

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: P231537

Luminaire Tested: **S121-DR-1-35-X-0048-1-U-DD-3-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231537
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-1-35-X-0048-1-U-DD-3-W
Description: DEFINE 1 LED LINEAR DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC LENS.
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

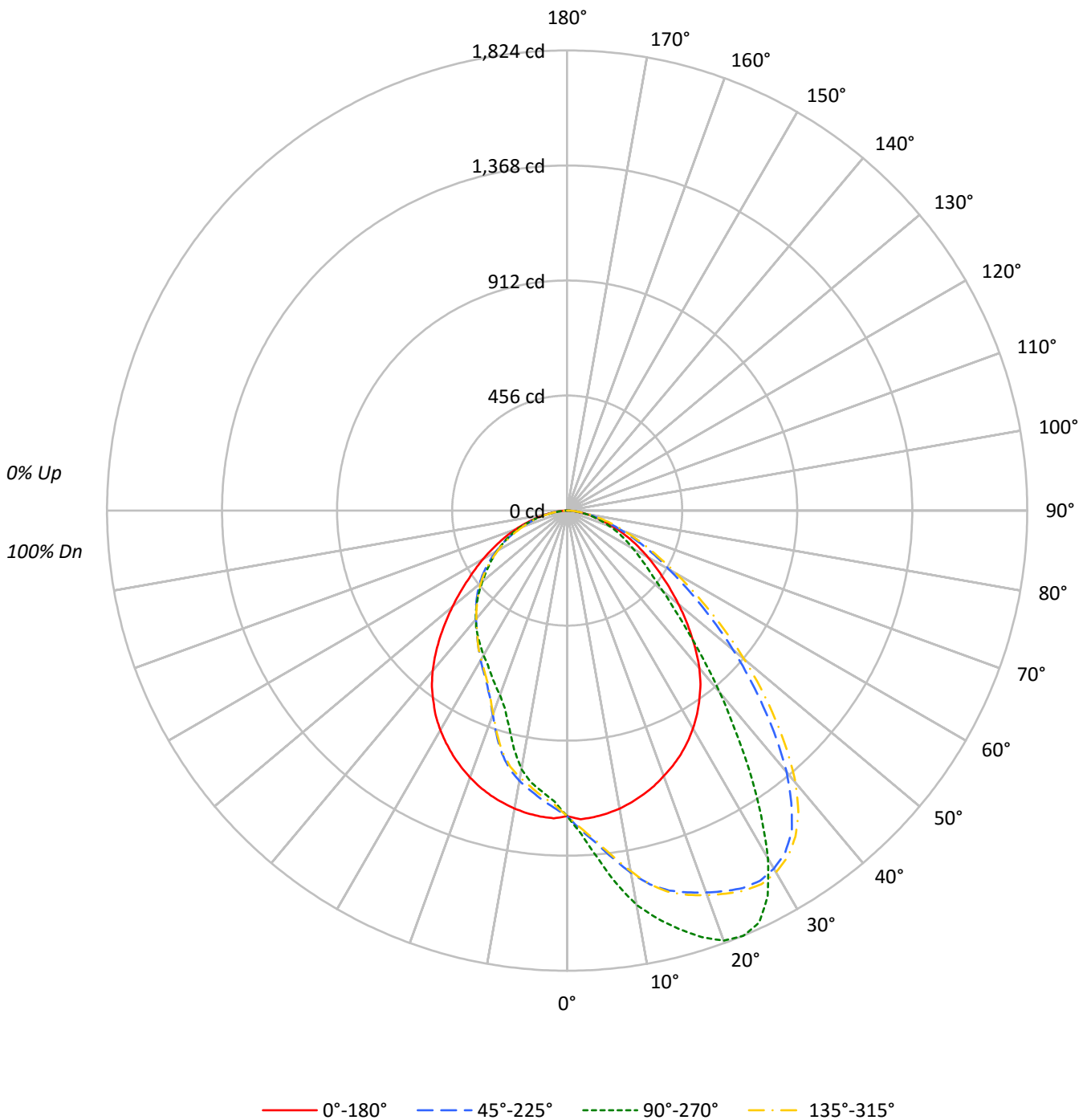
Lumens per Lamp: N/A
Luminaire Lumens: 3112.9 lumens
Efficiency: N/A
Efficacy: 111.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.39
Luminous Opening: Rectangular (W 3.92' x L: 0.1' x H: 0')
CIE Type: Direct

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





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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	33854	33854	33854	33854
5°	34224	38771	34157	31418
10°	34047	45050	34047	29558
15°	33725	49702	33838	25693
20°	33307	53972	33491	23156
25°	32883	55578	33025	22025
30°	32208	51381	32434	21397
35°	31195	43075	31539	20983
40°	29766	34321	30273	20540
45°	27495	26605	28198	19923
50°	25018	21447	25796	19085
55°	22636	18551	23430	18400
60°	20677	16864	21499	17904
65°	18768	15744	19588	17332
70°	16790	14509	17681	16536
75°	14323	13146	15404	14237
80°	11479	11351	13234	11109
85°	8212	9206	10201	7699



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.3	3.8
10°-20°	353.0	11.3
20°-30°	541.9	17.4
30°-40°	617.2	19.8
40°-50°	561.0	18.0
50°-60°	437.6	14.1
60°-70°	296.3	9.5
70°-80°	151.9	4.9
80°-90°	35.7	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°	1013.2	32.5
0°-40°	1630.4	52.4
0°-60°	2629.0	84.5
0°-90°	3112.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3112.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1211	1211	1211	1211	1211	
5°	1220	1382	1217	1120	1220	116
15°	1165	1717	1169	888	1165	329
25°	1066	1802	1071	714	1066	490
35°	914	1262	924	615	914	571
45°	695	673	713	504	695	536
55°	464	381	481	378	464	418
65°	284	238	296	262	284	282
75°	133	122	143	132	133	142
85°	26	29	32	24	26	32
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°	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9
2.5°	1224.9	1219.5	1222.6	1231.1	1240.4	1243.5	1245.0	1248.9	1253.6	1261.3	1267.5
5°	1219.5	1220.2	1229.5	1244.3	1259.0	1265.2	1270.6	1281.5	1293.9	1309.4	1323.3
7.5°	1210.9	1217.1	1234.2	1255.1	1277.6	1288.5	1297.0	1318.7	1341.2	1366.0	1390.0
10°	1199.3	1211.7	1235.0	1263.7	1297.0	1312.5	1327.2	1359.8	1392.3	1426.5	1458.2
12.5°	1183.8	1202.4	1232.6	1270.6	1315.6	1336.5	1356.7	1399.3	1440.4	1480.7	1517.9
15°	1165.2	1190.0	1228.0	1276.1	1331.1	1356.7	1381.5	1431.1	1476.8	1519.5	1559.0
17.5°	1145.0	1175.3	1221.0	1279.2	1342.7	1370.6	1396.2	1449.7	1496.2	1542.0	1586.9
20°	1119.5	1159.0	1211.7	1276.8	1344.3	1373.0	1400.9	1455.1	1504.8	1558.2	1611.0
