

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: P243689

Luminaire Tested: **S125DR-H1270D935-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243689
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-61)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DR-H1270D935-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4255.8 lumens
Efficiency: N/A
Efficacy: 112.9 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

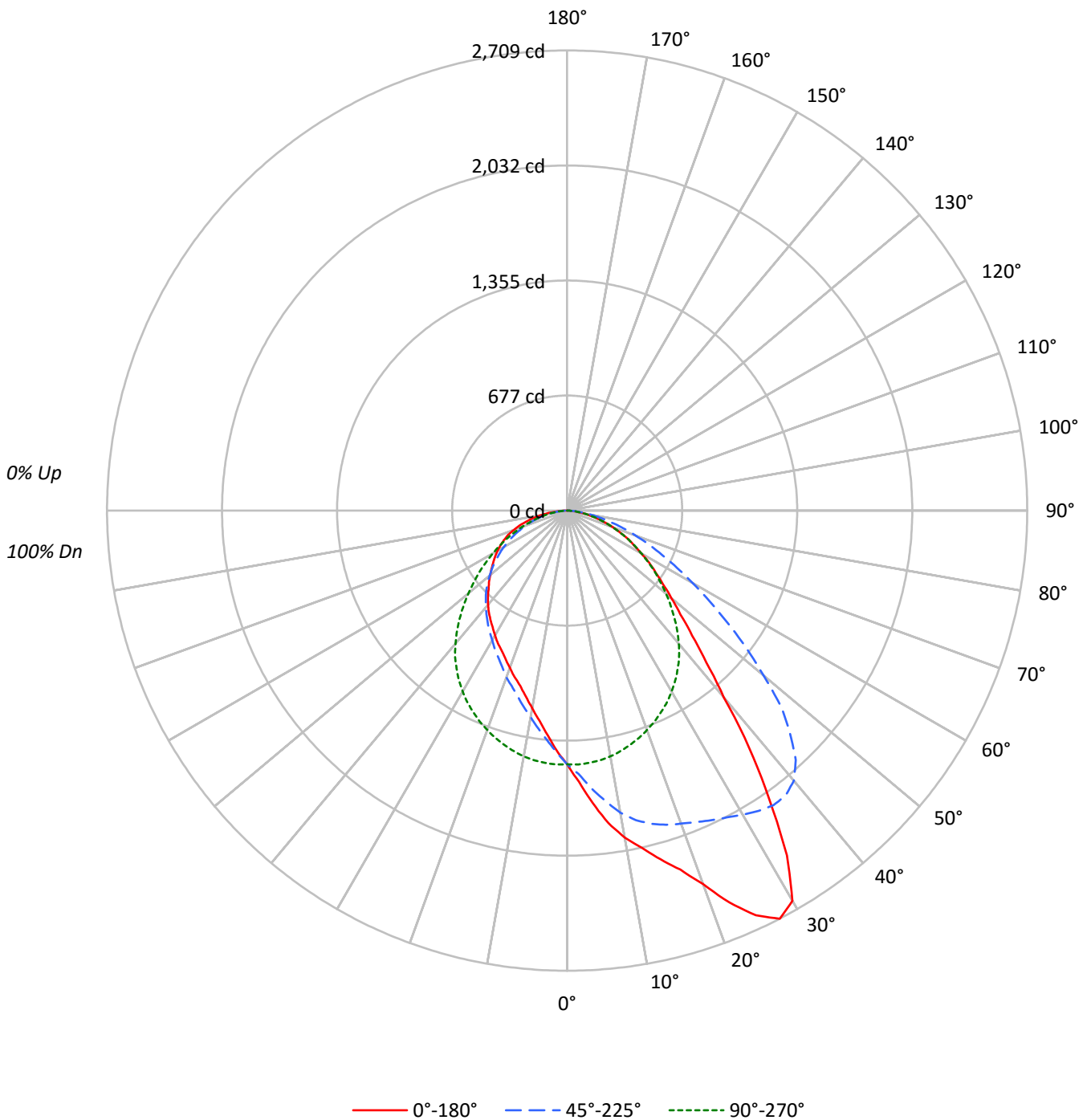
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	97	90	84	79	87	82	78	84	79	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	63	61
4	84	73	64	58	82	71	63	57	69	62	56	66	61	56	64	59	55	53
5	78	65	56	50	75	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	40
7	67	53	45	39	65	53	44	39	51	44	38	50	43	38	48	42	38	36
8	62	49	40	35	60	48	40	35	47	40	34	46	39	34	44	38	34	32
9	58	45	37	31	57	44	36	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°	10613	10613	10613
5°	12330	10636	9452
10°	14106	10602	8530
15°	15639	10506	7859
20°	17706	10401	7456
25°	20618	10266	7142
30°	21766	10098	6967
35°	17999	9851	6820
40°	13315	9494	6719
45°	10468	8977	6574
50°	8864	8396	6548
55°	7893	7819	6572
60°	7161	7178	6714
65°	6640	6579	6904
70°	5964	5889	6945
75°	5088	5171	6851
80°	4163	4236	6393
85°	2862	3009	5431



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.2	3.4
10°-20°	431.0	10.1
20°-30°	700.8	16.5
30°-40°	852.6	20.0
40°-50°	780.1	18.3
50°-60°	624.3	14.7
60°-70°	434.8	10.2
70°-80°	231.1	5.4
80°-90°	56.7	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°	1276.0	30.0
0°-40°	2128.6	50.0
0°-60°	3533.1	83.0
0°-90°	4255.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4255.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1493	1493	1493	1493	1493	
5°	1728	1641	1491	1356	1325	172
15°	2125	1909	1428	1129	1068	610
25°	2629	2011	1309	956	911	1200
35°	2074	2118	1135	814	786	1286
45°	1042	1856	893	674	654	821
55°	637	1152	631	515	530	575
65°	395	615	391	345	410	389
75°	185	272	188	180	250	200
85°	35	52	37	42	67	45
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°	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2
2.5°	1598.6	1591.9	1590.1	1590.7	1587.1	1584.1	1576.8	1567.1	1560.4	1552.0	1549.5
5°	1728.2	1711.8	1714.8	1710.0	1702.1	1691.8	1682.8	1668.2	1654.3	1641.0	1623.4
