

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: P332061

Luminaire Tested: **S123DIP-S1165D585U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332061
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-S1165D585U835-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 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: 6770.9 lumens
Efficiency: N/A
Efficacy: 122.9 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

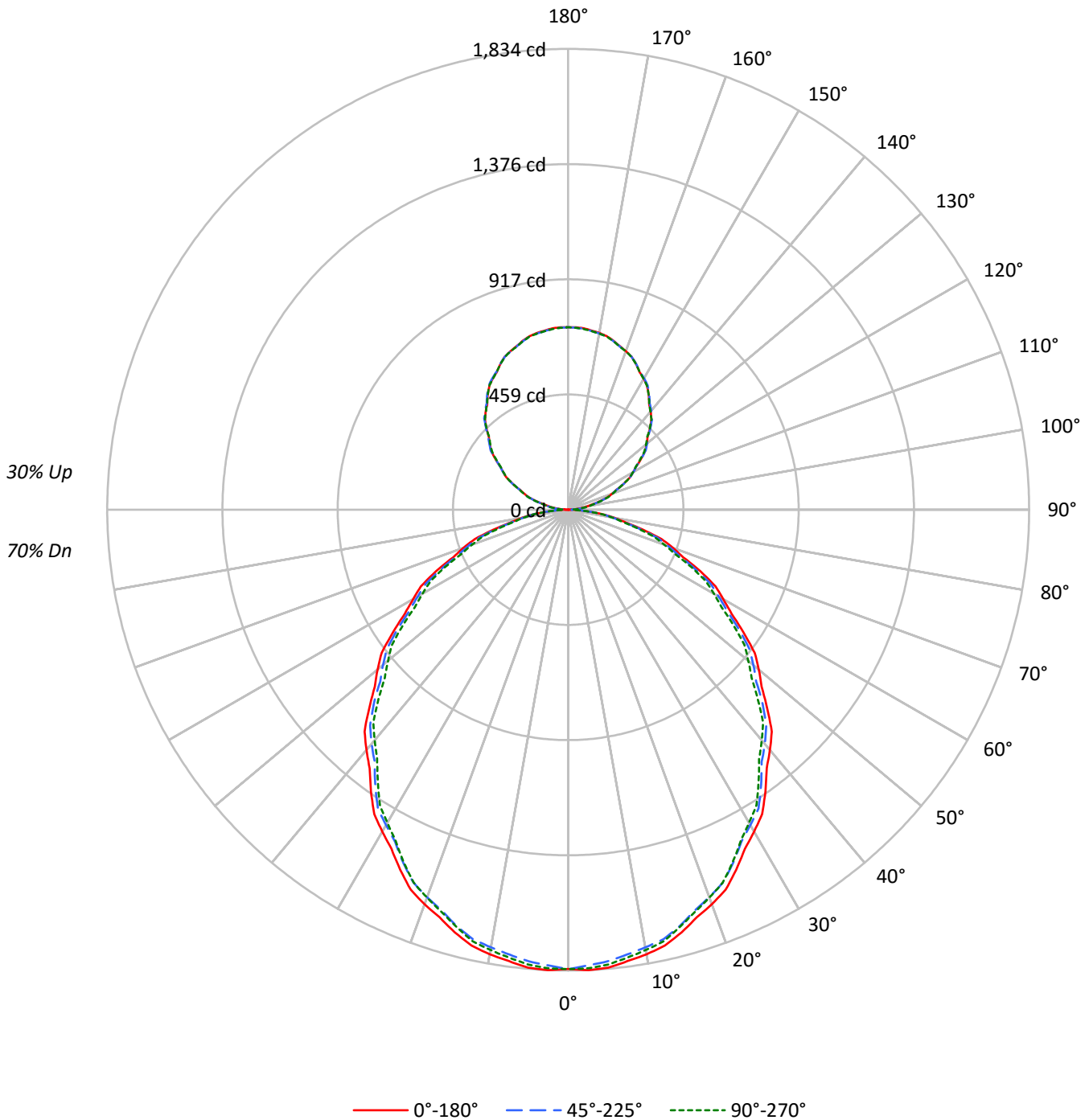
Input Watts (W): 55.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332061

