

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: P242906

Luminaire Tested: **S125RDR-S1090D927-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242906  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-32)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125RDR-S1090D927-X4F0-XX-UDD-A-W  
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3187.9 lumens  
Efficiency: N/A  
Efficacy: 91.6 lumens/watt  
Spacing Criteria (0/90/45): 1.4 / 1.21 / 1.48  
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')  
CIE Type: Direct

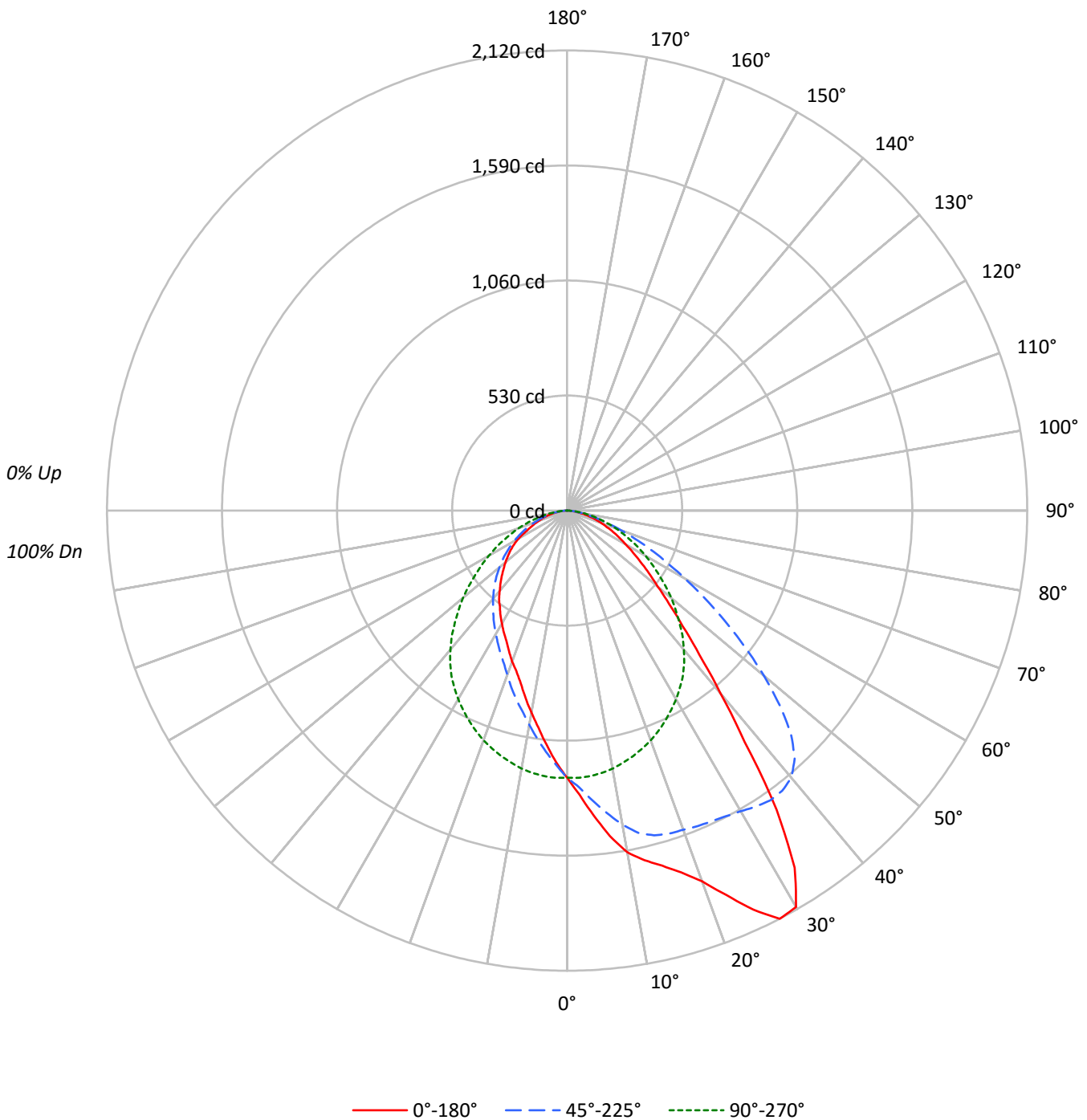
Input Watts (W): 34.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P242906

