

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: P242937

Luminaire Tested: **S125RDR-S1270D940-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242937
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-S1270D940-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4170.4 lumens
Efficiency: N/A
Efficacy: 101.5 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

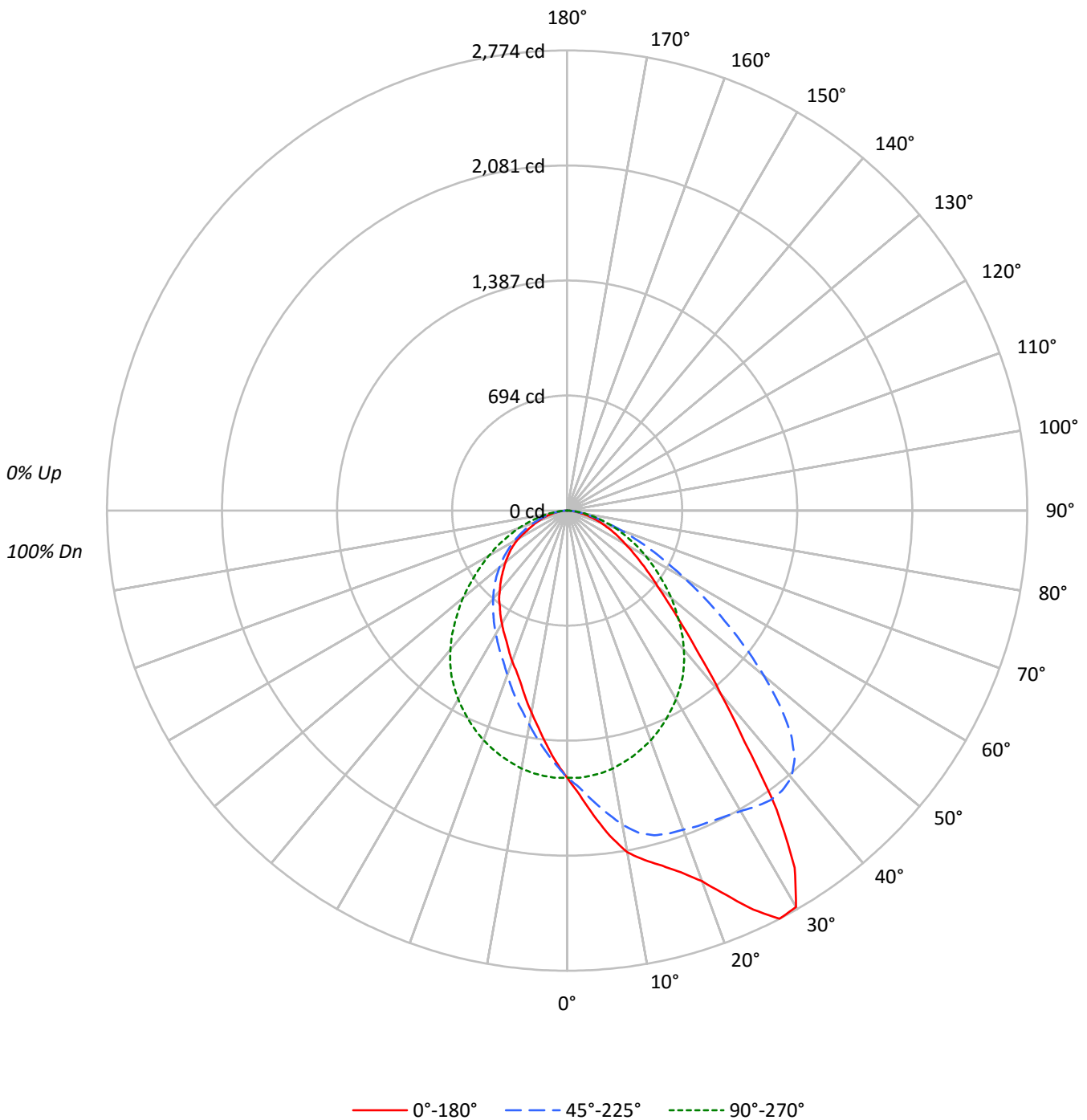
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	11440	11440	11440
5°	13162	11455	10117
10°	15097	11397	8927
15°	16307	11279	7934
20°	17981	11145	7327
25°	20810	10965	6798
30°	22645	10775	6453
35°	19102	10554	6134
40°	13340	10158	5861
45°	9896	9623	5593
50°	7890	9067	5363
55°	6697	8377	5158
60°	5785	7758	4827
65°	5156	7090	4156
70°	4530	6494	3790
75°	3919	5624	3556
80°	2976	4731	2976
85°	2479	3719	2805



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.3	3.7
10°-20°	452.5	10.9
20°-30°	717.5	17.2
30°-40°	867.0	20.8
40°-50°	772.1	18.5
50°-60°	592.0	14.2
60°-70°	384.4	9.2
70°-80°	186.6	4.5
80°-90°	43.9	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°	1324.4	31.8
0°-40°	2191.4	52.5
0°-60°	3555.5	85.3
0°-90°	4170.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4170.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1610	1610	1610	1610	1610	
5°	1845	1754	1606	1459	1418	184
15°	2216	2026	1533	1181	1078	634
25°	2654	2065	1398	951	867	1221
35°	2202	2133	1216	774	707	1334
45°	984	1910	957	614	556	781
55°	540	1159	676	451	416	489
65°	307	552	422	289	247	305
75°	143	194	205	143	130	152
85°	30	33	46	36	34	36
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°	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6
2.5°	1714.0	1712.7	1715.3	1708.0	1708.7	1697.5	1697.5	1688.9	1677.7	1669.1	1665.1
5°	1844.8	1846.1	1843.5	1833.6	1827.0	1817.1	1805.8	1786.0	1769.5	1753.6	1741.1
7.5°	1978.3	1979.6	1971.0	1969.0	1951.9	1941.3	1916.2	1890.4	1867.9	1838.2	1817.1
10°	2091.9	2091.3	2082.0	2074.8	2060.2	2041.7	2017.3	1985.6	1955.8	1922.8	1891.1
12.5°	2158.0	2156.0	2154.7	2145.5	2132.2	2116.4	2096.6	2065.5	2027.2	1990.2	1951.9
15°	2216.2	2211.5	2202.9	2191.7	2172.6	2153.4	2130.3	2102.5	2067.5	2026.5	1992.2