CATALOG NUMBER: S123DIP-S1165D585U835-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P332061

CATALOG NUMBER: S123DIP-S1165D585U835-4F0-1E-UDD-F1

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	112	112	112	112	106	106	106	106	95	95	95	84	84	84	75	75	75	70
1	102	98	94	90	97	93	89	86	83	80	78	74	72	70	66	64	63	59
2	93	85	79	74	88	81	75	70	73	68	64	65	62	59	58	55	53	49
3	85	75	67	61	80	71	64	59	64	59	54	58	53	50	51	48	45	42
4	78	66	58	52	73	63	56	50	57	51	46	51	46	42	46	42	39	36
5	71	59	51	45	67	57	49	43	51	45	40	46	41	37	41	37	34	31
6	66	53	45	39	62	51	43	38	46	40	35	42	36	32	38	33	30	27
7	61	48	40	34	58	46	38	33	42	36	31	38	33	29	34	30	27	24
8	57	44	36	30	54	42	35	29	38	32	28	35	30	26	32	27	24	22
9	53	40	32	27	50	39	31	26	35	29	25	32	27	23	29	25	22	19
10	50	37	30	25	47	35	29	24	33	27	22	30	25	21	27	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19678	19678	19678
5°	19770	19498	19634
10°	19638	19329	19449
15°	19409	19110	19146
20°	19140	18798	18816
25°	18781	18427	18389
30°	18385	18013	17877
35°	17971	17578	17350
40°	17537	17096	16831
45°	17061	16653	16247
50°	16583	16109	15662
55°	15959	15546	15073
60°	15330	14889	14415
65°	14772	14174	13733
70°	13951	13357	12765
75°	12747	12289	11765
80°	11499	11009	10916
85°	10090	9707	9324



TEST NUMBER: P332061

CATALOG NUMBER: S123DIP-S1165D585U835-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.2	2.5
10°-20°	486.2	7.2
20°-30°	718.3	10.6
30°-40°	839.0	12.4
40°-50°	843.5	12.5
50°-60°	740.9	10.9
60°-70°	552.0	8.2
70°-80°	314.5	4.6
80°-90°	92.4	1.4
90°-100°	47.3	0.7
100°-110°	141.6	2.1
110°-120°	240.8	3.6
120°-130°	316.7	4.7
130°-140°	356.0	5.3
140°-150°	349.9	5.2
150°-160°	294.6	4.4
160°-170°	196.1	2.9
170°-180°	68.7	1.0
0°-30°	1376.7	20.3
0°-40°	2215.7	32.7
0°-60°	3800.2	56.1
0°-90°	4759.1	70.3
90°-120°	429.7	6.3
90°-150°	1452.4	21.5
90°-180°	2012.0	29.7
0°-180°	6770.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1828	1828	1828	1828	1828	
5°	1830	1821	1804	1819	1817	173
15°	1742	1735	1715	1726	1718	491
25°	1581	1571	1552	1553	1548	728
35°	1368	1358	1338	1328	1320	855
45°	1121	1114	1094	1076	1067	865
55°	850	848	828	812	803	761
65°	580	572	556	544	539	572
75°	306	300	296	288	283	328
85°	82	79	79	76	76	90
90°	1	6	14	16	17	7
95°	34	38	42	44	44	38
105°	128	130	135	135	136	137
115°	242	244	243	244	243	240
125°	355	356	355	353	351	316
135°	460	464	463	461	460	355
145°	558	560	561	561	558	349
155°	639	639	640	642	638	294
165°	696	695	695	698	694	196
175°	724	722	722	725	722	69
180°	726	726	726	726	726	



