

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: P243766

Luminaire Tested: **S125RDR-H1090D927-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243766
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-71)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125RDR-H1090D927-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3201.0 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 1.42 / 1.22 / 1.5
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

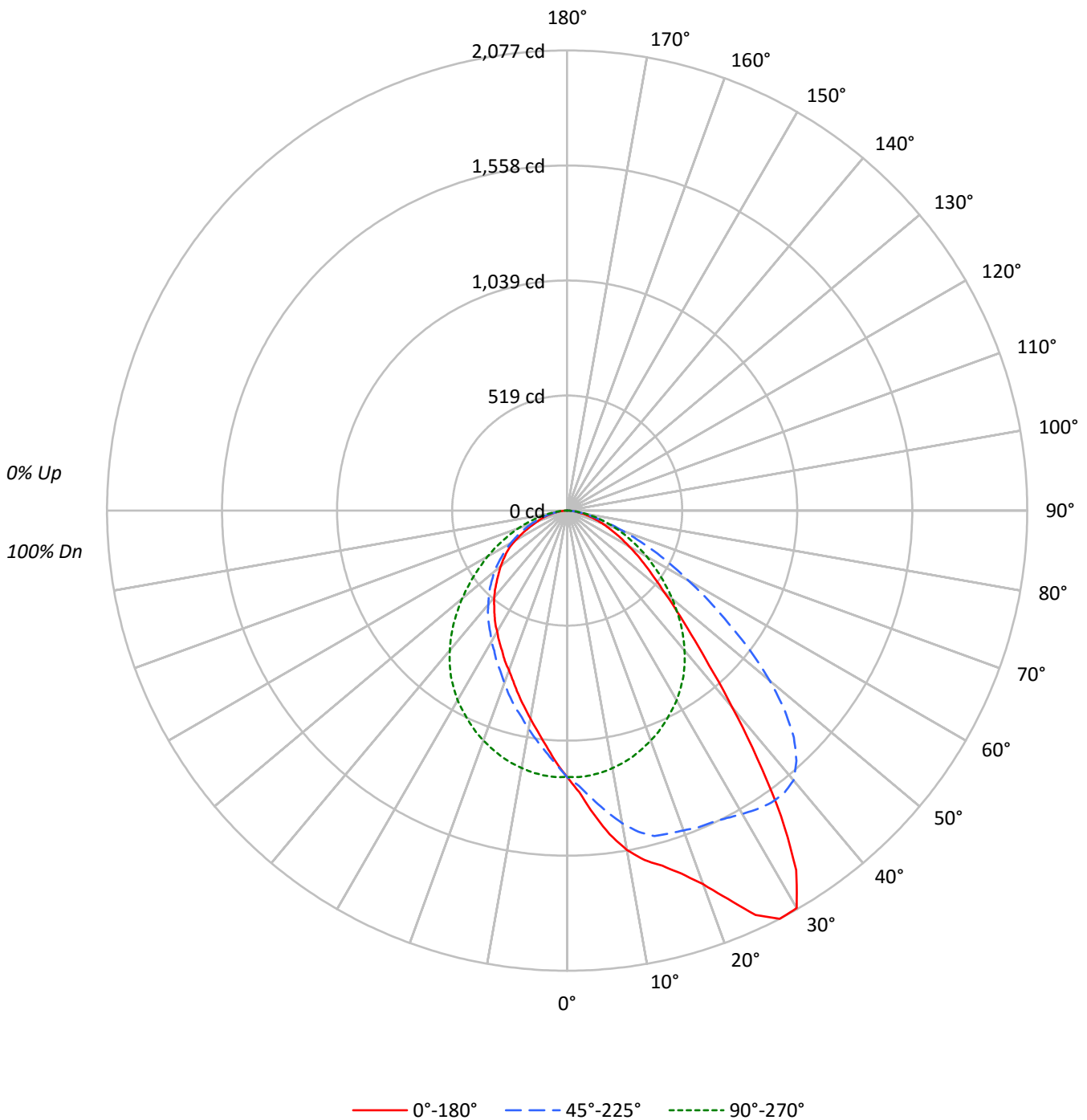
Input Watts (W): 31.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	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	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	33
9	59	46	38	32	57	45	38	32	44	37	32	43	37	32	42	36	32	30
10	55	42	35	29	54	42	34	29	41	34	29	40	34	29	39	33	29	27

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	8549	8549	8549
5°	9813	8561	7615
10°	11227	8519	6884
15°	12212	8450	6296
20°	13570	8354	5800
25°	15790	8236	5460
30°	17002	8113	5182
35°	14607	7932	4957
40°	10762	7646	4752
45°	7948	7291	4506
50°	6296	6855	4324
55°	5318	6353	4160
60°	4583	5885	3851
65°	3979	5358	3353
70°	3489	4906	2934
75°	2960	4295	2776
80°	2304	3594	2304
85°	2022	2879	2104



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.8	3.6
10°-20°	342.5	10.7
20°-30°	546.3	17.1
30°-40°	663.3	20.7
40°-50°	597.7	18.7
50°-60°	459.6	14.4
60°-70°	298.3	9.3
70°-80°	143.5	4.5
80°-90°	34.0	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°	1004.6	31.4
0°-40°	1667.9	52.1
0°-60°	2725.3	85.1
0°-90°	3201.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3201.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1203	1203	1203	1203	1203	
5°	1375	1307	1200	1094	1067	137
15°	1660	1521	1148	914	856	476
25°	2014	1552	1050	753	696	921
35°	1684	1609	914	617	571	1030
45°	791	1447	725	492	448	628
55°	429	889	513	359	336	389
65°	237	432	319	228	199	237
75°	108	146	156	112	101	116
85°	25	26	35	28	26	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8
2.5°	1272.4	1277.2	1273.4	1275.7	1271.9	1270.0	1265.3	1258.1	1250.9	1244.3	1243.8
5°	1375.4	1374.5	1370.7	1365.4	1361.6	1352.1	1347.3	1331.1	1320.1	1306.7	1300.1
7.5°	1473.7	1471.3	1465.6	1458.4	1455.1	1442.7	1429.3	1408.8	1391.6	1370.7	1354.9
