

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: P332062

Luminaire Tested: **S123DIP-S1165D585U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332062
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-S1165D585U835-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

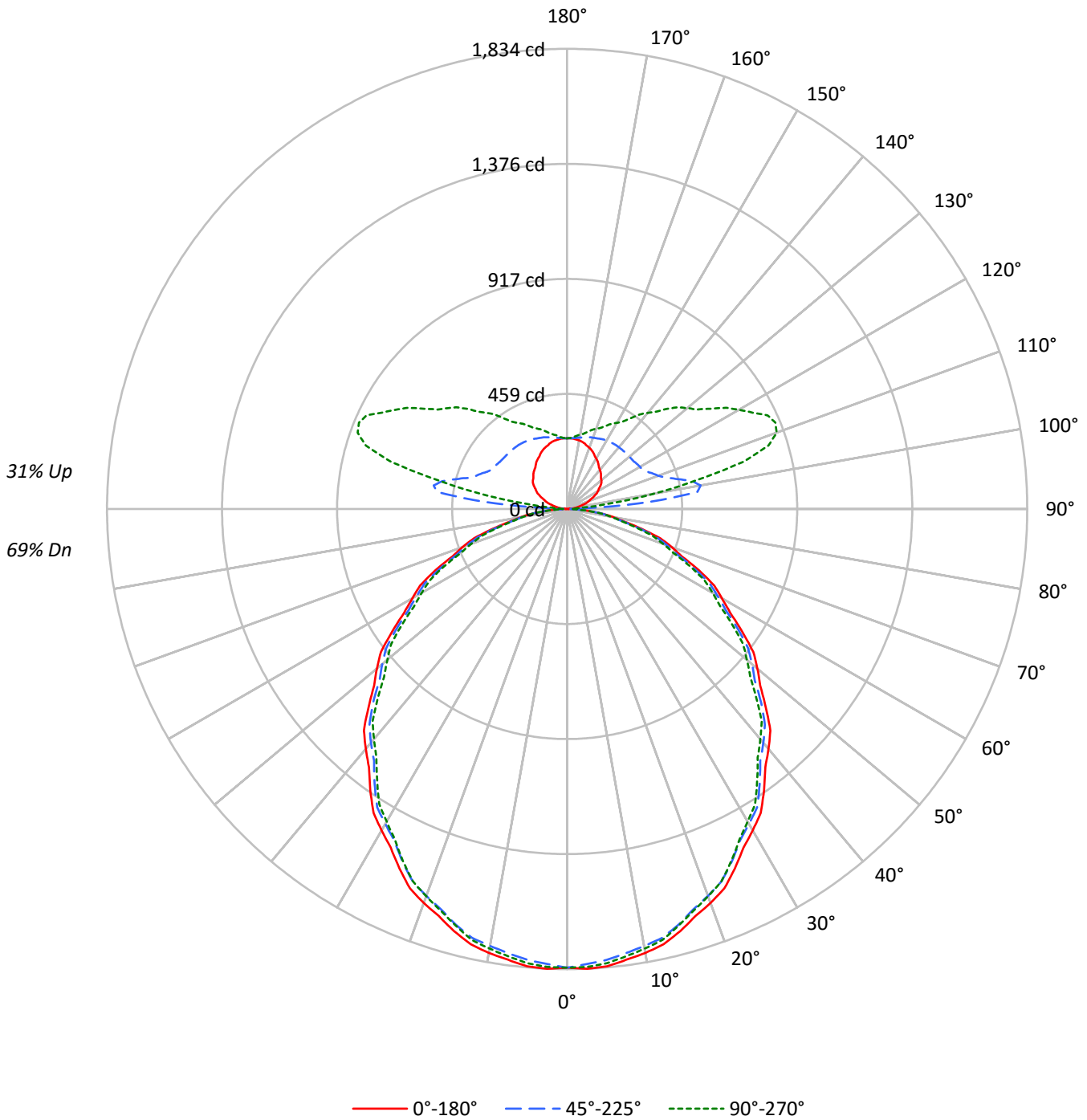
Lumens per Lamp: N/A
Luminaire Lumens: 6879.0 lumens
Efficiency: N/A
Efficacy: 124.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

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



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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	112	112	112	112	106	106	106	106	94	94	94	83	83	83	74	74	74	69
1	102	98	93	90	96	92	89	85	82	80	77	73	71	69	65	64	62	58
2	93	85	79	73	87	81	75	70	72	68	64	64	61	58	57	55	52	49
3	85	75	67	61	80	71	64	59	64	58	54	57	53	49	51	47	44	41
4	78	66	58	52	73	63	56	50	57	51	46	51	46	42	45	41	38	35
5	71	59	51	45	67	56	49	43	51	44	40	46	40	36	41	37	33	31
6	66	53	45	39	62	51	43	37	46	39	35	41	36	32	37	33	29	27
7	61	48	40	34	57	46	38	33	42	35	31	38	32	28	34	29	26	24
8	57	44	36	30	53	42	34	29	38	32	27	34	29	25	31	27	23	21
9	53	40	32	27	50	38	31	26	35	29	25	32	27	23	29	24	21	19
10	49	37	29	24	47	35	28	24	32	26	22	29	24	21	27	22	19	17

