

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: P231539

Luminaire Tested: **S121-DR-2-27-X-0048-1-U-DD-3-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231539
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29630)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S121-DR-2-27-X-0048-1-U-DD-3-W
Description: DEFINE 1 LED LINEAR DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC LENS.
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

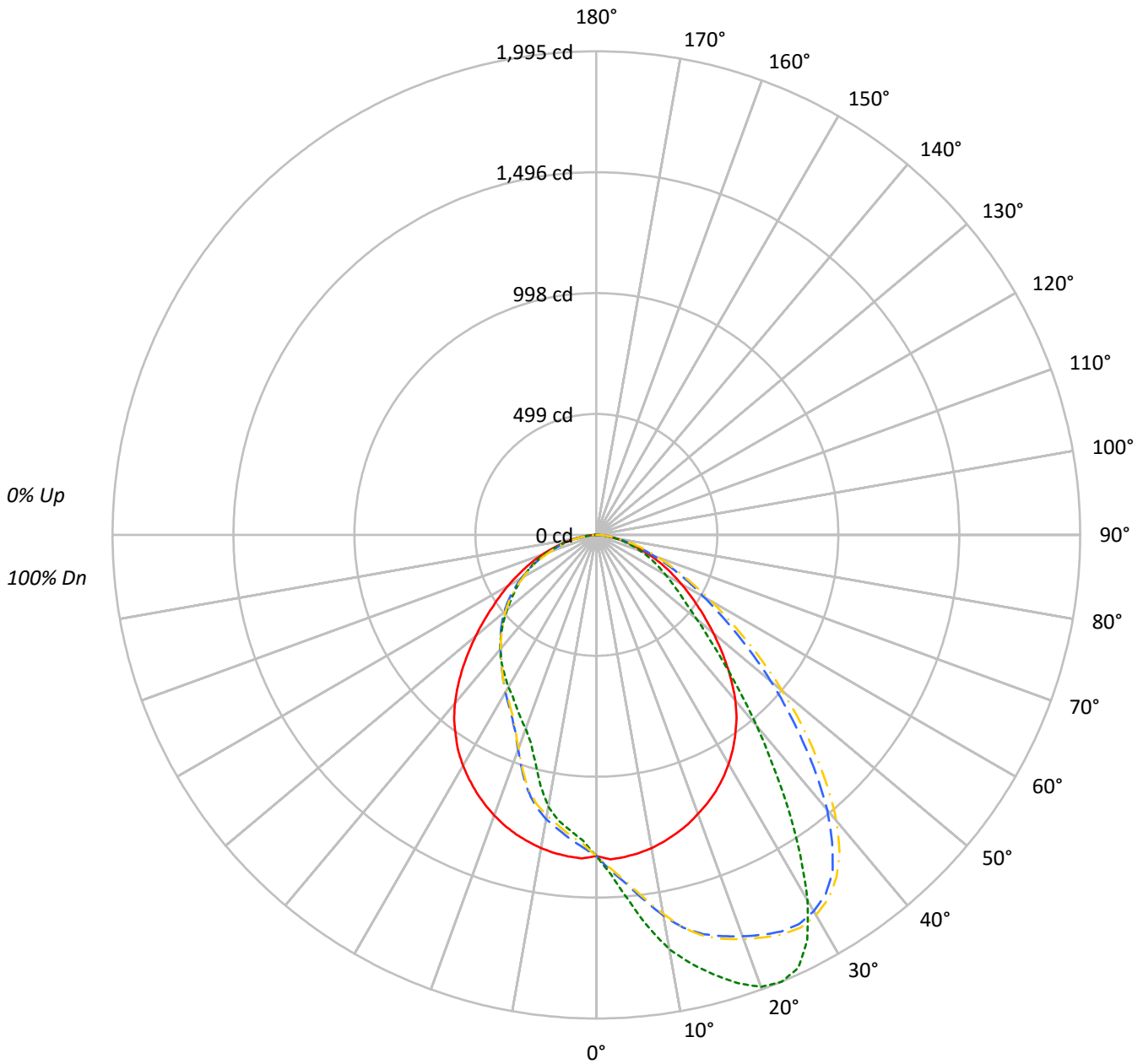
Lumens per Lamp: N/A
Luminaire Lumens: 3404.6 lumens
Efficiency: N/A
Efficacy: 79.9 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.39
Luminous Opening: Rectangular (W 3.92' x L: 0.1' x H: 0')
CIE Type: Direct

Input Watts (W): 42.6
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



— 0°-180° - - 45°-225° - - - 90°-270° - - - 135°-315°



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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	102	98	107	103	100	96	99	96	93	95	93	91	92	90	88	86
2	101	93	87	81	98	91	85	81	88	83	79	84	80	77	81	78	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	66	61	56	54
5	79	66	58	52	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	52	45	71	59	51	45	57	50	45	56	49	44	54	49	44	42
7	68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39	38
8	63	50	42	36	62	49	42	36	48	41	36	47	40	36	46	40	36	34
9	59	46	38	33	58	46	38	33	44	37	33	43	37	32	42	37	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	37027	37027	37027	37027
5°	37432	42405	37359	34362
10°	37237	49274	37237	32326
15°	36886	54359	37007	28101
20°	36428	59030	36630	25328
25°	35965	60785	36122	24089
30°	35230	56197	35475	23405
35°	34119	47113	34495	22949
40°	32554	37536	33113	22467
45°	30072	29100	30843	21789
50°	27362	23456	28210	20873
55°	24756	20291	25624	20126
60°	22618	18441	23518	19581
65°	20527	17220	21427	18959
70°	18367	15874	19340	18089
75°	15663	14377	16851	15566
80°	12558	12429	14474	12156
85°	8982	10072	11163	8436



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.4	3.8
10°-20°	386.1	11.3
20°-30°	592.7	17.4
30°-40°	675.1	19.8
40°-50°	613.6	18.0
50°-60°	478.6	14.1
60°-70°	324.1	9.5
70°-80°	166.1	4.9
80°-90°	39.0	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1108.2	32.5
0°-40°	1783.2	52.4
0°-60°	2875.4	84.5
0°-90°	3404.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3404.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1324	1324	1324	1324	1324	
5°	1334	1511	1331	1224	1334	127
15°	1274	1878	1279	971	1274	359
25°	1166	1970	1171	781	1166	536
35°	1000	1380	1011	672	1000	624
45°	761	736	780	551	761	586
55°	508	416	526	413	508	457
65°	310	260	324	287	310	309
75°	145	133	156	144	145	155
85°	28	31	35	26	28	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4
2.5°	1339.7	1333.8	1337.1	1346.5	1356.6	1360.0	1361.7	1366.0	1371.1	1379.5	1386.3
