

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: P231538

Luminaire Tested: **S121-DR-1-40-X-0048-1-U-DD-3-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231538
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-1-40-X-0048-1-U-DD-3-W
Description: DEFINE 1 LED LINEAR DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC LENS.
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3172.7 lumens
Efficiency: N/A
Efficacy: 113.7 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

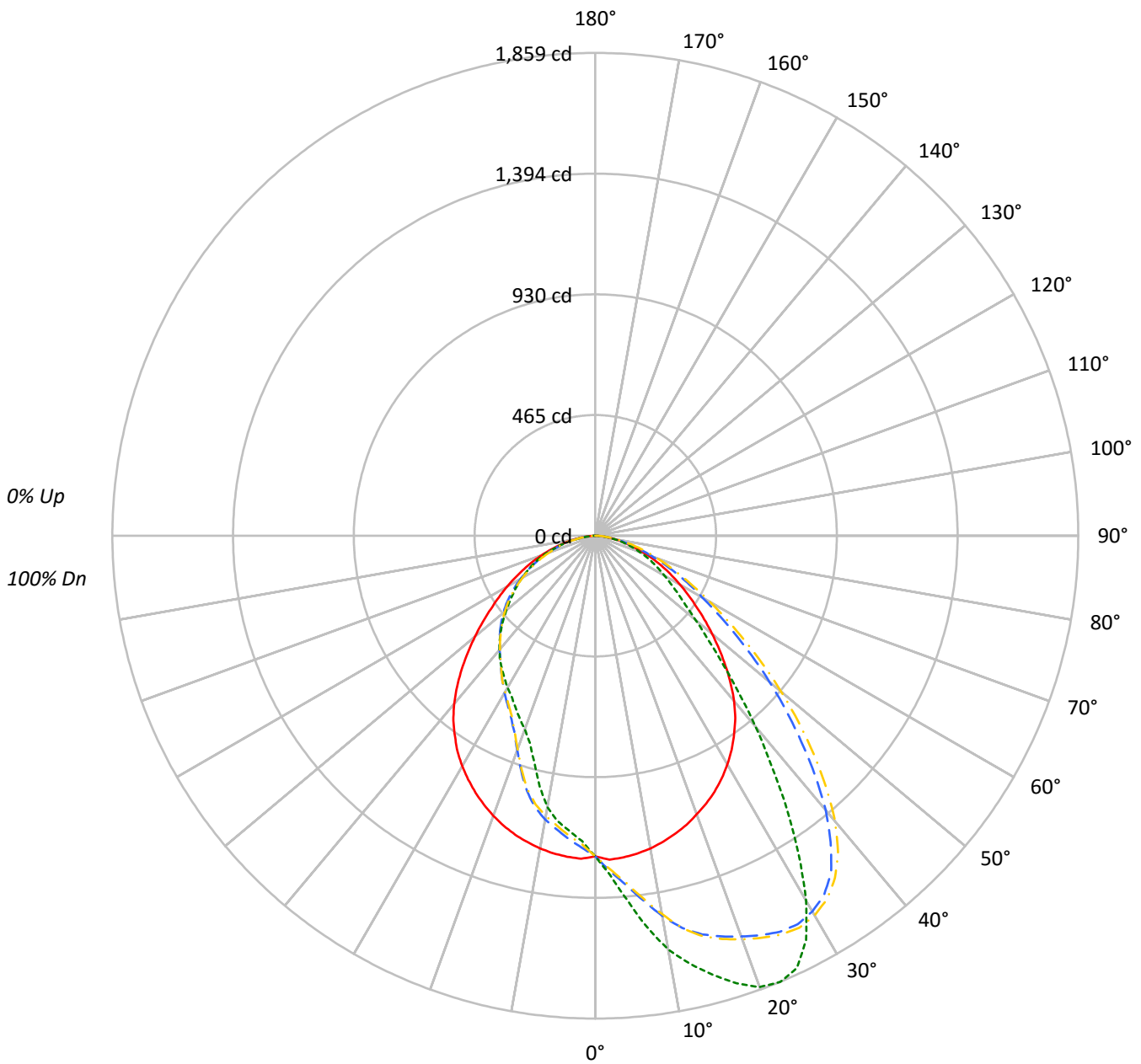
Input Watts (W): 27.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					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°	34505	34505	34505	34505
5°	34881	39517	34814	32021
10°	34702	45919	34702	30126
15°	34373	50657	34489	26185
20°	33947	55011	34134	23602
25°	33516	56645	33661	22448
30°	32828	52369	33057	21810
35°	31795	43904	32147	21386
40°	30335	34981	30857	20938
45°	28024	27119	28740	20307
50°	25501	21856	26292	19450
55°	23070	18912	23879	18756
60°	21074	17188	21913	18245
65°	19131	16049	19965	17669
70°	17117	14787	18024	16855
75°	14593	13405	15706	14507
80°	11705	11576	13492	11318
85°	8372	9367	10393	7859



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.6	3.8
10°-20°	359.8	11.3
20°-30°	552.3	17.4
30°-40°	629.1	19.8
40°-50°	571.8	18.0
50°-60°	446.0	14.1
60°-70°	302.0	9.5
70°-80°	154.8	4.9
80°-90°	36.4	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°	1032.7	32.5
0°-40°	1661.8	52.4
0°-60°	2679.5	84.5
0°-90°	3172.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3172.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1234	1234	1234	1234	1234	
5°	1243	1408	1240	1141	1243	118
15°	1188	1750	1192	905	1188	335
25°	1086	1836	1091	728	1086	500
35°	932	1286	942	627	932	582
45°	709	686	727	514	709	546
55°	473	388	490	385	473	426
65°	289	243	302	267	289	288
75°	135	124	145	134	135	144
85°	26	29	32	24	26	33
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°	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2
2.5°	1248.4	1242.9	1246.1	1254.8	1264.3	1267.4	1269.0	1272.9	1277.7	1285.6	1291.9
5°	1242.9	1243.7	1253.2	1268.2	1283.2	1289.5	1295.1	1306.1	1318.8	1334.6	1348.8
7.5°	1234.2	1240.5	1257.9	1279.3	1302.2	1313.2	1321.9	1344.1	1367.0	1392.3	1416.8
10°	1222.4	1235.0	1258.7	1288.0	1321.9	1337.7	1352.7	1385.9	1419.1	1453.9	1486.3
12.5°	1206.6	1225.5	1256.3	1295.1	1340.9	1362.2	1382.8	1426.2	1468.1	1509.2	1547.1
15°	1187.6	1212.9	1251.6	1300.6	1356.7	1382.8	1408.1	1458.6	1505.2	1548.7	1589.0
17.5°	1167.1	1197.9	1244.5	1303.8	1368.6	1397.0	1423.1	1477.6	1525.0	1571.6	1617.5
20°	1141.0	1181.3	1235.0	1301.4	1370.1	1399.4	1427.8	1483.1	1533.7	1588.2	1641.9
22.5°	1115.7	1157.6	1221.6	1291.1	1359.1	1390.7	1419.9	1480.0	1538.4	1601.6	1664.1
