

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: P242912

Luminaire Tested: **S125RDR-S1270D830-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242912
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-S1270D830-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4408.1 lumens
Efficiency: N/A
Efficacy: 107.3 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

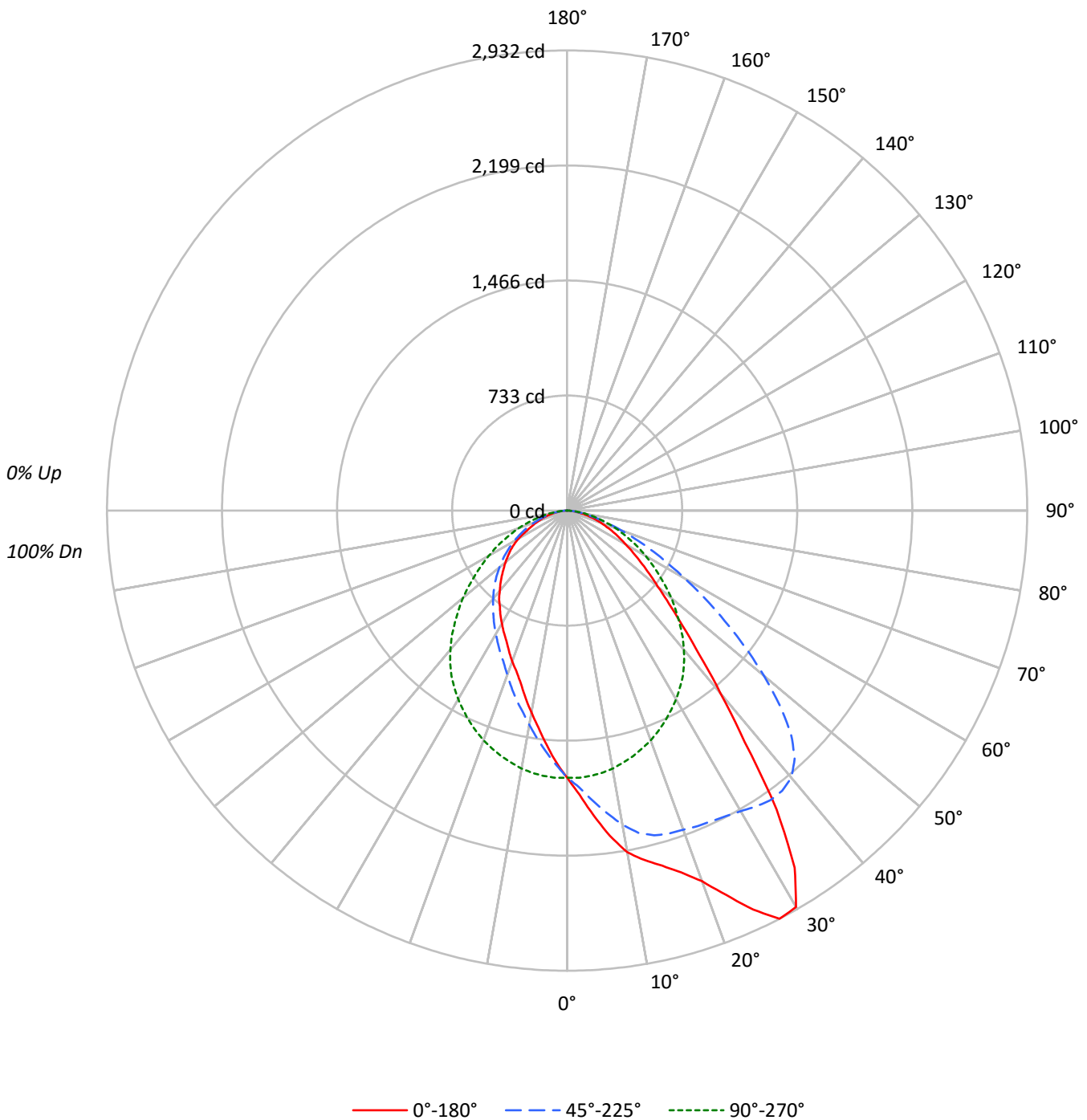
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	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°	12092	12092	12092
5°	13912	12109	10693
10°	15958	12047	9435
15°	17236	11922	8387
20°	19006	11780	7744
25°	21995	11590	7186
30°	23936	11389	6821
35°	20191	11156	6484
40°	14101	10737	6195
45°	10459	10172	5911
50°	8340	9583	5668
55°	7079	8854	5452
60°	6115	8200	5103
65°	5451	7494	4393
70°	4790	6866	4006
75°	4144	5945	3759
80°	3143	5002	3143
85°	2618	3931	2960



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.1	3.7
10°-20°	478.3	10.9
20°-30°	758.4	17.2
30°-40°	916.5	20.8
40°-50°	816.1	18.5
50°-60°	625.8	14.2
60°-70°	406.4	9.2
70°-80°	197.2	4.5
80°-90°	46.4	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°	1399.9	31.8
0°-40°	2316.3	52.5
0°-60°	3758.2	85.3
0°-90°	4408.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4408.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1701	1701	1701	1701	1701	
5°	1950	1854	1697	1542	1499	194
15°	2342	2142	1620	1248	1140	670
25°	2805	2183	1478	1005	916	1291
35°	2327	2254	1286	818	747	1411
45°	1041	2018	1012	649	588	825
55°	571	1225	714	476	440	517
65°	324	584	446	305	261	322
75°	151	205	216	151	137	160
85°	32	35	48	38	36	38
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°	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3
2.5°	1811.7	1810.3	1813.1	1805.4	1806.1	1794.2	1794.2	1785.2	1773.3	1764.2	1760.0
5°	1950.0	1951.4	1948.6	1938.1	1931.1	1920.7	1908.8	1887.8	1870.4	1853.6	1840.3
7.5°	2091.1	2092.5	2083.4	2081.3	2063.1	2052.0	2025.4	1998.2	1974.4	1943.0	1920.7
10°	2211.2	2210.5	2200.7	2193.0	2177.7	2158.1	2132.3	2098.7	2067.3	2032.4	1998.9
12.5°	2281.0	2278.9	2277.5	2267.8	2253.8	2237.0	2216.1	2183.3	2142.7	2103.6	2063.1
15°	2342.5	2337.6	2328.5	2316.7	2296.4	2276.1	2251.7	2222.4	2185.4	2142.1	2105.7