5°	1333.8	1334.6	1344.8	1360.9	1377.0	1383.8	1389.7	1401.6	1415.2	1432.1	1447.4
7.5°	1324.4	1331.2	1349.9	1372.8	1397.3	1409.2	1418.5	1442.3	1466.9	1494.0	1520.3
10°	1311.7	1325.3	1350.7	1382.1	1418.5	1435.5	1451.6	1487.2	1522.8	1560.1	1594.9
12.5°	1294.8	1315.1	1348.2	1389.7	1438.9	1461.8	1483.8	1530.5	1575.4	1619.5	1660.2
15°	1274.4	1301.5	1343.1	1395.7	1455.9	1483.8	1511.0	1565.2	1615.3	1661.9	1705.1
17.5°	1252.4	1285.4	1335.5	1399.0	1468.6	1499.1	1527.1	1585.6	1636.5	1686.5	1735.7
20°	1224.4	1267.6	1325.3	1396.5	1470.3	1501.6	1532.2	1591.5	1645.8	1704.3	1761.9
22.5°	1197.2	1242.2	1310.9	1385.5	1458.4	1492.3	1523.7	1588.1	1650.9	1718.7	1785.7
25°	1165.9	1216.7	1289.7	1364.3	1437.2	1471.1	1506.7	1579.6	1656.0	1732.3	1805.2
27.5°	1130.3	1184.5	1259.1	1332.1	1407.5	1446.5	1487.2	1572.0	1658.5	1739.1	1809.4
30°	1091.3	1150.6	1220.1	1291.4	1376.2	1420.2	1466.9	1561.8	1655.1	1728.0	1792.5
32.5°	1048.0	1107.4	1171.8	1251.5	1342.2	1392.3	1446.5	1543.2	1636.5	1700.9	1758.6
35°	999.7	1053.1	1119.2	1206.6	1307.5	1362.6	1416.0	1515.2	1604.2	1658.5	1698.4
37.5°	949.7	1003.1	1065.0	1159.9	1268.5	1328.7	1378.7	1473.7	1556.8	1595.8	1596.6
40°	892.0	941.2	1007.3	1111.6	1225.2	1281.2	1336.3	1423.6	1494.9	1510.1	1480.4
42.5°	827.6	879.3	950.5	1061.6	1174.3	1232.9	1280.3	1364.3	1417.7	1407.5	1343.1
45°	760.6	817.4	892.8	1006.5	1115.0	1168.4	1216.7	1291.4	1324.4	1292.2	1203.2
47.5°	693.6	754.6	833.5	946.3	1048.0	1099.7	1144.7	1206.6	1220.1	1167.6	1067.5
50°	629.1	691.0	772.4	881.0	975.1	1026.0	1064.1	1111.6	1108.2	1040.4	938.6
52.5°	567.2	630.8	716.5	810.6	898.8	943.7	979.3	1009.9	994.6	914.9	814.8
55°	507.9	569.8	645.3	728.4	820.8	856.4	888.6	905.6	880.1	799.6	700.4
57.5°	455.3	510.4	586.8	660.5	739.4	769.1	796.2	801.3	767.4	680.0	597.8
60°	404.5	453.6	520.6	578.3	653.7	681.7	701.2	698.7	662.2	589.3	510.4
62.5°	356.1	398.5	455.3	512.1	569.8	591.8	608.8	608.8	563.9	500.3	439.2
65°	310.3	345.9	390.9	432.4	489.2	506.2	519.8	507.9	475.7	415.5	370.5
67.5°	267.1	295.1	329.8	364.6	412.9	425.6	434.1	430.7	396.0	345.9	309.5
70°	224.7	246.7	273.9	301.0	339.2	348.5	356.1	352.7	325.6	289.1	251.0
72.5°	182.3	198.4	220.5	243.3	271.3	278.1	284.9	281.5	255.2	231.5	203.5
75°	145.0	156.0	171.3	189.1	209.4	216.2	220.5	218.8	198.4	178.9	160.3
77.5°	109.4	117.0	128.9	141.6	155.2	157.7	161.9	160.3	147.5	134.0	121.3
80°	78.0	82.2	90.7	98.4	107.7	110.2	111.9	111.9	102.6	94.1	87.3
82.5°	50.9	53.4	58.5	62.7	68.7	69.5	71.2	71.2	65.3	61.9	58.5
85°	28.0	29.7	33.1	34.8	37.3	36.5	38.2	39.0	36.5	35.6	33.9
87.5°	11.9	11.9	12.7	14.4	13.6	13.6	14.4	15.3	14.4	13.6	14.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4
2.5°	1391.4	1383.8	1394.0	1403.3	1405.8	1410.1	1401.6	1396.5	1394.8	1402.4	1397.3
5°	1459.2	1458.4	1475.4	1489.8	1494.0	1501.6	1497.4	1496.6	1498.2	1511.0	1505.0
7.5°	1540.6	1548.3	1573.7	1594.9	1601.7	1612.7	1611.9	1613.6	1617.0	1630.5	1625.4
