

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: P242935

Luminaire Tested: **S125RDR-S850D940-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242935
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-S850D940-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2813.9 lumens
Efficiency: N/A
Efficacy: 106.6 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

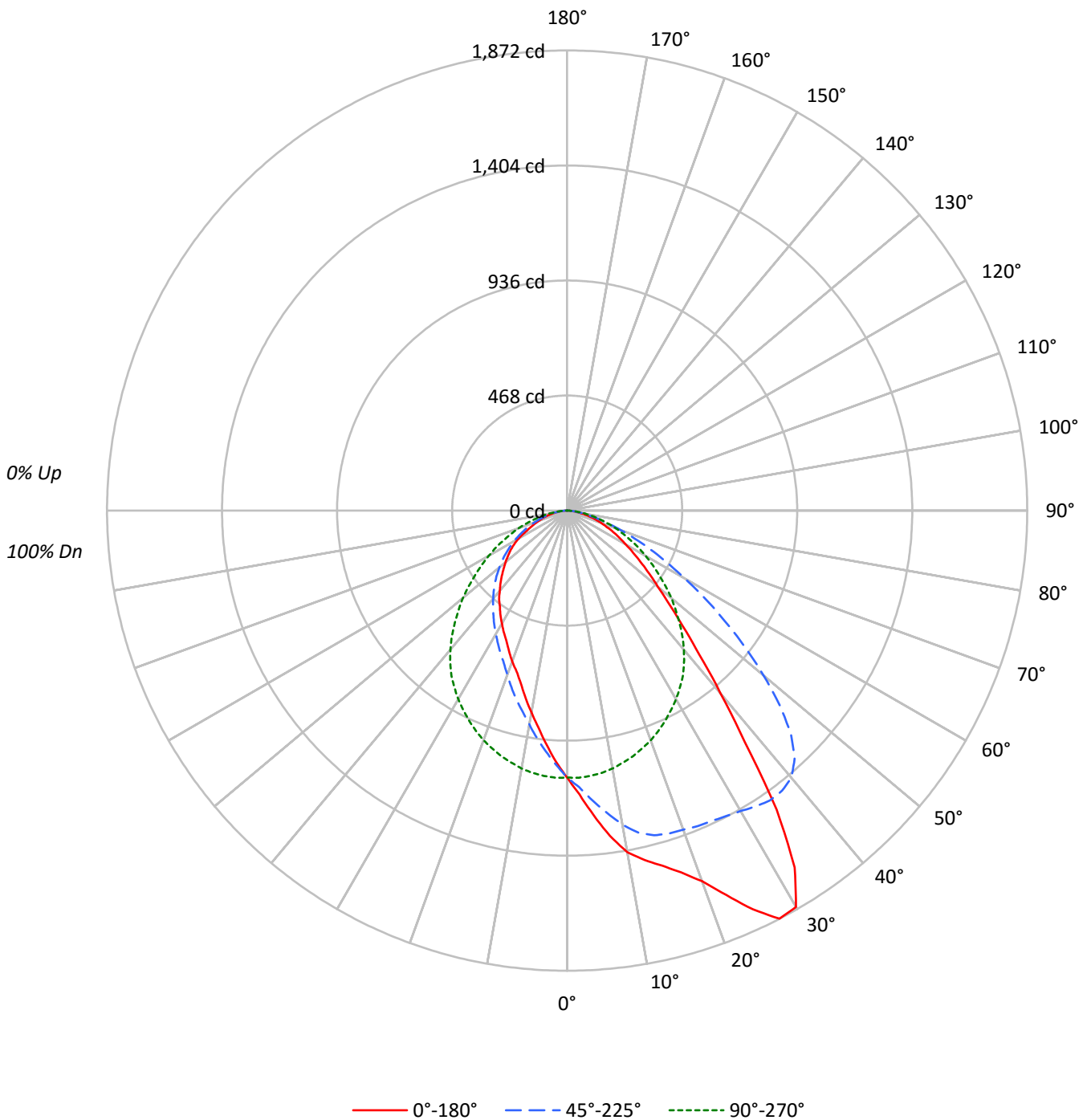
Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	7719	7719	7719
5°	8881	7730	6826
10°	10187	7690	6023
15°	11003	7610	5354
20°	12133	7520	4943
25°	14040	7398	4587
30°	15280	7270	4354
35°	12889	7122	4139
40°	9001	6854	3954
45°	6677	6493	3773
50°	5324	6118	3618
55°	4519	5652	3481
60°	3903	5235	3258
65°	3480	4783	2803
70°	3057	4383	2556
75°	2644	3795	2400
80°	2006	3193	2006
85°	1672	2512	1892



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.1	3.7
10°-20°	305.3	10.9
20°-30°	484.1	17.2
30°-40°	585.0	20.8
40°-50°	520.9	18.5
50°-60°	399.4	14.2
60°-70°	259.4	9.2
70°-80°	125.9	4.5
80°-90°	29.6	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°	893.6	31.8
0°-40°	1478.6	52.5
0°-60°	2399.0	85.3
0°-90°	2813.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2813.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1086	1086	1086	1086	1086	
5°	1245	1183	1083	984	957	124
15°	1495	1367	1034	797	728	428
25°	1790	1393	943	642	585	824
35°	1486	1439	821	522	477	900
45°	664	1288	646	414	375	527
55°	365	782	456	304	281	330
65°	207	373	284	195	167	206
75°	96	131	138	96	87	102
85°	20	22	31	24	23	24
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°	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0
2.5°	1156.5	1155.6	1157.4	1152.5	1152.9	1145.3	1145.3	1139.5	1132.0	1126.2	1123.5
5°	1244.8	1245.6	1243.9	1237.2	1232.7	1226.0	1218.4	1205.1	1193.9	1183.2	1174.8
7.5°	1334.8	1335.7	1329.9	1328.6	1317.0	1309.8	1292.9	1275.5	1260.4	1240.3	1226.0
10°	1411.5	1411.0	1404.8	1399.9	1390.1	1377.6	1361.1	1339.7	1319.7	1297.4	1276.0
12.5°	1456.1	1454.7	1453.8	1447.6	1438.7	1428.0	1414.6	1393.7	1367.8	1342.8	1317.0
15°	1495.3	1492.2	1486.4	1478.8	1465.9	1453.0	1437.4	1418.6	1395.0	1367.4	1344.2