10°	1555.7	1555.2	1550.9	1546.2	1533.3	1519.5	1506.6	1485.1	1459.4	1433.1	1411.2
12.5°	1615.8	1613.4	1608.2	1600.1	1589.6	1580.0	1562.9	1543.3	1511.8	1485.1	1455.1
15°	1659.7	1658.7	1651.1	1648.2	1627.7	1614.4	1591.5	1571.9	1547.6	1520.9	1488.5
17.5°	1717.8	1719.8	1713.1	1696.9	1678.3	1657.8	1625.3	1593.4	1559.5	1528.5	1502.3
20°	1794.2	1789.4	1777.9	1758.4	1725.0	1699.7	1667.3	1627.7	1581.9	1536.1	1498.5
22.5°	1896.2	1891.0	1872.8	1849.0	1807.0	1760.8	1711.2	1652.0	1599.6	1547.1	1497.5
25°	2013.5	2003.5	1976.8	1951.1	1891.4	1842.3	1768.4	1697.8	1621.5	1551.9	1496.1
27.5°	2077.4	2077.4	2065.0	2036.9	1989.7	1917.2	1841.8	1747.9	1659.7	1564.3	1485.1
30°	2071.7	2068.4	2073.2	2061.2	2030.7	1976.3	1901.5	1802.7	1690.2	1581.0	1486.1
32.5°	1923.9	1925.3	1953.9	1973.5	1988.7	1975.4	1926.7	1837.6	1725.5	1597.2	1482.3
35°	1683.5	1687.3	1737.9	1771.3	1839.5	1878.6	1890.0	1841.8	1741.2	1608.6	1475.6
37.5°	1408.8	1408.8	1467.5	1518.0	1594.3	1690.7	1762.7	1780.8	1731.7	1608.2	1469.9
40°	1159.9	1158.4	1204.7	1266.7	1348.2	1454.6	1561.9	1653.9	1665.9	1589.6	1449.8
42.5°	949.1	946.7	997.2	1031.6	1117.4	1212.3	1354.9	1485.1	1559.5	1531.9	1420.3
45°	790.7	788.8	821.7	860.8	921.4	1020.1	1139.8	1284.3	1409.3	1447.4	1364.9
47.5°	671.5	672.5	690.1	723.0	774.5	845.1	952.4	1086.4	1240.9	1329.2	1295.3
50°	569.4	572.8	586.1	610.9	648.6	705.4	797.4	918.5	1077.4	1194.2	1201.3
52.5°	493.1	497.9	512.2	525.6	557.0	597.1	668.6	773.6	904.7	1044.9	1095.0
55°	429.2	431.6	439.7	454.0	477.4	510.8	562.8	642.9	764.5	889.4	977.7
57.5°	375.8	375.8	381.1	391.1	409.7	439.7	474.5	540.8	643.4	756.4	850.3
60°	322.4	324.3	328.1	339.1	351.5	374.4	408.2	450.2	538.9	633.3	734.4
62.5°	277.6	280.9	284.7	290.0	301.4	317.6	341.5	380.1	439.7	527.0	617.1
65°	236.6	239.9	240.4	246.6	254.2	267.5	285.7	313.8	363.4	432.1	506.5
67.5°	200.3	201.7	203.2	207.9	215.1	223.7	235.6	256.6	295.7	341.9	414.4
70°	167.9	168.8	169.3	174.6	177.9	185.5	191.7	205.1	229.9	265.6	321.9
72.5°	137.4	135.9	135.4	139.7	141.2	147.4	155.0	164.5	177.9	203.2	245.1
75°	107.8	108.3	108.7	111.1	111.6	114.5	119.2	125.4	131.6	146.4	173.1
77.5°	83.0	81.1	81.1	83.9	84.9	85.4	88.7	92.0	95.4	104.0	114.5
80°	56.3	57.2	57.2	57.2	57.7	58.7	60.6	63.4	65.8	71.1	73.0
