

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: P242391

Luminaire Tested: **S122RDR-S1005D927-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242391  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-29)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122RDR-S1005D927-X4F0-XX-UDD-A-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2919.7 lumens  
Efficiency: N/A  
Efficacy: 71.0 lumens/watt  
Spacing Criteria (0/90/45): 0.85 / 1.16 / 1.02  
Luminous Opening: Rectangular (W 3.88' x L: 0.15' x H: 0')  
CIE Type: Direct

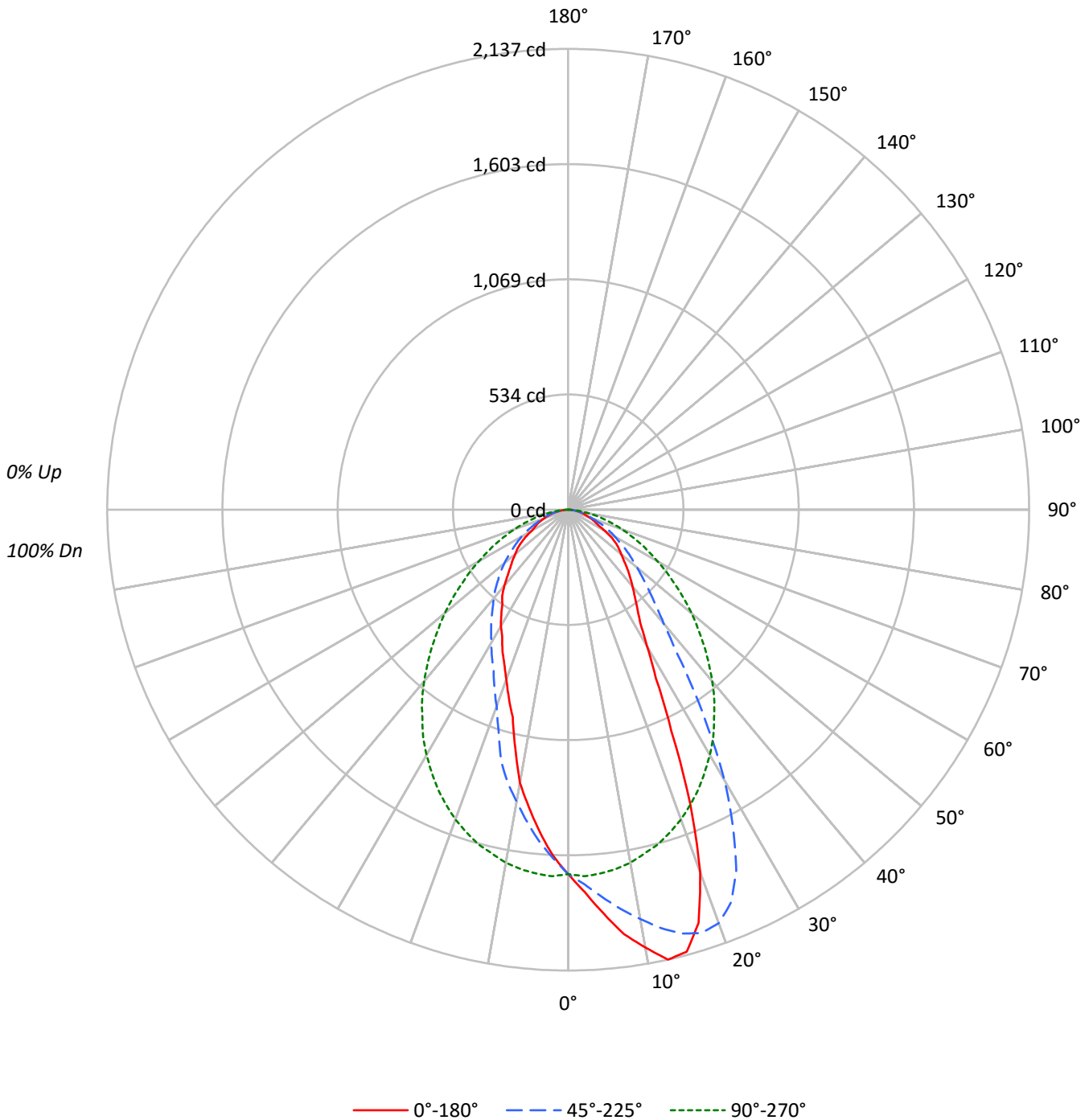
Input Watts (W): 41.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	100	100	100	100	100		
1	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87	87	87	87	87	87	87		
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76	76	76	76	76	76	76		
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66	66	66	66	66	66	66		
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	59	59	59	59	59	59	59		
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52	52	52	52	52	52	52		
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47	47	47	47	47	47	47		
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42	42	42	42	42	42	42		
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	39	39	39	39	39	39	39		
9	62	50	43	38	61	50	42	37	49	42	37	47	41	37	47	41	37	35	35	35	35	35	35	35		
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	44	38	34	33	33	33	33	33	33	33		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	32183	32183	32183
5°	35943	32384	28713
10°	39878	32157	24891
15°	41839	31686	19611
20°	36271	30987	16970
25°	23789	30031	15151
30°	16012	28872	13714
35°	12968	27411	12368
40°	11532	25822	11445
45°	10438	23958	10215
50°	9497	22112	9465
55°	8930	20061	8814
60°	7471	18183	7379
65°	6296	16509	7144
70°	5820	14747	6733
75°	5446	12835	6219
80°	5024	10563	5539
85°	4611	8349	4874



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	160.3	5.5
10°-20°	447.3	15.3
20°-30°	575.7	19.7
30°-40°	546.1	18.7
40°-50°	468.0	16.0
50°-60°	356.5	12.2
60°-70°	224.8	7.7
70°-80°	112.2	3.8
80°-90°	28.8	1.0
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°	1183.2	40.5
0°-40°	1729.4	59.2
0°-60°	2553.8	87.5
0°-90°	2919.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2919.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1690	1690	1690	1690	1690	
