

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: P243777

Luminaire Tested: **S125RDR-H1270D835-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243777
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-H1270D835-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4720.4 lumens
Efficiency: N/A
Efficacy: 125.2 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

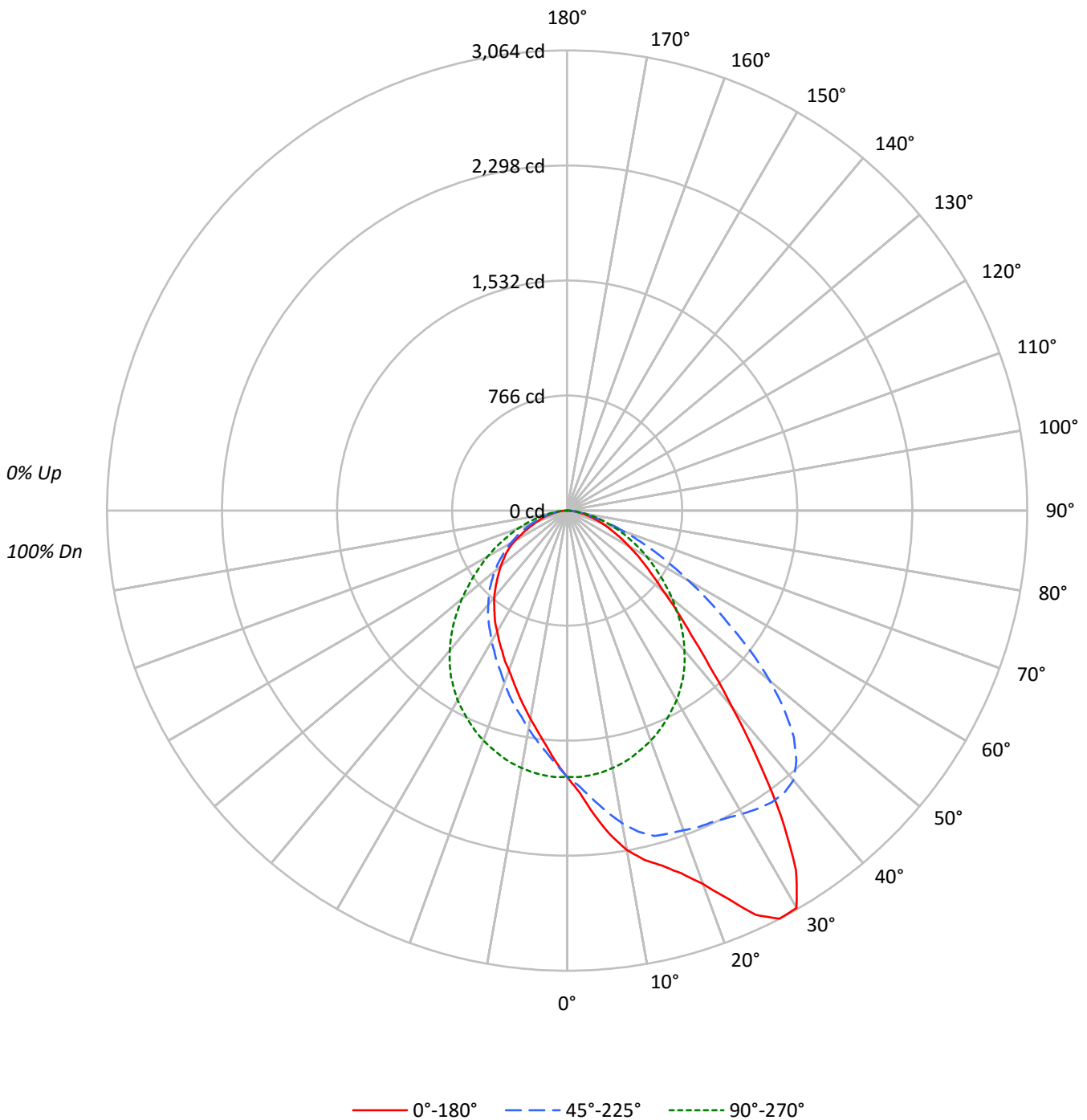
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P243777

