

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: P243797

Luminaire Tested: **S125RDR-H1270D940-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243797
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-H1270D940-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4209.2 lumens
Efficiency: N/A
Efficacy: 111.7 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

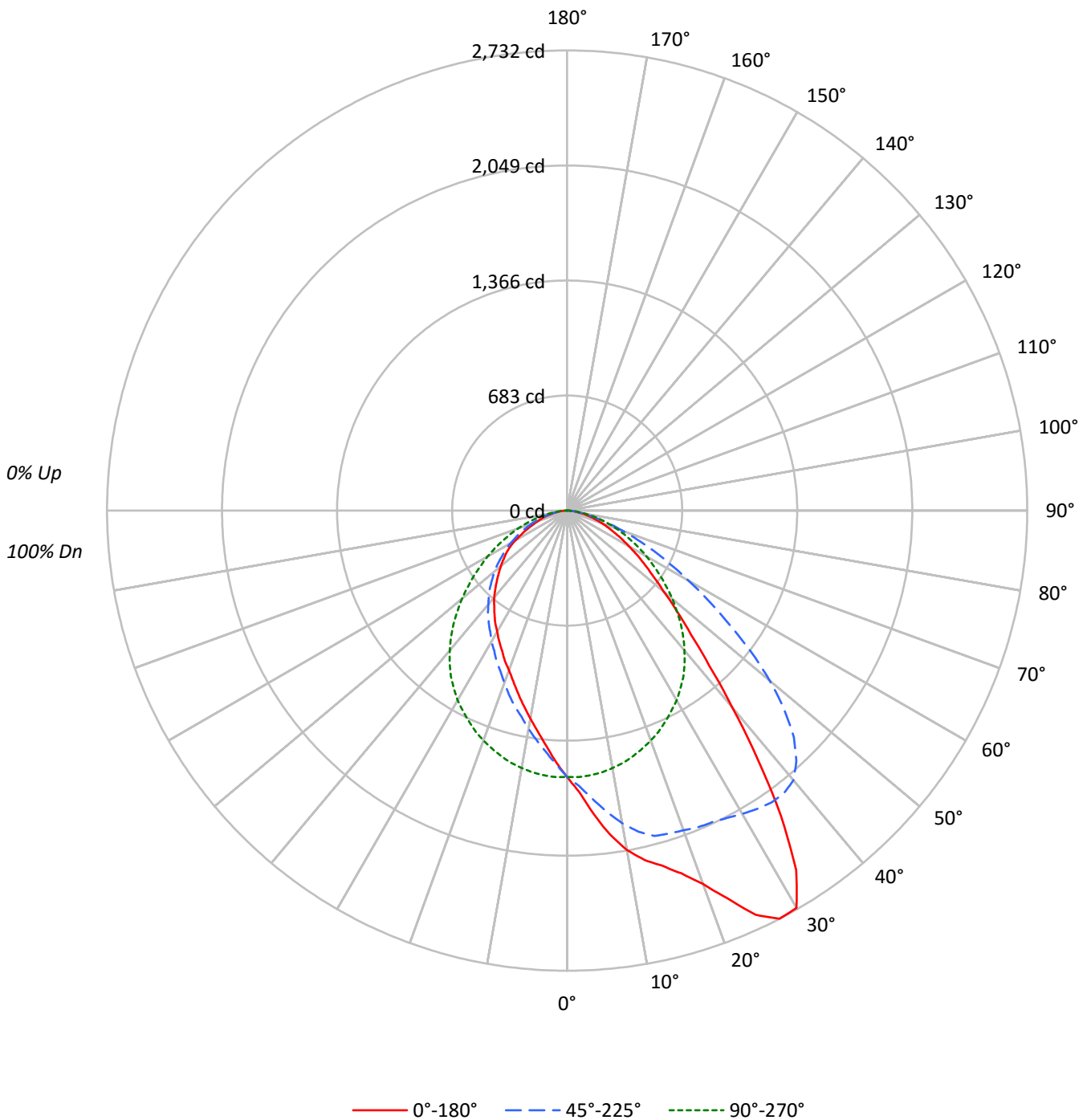
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	11241	11241	11241
5°	12903	11257	10013
10°	14764	11201	9052
15°	16058	11111	8279
20°	17844	10985	7627
25°	20763	10829	7180
30°	22357	10669	6814
35°	19207	10431	6519
40°	14151	10055	6249
45°	10451	9588	5925
50°	8280	9015	5686
55°	6994	8354	5471
60°	6026	7737	5063
65°	5232	7045	4408
70°	4586	6450	3857
75°	3891	5649	3652
80°	3029	4723	3029
85°	2658	3784	2764



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.2	3.6
10°-20°	450.4	10.7
20°-30°	718.4	17.1
30°-40°	872.2	20.7
40°-50°	786.0	18.7
50°-60°	604.4	14.4
60°-70°	392.2	9.3
70°-80°	188.7	4.5
80°-90°	44.7	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°	1321.0	31.4
0°-40°	2193.3	52.1
0°-60°	3583.6	85.1
0°-90°	4209.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4209.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1582	1582	1582	1582	1582	
5°	1809	1718	1578	1439	1404	180
15°	2182	2000	1510	1202	1125	626
25°	2648	2041	1381	990	916	1211
35°	2214	2115	1202	812	751	1354
45°	1040	1903	954	647	590	826
55°	564	1170	674	472	442	512
65°	311	568	419	300	262	312
75°	142	192	206	147	133	153
85°	33	34	46	37	34	37
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°	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6
2.5°	1673.2	1679.4	1674.4	1677.6	1672.5	1670.0	1663.8	1654.4	1644.9	1636.2	1635.5
5°	1808.6	1807.4	1802.4	1795.5	1790.4	1777.9	1771.6	1750.3	1735.9	1718.3	1709.5
7.5°	1937.8	1934.7	1927.2	1917.7	1913.4	1897.1	1879.5	1852.5	1829.9	1802.4	1781.7
10°	2045.7	2045.1	2039.4	2033.1	2016.2	1998.0	1981.1	1952.9	1919.0	1884.5	1855.7
12.5°	2124.7	2121.6	2114.7	2104.0	2090.2	2077.7	2055.1	2029.4	1988.0	1952.9	1913.4
15°	2182.4	2181.1	2171.1	2167.3	2140.4	2122.8	2092.7	2067.0	2035.0	1999.9	1957.3
