

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: P231536

Luminaire Tested: **S121-DR-1-30-X-0048-1-U-DD-3-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231536  
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-1-30-X-0048-1-U-DD-3-W  
Description: DEFINE 1 LED LINEAR DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC LENS.  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

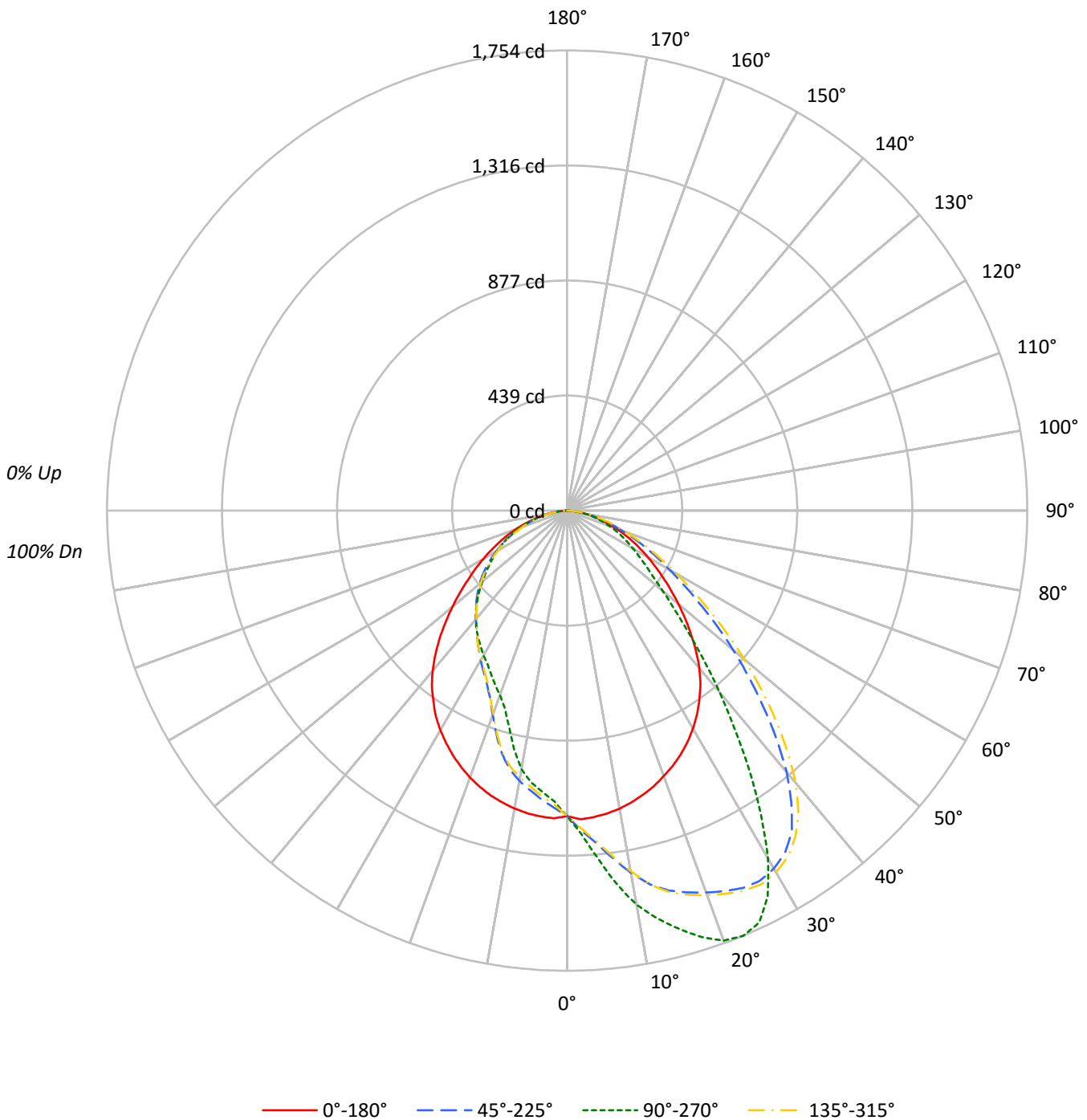
Lumens per Lamp: N/A  
Luminaire Lumens: 2993.1 lumens  
Efficiency: N/A  
Efficacy: 107.3 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.39  
Luminous Opening: Rectangular (W 3.92' x L: 0.1' x H: 0')  
CIE Type: Direct

Input Watts (W): 27.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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				
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°	32554	32554	32554	32554
5°	32908	37280	32843	30208
10°	32738	43318	32738	28420
15°	32428	47789	32536	24703
20°	32025	51896	32203	22266
25°	31619	53440	31754	21177
30°	30972	49405	31188	20574
35°	29997	41420	30328	20174
40°	28620	32999	29109	19752
45°	26439	25581	27115	19156
50°	24057	20620	24805	18350
55°	21763	17840	22529	17693
60°	19883	16215	20672	17216
65°	18046	15136	18840	16671
70°	16144	13953	17002	15907
75°	13772	12638	14820	13686
80°	11045	10916	12719	10674
85°	7891	8853	9816	7410