7.5°	1855.3	1852.3	1843.8	1842.6	1829.9	1812.3	1794.2	1774.2	1744.5	1723.9	1700.3
10°	1954.6	1960.7	1948.6	1949.2	1926.8	1909.2	1893.5	1867.4	1834.1	1806.3	1771.8
12.5°	2034.6	2037.0	2035.2	2027.3	2012.8	1983.1	1968.0	1940.7	1904.4	1866.2	1839.6
15°	2125.4	2118.7	2108.4	2098.7	2077.6	2056.4	2024.9	1992.8	1946.8	1908.6	1869.9
17.5°	2216.2	2215.0	2202.3	2181.7	2155.1	2127.2	2080.0	2038.8	1989.8	1939.5	1891.1
20°	2341.0	2334.3	2315.5	2291.9	2242.9	2203.5	2144.8	2088.5	2024.3	1961.3	1905.0
22.5°	2497.2	2475.4	2456.6	2420.3	2364.0	2295.5	2229.5	2147.8	2058.2	1984.3	1914.1
25°	2629.2	2619.5	2599.5	2558.9	2494.8	2412.4	2314.3	2221.7	2109.0	2010.9	1919.5
27.5°	2709.1	2704.9	2692.8	2654.6	2601.3	2519.6	2414.8	2296.8	2169.0	2036.4	1926.8
30°	2652.2	2652.8	2659.5	2655.2	2631.6	2578.9	2485.7	2367.0	2219.2	2066.7	1928.6
32.5°	2407.6	2423.9	2476.0	2500.8	2534.1	2545.0	2503.2	2404.5	2261.6	2096.9	1934.7
35°	2074.5	2114.5	2149.6	2222.3	2308.9	2379.7	2420.9	2388.8	2279.2	2117.5	1937.7
37.5°	1760.9	1757.8	1812.3	1891.1	1983.1	2103.6	2220.5	2284.6	2248.9	2113.3	1932.2
40°	1435.1	1462.9	1496.9	1566.5	1674.3	1822.6	1961.9	2099.4	2149.0	2075.7	1911.0
42.5°	1212.3	1225.0	1258.9	1313.4	1390.9	1542.3	1679.7	1856.5	1983.7	1992.2	1864.4
45°	1041.5	1055.4	1065.1	1119.0	1191.1	1292.8	1433.9	1611.9	1782.7	1856.5	1788.7
47.5°	904.7	912.5	933.7	966.4	1013.6	1103.9	1216.5	1378.2	1564.1	1707.6	1684.6
50°	801.7	807.8	824.7	842.9	881.6	948.3	1039.1	1171.7	1350.3	1507.2	1558.6
52.5°	710.9	718.8	727.2	744.8	780.5	825.3	899.2	1002.7	1168.7	1329.1	1410.9
55°	637.0	640.0	649.1	662.4	689.7	723.6	782.3	876.2	992.5	1152.3	1264.9
57.5°	572.8	569.8	579.5	588.6	606.7	635.2	677.6	747.2	858.0	994.3	1111.7
60°	503.8	506.8	514.1	521.4	534.1	558.9	592.2	647.9	729.1	851.4	971.3
62.5°	444.5	446.9	448.7	459.0	470.5	488.1	515.3	560.7	627.9	729.1	836.2
65°	394.8	390.6	393.0	400.3	409.3	423.9	449.3	482.6	532.9	615.2	704.2
67.5°	336.7	337.9	338.5	342.7	350.6	364.5	382.7	409.9	451.1	515.9	594.0
70°	287.0	287.6	288.2	291.9	298.5	306.4	319.1	340.3	375.4	425.7	486.8
72.5°	236.2	238.6	238.6	241.6	246.4	250.7	262.8	280.4	307.0	347.0	398.4
75°	185.3	189.5	190.7	194.4	198.6	199.8	208.9	222.8	239.8	272.5	313.1
77.5°	144.1	144.1	146.5	150.8	150.8	154.4	164.1	170.2	183.5	205.9	236.8
80°	101.7	103.5	103.5	104.8	107.2	110.2	114.4	119.9	131.4	147.7	164.1