TEST NUMBER: P332061

CATALOG NUMBER: S123DIP-S1165D585U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1828.1	1828.1	1828.1	1828.1	1828.1	1828.1	1828.1	1828.1	1828.1	1828.1	1828.1
2.5°	1834.4	1833.3	1832.2	1831.1	1829.9	1827.8	1824.8	1821.7	1818.6	1815.5	1818.3
5°	1829.7	1828.0	1826.2	1824.5	1822.7	1819.9	1816.1	1812.2	1808.4	1804.5	1808.0
7.5°	1811.8	1810.0	1808.3	1806.5	1804.8	1801.9	1797.9	1794.0	1790.0	1786.0	1789.1
10°	1796.7	1794.9	1793.2	1791.4	1789.7	1786.6	1782.0	1777.5	1772.9	1768.4	1771.5
12.5°	1776.6	1775.1	1773.6	1772.2	1770.7	1767.8	1763.6	1759.3	1755.0	1750.8	1753.1
15°	1741.7	1740.3	1738.9	1737.5	1736.1	1733.1	1728.6	1724.0	1719.5	1714.9	1717.7
17.5°	1701.1	1699.3	1697.5	1695.7	1693.8	1690.7	1686.1	1681.6	1677.0	1672.5	1674.5
20°	1670.9	1668.8	1666.7	1664.6	1662.6	1659.2	1654.7	1650.2	1645.6	1641.1	1642.5
22.5°	1637.0	1634.9	1632.8	1630.7	1628.6	1625.3	1620.7	1616.2	1611.7	1607.1	1608.2
25°	1581.3	1579.2	1577.1	1575.0	1573.0	1569.6	1565.1	1560.6	1556.0	1551.5	1551.8
27.5°	1521.9	1519.9	1517.9	1515.8	1513.8	1510.4	1505.5	1500.6	1495.7	1490.8	1491.1
30°	1479.2	1477.4	1475.7	1473.9	1472.2	1468.9	1464.0	1459.1	1454.2	1449.3	1449.3
32.5°	1436.4	1434.1	1431.8	1429.5	1427.2	1424.1	1420.4	1416.6	1412.8	1409.1	1407.1
35°	1367.6	1365.5	1363.4	1361.3	1359.2	1355.9	1351.3	1346.8	1342.2	1337.7	1335.6
37.5°	1297.1	1294.5	1291.8	1289.2	1286.5	1282.9	1278.3	1273.7	1269.1	1264.4	1261.9
40°	1248.1	1246.0	1243.9	1241.8	1239.7	1236.2	1231.3	1226.4	1221.5	1216.7	1213.9
42.5°	1199.0	1196.7	1194.3	1191.9	1189.5	1185.9	1181.0	1176.1	1171.2	1166.4	1163.6
45°	1120.8	1119.4	1118.0	1116.6	1115.2	1112.2	1107.7	1103.1	1098.6	1094.0	1089.9
47.5°	1043.1	1041.1	1039.1	1037.0	1035.0	1031.9	1027.6	1023.3	1019.1	1014.8	1010.7
50°	990.3	988.6	986.8	985.1	983.3	980.2	975.6	971.1	966.5	962.0	958.2
52.5°	935.0	933.8	932.6	931.4	930.2	927.2	922.4	917.6	912.8	907.9	904.6
55°	850.4	850.1	849.7	849.4	849.0	846.6	842.0	837.5	832.9	828.4	824.6
57.5°	769.9	768.7	767.5	766.4	765.2	762.8	759.1	755.5	751.9	748.2	744.8
60°	712.1	711.7	711.4	711.0	710.7	708.4	704.2	700.0	695.8	691.6	688.5
62.5°	660.5	659.6	658.7	657.8	656.9	654.3	650.1	645.9	641.8	637.6	634.4
65°	580.0	578.3	576.5	574.8	573.0	570.4	566.9	563.4	559.9	556.5	553.7
67.5°	494.8	493.3	491.8	490.2	488.7	486.6	483.9	481.3	478.6	476.0	473.5
70°	443.3	441.2	439.1	437.0	434.9	432.8	430.7	428.6	426.5	424.4	422.0
72.5°	389.2	387.7	386.1	384.6	383.1	381.1	378.7	376.3	374.0	371.6	369.4
75°	306.5	305.1	303.7	302.3	300.9	299.7	298.7	297.6	296.6	295.5	293.8
77.5°	233.3	232.5	231.7	231.0	230.2	229.2	227.9	226.7	225.4	224.2	223.0
80°	185.5	184.4	183.4	182.3	181.3	180.4	179.7	179.0	178.3	177.6	177.3
82.5°	139.0	138.7	138.5	138.3	138.1	137.9	137.8	137.7	137.5	137.4	136.8
85°	81.7	81.0	80.3	79.6	78.9	78.6	78.6	78.6	78.6	78.6	77.9
87.5°	32.8	32.2	31.6	31.1	30.5	30.2	30.3	30.3	30.4	30.4	30.2
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°	13.8	14.7	15.5	16.4	17.3	18.2	19.1	20.0	21.0	21.9	22.3
95°	33.7	34.5	35.4	36.3	37.2	38.2	39.2	40.2	41.2	42.2	42.7
97.5°	59.8	60.4	61.1	61.8	62.4	63.1	63.8	64.6	65.3	66.1	66.6
100°	77.6	78.3	79.1	79.9	80.6	81.3	81.9	82.6	83.2	83.8	84.2
102.5°	98.1	98.6	99.0	99.5	99.9	100.6	101.4	102.3	103.1	103.9	104.3
105°	128.3	128.6	128.8	129.1	129.4	130.0	131.2	132.3	133.5	134.6	134.6
107.5°	163.5	163.6	163.8	163.9	164.1	164.4	164.8	165.3	165.8	166.2	166.6
110°	185.4	185.6	185.9	186.1	186.4	186.6	186.9	187.2	187.4	187.7	188.2



