

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: P242907

Luminaire Tested: **S125RDR-S1270D927-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242907  
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-S1270D927-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: 3704.9 lumens  
Efficiency: N/A  
Efficacy: 90.1 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

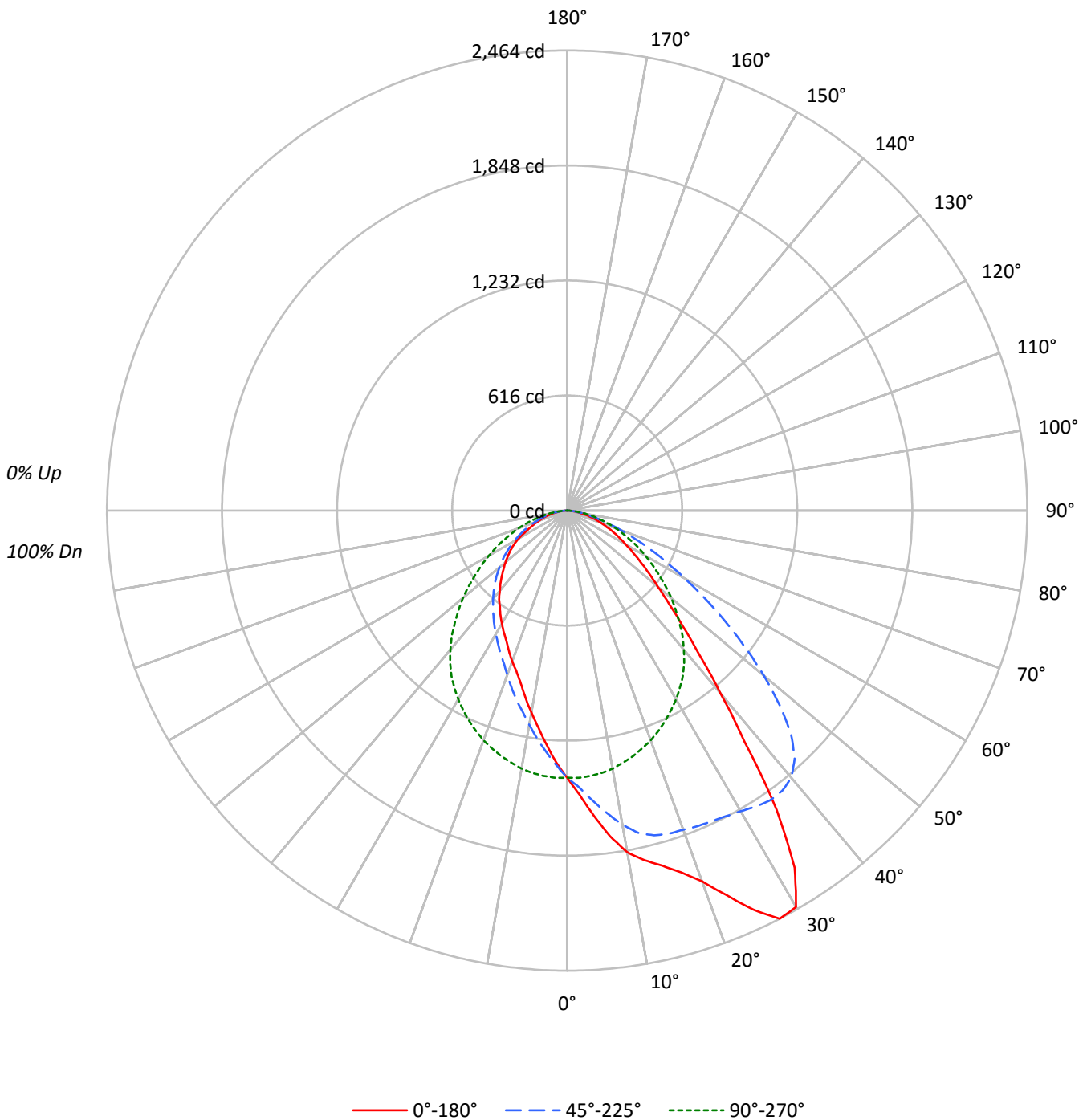
Input Watts (W): 41.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P242907