25°	1086.5	1133.9	1201.8	1271.4	1339.3	1370.9	1404.1	1472.1	1543.2	1614.3	1682.2
27.5°	1053.3	1103.8	1173.4	1241.3	1311.7	1348.0	1385.9	1465.0	1545.5	1620.6	1686.2
30°	1016.9	1072.2	1137.0	1203.4	1282.4	1323.5	1367.0	1455.5	1542.4	1610.3	1670.4
32.5°	976.6	1031.9	1092.0	1166.3	1250.8	1297.4	1348.0	1438.1	1525.0	1585.1	1638.8
35°	931.6	981.4	1043.0	1124.4	1218.4	1269.8	1319.6	1412.0	1495.0	1545.5	1582.7
37.5°	885.0	934.8	992.4	1080.9	1182.1	1238.2	1284.8	1373.3	1450.7	1487.1	1487.9
40°	831.2	877.1	938.7	1035.9	1141.8	1193.9	1245.3	1326.7	1393.0	1407.3	1379.6
42.5°	771.2	819.4	885.8	989.3	1094.4	1148.9	1193.1	1271.4	1321.1	1311.7	1251.6
45°	708.8	761.7	832.0	937.9	1039.1	1088.8	1133.9	1203.4	1234.2	1204.2	1121.2
47.5°	646.3	703.2	776.7	881.8	976.6	1024.8	1066.7	1124.4	1137.0	1088.0	994.8
50°	586.3	644.0	719.8	821.0	908.7	956.1	991.6	1035.9	1032.7	969.5	874.7
52.5°	528.6	587.9	667.7	755.4	837.6	879.4	912.6	941.1	926.9	852.6	759.3
55°	473.3	531.0	601.3	678.7	764.9	798.1	828.1	843.9	820.2	745.1	652.7
57.5°	424.3	475.7	546.8	615.5	689.0	716.7	742.0	746.7	715.1	633.7	557.1
60°	376.9	422.7	485.2	538.9	609.2	635.3	653.5	651.1	617.1	549.2	475.7
62.5°	331.9	371.4	424.3	477.3	531.0	551.5	567.3	567.3	525.5	466.2	409.3
65°	289.2	322.4	364.3	403.0	455.9	471.7	484.4	473.3	443.3	387.2	345.3
67.5°	248.9	275.0	307.4	339.8	384.8	396.7	404.6	401.4	369.0	322.4	288.4
70°	209.4	229.9	255.2	280.5	316.1	324.8	331.9	328.7	303.4	269.4	233.9
72.5°	169.9	184.9	205.4	226.8	252.9	259.2	265.5	262.3	237.8	215.7	189.6
75°	135.1	145.4	159.6	176.2	195.2	201.5	205.4	203.9	184.9	166.7	149.3
77.5°	101.9	109.0	120.1	132.0	144.6	147.0	150.9	149.3	137.5	124.8	113.0
80°	72.7	76.6	84.5	91.7	100.3	102.7	104.3	104.3	95.6	87.7	81.4
82.5°	47.4	49.8	54.5	58.5	64.0	64.8	66.4	66.4	60.8	57.7	54.5
85°	26.1	27.7	30.8	32.4	34.8	34.0	35.6	36.3	34.0	33.2	31.6
87.5°	11.1	11.1	11.9	13.4	12.6	12.6	13.4	14.2	13.4	12.6	13.4
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°	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2
2.5°	1296.6	1289.5	1299.0	1307.7	1310.1	1314.0	1306.1	1301.4	1299.8	1306.9	1302.2
5°	1359.9	1359.1	1374.9	1388.3	1392.3	1399.4	1395.4	1394.6	1396.2	1408.1	1402.5
7.5°	1435.7	1442.8	1466.5	1486.3	1492.6	1502.9	1502.1	1503.7	1506.8	1519.5	1514.7
10°	1521.1	1526.6	1555.0	1580.3	1588.2	1598.5	1592.2	1603.2	1607.2	1617.5	1611.1
12.5°	1582.7	1592.2	1622.2	1649.8	1657.0	1664.1	1663.3	1672.0	1679.1	1688.6	1684.6
15°	1623.8	1635.6	1671.2	1702.0	1711.5	1717.8	1718.6	1729.7	1737.6	1750.2	1754.9
17.5°	1655.4	1674.3	1714.6	1750.2	1760.5	1767.6	1772.3	1785.0	1795.2	1807.1	1811.0
20°	1684.6	1711.5	1757.3	1794.4	1803.9	1809.5	1816.6	1826.8	1838.7	1849.0	1851.3
22.5°	1709.9	1741.5	1785.8	1817.4	1824.5	1826.8	1831.6	1838.7	1851.3	1859.2	1863.2