22.5°	1094.6	1135.7	1198.5	1266.8	1333.4	1364.4	1393.1	1452.0	1509.4	1571.4	1632.7
25°	1066.0	1112.5	1179.2	1247.4	1314.0	1345.1	1377.6	1444.3	1514.1	1583.8	1650.5
27.5°	1033.4	1083.0	1151.2	1217.9	1286.9	1322.6	1359.8	1437.3	1516.4	1590.0	1654.4
30°	997.7	1052.0	1115.6	1180.7	1258.2	1298.5	1341.2	1428.0	1513.3	1580.0	1638.9
32.5°	958.2	1012.5	1071.4	1144.3	1227.2	1273.0	1322.6	1411.0	1496.2	1555.1	1607.9
35°	914.0	962.9	1023.3	1103.2	1195.4	1245.8	1294.7	1385.4	1466.8	1516.4	1552.8
37.5°	868.3	917.1	973.7	1060.5	1159.8	1214.8	1260.6	1347.4	1423.4	1459.0	1459.8
40°	815.6	860.5	921.0	1016.3	1120.2	1171.4	1221.8	1301.6	1366.8	1380.7	1353.6
42.5°	756.6	803.9	869.1	970.6	1073.7	1127.2	1170.6	1247.4	1296.2	1286.9	1228.0
45°	695.4	747.3	816.3	920.2	1019.5	1068.3	1112.5	1180.7	1210.9	1181.5	1100.1
47.5°	634.2	690.0	762.1	865.2	958.2	1005.5	1046.6	1103.2	1115.6	1067.5	976.0
50°	575.2	631.8	706.3	805.5	891.5	938.0	972.9	1016.3	1013.2	951.2	858.2
52.5°	518.6	576.8	655.1	741.1	821.8	862.9	895.4	923.3	909.4	836.5	745.0
55°	464.4	521.0	590.0	665.9	750.4	783.0	812.5	828.0	804.7	731.1	640.4
57.5°	416.3	466.7	536.5	603.9	676.0	703.1	728.0	732.6	701.6	621.7	546.5
60°	369.8	414.8	476.0	528.7	597.7	623.3	641.1	638.8	605.5	538.8	466.7
62.5°	325.6	364.4	416.3	468.2	521.0	541.1	556.6	556.6	515.5	457.4	401.6
65°	283.7	316.3	357.4	395.4	447.3	462.8	475.2	464.4	434.9	379.9	338.8
67.5°	244.2	269.8	301.6	333.4	377.5	389.2	396.9	393.8	362.0	316.3	283.0
70°	205.4	225.6	250.4	275.2	310.1	318.6	325.6	322.5	297.7	264.4	229.5
72.5°	166.7	181.4	201.6	222.5	248.1	254.3	260.5	257.4	233.3	211.6	186.1
75°	132.6	142.6	156.6	172.9	191.5	197.7	201.6	200.0	181.4	163.6	146.5
77.5°	100.0	107.0	117.8	129.5	141.9	144.2	148.1	146.5	134.9	122.5	110.9
80°	71.3	75.2	83.0	89.9	98.5	100.8	102.3	102.3	93.8	86.1	79.9
82.5°	46.5	48.8	53.5	57.4	62.8	63.6	65.1	65.1	59.7	56.6	53.5
85°	25.6	27.1	30.2	31.8	34.1	33.3	34.9	35.7	33.3	32.6	31.0
87.5°	10.9	10.9	11.6	13.2	12.4	12.4	13.2	14.0	13.2	12.4	13.2
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°	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9
2.5°	1272.2	1265.2	1274.5	1283.0	1285.4	1289.2	1281.5	1276.8	1275.3	1282.3	1277.6
5°	1334.2	1333.4	1348.9	1362.1	1366.0	1373.0	1369.1	1368.3	1369.9	1381.5	1376.1
7.5°	1408.6	1415.6	1438.9	1458.2	1464.4	1474.5	1473.7	1475.3	1478.4	1490.8	1486.2
10°	1492.4	1497.8	1525.7	1550.5	1558.2	1568.3	1562.1	1573.0	1576.9	1586.9	1580.7
12.5°	1552.8	1562.1	1591.6	1618.7	1625.7	1632.7	1631.9	1640.4	1647.4	1656.7	1652.8
15°	1593.1	1604.8	1639.6	1669.9	1679.2	1685.4	1686.2	1697.0	1704.8	1717.2	1721.8
17.5°	1624.1	1642.8	1682.3	1717.2	1727.3	1734.2	1738.9	1751.3	1761.4	1773.0	1776.9
20°	1652.8	1679.2	1724.2	1760.6	1769.9	1775.3	1782.3	1792.4	1804.0	1814.1	1816.4