CATALOG NUMBER: S125RDR-S1270D927-X4F0-XX-UDD-A-W

### Luminous Intensity Polar Plot





TEST NUMBER: P242907

CATALOG NUMBER: S125RDR-S1270D927-X4F0-XX-UDD-A-W

**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°	10163	10163	10163
5°	11693	10177	8987
10°	13413	10125	7931
15°	14487	10020	7049
20°	15974	9901	6508
25°	18487	9741	6039
30°	20117	9572	5732
35°	16970	9377	5450
40°	11851	9025	5207
45°	8791	8550	4968
50°	7010	8055	4764
55°	5950	7441	4582
60°	5140	6893	4289
65°	4581	6298	3691
70°	4025	5771	3366
75°	3482	4998	3161
80°	2644	4203	2644
85°	2202	3303	2487



TEST NUMBER: P242907

CATALOG NUMBER: S125RDR-S1270D927-X4F0-XX-UDD-A-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	137.1	3.7
10°-20°	402.0	10.9
20°-30°	637.4	17.2
30°-40°	770.3	20.8
40°-50°	685.9	18.5
50°-60°	525.9	14.2
60°-70°	341.5	9.2
70°-80°	165.7	4.5
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°	1176.6	31.8
0°-40°	1946.8	52.5
0°-60°	3158.7	85.3
0°-90°	3704.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3704.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1430	1430	1430	1430	1430	
5°	1639	1558	1426	1296	1260	163
15°	1969	1800	1362	1049	958	564
25°	2357	1834	1242	845	770	1085
35°	1956	1895	1081	688	628	1186
45°	875	1696	851	545	494	694
55°	480	1030	600	400	370	435
65°	272	491	374	256	220	271
75°	127	172	182	127	115	135
85°	27	29	40	32	30	32
90°	0	0	0	0	0	



TEST NUMBER: P242907

CATALOG NUMBER: S125RDR-S1270D927-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9
2.5°	1522.7	1521.5	1523.9	1517.4	1518.0	1508.0	1508.0	1500.4	1490.4	1482.8	1479.2
5°	1638.9	1640.1	1637.7	1628.9	1623.1	1614.3	1604.3	1586.7	1572.0	1557.9	1546.8
7.5°	1757.5	1758.7	1751.0	1749.3	1734.0	1724.6	1702.3	1679.4	1659.5	1633.0	1614.3
10°	1858.5	1857.9	1849.6	1843.2	1830.3	1813.8	1792.1	1763.9	1737.5	1708.2	1680.0
12.5°	1917.2	1915.4	1914.2	1906.0	1894.3	1880.2	1862.6	1835.0	1800.9	1768.1	1734.0
15°	1968.8	1964.7	1957.1	1947.1	1930.1	1913.0	1892.5	1867.8	1836.7	1800.3	1769.8
17.5°	2031.0	2031.6	2019.9	2009.3	1987.0	1958.8	1928.3	1890.7	1850.8	1813.8	1783.3
20°	2112.0	2110.3	2098.5	2071.5	2045.1	2007.5	1971.2	1922.4	1870.8	1818.5	1778.0
22.5°	2228.3	2223.0	2210.7	2173.1	2128.5	2077.4	2016.9	1954.7	1889.6	1828.5	1772.2
25°	2357.4	2353.9	2329.8	2288.7	2231.2	2156.6	2083.9	2002.3	1912.5	1834.4	1769.8
27.5°	2464.2	2457.2	2435.5	2396.7	2340.4	2260.0	2159.6	2053.9	1947.1	1844.4	1755.7
30°	2451.3	2460.1	2457.8	2441.9	2402.0	2331.6	2240.6	2117.9	1984.7	1858.5	1747.5
32.5°	2267.0	2274.6	2301.1	2343.9	2356.8	2339.2	2277.0	2166.0	2026.9	1879.0	1741.0
35°	1955.9	1966.5	2006.4	2069.2	2151.4	2220.0	2234.1	2173.1	2049.2	1894.8	1734.6
37.5°	1560.3	1628.9	1655.9	1719.9	1849.1	1974.1	2082.7	2107.3	2040.4	1891.3	1727.0
40°	1277.3	1291.4	1351.3	1425.8	1530.3	1661.8	1835.0	1960.0	1964.1	1867.8	1702.3
42.5°	1047.2	1066.0	1102.4	1158.2	1243.9	1375.3	1555.6	1730.5	1825.0	1803.3	1670.0
45°	874.6	888.1	918.1	963.9	1032.5	1141.1	1294.9	1485.7	1637.2	1696.4	1607.2
47.5°	739.6	746.7	774.3	811.2	864.1	946.2	1071.3	1243.9	1424.1	1544.4	1520.9
50°	634.0	642.2	662.1	688.6	731.4	798.3	893.4	1031.4	1218.6	1374.2	1405.3
52.5°	551.8	558.2	568.8	593.5	626.9	674.5	746.7	868.2	1032.0	1199.8	1282.0
55°	480.2	484.9	494.8	508.9	537.1	574.1	640.4	726.7	862.9	1029.6	1135.3
57.5°	419.1	421.5	427.3	441.4	462.0	489.6	540.0	618.7	717.3	874.0	990.3
60°	361.6	363.9	372.2	381.0	396.2	420.9	458.4	509.5	603.4	727.3	845.3
62.5°	315.8	317.0	319.3	328.1	341.0	358.7	386.2	425.6	495.4	600.5	710.3
65°	272.4	273.0	274.1	281.2	289.4	303.5	322.9	352.2	408.6	490.7	589.4
67.5°	228.9	230.1	234.2	236.6	246.5	253.6	265.9	289.4	332.8	391.5	471.4
70°	193.7	193.1	197.2	200.2	203.1	211.9	219.5	237.7	262.4	304.7	368.6
72.5°	160.8	159.1	160.3	160.8	164.9	170.2	177.9	187.3	204.9	230.7	275.9
75°	126.8	127.4	127.4	128.6	131.5	133.8	136.2	142.1	152.6	172.0	198.4
77.5°	95.1	93.9	96.9	96.9	99.2	102.1	103.9	106.2	110.4	119.2	135.0
80°	64.6	64.6	65.2	66.9	66.3	67.5	70.4	72.8	78.1	82.8	87.5
82.5°	45.8	45.2	45.8	45.8	45.8	47.0	47.5	47.5	48.7	50.5	53.4
85°	27.0	27.0	27.6	27.6	28.2	28.2	28.8	28.8	28.8	29.4	29.9
87.5°	12.9	12.3	11.7	11.7	12.3	13.5	12.9	12.3	12.3	12.3	12.9
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: P242907