17.5°	1542.6	1543.0	1534.1	1526.1	1509.1	1487.7	1464.5	1436.0	1405.7	1377.6	1354.4
20°	1604.1	1602.8	1593.8	1573.3	1553.3	1524.7	1497.1	1460.1	1420.9	1381.2	1350.4
22.5°	1692.4	1688.4	1679.0	1650.5	1616.6	1577.8	1531.9	1484.6	1435.1	1388.8	1346.0
25°	1790.4	1787.8	1769.5	1738.3	1694.6	1638.0	1582.7	1520.7	1452.5	1393.2	1344.2
27.5°	1871.6	1866.2	1849.7	1820.3	1777.5	1716.4	1640.2	1560.0	1478.8	1400.8	1333.5
30°	1861.8	1868.5	1866.7	1854.6	1824.3	1770.8	1701.7	1608.5	1507.3	1411.5	1327.2
32.5°	1721.8	1727.6	1747.6	1780.2	1790.0	1776.6	1729.4	1645.1	1539.4	1427.1	1322.3
35°	1485.5	1493.5	1523.8	1571.5	1634.0	1686.1	1696.8	1650.5	1556.4	1439.1	1317.4
37.5°	1185.0	1237.2	1257.7	1306.3	1404.4	1499.3	1581.8	1600.5	1549.7	1436.5	1311.6
40°	970.1	980.8	1026.3	1082.9	1162.3	1262.1	1393.7	1488.6	1491.7	1418.6	1292.9
42.5°	795.4	809.6	837.3	879.6	944.7	1044.6	1181.4	1314.3	1386.1	1369.6	1268.4
45°	664.3	674.5	697.3	732.1	784.2	866.7	983.5	1128.4	1243.4	1288.4	1220.7
47.5°	561.7	567.1	588.0	616.1	656.3	718.7	813.6	944.7	1081.6	1173.0	1155.1
50°	481.5	487.7	502.9	523.0	555.5	606.3	678.6	783.3	925.5	1043.7	1067.3
52.5°	419.1	424.0	432.0	450.7	476.1	512.3	567.1	659.4	783.8	911.3	973.7
55°	364.7	368.3	375.8	386.5	407.9	436.0	486.4	551.9	655.4	782.0	862.2
57.5°	318.3	320.1	324.6	335.3	350.9	371.8	410.2	469.9	544.8	663.8	752.1
60°	274.6	276.4	282.7	289.3	300.9	319.7	348.2	387.0	458.3	552.4	642.0
62.5°	239.9	240.7	242.5	249.2	259.0	272.4	293.4	323.2	376.3	456.1	539.5
65°	206.9	207.3	208.2	213.6	219.8	230.5	245.2	267.5	310.3	372.7	447.6
67.5°	173.9	174.8	177.9	179.7	187.2	192.6	202.0	219.8	252.8	297.4	358.0
70°	147.1	146.7	149.8	152.0	154.3	160.9	166.7	180.6	199.3	231.4	280.0
72.5°	122.2	120.8	121.7	122.2	125.3	129.3	135.1	142.2	155.6	175.2	209.5
75°	96.3	96.7	96.7	97.6	99.9	101.6	103.4	107.9	115.9	130.6	150.7
77.5°	72.2	71.3	73.6	73.6	75.3	77.6	78.9	80.7	83.8	90.5	102.5
80°	49.0	49.0	49.5	50.8	50.4	51.3	53.5	55.3	59.3	62.9	66.4
82.5°	34.8	34.3	34.8	34.8	34.8	35.7	36.1	36.1	37.0	38.3	40.6
85°	20.5	20.5	21.0	21.0	21.4	21.4	21.8	21.8	21.8	22.3	22.7
87.5°	9.8	9.4	8.9	8.9	9.4	10.3	9.8	9.4	9.4	9.4	9.8