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.2	2.5
10°-20°	486.2	7.1
20°-30°	718.3	10.4
30°-40°	839.0	12.2
40°-50°	843.5	12.3
50°-60°	740.9	10.8
60°-70°	552.0	8.0
70°-80°	314.5	4.6
80°-90°	92.4	1.3
90°-100°	156.8	2.3
100°-110°	444.0	6.5
110°-120°	436.8	6.3
120°-130°	348.4	5.1
130°-140°	274.7	4.0
140°-150°	205.0	3.0
150°-160°	142.9	2.1
160°-170°	83.9	1.2
170°-180°	27.3	0.4
0°-30°	1376.7	20.0
0°-40°	2215.7	32.2
0°-60°	3800.2	55.2
0°-90°	4759.1	69.2
90°-120°	1037.6	15.1
90°-150°	1865.7	27.1
90°-180°	2120.0	30.8
0°-180°	6879.0	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	7	14	16	16	6
95°	19	63	338	99	66	21
105°	66	98	459	802	726	70
115°	117	146	351	769	882	116
125°	163	192	327	593	696	144
135°	190	227	323	489	564	147
145°	217	249	319	401	441	136
155°	247	266	309	351	366	114
165°	270	278	296	313	319	76
175°	281	282	284	288	287	27
180°	282	282	282	282	282	



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CATALOG NUMBER: S123DIP-S1165D585U835-4F0-1E-UDD-F4

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°	32.9	32.3	31.7	31.2	30.6	30.3	30.3	30.4	30.5	30.5	30.1
90°	1.1	2.3	3.4	5.1	6.3	7.4	9.1	10.8	12.5	14.3	13.7
92.5°	7.1	10.5	15.3	19.7	24.5	33.0	47.9	72.4	96.5	87.7	66.2
95°	19.4	21.1	27.4	37.1	51.9	74.1	122.6	207.6	301.2	338.2	274.3
97.5°	33.1	33.7	38.6	47.0	61.6	85.7	132.0	227.8	383.7	524.2	560.8
100°	42.2	42.8	46.8	54.8	68.4	90.7	130.6	215.0	365.0	540.1	652.5
102.5°	51.8	52.8	56.4	63.9	76.2	96.6	132.4	204.1	337.7	510.5	657.1
105°	66.2	67.9	71.3	78.1	89.0	106.7	137.5	196.2	304.0	458.6	622.3
107.5°	81.4	83.2	86.5	93.2	103.4	119.8	146.8	195.6	282.6	412.7	561.4
110°	92.4	94.1	97.0	103.2	112.9	128.9	154.6	197.9	274.3	386.7	523.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	102.4	104.2	107.0	113.3	123.0	138.5	162.3	202.5	269.8	369.4	489.7
115°	116.9	119.2	122.6	128.3	138.0	153.4	175.1	209.9	268.1	350.8	449.5
117.5°	131.4	134.0	136.9	142.1	153.0	167.2	188.7	219.7	269.1	339.8	425.2
120°	141.5	143.2	146.0	151.7	162.6	176.8	197.3	227.0	270.9	334.8	412.4
122.5°	150.1	151.8	154.7	160.8	171.2	186.4	206.5	233.9	274.1	331.6	401.9
125°	162.6	163.7	167.1	173.4	184.2	199.6	219.6	244.7	278.9	327.4	388.4
127.5°	172.0	173.7	178.0	184.3	196.3	211.7	231.0	253.6	284.4	325.3	376.6
130°	178.0	179.7	184.8	191.6	203.6	219.0	237.8	259.5	288.0	324.0	370.2
132.5°	182.5	184.7	190.3	198.5	210.5	225.4	243.8	265.0	290.8	323.5	364.2
135°	190.5	192.8	199.1	207.6	219.6	235.0	252.7	272.1	294.9	322.8	356.5
137.5°	198.0	200.4	206.6	215.7	227.6	241.8	258.8	277.3	297.6	321.6	349.8
140°	203.1	205.9	211.6	220.7	232.1	246.4	262.9	280.1	299.4	321.1	345.6
142.5°	208.5	210.9	217.1	225.3	236.7	250.1	266.1	282.8	300.8	320.2	342.0
145°	217.3	219.0	224.2	232.7	242.4	255.5	270.4	285.8	301.7	318.8	337.1
147.5°	226.2	227.2	232.3	239.7	249.0	260.2	273.8	287.6	301.7	316.7	332.3
150°	232.1	232.7	237.3	244.7	252.7	262.9	276.1	288.0	301.7	314.8	329.1
152.5°	238.1	238.2	242.8	249.3	256.3	266.1	277.4	289.0	300.4	312.6	325.5
155°	247.0	247.0	250.4	256.1	262.4	270.4	280.1	289.2	298.9	308.6	320.0
157.5°	254.0	254.5	257.2	262.3	267.6	273.8	281.5	289.8	296.9	305.0	313.8
160°	259.5	259.5	261.8	266.4	270.4	276.1	282.9	289.8	296.0	302.3	309.7
162.5°	263.6	263.6	265.5	269.1	272.6	277.4	283.4	289.3	294.2	299.6	305.6
165°	269.8	269.2	270.4	273.2	275.5	279.5	284.0	288.0	291.5	295.5	300.0
167.5°	274.5	273.8	274.3	276.5	278.1	280.6	283.9	287.1	288.7	291.3	294.7
170°	277.2	276.1	276.6	278.3	279.5	280.6	283.5	285.8	286.9	288.6	291.5
172.5°	279.0	278.3	278.5	279.7	280.4	281.1	283.5	285.3	285.5	286.3	288.3
175°	281.2	280.6	280.1	281.2	281.2	281.8	282.9	284.0	283.5	283.5	284.6
177.5°	282.2	281.8	281.3	281.8	281.8	281.8	282.2	283.1	282.2	281.8	282.2
180°	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8