25°	1724.1	1750.2	1789.7	1816.6	1822.1	1818.1	1821.3	1821.3	1831.6	1836.3	1845.0
27.5°	1718.6	1740.7	1771.5	1785.8	1783.4	1772.3	1758.1	1746.2	1755.7	1755.7	1767.6
30°	1692.5	1702.8	1712.3	1702.0	1679.9	1667.2	1641.9	1617.5	1625.4	1622.2	1634.0
32.5°	1638.0	1623.0	1608.0	1575.6	1544.0	1523.4	1485.5	1472.1	1459.4	1457.8	1468.1
35°	1551.9	1510.0	1470.5	1421.5	1385.9	1360.6	1315.6	1281.6	1284.8	1286.4	1294.3
37.5°	1437.3	1374.1	1318.0	1259.5	1227.1	1194.7	1150.5	1132.3	1119.7	1111.0	1126.0
40°	1305.3	1227.1	1162.3	1102.3	1073.0	1037.5	996.4	978.2	965.6	958.5	968.7
42.5°	1169.4	1085.7	1017.7	956.1	925.3	894.5	854.9	837.6	823.3	813.1	824.9
45°	1037.5	950.6	880.2	819.4	788.6	764.1	725.4	710.4	696.9	685.9	698.5
47.5°	908.7	836.0	753.8	695.3	669.3	645.6	614.7	602.1	591.8	583.9	591.8
50°	787.8	716.7	640.0	591.8	571.3	549.9	525.5	516.0	508.1	502.5	507.3
52.5°	677.2	610.8	546.0	500.2	489.1	473.3	454.3	447.2	437.7	436.2	441.7
55°	577.6	520.7	467.8	433.8	422.7	410.9	396.7	391.9	386.4	388.0	387.2
57.5°	493.1	445.6	402.2	378.5	368.2	358.7	348.5	346.1	343.7	344.5	343.7
60°	421.2	382.4	348.5	328.7	322.4	315.3	308.2	304.2	305.8	307.4	309.7
62.5°	357.9	327.9	301.0	286.0	282.1	277.3	273.4	271.0	272.6	274.2	276.6
65°	303.4	279.7	260.0	249.7	245.7	243.4	241.0	242.6	241.0	242.6	244.9
67.5°	255.2	237.0	222.0	215.7	213.3	211.0	209.4	211.8	211.0	211.8	213.3
70°	211.8	196.7	186.5	181.7	180.2	178.6	177.8	177.8	179.4	180.9	182.5
72.5°	170.7	162.0	155.7	151.7	150.1	149.3	148.5	150.1	150.1	151.7	153.3
75°	135.1	129.6	124.1	123.3	122.5	121.7	121.7	123.3	123.3	124.1	124.8
77.5°	105.9	101.1	96.4	96.4	95.6	97.2	95.6	97.2	95.6	97.2	98.0
80°	78.2	74.3	73.5	71.1	70.3	72.7	70.3	71.9	70.3	71.9	72.7
82.5°	52.9	50.6	49.8	48.2	48.2	49.8	48.2	49.0	48.2	49.0	49.8
85°	30.8	30.0	29.2	29.2	28.4	30.0	28.4	29.2	28.4	29.2	30.0
87.5°	13.4	13.4	12.6	13.4	11.9	13.4	12.6	13.4	14.2	13.4	13.4
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°	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2
2.5°	1307.7	1299.8	1297.4	1291.1	1292.7	1300.6	1298.2	1303.0	1284.0	1269.0	1258.7
5°	1404.9	1391.5	1384.4	1373.3	1372.5	1374.9	1366.2	1366.2	1339.3	1317.2	1298.2
7.5°	1516.3	1498.1	1487.1	1472.1	1469.7	1466.5	1450.7	1442.8	1408.1	1374.1	1344.8
10°	1611.1	1593.0	1581.1	1566.9	1563.7	1559.0	1537.6	1522.6	1479.2	1435.7	1395.4
12.5°	1684.6	1665.6	1652.2	1639.6	1634.8	1630.1	1610.3	1585.8	1547.1	1493.4	1446.0
15°	1751.0	1730.4	1714.6	1699.6	1691.7	1682.2	1659.3	1636.4	1596.1	1538.4	1487.1
17.5°	1806.3	1784.2	1765.2	1750.2	1739.9	1727.3	1699.6	1668.0	1627.7	1566.9	1513.9
20°	1846.6	1824.5	1803.9	1790.5	1781.8	1763.6	1734.4	1698.0	1653.8	1587.4	1527.4
22.5°	1860.0	1839.5	1821.3	1811.0	1802.3	1788.1	1762.0	1726.5	1675.1	1602.4	1534.5
25°	1843.4	1831.6	1818.9	1813.4	1807.1	1796.0	1777.1	1743.9	1694.1	1615.9	1538.4