82.5°	66.6	67.2	67.8	70.8	69.6	72.7	74.5	81.1	86.6	94.5	104.8
85°	35.1	35.1	35.7	37.5	39.4	40.0	41.2	44.2	48.4	52.1	58.1
87.5°	14.5	13.9	13.9	15.1	15.1	15.7	16.3	17.6	20.0	20.0	22.4
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°	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2
2.5°	1547.7	1542.9	1534.4	1527.1	1518.0	1511.4	1504.7	1496.3	1487.8	1478.7	1469.0
5°	1609.5	1595.0	1578.6	1562.3	1542.9	1527.1	1510.2	1490.8	1474.5	1456.3	1436.9
7.5°	1680.3	1654.9	1626.4	1594.3	1564.1	1536.8	1509.0	1482.3	1458.1	1430.9	1404.2
10°	1748.8	1704.6	1668.8	1625.2	1582.2	1542.3	1504.1	1469.0	1433.9	1400.0	1367.3
12.5°	1795.4	1745.1	1700.3	1650.1	1599.8	1549.5	1499.3	1450.8	1409.1	1367.9	1333.4
15°	1827.5	1792.4	1733.0	1672.5	1606.5	1541.1	1484.1	1427.8	1378.2	1330.3	1289.2
17.5°	1847.5	1802.0	1743.9	1680.3	1607.7	1539.2	1470.8	1403.6	1346.7	1295.2	1248.6
20°	1852.9	1799.6	1739.1	1673.1	1600.4	1525.3	1448.4	1375.1	1313.4	1254.6	1207.4
22.5°	1847.5	1785.7	1720.9	1656.7	1580.4	1504.1	1423.6	1343.7	1272.8	1212.3	1162.6
25°	1838.4	1763.9	1696.1	1620.4	1549.5	1476.9	1393.9	1309.1	1235.3	1172.3	1116.6
27.5°	1826.9	1741.5	1657.9	1583.4	1506.5	1435.1	1358.8	1272.2	1195.3	1126.3	1074.2
30°	1813.5	1711.8	1619.2	1530.8	1458.1	1386.7	1312.2	1230.4	1152.9	1086.9	1030.6
32.5°	1798.4	1680.3	1571.3	1476.3	1398.8	1332.8	1263.1	1185.0	1108.7	1037.9	988.8
35°	1777.2	1637.3	1519.9	1416.9	1336.4	1264.9	1203.8	1135.4	1059.7	993.7	942.8
37.5°	1752.4	1599.2	1467.8	1356.4	1268.6	1195.3	1139.0	1083.3	1012.4	948.9	899.8
40°	1719.1	1553.2	1412.7	1292.2	1198.3	1126.3	1071.2	1023.3	964.6	900.4	856.2
42.5°	1675.5	1502.3	1350.3	1221.9	1131.1	1054.2	1002.7	959.2	908.9	853.2	809.6
45°	1625.8	1444.2	1280.7	1154.7	1056.0	982.8	932.5	893.1	855.0	805.3	764.8
47.5°	1548.3	1375.8	1217.7	1078.4	981.6	910.7	863.5	825.9	797.5	758.1	718.2
50°	1456.3	1298.2	1143.2	1003.4	905.3	836.8	792.0	759.3	735.1	704.8	674.6
52.5°	1355.2	1211.0	1061.5	930.7	832.6	767.8	720.6	691.5	675.8	651.5	627.9
55°	1237.1	1113.0	973.7	854.4	758.1	692.1	651.5	631.0	613.4	601.3	580.1
57.5°	1118.4	1013.6	889.5	771.4	683.0	624.3	588.0	565.0	552.2	543.8	528.6
60°	988.8	906.5	792.6	690.3	611.6	555.9	523.8	505.0	493.5	488.7	478.4
62.5°	865.3	802.3	698.8	613.4	543.2	494.1	462.0	446.9	439.6	434.2	428.1