17.5°	2286.2	2286.9	2273.7	2261.8	2236.6	2204.9	2170.6	2128.3	2083.4	2041.7	2007.4
20°	2377.4	2375.4	2362.2	2331.8	2302.1	2259.8	2218.8	2164.0	2105.8	2047.0	2001.4
22.5°	2508.2	2502.3	2488.4	2446.1	2395.9	2338.4	2270.3	2200.3	2127.0	2058.2	1994.8
25°	2653.6	2649.6	2622.5	2576.3	2511.5	2427.6	2345.7	2253.8	2152.7	2064.9	1992.2
27.5°	2773.8	2765.9	2741.5	2697.9	2634.4	2543.9	2430.9	2312.0	2191.7	2076.1	1976.3
30°	2759.3	2769.2	2766.6	2748.7	2703.8	2624.5	2522.1	2384.0	2234.0	2091.9	1967.1
32.5°	2551.8	2560.4	2590.2	2638.4	2652.9	2633.1	2563.1	2438.2	2281.6	2115.1	1959.8
35°	2201.6	2213.5	2258.5	2329.2	2421.7	2499.0	2514.8	2446.1	2306.7	2132.9	1952.5
37.5°	1756.3	1833.6	1864.0	1936.0	2081.4	2222.1	2344.4	2372.1	2296.8	2128.9	1943.9
40°	1437.8	1453.7	1521.1	1605.0	1722.6	1870.6	2065.5	2206.3	2210.9	2102.5	1916.2
42.5°	1178.8	1199.9	1240.9	1303.7	1400.1	1548.1	1751.0	1947.9	2054.3	2029.8	1879.8
45°	984.5	999.7	1033.4	1085.0	1162.3	1284.5	1457.6	1672.4	1842.8	1909.6	1809.1
47.5°	832.5	840.5	871.5	913.2	972.6	1065.1	1205.9	1400.1	1603.0	1738.4	1712.0
50°	713.6	722.9	745.3	775.1	823.3	898.6	1005.7	1160.9	1371.7	1546.8	1581.8
52.5°	621.1	628.4	640.3	668.0	705.7	759.2	840.5	977.3	1161.6	1350.6	1443.1
55°	540.5	545.8	557.0	572.9	604.6	646.2	720.9	818.0	971.3	1159.0	1277.9
57.5°	471.8	474.4	481.0	496.9	520.0	551.1	607.9	696.4	807.4	983.9	1114.7
60°	407.0	409.7	418.9	428.8	446.0	473.8	516.0	573.5	679.3	818.7	951.5
62.5°	355.5	356.8	359.4	369.4	383.9	403.7	434.8	479.0	557.7	676.0	799.5
65°	306.6	307.3	308.6	316.5	325.8	341.6	363.4	396.5	459.9	552.4	663.4
67.5°	257.7	259.0	263.6	266.3	277.5	285.4	299.3	325.8	374.6	440.7	530.6
70°	218.0	217.4	222.0	225.3	228.6	238.5	247.1	267.6	295.4	342.9	415.0
72.5°	181.0	179.1	180.4	181.0	185.7	191.6	200.2	210.8	230.6	259.7	310.6
75°	142.7	143.4	143.4	144.7	148.0	150.7	153.3	159.9	171.8	193.6	223.3
77.5°	107.0	105.7	109.0	109.0	111.7	115.0	117.0	119.6	124.2	134.1	152.0
80°	72.7	72.7	73.3	75.3	74.7	76.0	79.3	81.9	87.9	93.2	98.5
82.5°	51.5	50.9	51.5	51.5	51.5	52.9	53.5	53.5	54.8	56.8	60.1
85°	30.4	30.4	31.1	31.1	31.7	31.7	32.4	32.4	32.4	33.0	33.7
87.5°	14.5	13.9	13.2	13.2	13.9	15.2	14.5	13.9	13.9	13.9	14.5
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°	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6