5°	1880	1802	1694	1543	1502	185
15°	2122	2035	1607	1203	994	577
25°	1132	1844	1429	818	721	534
35°	558	1002	1179	621	532	355
45°	388	528	889	458	379	300
55°	269	329	604	311	265	237
65°	140	188	366	187	158	141
75°	74	83	174	95	84	78
85°	21	22	38	22	22	23
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°	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6
2.5°	1775.3	1777.1	1778.8	1774.7	1774.7	1771.2	1763.6	1757.7	1741.2	1738.9	1738.9
5°	1879.8	1878.6	1881.0	1873.3	1862.8	1860.4	1849.3	1834.6	1819.3	1802.3	1798.8
7.5°	1985.5	1978.4	1975.5	1979.0	1967.9	1952.6	1933.8	1916.2	1889.8	1868.1	1854.6
10°	2061.8	2081.2	2069.4	2048.9	2053.0	2025.4	2010.7	1985.5	1964.3	1927.3	1919.1
12.5°	2136.9	2141.6	2139.9	2130.5	2122.8	2105.8	2084.7	2063.5	2020.1	1987.8	1953.8
15°	2121.7	2132.8	2135.8	2132.2	2135.2	2134.0	2123.4	2105.2	2071.2	2034.8	2003.1
17.5°	2009.0	2021.9	2032.4	2041.8	2056.5	2085.3	2094.1	2097.6	2083.5	2057.7	2031.3
20°	1789.4	1776.5	1830.5	1858.1	1881.6	1940.3	1990.8	2010.1	2041.2	2040.7	2034.8
22.5°	1478.2	1485.3	1535.8	1569.8	1649.7	1708.4	1767.7	1854.0	1921.5	1971.4	2001.9
25°	1131.9	1154.2	1205.3	1249.9	1326.2	1435.4	1534.6	1649.7	1758.3	1844.0	1925.6
27.5°	880.6	883.5	929.9	975.1	1022.1	1116.6	1249.3	1387.2	1542.2	1653.8	1794.7
30°	728.0	724.4	741.5	766.7	805.5	874.7	968.7	1103.7	1258.1	1450.6	1622.1
32.5°	619.9	621.1	632.9	649.9	680.4	721.5	778.5	881.8	1025.6	1214.1	1422.5
35°	557.7	557.1	566.5	580.0	593.5	623.5	667.5	725.0	825.4	1002.1	1207.6
37.5°	506.1	509.0	513.1	521.9	538.3	556.0	583.5	624.1	700.4	810.2	994.5
40°	463.8	465.0	471.4	478.5	487.3	500.2	521.9	553.0	605.3	688.6	814.9
42.5°	425.0	426.2	430.3	436.8	443.2	456.2	473.2	499.0	538.9	599.4	698.0
45°	387.5	387.5	391.6	394.5	402.1	413.9	428.6	450.9	480.2	528.4	597.6
47.5°	351.1	351.1	354.0	359.3	364.6	374.0	389.2	408.0	429.1	468.5	530.1
50°	320.5	321.1	322.9	327.0	329.9	338.2	349.3	365.2	387.5	416.2	465.5
52.5°	295.9	295.3	297.6	298.8	300.6	305.9	313.5	327.0	346.4	370.4	409.2
55°	268.9	266.5	270.1	273.0	274.7	277.1	281.8	290.6	307.6	328.8	359.3
57.5°	237.2	236.0	237.8	240.7	246.0	251.9	254.8	260.7	269.5	285.9	318.2
60°	196.1	196.1	201.4	203.1	209.6	217.8	226.0	230.7	239.5	249.5	271.8
62.5°	159.7	160.3	162.0	163.8	166.7	177.3	189.6	201.4	209.6	219.0	231.9
65°	139.7	140.9	140.9	142.1	144.4	146.8	151.5	159.7	174.4	187.9	199.0
67.5°	122.1	122.1	122.7	123.9	124.5	127.4	129.2	133.3	136.2	151.5	166.7
