

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: P242824

Luminaire Tested: **S125DR-S1270D930-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242824
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-22)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DR-S1270D930-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4016.7 lumens
Efficiency: N/A
Efficacy: 97.7 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.23 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

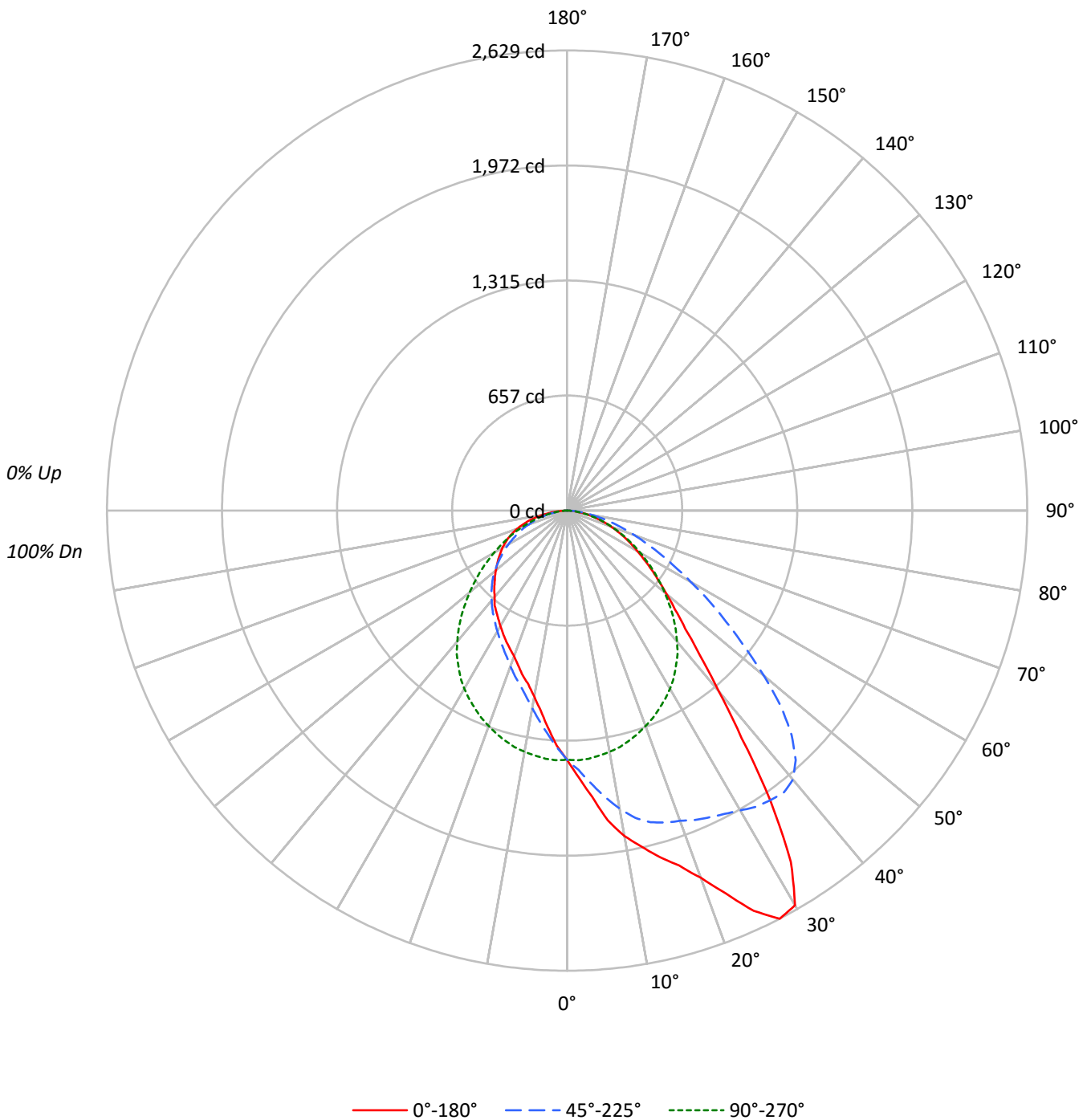
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	98	90	84	79	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61
4	84	73	64	58	82	71	63	57	69	62	57	67	61	56	64	59	55	53
5	78	65	56	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	10117	10117	10117
5°	11716	10150	8887
10°	13629	10098	7787
15°	15088	10024	7184
20°	16888	9907	6699
25°	19785	9774	6462
30°	21369	9644	6257
35°	17571	9398	6122
40°	12488	9058	5975
45°	9594	8599	5890
50°	8190	8030	5878
55°	7291	7471	5929
60°	6579	6861	6080
65°	6076	6248	6238
70°	5523	5613	6328
75°	4877	4943	6272
80°	4105	4032	5738
85°	3254	2903	4632



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.0	3.4
10°-20°	408.0	10.2
20°-30°	662.8	16.5
30°-40°	810.0	20.2
40°-50°	734.9	18.3
50°-60°	585.3	14.6
60°-70°	407.7	10.1
70°-80°	217.1	5.4
80°-90°	53.9	1.3
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°	1207.8	30.1
0°-40°	2017.9	50.2
0°-60°	3338.0	83.1
0°-90°	4016.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4016.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1423	1423	1423	1423	1423	
5°	1642	1564	1423	1280	1246	165
15°	2050	1843	1362	1033	976	586
25°	2523	1933	1246	866	824	1156
35°	2025	2021	1083	734	706	1242
45°	954	1813	856	607	586	760
55°	588	1111	603	463	478	529
65°	361	589	372	312	371	358
75°	178	262	180	164	228	191
85°	40	53	36	39	57	47
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°	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4
2.5°	1526.1	1523.6	1521.2	1516.4	1520.0	1509.7	1504.9	1496.5	1486.2	1482.6	1478.3
5°	1642.1	1645.1	1648.1	1635.4	1636.6	1628.2	1608.8	1593.1	1580.4	1564.1	1552.6
7.5°	1785.8	1776.8	1777.4	1769.5	1755.6	1744.2	1725.4	1699.4	1675.9	1649.3	1626.3