CATALOG NUMBER: S125RDR-H1270D835-X4F0-XX-UDD-A-W

Luminous Intensity Polar Plot





TEST NUMBER: P243777

CATALOG NUMBER: S125RDR-H1270D835-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	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					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°	12606	12606	12606
5°	14471	12624	11229
10°	16556	12562	10151
15°	18008	12461	9284
20°	20011	12319	8554
25°	23286	12144	8052
30°	25073	11965	7641
35°	21540	11698	7310
40°	15869	11276	7008
45°	11720	10752	6645
50°	9285	10109	6377
55°	7844	9368	6135
60°	6758	8677	5679
65°	5866	7901	4944
70°	5145	7234	4326
75°	4364	6335	4094
80°	3397	5296	3397
85°	2985	4240	3099



TEST NUMBER: P243777

CATALOG NUMBER: S125RDR-H1270D835-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.7	3.6
10°-20°	505.1	10.7
20°-30°	805.6	17.1
30°-40°	978.2	20.7
40°-50°	881.4	18.7
50°-60°	677.8	14.4
60°-70°	439.9	9.3
70°-80°	211.6	4.5
80°-90°	50.1	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°	1481.4	31.4
0°-40°	2459.6	52.1
0°-60°	4018.8	85.1
0°-90°	4720.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4720.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1774	1774	1774	1774	1774	
5°	2028	1927	1770	1613	1574	202
15°	2447	2243	1694	1348	1262	702
25°	2969	2288	1549	1110	1027	1358
35°	2483	2372	1348	910	842	1519
45°	1166	2134	1070	726	661	926
55°	633	1312	756	530	495	574
65°	349	637	470	336	294	350
75°	159	216	231	165	149	171
85°	37	39	52	42	38	42
90°	0	0	0	0	0	



TEST NUMBER: P243777

CATALOG NUMBER: S125RDR-H1270D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7
2.5°	1876.4	1883.4	1877.8	1881.3	1875.7	1872.8	1865.8	1855.3	1844.7	1834.9	1834.2
5°	2028.3	2026.9	2021.2	2013.5	2007.9	1993.8	1986.8	1962.9	1946.7	1927.0	1917.1
7.5°	2173.1	2169.6	2161.2	2150.6	2145.7	2127.4	2107.7	2077.5	2052.2	2021.2	1998.0
10°	2294.1	2293.4	2287.1	2280.0	2261.1	2240.7	2221.7	2190.0	2152.0	2113.4	2081.0
12.5°	2382.7	2379.2	2371.5	2359.5	2344.0	2330.0	2304.7	2275.8	2229.4	2190.0	2145.7
15°	2447.4	2446.0	2434.8	2430.5	2400.3	2380.6	2346.9	2318.0	2282.2	2242.8	2194.9
17.5°	2533.2	2536.0	2526.2	2502.3	2474.9	2444.6	2396.8	2349.7	2299.7	2254.0	2215.3
20°	2645.7	2638.7	2621.8	2593.0	2543.8	2506.5	2458.7	2400.3	2332.8	2265.3	2209.7
22.5°	2796.3	2788.5	2761.8	2726.6	2664.7	2596.5	2523.4	2436.2	2358.8	2281.4	2208.3
25°	2969.3	2954.5	2915.1	2877.1	2789.2	2716.8	2607.8	2503.7	2391.2	2288.5	2206.2
27.5°	3063.5	3063.5	3045.2	3003.7	2934.1	2827.2	2716.1	2577.5	2447.4	2306.8	2190.0
30°	3055.1	3050.1	3057.2	3039.6	2994.6	2914.4	2804.0	2658.4	2492.4	2331.4	2191.4
32.5°	2837.0	2839.2	2881.3	2910.2	2932.7	2913.0	2841.3	2709.7	2544.5	2355.3	2185.8
35°	2482.6	2488.2	2562.8	2612.0	2712.6	2770.2	2787.1	2716.1	2567.7	2372.2	2176.0
37.5°	2077.5	2077.5	2164.0	2238.5	2351.1	2493.1	2599.3	2626.1	2553.6	2371.5	2167.5
40°	1710.4	1708.3	1776.5	1867.9	1988.2	2145.0	2303.3	2439.0	2456.6	2344.0	2138.0
42.5°	1399.5	1396.0	1470.6	1521.2	1647.8	1787.7	1998.0	2190.0	2299.7	2258.9	2094.4
45°	1166.0	1163.2	1211.8	1269.4	1358.7	1504.3	1680.8	1893.9	2078.2	2134.5	2012.8
47.5°	990.2	991.6	1017.6	1066.2	1142.1	1246.2	1404.5	1602.1	1829.9	1960.0	1910.1
50°	839.7	844.6	864.3	900.9	956.5	1040.2	1175.9	1354.5	1588.7	1761.0	1771.6
52.5°	727.2	734.2	755.3	775.0	821.4	880.5	986.0	1140.7	1334.1	1540.9	1614.7
55°	633.0	636.5	648.4	669.5	704.0	753.2	829.9	948.0	1127.4	1311.6	1441.7
57.5°	554.2	554.2	561.9	576.7	604.1	648.4	699.8	797.5	948.7	1115.4	1254.0
60°	475.4	478.2	483.9	500.0	518.3	552.1	602.0	663.9	794.7	934.0	1083.1
62.5°	409.3	414.2	419.9	427.6	444.5	468.4	503.6	560.5	648.4	777.1	910.0
65°	348.8	353.8	354.5	363.6	374.8	394.5	421.3	462.8	535.9	637.2	746.9
67.5°	295.4	297.5	299.6	306.6	317.2	329.8	347.4	378.4	436.0	504.3	611.2
70°	247.6	249.0	249.7	257.4	262.3	273.6	282.7	302.4	339.0	391.7	474.7
72.5°	202.5	200.4	199.7	206.1	208.2	217.3	228.6	242.6	262.3	299.6	361.5
75°	158.9	159.6	160.3	163.9	164.6	168.8	175.8	185.0	194.1	215.9	255.3
77.5°	122.4	119.6	119.6	123.8	125.2	125.9	130.8	135.7	140.7	153.3	168.8
80°	83.0	84.4	84.4	84.4	85.1	86.5	89.3	93.5	97.1	104.8	107.6
82.5°	59.1	59.1	58.4	59.8	60.5	61.2	61.2	61.2	63.3	65.4	68.2
85°	36.6	37.3	35.2	36.6	37.3	37.3	37.3	37.3	39.4	38.7	39.4
87.5°	15.5	16.2	16.2	16.9	16.9	17.6	16.9	17.6	16.9	16.9	17.6
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: P243777