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.8	3.8
10°-20°	339.4	11.3
20°-30°	521.1	17.4
30°-40°	593.5	19.8
40°-50°	539.4	18.0
50°-60°	420.7	14.1
60°-70°	284.9	9.5
70°-80°	146.0	4.9
80°-90°	34.3	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°	974.2	32.5
0°-40°	1567.7	52.4
0°-60°	2527.8	84.5
0°-90°	2993.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2993.1	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1164	1164	1164	1164	1164	
5°	1173	1328	1170	1076	1173	111
15°	1120	1651	1124	854	1120	316
25°	1025	1732	1029	686	1025	472
35°	879	1214	889	591	879	549
45°	669	647	686	484	669	515
55°	446	366	462	363	446	402
65°	273	229	285	252	273	271
75°	128	117	137	127	128	136
85°	25	28	31	23	25	31
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°	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4
2.5°	1177.8	1172.6	1175.5	1183.7	1192.7	1195.7	1197.2	1200.9	1205.4	1212.8	1218.8
5°	1172.6	1173.3	1182.3	1196.4	1210.6	1216.5	1221.8	1232.2	1244.1	1259.0	1272.5
7.5°	1164.4	1170.3	1186.7	1206.9	1228.5	1238.9	1247.1	1268.0	1289.6	1313.4	1336.6
10°	1153.2	1165.1	1187.5	1215.1	1247.1	1262.0	1276.2	1307.5	1338.8	1371.6	1402.2
12.5°	1138.3	1156.2	1185.2	1221.8	1265.0	1285.1	1304.5	1345.5	1385.0	1423.8	1459.6
15°	1120.4	1144.2	1180.8	1227.0	1279.9	1304.5	1328.4	1376.1	1420.0	1461.0	1499.1
17.5°	1101.0	1130.1	1174.1	1230.0	1291.1	1317.9	1342.5	1394.0	1438.7	1482.7	1525.9
20°	1076.4	1114.4	1165.1	1227.7	1292.6	1320.2	1347.0	1399.2	1446.9	1498.3	1549.0
22.5°	1052.5	1092.1	1152.4	1218.0	1282.1	1312.0	1339.5	1396.2	1451.4	1511.0	1569.9
25°	1025.0	1069.7	1133.8	1199.4	1263.5	1293.3	1324.6	1388.7	1455.8	1522.9	1587.0
27.5°	993.7	1041.4	1107.0	1171.1	1237.4	1271.7	1307.5	1382.0	1458.1	1528.9	1590.7
30°	959.4	1011.5	1072.7	1135.3	1209.8	1248.6	1289.6	1373.1	1455.1	1519.2	1575.8
32.5°	921.4	973.5	1030.2	1100.3	1180.0	1224.0	1271.7	1356.7	1438.7	1495.3	1546.0
35°	878.9	925.8	984.0	1060.7	1149.5	1197.9	1244.9	1332.1	1410.4	1458.1	1493.1
37.5°	834.9	881.8	936.3	1019.7	1115.2	1168.1	1212.1	1295.6	1368.6	1402.9	1403.6
40°	784.2	827.4	885.6	977.3	1077.1	1126.3	1174.8	1251.6	1314.2	1327.6	1301.5
42.5°	727.5	773.0	835.6	933.3	1032.4	1083.9	1125.6	1199.4	1246.4	1237.4	1180.8
45°	668.7	718.6	784.9	884.8	980.2	1027.2	1069.7	1135.3	1164.4	1136.0	1057.8
47.5°	609.8	663.4	732.8	831.9	921.4	966.8	1006.3	1060.7	1072.7	1026.5	938.5
50°	553.1	607.5	679.1	774.5	857.2	902.0	935.5	977.3	974.3	914.6	825.2
52.5°	498.7	554.6	629.9	712.6	790.2	829.7	861.0	887.8	874.4	804.3	716.4
55°	446.5	500.9	567.3	640.3	721.6	752.9	781.2	796.1	773.8	702.9	615.7
57.5°	400.3	448.7	515.8	580.7	650.0	676.1	700.0	704.4	674.6	597.8	525.5
60°	355.6	398.8	457.7	508.4	574.7	599.3	616.5	614.2	582.2	518.1	448.7
62.5°	313.1	350.4	400.3	450.2	500.9	520.3	535.2	535.2	495.7	439.8	386.1
65°	272.8	304.1	343.6	380.2	430.1	445.0	456.9	446.5	418.2	365.3	325.8
67.5°	234.8	259.4	290.0	320.5	363.0	374.2	381.7	378.7	348.1	304.1	272.1
70°	197.5	216.9	240.8	264.6	298.2	306.4	313.1	310.1	286.2	254.2	220.6
72.5°	160.3	174.4	193.8	213.9	238.5	244.5	250.5	247.5	224.4	203.5	178.9
75°	127.5	137.2	150.6	166.2	184.1	190.1	193.8	192.3	174.4	157.3	140.9
77.5°	96.2	102.9	113.3	124.5	136.4	138.7	142.4	140.9	129.7	117.8	106.6
80°	68.6	72.3	79.8	86.5	94.7	96.9	98.4	98.4	90.2	82.7	76.8
82.5°	44.7	47.0	51.4	55.2	60.4	61.1	62.6	62.6	57.4	54.4	51.4
85°	24.6	26.1	29.1	30.6	32.8	32.1	33.5	34.3	32.1	31.3	29.8
87.5°	10.4	10.4	11.2	12.7	11.9	11.9	12.7	13.4	12.7	11.9	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



