

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: P242915

Luminaire Tested: **S125RDR-S850D835-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242915
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-S850D835-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3155.6 lumens
Efficiency: N/A
Efficacy: 119.5 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

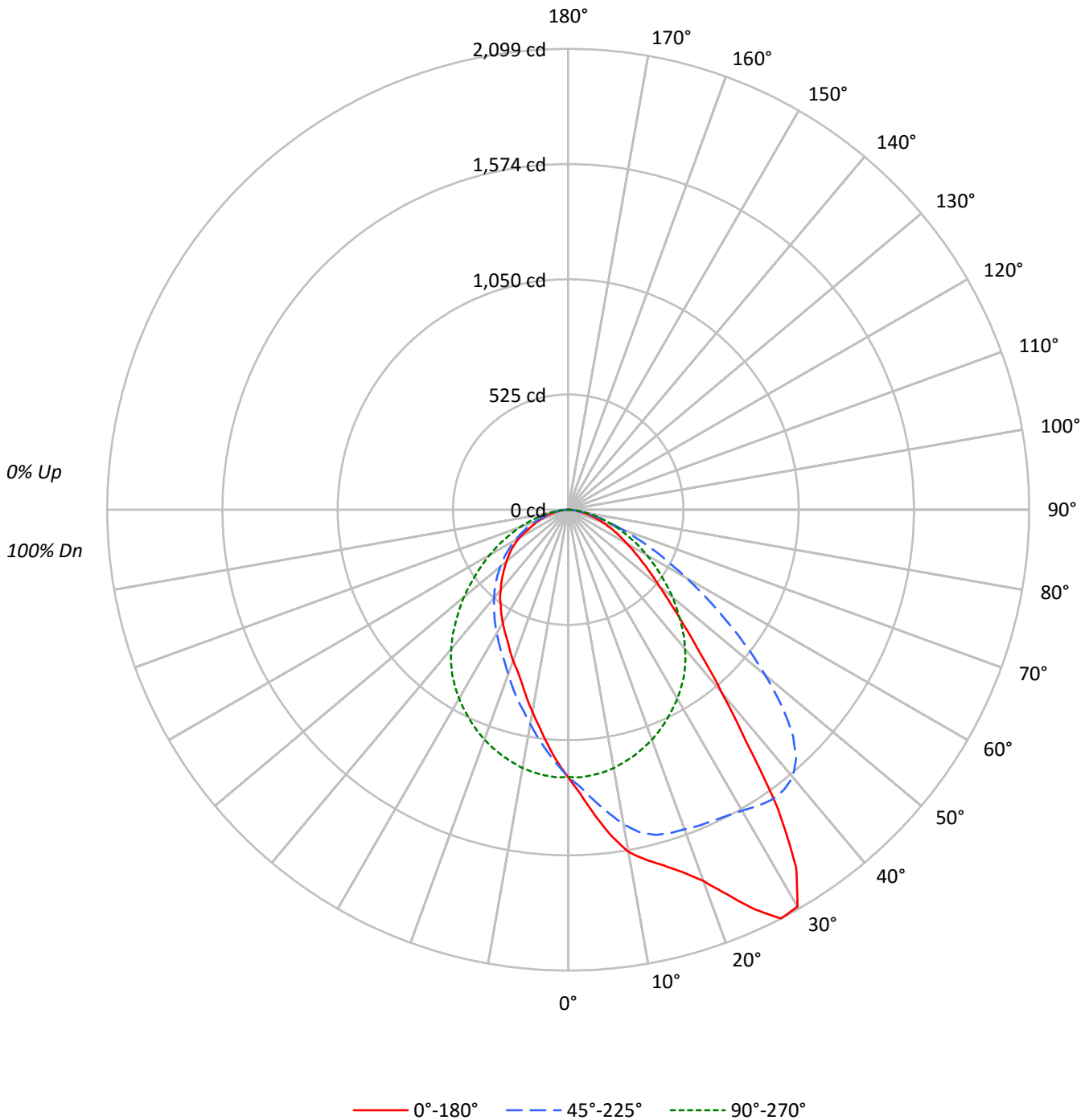
Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242915