17.5°	2416.5	2417.2	2403.3	2390.7	2364.1	2330.6	2294.3	2249.6	2202.1	2158.1	2121.8
20°	2512.9	2510.8	2496.8	2464.7	2433.3	2388.6	2345.3	2287.3	2225.9	2163.7	2115.5
22.5°	2651.2	2644.9	2630.2	2585.5	2532.5	2471.7	2399.8	2325.7	2248.2	2175.6	2108.5
25°	2804.8	2800.7	2772.0	2723.1	2654.7	2566.0	2479.4	2382.3	2275.4	2182.6	2105.7
27.5°	2932.0	2923.6	2897.7	2851.6	2784.6	2688.9	2569.5	2443.8	2316.7	2194.4	2089.0
30°	2916.6	2927.1	2924.3	2905.4	2857.9	2774.1	2665.9	2519.9	2361.4	2211.2	2079.2
32.5°	2697.3	2706.4	2737.8	2788.8	2804.2	2783.2	2709.2	2577.2	2411.6	2235.6	2071.5
35°	2327.1	2339.7	2387.2	2461.9	2559.7	2641.4	2658.2	2585.5	2438.2	2254.5	2063.8
37.5°	1856.4	1938.1	1970.2	2046.4	2200.0	2348.8	2478.0	2507.3	2427.7	2250.3	2054.7
40°	1519.8	1536.5	1607.8	1696.5	1820.8	1977.2	2183.3	2332.0	2336.9	2222.4	2025.4
42.5°	1246.0	1268.3	1311.6	1378.0	1479.9	1636.4	1850.8	2058.9	2171.4	2145.5	1987.0
45°	1040.6	1056.7	1092.3	1146.8	1228.5	1357.7	1540.7	1767.7	1947.9	2018.4	1912.3
47.5°	880.0	888.4	921.2	965.2	1028.1	1125.9	1274.6	1479.9	1694.4	1837.5	1809.6
50°	754.3	764.1	787.8	819.2	870.2	949.8	1063.0	1227.1	1449.9	1635.0	1672.0
52.5°	656.5	664.2	676.8	706.1	745.9	802.5	888.4	1033.0	1227.8	1427.6	1525.3
55°	571.3	576.9	588.8	605.5	639.1	683.1	762.0	864.6	1026.7	1225.0	1350.7
57.5°	498.7	501.5	508.4	525.2	549.7	582.5	642.5	736.1	853.5	1039.9	1178.2
60°	430.2	433.0	442.8	453.3	471.4	500.8	545.5	606.2	718.0	865.3	1005.7
62.5°	375.7	377.1	379.9	390.4	405.8	426.7	459.6	506.4	589.5	714.5	845.1
65°	324.1	324.8	326.2	334.5	344.3	361.1	384.1	419.1	486.1	583.9	701.2
67.5°	272.4	273.8	278.7	281.5	293.3	301.7	316.4	344.3	396.0	465.8	560.8
70°	230.5	229.8	234.7	238.2	241.7	252.1	261.2	282.9	312.2	362.5	438.6
72.5°	191.4	189.3	190.7	191.4	196.3	202.5	211.6	222.8	243.7	274.5	328.3
75°	150.9	151.6	151.6	153.0	156.4	159.2	162.0	169.0	181.6	204.6	236.1
77.5°	113.1	111.7	115.2	115.2	118.0	121.5	123.6	126.4	131.3	141.8	160.6
80°	76.8	76.8	77.5	79.6	78.9	80.3	83.8	86.6	92.9	98.5	104.1
82.5°	54.5	53.8	54.5	54.5	54.5	55.9	56.6	56.6	58.0	60.1	63.6
85°	32.1	32.1	32.8	32.8	33.5	33.5	34.2	34.2	34.2	34.9	35.6
87.5°	15.4	14.7	14.0	14.0	14.7	16.1	15.4	14.7	14.7	14.7	15.4
