

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: P242917

Luminaire Tested: **S125RDR-S1270D835-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242917
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-S1270D835-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: 4676.8 lumens
Efficiency: N/A
Efficacy: 113.8 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

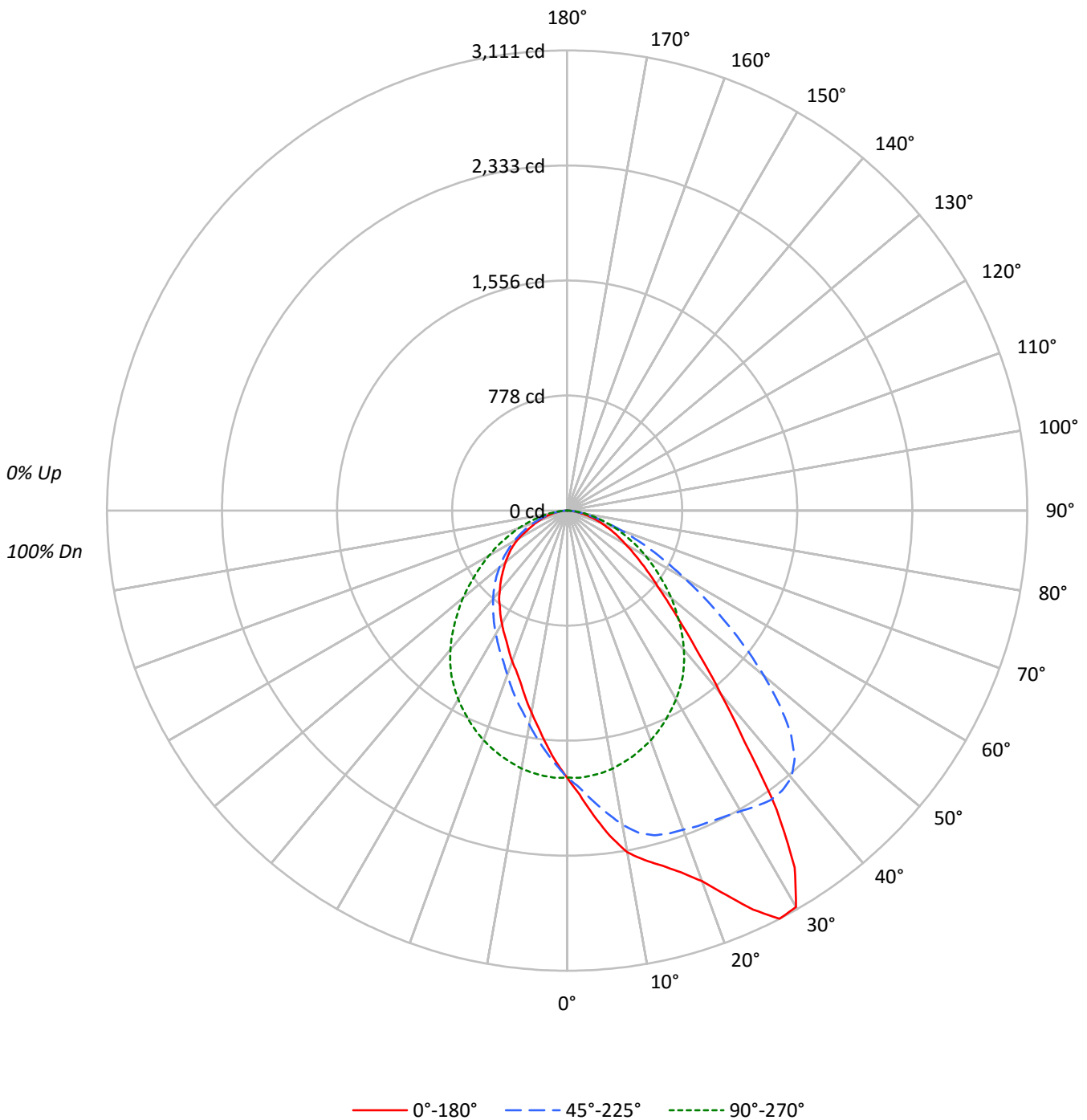
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242917