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	92	83	75	69	90	81	74	69	78	72	67	76	70	66	73	69	65	63
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55
5	79	66	58	52	77	65	57	51	63	56	51	61	55	50	60	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	44	40	50	44	39	37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	42	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	8745	8745	8745
5°	10061	8757	7733
10°	11541	8712	6824
15°	12465	8622	6065
20°	13745	8519	5601
25°	15907	8382	5197
30°	17310	8236	4932
35°	14602	8068	4689
40°	10197	7765	4480
45°	7565	7357	4275
50°	6032	6931	4099
55°	5120	6403	3943
60°	4422	5930	3690
65°	3942	5419	3177
70°	3464	4964	2897
75°	2996	4300	2719
80°	2276	3618	2276
85°	1892	2846	2145



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CATALOG NUMBER: S125RDR-S1090D927-X4F0-XX-UDD-A-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.0	3.7
10°-20°	345.9	10.9
20°-30°	548.5	17.2
30°-40°	662.8	20.8
40°-50°	590.2	18.5
50°-60°	452.5	14.2
60°-70°	293.9	9.2
70°-80°	142.6	4.5
80°-90°	33.5	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°	1012.4	31.8
0°-40°	1675.1	52.5
0°-60°	2717.8	85.3
0°-90°	3187.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3187.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1230	1230	1230	1230	1230	
5°	1410	1340	1227	1115	1084	140
15°	1694	1549	1172	903	824	485
25°	2028	1578	1069	727	663	934
35°	1683	1630	930	592	540	1020
45°	753	1460	732	469	425	597
55°	413	886	517	344	318	374
65°	234	422	322	221	189	233
75°	109	148	157	109	99	116
85°	23	25	35	28	26	28
90°	0	0	0	0	0	



TEST NUMBER: P242906

CATALOG NUMBER: S125RDR-S1090D927-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4
2.5°	1310.2	1309.2	1311.2	1305.6	1306.1	1297.6	1297.6	1291.0	1282.4	1275.8	1272.8
5°	1410.2	1411.2	1409.2	1401.6	1396.6	1389.0	1380.4	1365.2	1352.6	1340.5	1330.9
7.5°	1512.2	1513.2	1506.7	1505.1	1492.0	1483.9	1464.7	1445.0	1427.9	1405.1	1389.0
10°	1599.1	1598.6	1591.5	1586.0	1574.9	1560.7	1542.0	1517.8	1495.0	1469.8	1445.5
12.5°	1649.6	1648.1	1647.1	1640.0	1629.9	1617.8	1602.6	1578.9	1549.6	1521.3	1492.0
15°	1694.1	1690.5	1683.9	1675.4	1660.7	1646.1	1628.4	1607.2	1580.4	1549.1	1522.8
17.5°	1747.6	1748.1	1738.0	1728.9	1709.7	1685.5	1659.2	1626.9	1592.5	1560.7	1534.4
20°	1817.3	1815.8	1805.7	1782.4	1759.7	1727.4	1696.1	1654.1	1609.7	1564.7	1529.9
22.5°	1917.3	1912.8	1902.1	1869.8	1831.4	1787.5	1735.5	1681.9	1625.9	1573.3	1524.8
25°	2028.4	2025.4	2004.7	1969.3	1919.8	1855.7	1793.0	1722.8	1645.6	1578.4	1522.8
27.5°	2120.3	2114.3	2095.6	2062.3	2013.8	1944.6	1858.2	1767.3	1675.4	1587.0	1510.7
30°	2109.2	2116.8	2114.8	2101.1	2066.8	2006.2	1927.9	1822.3	1707.7	1599.1	1503.6
32.5°	1950.6	1957.2	1979.9	2016.8	2027.9	2012.8	1959.2	1863.8	1744.1	1616.8	1498.1
35°	1682.9	1692.0	1726.4	1780.4	1851.1	1910.2	1922.3	1869.8	1763.2	1630.4	1492.5
37.5°	1342.5	1401.6	1424.8	1479.9	1591.0	1698.6	1792.0	1813.2	1755.7	1627.4	1486.0
40°	1099.1	1111.2	1162.7	1226.8	1316.8	1429.9	1578.9	1686.5	1690.0	1607.2	1464.7
42.5°	901.1	917.2	948.5	996.5	1070.3	1183.4	1338.5	1489.0	1570.3	1551.6	1437.0
45°	752.6	764.2	790.0	829.3	888.4	981.9	1114.2	1278.4	1408.7	1459.7	1382.9
47.5°	636.4	642.5	666.2	698.0	743.5	814.2	921.8	1070.3	1225.3	1328.9	1308.7
50°	545.5	552.6	569.7	592.5	629.3	686.9	768.7	887.4	1048.6	1182.4	1209.2
52.5°	474.8	480.3	489.4	510.6	539.4	580.3	642.5	747.0	887.9	1032.4	1103.1
55°	413.2	417.2	425.8	437.9	462.2	494.0	551.0	625.3	742.5	885.9	976.8
57.5°	360.6	362.6	367.7	379.8	397.5	421.2	464.7	532.4	617.2	752.1	852.1
60°	311.1	313.2	320.2	327.8	340.9	362.1	394.5	438.4	519.2	625.8	727.3
62.5°	271.7	272.7	274.8	282.3	293.5	308.6	332.3	366.2	426.3	516.7	611.2
65°	234.4	234.9	235.9	241.9	249.0	261.1	277.8	303.1	351.5	422.2	507.1
67.5°	197.0	198.0	201.5	203.5	212.1	218.2	228.8	249.0	286.4	336.9	405.6
70°	166.7	166.2	169.7	172.2	174.8	182.3	188.9	204.6	225.8	262.1	317.2
72.5°	138.4	136.9	137.9	138.4	141.9	146.5	153.0	161.1	176.3	198.5	237.4
75°	109.1	109.6	109.6	110.6	113.1	115.2	117.2	122.2	131.3	148.0	170.7
77.5°	81.8	80.8	83.3	83.3	85.4	87.9	89.4	91.4	95.0	102.5	116.2
80°	55.6	55.6	56.1	57.6	57.1	58.1	60.6	62.6	67.2	71.2	75.3
82.5°	39.4	38.9	39.4	39.4	39.4	40.4	40.9	40.9	41.9	43.4	46.0
85°	23.2	23.2	23.7	23.7	24.2	24.2	24.7	24.7	24.7	25.3	25.8
87.5°	11.1	10.6	10.1	10.1	10.6	11.6	11.1	10.6	10.6	10.6	11.1
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: P242906