65°	743.6	693.9	612.2	532.3	472.9	428.7	403.3	391.2	385.7	379.7	379.1
67.5°	634.0	588.6	523.2	457.8	408.1	370.6	348.2	336.1	330.0	330.6	327.6
70°	526.2	491.1	437.8	384.5	342.1	312.5	291.3	283.4	281.0	280.4	277.9
72.5°	425.7	405.7	359.1	314.3	281.0	258.0	241.0	234.3	231.3	230.1	230.1
75°	337.3	322.7	282.8	248.9	223.4	204.7	193.2	188.3	184.1	186.5	184.7
77.5°	253.1	241.0	213.8	189.5	170.2	154.4	149.0	144.7	142.3	141.7	144.1
80°	178.0	170.8	153.8	134.4	119.9	110.8	107.2	103.5	101.7	100.5	101.7
82.5°	114.4	110.2	98.1	86.6	78.1	73.3	69.6	67.8	64.8	65.4	66.6
85°	62.4	61.2	53.3	49.7	41.8	41.2	38.8	36.9	37.5	36.3	38.1
87.5°	25.4	24.2	22.4	20.6	18.2	16.3	15.1	16.3	14.5	16.3	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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2	1493.2
2.5°	1464.2	1457.5	1449.6	1442.4	1431.5	1424.2	1420.6	1421.8	1417.5	1416.3	1415.7
5°	1425.4	1410.3	1395.7	1383.6	1370.9	1356.4	1346.1	1343.1	1341.8	1338.8	1332.2
7.5°	1385.4	1366.1	1347.3	1329.7	1311.6	1294.6	1284.3	1275.8	1271.0	1262.5	1260.7
10°	1343.1	1319.4	1299.5	1274.0	1252.2	1234.7	1221.3	1214.1	1209.8	1202.0	1195.3
12.5°	1302.5	1277.7	1246.8	1223.8	1200.8	1182.6	1167.5	1155.3	1152.3	1142.0	1136.6
15°	1258.9	1228.6	1200.8	1174.1	1152.3	1129.3	1120.2	1109.3	1098.4	1089.3	1087.5
17.5°	1217.1	1180.8	1153.5	1127.5	1100.8	1083.9	1071.8	1064.5	1056.0	1051.2	1042.7
20°	1166.8	1137.2	1106.9	1082.7	1059.7	1045.1	1028.8	1022.1	1016.1	1004.6	1000.9
22.5°	1124.5	1088.7	1063.3	1039.1	1018.5	997.9	986.4	979.7	970.7	964.6	959.8
25°	1080.3	1050.6	1018.5	994.3	976.7	956.1	948.3	939.8	931.9	926.5	921.6
27.5°	1037.3	1004.6	978.5	954.3	936.1	921.6	910.7	901.6	896.2	891.9	888.9
30°	992.5	962.2	938.0	915.6	895.0	882.9	872.6	868.9	862.9	859.8	855.0
32.5°	951.9	921.0	898.0	878.6	860.5	848.3	842.3	836.8	830.8	825.3	824.7
35°	905.9	879.2	858.0	836.8	823.5	813.8	807.2	801.7	796.9	792.6	790.2
37.5°	865.3	839.9	816.2	801.1	786.6	778.1	770.8	769.0	764.2	764.8	761.1
40°	821.7	798.7	778.7	763.6	753.9	744.8	740.0	733.9	730.9	731.5	728.4
42.5°	779.3	758.1	740.0	726.0	715.7	709.1	704.8	700.0	696.4	693.9	693.3
45°	736.3	717.5	702.4	688.5	680.0	673.9	668.5	662.4	659.4	658.2	657.6
47.5°	693.9	677.0	660.6	650.9	643.1	637.6	632.2	627.3	624.9	623.1	620.1
50°	650.3	633.4	621.9	609.8	603.1	595.8	589.8	587.4	584.3	583.7	586.8