2.5°	1665.1	1660.5	1651.9	1644.0	1634.0	1625.5	1619.5	1612.2	1603.0	1591.8	1582.5
5°	1727.2	1712.7	1693.5	1677.0	1655.8	1639.3	1622.1	1605.6	1589.1	1568.0	1549.5
7.5°	1795.9	1767.5	1741.1	1706.7	1675.7	1648.6	1622.1	1595.1	1569.3	1540.2	1513.1
10°	1858.0	1821.7	1781.4	1735.1	1692.8	1652.5	1615.5	1579.2	1540.9	1507.2	1470.8
12.5°	1916.2	1866.6	1819.1	1757.6	1704.7	1653.2	1603.6	1556.1	1514.4	1468.2	1428.5
15°	1946.6	1900.3	1848.8	1777.4	1706.7	1647.3	1591.8	1532.9	1482.1	1433.2	1389.6
17.5°	1964.4	1915.5	1856.1	1786.7	1710.7	1636.7	1566.6	1503.9	1445.7	1389.6	1341.3
20°	1956.5	1909.6	1848.1	1782.7	1700.1	1622.1	1544.8	1473.5	1406.7	1346.6	1294.4
22.5°	1937.3	1888.4	1829.6	1759.6	1682.3	1598.4	1514.4	1437.1	1366.4	1303.7	1245.5
25°	1918.2	1852.1	1791.3	1723.9	1649.2	1567.3	1482.1	1398.2	1323.5	1260.1	1197.9
27.5°	1899.7	1819.7	1744.4	1679.6	1599.7	1525.7	1442.4	1355.9	1277.9	1213.8	1150.4
30°	1872.6	1780.1	1694.8	1618.8	1544.2	1474.8	1396.8	1312.9	1232.3	1165.6	1100.8
32.5°	1838.9	1739.1	1643.3	1552.8	1481.4	1412.7	1344.0	1264.7	1186.7	1117.3	1051.3
35°	1811.8	1686.2	1584.5	1491.3	1411.4	1344.6	1281.2	1216.4	1137.8	1066.5	1002.4
37.5°	1774.1	1636.0	1521.1	1419.3	1336.0	1270.0	1219.1	1157.6	1084.3	1014.9	955.4
40°	1740.4	1580.5	1451.7	1351.2	1262.7	1192.0	1145.1	1094.9	1029.5	965.4	905.9
42.5°	1695.5	1529.6	1381.6	1275.9	1186.7	1119.3	1071.7	1029.5	977.3	917.8	853.0
45°	1634.0	1460.9	1309.6	1197.3	1107.4	1040.7	996.4	957.4	915.8	860.3	804.8
47.5°	1560.7	1395.5	1236.3	1112.7	1026.1	963.4	919.8	887.4	857.0	808.8	752.6
50°	1468.9	1310.9	1156.3	1037.4	943.6	884.7	844.4	820.0	792.9	750.0	705.0
52.5°	1360.5	1223.7	1073.1	950.8	863.6	809.4	771.1	746.7	725.5	692.5	650.2
55°	1245.5	1122.0	983.2	872.9	791.6	736.1	699.1	676.0	662.7	633.0	599.3
57.5°	1115.4	1020.2	894.7	787.0	713.6	658.1	630.4	609.9	594.7	572.9	547.8
60°	977.9	915.8	806.1	705.0	638.9	586.7	562.3	545.8	531.9	514.1	495.6
62.5°	838.5	797.5	705.7	622.4	563.0	521.3	498.9	484.3	467.8	457.2	439.4
65°	716.9	676.6	610.5	542.5	486.3	451.3	434.8	421.6	411.6	398.4	385.9
67.5°	582.1	563.6	514.7	463.8	422.9	389.2	374.6	364.1	352.8	344.9	335.7
70°	459.9	452.0	419.6	388.5	350.9	329.7	316.5	312.5	298.0	290.1	284.1