CATALOG NUMBER: S125RDR-S1270D835-X4F0-XX-UDD-A-W

Luminous Intensity Polar Plot





TEST NUMBER: P242917

CATALOG NUMBER: S125RDR-S1270D835-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	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°	12829	12829	12829
5°	14761	12846	11345
10°	16931	12781	10011
15°	18287	12649	8898
20°	20165	12498	8216
25°	23336	12296	7624
30°	25395	12084	7237
35°	21422	11836	6880
40°	14960	11392	6573
45°	11098	10792	6271
50°	8849	10168	6014
55°	7510	9393	5784
60°	6489	8701	5414
65°	5782	7951	4660
70°	5081	7284	4250
75°	4396	6308	3987
80°	3336	5309	3336
85°	2781	4167	3140



TEST NUMBER: P242917

CATALOG NUMBER: S125RDR-S1270D835-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.1	3.7
10°-20°	507.5	10.9
20°-30°	804.6	17.2
30°-40°	972.3	20.8
40°-50°	865.8	18.5
50°-60°	663.9	14.2
60°-70°	431.1	9.2
70°-80°	209.2	4.5
80°-90°	49.2	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°	1485.2	31.8
0°-40°	2457.5	52.5
0°-60°	3987.3	85.3
0°-90°	4676.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4676.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1805	1805	1805	1805	1805	
5°	2069	1967	1801	1636	1590	206
15°	2485	2273	1719	1324	1209	711
25°	2976	2316	1568	1066	972	1370
35°	2469	2392	1364	868	793	1497
45°	1104	2142	1074	688	624	876
55°	606	1300	758	505	467	549
65°	344	620	473	324	277	342
75°	160	217	230	160	145	170
85°	34	37	51	41	38	41
90°	0	0	0	0	0	



TEST NUMBER: P242917

CATALOG NUMBER: S125RDR-S1270D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1
2.5°	1922.1	1920.7	1923.6	1915.5	1916.2	1903.6	1903.6	1894.0	1881.4	1871.8	1867.3
5°	2068.9	2070.3	2067.4	2056.3	2048.8	2037.7	2025.1	2002.9	1984.4	1966.6	1952.5
7.5°	2218.5	2220.0	2210.4	2208.2	2188.9	2177.0	2148.9	2120.0	2094.8	2061.4	2037.7
10°	2346.0	2345.2	2334.9	2326.7	2310.4	2289.7	2262.3	2226.7	2193.3	2156.3	2120.7
12.5°	2420.1	2417.9	2416.4	2406.0	2391.2	2373.4	2351.2	2316.3	2273.4	2231.9	2188.9
15°	2485.3	2480.1	2470.5	2457.9	2436.4	2414.9	2389.0	2357.8	2318.6	2272.6	2234.1
17.5°	2563.8	2564.6	2549.8	2536.4	2508.3	2472.7	2434.2	2386.7	2336.4	2289.7	2251.1
20°	2666.1	2663.9	2649.1	2615.0	2581.6	2534.2	2488.3	2426.8	2361.5	2295.6	2244.5
22.5°	2812.8	2806.1	2790.6	2743.2	2686.8	2622.4	2546.1	2467.5	2385.3	2308.2	2237.1
25°	2975.8	2971.4	2941.0	2889.1	2816.5	2722.4	2630.5	2527.5	2414.2	2315.6	2234.1
27.5°	3110.7	3101.8	3074.4	3025.5	2954.3	2852.8	2726.1	2592.7	2457.9	2328.2	2216.3
30°	3094.4	3105.5	3102.5	3082.5	3032.1	2943.2	2828.4	2673.5	2505.3	2346.0	2205.9
32.5°	2861.7	2871.4	2904.7	2958.8	2975.1	2952.9	2874.3	2734.3	2558.7	2371.9	2197.8
35°	2469.0	2482.3	2532.7	2612.0	2715.7	2802.4	2820.2	2743.2	2586.8	2391.9	2189.6
37.5°	1969.6	2056.3	2090.3	2171.1	2334.1	2492.0	2629.0	2660.2	2575.7	2387.5	2180.0
40°	1612.4	1630.2	1705.8	1799.9	1931.8	2097.8	2316.3	2474.2	2479.4	2357.8	2148.9
42.5°	1321.9	1345.6	1391.6	1462.0	1570.2	1736.1	1963.6	2184.5	2303.8	2276.3	2108.1
45°	1104.1	1121.1	1158.9	1216.7	1303.4	1440.5	1634.6	1875.5	2066.6	2141.5	2028.8
47.5°	933.7	942.5	977.4	1024.1	1090.7	1194.5	1352.3	1570.2	1797.7	1949.6	1919.9
50°	800.3	810.6	835.8	869.2	923.3	1007.8	1127.8	1301.9	1538.3	1734.7	1773.9
52.5°	696.5	704.7	718.0	749.1	791.4	851.4	942.5	1095.9	1302.7	1514.6	1618.3
55°	606.1	612.1	624.7	642.4	678.0	724.7	808.4	917.4	1089.3	1299.7	1433.1
57.5°	529.1	532.0	539.4	557.2	583.2	618.0	681.7	781.0	905.5	1103.3	1250.1
60°	456.5	459.4	469.8	480.9	500.2	531.3	578.7	643.2	761.7	918.1	1067.0
62.5°	398.7	400.1	403.1	414.2	430.5	452.7	487.6	537.2	625.4	758.0	896.6
65°	343.8	344.6	346.0	354.9	365.3	383.1	407.5	444.6	515.7	619.5	744.0
67.5°	289.0	290.5	295.7	298.6	311.2	320.1	335.7	365.3	420.1	494.2	595.0
70°	244.5	243.8	249.0	252.7	256.4	267.5	277.1	300.1	331.2	384.6	465.3
72.5°	203.0	200.8	202.3	203.0	208.2	214.9	224.5	236.4	258.6	291.2	348.3
75°	160.1	160.8	160.8	162.3	166.0	168.9	171.9	179.3	192.7	217.1	250.5
77.5°	120.0	118.6	122.3	122.3	125.2	128.9	131.2	134.1	139.3	150.4	170.4
80°	81.5	81.5	82.3	84.5	83.7	85.2	88.9	91.9	98.6	104.5	110.4
82.5°	57.8	57.1	57.8	57.8	57.8	59.3	60.0	60.0	61.5	63.7	67.4
85°	34.1	34.1	34.8	34.8	35.6	35.6	36.3	36.3	36.3	37.0	37.8
87.5°	16.3	15.6	14.8	14.8	15.6	17.0	16.3	15.6	15.6	15.6	16.3
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: P242917