52.5°	604.9	591.6	581.3	571.6	563.7	555.9	549.8	546.8	548.6	548.6	552.2
55°	561.9	548.0	538.3	530.4	522.0	514.7	508.6	508.6	508.6	512.3	517.1
57.5°	514.1	502.0	494.7	485.6	477.8	472.9	468.7	468.1	470.5	476.5	482.0
60°	465.6	457.2	449.3	442.0	434.2	430.5	429.9	428.7	432.3	438.4	449.9
62.5°	417.8	412.4	402.7	399.0	392.4	388.1	388.1	389.4	394.8	404.5	414.8
65°	371.8	363.9	356.7	353.0	348.8	345.1	345.1	350.0	357.9	366.9	379.7
67.5°	324.6	317.9	313.1	309.4	304.6	302.8	304.6	310.0	319.7	328.8	342.1
70°	273.7	272.5	268.2	263.4	261.0	261.0	262.8	268.9	276.1	290.0	301.6
72.5°	227.1	227.1	224.6	221.6	219.8	221.6	222.8	228.9	238.0	250.1	262.8
75°	184.7	182.9	181.1	179.8	179.2	180.4	182.3	187.1	198.0	209.5	219.8
77.5°	142.9	141.7	139.9	141.1	141.1	141.7	147.1	152.6	158.6	167.7	178.6
80°	102.9	103.5	101.7	101.1	104.2	105.4	109.6	113.8	118.1	128.4	136.2
82.5°	67.8	69.0	68.4	69.6	70.8	70.8	75.7	79.9	83.6	90.8	96.9
85°	38.8	39.4	39.4	41.2	42.4	41.8	46.0	48.4	50.3	55.7	59.3
87.5°	17.0	17.6	18.2	18.2	18.2	20.6	21.2	22.4	23.0	24.2	26.0
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: P243689

CATALOG NUMBER: S125DR-H1270D935-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1493.2	1493.2	1493.2	1493.2
2.5°	1410.3	1409.7	1412.7	1414.5
5°	1327.9	1326.1	1323.7	1324.9
7.5°	1254.6	1249.8	1248.6	1248.6
10°	1189.9	1185.0	1183.8	1182.0
12.5°	1134.8	1127.5	1124.5	1121.4
15°	1082.7	1081.5	1074.8	1068.1
17.5°	1034.8	1036.7	1030.0	1027.0
20°	994.9	989.4	987.0	985.8
22.5°	954.3	950.1	950.1	945.8
25°	918.0	914.3	914.9	910.7
27.5°	884.1	883.5	882.9	881.6
30°	852.6	850.2	847.7	848.9
32.5°	822.3	818.7	816.9	816.2
35°	790.8	789.6	787.2	786.0
37.5°	759.9	760.5	757.5	756.9
40°	726.6	726.0	725.4	724.2
42.5°	691.5	689.7	690.9	690.3
45°	656.4	654.6	655.8	654.0
47.5°	621.9	623.1	623.1	623.7
50°	588.0	590.4	590.4	592.2
52.5°	556.5	561.3	561.3	560.7
55°	522.6	528.0	529.8	530.4
57.5°	490.5	495.9	501.4	502.6
60°	456.0	465.6	471.1	472.3
62.5°	425.1	434.2	441.4	442.0
65°	390.6	401.5	408.1	410.5
67.5°	355.4	363.9	373.0	376.6
70°	315.5	325.8	331.8	334.2
72.5°	273.7	285.2	293.1	294.3
75°	233.7	242.2	248.3	249.5
77.5°	188.3	196.8	202.2	203.5
80°	142.9	150.2	153.8	156.2
82.5°	101.1	106.0	107.8	110.2
85°	62.4	66.0	66.6	66.6
87.5°	27.2	27.9	27.9	29.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)