

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: P242916

Luminaire Tested: **S125RDR-S1090D835-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242916  
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-S1090D835-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: 4024.2 lumens  
Efficiency: N/A  
Efficacy: 115.6 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

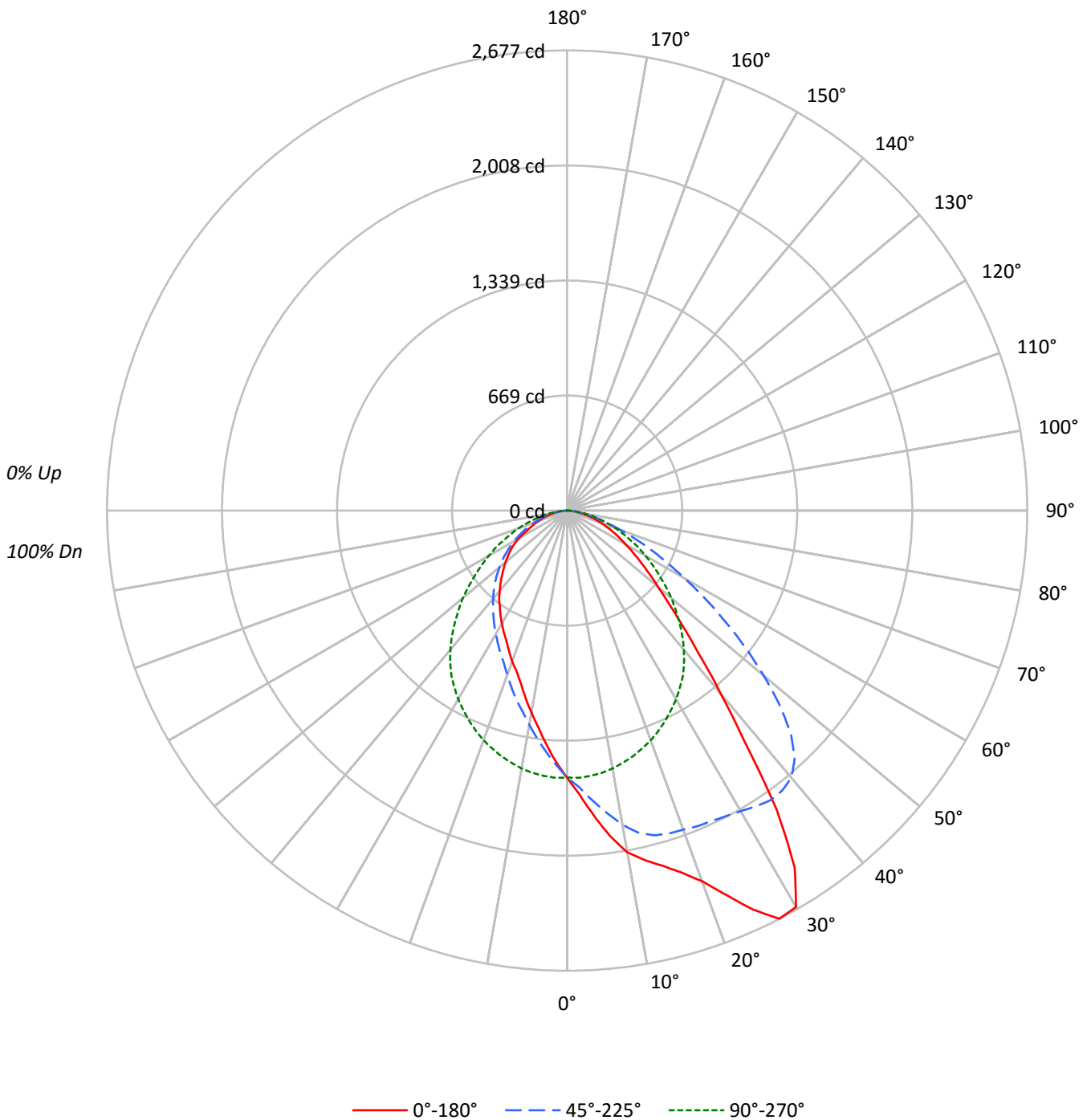
Input Watts (W): 34.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	11039	11039	11039
5°	12700	11053	9762
10°	14568	10997	8614
15°	15735	10884	7656
20°	17351	10754	7070
25°	20080	10580	6560
30°	21852	10397	6227
35°	18432	10184	5919
40°	12872	9802	5655
45°	9549	9286	5396
50°	7614	8748	5175
55°	6462	8082	4978
60°	5584	7485	4658
65°	4975	6841	4011
70°	4372	6267	3657
75°	3781	5429	3433
80°	2869	4568	2869
85°	2389	3588	2707



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.9	3.7
10°-20°	436.7	10.9
20°-30°	692.4	17.2
30°-40°	836.6	20.8
40°-50°	745.0	18.5
50°-60°	571.3	14.2
60°-70°	371.0	9.2
70°-80°	180.0	4.5
80°-90°	42.3	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°	1277.9	31.8
0°-40°	2114.6	52.5
0°-60°	3430.8	85.3
0°-90°	4024.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4024.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1553	1553	1553	1553	1553	
5°	1780	1692	1549	1408	1368	177
15°	2138	1956	1479	1139	1040	612
25°	2560	1992	1349	918	836	1179
35°	2124	2058	1174	747	682	1288
45°	950	1843	924	592	537	753
55°	522	1118	652	435	402	472
65°	296	533	407	279	238	294
75°	138	187	198	138	125	146
85°	29	32	44	35	33	35
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°	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2
2.5°	1653.9	1652.6	1655.2	1648.2	1648.8	1638.0	1638.0	1629.7	1618.8	1610.5	1606.7
5°	1780.1	1781.4	1778.9	1769.3	1762.9	1753.4	1742.5	1723.4	1707.5	1692.2	1680.0
7.5°	1908.9	1910.2	1901.9	1900.0	1883.4	1873.2	1849.0	1824.1	1802.5	1773.8	1753.4
10°	2018.6	2018.0	2009.0	2002.0	1988.0	1970.1	1946.5	1915.9	1887.3	1855.4	1824.8
12.5°	2082.4	2080.4	2079.2	2070.2	2057.5	2042.2	2023.1	1993.1	1956.1	1920.4	1883.4
15°	2138.5	2134.0	2125.7	2114.9	2096.4	2077.9	2055.6	2028.8	1995.0	1955.5	1922.3