70°	104.5	106.3	105.7	106.8	107.4	108.6	111.0	112.7	118.0	120.9	129.2
72.5°	88.1	89.2	89.2	89.8	91.6	91.6	93.3	95.1	98.0	100.4	103.9
75°	74.0	73.4	74.0	75.1	75.7	76.3	76.3	78.7	80.4	82.8	85.7
77.5°	59.9	60.5	60.5	60.5	60.5	61.6	61.6	62.8	64.6	65.8	67.5
80°	45.8	46.4	45.8	46.4	47.0	47.6	47.0	47.6	49.3	50.5	50.5
82.5°	32.9	32.9	33.5	33.5	33.5	33.5	34.6	34.6	35.8	35.2	35.8
85°	21.1	20.5	20.5	20.5	21.1	21.7	21.1	21.1	21.7	21.7	21.7
87.5°	9.4	10.0	10.0	10.0	10.0	10.0	10.0	10.6	10.0	10.6	10.0
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°	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6
2.5°	1740.1	1735.4	1731.3	1720.7	1715.4	1703.7	1701.9	1701.3	1686.1	1671.4	1667.3
5°	1789.4	1780.0	1765.9	1749.5	1732.4	1714.8	1703.1	1693.7	1670.2	1647.9	1635.0
7.5°	1838.1	1821.1	1798.8	1770.6	1746.5	1718.4	1699.0	1681.4	1649.1	1619.7	1600.4
10°	1893.9	1861.0	1828.7	1785.9	1752.4	1719.5	1689.0	1662.6	1625.0	1582.7	1552.8
12.5°	1928.5	1891.5	1844.0	1802.3	1756.5	1712.5	1669.0	1633.2	1587.4	1543.4	1506.4
15°	1959.1	1920.3	1866.3	1806.4	1750.6	1696.0	1649.1	1606.8	1549.3	1497.0	1453.6
17.5°	1987.2	1933.8	1878.0	1808.8	1747.1	1680.8	1621.5	1568.6	1505.8	1444.2	1394.9
20°	1999.6	1946.7	1879.8	1810.5	1734.2	1652.6	1587.4	1528.7	1460.0	1391.4	1332.6
22.5°	1991.9	1953.8	1877.4	1791.1	1712.5	1626.2	1550.5	1480.0	1401.9	1331.5	1261.0
25°	1952.0	1937.9	1867.5	1777.1	1687.8	1588.6	1503.5	1428.9	1342.0	1266.9	1192.9
27.5°	1878.6	1899.2	1849.3	1751.2	1654.9	1548.1	1455.3	1371.4	1282.7	1198.8	1124.8
30°	1762.4	1832.2	1813.5	1724.2	1613.3	1508.8	1401.3	1312.7	1216.4	1129.5	1056.7
32.5°	1603.3	1730.1	1757.7	1686.7	1571.0	1453.6	1339.7	1251.6	1150.1	1057.3	986.9
35°	1432.4	1605.0	1684.3	1636.7	1521.7	1397.8	1281.6	1178.8	1077.9	987.5	917.0
37.5°	1229.9	1460.0	1582.2	1576.9	1467.1	1340.9	1214.6	1113.1	1009.2	919.9	846.6
40°	1033.8	1288.6	1460.6	1498.8	1409.6	1270.4	1142.4	1038.5	937.5	850.7	763.2
42.5°	857.7	1111.3	1332.6	1406.0	1339.7	1201.7	1073.2	963.4	865.9	784.9	695.1
45°	722.1	944.0	1177.1	1295.7	1256.3	1128.3	992.7	889.4	797.2	726.2	640.5
47.5°	625.2	786.7	1020.9	1175.9	1171.2	1049.7	914.7	815.4	728.6	662.8	590.0
50°	544.8	681.0	871.8	1053.8	1069.1	971.0	844.2	746.2	666.3	596.5	540.7
52.5°	472.6	578.9	745.6	918.2	968.7	887.1	765.0	676.3	599.4	536.6	490.8
55°	411.5	498.4	628.8	792.0	857.7	797.8	688.6	604.1	541.3	487.3	446.2