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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	29.8	29.6	29.7	29.6	29.7	29.8	29.7
90°	14.3	14.8	15.4	16.5	16.0	16.5	17.1	16.5
92.5°	48.0	38.1	33.7	30.7	29.7	27.9	28.5	27.5
95°	205.3	139.2	108.9	88.4	77.6	72.4	68.4	66.2
97.5°	511.9	410.0	336.4	268.2	226.1	200.4	185.0	180.1
100°	672.5	626.3	559.5	478.5	420.9	379.3	357.1	357.6
102.5°	725.9	724.4	685.5	634.1	589.3	556.3	537.7	524.6
105°	741.5	798.5	809.4	794.5	768.3	746.6	728.4	725.5
107.5°	696.5	789.2	839.1	859.4	859.9	852.6	846.4	841.2
110°	653.6	758.6	830.5	870.4	886.4	890.9	889.8	888.6



TEST NUMBER: P332062

CATALOG NUMBER: S123DIP-S1165D585U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	611.2	718.4	799.0	850.3	879.5	893.7	898.0	898.2
115°	555.0	654.2	738.1	800.2	843.0	868.1	879.5	882.4
117.5°	514.2	599.9	675.2	738.3	782.9	811.6	828.1	831.9
120°	492.8	569.8	638.2	695.9	740.9	772.9	786.5	790.0
122.5°	475.9	545.6	609.0	662.5	702.6	731.3	746.4	750.7
125°	453.4	515.6	570.4	616.0	652.5	677.6	691.9	695.9
127.5°	433.8	489.3	538.7	580.2	612.7	634.1	647.0	650.7
130°	421.5	472.8	519.0	557.8	588.1	608.6	620.6	625.1
132.5°	410.1	457.3	500.3	537.3	565.7	586.2	596.8	600.0
135°	394.7	435.2	472.3	504.8	532.7	549.8	560.1	564.1
137.5°	380.7	413.9	445.8	474.0	497.5	514.8	523.5	526.1
140°	372.5	401.5	428.9	453.4	475.1	491.1	500.2	499.6
142.5°	364.7	389.7	413.4	434.7	453.2	467.4	475.6	475.0
145°	355.3	374.2	392.4	409.0	423.2	435.2	439.8	440.9
147.5°	347.7	362.6	377.4	389.1	399.9	408.0	412.4	412.8
150°	342.2	355.3	367.3	378.2	386.7	393.0	396.4	396.4
152.5°	337.2	348.5	359.1	368.1	374.8	380.7	382.7	382.7
155°	329.7	338.8	347.4	354.2	359.3	363.9	365.0	365.6
157.5°	321.7	329.3	336.0	341.3	345.8	349.2	350.1	350.0
160°	317.1	323.4	329.1	333.1	337.1	340.5	340.5	339.9
162.5°	311.7	317.0	322.3	325.8	328.4	331.4	331.4	330.8
165°	304.6	308.0	312.0	314.8	317.1	319.4	318.8	318.8
167.5°	298.4	301.0	303.3	305.4	306.4	308.0	307.4	307.4
170°	294.3	296.0	298.3	299.4	300.0	301.2	300.6	300.6
172.5°	290.7	291.9	293.7	294.4	294.5	295.7	294.7	294.2
175°	285.8	286.3	287.5	287.5	287.5	288.0	287.5	286.9
177.5°	282.7	283.1	283.6	283.6	283.1	283.6	282.7	282.7
180°	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8

(END OF REPORT)