17.5°	2206.0	2206.7	2193.9	2182.5	2158.2	2127.6	2094.5	2053.7	2010.3	1970.1	1937.0
20°	2294.0	2292.1	2279.4	2250.0	2221.3	2180.5	2141.0	2088.1	2032.0	1975.2	1931.2
22.5°	2420.3	2414.5	2401.1	2360.3	2311.9	2256.4	2190.7	2123.2	2052.4	1986.1	1924.9
25°	2560.5	2556.7	2530.6	2485.9	2423.5	2342.5	2263.4	2174.8	2077.3	1992.5	1922.3
27.5°	2676.6	2668.9	2645.3	2603.3	2542.1	2454.7	2345.7	2230.9	2114.9	2003.3	1907.0
30°	2662.6	2672.1	2669.6	2652.4	2609.0	2532.5	2433.7	2300.4	2155.7	2018.6	1898.1
32.5°	2462.4	2470.6	2499.3	2545.9	2559.9	2540.8	2473.2	2352.7	2201.6	2040.9	1891.1
35°	2124.4	2135.9	2179.3	2247.5	2336.7	2411.3	2426.6	2360.3	2225.8	2058.1	1884.1
37.5°	1694.7	1769.3	1798.6	1868.1	2008.4	2144.2	2262.2	2288.9	2216.2	2054.3	1875.8
40°	1387.4	1402.7	1467.7	1548.7	1662.2	1805.0	1993.1	2128.9	2133.4	2028.8	1849.0
42.5°	1137.5	1157.9	1197.4	1258.0	1351.0	1493.9	1689.6	1879.6	1982.3	1958.7	1813.9
45°	950.0	964.7	997.2	1046.9	1121.5	1239.5	1406.5	1613.7	1778.2	1842.6	1745.7
47.5°	803.4	811.0	841.0	881.1	938.5	1027.8	1163.6	1351.0	1546.8	1677.5	1652.0
50°	688.6	697.5	719.2	747.9	794.4	867.1	970.4	1120.2	1323.6	1492.6	1526.4
52.5°	599.3	606.3	617.8	644.6	680.9	732.6	811.0	943.0	1120.9	1303.2	1392.5
55°	521.5	526.6	537.5	552.8	583.4	623.6	695.6	789.3	937.2	1118.3	1233.1
57.5°	455.2	457.8	464.2	479.5	501.8	531.7	586.6	672.0	779.1	949.4	1075.6
60°	392.8	395.3	404.2	413.8	430.4	457.1	498.0	553.4	655.4	790.0	918.1
62.5°	343.0	344.3	346.8	356.4	370.4	389.6	419.5	462.2	538.1	652.2	771.5
65°	295.8	296.5	297.8	305.4	314.3	329.6	350.7	382.6	443.8	533.0	640.1
67.5°	248.7	249.9	254.4	256.9	267.8	275.4	288.8	314.3	361.5	425.3	512.0
70°	210.4	209.8	214.2	217.4	220.6	230.2	238.5	258.2	285.0	330.9	400.4
72.5°	174.7	172.8	174.1	174.7	179.2	184.9	193.2	203.4	222.5	250.6	299.7
75°	137.7	138.4	138.4	139.6	142.8	145.4	147.9	154.3	165.8	186.8	215.5
77.5°	103.3	102.0	105.2	105.2	107.8	110.9	112.9	115.4	119.9	129.4	146.6
80°	70.1	70.1	70.8	72.7	72.0	73.3	76.5	79.1	84.8	89.9	95.0
82.5°	49.7	49.1	49.7	49.7	49.7	51.0	51.6	51.6	52.9	54.8	58.0
85°	29.3	29.3	30.0	30.0	30.6	30.6	31.2	31.2	31.2	31.9	32.5
87.5°	14.0	13.4	12.8	12.8	13.4	14.7	14.0	13.4	13.4	13.4	14.0