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°	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3
2.5°	1760.0	1755.1	1746.0	1737.7	1727.2	1718.1	1711.8	1704.1	1694.4	1682.5	1672.7
5°	1825.7	1810.3	1790.0	1772.6	1750.2	1732.8	1714.6	1697.2	1679.7	1657.3	1637.8
7.5°	1898.3	1868.3	1840.3	1804.0	1771.2	1742.6	1714.6	1686.0	1658.7	1628.0	1599.4
10°	1964.0	1925.5	1882.9	1834.0	1789.3	1746.7	1707.6	1669.2	1628.7	1593.1	1554.7
12.5°	2025.4	1973.0	1922.7	1857.8	1801.9	1747.4	1695.1	1644.8	1600.8	1551.9	1510.0
15°	2057.5	2008.7	1954.2	1878.7	1804.0	1741.2	1682.5	1620.3	1566.6	1514.9	1468.8
17.5°	2076.4	2024.7	1961.9	1888.5	1808.2	1730.0	1656.0	1589.6	1528.1	1468.8	1417.8
20°	2068.0	2018.4	1953.5	1884.3	1797.0	1714.6	1632.9	1557.5	1486.9	1423.4	1368.2
22.5°	2047.8	1996.1	1933.9	1859.9	1778.2	1689.5	1600.8	1519.1	1444.3	1378.0	1316.5
25°	2027.5	1957.7	1893.4	1822.2	1743.3	1656.6	1566.6	1477.9	1398.9	1331.9	1266.2
27.5°	2008.0	1923.4	1843.8	1775.4	1690.9	1612.6	1524.6	1433.2	1350.7	1283.0	1215.9
30°	1979.3	1881.5	1791.4	1711.1	1632.2	1558.9	1476.5	1387.8	1302.6	1232.0	1163.6
32.5°	1943.7	1838.2	1737.0	1641.3	1565.9	1493.2	1420.6	1336.8	1254.4	1181.0	1111.2
35°	1915.1	1782.4	1674.8	1576.3	1491.8	1421.3	1354.2	1285.8	1202.7	1127.2	1059.5
37.5°	1875.3	1729.3	1607.8	1500.2	1412.2	1342.4	1288.6	1223.6	1146.1	1072.8	1009.9
40°	1839.6	1670.6	1534.4	1428.3	1334.7	1259.9	1210.4	1157.3	1088.1	1020.4	957.5
42.5°	1792.1	1616.8	1460.4	1348.6	1254.4	1183.1	1132.8	1088.1	1033.0	970.1	901.7
45°	1727.2	1544.2	1384.3	1265.5	1170.5	1100.0	1053.2	1012.0	968.0	909.3	850.7
47.5°	1649.7	1475.1	1306.7	1176.1	1084.6	1018.3	972.2	938.0	905.8	854.9	795.5
50°	1552.6	1385.7	1222.2	1096.5	997.3	935.2	892.6	866.7	838.1	792.7	745.2
52.5°	1438.0	1293.5	1134.2	1005.0	912.8	855.6	815.1	789.2	766.9	731.9	687.2
55°	1316.5	1185.9	1039.2	922.6	836.7	778.0	738.9	714.5	700.5	669.1	633.5
57.5°	1178.9	1078.4	945.7	831.8	754.3	695.6	666.3	644.6	628.6	605.5	579.0
60°	1033.7	968.0	852.1	745.2	675.4	620.2	594.4	576.9	562.2	543.4	523.8
62.5°	886.3	843.0	745.9	657.9	595.1	551.1	527.3	511.9	494.5	483.3	464.4
65°	757.8	715.2	645.3	573.4	514.0	477.0	459.6	445.6	435.1	421.1	407.9
67.5°	615.3	595.8	544.1	490.3	447.0	411.4	396.0	384.8	373.0	364.6	354.8