27.5°	1770.7	1773.9	1775.5	1784.2	1782.6	1785.0	1773.9	1744.7	1701.2	1625.4	1540.8
30°	1645.9	1664.1	1680.7	1701.2	1705.2	1732.8	1741.5	1721.8	1687.8	1623.8	1540.0
32.5°	1500.5	1513.1	1541.6	1562.9	1585.8	1635.6	1668.0	1679.1	1659.3	1606.4	1529.0
35°	1325.9	1344.8	1382.0	1412.8	1438.9	1506.0	1559.8	1604.0	1608.0	1575.6	1503.7
37.5°	1157.6	1178.9	1216.8	1254.8	1275.3	1356.7	1427.0	1499.7	1534.5	1527.4	1469.7
40°	1000.3	1023.3	1060.4	1099.9	1116.5	1201.0	1278.5	1373.3	1435.7	1462.6	1422.3
42.5°	854.9	878.7	915.0	949.8	984.5	1052.5	1130.7	1236.6	1316.4	1371.7	1359.1
45°	723.8	745.9	781.5	812.3	835.2	913.4	990.1	1085.7	1187.6	1255.6	1276.9
47.5°	613.2	632.1	663.7	691.4	722.2	783.0	859.7	954.5	1058.8	1152.0	1182.9
50°	524.7	540.5	567.3	589.5	612.4	666.9	737.2	829.7	933.2	1032.7	1078.6
52.5°	454.3	467.0	489.1	504.1	523.9	568.1	629.8	715.1	812.3	914.2	970.3
55°	398.2	407.7	427.5	435.4	451.2	486.7	537.3	614.7	698.5	798.1	861.3
57.5°	351.6	357.9	374.5	380.1	391.9	419.6	459.9	525.5	598.1	689.8	765.7
60°	312.9	317.6	327.9	332.7	342.1	363.5	395.1	446.4	508.9	591.0	653.5
62.5°	277.3	280.5	288.4	291.6	298.7	314.5	339.8	380.9	431.4	501.0	568.1
65°	245.7	247.3	253.6	253.6	260.0	271.8	290.8	324.8	363.5	422.7	480.4
67.5°	214.1	214.9	217.3	220.5	225.2	233.9	247.3	274.2	305.0	353.2	401.4
70°	182.5	183.3	186.5	186.5	189.6	196.0	208.6	228.4	252.1	290.8	330.3
72.5°	153.3	154.9	156.5	155.7	158.8	162.8	171.5	184.1	207.8	234.7	266.3
75°	125.6	124.8	128.0	127.2	129.6	132.0	139.1	147.8	163.6	182.5	207.8
77.5°	98.8	98.0	100.3	101.9	101.1	103.5	108.3	113.0	124.1	137.5	154.9
80°	73.5	74.3	74.3	75.9	75.9	76.6	79.8	82.2	90.1	98.0	109.8
82.5°	49.8	51.4	51.4	52.9	52.2	52.9	54.5	56.1	60.8	64.8	71.9
85°	30.0	30.0	30.8	31.6	31.6	31.6	33.2	33.2	35.6	37.1	41.1
87.5°	14.2	13.4	14.2	15.0	14.2	15.0	14.2	15.0	16.6	15.8	17.4
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: P231538

CATALOG NUMBER: S121-DR-1-40-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2
2.5°	1252.4	1254.8	1253.2	1250.8	1250.8	1257.9	1256.3	1244.5	1232.6	1219.2	1214.5
5°	1285.6	1281.6	1276.1	1270.6	1264.3	1265.0	1257.9	1240.5	1224.0	1206.6	1199.5
7.5°	1321.9	1308.5	1299.8	1290.3	1275.3	1270.6	1256.3	1233.4	1212.9	1192.3	1182.1
10°	1362.2	1336.9	1321.9	1307.7	1284.8	1271.4	1250.8	1222.4	1198.7	1174.2	1162.3
12.5°	1401.7	1365.4	1345.6	1325.1	1291.1	1270.6	1242.9	1208.1	1180.5	1153.6	1138.6
15°	1435.7	1393.0	1367.8	1342.5	1296.6	1265.0	1230.3	1191.6	1157.6	1129.9	1111.8
17.5°	1459.4	1411.2	1385.1	1355.9	1299.8	1257.9	1215.3	1171.0	1133.9	1102.3	1080.9
20°	1468.9	1418.3	1391.5	1360.6	1298.2	1246.1	1197.9	1147.3	1107.8	1075.4	1047.0
22.5°	1468.1	1414.4	1385.9	1354.3	1288.7	1232.6	1176.5	1120.4	1077.8	1040.6	1008.2
25°	1461.0	1400.9	1370.1	1337.7	1272.2	1214.5	1152.8	1091.2	1044.6	1001.9	962.4
