5°	82.2	84.0	87.4	94.1	104.4	121.0	148.2	197.5	285.4	416.8	566.9
110°	93.3	95.0	98.0	104.2	114.0	130.2	156.1	199.9	277.0	390.5	528.2

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	103.4	105.2	108.1	114.4	124.2	139.9	163.9	204.5	272.5	373.0	494.5
115°	118.1	120.4	123.8	129.6	139.4	154.9	176.8	212.0	270.7	354.3	453.9
117.5°	132.7	135.3	138.3	143.5	154.5	168.8	190.6	221.9	271.8	343.2	429.4
120°	142.9	144.6	147.4	153.2	164.2	178.5	199.2	229.2	273.6	338.1	416.5
122.5°	151.6	153.3	156.2	162.4	172.9	188.2	208.5	236.2	276.8	334.9	405.9
125°	164.2	165.3	168.7	175.1	186.0	201.6	221.8	247.1	281.7	330.6	392.2
127.5°	173.7	175.4	179.8	186.1	198.2	213.8	233.3	256.1	287.2	328.5	380.3
130°	179.8	181.5	186.6	193.5	205.6	221.2	240.1	262.1	290.8	327.2	373.9
132.5°	184.3	186.5	192.2	200.5	212.6	227.6	246.2	267.6	293.7	326.7	367.8
135°	192.4	194.7	201.1	209.6	221.8	237.3	255.2	274.8	297.8	326.0	360.0
137.5°	200.0	202.4	208.6	217.8	229.8	244.2	261.4	280.0	300.5	324.8	353.3
140°	205.1	207.9	213.7	222.9	234.4	248.8	265.5	282.9	302.4	324.3	349.0
142.5°	210.6	213.0	219.2	227.5	239.0	252.6	268.7	285.6	303.8	323.4	345.4
145°	219.4	221.2	226.4	235.0	244.8	258.0	273.1	288.6	304.7	321.9	340.4
147.5°	228.4	229.4	234.6	242.1	251.5	262.8	276.5	290.4	304.7	319.8	335.6
150°	234.4	235.0	239.6	247.1	255.2	265.5	278.8	290.8	304.7	317.9	332.3
152.5°	240.4	240.5	245.2	251.8	258.8	268.7	280.1	291.9	303.4	315.7	328.7
155°	249.4	249.4	252.9	258.6	265.0	273.1	282.9	292.1	301.8	311.6	323.2
157.5°	256.5	257.0	259.7	264.9	270.2	276.5	284.3	292.7	299.8	308.0	316.9
160°	262.1	262.1	264.4	269.0	273.1	278.8	285.7	292.7	298.9	305.3	312.8
162.5°	266.2	266.2	268.1	271.8	275.3	280.1	286.2	292.2	297.1	302.6	308.6
165°	272.5	271.9	273.1	275.9	278.2	282.3	286.8	290.8	294.4	298.4	303.0
167.5°	277.2	276.5	277.0	279.2	280.8	283.4	286.7	289.9	291.5	294.2	297.6
170°	279.9	278.8	279.3	281.0	282.3	283.4	286.3	288.6	289.7	291.4	294.4
172.5°	281.8	281.0	281.2	282.5	283.2	283.9	286.3	288.1	288.3	289.1	291.1
175°	284.0	283.4	282.9	284.0	284.0	284.6	285.7	286.8	286.3	286.3	287.4
177.5°	285.0	284.6	284.1	284.6	284.6	284.6	285.0	285.9	285.0	284.6	285.0
180°	284.6	284.6	284.6	284.6	284.6	284.6	284.6	284.6	284.6	284.6	284.6