17.5°	2258.9	2261.4	2252.6	2231.3	2206.9	2179.9	2137.2	2095.2	2050.7	2009.9	1975.4
20°	2359.2	2353.0	2337.9	2312.2	2268.3	2235.1	2192.4	2140.4	2080.2	2020.0	1970.4
22.5°	2493.4	2486.5	2462.7	2431.4	2376.2	2315.3	2250.1	2172.4	2103.4	2034.4	1969.2
25°	2647.7	2634.6	2599.4	2565.6	2487.2	2422.6	2325.4	2232.6	2132.2	2040.7	1967.3
27.5°	2731.8	2731.8	2715.4	2678.4	2616.4	2521.0	2422.0	2298.4	2182.4	2057.0	1952.9
30°	2724.2	2719.8	2726.1	2710.4	2670.3	2598.8	2500.3	2370.5	2222.5	2078.9	1954.1
32.5°	2529.8	2531.7	2569.3	2595.0	2615.1	2597.6	2533.6	2416.3	2268.9	2100.2	1949.1
35°	2213.7	2218.8	2285.2	2329.1	2418.8	2470.2	2485.3	2422.0	2289.6	2115.3	1940.3
37.5°	1852.5	1852.5	1929.7	1996.1	2096.5	2223.2	2317.9	2341.7	2277.1	2114.7	1932.8
40°	1525.2	1523.3	1584.1	1665.6	1772.9	1912.7	2053.8	2174.9	2190.5	2090.2	1906.5
42.5°	1248.0	1244.8	1311.3	1356.5	1469.4	1594.2	1781.7	1952.9	2050.7	2014.3	1867.6
45°	1039.8	1037.3	1080.5	1132.0	1211.6	1341.4	1498.8	1688.8	1853.2	1903.3	1794.8
47.5°	883.0	884.2	907.4	950.7	1018.5	1111.3	1252.4	1428.6	1631.8	1747.8	1703.3
50°	748.8	753.2	770.7	803.3	852.9	927.5	1048.6	1207.8	1416.7	1570.3	1579.7
52.5°	648.4	654.7	673.5	691.1	732.5	785.2	879.2	1017.2	1189.7	1374.0	1439.9
55°	564.4	567.5	578.2	597.0	627.8	671.7	740.0	845.4	1005.3	1169.6	1285.6
57.5°	494.2	494.2	501.1	514.2	538.7	578.2	624.0	711.2	846.0	994.6	1118.2
60°	423.9	426.4	431.5	445.9	462.2	492.3	536.8	592.0	708.7	832.8	965.8
62.5°	365.0	369.4	374.4	381.3	396.3	417.7	449.0	499.8	578.2	693.0	811.5
65°	311.1	315.4	316.1	324.2	334.3	351.8	375.6	412.6	477.9	568.2	666.0
67.5°	263.4	265.3	267.2	273.4	282.8	294.1	309.8	337.4	388.8	449.6	545.0
70°	220.7	222.0	222.6	229.5	233.9	244.0	252.1	269.7	302.3	349.3	423.3
72.5°	180.6	178.7	178.1	183.7	185.6	193.8	203.8	216.4	233.9	267.2	322.3
75°	141.7	142.4	143.0	146.1	146.7	150.5	156.8	164.9	173.1	192.5	227.6
77.5°	109.1	106.6	106.6	110.4	111.6	112.3	116.6	121.0	125.4	136.7	150.5
80°	74.0	75.3	75.3	75.3	75.9	77.1	79.6	83.4	86.5	93.4	96.0
82.5°	52.7	52.7	52.1	53.3	53.9	54.6	54.6	54.6	56.4	58.3	60.8
85°	32.6	33.2	31.4	32.6	33.2	33.2	33.2	33.2	35.1	34.5	35.1
87.5°	13.8	14.4	14.4	15.1	15.1	15.7	15.1	15.7	15.1	15.1	15.7
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6