22.5°	1677.6	1708.6	1752.1	1783.1	1790.0	1792.4	1797.0	1804.0	1816.4	1824.2	1828.0
25°	1691.6	1717.2	1755.9	1782.3	1787.7	1783.8	1786.9	1786.9	1797.0	1801.7	1810.2
27.5°	1686.2	1707.9	1738.1	1752.1	1749.7	1738.9	1724.9	1713.3	1722.6	1722.6	1734.2
30°	1660.6	1670.7	1680.0	1669.9	1648.2	1635.8	1611.0	1586.9	1594.7	1591.6	1603.2
32.5°	1607.1	1592.4	1577.6	1545.8	1514.8	1494.7	1457.5	1444.3	1431.9	1430.3	1440.4
35°	1522.6	1481.5	1442.7	1394.7	1359.8	1335.0	1290.8	1257.5	1260.6	1262.1	1269.9
37.5°	1410.2	1348.2	1293.1	1235.7	1204.0	1172.2	1128.8	1110.9	1098.5	1090.0	1104.7
40°	1280.7	1204.0	1140.4	1081.5	1052.8	1017.9	977.6	959.8	947.4	940.4	950.5
42.5°	1147.4	1065.2	998.5	938.0	907.8	877.6	838.8	821.8	807.8	797.7	809.4
45°	1017.9	932.6	863.6	803.9	773.7	749.7	711.7	696.9	683.8	672.9	685.3
47.5°	891.5	820.2	739.6	682.2	656.6	633.4	603.1	590.7	580.7	572.9	580.7
50°	772.9	703.1	628.0	580.7	560.5	539.6	515.5	506.2	498.5	493.1	497.7
52.5°	664.4	599.3	535.7	490.7	479.9	464.4	445.8	438.8	429.5	427.9	433.4
55°	566.7	510.9	458.9	425.6	414.8	403.1	389.2	384.5	379.1	380.6	379.9
57.5°	483.8	437.2	394.6	371.3	361.3	352.0	341.9	339.6	337.2	338.0	337.2
60°	413.2	375.2	341.9	322.5	316.3	309.3	302.3	298.5	300.0	301.6	303.9
62.5°	351.2	321.7	295.4	280.6	276.8	272.1	268.2	265.9	267.5	269.0	271.3
65°	297.7	274.4	255.1	245.0	241.1	238.8	236.5	238.0	236.5	238.0	240.3
67.5°	250.4	232.6	217.8	211.6	209.3	207.0	205.4	207.8	207.0	207.8	209.3
70°	207.8	193.0	183.0	178.3	176.8	175.2	174.4	174.4	176.0	177.5	179.1
72.5°	167.5	158.9	152.7	148.8	147.3	146.5	145.7	147.3	147.3	148.8	150.4
75°	132.6	127.1	121.7	120.9	120.2	119.4	119.4	120.9	120.9	121.7	122.5
77.5°	103.9	99.2	94.6	94.6	93.8	95.4	93.8	95.4	93.8	95.4	96.1
80°	76.7	72.9	72.1	69.8	69.0	71.3	69.0	70.5	69.0	70.5	71.3
82.5°	51.9	49.6	48.8	47.3	47.3	48.8	47.3	48.1	47.3	48.1	48.8
85°	30.2	29.5	28.7	28.7	27.9	29.5	27.9	28.7	27.9	28.7	29.5
87.5°	13.2	13.2	12.4	13.2	11.6	13.2	12.4	13.2	14.0	13.2	13.2
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°	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9
2.5°	1283.0	1275.3	1273.0	1266.8	1268.3	1276.1	1273.7	1278.4	1259.8	1245.0	1235.0
5°	1378.4	1365.2	1358.2	1347.4	1346.6	1348.9	1340.4	1340.4	1314.0	1292.3	1273.7
7.5°	1487.7	1469.9	1459.0	1444.3	1442.0	1438.9	1423.4	1415.6	1381.5	1348.2	1319.5
10°	1580.7	1562.9	1551.3	1537.3	1534.2	1529.6	1508.6	1493.9	1451.3	1408.6	1369.1
12.5°	1652.8	1634.2	1621.0	1608.6	1604.0	1599.3	1580.0	1555.9	1517.9	1465.2	1418.7
15°	1717.9	1697.8	1682.3	1667.6	1659.8	1650.5	1628.0	1605.5	1566.0	1509.4	1459.0
17.5°	1772.2	1750.5	1731.9	1717.2	1707.1	1694.7	1667.6	1636.5	1597.0	1537.3	1485.4
20°	1811.8	1790.0	1769.9	1756.7	1748.2	1730.4	1701.7	1666.0	1622.6	1557.5	1498.6
22.5°	1824.9	1804.8	1786.9	1776.9	1768.3	1754.4	1728.8	1693.9	1643.5	1572.2	1505.5