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°	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2
2.5°	1606.7	1602.3	1594.0	1586.3	1576.7	1568.5	1562.7	1555.7	1546.8	1535.9	1527.0
5°	1666.6	1652.6	1634.1	1618.2	1597.8	1581.8	1565.3	1549.3	1533.4	1513.0	1495.1
7.5°	1733.0	1705.5	1680.0	1646.9	1616.9	1590.8	1565.3	1539.1	1514.3	1486.2	1460.1
10°	1792.9	1757.8	1718.9	1674.3	1633.5	1594.6	1558.9	1523.8	1486.8	1454.3	1419.3
12.5°	1849.0	1801.2	1755.3	1696.0	1645.0	1595.2	1547.4	1501.5	1461.3	1416.7	1378.5
15°	1878.3	1833.7	1784.0	1715.1	1646.9	1589.5	1535.9	1479.2	1430.1	1382.9	1340.8
17.5°	1895.5	1848.4	1791.0	1724.0	1650.7	1579.3	1511.7	1451.1	1395.0	1340.8	1294.3
20°	1887.9	1842.6	1783.3	1720.2	1640.5	1565.3	1490.7	1421.8	1357.4	1299.4	1249.0
22.5°	1869.4	1822.2	1765.5	1697.9	1623.3	1542.3	1461.3	1386.7	1318.5	1258.0	1201.8
25°	1850.9	1787.2	1728.5	1663.5	1591.4	1512.4	1430.1	1349.1	1277.1	1215.9	1155.9
27.5°	1833.1	1755.9	1683.2	1620.7	1543.6	1472.2	1391.8	1308.3	1233.1	1171.2	1110.0
30°	1806.9	1717.7	1635.4	1562.1	1490.0	1423.1	1347.9	1266.9	1189.1	1124.7	1062.2
32.5°	1774.4	1678.1	1585.7	1498.3	1429.5	1363.2	1296.8	1220.3	1145.1	1078.2	1014.4
35°	1748.3	1627.1	1528.9	1439.0	1361.9	1297.5	1236.3	1173.8	1097.9	1029.1	967.2
37.5°	1711.9	1578.7	1467.7	1369.5	1289.2	1225.4	1176.3	1117.0	1046.3	979.3	921.9
40°	1679.4	1525.1	1400.8	1303.9	1218.4	1150.2	1104.9	1056.5	993.4	931.5	874.1
42.5°	1636.0	1476.0	1333.2	1231.2	1145.1	1080.1	1034.2	993.4	943.0	885.6	823.1
45°	1576.7	1409.7	1263.7	1155.3	1068.6	1004.2	961.5	923.9	883.7	830.1	776.6
47.5°	1506.0	1346.6	1192.9	1073.7	990.2	929.6	887.5	856.3	826.9	780.4	726.2
50°	1417.4	1265.0	1115.8	1001.0	910.5	853.7	814.8	791.2	765.1	723.7	680.3
52.5°	1312.8	1180.8	1035.4	917.5	833.3	781.0	744.1	720.5	700.1	668.2	627.4
55°	1201.8	1082.6	948.7	842.2	763.8	710.3	674.6	652.2	639.5	610.8	578.3
57.5°	1076.2	984.4	863.3	759.4	688.6	635.0	608.3	588.5	573.8	552.8	528.6
60°	943.6	883.7	777.9	680.3	616.5	566.2	542.6	526.6	513.3	496.0	478.2
62.5°	809.1	769.6	680.9	600.6	543.2	503.1	481.4	467.3	451.4	441.2	424.0
65°	691.8	652.9	589.1	523.5	469.3	435.5	419.5	406.8	397.2	384.5	372.3
67.5°	561.7	543.9	496.7	447.6	408.1	375.5	361.5	351.3	340.5	332.8	323.9