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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	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	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°	8656	8656	8656
5°	9959	8668	7655
10°	11424	8624	6754
15°	12339	8535	6004
20°	13606	8433	5544
25°	15746	8296	5144
30°	17135	8153	4883
35°	14454	7986	4642
40°	10094	7687	4435
45°	7488	7282	4232
50°	5971	6861	4058
55°	5068	6338	3903
60°	4378	5871	3653
65°	3902	5365	3145
70°	3429	4915	2868
75°	2966	4256	2691
80°	2251	3581	2251
85°	1876	2813	2120



TEST NUMBER: P242915

CATALOG NUMBER: S125RDR-S850D835-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.8	3.7
10°-20°	342.4	10.9
20°-30°	542.9	17.2
30°-40°	656.1	20.8
40°-50°	584.2	18.5
50°-60°	448.0	14.2
60°-70°	290.9	9.2
70°-80°	141.2	4.5
80°-90°	33.2	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°	1002.1	31.8
0°-40°	1658.2	52.5
0°-60°	2690.4	85.3
0°-90°	3155.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3155.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1218	1218	1218	1218	1218	
5°	1396	1327	1215	1104	1073	139
15°	1677	1533	1160	893	816	480
25°	2008	1562	1058	720	656	924
35°	1666	1614	920	586	535	1010
45°	745	1445	724	464	421	591
55°	409	877	512	341	315	370
65°	232	418	319	218	187	230
75°	108	146	155	108	98	115
85°	23	25	34	28	26	27
90°	0	0	0	0	0	



TEST NUMBER: P242915

CATALOG NUMBER: S125RDR-S850D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9
2.5°	1296.9	1295.9	1297.9	1292.4	1292.9	1284.4	1284.4	1277.9	1269.4	1262.9	1259.9
5°	1395.9	1396.9	1394.9	1387.4	1382.4	1374.9	1366.4	1351.4	1338.9	1326.9	1317.4
7.5°	1496.9	1497.9	1491.4	1489.9	1476.9	1468.9	1449.9	1430.4	1413.4	1390.9	1374.9
10°	1582.9	1582.4	1575.4	1569.9	1558.9	1544.9	1526.4	1502.4	1479.9	1454.9	1430.9
12.5°	1632.9	1631.4	1630.4	1623.4	1613.4	1601.4	1586.4	1562.9	1533.9	1505.9	1476.9
15°	1676.9	1673.4	1666.9	1658.4	1643.9	1629.4	1611.9	1590.9	1564.4	1533.4	1507.4
17.5°	1729.9	1730.4	1720.4	1711.4	1692.4	1668.4	1642.4	1610.4	1576.4	1544.9	1518.9
20°	1798.9	1797.4	1787.4	1764.4	1741.9	1709.9	1678.9	1637.4	1593.4	1548.9	1514.4
22.5°	1897.9	1893.4	1882.9	1850.9	1812.9	1769.4	1717.9	1664.9	1609.4	1557.4	1509.4
25°	2007.9	2004.9	1984.4	1949.4	1900.4	1836.9	1774.9	1705.4	1628.9	1562.4	1507.4
27.5°	2098.9	2092.9	2074.4	2041.4	1993.4	1924.9	1839.4	1749.4	1658.4	1570.9	1495.4
30°	2087.9	2095.4	2093.4	2079.9	2045.9	1985.9	1908.4	1803.9	1690.4	1582.9	1488.4
32.5°	1930.9	1937.4	1959.9	1996.4	2007.4	1992.4	1939.4	1844.9	1726.4	1600.4	1482.9
35°	1665.9	1674.9	1708.9	1762.4	1832.4	1890.9	1902.9	1850.9	1745.4	1613.9	1477.4
37.5°	1328.9	1387.4	1410.4	1464.9	1574.9	1681.4	1773.9	1794.9	1737.9	1610.9	1470.9
40°	1087.9	1099.9	1150.9	1214.4	1303.4	1415.4	1562.9	1669.4	1672.9	1590.9	1449.9
42.5°	891.9	907.9	938.9	986.4	1059.4	1171.4	1324.9	1473.9	1554.4	1535.9	1422.4
45°	745.0	756.5	782.0	821.0	879.4	971.9	1102.9	1265.4	1394.4	1444.9	1368.9
47.5°	630.0	636.0	659.5	691.0	736.0	806.0	912.4	1059.4	1212.9	1315.4	1295.4
50°	540.0	547.0	564.0	586.5	623.0	680.0	761.0	878.4	1037.9	1170.4	1196.9
52.5°	470.0	475.5	484.5	505.5	534.0	574.5	636.0	739.5	878.9	1021.9	1091.9
55°	409.0	413.0	421.5	433.5	457.5	489.0	545.5	619.0	735.0	876.9	966.9
57.5°	357.0	359.0	364.0	376.0	393.5	417.0	460.0	527.0	611.0	744.5	843.4
60°	308.0	310.0	317.0	324.5	337.5	358.5	390.5	434.0	514.0	619.5	720.0
62.5°	269.0	270.0	272.0	279.5	290.5	305.5	329.0	362.5	422.0	511.5	605.0
65°	232.0	232.5	233.5	239.5	246.5	258.5	275.0	300.0	348.0	418.0	502.0
67.5°	195.0	196.0	199.5	201.5	210.0	216.0	226.5	246.5	283.5	333.5	401.5
70°	165.0	164.5	168.0	170.5	173.0	180.5	187.0	202.5	223.5	259.5	314.0
72.5°	137.0	135.5	136.5	137.0	140.5	145.0	151.5	159.5	174.5	196.5	235.0
75°	108.0	108.5	108.5	109.5	112.0	114.0	116.0	121.0	130.0	146.5	169.0
77.5°	81.0	80.0	82.5	82.5	84.5	87.0	88.5	90.5	94.0	101.5	115.0
80°	55.0	55.0	55.5	57.0	56.5	57.5	60.0	62.0	66.5	70.5	74.5
82.5°	39.0	38.5	39.0	39.0	39.0	40.0	40.5	40.5	41.5	43.0	45.5
85°	23.0	23.0	23.5	23.5	24.0	24.0	24.5	24.5	24.5	25.0	25.5
87.5°	11.0	10.5	10.0	10.0	10.5	11.5	11.0	10.5	10.5	10.5	11.0
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: P242915