2.5°	1633.7	1626.1	1622.4	1614.8	1604.8	1598.5	1592.3	1583.5	1576.6	1565.9	1556.5
5°	1693.9	1678.8	1665.0	1646.2	1628.0	1612.3	1596.0	1577.8	1561.5	1543.4	1523.9
7.5°	1761.0	1737.1	1708.3	1675.0	1646.8	1622.4	1594.8	1567.8	1543.4	1514.5	1488.2
10°	1825.6	1787.3	1749.1	1704.5	1663.1	1626.8	1589.8	1552.1	1520.1	1484.4	1451.8
12.5°	1875.7	1839.4	1782.3	1727.1	1673.2	1626.1	1579.7	1533.9	1491.9	1452.4	1413.5
15°	1919.6	1859.4	1811.1	1750.9	1685.1	1621.1	1563.4	1510.1	1459.3	1412.9	1373.4
17.5°	1932.2	1878.2	1825.6	1755.3	1684.5	1611.7	1545.2	1481.9	1425.5	1374.0	1329.5
20°	1930.9	1876.4	1819.3	1752.2	1676.9	1597.3	1523.3	1452.4	1388.5	1329.5	1281.8
22.5°	1912.1	1859.4	1801.7	1734.0	1657.5	1575.3	1497.6	1419.2	1349.6	1288.1	1239.2
25°	1892.0	1825.6	1765.4	1697.0	1624.3	1548.4	1465.6	1380.9	1308.2	1244.2	1189.0
27.5°	1874.5	1794.8	1720.8	1653.7	1579.1	1510.7	1428.6	1340.2	1265.5	1198.4	1141.4
30°	1846.3	1762.2	1672.5	1599.2	1527.0	1455.6	1380.3	1300.0	1218.5	1150.1	1093.1
32.5°	1821.8	1715.8	1618.6	1535.8	1463.7	1401.0	1328.9	1251.7	1172.1	1106.9	1045.4
35°	1794.8	1668.2	1566.6	1469.4	1397.2	1328.9	1271.8	1202.2	1123.2	1054.2	999.0
37.5°	1762.8	1619.2	1502.6	1403.5	1328.9	1258.6	1207.2	1145.1	1073.6	1005.3	950.7
40°	1727.1	1569.1	1434.9	1332.6	1252.4	1182.1	1138.9	1083.7	1022.8	955.1	904.3
42.5°	1681.9	1515.8	1373.4	1261.8	1172.7	1109.4	1066.1	1020.3	964.5	905.6	850.4
45°	1624.9	1449.3	1300.0	1182.1	1094.3	1032.9	987.7	953.9	909.3	854.1	802.1
47.5°	1555.3	1379.7	1224.8	1102.5	1017.8	958.9	916.9	883.0	849.1	801.5	751.9
50°	1463.1	1300.0	1151.4	1026.6	936.9	879.9	842.2	815.3	784.5	745.7	700.5
52.5°	1361.5	1210.4	1064.9	948.2	861.7	804.6	765.7	743.1	719.9	688.0	649.1
55°	1243.6	1120.7	982.1	867.9	783.3	726.8	696.1	674.2	654.7	630.3	597.6
57.5°	1118.8	1010.9	890.5	785.2	705.5	652.2	625.2	607.1	590.8	573.2	546.2
60°	987.7	911.2	797.1	700.5	630.9	587.0	561.3	544.3	529.3	514.9	494.8
62.5°	851.0	787.7	702.4	620.2	558.1	516.8	497.9	483.5	467.8	455.3	440.9
65°	712.4	676.0	617.1	540.0	482.9	449.0	430.8	418.9	411.4	397.0	385.7
67.5°	586.4	566.3	516.1	464.1	420.2	389.4	372.5	363.7	355.6	348.7	336.1
70°	466.6	452.2	423.3	386.3	351.8	325.5	312.9	310.4	299.1	292.2	286.0