70°	486.1	477.7	443.5	410.7	370.9	348.5	334.5	330.4	315.0	306.6	300.3
72.5°	371.6	368.8	352.7	332.4	307.3	288.4	275.9	271.0	262.6	256.3	252.8
75°	270.3	271.7	268.2	253.5	243.0	230.5	219.3	216.5	209.5	203.9	200.4
77.5°	184.4	191.4	190.0	189.3	184.4	175.3	170.4	168.3	160.6	158.5	157.8
80°	117.3	125.0	132.0	131.3	129.9	127.8	124.3	122.2	118.7	116.6	115.2
82.5°	68.4	75.4	81.0	85.9	85.9	83.8	81.7	81.0	81.0	79.6	79.6
85°	37.0	38.4	40.5	45.4	48.9	49.6	48.9	48.2	46.1	46.8	47.5
87.5°	16.1	16.1	16.8	16.8	16.1	19.6	21.7	22.3	21.0	19.6	18.2
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°	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3	1701.3
2.5°	1665.7	1656.0	1649.0	1635.0	1625.2	1621.0	1613.3	1611.3	1618.9	1613.3	1612.6
5°	1623.1	1602.9	1586.8	1570.7	1553.3	1542.1	1525.3	1522.6	1518.4	1512.1	1510.7
7.5°	1573.5	1548.4	1529.5	1503.0	1481.3	1463.9	1442.9	1434.6	1430.4	1422.7	1410.1
10°	1523.3	1491.8	1463.9	1437.3	1408.7	1385.7	1364.7	1348.6	1338.2	1328.4	1324.2
12.5°	1473.7	1441.5	1403.8	1370.3	1337.5	1310.9	1287.2	1278.1	1266.2	1254.4	1243.2
15°	1422.0	1379.4	1340.3	1303.2	1276.0	1248.1	1225.7	1210.4	1192.9	1188.0	1169.2
17.5°	1366.8	1327.0	1280.9	1241.1	1210.4	1181.0	1156.6	1138.4	1125.2	1106.3	1097.2
20°	1315.8	1266.2	1221.5	1185.9	1151.0	1114.7	1089.5	1074.9	1062.3	1047.6	1040.6
22.5°	1261.3	1213.2	1167.1	1123.8	1088.1	1052.5	1036.5	1021.1	1006.4	993.2	983.4
25°	1208.3	1159.4	1111.2	1067.9	1030.9	1005.0	984.1	966.6	958.9	945.7	935.9
27.5°	1155.2	1103.5	1054.6	1009.2	980.6	954.7	938.0	924.0	909.3	897.5	888.4
30°	1104.2	1051.1	996.6	962.4	931.7	907.2	888.4	875.1	864.6	854.2	847.9
32.5°	1053.2	998.0	951.2	913.5	884.9	864.6	845.1	832.5	821.3	809.5	801.8
35°	998.0	942.2	903.1	866.7	838.1	818.5	805.3	787.1	778.0	769.7	762.0
37.5°	948.5	895.4	852.1	820.6	794.1	775.2	757.8	748.7	736.8	729.8	723.6
40°	892.6	845.1	806.7	773.1	755.0	733.3	717.3	704.7	696.3	686.5	679.6
42.5°	842.3	799.0	762.0	732.6	708.9	691.4	676.1	663.5	652.3	646.0	640.4
45°	795.5	751.5	715.2	687.2	666.3	648.8	632.8	626.5	612.5	604.1	601.3
47.5°	746.6	706.8	671.2	645.3	623.7	607.6	592.3	578.3	571.3	562.9	558.7
50°	697.0	659.3	626.5	601.3	580.4	562.2	548.3	539.9	529.4	521.7	516.1
52.5°	647.4	613.2	580.4	556.6	539.2	521.0	505.0	496.6	486.8	482.6	479.1