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°	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0
2.5°	1123.5	1120.4	1114.6	1109.2	1102.5	1096.7	1092.7	1087.8	1081.6	1074.0	1067.8
5°	1165.4	1155.6	1142.7	1131.5	1117.2	1106.1	1094.5	1083.4	1072.2	1058.0	1045.5
7.5°	1211.8	1192.6	1174.8	1151.6	1130.6	1112.3	1094.5	1076.2	1058.8	1039.2	1020.9
10°	1253.7	1229.1	1202.0	1170.7	1142.2	1115.0	1090.1	1065.5	1039.7	1016.9	992.4
12.5°	1292.9	1259.5	1227.4	1185.9	1150.2	1115.5	1082.0	1049.9	1021.8	990.6	963.9
15°	1313.4	1282.2	1247.4	1199.3	1151.6	1111.5	1074.0	1034.3	1000.0	967.0	937.6
17.5°	1325.4	1292.5	1252.3	1205.5	1154.3	1104.3	1057.1	1014.7	975.5	937.6	905.0
20°	1320.1	1288.4	1247.0	1202.8	1147.1	1094.5	1042.3	994.2	949.2	908.6	873.4
22.5°	1307.2	1274.2	1234.5	1187.2	1135.1	1078.5	1021.8	969.7	922.0	879.6	840.4
25°	1294.2	1249.7	1208.6	1163.2	1112.8	1057.5	1000.0	943.4	893.0	850.2	808.3
27.5°	1281.8	1227.8	1177.0	1133.3	1079.4	1029.4	973.2	914.8	862.2	819.0	776.2
30°	1263.5	1201.1	1143.6	1092.3	1041.9	995.1	942.5	885.9	831.5	786.4	742.8
32.5°	1240.7	1173.4	1108.8	1047.7	999.5	953.2	906.8	853.3	800.7	753.9	709.3
35°	1222.5	1137.8	1069.1	1006.2	952.3	907.3	864.5	820.8	767.7	719.6	676.3
37.5°	1197.1	1103.9	1026.3	957.6	901.5	856.9	822.6	781.1	731.6	684.8	644.7
40°	1174.3	1066.4	979.5	911.7	852.0	804.3	772.6	738.7	694.6	651.4	611.2
42.5°	1144.0	1032.1	932.2	860.9	800.7	755.2	723.1	694.6	659.4	619.3	575.6
45°	1102.5	985.7	883.6	807.8	747.2	702.2	672.3	646.0	617.9	580.5	543.0
47.5°	1053.0	941.6	834.1	750.8	692.4	650.0	620.6	598.7	578.2	545.7	507.8
50°	991.1	884.5	780.2	700.0	636.6	597.0	569.8	553.3	535.0	506.0	475.7
52.5°	918.0	825.7	724.0	641.5	582.7	546.1	520.3	503.8	489.5	467.2	438.7
55°	840.4	757.0	663.4	588.9	534.1	496.7	471.7	456.1	447.2	427.1	404.4
57.5°	752.6	688.4	603.7	531.0	481.5	444.0	425.3	411.5	401.2	386.5	369.6
60°	659.8	617.9	543.9	475.7	431.1	395.9	379.4	368.3	358.9	346.9	334.4
62.5°	565.8	538.1	476.1	420.0	379.8	351.8	336.6	326.8	315.6	308.5	296.5
65°	483.7	456.5	411.9	366.0	328.1	304.5	293.4	284.4	277.8	268.8	260.4
67.5°	392.8	380.3	347.3	313.0	285.3	262.6	252.8	245.7	238.1	232.7	226.5