27.5°	1453.9	1382.0	1348.0	1314.8	1248.4	1190.0	1124.4	1058.8	1007.4	958.5	912.6
30°	1445.2	1361.4	1322.7	1284.8	1212.9	1156.0	1092.0	1024.0	967.2	911.8	856.5
32.5°	1432.6	1340.9	1298.2	1253.2	1174.2	1116.5	1054.9	986.9	922.1	858.9	800.4
35°	1414.4	1317.2	1272.2	1222.4	1130.7	1069.9	1012.2	941.9	875.5	805.2	746.7
37.5°	1385.1	1288.0	1239.8	1188.4	1085.7	1018.5	962.4	897.6	824.1	751.4	695.3
40°	1346.4	1250.0	1202.6	1148.1	1039.1	964.0	907.9	845.5	769.6	698.5	648.7
42.5°	1299.8	1202.6	1156.0	1104.6	991.6	908.7	850.2	787.8	714.3	648.7	604.5
45°	1238.2	1146.5	1098.3	1052.5	941.1	851.8	790.2	726.9	661.4	603.7	562.6
47.5°	1165.5	1084.9	1036.7	992.4	885.8	794.9	729.3	665.3	608.4	559.4	523.1
50°	1080.9	1016.9	970.3	923.7	826.5	736.4	668.5	604.5	555.5	517.6	485.2
52.5°	990.1	943.4	898.4	854.9	763.3	677.2	604.5	546.0	506.5	476.5	449.6
55°	894.5	865.2	828.9	781.5	696.1	615.5	547.6	489.9	458.3	436.2	414.0
57.5°	796.5	780.7	749.9	706.4	626.6	553.9	491.5	439.3	412.5	395.9	379.3
60°	700.1	690.6	661.4	630.5	557.1	493.1	434.6	391.9	369.8	357.2	343.7
62.5°	604.5	603.7	585.5	553.1	489.1	433.8	381.6	345.3	327.9	319.2	308.2
65°	514.4	519.9	502.5	477.3	422.7	374.5	331.1	301.8	288.4	281.3	273.4
67.5°	430.6	438.5	425.1	403.8	359.5	318.4	284.5	260.8	249.7	244.2	237.8
70°	354.8	361.1	352.4	334.2	298.7	266.3	238.6	220.5	212.6	207.8	204.7
72.5°	286.8	290.0	282.9	269.4	242.6	218.1	194.4	180.9	174.6	170.7	166.7
75°	220.5	227.6	221.2	210.2	188.8	168.3	154.9	145.4	139.9	137.5	135.1
77.5°	163.6	168.3	164.4	156.5	143.0	128.0	118.5	114.6	111.4	105.9	104.3
80°	114.6	118.5	116.2	110.6	101.9	94.8	85.3	83.8	80.6	76.6	75.9
82.5°	77.4	76.6	75.9	71.1	66.4	62.4	56.1	56.1	51.4	50.6	49.8
85°	41.1	42.7	41.9	39.5	37.9	34.0	32.4	32.4	30.8	28.4	28.4
87.5°	16.6	17.4	17.4	15.8	15.8	14.2	15.0	14.2	13.4	11.9	11.9
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: P231538

CATALOG NUMBER: S121-DR-1-40-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2
2.5°	1211.3	1212.1	1209.7	1205.0	1202.6	1195.5	1201.8	1193.9	1183.7	1191.6	1189.2
5°	1193.1	1192.3	1187.6	1181.3	1176.5	1167.1	1171.8	1162.3	1150.5	1155.2	1152.0
7.5°	1172.6	1171.0	1164.7	1155.2	1147.3	1136.2	1140.2	1129.1	1116.5	1121.2	1118.1
10°	1150.5	1146.5	1138.6	1126.8	1118.1	1106.2	1109.4	1096.7	1082.5	1084.1	1077.8
12.5°	1123.6	1118.1	1109.4	1096.7	1086.5	1071.5	1070.7	1052.5	1031.9	1028.0	1015.4
15°	1093.6	1087.3	1078.6	1062.0	1047.0	1024.0	1016.9	990.1	961.6	952.1	935.5
17.5°	1064.3	1053.3	1043.0	1018.5	994.8	962.4	949.0	916.6	887.3	876.3	861.3
20°	1022.5	1012.2	997.2	964.0	932.4	894.5	877.9	842.3	822.6	817.0	808.3
22.5°	975.8	961.6	945.0	900.8	866.0	829.7	816.2	789.4	777.5	775.9	771.2
25°	922.1	904.7	878.7	836.8	803.6	775.1	768.8	749.9	743.5	744.3	740.4