10°	1888.5	1889.1	1883.7	1874.0	1858.9	1848.1	1821.5	1796.1	1765.3	1729.0	1703.1
12.5°	1965.9	1968.9	1961.6	1947.7	1942.3	1914.5	1895.2	1863.8	1825.7	1798.5	1755.6
15°	2050.5	2043.8	2039.0	2022.7	2010.0	1984.6	1951.4	1920.0	1880.1	1843.2	1806.4
17.5°	2125.4	2130.8	2122.9	2110.9	2073.4	2043.8	2002.7	1962.9	1915.1	1869.2	1826.3
20°	2232.9	2237.7	2223.8	2197.9	2150.7	2121.1	2062.5	2007.0	1949.6	1886.1	1837.8
22.5°	2367.0	2361.0	2341.0	2298.1	2258.9	2197.9	2133.2	2062.5	1987.0	1913.3	1845.0
25°	2522.9	2497.5	2486.0	2437.1	2383.3	2303.0	2216.0	2116.9	2027.5	1932.6	1850.5
27.5°	2629.2	2618.9	2602.6	2562.8	2501.1	2409.9	2307.2	2188.8	2068.6	1952.6	1849.3
30°	2603.8	2605.1	2606.3	2595.4	2559.1	2494.5	2392.4	2262.5	2112.7	1978.0	1853.5
32.5°	2379.1	2406.3	2432.3	2466.1	2487.8	2488.5	2434.1	2319.9	2164.6	2007.0	1851.1
35°	2025.1	2031.7	2100.0	2167.7	2259.5	2330.8	2378.5	2326.5	2196.7	2020.8	1849.3
37.5°	1637.2	1670.4	1721.8	1797.9	1935.7	2048.0	2195.4	2246.2	2185.2	2032.3	1848.7
40°	1346.0	1376.2	1407.0	1485.0	1596.7	1740.5	1913.9	2061.9	2096.4	2007.0	1830.5
42.5°	1121.3	1143.6	1178.7	1232.4	1321.3	1444.5	1608.2	1813.0	1953.2	1933.2	1792.5
45°	954.5	969.6	996.2	1042.7	1110.4	1210.1	1356.3	1567.7	1752.0	1813.0	1727.8
47.5°	836.1	836.7	858.5	891.7	943.1	1034.9	1144.2	1318.2	1517.0	1657.8	1637.8
50°	740.7	737.7	754.0	781.8	820.4	876.6	979.9	1112.2	1301.3	1466.2	1512.2
52.5°	658.5	659.7	668.2	686.9	717.7	763.6	834.3	950.3	1105.0	1275.3	1372.0
55°	588.4	586.0	597.5	611.4	635.0	666.4	721.9	813.2	944.3	1111.0	1223.4
57.5°	520.8	527.4	532.2	541.9	562.5	584.2	633.7	703.8	812.0	960.0	1079.0
60°	462.8	469.4	473.0	482.7	498.4	516.5	552.8	607.2	694.8	818.0	935.8
62.5°	410.8	415.6	416.3	424.7	436.8	454.3	480.9	524.4	589.0	692.9	807.7
65°	361.3	361.3	363.7	372.8	378.8	394.5	416.3	449.5	505.1	589.0	687.5
67.5°	312.9	316.0	315.4	319.6	325.0	338.3	354.6	382.4	426.5	490.0	571.5
70°	265.8	268.2	267.6	270.7	276.7	284.5	297.2	323.2	352.8	405.4	473.0
72.5°	223.5	224.1	222.3	226.6	229.6	236.2	250.7	261.6	288.8	331.1	383.6
75°	177.6	178.8	180.0	182.5	186.1	189.7	196.9	210.8	229.0	262.2	297.8
77.5°	141.4	138.3	142.0	141.4	143.2	146.2	152.8	160.7	176.4	198.8	228.4
80°	100.3	100.9	100.9	101.5	104.5	106.3	111.8	117.2	128.7	144.4	163.7
82.5°	66.5	68.3	67.1	68.3	70.7	71.9	74.3	78.5	84.0	95.5	108.1