25°	1808.7	1797.0	1784.6	1779.2	1773.0	1762.1	1743.5	1711.0	1662.1	1585.4	1509.4
27.5°	1737.3	1740.4	1742.0	1750.5	1749.0	1751.3	1740.4	1711.7	1669.1	1594.7	1511.7
30°	1614.8	1632.7	1649.0	1669.1	1673.0	1700.1	1708.6	1689.3	1655.9	1593.1	1511.0
32.5°	1472.2	1484.6	1512.5	1533.4	1555.9	1604.8	1636.5	1647.4	1628.0	1576.1	1500.1
35°	1300.9	1319.5	1355.9	1386.1	1411.7	1477.6	1530.3	1573.8	1577.6	1545.8	1475.3
37.5°	1135.7	1156.7	1193.9	1231.1	1251.2	1331.1	1400.1	1471.4	1505.5	1498.6	1442.0
40°	981.5	1003.9	1040.4	1079.1	1095.4	1178.4	1254.4	1347.4	1408.6	1435.0	1395.4
42.5°	838.8	862.1	897.7	931.8	966.0	1032.6	1109.4	1213.3	1291.6	1345.8	1333.4
45°	710.1	731.8	766.7	797.0	819.4	896.2	971.4	1065.2	1165.2	1231.9	1252.8
47.5°	601.6	620.2	651.2	678.3	708.6	768.3	843.5	936.5	1038.8	1130.3	1160.5
50°	514.8	530.3	556.6	578.3	600.8	654.3	723.3	814.0	915.6	1013.2	1058.2
52.5°	445.8	458.2	479.9	494.6	514.0	557.4	617.9	701.6	797.0	897.0	952.0
55°	390.7	400.0	419.4	427.2	442.7	477.6	527.2	603.1	685.3	783.0	845.0
57.5°	345.0	351.2	367.5	372.9	384.5	411.7	451.2	515.5	586.9	676.8	751.2
60°	307.0	311.6	321.7	326.4	335.7	356.6	387.6	438.0	499.3	579.9	641.1
62.5°	272.1	275.2	283.0	286.1	293.0	308.5	333.4	373.7	423.3	491.5	557.4
65°	241.1	242.7	248.9	248.9	255.1	266.7	285.3	318.6	356.6	414.8	471.4
67.5°	210.1	210.9	213.2	216.3	220.9	229.5	242.7	269.0	299.2	346.5	393.8
70°	179.1	179.9	183.0	183.0	186.1	192.3	204.7	224.0	247.3	285.3	324.1
72.5°	150.4	151.9	153.5	152.7	155.8	159.7	168.2	180.6	203.9	230.2	261.3
75°	123.3	122.5	125.6	124.8	127.1	129.5	136.4	145.0	160.5	179.1	203.9
77.5°	96.9	96.1	98.5	100.0	99.2	101.6	106.2	110.9	121.7	134.9	151.9
80°	72.1	72.9	72.9	74.4	74.4	75.2	78.3	80.6	88.4	96.1	107.8
82.5°	48.8	50.4	50.4	51.9	51.2	51.9	53.5	55.0	59.7	63.6	70.5
85°	29.5	29.5	30.2	31.0	31.0	31.0	32.6	32.6	34.9	36.4	40.3
87.5°	14.0	13.2	14.0	14.7	14.0	14.7	14.0	14.7	16.3	15.5	17.1
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: P231537

CATALOG NUMBER: S121-DR-1-35-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9
2.5°	1228.8	1231.1	1229.5	1227.2	1227.2	1234.2	1232.6	1221.0	1209.4	1196.2	1191.6
5°	1261.3	1257.5	1252.0	1246.6	1240.4	1241.2	1234.2	1217.1	1200.9	1183.8	1176.8
7.5°	1297.0	1283.8	1275.3	1266.0	1251.2	1246.6	1232.6	1210.2	1190.0	1169.8	1159.8
10°	1336.5	1311.7	1297.0	1283.0	1260.6	1247.4	1227.2	1199.3	1176.1	1152.0	1140.4
12.5°	1375.3	1339.6	1320.2	1300.1	1266.8	1246.6	1219.5	1185.4	1158.2	1131.9	1117.1
15°	1408.6	1366.8	1342.0	1317.1	1272.2	1241.2	1207.1	1169.1	1135.7	1108.6	1090.8
17.5°	1431.9	1384.6	1359.0	1330.3	1275.3	1234.2	1192.3	1148.9	1112.5	1081.5	1060.5
20°	1441.2	1391.6	1365.2	1335.0	1273.7	1222.6	1175.3	1125.7	1086.9	1055.1	1027.2
22.5°	1440.4	1387.7	1359.8	1328.8	1264.4	1209.4	1154.3	1099.3	1057.4	1021.0	989.2