72.5°	355.6	351.8	328.0	311.7	292.2	271.5	262.1	257.1	249.6	243.3	240.8
75°	252.7	258.4	250.8	242.7	233.3	216.4	208.2	205.7	198.8	196.9	193.8
77.5°	172.5	180.6	183.1	179.4	175.0	169.3	163.7	161.2	154.3	153.0	151.1
80°	108.5	120.4	124.8	124.2	122.3	122.9	116.0	115.4	112.3	110.4	112.3
82.5°	65.8	72.1	80.3	82.2	79.6	80.9	79.0	76.5	76.5	77.8	75.3
85°	35.7	36.4	40.1	42.6	45.8	48.3	45.8	46.4	45.8	45.8	43.9
87.5°	15.7	16.3	16.3	15.7	16.9	18.2	20.7	21.9	21.3	19.4	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



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6	1581.6
2.5°	1549.0	1544.6	1537.1	1530.8	1516.4	1506.4	1505.1	1505.7	1504.5	1503.2	1502.6
5°	1511.4	1496.9	1483.1	1471.2	1454.9	1438.6	1431.1	1428.0	1426.7	1419.8	1423.6
7.5°	1471.2	1449.3	1433.0	1410.4	1391.0	1377.2	1364.0	1357.7	1356.5	1347.1	1344.6
10°	1428.6	1402.3	1377.8	1355.2	1335.8	1316.3	1300.7	1295.0	1287.5	1280.0	1268.7
12.5°	1386.6	1354.0	1327.0	1301.9	1275.6	1253.6	1241.1	1232.9	1223.5	1216.6	1212.9
15°	1336.4	1308.8	1275.6	1248.6	1221.6	1202.2	1185.3	1170.2	1161.4	1155.8	1140.1
17.5°	1291.2	1254.9	1223.5	1197.8	1168.3	1146.4	1128.8	1116.3	1101.2	1089.9	1079.9
20°	1243.0	1205.3	1176.5	1145.8	1115.7	1088.7	1066.7	1056.7	1046.0	1035.4	1029.7
22.5°	1190.9	1158.3	1125.7	1093.7	1061.7	1032.9	1019.1	1004.7	995.2	984.6	977.1
25°	1145.8	1110.0	1077.4	1041.7	1006.5	989.6	970.8	956.4	948.8	938.2	930.0
27.5°	1097.5	1063.0	1024.1	987.1	966.4	937.6	925.0	913.7	903.7	893.0	887.4
30°	1052.3	1012.2	973.3	944.4	917.5	896.8	884.9	871.1	857.3	852.3	844.7
32.5°	1004.7	961.4	927.5	898.7	876.1	851.0	839.7	828.4	815.3	809.0	802.1
35°	955.1	913.1	879.9	853.5	830.3	811.5	799.0	787.0	778.9	769.5	764.5
37.5°	903.1	866.7	834.7	808.4	787.0	772.0	756.3	746.9	735.6	726.8	723.1
40°	853.5	820.9	790.2	765.7	746.3	728.1	714.3	702.4	695.5	688.0	681.7
42.5°	809.0	775.1	748.8	723.1	705.5	688.0	674.2	665.4	653.5	650.3	641.5
45°	761.3	730.0	703.6	679.8	661.6	647.2	630.9	620.2	612.7	605.2	602.0
47.5°	713.0	684.2	659.7	637.8	619.0	602.7	590.1	578.8	570.7	563.8	560.0
50°	666.0	640.9	616.5	595.1	575.7	563.8	548.7	536.2	529.9	522.4	518.0
52.5°	616.5	595.8	569.4	551.2	533.1	517.4	502.3	494.2	487.9	481.6	478.5