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1694.8	1694.8	1694.8	1694.8	1694.8	1694.8	1694.8	1694.8
2.5°	1688.0	1690.7	1693.3	1694.5	1693.9	1693.5	1693.0	1692.5
5°	1676.9	1679.6	1682.3	1683.4	1682.8	1682.2	1681.6	1681.0
7.5°	1653.3	1654.8	1656.3	1656.6	1655.5	1654.5	1653.5	1652.3
10°	1632.1	1632.4	1632.7	1632.1	1630.5	1629.0	1627.5	1626.0
12.5°	1605.8	1605.7	1605.5	1604.5	1602.8	1600.9	1599.2	1597.4
15°	1559.7	1558.2	1556.7	1554.8	1552.7	1550.5	1548.4	1546.3
17.5°	1504.6	1501.4	1498.1	1494.9	1491.8	1488.5	1485.4	1482.2
20°	1466.8	1462.9	1459.0	1455.1	1451.5	1447.7	1444.1	1440.5
22.5°	1426.4	1421.5	1416.5	1412.3	1409.0	1405.5	1402.1	1398.7
25°	1360.3	1353.8	1347.5	1342.5	1339.2	1335.8	1332.5	1329.1
27.5°	1288.2	1279.3	1270.3	1263.3	1258.2	1253.0	1247.9	1242.8
30°	1236.9	1226.5	1216.1	1208.5	1203.6	1198.7	1193.8	1188.9
32.5°	1186.5	1175.2	1163.8	1155.6	1150.4	1145.3	1140.1	1135.0
35°	1111.8	1098.6	1085.5	1076.2	1070.8	1065.2	1059.8	1054.2
37.5°	1031.6	1016.6	1001.8	990.9	984.1	977.3	970.6	963.8
40°	975.7	959.9	943.9	932.5	925.4	918.5	911.4	904.4
42.5°	922.2	904.8	887.5	875.7	869.4	863.1	856.8	850.5
45°	843.4	826.1	808.6	796.3	788.9	781.6	774.3	767.0
47.5°	762.0	743.2	724.2	711.4	704.9	698.4	691.9	685.3
50°	707.1	688.1	669.2	656.2	649.2	642.2	635.2	628.1
52.5°	654.0	634.3	614.6	601.6	595.3	589.1	582.8	576.4
55°	574.8	557.1	539.4	527.5	521.4	515.2	509.2	503.0
57.5°	497.1	480.3	463.6	452.6	447.5	442.2	437.1	431.8
60°	448.1	431.6	415.1	404.2	399.1	393.8	388.7	383.4
62.5°	399.4	384.0	368.4	357.9	352.5	347.1	341.6	336.2
65°	330.2	315.2	300.2	291.0	287.7	284.4	281.0	277.6
67.5°	264.1	252.9	241.8	234.3	230.8	227.1	223.5	219.9
70°	223.3	212.6	201.9	194.9	191.5	188.1	184.8	181.5
72.5°	186.5	177.7	169.1	164.0	162.6	161.2	159.8	158.3
75°	139.6	136.5	133.5	131.7	131.1	130.4	129.8	129.2
77.5°	105.3	103.6	102.0	100.9	100.3	99.7	99.1	98.5
80°	84.7	83.8	82.9	82.2	81.6	81.0	80.3	79.7
82.5°	64.9	64.0	63.1	62.6	62.5	62.4	62.2	62.1
85°	37.3	36.7	36.1	35.7	35.7	35.7	35.7	35.7
87.5°	16.7	16.6	16.5	16.5	16.1	16.0	15.8	15.5
90°	14.4	14.9	15.6	16.7	16.2	16.7	17.3	16.7
92.5°	48.5	38.5	34.0	31.0	30.0	28.2	28.8	27.8
95°	207.3	140.6	110.0	89.3	78.4	73.1	69.1	66.9
97.5°	516.9	414.0	339.7	270.8	228.3	202.4	186.8	181.9
100°	679.1	632.5	565.0	483.2	425.1	383.0	360.6	361.1
102.5°	733.1	731.5	692.3	640.4	595.1	561.8	543.0	529.8
105°	748.8	806.4	817.4	802.3	775.9	754.0	735.6	732.7
107.5°	703.4	797.0	847.4	867.9	868.4	861.0	854.7	849.5
110°	660.0	766.1	838.7	879.0	895.1	899.7	898.6	897.4

TEST NUMBER: P332341-840

CATALOG NUMBER: S123RDIP-S1000D585U840-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	617.2	725.5	806.9	858.7	888.2	902.5	906.9	907.1
115°	560.5	660.7	745.4	808.1	851.3	876.7	888.2	891.1
117.5°	519.3	605.8	681.9	745.6	790.6	819.6	836.3	840.1
120°	497.7	575.4	644.5	702.8	748.2	780.5	794.3	797.8
122.5°	480.6	551.0	615.0	669.0	709.5	738.5	753.8	758.1
125°	457.9	520.7	576.0	622.1	658.9	684.3	698.7	702.8
127.5°	438.1	494.1	544.0	585.9	618.7	640.4	653.4	657.1
130°	425.7	477.5	524.1	563.3	593.9	614.6	626.7	631.3
132.5°	414.1	461.8	505.2	542.6	571.3	592.0	602.7	605.9
135°	398.6	439.5	477.0	509.8	538.0	555.2	565.6	569.7
137.5°	384.5	418.0	450.2	478.7	502.4	519.9	528.7	531.3
140°	376.2	405.5	433.1	457.9	479.8	495.9	505.1	504.5
142.5°	368.3	393.5	417.5	439.0	457.7	472.0	480.3	479.7
145°	358.8	377.9	396.3	413.0	427.4	439.5	444.1	445.2
147.5°	351.1	366.2	381.1	392.9	403.8	412.0	416.5	416.9
150°	345.6	358.8	370.9	381.9	390.5	396.9	400.3	400.3
152.5°	340.5	351.9	362.6	371.7	378.5	384.5	386.5	386.5
155°	333.0	342.1	350.8	357.7	362.8	367.5	368.6	369.2
157.5°	324.9	332.5	339.3	344.7	349.2	352.6	353.6	353.5
160°	320.2	326.6	332.3	336.4	340.4	343.9	343.9	343.3
162.5°	314.8	320.1	325.5	329.0	331.6	334.7	334.7	334.1
165°	307.6	311.0	315.1	317.9	320.2	322.6	321.9	321.9
167.5°	301.3	304.0	306.3	308.4	309.4	311.0	310.4	310.4
170°	297.2	298.9	301.2	302.4	303.0	304.2	303.6	303.6
172.5°	293.6	294.8	296.6	297.3	297.4	298.6	297.6	297.1
175°	288.6	289.1	290.3	290.3	290.3	290.8	290.3	289.7
177.5°	285.5	285.9	286.4	286.4	285.9	286.4	285.5	285.5
180°	284.6	284.6	284.6	284.6	284.6	284.6	284.6	284.6

(END OF REPORT)