70°	310.3	304.9	283.1	262.1	236.7	222.5	213.6	210.9	201.1	195.7	191.7
72.5°	237.2	235.4	225.1	212.2	196.2	184.1	176.1	173.0	167.6	163.6	161.4
75°	172.5	173.4	171.2	161.8	155.1	147.1	140.0	138.2	133.7	130.2	128.0
77.5°	117.7	122.2	121.3	120.8	117.7	111.9	108.8	107.4	102.5	101.2	100.8
80°	74.9	79.8	84.3	83.8	82.9	81.6	79.4	78.0	75.8	74.5	73.6
82.5°	43.7	48.1	51.7	54.8	54.8	53.5	52.2	51.7	51.7	50.8	50.8
85°	23.6	24.5	25.9	29.0	31.2	31.7	31.2	30.8	29.4	29.9	30.3
87.5°	10.3	10.3	10.7	10.7	10.3	12.5	13.8	14.3	13.4	12.5	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



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0	1086.0
2.5°	1063.3	1057.1	1052.6	1043.7	1037.4	1034.8	1029.9	1028.5	1033.4	1029.9	1029.4
5°	1036.1	1023.2	1012.9	1002.7	991.5	984.4	973.7	971.9	969.2	965.2	964.3
7.5°	1004.5	988.4	976.4	959.4	945.6	934.5	921.1	915.7	913.1	908.2	900.1
10°	972.4	952.3	934.5	917.5	899.2	884.5	871.1	860.9	854.2	848.0	845.3
12.5°	940.7	920.2	896.1	874.7	853.8	836.8	821.7	815.9	808.3	800.7	793.6
15°	907.7	880.5	855.5	831.9	814.5	796.7	782.4	772.6	761.5	758.4	746.3
17.5°	872.5	847.1	817.6	792.2	772.6	753.9	738.3	726.7	718.2	706.2	700.4
20°	839.9	808.3	779.8	757.0	734.7	711.5	695.5	686.1	678.1	668.7	664.3
22.5°	805.2	774.4	745.0	717.3	694.6	671.9	661.6	651.8	642.4	634.0	627.7
25°	771.3	740.1	709.3	681.7	658.0	641.5	628.2	617.0	612.1	603.7	597.4
27.5°	737.4	704.4	673.2	644.2	625.9	609.4	598.7	589.8	580.5	572.9	567.1
30°	704.9	671.0	636.2	614.4	594.7	579.1	567.1	558.6	551.9	545.2	541.2
32.5°	672.3	637.1	607.2	583.1	564.9	551.9	539.5	531.4	524.3	516.7	511.8
35°	637.1	601.4	576.5	553.3	535.0	522.5	514.0	502.4	496.7	491.3	486.4
37.5°	605.4	571.6	543.9	523.8	506.9	494.9	483.7	477.9	470.3	465.9	461.9
40°	569.8	539.5	514.9	493.5	481.9	468.1	457.9	449.8	444.5	438.2	433.8
42.5°	537.7	510.0	486.4	467.7	452.5	441.4	431.6	423.5	416.4	412.4	408.8
45°	507.8	479.7	456.5	438.7	425.3	414.2	403.9	399.9	391.0	385.6	383.9
47.5°	476.6	451.2	428.4	411.9	398.1	387.9	378.1	369.1	364.7	359.3	356.7
50°	444.9	420.9	399.9	383.9	370.5	358.9	350.0	344.6	337.9	333.0	329.5
52.5°	413.3	391.4	370.5	355.3	344.2	332.6	322.3	317.0	310.7	308.1	305.8