27.5°	870.8	845.5	821.8	777.5	751.4	733.3	731.7	716.7	714.3	713.5	708.0
30°	806.7	787.0	763.3	726.2	708.0	698.5	699.3	685.9	682.7	681.1	678.0
32.5°	751.4	734.1	711.9	682.7	672.4	669.3	664.5	653.5	655.0	653.5	653.5
35°	700.1	681.1	666.9	645.6	640.8	639.2	632.1	624.2	625.8	630.5	629.0
37.5°	653.5	639.2	625.8	612.4	609.2	608.4	600.5	598.1	604.5	604.5	602.9
40°	610.8	598.9	587.9	580.8	578.4	576.8	572.1	572.1	578.4	577.6	576.8
42.5°	572.1	561.0	553.9	549.9	547.6	547.6	545.2	549.2	552.3	551.5	547.6
45°	534.9	526.2	522.3	518.3	516.8	519.1	518.3	520.7	524.7	522.3	517.6
47.5°	498.6	492.3	489.9	486.7	489.1	489.9	490.7	492.3	494.6	490.7	485.9
50°	464.6	459.9	458.3	454.3	460.7	459.9	462.2	464.6	463.0	457.5	453.5
52.5°	431.4	428.3	427.5	427.5	430.6	430.6	432.2	433.8	429.8	424.3	420.4
55°	399.8	396.7	395.9	393.5	398.2	399.8	399.8	399.8	395.1	388.8	385.6
57.5°	368.2	364.3	363.5	365.8	365.8	365.8	366.6	365.8	361.1	356.4	354.0
60°	335.0	331.9	331.1	333.4	332.7	335.8	332.7	331.1	327.1	324.8	325.5
62.5°	301.8	297.9	297.9	300.3	300.3	301.8	298.7	296.3	293.9	292.4	294.7
65°	265.5	263.9	263.9	267.1	267.1	265.5	263.1	263.1	262.3	261.5	261.5
67.5°	231.5	230.7	231.5	234.7	233.9	231.5	229.9	230.7	230.7	231.5	231.5
70°	201.5	196.0	196.0	201.5	201.5	201.5	196.0	197.5	197.5	200.7	203.9
72.5°	166.7	163.6	163.6	166.7	164.4	167.5	164.4	166.7	167.5	169.1	170.7
75°	132.0	135.1	132.7	135.9	134.3	135.9	133.5	135.9	136.7	135.9	135.1
77.5°	104.3	105.1	102.7	105.9	105.1	105.9	104.3	105.9	105.9	104.3	105.9
80°	75.9	76.6	75.1	78.2	76.6	77.4	75.9	77.4	76.6	73.5	74.3
82.5°	50.6	51.4	49.8	52.9	50.6	52.2	49.8	50.6	49.8	46.6	47.4
85°	29.2	30.0	28.4	30.8	29.2	30.0	27.7	28.4	27.7	26.1	26.1
87.5°	11.9	12.6	11.1	12.6	11.9	11.9	10.3	11.1	11.1	9.5	10.3
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: P231538

CATALOG NUMBER: S121-DR-1-40-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2
2.5°	1189.2	1183.7	1180.5	1177.3	1174.2	1176.5	1178.1	1178.9	1183.7	1182.1	1182.9
5°	1150.5	1144.9	1140.2	1137.0	1136.2	1141.0	1143.4	1142.6	1144.9	1141.8	1143.4
7.5°	1117.3	1111.8	1107.0	1102.3	1103.1	1108.6	1111.8	1111.8	1114.9	1110.2	1110.2
10°	1077.8	1070.7	1062.8	1057.2	1056.4	1061.2	1062.0	1060.4	1066.7	1066.7	1069.9
12.5°	1014.6	1004.3	998.8	984.5	983.7	988.5	990.9	995.6	998.0	1001.1	1007.4
15°	933.2	923.7	915.8	900.8	900.0	904.7	901.6	914.2	919.0	923.7	930.0
17.5°	858.9	852.6	844.7	833.6	832.0	836.8	836.0	844.7	847.8	851.0	856.5
20°	806.7	798.8	797.3	790.2	790.2	793.3	792.5	796.5	798.1	798.1	801.2
22.5°	770.4	765.7	763.3	758.6	758.6	760.9	761.7	763.3	763.3	760.9	762.5
25°	739.6	734.8	730.9	724.6	725.4	727.7	728.5	730.1	730.9	730.1	731.7
27.5°	706.4	701.7	698.5	694.5	695.3	697.7	696.9	698.5	698.5	698.5	700.1
30°	677.2	674.0	674.0	671.6	674.0	675.6	674.8	674.8	673.2	670.1	670.1