10°	1632.2	1638.2	1668.7	1695.8	1704.3	1715.3	1708.5	1720.4	1724.6	1735.7	1728.9
12.5°	1698.4	1708.5	1740.8	1770.4	1778.1	1785.7	1784.8	1794.2	1801.8	1812.0	1807.7
15°	1742.4	1755.2	1793.3	1826.4	1836.6	1843.3	1844.2	1856.1	1864.5	1878.1	1883.2
17.5°	1776.4	1796.7	1840.0	1878.1	1889.1	1896.8	1901.9	1915.4	1926.4	1939.2	1943.4
20°	1807.7	1836.6	1885.7	1925.6	1935.8	1941.7	1949.3	1960.4	1973.1	1984.1	1986.6
22.5°	1834.9	1868.8	1916.3	1950.2	1957.8	1960.4	1965.4	1973.1	1986.6	1995.1	1999.4
25°	1850.1	1878.1	1920.5	1949.3	1955.3	1951.0	1954.4	1954.4	1965.4	1970.5	1979.9
27.5°	1844.2	1867.9	1901.0	1916.3	1913.7	1901.9	1886.6	1873.9	1884.0	1884.0	1896.8
30°	1816.2	1827.2	1837.4	1826.4	1802.6	1789.1	1761.9	1735.7	1744.1	1740.8	1753.5
32.5°	1757.7	1741.6	1725.5	1690.7	1656.8	1634.8	1594.1	1579.6	1566.1	1564.4	1575.4
35°	1665.3	1620.3	1578.0	1525.4	1487.2	1460.1	1411.8	1375.3	1378.7	1380.4	1388.9
37.5°	1542.3	1474.5	1414.3	1351.6	1316.8	1282.0	1234.6	1215.0	1201.5	1192.2	1208.3
40°	1400.7	1316.8	1247.3	1182.8	1151.5	1113.3	1069.2	1049.7	1036.1	1028.5	1039.5
42.5°	1254.9	1165.0	1092.1	1026.0	992.9	959.8	917.4	898.8	883.5	872.5	885.2
45°	1113.3	1020.0	944.6	879.3	846.2	819.9	778.4	762.3	747.9	736.0	749.5
47.5°	975.1	897.1	808.9	746.2	718.2	692.7	659.7	646.1	635.1	626.6	635.1
50°	845.4	769.1	686.8	635.1	613.0	590.1	563.9	553.7	545.2	539.3	544.4
52.5°	726.7	655.4	585.9	536.7	524.9	507.9	487.5	479.9	469.7	468.0	474.0
55°	619.8	558.8	502.0	465.5	453.6	440.9	425.6	420.6	414.6	416.3	415.5
57.5°	529.1	478.2	431.6	406.1	395.1	384.9	373.9	371.4	368.8	369.7	368.8
60°	451.9	410.4	373.9	352.7	345.9	338.3	330.7	326.4	328.1	329.8	332.4
62.5°	384.1	351.9	323.1	306.9	302.7	297.6	293.4	290.8	292.5	294.2	296.8
65°	325.6	300.2	279.0	267.9	263.7	261.2	258.6	260.3	258.6	260.3	262.9
67.5°	273.9	254.4	238.3	231.5	228.9	226.4	224.7	227.2	226.4	227.2	228.9
70°	227.2	211.1	200.1	195.0	193.3	191.6	190.8	190.8	192.5	194.2	195.9
72.5°	183.1	173.8	167.0	162.8	161.1	160.3	159.4	161.1	161.1	162.8	164.5
75°	145.0	139.1	133.1	132.3	131.4	130.6	130.6	132.3	132.3	133.1	134.0
77.5°	113.6	108.5	103.4	103.4	102.6	104.3	102.6	104.3	102.6	104.3	105.1
80°	83.9	79.7	78.9	76.3	75.5	78.0	75.5	77.2	75.5	77.2	78.0
82.5°	56.8	54.3	53.4	51.7	51.7	53.4	51.7	52.6	51.7	52.6	53.4
85°	33.1	32.2	31.4	31.4	30.5	32.2	30.5	31.4	30.5	31.4	32.2
87.5°	14.4	14.4	13.6	14.4	12.7	14.4	13.6	14.4	15.3	14.4	14.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4
2.5°	1403.3	1394.8	1392.3	1385.5	1387.2	1395.7	1393.1	1398.2	1377.8	1361.7	1350.7
5°	1507.6	1493.2	1485.5	1473.7	1472.8	1475.4	1466.0	1466.0	1437.2	1413.5	1393.1
7.5°	1627.1	1607.6	1595.8	1579.6	1577.1	1573.7	1556.8	1548.3	1511.0	1474.5	1443.1
10°	1728.9	1709.4	1696.7	1681.4	1678.0	1672.9	1650.0	1633.9	1587.3	1540.6	1497.4
12.5°	1807.7	1787.4	1773.0	1759.4	1754.3	1749.2	1728.0	1701.7	1660.2	1602.5	1551.7