72.5°	351.5	348.9	333.7	314.5	290.7	272.9	261.0	256.4	248.4	242.5	239.2
75°	255.7	257.0	253.7	239.9	229.9	218.0	207.5	204.8	198.2	192.9	189.6
77.5°	174.4	181.0	179.7	179.1	174.4	165.8	161.2	159.2	152.0	150.0	149.3
80°	111.0	118.3	124.9	124.2	122.9	120.9	117.6	115.6	112.3	110.3	109.0
82.5°	64.8	71.4	76.6	81.3	81.3	79.3	77.3	76.6	76.6	75.3	75.3
85°	35.0	36.3	38.3	42.9	46.3	46.9	46.3	45.6	43.6	44.3	44.9
87.5°	15.2	15.2	15.9	15.9	15.2	18.5	20.5	21.1	19.8	18.5	17.2
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°	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6	1609.6
2.5°	1575.9	1566.6	1560.0	1546.8	1537.6	1533.6	1526.3	1524.4	1531.6	1526.3	1525.7
5°	1535.6	1516.4	1501.2	1486.0	1469.5	1458.9	1443.1	1440.4	1436.5	1430.5	1429.2
7.5°	1488.7	1464.9	1447.0	1421.9	1401.5	1384.9	1365.1	1357.2	1353.2	1346.0	1334.1
10°	1441.1	1411.4	1384.9	1359.8	1332.7	1310.9	1291.1	1275.9	1266.0	1256.8	1252.8
12.5°	1394.2	1363.8	1328.1	1296.4	1265.3	1240.2	1217.8	1209.2	1197.9	1186.7	1176.1
15°	1345.3	1305.0	1268.0	1233.0	1207.2	1180.8	1159.6	1145.1	1128.6	1123.9	1106.1
17.5°	1293.1	1255.4	1211.8	1174.2	1145.1	1117.3	1094.2	1077.0	1064.5	1046.6	1038.0
20°	1244.9	1197.9	1155.7	1122.0	1088.9	1054.6	1030.8	1016.9	1005.0	991.1	984.5
22.5°	1193.3	1147.7	1104.1	1063.2	1029.5	995.8	980.6	966.0	952.1	939.6	930.3
25°	1143.1	1096.8	1051.3	1010.3	975.3	950.8	931.0	914.5	907.2	894.7	885.4
27.5°	1092.9	1044.0	997.7	954.8	927.7	903.2	887.4	874.2	860.3	849.1	840.5
30°	1044.7	994.4	942.9	910.5	881.4	858.3	840.5	827.9	818.0	808.1	802.2
32.5°	996.4	944.2	899.9	864.3	837.2	818.0	799.5	787.6	777.0	765.8	758.5
35°	944.2	891.4	854.4	820.0	792.9	774.4	761.8	744.7	736.1	728.1	720.9
37.5°	897.3	847.1	806.1	776.4	751.3	733.4	716.9	708.3	697.1	690.5	684.5
40°	844.4	799.5	763.2	731.5	714.3	693.8	678.6	666.7	658.8	649.5	642.9
42.5°	796.9	755.9	720.9	693.1	670.7	654.1	639.6	627.7	617.1	611.2	605.9
45°	752.6	711.0	676.6	650.2	630.4	613.8	598.6	592.7	579.5	571.6	568.9
47.5°	706.3	668.7	635.0	610.5	590.1	574.9	560.3	547.1	540.5	532.6	528.6
50°	659.4	623.8	592.7	568.9	549.1	531.9	518.7	510.8	500.9	493.6	488.3
52.5°	612.5	580.1	549.1	526.6	510.1	492.9	477.7	469.8	460.5	456.6	453.3