32.5°	651.9	651.1	651.1	650.3	650.3	650.3	651.1	651.9	650.3	647.9	647.1
35°	628.2	626.6	626.6	624.2	626.6	626.6	626.6	627.4	625.8	624.2	621.9
37.5°	603.7	603.7	602.1	602.1	601.3	602.9	602.1	602.1	601.3	598.9	597.4
40°	577.6	576.8	573.7	572.9	572.1	573.7	572.1	573.7	573.7	572.9	572.1
42.5°	547.6	546.8	545.2	543.6	542.8	544.4	542.8	543.6	544.4	544.4	542.8
45°	516.8	517.6	514.4	510.4	513.6	513.6	512.8	513.6	513.6	514.4	512.8
47.5°	485.9	485.9	482.8	481.2	480.4	480.4	478.8	480.4	482.0	483.6	482.0
50°	452.8	452.0	448.0	444.1	446.4	447.2	444.9	446.4	447.2	449.6	449.6
52.5°	418.8	418.8	415.6	413.3	416.4	415.6	414.0	414.0	414.8	414.0	414.8
55°	385.6	387.2	384.8	383.2	384.0	384.8	384.0	384.0	384.0	383.2	382.4
57.5°	354.8	356.4	354.0	353.2	354.8	355.6	353.2	353.2	353.2	353.2	351.6
60°	324.8	325.5	324.8	323.2	325.5	326.3	324.8	324.0	323.2	321.6	321.6
62.5°	293.9	294.7	295.5	294.7	296.3	297.1	295.5	294.7	293.9	290.8	290.0
65°	263.1	264.7	266.3	266.3	267.9	267.1	266.3	265.5	263.9	261.5	259.2
67.5°	232.3	234.7	236.3	236.3	237.8	237.0	236.3	235.5	233.9	231.5	229.1
70°	202.3	204.7	204.7	205.4	205.4	206.2	203.9	203.9	203.9	200.7	196.7
72.5°	168.3	170.7	169.9	170.7	170.7	169.1	169.1	169.1	169.9	166.7	165.1
75°	135.9	137.5	136.7	137.5	135.1	134.3	136.7	134.3	134.3	134.3	132.7
77.5°	102.7	103.5	102.7	103.5	99.6	102.7	101.9	99.6	100.3	100.3	103.5
80°	71.9	72.7	71.1	71.1	68.0	70.3	70.3	68.7	68.7	68.7	71.9
82.5°	45.8	45.8	45.0	45.0	42.7	45.0	44.2	42.7	42.7	43.5	45.0
85°	26.1	25.3	24.5	25.3	22.9	24.5	24.5	23.7	23.7	23.7	24.5
87.5°	10.3	9.5	9.5	9.5	9.5	9.5	9.5	8.7	8.7	9.5	9.5
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: P231538

CATALOG NUMBER: S121-DR-1-40-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2	1234.2
2.5°	1187.6	1191.6	1199.5	1207.4	1188.4	1191.6	1195.5	1201.0	1205.8	1208.1	1210.5
5°	1147.3	1153.6	1162.3	1173.4	1159.2	1159.9	1168.6	1176.5	1183.7	1186.8	1190.8
7.5°	1113.3	1118.1	1129.9	1137.8	1126.0	1127.6	1138.6	1150.5	1159.2	1163.9	1169.4
10°	1074.6	1081.7	1097.5	1105.4	1095.2	1095.9	1105.4	1119.7	1132.3	1137.8	1144.9
12.5°	1015.4	1026.4	1049.3	1061.2	1060.4	1062.8	1073.0	1087.3	1100.7	1107.8	1117.3
15°	932.4	952.1	981.4	998.8	1009.8	1018.5	1034.3	1054.1	1068.3	1074.6	1082.5
17.5°	859.7	877.1	904.7	923.7	943.4	960.0	982.2	1010.6	1030.4	1039.1	1048.5
20°	803.6	813.1	835.2	851.8	873.9	892.9	919.0	956.9	984.5	996.4	1009.0
22.5°	764.1	772.0	783.0	794.1	811.5	828.1	852.6	896.0	931.6	946.6	965.6
25°	732.5	738.8	745.9	751.4	762.5	766.5	790.2	832.8	873.1	891.3	915.0
27.5°	701.7	709.6	715.9	719.8	726.2	724.6	742.0	772.8	813.1	833.6	857.3
30°	670.1	675.6	684.3	688.2	695.3	688.2	696.9	719.8	755.4	775.1	798.8
32.5°	645.6	645.6	649.5	654.2	664.5	658.2	660.6	674.8	704.0	721.4	744.3