CATALOG NUMBER: S125RDR-H1270D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7
2.5°	1832.1	1823.6	1819.4	1811.0	1799.7	1792.7	1785.6	1775.8	1768.1	1756.1	1745.5
5°	1899.6	1882.7	1867.2	1846.1	1825.7	1808.1	1789.9	1769.5	1751.2	1730.8	1709.0
7.5°	1974.8	1948.1	1915.7	1878.5	1846.8	1819.4	1788.4	1758.2	1730.8	1698.4	1668.9
10°	2047.3	2004.4	1961.5	1911.5	1865.1	1824.3	1782.8	1740.6	1704.8	1664.7	1628.1
12.5°	2103.5	2062.7	1998.7	1936.8	1876.4	1823.6	1771.6	1720.2	1673.1	1628.8	1585.2
15°	2152.7	2085.2	2031.1	1963.6	1889.7	1818.0	1753.3	1693.5	1636.5	1584.5	1540.2
17.5°	2166.8	2106.3	2047.3	1968.5	1889.0	1807.4	1732.9	1661.9	1598.6	1540.9	1491.0
20°	2165.4	2104.2	2040.2	1965.0	1880.6	1791.3	1708.3	1628.8	1557.1	1491.0	1437.5
22.5°	2144.3	2085.2	2020.5	1944.6	1858.8	1766.6	1679.4	1591.5	1513.5	1444.5	1389.7
25°	2121.8	2047.3	1979.7	1903.1	1821.5	1736.4	1643.6	1548.6	1467.0	1395.3	1333.4
27.5°	2102.1	2012.8	1929.8	1854.6	1770.9	1694.2	1602.1	1502.9	1419.2	1344.0	1280.0
30°	2070.5	1976.2	1875.7	1793.4	1712.5	1632.3	1547.9	1457.9	1366.5	1289.8	1225.8
32.5°	2043.0	1924.2	1815.2	1722.3	1641.5	1571.1	1490.3	1403.8	1314.4	1241.3	1172.4
35°	2012.8	1870.7	1756.8	1647.8	1566.9	1490.3	1426.3	1348.2	1259.6	1182.2	1120.3
37.5°	1976.9	1815.9	1685.1	1573.9	1490.3	1411.5	1353.8	1284.2	1204.0	1127.4	1066.2
40°	1936.8	1759.6	1609.1	1494.5	1404.5	1325.7	1277.2	1215.3	1147.1	1071.1	1014.1
42.5°	1886.2	1699.8	1540.2	1415.0	1315.1	1244.1	1195.6	1144.2	1081.6	1015.5	953.7
45°	1822.2	1625.3	1457.9	1325.7	1227.2	1158.3	1107.7	1069.7	1019.8	957.9	899.5
47.5°	1744.1	1547.2	1373.5	1236.4	1141.4	1075.3	1028.2	990.2	952.2	898.8	843.2
50°	1640.8	1457.9	1291.2	1151.3	1050.7	986.7	944.5	914.3	879.8	836.2	785.6
52.5°	1526.8	1357.3	1194.2	1063.4	966.3	902.3	858.7	833.4	807.4	771.5	727.9
55°	1394.6	1256.8	1101.3	973.3	878.4	815.1	780.6	756.0	734.2	706.8	670.2
57.5°	1254.7	1133.7	998.7	880.5	791.2	731.4	701.2	680.8	662.5	642.8	612.6
60°	1107.7	1021.9	893.9	785.6	707.5	658.3	629.4	610.4	593.6	577.4	554.9
62.5°	954.4	883.3	787.7	695.5	625.9	579.5	558.4	542.2	524.6	510.6	494.4
65°	798.9	758.1	692.0	605.5	541.5	503.6	483.2	469.8	461.4	445.2	432.5
67.5°	657.6	635.1	578.8	520.4	471.2	436.7	417.7	407.9	398.8	391.0	377.0
70°	523.2	507.1	474.7	433.2	394.5	365.0	350.9	348.1	335.5	327.7	320.7
72.5°	398.8	394.5	367.8	349.5	327.7	304.5	294.0	288.3	279.9	272.9	270.1
75°	283.4	289.8	281.3	272.2	261.6	242.6	233.5	230.7	222.9	220.8	217.3
77.5°	193.4	202.5	205.4	201.1	196.2	189.9	183.6	180.7	173.0	171.6	169.5
80°	121.7	135.0	140.0	139.2	137.1	137.8	130.1	129.4	125.9	123.8	125.9
82.5°	73.8	80.9	90.0	92.1	89.3	90.7	88.6	85.8	85.8	87.2	84.4
85°	40.1	40.8	45.0	47.8	51.3	54.2	51.3	52.0	51.3	51.3	49.2
87.5°	17.6	18.3	18.3	17.6	19.0	20.4	23.2	24.6	23.9	21.8	19.0
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: P243777