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4
2.5°	1223.3	1216.5	1225.5	1233.7	1235.9	1239.7	1232.2	1227.7	1226.2	1232.9	1228.5
5°	1282.9	1282.1	1297.0	1309.7	1313.4	1320.2	1316.4	1315.7	1317.2	1328.4	1323.1
7.5°	1354.4	1361.2	1383.5	1402.2	1408.1	1417.8	1417.1	1418.6	1421.5	1433.5	1429.0
10°	1435.0	1440.2	1467.0	1490.9	1498.3	1508.0	1502.0	1512.5	1516.2	1525.9	1519.9
12.5°	1493.1	1502.0	1530.4	1556.5	1563.2	1569.9	1569.1	1577.3	1584.0	1593.0	1589.3
15°	1531.9	1543.0	1576.6	1605.7	1614.6	1620.6	1621.3	1631.7	1639.2	1651.1	1655.6
17.5°	1561.7	1579.6	1617.6	1651.1	1660.8	1667.5	1672.0	1683.9	1693.6	1704.8	1708.5
20°	1589.3	1614.6	1657.8	1692.9	1701.8	1707.0	1713.7	1723.4	1734.6	1744.3	1746.5
22.5°	1613.1	1642.9	1684.7	1714.5	1721.2	1723.4	1727.9	1734.6	1746.5	1754.0	1757.7
25°	1626.5	1651.1	1688.4	1713.7	1719.0	1715.2	1718.2	1718.2	1727.9	1732.4	1740.6
27.5°	1621.3	1642.2	1671.3	1684.7	1682.4	1672.0	1658.6	1647.4	1656.3	1656.3	1667.5
30°	1596.7	1606.4	1615.3	1605.7	1584.8	1572.9	1549.0	1525.9	1533.4	1530.4	1541.6
32.5°	1545.3	1531.1	1517.0	1486.4	1456.6	1437.2	1401.4	1388.7	1376.8	1375.3	1385.0
35°	1464.0	1424.5	1387.2	1341.0	1307.5	1283.6	1241.1	1209.1	1212.1	1213.6	1221.0
37.5°	1355.9	1296.3	1243.4	1188.2	1157.7	1127.1	1085.3	1068.2	1056.3	1048.1	1062.2
40°	1231.5	1157.7	1096.5	1039.9	1012.3	978.8	940.0	922.8	910.9	904.2	913.9
42.5°	1103.2	1024.2	960.1	902.0	872.9	843.8	806.6	790.2	776.7	767.0	778.2
45°	978.8	896.8	830.4	773.0	743.9	720.8	684.3	670.1	657.5	647.0	659.0
47.5°	857.2	788.7	711.1	656.0	631.4	609.0	579.9	568.0	558.3	550.9	558.3
50°	743.2	676.1	603.8	558.3	538.9	518.8	495.7	486.8	479.3	474.1	478.6
52.5°	638.8	576.2	515.1	471.9	461.4	446.5	428.6	421.9	413.0	411.5	416.7
55°	544.9	491.2	441.3	409.2	398.8	387.6	374.2	369.7	364.5	366.0	365.3
57.5°	465.1	420.4	379.4	357.1	347.4	338.4	328.7	326.5	324.3	325.0	324.3
60°	397.3	360.8	328.7	310.1	304.1	297.4	290.7	287.0	288.5	290.0	292.2
62.5°	337.7	309.4	284.0	269.8	266.1	261.6	257.9	255.7	257.2	258.7	260.9
65°	286.2	263.9	245.2	235.6	231.8	229.6	227.4	228.8	227.4	228.8	231.1
67.5°	240.8	223.6	209.5	203.5	201.3	199.0	197.5	199.8	199.0	199.8	201.3
70°	199.8	185.6	175.9	171.4	170.0	168.5	167.7	167.7	169.2	170.7	172.2
72.5°	161.0	152.8	146.8	143.1	141.6	140.9	140.1	141.6	141.6	143.1	144.6
75°	127.5	122.3	117.0	116.3	115.5	114.8	114.8	116.3	116.3	117.0	117.8
77.5°	99.9	95.4	90.9	90.9	90.2	91.7	90.2	91.7	90.2	91.7	92.4
80°	73.8	70.1	69.3	67.1	66.3	68.6	66.3	67.8	66.3	67.8	68.6
82.5°	49.9	47.7	47.0	45.5	45.5	47.0	45.5	46.2	45.5	46.2	47.0
85°	29.1	28.3	27.6	27.6	26.8	28.3	26.8	27.6	26.8	27.6	28.3
87.5°	12.7	12.7	11.9	12.7	11.2	12.7	11.9	12.7	13.4	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