TEST NUMBER: P332061

CATALOG NUMBER: S123DIP-S1165D585U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	208.2	208.3	208.5	208.6	208.8	208.9	209.0	209.0	209.1	209.1	209.7
115°	242.4	242.8	243.2	243.6	243.9	244.0	243.7	243.5	243.2	243.0	243.1
117.5°	276.9	277.1	277.4	277.6	277.9	277.8	277.5	277.2	276.9	276.5	276.5
120°	298.3	299.1	299.8	300.6	301.4	301.4	300.8	300.2	299.5	298.9	298.8
122.5°	320.7	321.2	321.8	322.3	322.9	323.0	322.7	322.4	322.0	321.7	321.4
125°	354.8	355.2	355.5	355.9	356.3	356.4	356.1	355.9	355.6	355.4	354.8
127.5°	386.3	387.1	387.9	388.7	389.5	389.8	389.5	389.2	388.9	388.7	388.0
130°	407.3	408.3	409.3	410.3	411.3	411.6	411.3	410.9	410.5	410.1	409.6
132.5°	428.2	429.3	430.3	431.3	432.3	432.7	432.4	432.1	431.8	431.6	430.9
135°	460.3	461.1	461.8	462.6	463.3	463.7	463.5	463.4	463.3	463.2	462.7
137.5°	490.0	490.6	491.2	491.9	492.5	493.0	493.3	493.6	494.0	494.3	493.8
140°	510.5	511.1	511.8	512.4	513.0	513.4	513.5	513.7	513.8	513.9	513.8
142.5°	529.2	529.8	530.5	531.1	531.7	532.2	532.4	532.6	532.9	533.1	533.0
145°	558.4	558.7	558.9	559.2	559.4	559.7	560.1	560.5	560.9	561.3	561.1
147.5°	584.0	584.4	584.9	585.3	585.8	586.2	586.6	586.9	587.3	587.6	587.6
150°	601.8	602.0	602.3	602.5	602.8	603.0	603.3	603.5	603.8	604.0	604.0
152.5°	616.4	616.7	617.1	617.4	617.8	618.0	618.2	618.3	618.5	618.6	618.8
155°	639.4	639.4	639.4	639.4	639.4	639.5	639.6	639.7	639.9	640.0	640.5
157.5°	659.0	658.9	658.7	658.6	658.4	658.4	658.5	658.6	658.7	658.8	659.3
160°	671.3	671.1	670.8	670.6	670.3	670.2	670.2	670.2	670.2	670.2	670.8
162.5°	682.3	681.9	681.6	681.2	680.9	680.8	680.9	681.0	681.1	681.2	681.8
165°	696.4	696.1	695.7	695.3	694.9	694.7	694.7	694.7	694.7	694.7	695.5
167.5°	707.7	707.2	706.7	706.2	705.7	705.5	705.6	705.7	705.8	705.9	706.7
170°	714.1	713.6	713.1	712.6	712.1	711.8	711.8	711.8	711.8	711.8	712.7
172.5°	719.1	718.6	718.1	717.6	717.1	716.9	716.9	716.9	716.9	716.9	717.7
175°	724.4	723.9	723.4	722.9	722.4	722.1	722.1	722.1	722.1	722.1	722.9
177.5°	726.6	726.2	725.8	725.3	724.9	724.7	724.7	724.7	724.7	724.7	725.3
180°	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1