82.5°	40.1	40.1	39.6	40.5	41.0	41.5	41.5	41.5	42.9	44.4	46.3
85°	24.8	25.3	23.8	24.8	25.3	25.3	25.3	25.3	26.7	26.2	26.7
87.5°	10.5	11.0	11.0	11.4	11.4	11.9	11.4	11.9	11.4	11.4	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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8
2.5°	1242.4	1236.6	1233.8	1228.1	1220.4	1215.7	1210.9	1204.2	1199.0	1190.9	1183.7
5°	1288.1	1276.7	1266.2	1251.9	1238.1	1226.1	1213.7	1199.9	1187.5	1173.7	1158.9
7.5°	1339.2	1321.1	1299.1	1273.8	1252.4	1233.8	1212.8	1192.3	1173.7	1151.8	1131.7
10°	1388.3	1359.2	1330.1	1296.3	1264.8	1237.1	1209.0	1180.4	1156.0	1128.9	1104.1
12.5°	1426.5	1398.8	1355.4	1313.4	1272.4	1236.6	1201.3	1166.5	1134.6	1104.5	1075.0
15°	1459.8	1414.1	1377.3	1331.5	1281.5	1232.8	1189.0	1148.4	1109.8	1074.5	1044.4
17.5°	1469.4	1428.4	1388.3	1334.9	1281.0	1225.7	1175.1	1127.0	1084.0	1044.9	1011.1
20°	1468.4	1426.9	1383.5	1332.5	1275.3	1214.7	1158.4	1104.5	1055.9	1011.1	974.8
22.5°	1454.1	1414.1	1370.2	1318.7	1260.5	1198.0	1138.9	1079.3	1026.3	979.6	942.4
25°	1438.9	1388.3	1342.5	1290.5	1235.2	1177.5	1114.6	1050.2	994.8	946.2	904.2
27.5°	1425.5	1364.9	1308.7	1257.6	1200.9	1148.9	1086.4	1019.2	962.4	911.4	868.0
30°	1404.0	1340.1	1271.9	1216.1	1161.3	1106.9	1049.7	988.6	926.6	874.7	831.3
32.5°	1385.4	1304.8	1230.9	1168.0	1113.1	1065.4	1010.6	951.9	891.4	841.8	795.0
35°	1364.9	1268.6	1191.3	1117.4	1062.6	1010.6	967.2	914.2	854.2	801.7	759.7
37.5°	1340.6	1231.4	1142.7	1067.3	1010.6	957.2	918.1	870.8	816.5	764.5	723.0
40°	1313.4	1193.2	1091.2	1013.4	952.4	899.0	866.1	824.1	777.8	726.3	687.7
42.5°	1279.1	1152.7	1044.4	959.6	891.8	843.7	810.8	775.9	733.5	688.7	646.7
45°	1235.7	1102.2	988.6	899.0	832.2	785.5	751.1	725.4	691.5	649.6	610.0
47.5°	1182.8	1049.2	931.4	838.4	774.0	729.2	697.3	671.5	645.7	609.5	571.8
50°	1112.6	988.6	875.6	780.7	712.5	669.1	640.5	620.0	596.6	567.1	532.7
52.5°	1035.4	920.4	809.8	721.1	655.3	611.9	582.3	565.1	547.5	523.2	493.6
55°	945.7	852.2	746.8	660.1	595.7	552.7	529.4	512.7	497.9	479.3	454.5
57.5°	850.8	768.8	677.2	597.1	536.5	496.0	475.5	461.7	449.3	435.9	415.4
60°	751.1	693.0	606.2	532.7	479.8	446.4	426.8	414.0	402.5	391.5	376.3
62.5°	647.2	599.0	534.1	471.7	424.5	393.0	378.7	367.7	355.8	346.2	335.3