55°	383.4	359.8	342.0	326.8	314.8	304.1	294.7	289.3	285.3	282.2	281.3
57.5°	349.1	329.9	313.0	299.6	286.7	276.4	267.9	263.0	259.5	259.0	255.9
60°	315.6	298.7	283.5	268.8	258.1	248.8	241.6	235.8	232.3	231.8	230.9
62.5°	282.2	266.2	252.3	239.9	230.5	221.6	214.9	208.2	206.4	203.7	201.5
65°	249.2	234.5	222.9	212.7	202.4	194.8	188.1	184.1	179.2	176.5	171.6
67.5°	216.7	204.6	193.5	185.0	176.5	169.0	163.2	157.4	153.8	151.6	147.6
70°	184.6	175.7	164.5	155.1	148.9	143.1	138.7	132.0	129.7	128.0	126.2
72.5°	154.3	146.7	137.8	130.6	124.4	119.0	113.7	111.5	109.2	107.4	106.6
75°	126.2	118.6	110.6	105.2	100.8	96.3	93.6	91.4	90.5	90.1	88.3
77.5°	98.1	93.6	86.9	82.0	78.9	77.1	74.5	73.6	74.0	71.8	71.3
80°	70.9	68.7	63.3	61.5	59.3	57.5	56.2	53.9	51.7	50.8	49.5
82.5°	48.1	45.9	44.6	41.5	39.7	38.8	37.4	37.0	37.9	36.6	36.1
85°	28.1	25.9	25.0	24.5	23.6	24.5	24.1	23.6	23.2	22.7	23.2
87.5°	11.1	11.1	10.7	11.6	10.3	10.7	10.7	10.3	10.3	10.3	9.8
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: P242935

CATALOG NUMBER: S125RDR-S850D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1086.0	1086.0	1086.0	1086.0
2.5°	1029.0	1024.1	1022.7	1024.5
5°	959.9	955.4	957.6	956.7
7.5°	901.5	895.7	889.0	890.8
10°	839.5	835.0	832.4	834.6
12.5°	787.3	785.1	782.9	781.1
15°	741.0	735.6	733.4	727.6
17.5°	696.4	694.6	688.8	684.8
20°	657.6	655.8	650.0	653.6
22.5°	625.5	621.0	620.1	617.9
25°	595.6	589.8	587.6	584.9
27.5°	565.3	562.2	559.1	558.2
30°	535.9	532.8	530.5	530.5
32.5°	509.6	507.4	505.1	504.7
35°	484.2	480.6	479.7	477.0
37.5°	457.4	454.3	454.3	454.7
40°	432.0	429.8	429.3	426.2
42.5°	404.8	403.9	402.1	401.2
45°	380.7	377.6	377.6	375.4
47.5°	355.3	352.7	353.1	350.4
50°	329.9	328.6	328.1	327.2
52.5°	304.5	304.1	306.3	304.1
55°	282.2	280.9	283.5	280.9
57.5°	255.9	255.0	257.7	255.9
60°	230.0	227.4	228.7	229.2
62.5°	199.3	197.9	198.8	196.2
65°	170.8	169.4	167.6	166.7
67.5°	148.5	144.4	144.4	145.3
70°	123.5	123.5	123.0	123.0
72.5°	106.1	105.7	104.8	104.3
75°	88.3	88.7	87.8	87.4
77.5°	69.1	66.9	67.8	66.9
80°	49.5	49.0	50.4	49.0
82.5°	36.6	36.1	36.6	35.7
85°	23.6	23.2	22.7	23.2
87.5°	10.3	9.8	9.8	9.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)