35°	621.9	621.1	621.9	622.6	631.3	629.8	629.0	636.1	659.0	673.2	693.0
37.5°	596.6	595.8	595.8	595.0	599.7	600.5	600.5	602.1	617.9	626.6	645.6
40°	569.7	568.9	569.7	568.9	570.5	569.7	570.5	572.1	581.6	587.9	600.5
42.5°	542.0	542.8	542.8	542.8	542.0	539.7	540.5	541.3	548.4	550.7	561.0
45°	512.0	514.4	514.4	513.6	513.6	512.0	508.9	511.2	516.0	516.0	523.9
47.5°	482.0	482.8	484.4	484.4	484.4	483.6	478.8	480.4	484.4	482.8	488.3
50°	448.8	451.2	452.8	454.3	455.1	453.5	449.6	448.8	448.8	450.4	452.8
52.5°	414.8	418.0	420.4	422.7	424.3	423.5	421.2	418.0	418.8	418.8	420.4
55°	382.4	383.2	387.2	391.1	391.9	391.9	390.3	386.4	388.8	386.4	388.8
57.5°	350.0	350.8	353.2	353.2	357.9	359.5	358.7	355.6	357.2	354.8	356.4
60°	320.0	320.0	320.0	322.4	324.0	326.3	326.3	323.2	324.0	323.2	324.0
62.5°	289.2	288.4	287.6	289.2	289.2	292.4	293.1	290.8	290.8	292.4	290.8
65°	258.4	257.6	256.8	253.6	255.2	257.6	260.0	258.4	257.6	258.4	257.6
67.5°	228.4	226.8	226.0	222.0	222.8	223.6	226.0	225.2	225.2	225.2	224.4
70°	200.7	194.4	193.6	192.0	188.8	189.6	190.4	190.4	189.6	190.4	188.8
72.5°	167.5	163.6	161.2	161.2	161.2	158.0	158.8	158.8	157.2	158.0	156.5
75°	135.9	132.7	132.0	132.0	130.4	128.0	128.0	126.4	126.4	126.4	124.8
77.5°	103.5	101.9	101.9	101.9	101.1	98.8	99.6	98.0	96.4	97.2	98.0
80°	72.7	71.9	71.9	72.7	73.5	71.1	71.9	70.3	69.5	69.5	68.0
82.5°	45.8	45.8	45.8	47.4	48.2	49.0	47.4	45.8	45.8	45.8	46.6
85°	25.3	24.5	25.3	26.1	26.1	25.3	26.1	26.1	26.1	26.1	24.5
87.5°	9.5	8.7	9.5	9.5	9.5	8.7	9.5	9.5	9.5	10.3	10.3
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: P231538

CATALOG NUMBER: S121-DR-1-40-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1234.2	1234.2	1234.2	1234.2
2.5°	1219.2	1233.4	1243.7	1248.4
5°	1201.8	1219.2	1233.4	1242.9
7.5°	1182.9	1201.8	1220.8	1234.2
10°	1160.7	1184.4	1204.2	1222.4
12.5°	1135.5	1161.5	1183.7	1206.6
15°	1107.0	1136.2	1161.5	1187.6
17.5°	1074.6	1107.8	1135.5	1167.1
20°	1037.5	1075.4	1107.0	1141.0
22.5°	998.0	1039.8	1076.2	1115.7
25°	953.7	1000.3	1043.0	1086.5
27.5°	902.4	957.7	1006.7	1053.3
30°	847.8	908.7	965.6	1016.9
32.5°	790.9	857.3	922.1	976.6
35°	737.2	804.4	875.5	931.6
37.5°	686.6	749.9	825.7	885.0
40°	637.7	695.3	771.2	831.2
42.5°	593.4	644.8	716.7	771.2
45°	550.7	596.6	659.8	708.8
47.5°	510.4	552.3	605.3	646.3
50°	472.5	508.9	551.5	586.3
52.5°	435.4	467.0	501.0	528.6
55°	399.0	425.9	449.6	473.3
57.5°	364.3	384.8	402.2	424.3
60°	329.5	345.3	356.4	376.9
62.5°	294.7	306.6	313.7	331.9
65°	260.0	268.7	274.2	289.2
67.5°	226.0	232.3	235.5	248.9
70°	189.6	192.0	196.0	209.4
72.5°	157.2	158.8	161.2	169.9
75°	125.6	128.0	128.8	135.1
77.5°	98.8	98.0	100.3	101.9
80°	68.7	69.5	71.9	72.7
82.5°	44.2	45.0	47.4	47.4
85°	24.5	25.3	26.9	26.1
87.5°	9.5	10.3	11.1	11.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)