85°	39.9	36.9	38.1	39.3	39.3	39.9	42.3	44.1	47.7	52.6	58.0
87.5°	14.5	15.7	16.3	16.3	16.9	16.9	19.3	19.3	21.1	23.0	25.4
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°	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4
2.5°	1474.7	1470.5	1465.6	1457.2	1446.9	1441.5	1433.0	1427.6	1416.7	1407.6	1398.0
5°	1538.7	1523.0	1508.5	1489.8	1469.3	1456.0	1440.3	1422.7	1404.6	1385.9	1365.4
7.5°	1602.8	1576.8	1548.4	1518.8	1489.8	1462.6	1437.2	1411.3	1387.7	1358.1	1333.3
10°	1667.4	1632.4	1594.9	1550.8	1507.9	1470.5	1432.4	1399.2	1365.4	1329.1	1297.1
12.5°	1732.1	1682.5	1625.7	1576.2	1522.4	1475.3	1428.8	1384.1	1339.4	1298.3	1259.6
15°	1755.6	1714.5	1665.6	1596.7	1538.7	1476.5	1417.3	1362.3	1311.0	1266.3	1219.2
17.5°	1778.6	1726.0	1674.1	1607.6	1532.1	1465.0	1398.0	1338.2	1281.4	1225.2	1182.3
20°	1784.0	1729.7	1674.7	1610.0	1532.1	1452.4	1385.3	1309.8	1247.5	1188.9	1133.4
22.5°	1782.2	1718.8	1657.8	1590.7	1515.2	1443.3	1358.7	1281.4	1212.5	1155.1	1096.5
25°	1768.9	1703.1	1628.2	1561.1	1486.2	1408.3	1326.1	1246.3	1177.5	1111.6	1054.2
27.5°	1761.1	1677.7	1595.5	1518.2	1446.3	1374.4	1294.7	1212.5	1137.0	1069.9	1016.8
30°	1743.5	1649.9	1554.5	1472.9	1398.6	1329.1	1254.8	1175.1	1095.3	1030.1	972.1
32.5°	1727.8	1614.9	1512.8	1422.1	1342.4	1275.3	1208.3	1133.4	1055.4	989.0	931.0
35°	1706.7	1580.4	1465.0	1364.8	1280.8	1211.3	1153.9	1083.2	1011.3	947.3	891.7
37.5°	1681.9	1535.7	1413.7	1309.2	1217.9	1145.4	1091.1	1036.1	964.2	901.4	851.8
40°	1651.7	1487.4	1356.3	1248.8	1153.3	1077.2	1027.6	976.3	918.9	861.5	808.3
42.5°	1613.7	1443.9	1298.3	1180.5	1086.2	1012.5	960.0	918.3	869.4	816.8	768.5
45°	1565.3	1389.5	1234.9	1110.4	1015.0	941.9	888.1	855.5	817.4	766.7	725.0
47.5°	1501.3	1327.9	1168.4	1039.7	941.3	873.6	822.2	790.2	762.4	722.6	683.3
50°	1410.1	1257.2	1095.3	967.8	869.4	801.1	754.6	726.2	703.2	674.2	642.2
52.5°	1308.0	1168.4	1023.4	897.8	800.5	733.4	688.1	663.9	645.8	627.1	595.7
55°	1198.6	1077.8	940.0	820.4	730.4	664.6	624.7	602.9	587.2	571.5	552.2
57.5°	1080.8	982.9	856.7	744.9	661.5	599.9	562.5	540.1	527.4	519.0	506.9
60°	955.1	874.2	769.1	669.4	588.4	535.3	499.0	482.7	472.4	465.8	457.3
62.5°	838.5	775.7	680.3	591.5	523.2	473.6	442.2	426.5	416.9	414.4	407.8
65°	724.4	673.0	592.7	517.1	456.7	413.8	386.6	371.5	365.5	361.9	362.5