25°	1433.4	1374.5	1344.3	1312.5	1248.1	1191.6	1131.1	1070.6	1024.9	983.0	944.3
27.5°	1426.5	1355.9	1322.6	1290.0	1224.9	1167.5	1103.2	1038.8	988.4	940.4	895.4
30°	1417.9	1335.8	1297.8	1260.6	1190.0	1134.2	1071.4	1004.7	948.9	894.6	840.4
32.5°	1405.5	1315.6	1273.7	1229.5	1152.0	1095.4	1035.0	968.3	904.7	842.7	785.3
35°	1387.7	1292.3	1248.1	1199.3	1109.4	1049.7	993.1	924.1	859.0	790.0	732.6
37.5°	1359.0	1263.7	1216.4	1166.0	1065.2	999.3	944.3	880.7	808.6	737.3	682.2
40°	1321.0	1226.4	1179.9	1126.4	1019.5	945.8	890.8	829.5	755.1	685.3	636.5
42.5°	1275.3	1179.9	1134.2	1083.8	972.9	891.5	834.2	772.9	700.8	636.5	593.1
45°	1214.8	1124.9	1077.6	1032.6	923.3	835.7	775.2	713.2	648.9	592.3	552.0
47.5°	1143.5	1064.4	1017.1	973.7	869.1	779.9	715.6	652.8	596.9	548.9	513.2
50°	1060.5	997.7	952.0	906.3	810.9	722.5	655.9	593.1	545.0	507.8	476.0
52.5°	971.4	925.6	881.5	838.8	748.9	664.4	593.1	535.7	496.9	467.5	441.1
55°	877.6	848.9	813.2	766.7	683.0	603.9	537.2	480.7	449.6	427.9	406.2
57.5°	781.4	765.9	735.7	693.1	614.8	543.4	482.2	431.0	404.7	388.4	372.1
60°	686.9	677.6	648.9	618.6	546.5	483.8	426.4	384.5	362.8	350.4	337.2
62.5°	593.1	592.3	574.5	542.7	479.9	425.6	374.4	338.8	321.7	313.2	302.3
65°	504.7	510.1	493.1	468.2	414.8	367.5	324.8	296.1	283.0	276.0	268.2
67.5°	422.5	430.3	417.1	396.2	352.7	312.4	279.1	255.8	245.0	239.6	233.3
70°	348.1	354.3	345.8	327.9	293.0	261.3	234.1	216.3	208.5	203.9	200.8
72.5°	281.4	284.5	277.5	264.4	238.0	214.0	190.7	177.5	171.3	167.5	163.6
75°	216.3	223.3	217.1	206.2	185.3	165.1	151.9	142.6	137.2	134.9	132.6
77.5°	160.5	165.1	161.3	153.5	140.3	125.6	116.3	112.4	109.3	103.9	102.3
80°	112.4	116.3	114.0	108.5	100.0	93.0	83.7	82.2	79.1	75.2	74.4
82.5°	76.0	75.2	74.4	69.8	65.1	61.2	55.0	55.0	50.4	49.6	48.8
85°	40.3	41.9	41.1	38.8	37.2	33.3	31.8	31.8	30.2	27.9	27.9
87.5°	16.3	17.1	17.1	15.5	15.5	14.0	14.7	14.0	13.2	11.6	11.6
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: P231537

CATALOG NUMBER: S121-DR-1-35-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9
2.5°	1188.5	1189.2	1186.9	1182.3	1179.9	1172.9	1179.2	1171.4	1161.3	1169.1	1166.7
5°	1170.6	1169.8	1165.2	1159.0	1154.3	1145.0	1149.7	1140.4	1128.8	1133.4	1130.3
7.5°	1150.5	1148.9	1142.7	1133.4	1125.7	1114.8	1118.7	1107.8	1095.4	1100.1	1097.0
10°	1128.8	1124.9	1117.1	1105.5	1097.0	1085.3	1088.4	1076.0	1062.1	1063.6	1057.4
12.5°	1102.4	1097.0	1088.4	1076.0	1066.0	1051.2	1050.5	1032.6	1012.5	1008.6	996.2
15°	1072.9	1066.7	1058.2	1041.9	1027.2	1004.7	997.7	971.4	943.5	934.2	917.9
17.5°	1044.3	1033.4	1023.3	999.3	976.0	944.3	931.1	899.3	870.6	859.7	845.0
20°	1003.2	993.1	978.4	945.8	914.8	877.6	861.3	826.4	807.0	801.6	793.1
22.5°	957.4	943.5	927.2	883.8	849.7	814.0	800.8	774.5	762.8	761.3	756.6