TEST NUMBER: P332061

CATALOG NUMBER: S123DIP-S1165D585U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1828.1	1828.1	1828.1	1828.1	1828.1	1828.1	1828.1	1828.1
2.5°	1821.1	1823.9	1826.7	1828.0	1827.7	1827.4	1827.1	1826.9
5°	1811.5	1815.0	1818.5	1819.9	1819.2	1818.5	1817.8	1817.1
7.5°	1792.3	1795.4	1798.6	1799.9	1799.5	1799.1	1798.7	1798.3
10°	1774.7	1777.8	1781.0	1782.2	1781.5	1780.8	1780.1	1779.4
12.5°	1755.4	1757.7	1760.0	1761.0	1760.5	1760.1	1759.7	1759.3
15°	1720.5	1723.3	1726.1	1726.5	1724.4	1722.3	1720.2	1718.1
17.5°	1676.4	1678.4	1680.3	1680.9	1680.2	1679.4	1678.6	1677.9
20°	1643.9	1645.3	1646.7	1646.8	1645.8	1644.7	1643.7	1642.6
22.5°	1609.4	1610.5	1611.6	1611.5	1610.2	1608.8	1607.5	1606.2
25°	1552.2	1552.5	1552.9	1552.5	1551.5	1550.4	1549.4	1548.3
27.5°	1491.4	1491.6	1491.9	1491.4	1490.1	1488.7	1487.4	1486.1
30°	1449.3	1449.3	1449.3	1448.1	1445.6	1443.2	1440.7	1438.3
32.5°	1405.1	1403.2	1401.2	1399.6	1398.3	1396.9	1395.6	1394.3
35°	1333.5	1331.4	1329.3	1327.4	1325.6	1323.9	1322.1	1320.4
37.5°	1259.4	1256.9	1254.4	1252.6	1251.4	1250.3	1249.2	1248.1
40°	1211.1	1208.3	1205.5	1203.4	1202.0	1200.6	1199.2	1197.8
42.5°	1160.8	1158.0	1155.2	1153.1	1151.7	1150.3	1148.9	1147.5
45°	1085.7	1081.5	1077.3	1074.3	1072.6	1070.8	1069.1	1067.3
47.5°	1006.6	1002.5	998.3	995.5	994.0	992.4	990.9	989.4
50°	954.3	950.5	946.6	943.7	941.6	939.5	937.4	935.3
52.5°	901.4	898.1	894.8	892.1	890.0	887.9	885.8	883.7
55°	820.7	816.9	813.0	810.2	808.5	806.7	805.0	803.2
57.5°	741.4	738.0	734.5	731.8	729.8	727.8	725.7	723.7
60°	685.4	682.2	679.1	676.6	674.9	673.1	671.4	669.6
62.5°	631.3	628.1	625.0	622.8	621.6	620.4	619.3	618.1
65°	550.9	548.1	545.3	543.4	542.3	541.3	540.2	539.2
67.5°	471.1	468.6	466.2	464.2	462.8	461.3	459.8	458.4
70°	419.5	417.1	414.6	412.5	410.8	409.0	407.3	405.6
72.5°	367.3	365.1	362.9	361.4	360.5	359.6	358.7	357.8
75°	292.0	290.3	288.5	287.1	286.1	285.0	284.0	282.9
77.5°	221.8	220.6	219.4	218.8	218.8	218.8	218.8	218.8
80°	176.9	176.6	176.2	176.1	176.1	176.1	176.1	176.1
82.5°	136.1	135.5	134.9	134.4	134.1	133.9	133.6	133.3
85°	77.2	76.5	75.8	75.5	75.5	75.5	75.5	75.5
87.5°	30.0	29.9	29.7	29.6	29.7	29.7	29.8	29.8
90°	14.7	15.2	15.7	16.1	16.4	16.6	16.9	17.1
92.5°	22.7	23.1	23.5	23.7	23.5	23.3	23.2	23.0
95°	43.2	43.7	44.2	44.5	44.5	44.5	44.5	44.5
97.5°	67.2	67.8	68.4	68.6	68.6	68.5	68.5	68.4
100°	84.6	85.0	85.4	85.7	85.9	86.2	86.4	86.7
102.5°	104.7	105.1	105.4	105.6	105.6	105.5	105.5	105.4
105°	134.6	134.6	134.6	134.7	135.0	135.2	135.5	135.8
107.5°	167.0	167.4	167.8	168.0	167.8	167.7	167.5	167.4
110°	188.7	189.2	189.7	189.8	189.6	189.3	189.1	188.8