15°	1879.0	1856.9	1840.0	1823.8	1815.4	1805.2	1780.6	1756.0	1712.8	1650.9	1595.8
17.5°	1938.3	1914.6	1894.2	1878.1	1867.1	1853.5	1823.8	1789.9	1746.7	1681.4	1624.6
20°	1981.6	1957.8	1935.8	1921.4	1912.0	1892.5	1861.2	1822.1	1774.7	1703.4	1639.0
22.5°	1996.0	1973.9	1954.4	1943.4	1934.1	1918.8	1890.8	1852.7	1797.6	1719.6	1646.6
25°	1978.2	1965.4	1951.9	1945.9	1939.2	1927.3	1906.9	1871.3	1817.9	1734.0	1650.9
27.5°	1900.2	1903.5	1905.2	1914.6	1912.9	1915.4	1903.5	1872.2	1825.5	1744.1	1653.4
30°	1766.2	1785.7	1803.5	1825.5	1829.8	1859.5	1868.8	1847.6	1811.1	1742.4	1652.6
32.5°	1610.2	1623.7	1654.3	1677.2	1701.7	1755.2	1789.9	1801.8	1780.6	1723.8	1640.7
35°	1422.8	1443.1	1483.0	1516.1	1544.0	1616.1	1673.8	1721.2	1725.5	1690.7	1613.6
37.5°	1242.2	1265.1	1305.8	1346.5	1368.5	1455.9	1531.3	1609.3	1646.6	1639.0	1577.1
40°	1073.4	1098.0	1137.9	1180.3	1198.1	1288.8	1371.9	1473.7	1540.6	1569.5	1526.2
42.5°	917.4	942.9	981.9	1019.2	1056.5	1129.4	1213.4	1327.0	1412.6	1472.0	1458.4
45°	776.7	800.4	838.6	871.6	896.2	980.2	1062.4	1165.0	1274.4	1347.3	1370.2
47.5°	658.0	678.3	712.2	741.9	775.0	840.3	922.5	1024.3	1136.2	1236.2	1269.3
50°	563.0	580.0	608.8	632.5	657.1	715.6	791.1	890.3	1001.4	1108.2	1157.4
52.5°	487.5	501.1	524.9	541.0	562.2	609.6	675.8	767.4	871.6	981.0	1041.2
55°	427.3	437.5	458.7	467.2	484.2	522.3	576.6	659.7	749.5	856.4	924.2
57.5°	377.3	384.1	401.9	407.8	420.6	450.2	493.5	563.9	641.9	740.2	821.6
60°	335.8	340.9	351.9	357.0	367.1	390.0	424.0	479.1	546.1	634.2	701.2
62.5°	297.6	301.0	309.5	312.9	320.5	337.5	364.6	408.7	463.0	537.6	609.6
65°	263.7	265.4	272.2	272.2	279.0	291.7	312.0	348.5	390.0	453.6	515.5
67.5°	229.8	230.6	233.2	236.6	241.7	251.0	265.4	294.2	327.3	379.0	430.7
70°	195.9	196.7	200.1	200.1	203.5	210.3	223.8	245.0	270.5	312.0	354.4
72.5°	164.5	166.2	167.9	167.0	170.4	174.7	184.0	197.6	223.0	251.8	285.7
75°	134.8	134.0	137.4	136.5	139.1	141.6	149.2	158.6	175.5	195.9	223.0
77.5°	106.0	105.1	107.7	109.4	108.5	111.1	116.2	121.3	133.1	147.5	166.2
80°	78.9	79.7	79.7	81.4	81.4	82.2	85.6	88.2	96.7	105.1	117.9
82.5°	53.4	55.1	55.1	56.8	56.0	56.8	58.5	60.2	65.3	69.5	77.2
85°	32.2	32.2	33.1	33.9	33.9	33.9	35.6	35.6	38.2	39.9	44.1
87.5°	15.3	14.4	15.3	16.1	15.3	16.1	15.3	16.1	17.8	17.0	18.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P231539

CATALOG NUMBER: S121-DR-2-27-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4
2.5°	1343.9	1346.5	1344.8	1342.2	1342.2	1349.9	1348.2	1335.5	1322.7	1308.3	1303.2
5°	1379.5	1375.3	1369.4	1363.4	1356.6	1357.5	1349.9	1331.2	1313.4	1294.8	1287.1
7.5°	1418.5	1404.1	1394.8	1384.6	1368.5	1363.4	1348.2	1323.6	1301.5	1279.5	1268.5
10°	1461.8	1434.7	1418.5	1403.3	1378.7	1364.3	1342.2	1311.7	1286.3	1260.0	1247.3
12.5°	1504.2	1465.2	1444.0	1421.9	1385.5	1363.4	1333.8	1296.4	1266.8	1237.9	1221.8
15°	1540.6	1494.9	1467.7	1440.6	1391.4	1357.5	1320.2	1278.6	1242.2	1212.5	1193.0