25°	904.7	887.7	862.1	821.0	788.4	760.5	754.3	735.7	729.5	730.3	726.4
27.5°	854.3	829.5	806.3	762.8	737.3	719.4	717.9	703.1	700.8	700.0	694.6
30°	791.5	772.1	748.9	712.5	694.6	685.3	686.1	672.9	669.8	668.3	665.2
32.5°	737.3	720.2	698.5	669.8	659.7	656.6	652.0	641.1	642.7	641.1	641.1
35°	686.9	668.3	654.3	633.4	628.7	627.2	620.2	612.4	614.0	618.6	617.1
37.5°	641.1	627.2	614.0	600.8	597.7	596.9	589.2	586.9	593.1	593.1	591.5
40°	599.3	587.6	576.8	569.8	567.5	565.9	561.3	561.3	567.5	566.7	565.9
42.5°	561.3	550.4	543.4	539.6	537.2	537.2	534.9	538.8	541.9	541.1	537.2
45°	524.8	516.3	512.4	508.6	507.0	509.3	508.6	510.9	514.8	512.4	507.8
47.5°	489.2	483.0	480.7	477.6	479.9	480.7	481.4	483.0	485.3	481.4	476.8
50°	455.8	451.2	449.6	445.8	452.0	451.2	453.5	455.8	454.3	448.9	445.0
52.5°	423.3	420.2	419.4	419.4	422.5	422.5	424.1	425.6	421.7	416.3	412.4
55°	392.3	389.2	388.4	386.1	390.7	392.3	392.3	392.3	387.6	381.4	378.3
57.5°	361.3	357.4	356.6	358.9	358.9	358.9	359.7	358.9	354.3	349.6	347.3
60°	328.7	325.6	324.8	327.2	326.4	329.5	326.4	324.8	321.0	318.6	319.4
62.5°	296.1	292.3	292.3	294.6	294.6	296.1	293.0	290.7	288.4	286.8	289.2
65°	260.5	258.9	258.9	262.0	262.0	260.5	258.2	258.2	257.4	256.6	256.6
67.5°	227.1	226.4	227.1	230.2	229.5	227.1	225.6	226.4	226.4	227.1	227.1
70°	197.7	192.3	192.3	197.7	197.7	197.7	192.3	193.8	193.8	196.9	200.0
72.5°	163.6	160.5	160.5	163.6	161.3	164.4	161.3	163.6	164.4	165.9	167.5
75°	129.5	132.6	130.2	133.3	131.8	133.3	131.0	133.3	134.1	133.3	132.6
77.5°	102.3	103.1	100.8	103.9	103.1	103.9	102.3	103.9	103.9	102.3	103.9
80°	74.4	75.2	73.6	76.7	75.2	76.0	74.4	76.0	75.2	72.1	72.9
82.5°	49.6	50.4	48.8	51.9	49.6	51.2	48.8	49.6	48.8	45.7	46.5
85°	28.7	29.5	27.9	30.2	28.7	29.5	27.1	27.9	27.1	25.6	25.6
87.5°	11.6	12.4	10.9	12.4	11.6	11.6	10.1	10.9	10.9	9.3	10.1
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: P231537

CATALOG NUMBER: S121-DR-1-35-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9
2.5°	1166.7	1161.3	1158.2	1155.1	1152.0	1154.3	1155.9	1156.7	1161.3	1159.8	1160.5
5°	1128.8	1123.3	1118.7	1115.6	1114.8	1119.5	1121.8	1121.0	1123.3	1120.2	1121.8
7.5°	1096.2	1090.8	1086.1	1081.5	1082.2	1087.7	1090.8	1090.8	1093.9	1089.2	1089.2
10°	1057.4	1050.5	1042.7	1037.3	1036.5	1041.2	1041.9	1040.4	1046.6	1046.6	1049.7
12.5°	995.4	985.3	979.9	966.0	965.2	969.8	972.2	976.8	979.1	982.2	988.4
15°	915.6	906.3	898.5	883.8	883.0	887.7	884.6	897.0	901.6	906.3	912.5
17.5°	842.7	836.5	828.7	817.9	816.3	821.0	820.2	828.7	831.8	834.9	840.4
20°	791.5	783.8	782.2	775.2	775.2	778.3	777.6	781.4	783.0	783.0	786.1
22.5°	755.9	751.2	748.9	744.2	744.2	746.6	747.3	748.9	748.9	746.6	748.1
25°	725.6	721.0	717.1	710.9	711.7	714.0	714.8	716.3	717.1	716.3	717.9
27.5°	693.1	688.4	685.3	681.4	682.2	684.5	683.8	685.3	685.3	685.3	686.9