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**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4
2.5°	1233.7	1226.2	1224.0	1218.0	1219.5	1227.0	1224.7	1229.2	1211.3	1197.2	1187.5
5°	1325.4	1312.7	1306.0	1295.6	1294.8	1297.0	1288.8	1288.8	1263.5	1242.6	1224.7
7.5°	1430.5	1413.3	1402.9	1388.7	1386.5	1383.5	1368.6	1361.2	1328.4	1296.3	1268.7
10°	1519.9	1502.8	1491.6	1478.2	1475.2	1470.7	1450.6	1436.4	1395.4	1354.4	1316.4
12.5°	1589.3	1571.4	1558.7	1546.8	1542.3	1537.8	1519.2	1496.1	1459.6	1408.9	1364.1
15°	1651.9	1632.5	1617.6	1603.4	1596.0	1587.0	1565.4	1543.8	1505.8	1451.4	1402.9
17.5°	1704.1	1683.2	1665.3	1651.1	1641.4	1629.5	1603.4	1573.6	1535.6	1478.2	1428.2
20°	1742.1	1721.2	1701.8	1689.1	1680.9	1663.8	1636.2	1601.9	1560.2	1497.6	1440.9
22.5°	1754.7	1735.4	1718.2	1708.5	1700.3	1686.9	1662.3	1628.8	1580.3	1511.7	1447.6
25°	1739.1	1727.9	1716.0	1710.8	1704.8	1694.4	1676.5	1645.2	1598.2	1524.4	1451.4
27.5°	1670.5	1673.5	1675.0	1683.2	1681.7	1683.9	1673.5	1645.9	1604.9	1533.4	1453.6
30°	1552.7	1569.9	1585.5	1604.9	1608.6	1634.7	1642.9	1624.3	1592.2	1531.9	1452.8
32.5°	1415.6	1427.5	1454.3	1474.5	1496.1	1543.0	1573.6	1584.0	1565.4	1515.5	1442.4
35°	1250.8	1268.7	1303.8	1332.8	1357.4	1420.8	1471.5	1513.2	1517.0	1486.4	1418.6
37.5°	1092.1	1112.2	1148.0	1183.7	1203.1	1279.9	1346.2	1414.8	1447.6	1440.9	1386.5
40°	943.7	965.3	1000.4	1037.6	1053.3	1133.1	1206.1	1295.6	1354.4	1379.8	1341.8
42.5°	806.6	828.9	863.2	896.0	928.8	992.9	1066.7	1166.6	1241.9	1294.1	1282.1
45°	682.8	703.7	737.2	766.3	787.9	861.7	934.0	1024.2	1120.4	1184.5	1204.6
47.5°	578.5	596.3	626.2	652.3	681.3	738.7	811.0	900.5	998.9	1086.8	1115.9
50°	495.0	509.9	535.2	556.1	577.7	629.1	695.5	782.7	880.4	974.3	1017.5
52.5°	428.6	440.5	461.4	475.6	494.2	536.0	594.1	674.6	766.3	862.5	915.4
55°	375.7	384.6	403.3	410.7	425.6	459.2	506.9	579.9	659.0	752.9	812.5
57.5°	331.7	337.7	353.3	358.6	369.7	395.8	433.8	495.7	564.3	650.8	722.3
60°	295.2	299.7	309.4	313.8	322.8	342.9	372.7	421.2	480.1	557.6	616.5
62.5°	261.6	264.6	272.1	275.1	281.8	296.7	320.5	359.3	407.0	472.6	536.0
65°	231.8	233.3	239.3	239.3	245.2	256.4	274.3	306.4	342.9	398.8	453.2
67.5°	202.0	202.8	205.0	208.0	212.4	220.6	233.3	258.7	287.7	333.2	378.7
70°	172.2	172.9	175.9	175.9	178.9	184.9	196.8	215.4	237.8	274.3	311.6
72.5°	144.6	146.1	147.6	146.8	149.8	153.6	161.8	173.7	196.0	221.4	251.2
75°	118.5	117.8	120.8	120.0	122.3	124.5	131.2	139.4	154.3	172.2	196.0
77.5°	93.2	92.4	94.7	96.2	95.4	97.7	102.1	106.6	117.0	129.7	146.1
80°	69.3	70.1	70.1	71.6	71.6	72.3	75.3	77.5	85.0	92.4	103.6
82.5°	47.0	48.5	48.5	49.9	49.2	49.9	51.4	52.9	57.4	61.1	67.8
85°	28.3	28.3	29.1	29.8	29.8	29.8	31.3	31.3	33.5	35.0	38.8
87.5°	13.4	12.7	13.4	14.2	13.4	14.2	13.4	14.2	15.7	14.9	16.4
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: P231536