17.5°	1566.1	1514.4	1486.4	1455.0	1394.8	1349.9	1304.1	1256.6	1216.7	1182.8	1159.9
20°	1576.3	1522.0	1493.2	1460.1	1393.1	1337.1	1285.4	1231.2	1188.8	1154.0	1123.5
22.5°	1575.4	1517.8	1487.2	1453.3	1382.9	1322.7	1262.5	1202.3	1156.5	1116.7	1081.9
25°	1567.8	1503.3	1470.3	1435.5	1365.1	1303.2	1237.1	1171.0	1120.9	1075.1	1032.7
27.5°	1560.1	1483.0	1446.5	1410.9	1339.7	1276.9	1206.6	1136.2	1081.1	1028.5	979.3
30°	1550.8	1460.9	1419.4	1378.7	1301.5	1240.5	1171.8	1098.9	1037.8	978.5	919.1
32.5°	1537.3	1438.9	1393.1	1344.8	1260.0	1198.1	1132.0	1059.0	989.5	921.7	858.9
35°	1517.8	1413.5	1365.1	1311.7	1213.4	1148.1	1086.2	1010.7	939.5	864.0	801.3
37.5°	1486.4	1382.1	1330.4	1275.2	1165.0	1093.0	1032.7	963.2	884.4	806.4	746.2
40°	1444.8	1341.4	1290.5	1232.0	1115.0	1034.4	974.2	907.3	825.9	749.5	696.1
42.5°	1394.8	1290.5	1240.5	1185.4	1064.1	975.1	912.3	845.4	766.5	696.1	648.6
45°	1328.7	1230.3	1178.6	1129.4	1009.9	914.0	847.9	780.1	709.7	647.8	603.7
47.5°	1250.7	1164.2	1112.5	1065.0	950.5	853.0	782.6	713.9	652.9	600.3	561.3
50°	1159.9	1091.3	1041.2	991.2	886.9	790.2	717.3	648.6	596.1	555.4	520.6
52.5°	1062.4	1012.4	964.1	917.4	819.1	726.7	648.6	585.9	543.5	511.3	482.5
55°	959.8	928.5	889.5	838.6	747.0	660.5	587.6	525.7	491.8	468.0	444.3
57.5°	854.7	837.7	804.7	758.0	672.4	594.4	527.4	471.4	442.6	424.8	407.0
60°	751.2	741.1	709.7	676.6	597.8	529.1	466.3	420.6	396.8	383.3	368.8
62.5°	648.6	647.8	628.3	593.5	524.9	465.5	409.5	370.5	351.9	342.6	330.7
65°	552.0	557.9	539.3	512.1	453.6	401.9	355.3	323.9	309.5	301.9	293.4
67.5°	462.1	470.6	456.2	433.3	385.8	341.7	305.2	279.8	267.9	262.0	255.2
70°	380.7	387.5	378.2	358.7	320.5	285.7	256.1	236.6	228.1	223.0	219.6
72.5°	307.8	311.2	303.6	289.1	260.3	234.0	208.6	194.2	187.4	183.1	178.9
75°	236.6	244.2	237.4	225.5	202.6	180.6	166.2	156.0	150.1	147.5	145.0
77.5°	175.5	180.6	176.4	167.9	153.5	137.4	127.2	122.9	119.6	113.6	111.9
80°	122.9	127.2	124.6	118.7	109.4	101.7	91.6	89.9	86.5	82.2	81.4
82.5°	83.1	82.2	81.4	76.3	71.2	67.0	60.2	60.2	55.1	54.3	53.4
85°	44.1	45.8	44.9	42.4	40.7	36.5	34.8	34.8	33.1	30.5	30.5
87.5°	17.8	18.7	18.7	17.0	17.0	15.3	16.1	15.3	14.4	12.7	12.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P231539

CATALOG NUMBER: S121-DR-2-27-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4
2.5°	1299.8	1300.7	1298.1	1293.1	1290.5	1282.9	1289.7	1281.2	1270.2	1278.6	1276.1
5°	1280.3	1279.5	1274.4	1267.6	1262.5	1252.4	1257.4	1247.3	1234.6	1239.6	1236.2
7.5°	1258.3	1256.6	1249.8	1239.6	1231.2	1219.3	1223.5	1211.7	1198.1	1203.2	1199.8
10°	1234.6	1230.3	1221.8	1209.1	1199.8	1187.1	1190.5	1176.9	1161.6	1163.3	1156.5
12.5°	1205.7	1199.8	1190.5	1176.9	1165.9	1149.8	1148.9	1129.4	1107.4	1103.1	1089.6
15°	1173.5	1166.7	1157.4	1139.6	1123.5	1098.9	1091.3	1062.4	1031.9	1021.7	1003.9
17.5°	1142.1	1130.3	1119.2	1093.0	1067.5	1032.7	1018.3	983.6	952.2	940.3	924.2