CATALOG NUMBER: S125RDR-S850D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9
2.5°	1259.9	1256.4	1249.9	1243.9	1236.4	1229.9	1225.4	1219.9	1212.9	1204.4	1197.4
5°	1306.9	1295.9	1281.4	1268.9	1252.9	1240.4	1227.4	1214.9	1202.4	1186.4	1172.4
7.5°	1358.9	1337.4	1317.4	1291.4	1267.9	1247.4	1227.4	1206.9	1187.4	1165.4	1144.9
10°	1405.9	1378.4	1347.9	1312.9	1280.9	1250.4	1222.4	1194.9	1165.9	1140.4	1112.9
12.5°	1449.9	1412.4	1376.4	1329.9	1289.9	1250.9	1213.4	1177.4	1145.9	1110.9	1080.9
15°	1472.9	1437.9	1398.9	1344.9	1291.4	1246.4	1204.4	1159.9	1121.4	1084.4	1051.4
17.5°	1486.4	1449.4	1404.4	1351.9	1294.4	1238.4	1185.4	1137.9	1093.9	1051.4	1014.9
20°	1480.4	1444.9	1398.4	1348.9	1286.4	1227.4	1168.9	1114.9	1064.4	1018.9	979.4
22.5°	1465.9	1428.9	1384.4	1331.4	1272.9	1209.4	1145.9	1087.4	1033.9	986.4	942.4
25°	1451.4	1401.4	1355.4	1304.4	1247.9	1185.9	1121.4	1057.9	1001.4	953.4	906.4
27.5°	1437.4	1376.9	1319.9	1270.9	1210.4	1154.4	1091.4	1025.9	966.9	918.4	870.4
30°	1416.9	1346.9	1282.4	1224.9	1168.4	1115.9	1056.9	993.4	932.4	881.9	833.0
32.5°	1391.4	1315.9	1243.4	1174.9	1120.9	1068.9	1016.9	956.9	897.9	845.4	795.5
35°	1370.9	1275.9	1198.9	1128.4	1067.9	1017.4	969.4	920.4	860.9	807.0	758.5
37.5°	1342.4	1237.9	1150.9	1073.9	1010.9	960.9	922.4	875.9	820.5	768.0	723.0
40°	1316.9	1195.9	1098.4	1022.4	955.4	901.9	866.4	828.5	779.0	730.5	685.5
42.5°	1282.9	1157.4	1045.4	965.4	897.9	846.9	811.0	779.0	739.5	694.5	645.5
45°	1236.4	1105.4	990.9	905.9	837.9	787.5	754.0	724.5	693.0	651.0	609.0
47.5°	1180.9	1055.9	935.4	841.9	776.5	729.0	696.0	671.5	648.5	612.0	569.5
50°	1111.4	991.9	874.9	785.0	714.0	669.5	639.0	620.5	600.0	567.5	533.5
52.5°	1029.4	925.9	812.0	719.5	653.5	612.5	583.5	565.0	549.0	524.0	492.0
55°	942.4	848.9	744.0	660.5	599.0	557.0	529.0	511.5	501.5	479.0	453.5
57.5°	843.9	772.0	677.0	595.5	540.0	498.0	477.0	461.5	450.0	433.5	414.5
60°	740.0	693.0	610.0	533.5	483.5	444.0	425.5	413.0	402.5	389.0	375.0
62.5°	634.5	603.5	534.0	471.0	426.0	394.5	377.5	366.5	354.0	346.0	332.5
65°	542.5	512.0	462.0	410.5	368.0	341.5	329.0	319.0	311.5	301.5	292.0
67.5°	440.5	426.5	389.5	351.0	320.0	294.5	283.5	275.5	267.0	261.0	254.0
70°	348.0	342.0	317.5	294.0	265.5	249.5	239.5	236.5	225.5	219.5	215.0
72.5°	266.0	264.0	252.5	238.0	220.0	206.5	197.5	194.0	188.0	183.5	181.0
75°	193.5	194.5	192.0	181.5	174.0	165.0	157.0	155.0	150.0	146.0	143.5
77.5°	132.0	137.0	136.0	135.5	132.0	125.5	122.0	120.5	115.0	113.5	113.0
80°	84.0	89.5	94.5	94.0	93.0	91.5	89.0	87.5	85.0	83.5	82.5
82.5°	49.0	54.0	58.0	61.5	61.5	60.0	58.5	58.0	58.0	57.0	57.0
85°	26.5	27.5	29.0	32.5	35.0	35.5	35.0	34.5	33.0	33.5	34.0
87.5°	11.5	11.5	12.0	12.0	11.5	14.0	15.5	16.0	15.0	14.0	13.0
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: P242915