CATALOG NUMBER: S121-DR-1-30-X-0048-1-U-DD-3-W

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4
2.5°	1181.5	1183.7	1182.3	1180.0	1180.0	1186.7	1185.2	1174.1	1162.9	1150.2	1145.7
5°	1212.8	1209.1	1203.9	1198.7	1192.7	1193.4	1186.7	1170.3	1154.7	1138.3	1131.6
7.5°	1247.1	1234.4	1226.2	1217.3	1203.1	1198.7	1185.2	1163.6	1144.2	1124.9	1115.2
10°	1285.1	1261.3	1247.1	1233.7	1212.1	1199.4	1180.0	1153.2	1130.8	1107.7	1096.5
12.5°	1322.4	1288.1	1269.5	1250.1	1218.0	1198.7	1172.6	1139.8	1113.7	1088.3	1074.2
15°	1354.4	1314.2	1290.3	1266.5	1223.3	1193.4	1160.6	1124.1	1092.1	1066.0	1048.8
17.5°	1376.8	1331.3	1306.7	1279.2	1226.2	1186.7	1146.5	1104.7	1069.7	1039.9	1019.7
20°	1385.8	1338.0	1312.7	1283.6	1224.7	1175.5	1130.1	1082.4	1045.1	1014.5	987.7
22.5°	1385.0	1334.3	1307.5	1277.7	1215.8	1162.9	1109.9	1057.0	1016.8	981.7	951.2
25°	1378.3	1321.6	1292.6	1262.0	1200.1	1145.7	1087.6	1029.4	985.5	945.2	907.9
27.5°	1371.6	1303.8	1271.7	1240.4	1177.8	1122.6	1060.7	998.9	950.4	904.2	861.0
30°	1363.4	1284.4	1247.9	1212.1	1144.2	1090.6	1030.2	966.1	912.4	860.2	808.0
32.5°	1351.5	1265.0	1224.7	1182.3	1107.7	1053.3	995.1	931.0	869.9	810.3	755.1
35°	1334.3	1242.6	1200.1	1153.2	1066.7	1009.3	954.9	888.6	825.9	759.6	704.4
37.5°	1306.7	1215.1	1169.6	1121.1	1024.2	960.9	907.9	846.8	777.5	708.9	656.0
40°	1270.2	1179.3	1134.5	1083.1	980.2	909.4	856.5	797.6	726.0	659.0	612.0
42.5°	1226.2	1134.5	1090.6	1042.1	935.5	857.2	802.1	743.2	673.9	612.0	570.3
45°	1168.1	1081.6	1036.1	992.9	887.8	803.6	745.4	685.8	623.9	569.5	530.7
47.5°	1099.5	1023.5	978.0	936.3	835.6	749.9	688.0	627.7	574.0	527.8	493.5
50°	1019.7	959.4	915.4	871.4	779.7	694.7	630.6	570.3	524.0	488.3	457.7
52.5°	934.0	890.0	847.6	806.6	720.1	638.8	570.3	515.1	477.8	449.5	424.2
55°	843.8	816.2	782.0	737.2	656.7	580.7	516.6	462.2	432.3	411.5	390.6
57.5°	751.4	736.5	707.4	666.4	591.1	522.5	463.7	414.5	389.1	373.5	357.8
60°	660.5	651.5	623.9	594.9	525.5	465.1	410.0	369.7	348.9	336.9	324.3
62.5°	570.3	569.5	552.4	521.8	461.4	409.2	360.0	325.8	309.4	301.2	290.7
65°	485.3	490.5	474.1	450.2	398.8	353.3	312.3	284.8	272.1	265.4	257.9
67.5°	406.3	413.7	401.0	380.9	339.2	300.4	268.4	246.0	235.6	230.3	224.4
70°	334.7	340.7	332.5	315.3	281.8	251.2	225.1	208.0	200.5	196.0	193.1
72.5°	270.6	273.6	266.9	254.2	228.8	205.7	183.4	170.7	164.7	161.0	157.3
75°	208.0	214.7	208.7	198.3	178.2	158.8	146.1	137.2	131.9	129.7	127.5
77.5°	154.3	158.8	155.0	147.6	134.9	120.8	111.8	108.1	105.1	99.9	98.4
80°	108.1	111.8	109.6	104.4	96.2	89.5	80.5	79.0	76.0	72.3	71.6
82.5°	73.1	72.3	71.6	67.1	62.6	58.9	52.9	52.9	48.5	47.7	47.0
85°	38.8	40.3	39.5	37.3	35.8	32.1	30.6	30.6	29.1	26.8	26.8
87.5°	15.7	16.4	16.4	14.9	14.9	13.4	14.2	13.4	12.7	11.2	11.2
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: P231536