20°	1097.2	1086.2	1070.1	1034.4	1000.5	959.8	942.0	903.9	882.7	876.7	867.4
22.5°	1047.2	1031.9	1014.1	966.6	929.3	890.3	875.9	847.1	834.3	832.6	827.6
25°	989.5	970.9	942.9	897.9	862.3	831.8	825.0	804.7	797.9	798.7	794.5
27.5°	934.4	907.3	881.8	834.3	806.4	786.9	785.2	769.1	766.5	765.7	759.7
30°	865.7	844.5	819.1	779.2	759.7	749.5	750.4	736.0	732.6	730.9	727.5
32.5°	806.4	787.7	764.0	732.6	721.6	718.2	713.1	701.2	702.9	701.2	701.2
35°	751.2	730.9	715.6	692.7	687.7	686.0	678.3	669.8	671.5	676.6	674.9
37.5°	701.2	686.0	671.5	657.1	653.7	652.9	644.4	641.9	648.6	648.6	647.0
40°	655.4	642.7	630.8	623.2	620.7	619.0	613.9	613.9	620.7	619.8	619.0
42.5°	613.9	602.0	594.4	590.1	587.6	587.6	585.1	589.3	592.7	591.8	587.6
45°	574.0	564.7	560.5	556.2	554.5	557.1	556.2	558.8	563.0	560.5	555.4
47.5°	535.0	528.2	525.7	522.3	524.9	525.7	526.5	528.2	530.8	526.5	521.5
50°	498.6	493.5	491.8	487.5	494.3	493.5	496.0	498.6	496.9	490.9	486.7
52.5°	463.0	459.6	458.7	458.7	462.1	462.1	463.8	465.5	461.3	455.3	451.1
55°	429.0	425.6	424.8	422.3	427.3	429.0	429.0	429.0	424.0	417.2	413.8
57.5°	395.1	390.9	390.0	392.6	392.6	392.6	393.4	392.6	387.5	382.4	379.9
60°	359.5	356.1	355.3	357.8	357.0	360.4	357.0	355.3	351.0	348.5	349.3
62.5°	323.9	319.7	319.7	322.2	322.2	323.9	320.5	318.0	315.4	313.7	316.3
65°	284.9	283.2	283.2	286.6	286.6	284.9	282.4	282.4	281.5	280.7	280.7
67.5°	248.4	247.6	248.4	251.8	251.0	248.4	246.7	247.6	247.6	248.4	248.4
70°	216.2	210.3	210.3	216.2	216.2	216.2	210.3	212.0	212.0	215.4	218.8
72.5°	178.9	175.5	175.5	178.9	176.4	179.8	176.4	178.9	179.8	181.5	183.1
75°	141.6	145.0	142.4	145.8	144.1	145.8	143.3	145.8	146.7	145.8	145.0
77.5°	111.9	112.8	110.2	113.6	112.8	113.6	111.9	113.6	113.6	111.9	113.6
80°	81.4	82.2	80.6	83.9	82.2	83.1	81.4	83.1	82.2	78.9	79.7
82.5°	54.3	55.1	53.4	56.8	54.3	56.0	53.4	54.3	53.4	50.0	50.9
85°	31.4	32.2	30.5	33.1	31.4	32.2	29.7	30.5	29.7	28.0	28.0
87.5°	12.7	13.6	11.9	13.6	12.7	12.7	11.0	11.9	11.9	10.2	11.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P231539

CATALOG NUMBER: S121-DR-2-27-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4
2.5°	1276.1	1270.2	1266.8	1263.4	1260.0	1262.5	1264.2	1265.1	1270.2	1268.5	1269.3
5°	1234.6	1228.6	1223.5	1220.1	1219.3	1224.4	1226.9	1226.1	1228.6	1225.2	1226.9
7.5°	1198.9	1193.0	1187.9	1182.8	1183.7	1189.6	1193.0	1193.0	1196.4	1191.3	1191.3
10°	1156.5	1148.9	1140.4	1134.5	1133.6	1138.7	1139.6	1137.9	1144.7	1144.7	1148.1
12.5°	1088.7	1077.7	1071.8	1056.5	1055.6	1060.7	1063.3	1068.4	1070.9	1074.3	1081.1
15°	1001.4	991.2	982.7	966.6	965.8	970.9	967.5	981.0	986.1	991.2	998.0
17.5°	921.7	914.9	906.4	894.5	892.8	897.9	897.1	906.4	909.8	913.2	919.1
20°	865.7	857.2	855.5	847.9	847.9	851.3	850.4	854.7	856.4	856.4	859.8
22.5°	826.7	821.6	819.1	814.0	814.0	816.5	817.4	819.1	819.1	816.5	818.2
25°	793.6	788.6	784.3	777.5	778.4	780.9	781.8	783.5	784.3	783.5	785.2