57.5°	358.1	426.2	534.8	671.6	746.2	705.7	612.3	542.5	486.7	436.2	403.3
60°	308.2	361.6	450.3	560.1	644.6	618.2	541.3	477.3	431.5	389.2	358.7
62.5°	261.2	305.3	378.1	462.0	537.8	530.7	471.4	420.3	381.6	344.0	319.4
65°	217.8	251.3	310.6	380.4	442.7	447.9	402.7	366.3	330.5	300.0	277.1
67.5°	180.2	203.1	247.7	309.4	356.9	373.4	342.8	313.5	284.1	259.5	238.9
70°	146.2	163.8	194.3	241.9	284.7	302.3	286.5	264.8	240.1	220.7	203.7
72.5°	111.5	128.6	149.1	180.8	216.0	235.4	232.5	218.4	199.6	184.3	168.5
75°	89.2	94.5	109.8	133.3	162.0	178.5	182.6	174.4	158.5	146.2	136.8
77.5°	69.3	72.8	81.0	95.1	115.1	129.7	136.2	135.0	123.3	115.1	106.3
80°	52.8	54.6	58.1	63.4	77.5	92.2	96.3	96.3	88.6	85.7	76.9
82.5°	37.0	38.2	39.9	42.3	47.0	59.3	64.0	65.2	61.1	56.9	50.5
85°	22.9	22.3	23.5	25.2	26.4	29.9	37.0	38.2	37.0	32.3	30.5
87.5°	10.0	10.6	10.6	10.0	10.6	11.2	14.1	17.0	14.7	12.9	11.7
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°	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6	1689.6
2.5°	1659.6	1655.5	1647.9	1636.2	1629.1	1616.8	1608.6	1613.3	1614.4	1613.3	1612.1
5°	1620.9	1608.6	1591.5	1575.1	1559.8	1543.4	1534.0	1529.9	1521.7	1517.0	1514.6
7.5°	1576.9	1558.7	1534.6	1508.2	1483.5	1460.0	1449.5	1441.3	1426.0	1417.8	1410.1
10°	1526.4	1492.9	1468.8	1431.3	1408.4	1374.9	1352.0	1352.6	1329.7	1316.8	1307.4
12.5°	1470.6	1433.0	1389.0	1356.1	1322.1	1296.8	1268.1	1254.0	1229.3	1217.0	1187.6
15°	1407.8	1364.9	1322.7	1276.9	1244.6	1202.9	1163.0	1114.3	1074.9	1040.9	1031.5
17.5°	1340.9	1288.0	1246.3	1199.4	1148.9	1073.2	1023.8	993.9	970.4	952.8	938.7
20°	1271.6	1217.6	1172.4	1091.4	1016.8	969.3	935.2	913.5	888.8	869.4	858.9
22.5°	1198.8	1141.9	1076.1	983.3	929.3	893.5	864.2	838.3	823.7	809.6	800.2
25°	1130.7	1069.1	967.5	905.3	858.3	818.4	797.2	782.0	764.4	743.8	734.4
27.5°	1059.7	961.6	884.7	839.5	791.4	766.1	747.9	722.7	706.8	699.2	688.6
30°	978.1	880.0	823.1	772.6	740.9	712.1	689.8	676.9	661.6	645.8	639.3
32.5°	887.1	813.7	759.7	719.7	687.5	664.0	647.5	624.6	614.7	606.4	591.2
35°	814.9	755.6	705.7	671.6	641.1	621.1	600.6	588.2	568.3	560.1	554.8
37.5°	749.1	697.4	659.9	622.3	598.8	575.3	563.6	543.0	535.4	522.5	511.9
40°	695.1	644.6	608.8	579.4	552.4	536.0	520.1	504.3	491.4	486.1	472.6
42.5°	639.9	601.2	565.3	532.5	516.6	499.0	477.9	467.3	453.8	444.4	437.4
45°	590.0	553.6	523.1	496.7	476.7	458.5	445.6	426.2	418.6	401.6	394.5