CATALOG NUMBER: S121-DR-1-30-X-0048-1-U-DD-3-W

**CANDELA DISTRIBUTION (continued):**

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4
2.5°	1142.7	1143.5	1141.3	1136.8	1134.5	1127.8	1133.8	1126.3	1116.7	1124.1	1121.9
5°	1125.6	1124.9	1120.4	1114.4	1109.9	1101.0	1105.5	1096.5	1085.3	1089.8	1086.8
7.5°	1106.2	1104.7	1098.8	1089.8	1082.4	1071.9	1075.7	1065.2	1053.3	1057.8	1054.8
10°	1085.3	1081.6	1074.2	1063.0	1054.8	1043.6	1046.6	1034.7	1021.2	1022.7	1016.8
12.5°	1060.0	1054.8	1046.6	1034.7	1025.0	1010.8	1010.1	992.9	973.5	969.8	957.9
15°	1031.7	1025.7	1017.5	1001.9	987.7	966.1	959.4	934.0	907.2	898.2	882.6
17.5°	1004.1	993.7	984.0	960.9	938.5	907.9	895.3	864.7	837.1	826.7	812.5
20°	964.6	954.9	940.7	909.4	879.6	843.8	828.2	794.6	776.0	770.8	762.6
22.5°	920.6	907.2	891.5	849.8	817.0	782.7	770.0	744.7	733.5	732.0	727.5
25°	869.9	853.5	828.9	789.4	758.1	731.3	725.3	707.4	701.5	702.2	698.5
27.5°	821.5	797.6	775.2	733.5	708.9	691.8	690.3	676.1	673.9	673.1	667.9
30°	761.1	742.4	720.1	685.1	667.9	659.0	659.7	647.0	644.1	642.6	639.6
32.5°	708.9	692.5	671.6	644.1	634.4	631.4	626.9	616.5	618.0	616.5	616.5
35°	660.5	642.6	629.1	609.0	604.5	603.1	596.3	588.9	590.4	594.9	593.4
37.5°	616.5	603.1	590.4	577.7	574.7	574.0	566.5	564.3	570.3	570.3	568.8
40°	576.2	565.0	554.6	547.9	545.7	544.2	539.7	539.7	545.7	544.9	544.2
42.5°	539.7	529.3	522.5	518.8	516.6	516.6	514.3	518.1	521.1	520.3	516.6
45°	504.7	496.5	492.7	489.0	487.5	489.7	489.0	491.2	495.0	492.7	488.3
47.5°	470.4	464.4	462.2	459.2	461.4	462.2	462.9	464.4	466.6	462.9	458.4
50°	438.3	433.8	432.3	428.6	434.6	433.8	436.1	438.3	436.8	431.6	427.9
52.5°	407.0	404.0	403.3	403.3	406.3	406.3	407.8	409.2	405.5	400.3	396.6
55°	377.2	374.2	373.5	371.2	375.7	377.2	377.2	377.2	372.7	366.8	363.8
57.5°	347.4	343.6	342.9	345.1	345.1	345.1	345.9	345.1	340.7	336.2	334.0
60°	316.1	313.1	312.3	314.6	313.8	316.8	313.8	312.3	308.6	306.4	307.1
62.5°	284.8	281.0	281.0	283.3	283.3	284.8	281.8	279.5	277.3	275.8	278.0
65°	250.5	249.0	249.0	252.0	252.0	250.5	248.2	248.2	247.5	246.7	246.7
67.5°	218.4	217.7	218.4	221.4	220.6	218.4	216.9	217.7	217.7	218.4	218.4
70°	190.1	184.9	184.9	190.1	190.1	190.1	184.9	186.4	186.4	189.3	192.3
72.5°	157.3	154.3	154.3	157.3	155.0	158.0	155.0	157.3	158.0	159.5	161.0
75°	124.5	127.5	125.2	128.2	126.7	128.2	126.0	128.2	129.0	128.2	127.5
77.5°	98.4	99.1	96.9	99.9	99.1	99.9	98.4	99.9	99.9	98.4	99.9
80°	71.6	72.3	70.8	73.8	72.3	73.1	71.6	73.1	72.3	69.3	70.1
82.5°	47.7	48.5	47.0	49.9	47.7	49.2	47.0	47.7	47.0	44.0	44.7
85°	27.6	28.3	26.8	29.1	27.6	28.3	26.1	26.8	26.1	24.6	24.6
87.5°	11.2	11.9	10.4	11.9	11.2	11.2	9.7	10.4	10.4	8.9	9.7
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: P231536