27.5°	758.0	752.9	749.5	745.3	746.2	748.7	747.9	749.5	749.5	749.5	751.2
30°	726.7	723.3	723.3	720.7	723.3	725.0	724.1	724.1	722.4	719.0	719.0
32.5°	699.5	698.7	698.7	697.8	697.8	697.8	698.7	699.5	697.8	695.3	694.4
35°	674.1	672.4	672.4	669.8	672.4	672.4	672.4	673.2	671.5	669.8	667.3
37.5°	647.8	647.8	646.1	646.1	645.3	647.0	646.1	646.1	645.3	642.7	641.0
40°	619.8	619.0	615.6	614.7	613.9	615.6	613.9	615.6	615.6	614.7	613.9
42.5°	587.6	586.8	585.1	583.4	582.5	584.2	582.5	583.4	584.2	584.2	582.5
45°	554.5	555.4	552.0	547.7	551.1	551.1	550.3	551.1	551.1	552.0	550.3
47.5°	521.5	521.5	518.1	516.4	515.5	515.5	513.8	515.5	517.2	518.9	517.2
50°	485.8	485.0	480.8	476.5	479.1	479.9	477.4	479.1	479.9	482.5	482.5
52.5°	449.4	449.4	446.0	443.5	446.8	446.0	444.3	444.3	445.2	444.3	445.2
55°	413.8	415.5	412.9	411.2	412.1	412.9	412.1	412.1	412.1	411.2	410.4
57.5°	380.7	382.4	379.9	379.0	380.7	381.6	379.0	379.0	379.0	379.0	377.3
60°	348.5	349.3	348.5	346.8	349.3	350.2	348.5	347.6	346.8	345.1	345.1
62.5°	315.4	316.3	317.1	316.3	318.0	318.8	317.1	316.3	315.4	312.0	311.2
65°	282.4	284.0	285.7	285.7	287.4	286.6	285.7	284.9	283.2	280.7	278.1
67.5°	249.3	251.8	253.5	253.5	255.2	254.4	253.5	252.7	251.0	248.4	245.9
70°	217.1	219.6	219.6	220.5	220.5	221.3	218.8	218.8	218.8	215.4	211.1
72.5°	180.6	183.1	182.3	183.1	183.1	181.5	181.5	181.5	182.3	178.9	177.2
75°	145.8	147.5	146.7	147.5	145.0	144.1	146.7	144.1	144.1	144.1	142.4
77.5°	110.2	111.1	110.2	111.1	106.8	110.2	109.4	106.8	107.7	107.7	111.1
80°	77.2	78.0	76.3	76.3	72.9	75.5	75.5	73.8	73.8	73.8	77.2
82.5°	49.2	49.2	48.3	48.3	45.8	48.3	47.5	45.8	45.8	46.6	48.3
85°	28.0	27.1	26.3	27.1	24.6	26.3	26.3	25.4	25.4	25.4	26.3
87.5°	11.0	10.2	10.2	10.2	10.2	10.2	10.2	9.3	9.3	10.2	10.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P231539

CATALOG NUMBER: S121-DR-2-27-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4	1324.4
2.5°	1274.4	1278.6	1287.1	1295.6	1275.2	1278.6	1282.9	1288.8	1293.9	1296.4	1299.0
5°	1231.2	1237.9	1247.3	1259.1	1243.9	1244.7	1254.1	1262.5	1270.2	1273.6	1277.8
7.5°	1194.7	1199.8	1212.5	1221.0	1208.3	1210.0	1221.8	1234.6	1243.9	1249.0	1254.9
10°	1153.2	1160.8	1177.7	1186.2	1175.2	1176.0	1186.2	1201.5	1215.0	1221.0	1228.6
12.5°	1089.6	1101.4	1126.0	1138.7	1137.9	1140.4	1151.5	1166.7	1181.1	1188.8	1198.9
15°	1000.5	1021.7	1053.1	1071.8	1083.6	1093.0	1109.9	1131.1	1146.4	1153.2	1161.6
17.5°	922.5	941.2	970.9	991.2	1012.4	1030.2	1053.9	1084.5	1105.7	1115.0	1125.2
20°	862.3	872.5	896.2	914.0	937.8	958.1	986.1	1026.8	1056.5	1069.2	1082.8
22.5°	819.9	828.4	840.3	852.1	870.8	888.6	914.9	961.5	999.7	1015.8	1036.1
25°	786.0	792.8	800.4	806.4	818.2	822.5	847.9	893.7	936.9	956.4	981.9
27.5°	752.9	761.4	768.2	772.4	779.2	777.5	796.2	829.3	872.5	894.5	920.0
30°	719.0	725.0	734.3	738.5	746.2	738.5	747.9	772.4	810.6	831.8	857.2