70°	443.8	436.1	404.9	374.9	338.6	318.2	305.4	301.6	287.6	279.9	274.2
72.5°	339.2	336.6	322.0	303.5	280.5	263.3	251.8	247.4	239.7	234.0	230.8
75°	246.7	248.0	244.8	231.4	221.9	210.4	200.2	197.7	191.3	186.2	183.0
77.5°	168.3	174.7	173.4	172.8	168.3	160.0	155.6	153.7	146.6	144.7	144.1
80°	107.1	114.1	120.5	119.9	118.6	116.7	113.5	111.6	108.4	106.5	105.2
82.5°	62.5	68.9	74.0	78.4	78.4	76.5	74.6	74.0	74.0	72.7	72.7
85°	33.8	35.1	37.0	41.4	44.6	45.3	44.6	44.0	42.1	42.7	43.4
87.5°	14.7	14.7	15.3	15.3	14.7	17.9	19.8	20.4	19.1	17.9	16.6
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°	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2	1553.2
2.5°	1520.6	1511.7	1505.3	1492.6	1483.7	1479.8	1472.8	1470.9	1477.9	1472.8	1472.2
5°	1481.7	1463.3	1448.6	1433.9	1418.0	1407.8	1392.5	1389.9	1386.1	1380.4	1379.1
7.5°	1436.5	1413.5	1396.3	1372.1	1352.3	1336.4	1317.3	1309.6	1305.8	1298.8	1287.3
10°	1390.6	1361.9	1336.4	1312.1	1286.0	1265.0	1245.8	1231.2	1221.6	1212.7	1208.9
12.5°	1345.3	1316.0	1281.5	1250.9	1221.0	1196.7	1175.1	1166.8	1155.9	1145.1	1134.9
15°	1298.1	1259.2	1223.5	1189.7	1164.9	1139.4	1119.0	1104.9	1089.0	1084.5	1067.3
17.5°	1247.8	1211.4	1169.3	1133.0	1104.9	1078.2	1055.8	1039.3	1027.1	1009.9	1001.6
20°	1201.2	1155.9	1115.1	1082.6	1050.7	1017.6	994.6	981.2	969.8	956.4	950.0
22.5°	1151.5	1107.5	1065.4	1025.9	993.4	960.8	946.2	932.1	918.8	906.6	897.7
25°	1103.0	1058.4	1014.4	974.9	941.1	917.5	898.4	882.4	875.4	863.3	854.4
27.5°	1054.6	1007.4	962.8	921.3	895.2	871.6	856.3	843.5	830.1	819.3	811.0
30°	1008.0	959.6	909.8	878.6	850.5	828.2	811.0	798.9	789.3	779.8	774.0
32.5°	961.5	911.1	868.4	834.0	807.8	789.3	771.5	760.0	749.8	739.0	731.9
35°	911.1	860.1	824.4	791.2	765.1	747.2	735.1	718.6	710.3	702.6	695.6
37.5°	865.8	817.4	777.9	749.2	724.9	707.7	691.8	683.5	672.7	666.3	660.5
40°	814.8	771.5	736.4	705.8	689.2	669.5	654.8	643.3	635.7	626.7	620.4
42.5°	768.9	729.4	695.6	668.8	647.1	631.2	617.2	605.7	595.5	589.8	584.7
45°	726.2	686.0	652.9	627.4	608.3	592.3	577.7	571.9	559.2	551.5	549.0
47.5°	681.6	645.2	612.7	589.1	569.4	554.7	540.7	527.9	521.5	513.9	510.1
50°	636.3	601.9	571.9	549.0	529.8	513.3	500.5	492.9	483.3	476.3	471.2
52.5°	591.0	559.8	529.8	508.2	492.2	475.6	461.0	453.3	444.4	440.6	437.4