CATALOG NUMBER: S125RDR-S850D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9	1217.9
2.5°	1192.4	1185.4	1180.4	1170.4	1163.4	1160.4	1154.9	1153.4	1158.9	1154.9	1154.4
5°	1161.9	1147.4	1135.9	1124.4	1111.9	1103.9	1091.9	1089.9	1086.9	1082.4	1081.4
7.5°	1126.4	1108.4	1094.9	1075.9	1060.4	1047.9	1032.9	1026.9	1023.9	1018.4	1009.4
10°	1090.4	1067.9	1047.9	1028.9	1008.4	991.9	976.9	965.4	957.9	950.9	947.9
12.5°	1054.9	1031.9	1004.9	980.9	957.4	938.4	921.4	914.9	906.4	897.9	889.9
15°	1017.9	987.4	959.4	932.9	913.4	893.4	877.4	866.4	853.9	850.4	836.9
17.5°	978.4	949.9	916.9	888.4	866.4	845.4	828.0	815.0	805.5	792.0	785.5
20°	941.9	906.4	874.4	848.9	824.0	798.0	780.0	769.5	760.5	750.0	745.0
22.5°	902.9	868.4	835.4	804.5	779.0	753.5	742.0	731.0	720.5	711.0	704.0
25°	864.9	830.0	795.5	764.5	738.0	719.5	704.5	692.0	686.5	677.0	670.0
27.5°	827.0	790.0	755.0	722.5	702.0	683.5	671.5	661.5	651.0	642.5	636.0
30°	790.5	752.5	713.5	689.0	667.0	649.5	636.0	626.5	619.0	611.5	607.0
32.5°	754.0	714.5	681.0	654.0	633.5	619.0	605.0	596.0	588.0	579.5	574.0
35°	714.5	674.5	646.5	620.5	600.0	586.0	576.5	563.5	557.0	551.0	545.5
37.5°	679.0	641.0	610.0	587.5	568.5	555.0	542.5	536.0	527.5	522.5	518.0
40°	639.0	605.0	577.5	553.5	540.5	525.0	513.5	504.5	498.5	491.5	486.5
42.5°	603.0	572.0	545.5	524.5	507.5	495.0	484.0	475.0	467.0	462.5	458.5
45°	569.5	538.0	512.0	492.0	477.0	464.5	453.0	448.5	438.5	432.5	430.5
47.5°	534.5	506.0	480.5	462.0	446.5	435.0	424.0	414.0	409.0	403.0	400.0
50°	499.0	472.0	448.5	430.5	415.5	402.5	392.5	386.5	379.0	373.5	369.5
52.5°	463.5	439.0	415.5	398.5	386.0	373.0	361.5	355.5	348.5	345.5	343.0
55°	430.0	403.5	383.5	366.5	353.0	341.0	330.5	324.5	320.0	316.5	315.5
57.5°	391.5	370.0	351.0	336.0	321.5	310.0	300.5	295.0	291.0	290.5	287.0
60°	354.0	335.0	318.0	301.5	289.5	279.0	271.0	264.5	260.5	260.0	259.0
62.5°	316.5	298.5	283.0	269.0	258.5	248.5	241.0	233.5	231.5	228.5	226.0
65°	279.5	263.0	250.0	238.5	227.0	218.5	211.0	206.5	201.0	198.0	192.5
67.5°	243.0	229.5	217.0	207.5	198.0	189.5	183.0	176.5	172.5	170.0	165.5
70°	207.0	197.0	184.5	174.0	167.0	160.5	155.5	148.0	145.5	143.5	141.5
72.5°	173.0	164.5	154.5	146.5	139.5	133.5	127.5	125.0	122.5	120.5	119.5
75°	141.5	133.0	124.0	118.0	113.0	108.0	105.0	102.5	101.5	101.0	99.0
77.5°	110.0	105.0	97.5	92.0	88.5	86.5	83.5	82.5	83.0	80.5	80.0
80°	79.5	77.0	71.0	69.0	66.5	64.5	63.0	60.5	58.0	57.0	55.5
82.5°	54.0	51.5	50.0	46.5	44.5	43.5	42.0	41.5	42.5	41.0	40.5
85°	31.5	29.0	28.0	27.5	26.5	27.5	27.0	26.5	26.0	25.5	26.0
87.5°	12.5	12.5	12.0	13.0	11.5	12.0	12.0	11.5	11.5	11.5	11.0
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: P242915