47.5°	546.0	510.8	481.4	455.6	435.6	425.0	406.3	389.2	378.7	366.9	356.9
50°	498.4	470.2	442.1	419.8	402.1	385.1	365.7	358.1	339.3	334.0	328.8
52.5°	455.0	428.6	403.3	381.6	364.0	347.5	331.1	320.5	309.4	304.1	300.6
55°	415.1	389.2	364.6	345.2	327.6	310.6	300.0	287.7	281.8	277.7	273.0
57.5°	374.0	350.5	331.1	311.1	293.5	279.4	266.5	259.5	253.6	248.9	242.5
60°	335.2	312.9	295.9	277.7	259.5	248.3	238.9	230.1	223.1	214.9	212.5
62.5°	294.1	275.3	260.1	242.5	227.2	217.2	208.4	200.2	191.4	178.5	174.9
65°	257.1	241.9	225.4	210.8	196.7	186.7	173.8	164.4	160.9	159.7	159.1
67.5°	223.1	208.4	194.3	179.1	166.1	155.0	147.4	146.2	143.8	143.2	141.5
70°	189.0	175.5	161.4	147.4	135.0	133.3	130.9	128.6	125.6	124.5	123.3
72.5°	158.5	144.4	130.3	119.8	116.2	113.9	111.5	109.2	107.4	106.3	105.7
75°	126.2	113.3	103.9	99.8	96.9	95.1	91.6	89.8	88.6	86.9	86.3
77.5°	96.3	88.1	83.4	81.0	77.5	75.7	73.4	71.6	69.9	69.9	68.7
80°	69.3	65.8	62.8	59.3	58.1	55.8	55.2	53.4	54.0	52.2	52.2
82.5°	49.9	45.2	42.9	41.7	40.5	38.7	38.2	37.6	37.6	36.4	36.4
85°	27.6	26.4	25.2	24.1	24.1	22.3	22.9	22.3	22.3	21.1	20.5
87.5°	11.2	10.6	9.4	9.4	9.4	8.8	8.8	8.2	8.2	8.2	7.6
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: P242391

CATALOG NUMBER: S122RDR-S1005D927-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1689.6	1689.6	1689.6	1689.6
2.5°	1605.6	1606.8	1605.0	1606.2
5°	1511.7	1504.7	1503.5	1501.7
7.5°	1400.7	1400.2	1396.6	1392.5
10°	1294.5	1291.6	1291.0	1286.9
12.5°	1170.0	1147.1	1144.8	1133.0
15°	1017.4	1013.9	1002.1	994.5
17.5°	932.3	920.5	916.4	914.7
20°	850.7	840.1	838.3	837.2
22.5°	794.3	783.2	777.9	773.8
25°	728.6	724.4	722.1	720.9
27.5°	676.9	666.3	665.1	662.2
30°	634.0	631.1	627.0	623.5
32.5°	583.5	581.2	577.7	576.5
35°	548.9	540.7	537.2	531.9
37.5°	510.8	506.1	500.2	502.5
40°	465.0	462.0	460.8	460.3
42.5°	428.6	419.2	415.6	415.6
45°	391.6	383.9	378.7	379.2
47.5°	351.7	352.2	348.7	349.9
50°	324.6	321.1	318.8	319.4
52.5°	298.8	295.9	294.1	297.1
55°	270.1	266.5	265.9	265.4
57.5°	238.9	237.2	234.2	232.5
60°	204.9	200.2	194.3	193.7
62.5°	173.8	173.8	173.8	173.8
65°	157.9	157.3	157.9	158.5
67.5°	141.5	140.3	139.1	139.7
70°	122.1	121.5	120.9	120.9
72.5°	103.3	103.3	102.7	102.2
75°	85.7	84.5	84.5	84.5
77.5°	68.7	68.1	67.5	66.9
80°	51.7	51.1	50.5	50.5
82.5°	36.4	35.8	35.8	35.2
85°	21.1	21.7	21.1	22.3
87.5°	7.6	7.0	7.6	7.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)