67.5°	609.6	576.3	509.3	442.8	393.3	355.2	332.9	321.4	318.4	312.9	312.9
70°	506.3	482.7	428.3	372.2	329.3	301.5	282.1	270.1	267.0	264.6	264.0
72.5°	415.0	395.1	349.8	307.5	270.1	246.5	231.4	225.3	219.9	218.7	218.7
75°	325.6	314.2	276.7	241.1	214.5	197.6	186.7	180.0	176.4	175.8	176.4
77.5°	245.9	235.0	209.0	182.5	164.9	151.6	141.4	139.6	134.7	135.3	134.1
80°	174.0	167.3	152.2	132.3	118.4	107.5	102.7	98.5	97.3	95.5	97.3
82.5°	114.2	106.9	97.9	87.0	76.1	70.7	65.9	65.2	64.6	64.0	64.0
85°	62.2	62.8	56.8	47.1	42.3	38.7	35.6	35.6	35.0	34.4	35.0
87.5°	26.6	25.4	23.0	21.1	18.1	16.3	15.7	16.3	14.5	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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4	1423.4
2.5°	1392.5	1385.9	1380.5	1368.4	1361.7	1352.7	1345.4	1353.3	1344.8	1348.4	1343.0
5°	1355.1	1338.2	1326.1	1308.6	1293.5	1279.6	1269.3	1267.5	1262.7	1260.2	1253.0
7.5°	1310.4	1291.0	1271.1	1249.4	1231.2	1211.9	1200.4	1189.6	1182.9	1174.4	1167.8
10°	1271.7	1243.3	1219.2	1191.4	1167.2	1146.1	1129.1	1120.7	1112.8	1101.3	1097.1
12.5°	1224.0	1194.4	1163.6	1133.4	1110.4	1086.2	1072.3	1058.5	1053.6	1040.3	1039.7
15°	1187.7	1143.6	1114.6	1084.4	1052.4	1033.1	1021.0	1007.1	1001.1	992.0	985.4
17.5°	1143.0	1103.2	1066.9	1036.1	1007.1	991.4	975.7	966.0	955.7	949.1	938.2
20°	1093.5	1056.0	1019.8	986.6	965.4	946.7	934.6	925.5	914.7	911.6	900.8
22.5°	1051.8	1009.5	975.1	948.5	924.9	903.2	889.9	884.5	877.8	866.9	866.9
25°	1005.9	963.0	933.4	905.6	885.1	865.7	856.7	848.8	841.6	834.9	832.5
27.5°	967.2	929.2	892.9	867.5	850.0	831.9	824.0	813.8	808.3	802.9	795.7
30°	926.1	886.9	856.1	831.9	812.6	796.9	788.4	781.8	776.9	772.1	768.5
32.5°	883.9	848.2	818.6	795.0	775.7	764.8	757.6	753.4	747.9	741.9	737.1
35°	847.6	807.7	778.7	758.2	743.1	734.0	725.6	721.3	715.3	715.3	710.5
37.5°	804.7	769.7	743.7	725.0	711.7	703.2	693.6	691.1	686.9	684.5	682.7
40°	767.3	735.2	711.1	692.3	677.8	671.2	663.9	659.1	656.7	653.7	652.5
42.5°	728.6	698.4	675.4	658.5	646.4	641.0	634.3	631.3	625.9	621.7	621.1
45°	689.3	659.7	638.6	624.7	613.8	607.2	602.9	595.7	593.3	588.4	587.8
47.5°	653.1	624.1	602.9	591.5	581.8	577.0	570.3	562.5	559.4	556.4	555.8
50°	611.4	585.4	566.1	555.2	546.1	538.3	531.6	526.8	525.0	525.0	526.2