CATALOG NUMBER: S121-DR-1-30-X-0048-1-U-DD-3-W

**CANDELA DISTRIBUTION (continued):**

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4
2.5°	1121.9	1116.7	1113.7	1110.7	1107.7	1109.9	1111.4	1112.2	1116.7	1115.2	1115.9
5°	1085.3	1080.1	1075.7	1072.7	1071.9	1076.4	1078.6	1077.9	1080.1	1077.1	1078.6
7.5°	1054.0	1048.8	1044.3	1039.9	1040.6	1045.8	1048.8	1048.8	1051.8	1047.3	1047.3
10°	1016.8	1010.1	1002.6	997.4	996.6	1001.1	1001.9	1000.4	1006.3	1006.3	1009.3
12.5°	957.1	947.4	942.2	928.8	928.1	932.5	934.8	939.2	941.5	944.5	950.4
15°	880.4	871.4	864.0	849.8	849.0	853.5	850.5	862.5	866.9	871.4	877.4
17.5°	810.3	804.3	796.9	786.4	784.9	789.4	788.7	796.9	799.8	802.8	808.0
20°	761.1	753.6	752.1	745.4	745.4	748.4	747.7	751.4	752.9	752.9	755.9
22.5°	726.8	722.3	720.1	715.6	715.6	717.8	718.6	720.1	720.1	717.8	719.3
25°	697.7	693.3	689.5	683.6	684.3	686.5	687.3	688.8	689.5	688.8	690.3
27.5°	666.4	661.9	659.0	655.2	656.0	658.2	657.5	659.0	659.0	659.0	660.5
30°	638.8	635.9	635.9	633.6	635.9	637.3	636.6	636.6	635.1	632.1	632.1
32.5°	615.0	614.2	614.2	613.5	613.5	613.5	614.2	615.0	613.5	611.3	610.5
35°	592.6	591.1	591.1	588.9	591.1	591.1	591.1	591.9	590.4	588.9	586.7
37.5°	569.5	569.5	568.0	568.0	567.3	568.8	568.0	568.0	567.3	565.0	563.5
40°	544.9	544.2	541.2	540.4	539.7	541.2	539.7	541.2	541.2	540.4	539.7
42.5°	516.6	515.8	514.3	512.9	512.1	513.6	512.1	512.9	513.6	513.6	512.1
45°	487.5	488.3	485.3	481.5	484.5	484.5	483.8	484.5	484.5	485.3	483.8
47.5°	458.4	458.4	455.5	454.0	453.2	453.2	451.7	453.2	454.7	456.2	454.7
50°	427.1	426.4	422.7	418.9	421.2	421.9	419.7	421.2	421.9	424.2	424.2
52.5°	395.1	395.1	392.1	389.9	392.8	392.1	390.6	390.6	391.4	390.6	391.4
55°	363.8	365.3	363.0	361.5	362.3	363.0	362.3	362.3	362.3	361.5	360.8
57.5°	334.7	336.2	334.0	333.2	334.7	335.4	333.2	333.2	333.2	333.2	331.7
60°	306.4	307.1	306.4	304.9	307.1	307.9	306.4	305.6	304.9	303.4	303.4
62.5°	277.3	278.0	278.8	278.0	279.5	280.3	278.8	278.0	277.3	274.3	273.6
65°	248.2	249.7	251.2	251.2	252.7	252.0	251.2	250.5	249.0	246.7	244.5
67.5°	219.2	221.4	222.9	222.9	224.4	223.6	222.9	222.1	220.6	218.4	216.2
70°	190.8	193.1	193.1	193.8	193.8	194.6	192.3	192.3	192.3	189.3	185.6
72.5°	158.8	161.0	160.3	161.0	161.0	159.5	159.5	159.5	160.3	157.3	155.8
75°	128.2	129.7	129.0	129.7	127.5	126.7	129.0	126.7	126.7	126.7	125.2
77.5°	96.9	97.7	96.9	97.7	93.9	96.9	96.2	93.9	94.7	94.7	97.7
80°	67.8	68.6	67.1	67.1	64.1	66.3	66.3	64.9	64.9	64.9	67.8
82.5°	43.2	43.2	42.5	42.5	40.3	42.5	41.7	40.3	40.3	41.0	42.5
85°	24.6	23.9	23.1	23.9	21.6	23.1	23.1	22.4	22.4	22.4	23.1
87.5°	9.7	8.9	8.9	8.9	8.9	8.9	8.9	8.2	8.2	8.9	8.9
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: P231536