CATALOG NUMBER: S125RDR-H1270D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7	1773.7
2.5°	1737.1	1732.2	1723.7	1716.7	1700.5	1689.3	1687.9	1688.6	1687.2	1685.8	1685.1
5°	1694.9	1678.7	1663.3	1649.9	1631.6	1613.3	1604.9	1601.4	1600.0	1592.2	1596.5
7.5°	1649.9	1625.3	1607.0	1581.7	1559.9	1544.4	1529.6	1522.6	1521.2	1510.7	1507.8
10°	1602.1	1572.5	1545.1	1519.8	1498.0	1476.2	1458.6	1452.3	1443.8	1435.4	1422.7
12.5°	1555.0	1518.4	1488.1	1460.0	1430.5	1405.9	1391.8	1382.7	1372.1	1364.4	1360.1
15°	1498.7	1467.8	1430.5	1400.2	1370.0	1348.2	1329.2	1312.3	1302.5	1296.1	1278.6
17.5°	1448.1	1407.3	1372.1	1343.3	1310.2	1285.6	1265.9	1251.8	1235.0	1222.3	1211.1
20°	1393.9	1351.7	1319.4	1284.9	1251.1	1220.9	1196.3	1185.0	1173.1	1161.1	1154.8
22.5°	1335.5	1299.0	1262.4	1226.5	1190.7	1158.3	1142.8	1126.7	1116.1	1104.2	1095.7
25°	1284.9	1244.8	1208.2	1168.2	1128.8	1109.8	1088.7	1072.5	1064.1	1052.1	1043.0
27.5°	1230.7	1192.1	1148.5	1107.0	1083.8	1051.4	1037.3	1024.7	1013.4	1001.5	995.1
30°	1180.1	1135.1	1091.5	1059.1	1028.9	1005.7	992.3	976.9	961.4	955.8	947.3
32.5°	1126.7	1078.1	1040.2	1007.8	982.5	954.4	941.7	929.0	914.3	907.2	899.5
35°	1071.1	1024.0	986.7	957.2	931.1	910.0	896.0	882.6	873.5	862.9	857.3
37.5°	1012.7	971.9	936.1	906.5	882.6	865.7	848.2	837.6	825.0	815.1	810.9
40°	957.2	920.6	886.1	858.7	836.9	816.5	801.0	787.7	779.9	771.5	764.5
42.5°	907.2	869.3	839.7	810.9	791.2	771.5	756.0	746.2	732.8	729.3	719.5
45°	853.8	818.6	789.1	762.4	742.0	725.8	707.5	695.5	687.1	678.7	675.2
47.5°	799.6	767.3	739.9	715.2	694.1	675.9	661.8	649.1	640.0	632.3	628.0
50°	746.9	718.8	691.3	667.4	645.6	632.3	615.4	601.3	594.3	585.8	580.9
52.5°	691.3	668.1	638.6	618.2	597.8	580.2	563.3	554.2	547.2	540.1	536.6
55°	639.3	614.7	589.4	567.5	547.9	529.6	516.2	509.2	500.0	495.8	495.1
57.5°	585.8	560.5	539.4	519.7	497.2	483.2	471.2	462.8	455.0	451.5	451.5
60°	527.5	507.1	487.4	465.6	449.4	433.2	420.6	414.9	407.2	405.8	400.9
62.5°	474.0	455.0	436.0	415.6	400.9	384.7	375.6	367.8	363.6	358.0	352.3
65°	418.5	401.6	383.3	365.7	353.8	336.2	327.7	318.6	313.7	307.3	300.3
67.5°	365.0	348.8	331.9	315.8	305.9	289.0	283.4	272.2	268.7	261.6	255.3
70°	308.7	297.5	284.1	268.0	259.5	246.1	240.5	230.0	224.3	220.1	216.6
72.5°	260.2	249.7	234.2	223.6	213.1	204.7	195.5	190.6	185.7	182.2	181.4
75°	212.4	199.0	189.9	180.0	173.0	164.6	160.3	156.8	154.7	152.6	150.5
77.5°	162.5	156.8	147.7	137.8	132.2	128.7	125.9	124.5	122.4	121.7	119.6
80°	121.0	113.2	107.6	104.1	99.9	97.1	94.9	90.0	87.2	85.8	84.4
82.5°	80.2	78.1	73.8	70.3	66.8	66.1	64.0	62.6	61.9	61.9	61.2
85°	48.5	42.9	42.9	42.2	42.2	41.5	40.1	40.1	38.7	40.8	40.8
87.5°	19.7	19.7	18.3	18.3	19.0	17.6	16.9	16.9	16.9	16.2	16.9
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: P243777