65°	541.8	514.1	469.3	410.6	367.2	341.5	327.6	318.6	312.9	301.9	293.3
67.5°	445.9	430.7	392.5	352.9	319.5	296.2	283.3	276.6	270.4	265.2	255.6
70°	354.8	343.9	321.9	293.8	267.5	247.5	238.0	236.1	227.5	222.2	217.5
72.5°	270.4	267.5	249.4	237.0	222.2	206.5	199.4	195.5	189.8	185.0	183.1
75°	192.2	196.5	190.8	184.6	177.4	164.5	158.3	156.4	151.2	149.8	147.4
77.5°	131.2	137.4	139.3	136.4	133.1	128.8	124.5	122.6	117.3	116.4	114.9
80°	82.5	91.6	94.9	94.4	93.0	93.5	88.2	87.8	85.4	83.9	85.4
82.5°	50.1	54.8	61.0	62.5	60.6	61.5	60.1	58.2	58.2	59.1	57.2
85°	27.2	27.7	30.5	32.4	34.8	36.7	34.8	35.3	34.8	34.8	33.4
87.5°	11.9	12.4	12.4	11.9	12.9	13.8	15.7	16.7	16.2	14.8	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



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8	1202.8
2.5°	1178.0	1174.6	1168.9	1164.2	1153.2	1145.6	1144.6	1145.1	1144.1	1143.2	1142.7
5°	1149.4	1138.4	1127.9	1118.8	1106.4	1094.0	1088.3	1085.9	1085.0	1079.7	1082.6
7.5°	1118.8	1102.2	1089.8	1072.6	1057.8	1047.3	1037.3	1032.5	1031.6	1024.4	1022.5
10°	1086.4	1066.4	1047.8	1030.6	1015.8	1001.0	989.1	984.8	979.1	973.4	964.8
12.5°	1054.5	1029.7	1009.2	990.1	970.0	953.4	943.8	937.6	930.5	925.2	922.4
15°	1016.3	995.3	970.0	949.5	929.0	914.2	901.4	889.9	883.2	879.0	867.0
17.5°	982.0	954.3	930.5	910.9	888.5	871.8	858.4	848.9	837.5	828.9	821.2
20°	945.2	916.6	894.7	871.3	848.4	827.9	811.2	803.6	795.5	787.4	783.1
22.5°	905.7	880.9	856.1	831.7	807.4	785.5	775.0	764.0	756.9	748.8	743.0
25°	871.3	844.1	819.3	792.2	765.4	752.6	738.3	727.3	721.6	713.5	707.3
27.5°	834.6	808.4	778.8	750.7	734.9	713.0	703.5	694.9	687.2	679.1	674.8
30°	800.3	769.7	740.2	718.2	697.7	682.0	672.9	662.4	651.9	648.1	642.4
32.5°	764.0	731.1	705.4	683.4	666.3	647.2	638.6	630.0	620.0	615.2	610.0
35°	726.3	694.4	669.1	649.1	631.4	617.1	607.6	598.5	592.3	585.2	581.4
37.5°	686.8	659.1	634.8	614.7	598.5	587.1	575.2	568.0	559.4	552.7	549.9
40°	649.1	624.3	600.9	582.3	567.5	553.7	543.2	534.1	528.9	523.2	518.4
42.5°	615.2	589.5	569.4	549.9	536.5	523.2	512.7	506.0	496.9	494.6	487.9
45°	579.0	555.1	535.1	517.0	503.1	492.2	479.8	471.7	465.9	460.2	457.8
47.5°	542.3	520.3	501.7	485.0	470.7	458.3	448.8	440.2	434.0	428.7	425.9
50°	506.5	487.4	468.8	452.6	437.8	428.7	417.3	407.8	403.0	397.3	393.9