30°	664.4	661.3	661.3	659.0	661.3	662.8	662.1	662.1	660.5	657.4	657.4
32.5°	639.6	638.8	638.8	638.0	638.0	638.0	638.8	639.6	638.0	635.7	634.9
35°	616.3	614.8	614.8	612.4	614.8	614.8	614.8	615.5	614.0	612.4	610.1
37.5°	592.3	592.3	590.7	590.7	590.0	591.5	590.7	590.7	590.0	587.6	586.1
40°	566.7	565.9	562.8	562.1	561.3	562.8	561.3	562.8	562.8	562.1	561.3
42.5°	537.2	536.5	534.9	533.4	532.6	534.1	532.6	533.4	534.1	534.1	532.6
45°	507.0	507.8	504.7	500.8	503.9	503.9	503.1	503.9	503.9	504.7	503.1
47.5°	476.8	476.8	473.7	472.1	471.4	471.4	469.8	471.4	472.9	474.5	472.9
50°	444.2	443.4	439.6	435.7	438.0	438.8	436.5	438.0	438.8	441.1	441.1
52.5°	410.9	410.9	407.8	405.5	408.6	407.8	406.2	406.2	407.0	406.2	407.0
55°	378.3	379.9	377.5	376.0	376.8	377.5	376.8	376.8	376.8	376.0	375.2
57.5°	348.1	349.6	347.3	346.5	348.1	348.9	346.5	346.5	346.5	346.5	345.0
60°	318.6	319.4	318.6	317.1	319.4	320.2	318.6	317.9	317.1	315.5	315.5
62.5°	288.4	289.2	289.9	289.2	290.7	291.5	289.9	289.2	288.4	285.3	284.5
65°	258.2	259.7	261.3	261.3	262.8	262.0	261.3	260.5	258.9	256.6	254.3
67.5°	227.9	230.2	231.8	231.8	233.3	232.6	231.8	231.0	229.5	227.1	224.8
70°	198.5	200.8	200.8	201.6	201.6	202.3	200.0	200.0	200.0	196.9	193.0
72.5°	165.1	167.5	166.7	167.5	167.5	165.9	165.9	165.9	166.7	163.6	162.0
75°	133.3	134.9	134.1	134.9	132.6	131.8	134.1	131.8	131.8	131.8	130.2
77.5°	100.8	101.6	100.8	101.6	97.7	100.8	100.0	97.7	98.5	98.5	101.6
80°	70.5	71.3	69.8	69.8	66.7	69.0	69.0	67.4	67.4	67.4	70.5
82.5°	45.0	45.0	44.2	44.2	41.9	44.2	43.4	41.9	41.9	42.6	44.2
85°	25.6	24.8	24.0	24.8	22.5	24.0	24.0	23.3	23.3	23.3	24.0
87.5°	10.1	9.3	9.3	9.3	9.3	9.3	9.3	8.5	8.5	9.3	9.3
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: P231537

CATALOG NUMBER: S121-DR-1-35-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9	1210.9
2.5°	1165.2	1169.1	1176.8	1184.6	1166.0	1169.1	1172.9	1178.4	1183.0	1185.4	1187.7
5°	1125.7	1131.9	1140.4	1151.2	1137.3	1138.1	1146.6	1154.3	1161.3	1164.4	1168.3
7.5°	1092.3	1097.0	1108.6	1116.4	1104.7	1106.3	1117.1	1128.8	1137.3	1141.9	1147.4
10°	1054.3	1061.3	1076.8	1084.6	1074.5	1075.3	1084.6	1098.5	1110.9	1116.4	1123.3
12.5°	996.2	1007.0	1029.5	1041.2	1040.4	1042.7	1052.8	1066.7	1079.9	1086.9	1096.2
15°	914.8	934.2	962.9	979.9	990.8	999.3	1014.8	1034.2	1048.1	1054.3	1062.1
17.5°	843.5	860.5	887.7	906.3	925.6	941.9	963.6	991.5	1010.9	1019.5	1028.8
20°	788.4	797.7	819.4	835.7	857.4	876.0	901.6	938.8	966.0	977.6	990.0
22.5°	749.7	757.4	768.3	779.1	796.2	812.5	836.5	879.1	914.0	928.7	947.4
25°	718.7	724.9	731.8	737.3	748.1	752.0	775.2	817.1	856.6	874.5	897.7
27.5°	688.4	696.2	702.4	706.3	712.5	710.9	728.0	758.2	797.7	817.9	841.1
30°	657.4	662.8	671.4	675.2	682.2	675.2	683.8	706.3	741.1	760.5	783.8
32.5°	633.4	633.4	637.3	641.9	652.0	645.8	648.1	662.1	690.7	707.8	730.3