TEST NUMBER: P332061

CATALOG NUMBER: S123DIP-S1165D585U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	210.3	210.9	211.5	211.8	211.8	211.7	211.7	211.6
115°	243.2	243.4	243.5	243.5	243.4	243.2	243.1	243.0
117.5°	276.5	276.4	276.4	276.2	275.9	275.5	275.2	274.8
120°	298.6	298.5	298.4	298.2	297.9	297.7	297.4	297.2
122.5°	321.0	320.7	320.4	320.0	319.7	319.3	319.0	318.6
125°	354.3	353.8	353.3	352.8	352.3	351.8	351.3	350.8
127.5°	387.2	386.5	385.8	385.2	384.6	384.0	383.4	382.8
130°	409.1	408.6	408.1	407.4	406.5	405.6	404.7	403.8
132.5°	430.3	429.7	429.1	428.5	427.8	427.1	426.4	425.7
135°	462.1	461.6	461.1	460.7	460.5	460.2	460.0	459.7
137.5°	493.2	492.7	492.2	491.7	491.2	490.7	490.2	489.7
140°	513.7	513.5	513.4	512.9	512.0	511.1	510.2	509.4
142.5°	532.8	532.7	532.6	532.2	531.5	530.8	530.1	529.4
145°	561.0	560.9	560.8	560.4	559.9	559.4	558.9	558.4
147.5°	587.6	587.6	587.6	587.2	586.5	585.7	585.0	584.2
150°	604.0	604.0	604.0	603.7	602.9	602.1	601.4	600.6
152.5°	619.1	619.3	619.5	619.2	618.6	617.9	617.3	616.6
155°	641.0	641.5	642.0	641.8	640.9	640.0	639.2	638.3
157.5°	659.9	660.4	660.9	660.8	660.1	659.4	658.7	658.0
160°	671.5	672.1	672.7	672.8	672.3	671.8	671.3	670.8
162.5°	682.4	683.1	683.7	683.6	682.8	682.0	681.2	680.4
165°	696.3	697.0	697.8	697.7	696.8	695.9	695.1	694.2
167.5°	707.5	708.3	709.1	709.1	708.3	707.5	706.7	705.9
170°	713.6	714.5	715.4	715.4	714.5	713.6	712.7	711.8
172.5°	718.4	719.2	720.0	720.0	719.1	718.2	717.3	716.4
175°	723.6	724.4	725.2	725.1	724.2	723.3	722.4	721.5
177.5°	726.0	726.6	727.2	727.1	726.4	725.7	725.0	724.3
180°	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1

(END OF REPORT)