55°	548.3	514.5	489.0	467.3	450.1	434.8	421.4	413.8	408.1	403.6	402.3
57.5°	499.2	471.8	447.6	428.5	410.0	395.3	383.2	376.2	371.1	370.4	366.0
60°	451.4	427.2	405.5	384.5	369.2	355.8	345.6	337.3	332.2	331.5	330.3
62.5°	403.6	380.6	360.9	343.0	329.6	316.9	307.3	297.8	295.2	291.4	288.2
65°	356.4	335.4	318.8	304.1	289.5	278.6	269.1	263.3	256.3	252.5	245.5
67.5°	309.9	292.7	276.7	264.6	252.5	241.6	233.4	225.1	220.0	216.8	211.0
70°	264.0	251.2	235.3	221.9	213.0	204.7	198.3	188.7	185.5	183.0	180.4
72.5°	220.6	209.8	197.0	186.8	177.9	170.2	162.6	159.4	156.2	153.7	152.4
75°	180.4	169.6	158.1	150.5	144.1	137.7	133.9	130.7	129.4	128.8	126.2
77.5°	140.3	133.9	124.3	117.3	112.9	110.3	106.5	105.2	105.8	102.7	102.0
80°	101.4	98.2	90.5	88.0	84.8	82.2	80.3	77.1	74.0	72.7	70.8
82.5°	68.9	65.7	63.8	59.3	56.7	55.5	53.6	52.9	54.2	52.3	51.6
85°	40.2	37.0	35.7	35.1	33.8	35.1	34.4	33.8	33.2	32.5	33.2
87.5°	15.9	15.9	15.3	16.6	14.7	15.3	15.3	14.7	14.7	14.7	14.0
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: P242916

CATALOG NUMBER: S125RDR-S1090D835-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1553.2	1553.2	1553.2	1553.2
2.5°	1471.5	1464.5	1462.6	1465.2
5°	1372.7	1366.3	1369.5	1368.3
7.5°	1289.2	1280.9	1271.3	1273.9
10°	1200.6	1194.2	1190.4	1193.6
12.5°	1126.0	1122.8	1119.6	1117.0
15°	1059.7	1052.0	1048.8	1040.5
17.5°	995.9	993.4	985.1	979.3
20°	940.4	937.9	929.6	934.7
22.5°	894.5	888.2	886.9	883.7
25°	851.8	843.5	840.3	836.5
27.5°	808.5	804.0	799.5	798.3
30°	766.4	761.9	758.7	758.7
32.5°	728.8	725.6	722.4	721.7
35°	692.4	687.3	686.0	682.2
37.5°	654.2	649.7	649.7	650.3
40°	617.8	614.6	614.0	609.5
42.5°	578.9	577.7	575.1	573.8
45°	544.5	540.0	540.0	536.8
47.5°	508.2	504.3	505.0	501.1
50°	471.8	469.9	469.3	468.0
52.5°	435.5	434.8	438.0	434.8
55°	403.6	401.7	405.5	401.7
57.5°	366.0	364.7	368.5	366.0
60°	329.0	325.2	327.1	327.7
62.5°	285.0	283.1	284.4	280.5
65°	244.2	242.3	239.7	238.5
67.5°	212.3	206.6	206.6	207.9
70°	176.6	176.6	176.0	176.0
72.5°	151.7	151.1	149.8	149.2
75°	126.2	126.9	125.6	125.0
77.5°	98.8	95.6	96.9	95.6
80°	70.8	70.1	72.0	70.1
82.5°	52.3	51.6	52.3	51.0
85°	33.8	33.2	32.5	33.2
87.5°	14.7	14.0	14.0	14.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)