52.5°	468.8	453.1	433.0	419.2	405.4	393.5	382.0	375.8	371.0	366.3	363.9
55°	433.5	416.8	399.7	384.9	371.5	359.1	350.1	345.3	339.1	336.2	335.7
57.5°	397.3	380.1	365.8	352.4	337.2	327.6	319.5	313.8	308.6	306.2	306.2
60°	357.7	343.9	330.5	315.7	304.7	293.8	285.2	281.4	276.1	275.2	271.8
62.5°	321.4	308.6	295.7	281.9	271.8	260.9	254.7	249.4	246.6	242.7	238.9
65°	283.8	272.3	259.9	248.0	239.9	228.0	222.2	216.0	212.7	208.4	203.6
67.5°	247.5	236.6	225.1	214.1	207.5	196.0	192.2	184.6	182.2	177.4	173.1
70°	209.4	201.7	192.7	181.7	176.0	166.9	163.1	156.0	152.1	149.3	146.9
72.5°	176.5	169.3	158.8	151.7	144.5	138.8	132.6	129.2	125.9	123.5	123.0
75°	144.0	135.0	128.8	122.1	117.3	111.6	108.7	106.4	104.9	103.5	102.1
77.5°	110.2	106.4	100.2	93.5	89.7	87.3	85.4	84.4	83.0	82.5	81.1
80°	82.0	76.8	73.0	70.6	67.7	65.8	64.4	61.0	59.1	58.2	57.2
82.5°	54.4	52.9	50.1	47.7	45.3	44.8	43.4	42.4	42.0	42.0	41.5
85°	32.9	29.1	29.1	28.6	28.6	28.1	27.2	27.2	26.2	27.7	27.7
87.5°	13.4	13.4	12.4	12.4	12.9	11.9	11.4	11.4	11.4	11.0	11.4
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: P243766

CATALOG NUMBER: S125RDR-H1090D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1202.8	1202.8	1202.8	1202.8
2.5°	1142.7	1140.3	1140.8	1137.9
5°	1077.4	1075.9	1071.2	1067.3
7.5°	1017.7	1011.5	1011.1	1007.2
10°	961.9	956.2	953.4	953.8
12.5°	913.3	907.1	907.1	903.3
15°	861.3	855.1	856.1	855.6
17.5°	818.4	814.1	810.8	807.9
20°	776.4	771.2	769.3	766.9
22.5°	737.8	734.0	734.4	734.4
25°	701.1	701.5	697.3	696.3
27.5°	668.6	667.7	666.7	664.8
30°	638.1	634.3	633.3	631.4
32.5°	606.6	606.2	602.3	603.8
35°	574.7	573.3	572.3	571.3
37.5°	545.1	542.3	541.8	540.8
40°	515.1	514.1	509.8	512.2
42.5°	482.6	480.7	480.7	480.7
45°	455.5	450.2	450.2	448.3
47.5°	424.9	423.0	422.1	418.7
50°	394.9	392.0	391.1	391.1
52.5°	363.9	363.4	364.4	362.5
55°	336.7	337.2	336.7	335.7
57.5°	307.1	304.7	304.7	305.2
60°	271.8	271.8	272.8	270.9
62.5°	238.0	237.0	233.7	232.7
65°	203.2	199.4	198.9	199.4
67.5°	172.2	170.7	168.4	168.8
70°	145.5	145.0	142.6	141.2
72.5°	121.6	121.6	120.2	120.2
75°	101.6	100.6	100.2	101.1
77.5°	78.2	75.8	76.8	75.4
80°	56.8	57.7	56.8	56.3
82.5°	42.0	41.0	41.5	41.0
85°	26.7	25.8	26.2	25.8
87.5°	11.0	11.4	11.4	10.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)