35°	610.1	609.3	610.1	610.9	619.4	617.9	617.1	624.1	646.6	660.5	679.9
37.5°	585.3	584.5	584.5	583.8	588.4	589.2	589.2	590.7	606.2	614.8	633.4
40°	559.0	558.2	559.0	558.2	559.7	559.0	559.7	561.3	570.6	576.8	589.2
42.5°	531.8	532.6	532.6	532.6	531.8	529.5	530.3	531.0	538.0	540.3	550.4
45°	502.4	504.7	504.7	503.9	503.9	502.4	499.3	501.6	506.2	506.2	514.0
47.5°	472.9	473.7	475.2	475.2	475.2	474.5	469.8	471.4	475.2	473.7	479.1
50°	440.3	442.7	444.2	445.8	446.5	445.0	441.1	440.3	440.3	441.9	444.2
52.5°	407.0	410.1	412.4	414.8	416.3	415.5	413.2	410.1	410.9	410.9	412.4
55°	375.2	376.0	379.9	383.7	384.5	384.5	383.0	379.1	381.4	379.1	381.4
57.5°	343.4	344.2	346.5	346.5	351.2	352.7	352.0	348.9	350.4	348.1	349.6
60°	314.0	314.0	314.0	316.3	317.9	320.2	320.2	317.1	317.9	317.1	317.9
62.5°	283.7	283.0	282.2	283.7	283.7	286.8	287.6	285.3	285.3	286.8	285.3
65°	253.5	252.7	252.0	248.9	250.4	252.7	255.1	253.5	252.7	253.5	252.7
67.5°	224.0	222.5	221.7	217.8	218.6	219.4	221.7	220.9	220.9	220.9	220.2
70°	196.9	190.7	189.9	188.4	185.3	186.1	186.8	186.8	186.1	186.8	185.3
72.5°	164.4	160.5	158.2	158.2	158.2	155.0	155.8	155.8	154.3	155.0	153.5
75°	133.3	130.2	129.5	129.5	127.9	125.6	125.6	124.0	124.0	124.0	122.5
77.5°	101.6	100.0	100.0	100.0	99.2	96.9	97.7	96.1	94.6	95.4	96.1
80°	71.3	70.5	70.5	71.3	72.1	69.8	70.5	69.0	68.2	68.2	66.7
82.5°	45.0	45.0	45.0	46.5	47.3	48.1	46.5	45.0	45.0	45.0	45.7
85°	24.8	24.0	24.8	25.6	25.6	24.8	25.6	25.6	25.6	25.6	24.0
87.5°	9.3	8.5	9.3	9.3	9.3	8.5	9.3	9.3	9.3	10.1	10.1
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: P231537

CATALOG NUMBER: S121-DR-1-35-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1210.9	1210.9	1210.9	1210.9
2.5°	1196.2	1210.2	1220.2	1224.9
5°	1179.2	1196.2	1210.2	1219.5
7.5°	1160.5	1179.2	1197.8	1210.9
10°	1138.8	1162.1	1181.5	1199.3
12.5°	1114.0	1139.6	1161.3	1183.8
15°	1086.1	1114.8	1139.6	1165.2
17.5°	1054.3	1086.9	1114.0	1145.0
20°	1017.9	1055.1	1086.1	1119.5
22.5°	979.1	1020.2	1055.9	1094.6
25°	935.7	981.5	1023.3	1066.0
27.5°	885.3	939.6	987.7	1033.4
30°	831.8	891.5	947.4	997.7
32.5°	776.0	841.1	904.7	958.2
35°	723.3	789.2	859.0	914.0
37.5°	673.7	735.7	810.1	868.3
40°	625.6	682.2	756.6	815.6
42.5°	582.2	632.6	703.1	756.6
45°	540.3	585.3	647.3	695.4
47.5°	500.8	541.9	593.8	634.2
50°	463.6	499.3	541.1	575.2
52.5°	427.2	458.2	491.5	518.6
55°	391.5	417.9	441.1	464.4
57.5°	357.4	377.5	394.6	416.3
60°	323.3	338.8	349.6	369.8
62.5°	289.2	300.8	307.8	325.6
65°	255.1	263.6	269.0	283.7
67.5°	221.7	227.9	231.0	244.2
70°	186.1	188.4	192.3	205.4
72.5°	154.3	155.8	158.2	166.7
75°	123.3	125.6	126.4	132.6
77.5°	96.9	96.1	98.5	100.0
80°	67.4	68.2	70.5	71.3
82.5°	43.4	44.2	46.5	46.5
85°	24.0	24.8	26.4	25.6
87.5°	9.3	10.1	10.9	10.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)