CATALOG NUMBER: S121-DR-1-30-X-0048-1-U-DD-3-W

**CANDELA DISTRIBUTION (continued):**

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4	1164.4
2.5°	1120.4	1124.1	1131.6	1139.0	1121.1	1124.1	1127.8	1133.1	1137.5	1139.8	1142.0
5°	1082.4	1088.3	1096.5	1107.0	1093.5	1094.3	1102.5	1109.9	1116.7	1119.6	1123.4
7.5°	1050.3	1054.8	1066.0	1073.4	1062.2	1063.7	1074.2	1085.3	1093.5	1098.0	1103.2
10°	1013.8	1020.5	1035.4	1042.9	1033.2	1033.9	1042.9	1056.3	1068.2	1073.4	1080.1
12.5°	957.9	968.3	989.9	1001.1	1000.4	1002.6	1012.3	1025.7	1038.4	1045.1	1054.0
15°	879.6	898.2	925.8	942.2	952.7	960.9	975.8	994.4	1007.8	1013.8	1021.2
17.5°	811.0	827.4	853.5	871.4	890.0	905.7	926.6	953.4	972.0	980.2	989.2
20°	758.1	767.0	787.9	803.6	824.4	842.3	866.9	902.7	928.8	940.0	951.9
22.5°	720.8	728.3	738.7	749.2	765.6	781.2	804.3	845.3	878.9	893.0	910.9
25°	691.0	697.0	703.7	708.9	719.3	723.1	745.4	785.7	823.7	840.8	863.2
27.5°	661.9	669.4	675.4	679.1	685.1	683.6	700.0	729.0	767.0	786.4	808.8
30°	632.1	637.3	645.5	649.3	656.0	649.3	657.5	679.1	712.6	731.3	753.6
32.5°	609.0	609.0	612.7	617.2	626.9	620.9	623.2	636.6	664.2	680.6	702.2
35°	586.7	585.9	586.7	587.4	595.6	594.1	593.4	600.1	621.7	635.1	653.7
37.5°	562.8	562.1	562.1	561.3	565.8	566.5	566.5	568.0	582.9	591.1	609.0
40°	537.5	536.7	537.5	536.7	538.2	537.5	538.2	539.7	548.6	554.6	566.5
42.5°	511.4	512.1	512.1	512.1	511.4	509.1	509.9	510.6	517.3	519.6	529.3
45°	483.0	485.3	485.3	484.5	484.5	483.0	480.1	482.3	486.8	486.8	494.2
47.5°	454.7	455.5	456.9	456.9	456.9	456.2	451.7	453.2	456.9	455.5	460.7
50°	423.4	425.6	427.1	428.6	429.4	427.9	424.2	423.4	423.4	424.9	427.1
52.5°	391.4	394.3	396.6	398.8	400.3	399.6	397.3	394.3	395.1	395.1	396.6
55°	360.8	361.5	365.3	369.0	369.7	369.7	368.2	364.5	366.8	364.5	366.8
57.5°	330.2	331.0	333.2	333.2	337.7	339.2	338.4	335.4	336.9	334.7	336.2
60°	301.9	301.9	301.9	304.1	305.6	307.9	307.9	304.9	305.6	304.9	305.6
62.5°	272.8	272.1	271.3	272.8	272.8	275.8	276.6	274.3	274.3	275.8	274.3
65°	243.8	243.0	242.3	239.3	240.8	243.0	245.2	243.8	243.0	243.8	243.0
67.5°	215.4	213.9	213.2	209.5	210.2	211.0	213.2	212.4	212.4	212.4	211.7
70°	189.3	183.4	182.6	181.1	178.2	178.9	179.6	179.6	178.9	179.6	178.2
72.5°	158.0	154.3	152.1	152.1	152.1	149.1	149.8	149.8	148.3	149.1	147.6
75°	128.2	125.2	124.5	124.5	123.0	120.8	120.8	119.3	119.3	119.3	117.8
77.5°	97.7	96.2	96.2	96.2	95.4	93.2	93.9	92.4	90.9	91.7	92.4
80°	68.6	67.8	67.8	68.6	69.3	67.1	67.8	66.3	65.6	65.6	64.1
82.5°	43.2	43.2	43.2	44.7	45.5	46.2	44.7	43.2	43.2	43.2	44.0
85°	23.9	23.1	23.9	24.6	24.6	23.9	24.6	24.6	24.6	24.6	23.1
87.5°	8.9	8.2	8.9	8.9	8.9	8.2	8.9	8.9	8.9	9.7	9.7
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: P231536

CATALOG NUMBER: S121-DR-1-30-X-0048-1-U-DD-3-W

**CANDELA DISTRIBUTION (continued):**

	345°	350°	355°	360°
0°	1164.4	1164.4	1164.4	1164.4
2.5°	1150.2	1163.6	1173.3	1177.8
5°	1133.8	1150.2	1163.6	1172.6
7.5°	1115.9	1133.8	1151.7	1164.4
10°	1095.0	1117.4	1136.0	1153.2
12.5°	1071.2	1095.8	1116.7	1138.3
15°	1044.3	1071.9	1095.8	1120.4
17.5°	1013.8	1045.1	1071.2	1101.0
20°	978.8	1014.5	1044.3	1076.4
22.5°	941.5	981.0	1015.3	1052.5
25°	899.7	943.7	984.0	1025.0
27.5°	851.3	903.5	949.7	993.7
30°	799.8	857.2	910.9	959.4
32.5°	746.2	808.8	869.9	921.4
35°	695.5	758.8	825.9	878.9
37.5°	647.8	707.4	779.0	834.9
40°	601.6	656.0	727.5	784.2
42.5°	559.8	608.3	676.1	727.5
45°	519.6	562.8	622.4	668.7
47.5°	481.5	521.1	571.0	609.8
50°	445.8	480.1	520.3	553.1
52.5°	410.7	440.5	472.6	498.7
55°	376.4	401.8	424.2	446.5
57.5°	343.6	363.0	379.4	400.3
60°	310.8	325.8	336.2	355.6
62.5°	278.0	289.2	295.9	313.1
65°	245.2	253.4	258.7	272.8
67.5°	213.2	219.2	222.1	234.8
70°	178.9	181.1	184.9	197.5
72.5°	148.3	149.8	152.1	160.3
75°	118.5	120.8	121.5	127.5
77.5°	93.2	92.4	94.7	96.2
80°	64.9	65.6	67.8	68.6
82.5°	41.7	42.5	44.7	44.7
85°	23.1	23.9	25.3	24.6
87.5°	8.9	9.7	10.4	10.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)