55°	570.1	548.1	525.5	506.1	488.5	472.2	460.3	454.0	445.9	442.1	441.5
57.5°	522.4	499.8	481.0	463.4	443.4	430.8	420.2	412.6	405.7	402.6	402.6
60°	470.3	452.2	434.6	415.2	400.7	386.3	375.0	370.0	363.1	361.9	357.5
62.5°	422.7	405.7	388.8	370.6	357.5	343.0	334.9	328.0	324.2	319.2	314.2
65°	373.1	358.1	341.8	326.1	315.4	299.8	292.2	284.1	279.7	274.1	267.8
67.5°	325.5	311.1	296.0	281.6	272.8	257.7	252.7	242.7	239.6	233.3	227.6
70°	275.3	265.3	253.4	238.9	231.4	219.5	214.5	205.1	200.1	196.3	193.2
72.5°	232.0	222.6	208.8	199.4	190.0	182.5	174.3	170.0	165.6	162.4	161.8
75°	189.4	177.5	169.3	160.5	154.3	146.7	143.0	139.8	138.0	136.1	134.2
77.5°	144.9	139.8	131.7	122.9	117.9	114.8	112.3	111.0	109.1	108.5	106.6
80°	107.9	101.0	96.0	92.8	89.1	86.5	84.7	80.3	77.8	76.5	75.3
82.5°	71.5	69.6	65.8	62.7	59.6	58.9	57.1	55.8	55.2	55.2	54.6
85°	43.3	38.3	38.3	37.6	37.6	37.0	35.7	35.7	34.5	36.4	36.4
87.5°	17.6	17.6	16.3	16.3	16.9	15.7	15.1	15.1	15.1	14.4	15.1
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: P243797

CATALOG NUMBER: S125RDR-H1270D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1581.6	1581.6	1581.6	1581.6
2.5°	1502.6	1499.5	1500.1	1496.3
5°	1416.7	1414.8	1408.5	1403.5
7.5°	1338.3	1330.1	1329.5	1324.5
10°	1264.9	1257.4	1253.6	1254.2
12.5°	1200.9	1192.8	1192.8	1187.8
15°	1132.6	1124.4	1125.7	1125.1
17.5°	1076.1	1070.5	1066.1	1062.3
20°	1021.0	1014.1	1011.6	1008.4
22.5°	970.2	965.1	965.8	965.8
25°	921.9	922.5	916.9	915.6
27.5°	879.2	878.0	876.7	874.2
30°	839.1	834.1	832.8	830.3
32.5°	797.7	797.1	792.1	793.9
35°	755.7	753.8	752.5	751.3
37.5°	716.8	713.0	712.4	711.2
40°	677.3	676.0	670.4	673.5
42.5°	634.7	632.1	632.1	632.1
45°	598.9	592.0	592.0	589.5
47.5°	558.8	556.3	555.0	550.6
50°	519.3	515.5	514.2	514.2
52.5°	478.5	477.9	479.1	476.6
55°	442.7	443.4	442.7	441.5
57.5°	403.9	400.7	400.7	401.4
60°	357.5	357.5	358.7	356.2
62.5°	312.9	311.7	307.3	306.0
65°	267.2	262.1	261.5	262.1
67.5°	226.4	224.5	221.4	222.0
70°	191.3	190.6	187.5	185.6
72.5°	159.9	159.9	158.0	158.0
75°	133.6	132.3	131.7	133.0
77.5°	102.8	99.7	101.0	99.1
80°	74.6	75.9	74.6	74.0
82.5°	55.2	53.9	54.6	53.9
85°	35.1	33.9	34.5	33.9
87.5°	14.4	15.1	15.1	13.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)