55°	568.2	533.2	506.8	484.3	466.5	450.6	436.8	428.8	422.9	418.3	416.9
57.5°	517.4	489.0	463.8	444.0	424.9	409.7	397.1	389.8	384.6	383.9	379.3
60°	467.8	442.7	420.2	398.4	382.6	368.7	358.1	349.5	344.3	343.6	342.3
62.5°	418.3	394.5	374.0	355.5	341.6	328.4	318.5	308.6	305.9	302.0	298.7
65°	369.4	347.6	330.4	315.2	300.0	288.7	278.8	272.9	265.6	261.7	254.4
67.5°	321.1	303.3	286.8	274.2	261.7	250.4	241.8	233.2	228.0	224.7	218.7
70°	273.6	260.3	243.8	229.9	220.7	212.1	205.5	195.6	192.3	189.6	187.0
72.5°	228.6	217.4	204.2	193.6	184.4	176.4	168.5	165.2	161.9	159.2	157.9
75°	187.0	175.8	163.9	155.9	149.3	142.7	138.8	135.5	134.1	133.5	130.8
77.5°	145.4	138.8	128.8	121.6	117.0	114.3	110.3	109.0	109.7	106.4	105.7
80°	105.1	101.8	93.8	91.2	87.9	85.2	83.3	80.0	76.6	75.3	73.3
82.5°	71.4	68.1	66.1	61.5	58.8	57.5	55.5	54.8	56.2	54.2	53.5
85°	41.6	38.3	37.0	36.3	35.0	36.3	35.7	35.0	34.4	33.7	34.4
87.5°	16.5	16.5	15.9	17.2	15.2	15.9	15.9	15.2	15.2	15.2	14.5
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: P242937

CATALOG NUMBER: S125RDR-S1270D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1609.6	1609.6	1609.6	1609.6
2.5°	1525.0	1517.7	1515.8	1518.4
5°	1422.6	1416.0	1419.3	1418.0
7.5°	1336.0	1327.5	1317.5	1320.2
10°	1244.2	1237.6	1233.6	1236.9
12.5°	1166.9	1163.6	1160.3	1157.6
15°	1098.2	1090.2	1086.9	1078.3
17.5°	1032.1	1029.5	1020.9	1014.9
20°	974.6	972.0	963.4	968.7
22.5°	927.0	920.4	919.1	915.8
25°	882.8	874.2	870.9	866.9
27.5°	837.8	833.2	828.6	827.3
30°	794.2	789.6	786.3	786.3
32.5°	755.2	751.9	748.6	748.0
35°	717.6	712.3	711.0	707.0
37.5°	677.9	673.3	673.3	674.0
40°	640.3	637.0	636.3	631.7
42.5°	600.0	598.6	596.0	594.7
45°	564.3	559.7	559.7	556.4
47.5°	526.6	522.7	523.3	519.4
50°	489.0	487.0	486.3	485.0
52.5°	451.3	450.6	453.9	450.6
55°	418.3	416.3	420.2	416.3
57.5°	379.3	378.0	381.9	379.3
60°	340.9	337.0	339.0	339.6
62.5°	295.4	293.4	294.7	290.7
65°	253.1	251.1	248.4	247.1
67.5°	220.0	214.1	214.1	215.4
70°	183.0	183.0	182.4	182.4
72.5°	157.3	156.6	155.3	154.6
75°	130.8	131.5	130.2	129.5
77.5°	102.4	99.1	100.4	99.1
80°	73.3	72.7	74.7	72.7
82.5°	54.2	53.5	54.2	52.9
85°	35.0	34.4	33.7	34.4
87.5°	15.2	14.5	14.5	14.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)