32.5°	692.7	692.7	697.0	702.1	713.1	706.3	708.8	724.1	755.5	774.1	798.7
35°	667.3	666.5	667.3	668.1	677.5	675.8	674.9	682.6	707.2	722.4	743.6
37.5°	640.2	639.3	639.3	638.5	643.6	644.4	644.4	646.1	663.1	672.4	692.7
40°	611.3	610.5	611.3	610.5	612.2	611.3	612.2	613.9	624.1	630.8	644.4
42.5°	581.7	582.5	582.5	582.5	581.7	579.1	580.0	580.8	588.4	591.0	602.0
45°	549.4	552.0	552.0	551.1	551.1	549.4	546.1	548.6	553.7	553.7	562.2
47.5°	517.2	518.1	519.8	519.8	519.8	518.9	513.8	515.5	519.8	518.1	524.0
50°	481.6	484.2	485.8	487.5	488.4	486.7	482.5	481.6	481.6	483.3	485.8
52.5°	445.2	448.5	451.1	453.6	455.3	454.5	451.9	448.5	449.4	449.4	451.1
55°	410.4	411.2	415.5	419.7	420.6	420.6	418.9	414.6	417.2	414.6	417.2
57.5°	375.6	376.5	379.0	379.0	384.1	385.8	384.9	381.6	383.3	380.7	382.4
60°	343.4	343.4	343.4	345.9	347.6	350.2	350.2	346.8	347.6	346.8	347.6
62.5°	310.3	309.5	308.6	310.3	310.3	313.7	314.6	312.0	312.0	313.7	312.0
65°	277.3	276.4	275.6	272.2	273.9	276.4	279.0	277.3	276.4	277.3	276.4
67.5°	245.0	243.3	242.5	238.3	239.1	240.0	242.5	241.7	241.7	241.7	240.8
70°	215.4	208.6	207.7	206.0	202.6	203.5	204.3	204.3	203.5	204.3	202.6
72.5°	179.8	175.5	173.0	173.0	173.0	169.6	170.4	170.4	168.7	169.6	167.9
75°	145.8	142.4	141.6	141.6	139.9	137.4	137.4	135.7	135.7	135.7	134.0
77.5°	111.1	109.4	109.4	109.4	108.5	106.0	106.8	105.1	103.4	104.3	105.1
80°	78.0	77.2	77.2	78.0	78.9	76.3	77.2	75.5	74.6	74.6	72.9
82.5°	49.2	49.2	49.2	50.9	51.7	52.6	50.9	49.2	49.2	49.2	50.0
85°	27.1	26.3	27.1	28.0	28.0	27.1	28.0	28.0	28.0	28.0	26.3
87.5°	10.2	9.3	10.2	10.2	10.2	9.3	10.2	10.2	10.2	11.0	11.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P231539

CATALOG NUMBER: S121-DR-2-27-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1324.4	1324.4	1324.4	1324.4
2.5°	1308.3	1323.6	1334.6	1339.7
5°	1289.7	1308.3	1323.6	1333.8
7.5°	1269.3	1289.7	1310.0	1324.4
10°	1245.6	1271.0	1292.2	1311.7
12.5°	1218.4	1246.4	1270.2	1294.8
15°	1187.9	1219.3	1246.4	1274.4
17.5°	1153.2	1188.8	1218.4	1252.4
20°	1113.3	1154.0	1187.9	1224.4
22.5°	1070.9	1115.8	1154.8	1197.2
25°	1023.4	1073.4	1119.2	1165.9
27.5°	968.3	1027.7	1080.2	1130.3
30°	909.8	975.1	1036.1	1091.3
32.5°	848.8	920.0	989.5	1048.0
35°	791.1	863.2	939.5	999.7
37.5°	736.8	804.7	886.1	949.7
40°	684.3	746.2	827.6	892.0
42.5°	636.8	691.9	769.1	827.6
45°	591.0	640.2	708.0	760.6
47.5°	547.7	592.7	649.5	693.6
50°	507.0	546.1	591.8	629.1
52.5°	467.2	501.1	537.6	567.2
55°	428.2	457.0	482.5	507.9
57.5°	390.9	412.9	431.6	455.3
60°	353.6	370.5	382.4	404.5
62.5°	316.3	329.0	336.6	356.1
65°	279.0	288.3	294.2	310.3
67.5°	242.5	249.3	252.7	267.1
70°	203.5	206.0	210.3	224.7
72.5°	168.7	170.4	173.0	182.3
75°	134.8	137.4	138.2	145.0
77.5°	106.0	105.1	107.7	109.4
80°	73.8	74.6	77.2	78.0
82.5°	47.5	48.3	50.9	50.9
85°	26.3	27.1	28.8	28.0
87.5°	10.2	11.0	11.9	11.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)