CATALOG NUMBER: S125RDR-S1270D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1
2.5°	1867.3	1862.1	1852.5	1843.6	1832.5	1822.8	1816.2	1808.0	1797.7	1785.1	1774.7
5°	1937.0	1920.7	1899.2	1880.6	1856.9	1838.4	1819.1	1800.6	1782.1	1758.4	1737.6
7.5°	2014.0	1982.2	1952.5	1914.0	1879.2	1848.8	1819.1	1788.8	1759.9	1727.3	1696.9
10°	2083.7	2042.9	1997.7	1945.9	1898.4	1853.2	1811.7	1771.0	1728.0	1690.2	1649.5
12.5°	2148.9	2093.3	2040.0	1971.0	1911.8	1854.0	1798.4	1745.0	1698.4	1646.5	1602.0
15°	2183.0	2131.1	2073.3	1993.3	1914.0	1847.3	1785.1	1719.1	1662.1	1607.2	1558.3
17.5°	2203.0	2148.1	2081.5	2003.6	1918.4	1835.4	1756.9	1686.5	1621.3	1558.3	1504.2
20°	2194.1	2141.5	2072.6	1999.2	1906.6	1819.1	1732.4	1652.4	1577.6	1510.1	1451.6
22.5°	2172.6	2117.8	2051.8	1973.3	1886.6	1792.5	1698.4	1611.7	1532.4	1462.0	1396.8
25°	2151.1	2077.0	2008.8	1933.3	1849.5	1757.6	1662.1	1567.9	1484.2	1413.1	1343.4
27.5°	2130.4	2040.7	1956.2	1883.6	1793.9	1711.0	1617.6	1520.5	1433.1	1361.2	1290.1
30°	2100.0	1996.2	1900.7	1815.4	1731.7	1653.9	1566.5	1472.4	1382.0	1307.1	1234.5
32.5°	2062.2	1950.3	1842.9	1741.3	1661.3	1584.2	1507.2	1418.3	1330.8	1253.0	1178.9
35°	2031.8	1891.0	1776.9	1672.4	1582.8	1507.9	1436.8	1364.2	1276.0	1196.0	1124.1
37.5°	1989.6	1834.7	1705.8	1591.7	1498.3	1424.2	1367.1	1298.2	1216.0	1138.2	1071.5
40°	1951.8	1772.5	1628.0	1515.3	1416.0	1336.8	1284.1	1227.8	1154.5	1082.6	1015.9
42.5°	1901.4	1715.4	1549.4	1430.9	1330.8	1255.2	1201.9	1154.5	1095.9	1029.2	956.6
45°	1832.5	1638.3	1468.7	1342.7	1241.9	1167.1	1117.4	1073.7	1027.0	964.8	902.5
47.5°	1750.2	1565.0	1386.4	1247.8	1150.8	1080.4	1031.5	995.2	961.1	907.0	844.0
50°	1647.2	1470.1	1296.7	1163.4	1058.1	992.2	947.0	919.6	889.2	841.0	790.6
52.5°	1525.7	1372.3	1203.4	1066.3	968.5	907.7	864.7	837.3	813.6	776.6	729.1
55°	1396.8	1258.2	1102.6	978.9	887.7	825.5	784.0	758.0	743.2	709.9	672.1
57.5°	1250.8	1144.1	1003.3	882.5	800.3	738.0	706.9	683.9	666.9	642.4	614.3
60°	1096.7	1027.0	904.0	790.6	716.5	658.0	630.6	612.1	596.5	576.5	555.7
62.5°	940.3	894.4	791.4	698.0	631.3	584.6	559.5	543.1	524.6	512.8	492.8
65°	804.0	758.8	684.7	608.4	545.4	506.1	487.6	472.8	461.6	446.8	432.7
67.5°	652.8	632.1	577.2	520.2	474.2	436.4	420.1	408.3	395.7	386.8	376.4
70°	515.7	506.8	470.5	435.7	393.5	369.8	354.9	350.5	334.2	325.3	318.6
72.5°	394.2	391.2	374.2	352.7	326.0	306.0	292.7	287.5	278.6	271.9	268.2
75°	286.8	288.2	284.5	269.0	257.9	244.5	232.7	229.7	222.3	216.4	212.7
77.5°	195.6	203.0	201.6	200.8	195.6	186.0	180.8	178.6	170.4	168.2	167.5
80°	124.5	132.6	140.0	139.3	137.8	135.6	131.9	129.7	126.0	123.7	122.3
82.5°	72.6	80.0	86.0	91.1	91.1	88.9	86.7	86.0	86.0	84.5	84.5
85°	39.3	40.8	43.0	48.2	51.9	52.6	51.9	51.1	48.9	49.6	50.4
87.5°	17.0	17.0	17.8	17.8	17.0	20.7	23.0	23.7	22.2	20.7	19.3
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: P242917