CATALOG NUMBER: S125RDR-S1270D927-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9
2.5°	1479.2	1475.1	1467.5	1460.5	1451.7	1444.0	1438.7	1432.3	1424.1	1414.1	1405.9
5°	1534.4	1521.5	1504.5	1489.8	1471.0	1456.4	1441.1	1426.4	1411.7	1393.0	1376.5
7.5°	1595.5	1570.2	1546.8	1516.2	1488.6	1464.6	1441.1	1417.0	1394.1	1368.3	1344.2
10°	1650.7	1618.4	1582.6	1541.5	1503.9	1468.1	1435.2	1402.9	1368.9	1339.0	1306.7
12.5°	1702.3	1658.3	1616.0	1561.4	1514.5	1468.7	1424.7	1382.4	1345.4	1304.3	1269.1
15°	1729.3	1688.2	1642.4	1579.0	1516.2	1463.4	1414.1	1361.8	1316.6	1273.2	1234.5
17.5°	1745.2	1701.7	1648.9	1587.3	1519.7	1454.0	1391.8	1336.0	1284.4	1234.5	1191.6
20°	1738.1	1696.4	1641.8	1583.7	1510.4	1441.1	1372.4	1309.0	1249.7	1196.3	1149.9
22.5°	1721.1	1677.7	1625.4	1563.2	1494.5	1420.0	1345.4	1276.7	1213.9	1158.2	1106.5
25°	1704.1	1645.4	1591.4	1531.5	1465.2	1392.4	1316.6	1242.1	1175.8	1119.4	1064.2
27.5°	1687.6	1616.6	1549.7	1492.2	1421.1	1355.4	1281.4	1204.5	1135.3	1078.3	1022.0
30°	1663.6	1581.4	1505.7	1438.2	1371.8	1310.2	1240.9	1166.4	1094.8	1035.5	977.9
32.5°	1633.6	1545.0	1459.9	1379.5	1316.1	1255.0	1194.0	1123.5	1054.3	992.6	933.9
35°	1609.6	1498.0	1407.6	1324.9	1253.8	1194.6	1138.2	1080.7	1010.8	947.4	890.5
37.5°	1576.1	1453.4	1351.3	1260.9	1186.9	1128.2	1083.0	1028.4	963.3	901.6	848.8
40°	1546.2	1404.1	1289.6	1200.4	1121.8	1059.0	1017.3	972.7	914.6	857.6	804.8
42.5°	1506.2	1358.9	1227.4	1133.5	1054.3	994.4	952.1	914.6	868.2	815.3	757.8
45°	1451.7	1297.9	1163.4	1063.6	983.8	924.5	885.2	850.6	813.6	764.3	715.0
47.5°	1386.5	1239.7	1098.3	988.5	911.6	855.8	817.1	788.3	761.3	718.5	668.6
50°	1304.9	1164.6	1027.3	921.6	838.2	786.0	750.2	728.5	704.4	666.2	626.3
52.5°	1208.6	1087.1	953.3	844.7	767.2	719.1	685.0	663.3	644.5	615.2	577.6
55°	1106.5	996.7	873.5	775.4	703.2	653.9	621.0	600.5	588.8	562.3	532.4
57.5°	990.9	906.3	794.8	699.1	634.0	584.7	560.0	541.8	528.3	508.9	486.6
60°	868.8	813.6	716.1	626.3	567.6	521.3	499.5	484.9	472.5	456.7	440.3
62.5°	744.9	708.5	626.9	553.0	500.1	463.1	443.2	430.3	415.6	406.2	390.4
65°	636.9	601.1	542.4	481.9	432.0	400.9	386.2	374.5	365.7	354.0	342.8
67.5°	517.1	500.7	457.3	412.1	375.7	345.7	332.8	323.4	313.5	306.4	298.2
70°	408.6	401.5	372.7	345.2	311.7	292.9	281.2	277.7	264.7	257.7	252.4
72.5°	312.3	309.9	296.4	279.4	258.3	242.4	231.9	227.8	220.7	215.4	212.5
75°	227.2	228.3	225.4	213.1	204.3	193.7	184.3	182.0	176.1	171.4	168.5
77.5°	155.0	160.8	159.7	159.1	155.0	147.3	143.2	141.5	135.0	133.2	132.7
80°	98.6	105.1	110.9	110.4	109.2	107.4	104.5	102.7	99.8	98.0	96.9
82.5°	57.5	63.4	68.1	72.2	72.2	70.4	68.7	68.1	68.1	66.9	66.9
85°	31.1	32.3	34.0	38.2	41.1	41.7	41.1	40.5	38.7	39.3	39.9
87.5°	13.5	13.5	14.1	14.1	13.5	16.4	18.2	18.8	17.6	16.4	15.3
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: P242907