55°	600.6	563.6	535.7	511.9	493.1	476.3	461.7	453.3	447.0	442.1	440.7
57.5°	546.9	516.8	490.3	469.3	449.1	433.0	419.7	412.1	406.5	405.8	400.9
60°	494.5	467.9	444.2	421.1	404.4	389.7	378.5	369.5	363.9	363.2	361.8
62.5°	442.1	417.0	395.3	375.7	361.1	347.1	336.6	326.2	323.4	319.2	315.7
65°	390.4	367.4	349.2	333.1	317.1	305.2	294.7	288.4	280.8	276.6	268.9
67.5°	339.4	320.6	303.1	289.8	276.6	264.7	255.6	246.5	241.0	237.5	231.2
70°	289.1	275.2	257.7	243.0	233.3	224.2	217.2	206.7	203.2	200.4	197.7
72.5°	241.7	229.8	215.8	204.6	194.9	186.5	178.1	174.6	171.1	168.3	166.9
75°	197.7	185.8	173.2	164.8	157.8	150.9	146.7	143.2	141.8	141.1	138.3
77.5°	153.7	146.7	136.2	128.5	123.6	120.8	116.6	115.2	115.9	112.4	111.7
80°	111.0	107.6	99.2	96.4	92.9	90.1	88.0	84.5	81.0	79.6	77.5
82.5°	75.4	71.9	69.8	65.0	62.2	60.8	58.7	58.0	59.4	57.3	56.6
85°	44.0	40.5	39.1	38.4	37.0	38.4	37.7	37.0	36.3	35.6	36.3
87.5°	17.5	17.5	16.8	18.2	16.1	16.8	16.8	16.1	16.1	16.1	15.4
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: P242912

CATALOG NUMBER: S125RDR-S1270D830-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1701.3	1701.3	1701.3	1701.3
2.5°	1612.0	1604.3	1602.2	1605.0
5°	1503.7	1496.7	1500.2	1498.8
7.5°	1412.2	1403.1	1392.6	1395.4
10°	1315.1	1308.1	1303.9	1307.4
12.5°	1233.4	1229.9	1226.4	1223.6
15°	1160.8	1152.4	1148.9	1139.8
17.5°	1090.9	1088.1	1079.1	1072.8
20°	1030.2	1027.4	1018.3	1023.9
22.5°	979.9	972.9	971.5	968.0
25°	933.1	924.0	920.5	916.3
27.5°	885.6	880.7	875.8	874.4
30°	839.5	834.6	831.1	831.1
32.5°	798.3	794.8	791.3	790.6
35°	758.5	752.9	751.5	747.3
37.5°	716.6	711.7	711.7	712.4
40°	676.8	673.3	672.6	667.7
42.5°	634.2	632.8	630.0	628.6
45°	596.4	591.6	591.6	588.1
47.5°	556.6	552.4	553.1	549.0
50°	516.8	514.7	514.0	512.6
52.5°	477.0	476.3	479.8	476.3
55°	442.1	440.0	444.2	440.0
57.5°	400.9	399.5	403.7	400.9
60°	360.4	356.2	358.3	359.0
62.5°	312.2	310.1	311.5	307.3
65°	267.5	265.4	262.6	261.2
67.5°	232.6	226.3	226.3	227.7
70°	193.5	193.5	192.8	192.8
72.5°	166.2	165.5	164.1	163.4
75°	138.3	139.0	137.6	136.9
77.5°	108.3	104.8	106.2	104.8
80°	77.5	76.8	78.9	76.8
82.5°	57.3	56.6	57.3	55.9
85°	37.0	36.3	35.6	36.3
87.5°	16.1	15.4	15.4	15.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)