CATALOG NUMBER: S125RDR-H1270D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1773.7	1773.7	1773.7	1773.7
2.5°	1685.1	1681.5	1682.3	1678.0
5°	1588.7	1586.6	1579.6	1573.9
7.5°	1500.8	1491.7	1491.0	1485.3
10°	1418.5	1410.1	1405.9	1406.6
12.5°	1346.8	1337.6	1337.6	1332.0
15°	1270.1	1261.0	1262.4	1261.7
17.5°	1206.8	1200.5	1195.6	1191.4
20°	1144.9	1137.2	1134.4	1130.9
22.5°	1088.0	1082.4	1083.1	1083.1
25°	1033.8	1034.5	1028.2	1026.8
27.5°	986.0	984.6	983.2	980.4
30°	941.0	935.4	934.0	931.1
32.5°	894.6	893.9	888.2	890.4
35°	847.5	845.3	843.9	842.5
37.5°	803.9	799.6	798.9	797.5
40°	759.5	758.1	751.8	755.3
42.5°	711.7	708.9	708.9	708.9
45°	671.6	663.9	663.9	661.1
47.5°	626.6	623.8	622.4	617.5
50°	582.3	578.1	576.7	576.7
52.5°	536.6	535.9	537.3	534.5
55°	496.5	497.2	496.5	495.1
57.5°	452.9	449.4	449.4	450.1
60°	400.9	400.9	402.3	399.5
62.5°	350.9	349.5	344.6	343.2
65°	299.6	294.0	293.3	294.0
67.5°	253.9	251.8	248.3	249.0
70°	214.5	213.8	210.3	208.2
72.5°	179.3	179.3	177.2	177.2
75°	149.8	148.4	147.7	149.1
77.5°	115.3	111.8	113.2	111.1
80°	83.7	85.1	83.7	83.0
82.5°	61.9	60.5	61.2	60.5
85°	39.4	38.0	38.7	38.0
87.5°	16.2	16.9	16.9	15.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)