CATALOG NUMBER: S125RDR-S1090D927-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4
2.5°	1272.8	1269.3	1262.7	1256.6	1249.1	1242.5	1238.0	1232.4	1225.3	1216.7	1209.7
5°	1320.3	1309.2	1294.5	1281.9	1265.7	1253.1	1240.0	1227.4	1214.7	1198.6	1184.4
7.5°	1372.8	1351.1	1330.9	1304.6	1280.9	1260.2	1240.0	1219.3	1199.6	1177.3	1156.6
10°	1420.3	1392.5	1361.7	1326.3	1294.0	1263.2	1234.9	1207.1	1177.9	1152.1	1124.3
12.5°	1464.7	1426.9	1390.5	1343.5	1303.1	1263.7	1225.8	1189.5	1157.7	1122.3	1092.0
15°	1488.0	1452.6	1413.2	1358.7	1304.6	1259.2	1216.7	1171.8	1132.9	1095.5	1062.2
17.5°	1501.6	1464.2	1418.8	1365.7	1307.7	1251.1	1197.6	1149.6	1105.1	1062.2	1025.3
20°	1495.6	1459.7	1412.7	1362.7	1299.6	1240.0	1180.9	1126.3	1075.3	1029.4	989.5
22.5°	1480.9	1443.5	1398.6	1345.0	1285.9	1221.8	1157.7	1098.6	1044.5	996.5	952.1
25°	1466.3	1415.7	1369.3	1317.8	1260.7	1198.1	1132.9	1068.8	1011.7	963.2	915.7
27.5°	1452.1	1391.0	1333.4	1283.9	1222.8	1166.2	1102.6	1036.4	976.8	927.8	879.4
30°	1431.4	1360.7	1295.5	1237.5	1180.4	1127.3	1067.7	1003.6	942.0	891.0	841.5
32.5°	1405.6	1329.4	1256.1	1186.9	1132.4	1079.9	1027.3	966.7	907.1	854.1	803.6
35°	1384.9	1289.0	1211.2	1140.0	1078.9	1027.8	979.4	929.9	869.8	815.2	766.2
37.5°	1356.1	1250.6	1162.7	1084.9	1021.3	970.8	931.9	884.9	828.8	775.8	730.4
40°	1330.4	1208.2	1109.7	1032.9	965.2	911.2	875.3	836.9	786.9	737.9	692.5
42.5°	1296.0	1169.3	1056.1	975.3	907.1	855.6	819.2	786.9	747.0	701.6	652.1
45°	1249.1	1116.7	1001.1	915.2	846.5	795.5	761.7	731.9	700.0	657.6	615.2
47.5°	1193.0	1066.7	945.0	850.6	784.4	736.4	703.1	678.3	655.1	618.2	575.3
50°	1122.8	1002.1	883.9	793.0	721.3	676.3	645.5	626.8	606.1	573.3	538.9
52.5°	1040.0	935.4	820.3	726.8	660.1	618.7	589.4	570.7	554.6	529.3	497.0
55°	952.1	857.6	751.6	667.2	605.1	562.7	534.4	516.7	506.6	483.9	458.1
57.5°	852.6	779.8	683.9	601.6	545.5	503.1	481.8	466.2	454.6	437.9	418.7
60°	747.5	700.0	616.2	538.9	488.4	448.5	429.8	417.2	406.6	393.0	378.8
62.5°	641.0	609.6	539.4	475.8	430.3	398.5	381.3	370.2	357.6	349.5	335.9
65°	548.0	517.2	466.7	414.7	371.7	345.0	332.3	322.2	314.7	304.6	295.0
67.5°	445.0	430.8	393.5	354.6	323.3	297.5	286.4	278.3	269.7	263.7	256.6
70°	351.5	345.5	320.7	297.0	268.2	252.0	241.9	238.9	227.8	221.7	217.2
72.5°	268.7	266.7	255.1	240.4	222.2	208.6	199.5	196.0	189.9	185.4	182.8
75°	195.5	196.5	194.0	183.3	175.8	166.7	158.6	156.6	151.5	147.5	145.0
77.5°	133.3	138.4	137.4	136.9	133.3	126.8	123.2	121.7	116.2	114.7	114.1
80°	84.9	90.4	95.5	95.0	93.9	92.4	89.9	88.4	85.9	84.3	83.3
82.5°	49.5	54.5	58.6	62.1	62.1	60.6	59.1	58.6	58.6	57.6	57.6
85°	26.8	27.8	29.3	32.8	35.4	35.9	35.4	34.9	33.3	33.8	34.3
87.5°	11.6	11.6	12.1	12.1	11.6	14.1	15.7	16.2	15.2	14.1	13.1
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: P242906