CATALOG NUMBER: S125RDR-S1270D927-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9	1429.9
2.5°	1400.0	1391.8	1385.9	1374.2	1366.0	1362.4	1356.0	1354.2	1360.7	1356.0	1355.4
5°	1364.2	1347.2	1333.7	1320.2	1305.5	1296.1	1282.0	1279.7	1276.1	1270.9	1269.7
7.5°	1322.5	1301.4	1285.5	1263.2	1245.0	1230.4	1212.7	1205.7	1202.2	1195.7	1185.2
10°	1280.3	1253.8	1230.4	1208.1	1184.0	1164.6	1147.0	1133.5	1124.7	1116.5	1113.0
12.5°	1238.6	1211.6	1179.9	1151.7	1124.1	1101.8	1081.8	1074.2	1064.2	1054.3	1044.9
15°	1195.1	1159.3	1126.5	1095.3	1072.5	1049.0	1030.2	1017.3	1002.6	998.5	982.6
17.5°	1148.8	1115.3	1076.6	1043.1	1017.3	992.6	972.1	956.8	945.7	929.8	922.2
20°	1105.9	1064.2	1026.7	996.7	967.4	936.9	915.7	903.4	892.8	880.5	874.6
22.5°	1060.1	1019.6	980.9	944.5	914.6	884.6	871.1	858.2	845.9	834.7	826.5
25°	1015.5	974.4	933.9	897.5	866.4	844.7	827.1	812.4	806.0	794.8	786.6
27.5°	970.9	927.5	886.4	848.2	824.2	802.4	788.3	776.6	764.3	754.3	746.7
30°	928.1	883.4	837.7	808.9	783.1	762.5	746.7	735.5	726.7	717.9	712.6
32.5°	885.2	838.8	799.5	767.8	743.7	726.7	710.3	699.7	690.3	680.3	673.9
35°	838.8	791.9	759.0	728.5	704.4	688.0	676.8	661.6	653.9	646.9	640.4
37.5°	797.1	752.5	716.1	689.7	667.4	651.6	636.9	629.3	619.3	613.4	608.1
40°	750.2	710.3	678.0	649.8	634.5	616.4	602.9	592.3	585.2	577.0	571.2
42.5°	707.9	671.5	640.4	615.8	595.8	581.1	568.2	557.7	548.3	543.0	538.3
45°	668.6	631.6	601.1	577.6	560.0	545.3	531.8	526.5	514.8	507.8	505.4
47.5°	627.5	594.0	564.1	542.4	524.2	510.7	497.8	486.0	480.2	473.1	469.6
50°	585.8	554.1	526.5	505.4	487.8	472.5	460.8	453.8	444.9	438.5	433.8
52.5°	544.2	515.4	487.8	467.8	453.2	437.9	424.4	417.4	409.1	405.6	402.7
55°	504.8	473.7	450.2	430.3	414.4	400.3	388.0	381.0	375.7	371.6	370.4
57.5°	459.6	434.4	412.1	394.5	377.4	363.9	352.8	346.3	341.6	341.0	336.9
60°	415.6	393.3	373.3	354.0	339.9	327.5	318.2	310.5	305.8	305.2	304.1
62.5°	371.6	350.4	332.2	315.8	303.5	291.7	282.9	274.1	271.8	268.3	265.3
65°	328.1	308.8	293.5	280.0	266.5	256.5	247.7	242.4	236.0	232.5	226.0
67.5°	285.3	269.4	254.8	243.6	232.5	222.5	214.8	207.2	202.5	199.6	194.3
70°	243.0	231.3	216.6	204.3	196.1	188.4	182.6	173.8	170.8	168.5	166.1
72.5°	203.1	193.1	181.4	172.0	163.8	156.7	149.7	146.8	143.8	141.5	140.3
75°	166.1	156.1	145.6	138.5	132.7	126.8	123.3	120.3	119.2	118.6	116.2
77.5°	129.1	123.3	114.5	108.0	103.9	101.6	98.0	96.9	97.4	94.5	93.9
80°	93.3	90.4	83.4	81.0	78.1	75.7	74.0	71.0	68.1	66.9	65.2
82.5°	63.4	60.5	58.7	54.6	52.2	51.1	49.3	48.7	49.9	48.1	47.5
85°	37.0	34.0	32.9	32.3	31.1	32.3	31.7	31.1	30.5	29.9	30.5
87.5°	14.7	14.7	14.1	15.3	13.5	14.1	14.1	13.5	13.5	13.5	12.9
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: P242907