CATALOG NUMBER: S125RDR-S850D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1217.9	1217.9	1217.9	1217.9
2.5°	1153.9	1148.4	1146.9	1148.9
5°	1076.4	1071.4	1073.9	1072.9
7.5°	1010.9	1004.4	996.9	998.9
10°	941.4	936.4	933.4	935.9
12.5°	882.9	880.4	877.9	875.9
15°	831.0	825.0	822.5	816.0
17.5°	781.0	779.0	772.5	768.0
20°	737.5	735.5	729.0	733.0
22.5°	701.5	696.5	695.5	693.0
25°	668.0	661.5	659.0	656.0
27.5°	634.0	630.5	627.0	626.0
30°	601.0	597.5	595.0	595.0
32.5°	571.5	569.0	566.5	566.0
35°	543.0	539.0	538.0	535.0
37.5°	513.0	509.5	509.5	510.0
40°	484.5	482.0	481.5	478.0
42.5°	454.0	453.0	451.0	450.0
45°	427.0	423.5	423.5	421.0
47.5°	398.5	395.5	396.0	393.0
50°	370.0	368.5	368.0	367.0
52.5°	341.5	341.0	343.5	341.0
55°	316.5	315.0	318.0	315.0
57.5°	287.0	286.0	289.0	287.0
60°	258.0	255.0	256.5	257.0
62.5°	223.5	222.0	223.0	220.0
65°	191.5	190.0	188.0	187.0
67.5°	166.5	162.0	162.0	163.0
70°	138.5	138.5	138.0	138.0
72.5°	119.0	118.5	117.5	117.0
75°	99.0	99.5	98.5	98.0
77.5°	77.5	75.0	76.0	75.0
80°	55.5	55.0	56.5	55.0
82.5°	41.0	40.5	41.0	40.0
85°	26.5	26.0	25.5	26.0
87.5°	11.5	11.0	11.0	11.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)