CATALOG NUMBER: S125RDR-S1090D927-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4	1230.4
2.5°	1204.6	1197.6	1192.5	1182.4	1175.3	1172.3	1166.7	1165.2	1170.8	1166.7	1166.2
5°	1173.8	1159.2	1147.5	1135.9	1123.3	1115.2	1103.1	1101.1	1098.1	1093.5	1092.5
7.5°	1138.0	1119.8	1106.1	1086.9	1071.3	1058.7	1043.5	1037.4	1034.4	1028.9	1019.8
10°	1101.6	1078.9	1058.7	1039.5	1018.8	1002.1	986.9	975.3	967.7	960.7	957.6
12.5°	1065.7	1042.5	1015.2	991.0	967.2	948.0	930.9	924.3	915.7	907.1	899.0
15°	1028.4	997.5	969.3	942.5	922.8	902.6	886.4	875.3	862.7	859.1	845.5
17.5°	988.4	959.7	926.3	897.5	875.3	854.1	836.4	823.3	813.7	800.1	793.5
20°	951.6	915.7	883.4	857.6	832.4	806.1	787.9	777.3	768.2	757.6	752.6
22.5°	912.2	877.3	844.0	812.7	786.9	761.2	749.5	738.4	727.8	718.2	711.2
25°	873.8	838.4	803.6	772.3	745.5	726.8	711.7	699.0	693.5	683.9	676.8
27.5°	835.4	798.0	762.7	729.8	709.1	690.4	678.3	668.2	657.6	649.0	642.5
30°	798.5	760.2	720.8	696.0	673.8	656.1	642.5	632.9	625.3	617.7	613.2
32.5°	761.7	721.8	687.9	660.6	639.9	625.3	611.2	602.1	594.0	585.4	579.8
35°	721.8	681.4	653.1	626.8	606.1	592.0	582.4	569.2	562.7	556.6	551.0
37.5°	685.9	647.5	616.2	593.5	574.3	560.6	548.0	541.4	532.9	527.8	523.3
40°	645.5	611.2	583.4	559.1	546.0	530.3	518.7	509.6	503.6	496.5	491.4
42.5°	609.1	577.8	551.0	529.8	512.7	500.0	488.9	479.8	471.7	467.2	463.2
45°	575.3	543.5	517.2	497.0	481.8	469.2	457.6	453.1	443.0	436.9	434.9
47.5°	539.9	511.1	485.4	466.7	451.0	439.4	428.3	418.2	413.2	407.1	404.1
50°	504.1	476.8	453.1	434.9	419.7	406.6	396.5	390.4	382.9	377.3	373.3
52.5°	468.2	443.5	419.7	402.6	389.9	376.8	365.2	359.1	352.0	349.0	346.5
55°	434.4	407.6	387.4	370.2	356.6	344.5	333.9	327.8	323.3	319.7	318.7
57.5°	395.5	373.8	354.6	339.4	324.8	313.2	303.6	298.0	294.0	293.5	289.9
60°	357.6	338.4	321.2	304.6	292.4	281.8	273.8	267.2	263.1	262.6	261.6
62.5°	319.7	301.5	285.9	271.7	261.1	251.0	243.5	235.9	233.9	230.8	228.3
65°	282.3	265.7	252.5	240.9	229.3	220.7	213.1	208.6	203.0	200.0	194.5
67.5°	245.5	231.8	219.2	209.6	200.0	191.4	184.9	178.3	174.3	171.7	167.2
70°	209.1	199.0	186.4	175.8	168.7	162.1	157.1	149.5	147.0	145.0	142.9
72.5°	174.8	166.2	156.1	148.0	140.9	134.9	128.8	126.3	123.7	121.7	120.7
75°	142.9	134.4	125.3	119.2	114.1	109.1	106.1	103.5	102.5	102.0	100.0
77.5°	111.1	106.1	98.5	92.9	89.4	87.4	84.3	83.3	83.8	81.3	80.8
80°	80.3	77.8	71.7	69.7	67.2	65.2	63.6	61.1	58.6	57.6	56.1
82.5°	54.5	52.0	50.5	47.0	45.0	43.9	42.4	41.9	42.9	41.4	40.9
85°	31.8	29.3	28.3	27.8	26.8	27.8	27.3	26.8	26.3	25.8	26.3
87.5°	12.6	12.6	12.1	13.1	11.6	12.1	12.1	11.6	11.6	11.6	11.1
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: P242906