CATALOG NUMBER: S125RDR-S1270D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1	1805.1
2.5°	1767.3	1756.9	1749.5	1734.7	1724.3	1719.8	1711.7	1709.5	1717.6	1711.7	1711.0
5°	1722.1	1700.6	1683.5	1666.5	1648.0	1636.1	1618.3	1615.4	1610.9	1604.3	1602.8
7.5°	1669.5	1642.8	1622.8	1594.6	1571.6	1553.1	1530.9	1522.0	1517.6	1509.4	1496.1
10°	1616.1	1582.8	1553.1	1525.0	1494.6	1470.1	1447.9	1430.9	1419.7	1409.4	1404.9
12.5°	1563.5	1529.4	1489.4	1453.8	1419.0	1390.8	1365.7	1356.0	1343.4	1330.8	1319.0
15°	1508.7	1463.5	1422.0	1382.7	1353.8	1324.2	1300.4	1284.1	1265.6	1260.4	1240.4
17.5°	1450.1	1407.9	1359.0	1316.7	1284.1	1253.0	1227.1	1207.8	1193.7	1173.7	1164.1
20°	1396.0	1343.4	1296.0	1258.2	1221.2	1182.6	1156.0	1140.4	1127.1	1111.5	1104.1
22.5°	1338.2	1287.1	1238.2	1192.3	1154.5	1116.7	1099.6	1083.3	1067.8	1053.7	1043.3
25°	1281.9	1230.1	1178.9	1133.0	1093.7	1066.3	1044.1	1025.5	1017.4	1003.3	992.9
27.5°	1225.6	1170.8	1118.9	1070.7	1040.4	1012.9	995.2	980.3	964.8	952.2	942.5
30°	1171.5	1115.2	1057.4	1021.1	988.5	962.6	942.5	928.5	917.4	906.2	899.6
32.5°	1117.4	1058.9	1009.2	969.2	938.8	917.4	896.6	883.3	871.4	858.8	850.7
35°	1058.9	999.6	958.1	919.6	889.2	868.4	854.4	835.1	825.5	816.6	808.4
37.5°	1006.3	950.0	904.0	870.7	842.5	822.5	804.0	794.3	781.7	774.3	767.7
40°	947.0	896.6	855.8	820.3	801.0	778.0	761.0	747.7	738.8	728.4	721.0
42.5°	893.6	847.7	808.4	777.3	752.1	733.6	717.3	703.9	692.1	685.4	679.5
45°	844.0	797.3	758.8	729.1	706.9	688.4	671.3	664.7	649.9	641.0	638.0
47.5°	792.1	749.9	712.1	684.7	661.7	644.7	628.4	613.5	606.1	597.2	592.8
50°	739.5	699.5	664.7	638.0	615.8	596.5	581.7	572.8	561.7	553.5	547.6
52.5°	686.9	650.6	615.8	590.6	572.0	552.8	535.7	526.8	516.5	512.0	508.3
55°	637.3	598.0	568.3	543.1	523.1	505.4	489.8	480.9	474.2	469.0	467.6
57.5°	580.2	548.3	520.2	497.9	476.5	459.4	445.3	437.2	431.3	430.5	425.3
60°	524.6	496.5	471.3	446.8	429.0	413.5	401.6	392.0	386.1	385.3	383.8
62.5°	469.0	442.4	419.4	398.7	383.1	368.3	357.2	346.0	343.1	338.6	334.9
65°	414.2	389.8	370.5	353.5	336.4	323.8	312.7	306.0	297.9	293.4	285.3
67.5°	360.1	340.1	321.6	307.5	293.4	280.8	271.2	261.6	255.6	251.9	245.3
70°	306.8	292.0	273.4	257.9	247.5	237.9	230.4	219.3	215.6	212.7	209.7
72.5°	256.4	243.8	229.0	217.1	206.7	197.8	189.0	185.2	181.5	178.6	177.1
75°	209.7	197.1	183.8	174.9	167.5	160.1	155.6	151.9	150.4	149.7	146.7
77.5°	163.0	155.6	144.5	136.3	131.2	128.2	123.7	122.3	123.0	119.3	118.6
80°	117.8	114.1	105.2	102.3	98.6	95.6	93.4	89.7	86.0	84.5	82.3
82.5°	80.0	76.3	74.1	68.9	65.9	64.5	62.2	61.5	63.0	60.8	60.0
85°	46.7	43.0	41.5	40.8	39.3	40.8	40.0	39.3	38.5	37.8	38.5
87.5°	18.5	18.5	17.8	19.3	17.0	17.8	17.8	17.0	17.0	17.0	16.3
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: P242917