52.5°	569.1	548.0	532.2	518.4	509.9	501.4	495.4	493.0	490.0	493.6	496.0
55°	528.0	505.7	493.6	480.9	472.4	462.8	459.8	458.5	456.7	461.6	464.0
57.5°	483.9	468.8	454.3	441.0	433.8	427.7	422.9	422.3	425.9	427.1	434.4
60°	442.2	424.1	411.4	401.8	392.7	389.1	387.9	386.6	389.1	395.7	406.0
62.5°	396.3	382.4	368.5	361.9	355.8	349.2	349.2	350.4	355.8	363.7	374.0
65°	351.6	338.9	329.9	321.4	316.0	312.3	313.5	316.0	321.4	331.7	343.2
67.5°	305.7	297.2	288.8	280.9	275.5	276.1	276.7	279.7	286.4	298.4	309.3
70°	261.6	251.9	245.3	242.3	238.0	235.6	239.2	245.3	250.7	261.6	270.7
72.5°	217.5	209.6	204.8	203.0	201.8	200.0	200.6	207.2	215.1	225.9	236.8
75°	174.0	171.0	167.3	164.9	163.1	164.3	165.5	171.6	177.6	189.1	201.2
77.5°	134.7	131.1	128.7	128.1	126.9	127.5	130.5	135.3	141.4	149.8	159.5
80°	96.1	94.8	93.6	93.0	93.0	93.6	98.5	101.5	106.9	114.8	122.0
82.5°	63.4	62.8	62.8	62.8	63.4	63.4	65.9	70.1	74.3	79.7	85.8
85°	36.9	35.6	37.5	38.1	36.9	38.7	39.9	42.3	44.1	47.1	50.1
87.5°	15.1	16.3	15.7	16.3	16.3	17.5	16.9	19.3	20.5	21.7	21.1
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: P242824

CATALOG NUMBER: S125DR-S1270D930-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1423.4	1423.4	1423.4	1423.4
2.5°	1339.4	1343.6	1340.0	1344.8
5°	1250.0	1244.5	1248.2	1245.7
7.5°	1167.2	1162.4	1155.1	1152.7
10°	1090.5	1083.8	1083.2	1079.0
12.5°	1034.3	1028.2	1019.8	1018.6
15°	981.7	976.9	972.7	976.3
17.5°	937.0	932.8	931.6	928.0
20°	895.3	892.3	893.5	885.7
22.5°	862.1	855.5	854.3	854.3
25°	827.1	824.0	821.0	824.0
27.5°	796.3	793.2	792.0	792.6
30°	768.5	762.4	763.0	762.4
32.5°	738.3	734.6	733.4	732.2
35°	708.7	708.7	705.6	705.6
37.5°	681.5	680.9	679.1	680.3
40°	650.1	649.5	647.6	644.0
42.5°	619.8	617.4	616.8	616.2
45°	587.8	587.8	586.6	586.0
47.5°	556.4	557.6	560.0	559.4
50°	528.6	529.2	531.0	531.6
52.5°	497.8	502.0	504.5	503.9
55°	469.4	473.6	477.9	478.5
57.5°	441.0	446.5	450.7	451.9
60°	412.0	419.9	425.3	427.7
62.5°	384.2	393.3	398.7	398.7
65°	353.4	362.5	367.3	370.9
67.5°	321.4	330.5	335.3	338.3
70°	285.8	294.8	302.1	304.5
72.5°	250.7	258.6	264.0	267.0
75°	209.0	219.9	225.3	228.4
77.5°	169.2	180.0	183.1	184.9
80°	129.3	135.3	139.6	140.2
82.5°	91.8	96.7	97.3	99.1
85°	54.4	56.8	57.4	56.8
87.5°	22.4	21.7	21.7	23.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)