CATALOG NUMBER: S125RDR-S1090D927-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1230.4	1230.4	1230.4	1230.4
2.5°	1165.7	1160.2	1158.7	1160.7
5°	1087.4	1082.4	1084.9	1083.9
7.5°	1021.3	1014.7	1007.1	1009.2
10°	951.1	946.0	943.0	945.5
12.5°	892.0	889.5	886.9	884.9
15°	839.4	833.4	830.9	824.3
17.5°	788.9	786.9	780.4	775.8
20°	745.0	743.0	736.4	740.5
22.5°	708.6	703.6	702.6	700.0
25°	674.8	668.2	665.7	662.7
27.5°	640.4	636.9	633.4	632.4
30°	607.1	603.6	601.0	601.0
32.5°	577.3	574.8	572.3	571.8
35°	548.5	544.5	543.5	540.4
37.5°	518.2	514.7	514.7	515.2
40°	489.4	486.9	486.4	482.9
42.5°	458.6	457.6	455.6	454.6
45°	431.3	427.8	427.8	425.3
47.5°	402.6	399.5	400.0	397.0
50°	373.8	372.2	371.7	370.7
52.5°	345.0	344.5	347.0	344.5
55°	319.7	318.2	321.2	318.2
57.5°	289.9	288.9	291.9	289.9
60°	260.6	257.6	259.1	259.6
62.5°	225.8	224.3	225.3	222.2
65°	193.4	191.9	189.9	188.9
67.5°	168.2	163.6	163.6	164.7
70°	139.9	139.9	139.4	139.4
72.5°	120.2	119.7	118.7	118.2
75°	100.0	100.5	99.5	99.0
77.5°	78.3	75.8	76.8	75.8
80°	56.1	55.6	57.1	55.6
82.5°	41.4	40.9	41.4	40.4
85°	26.8	26.3	25.8	26.3
87.5°	11.6	11.1	11.1	11.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)