CATALOG NUMBER: S125RDR-S1270D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1805.1	1805.1	1805.1	1805.1
2.5°	1710.2	1702.1	1699.8	1702.8
5°	1595.4	1588.0	1591.7	1590.2
7.5°	1498.3	1488.7	1477.5	1480.5
10°	1395.3	1387.9	1383.4	1387.1
12.5°	1308.6	1304.9	1301.2	1298.2
15°	1231.5	1222.6	1218.9	1209.3
17.5°	1157.4	1154.5	1144.8	1138.2
20°	1093.0	1090.0	1080.4	1086.3
22.5°	1039.6	1032.2	1030.7	1027.0
25°	990.0	980.3	976.6	972.2
27.5°	939.6	934.4	929.2	927.7
30°	890.7	885.5	881.8	881.8
32.5°	847.0	843.3	839.5	838.8
35°	804.7	798.8	797.3	792.9
37.5°	760.3	755.1	755.1	755.8
40°	718.0	714.3	713.6	708.4
42.5°	672.8	671.3	668.4	666.9
45°	632.8	627.6	627.6	623.9
47.5°	590.6	586.1	586.9	582.4
50°	548.3	546.1	545.4	543.9
52.5°	506.1	505.4	509.1	505.4
55°	469.0	466.8	471.3	466.8
57.5°	425.3	423.8	428.3	425.3
60°	382.4	377.9	380.1	380.9
62.5°	331.2	329.0	330.5	326.0
65°	283.8	281.6	278.6	277.1
67.5°	246.8	240.1	240.1	241.6
70°	205.3	205.3	204.5	204.5
72.5°	176.4	175.6	174.1	173.4
75°	146.7	147.5	146.0	145.2
77.5°	114.9	111.1	112.6	111.1
80°	82.3	81.5	83.7	81.5
82.5°	60.8	60.0	60.8	59.3
85°	39.3	38.5	37.8	38.5
87.5°	17.0	16.3	16.3	16.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)