CATALOG NUMBER: S125RDR-S1270D927-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1429.9	1429.9	1429.9	1429.9
2.5°	1354.8	1348.3	1346.6	1348.9
5°	1263.8	1257.9	1260.9	1259.7
7.5°	1186.9	1179.3	1170.5	1172.8
10°	1105.3	1099.5	1095.9	1098.9
12.5°	1036.6	1033.7	1030.8	1028.4
15°	975.6	968.6	965.6	958.0
17.5°	916.9	914.6	906.9	901.6
20°	865.8	863.5	855.8	860.5
22.5°	823.6	817.7	816.5	813.6
25°	784.2	776.6	773.7	770.1
27.5°	744.3	740.2	736.1	734.9
30°	705.6	701.5	698.5	698.5
32.5°	670.9	668.0	665.1	664.5
35°	637.5	632.8	631.6	628.1
37.5°	602.3	598.2	598.2	598.7
40°	568.8	565.9	565.3	561.2
42.5°	533.0	531.8	529.5	528.3
45°	501.3	497.2	497.2	494.3
47.5°	467.8	464.3	464.9	461.4
50°	434.4	432.6	432.0	430.9
52.5°	400.9	400.3	403.3	400.3
55°	371.6	369.8	373.3	369.8
57.5°	336.9	335.8	339.3	336.9
60°	302.9	299.4	301.1	301.7
62.5°	262.4	260.6	261.8	258.3
65°	224.8	223.1	220.7	219.5
67.5°	195.5	190.2	190.2	191.4
70°	162.6	162.6	162.0	162.0
72.5°	139.7	139.1	137.9	137.4
75°	116.2	116.8	115.6	115.1
77.5°	91.0	88.1	89.2	88.1
80°	65.2	64.6	66.3	64.6
82.5°	48.1	47.5	48.1	47.0
85°	31.1	30.5	29.9	30.5
87.5°	13.5	12.9	12.9	12.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)