

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: P242829

Luminaire Tested: **S125DR-S1270D935-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242829
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-S1270D935-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4241.8 lumens
Efficiency: N/A
Efficacy: 103.2 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

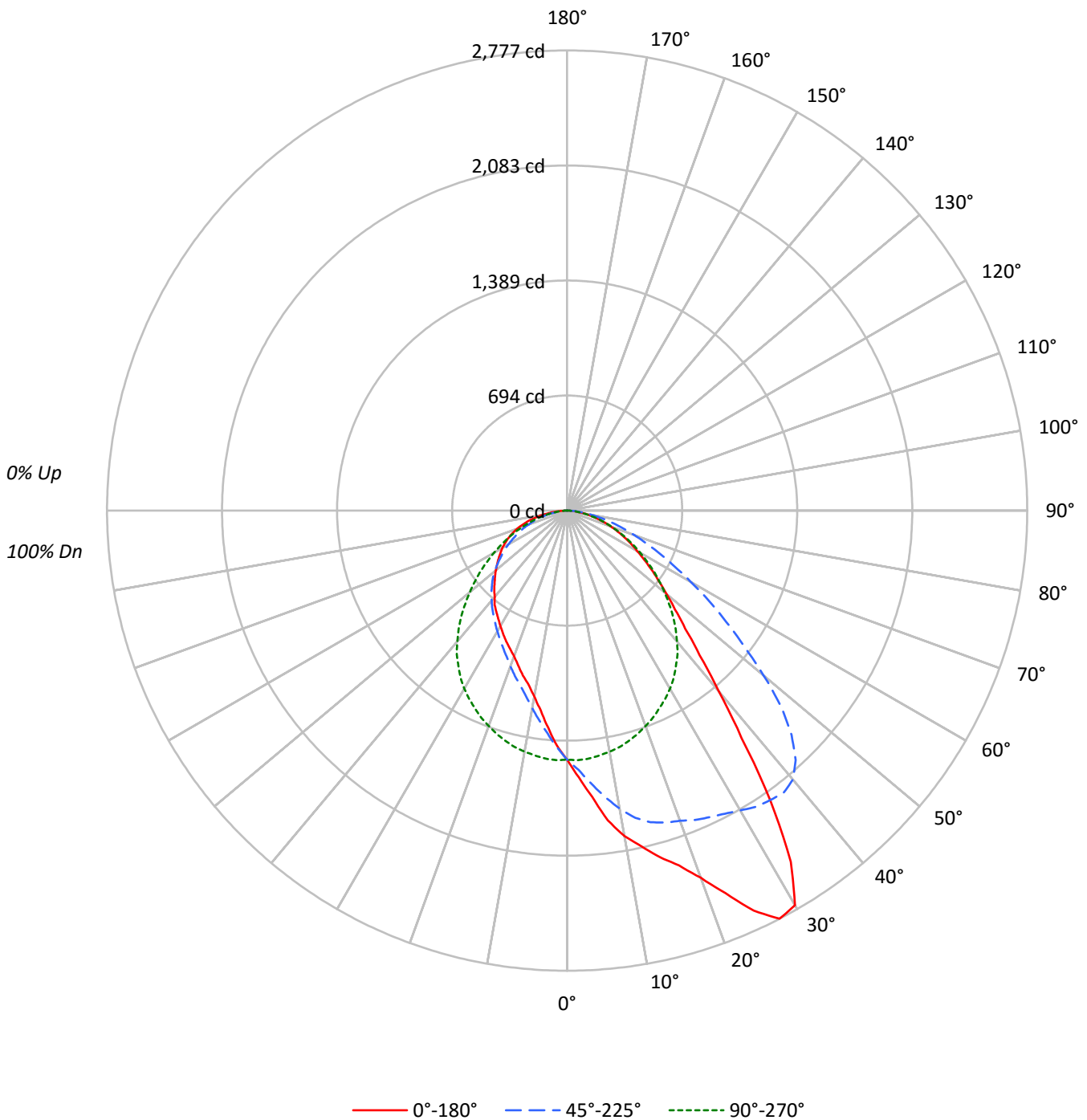
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	10683	10683	10683
5°	12372	10720	9386
10°	14394	10664	8224
15°	15933	10586	7586
20°	17835	10462	7074
25°	20894	10322	6824
30°	22567	10184	6608
35°	18555	9925	6466
40°	13189	9566	6310
45°	10132	9080	6221
50°	8649	8480	6207
55°	7700	7890	6261
60°	6947	7247	6421
65°	6416	6599	6587
70°	5833	5927	6683
75°	5152	5220	6624
80°	4334	4257	6058
85°	3433	3066	4893



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.7	3.4
10°-20°	430.9	10.2
20°-30°	700.0	16.5
30°-40°	855.4	20.2
40°-50°	776.1	18.3
50°-60°	618.1	14.6
60°-70°	430.5	10.1
70°-80°	229.3	5.4
80°-90°	56.9	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°	1275.6	30.1
0°-40°	2131.0	50.2
0°-60°	3525.1	83.1
0°-90°	4241.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4241.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1503	1503	1503	1503	1503	
5°	1734	1652	1502	1351	1316	174
15°	2165	1947	1439	1091	1031	619
25°	2664	2041	1316	914	870	1221
35°	2139	2134	1144	775	745	1312
45°	1008	1915	903	641	619	802
55°	621	1173	637	489	505	559
65°	382	622	392	330	392	378
75°	188	277	190	174	241	202
85°	42	56	38	41	60	49
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°	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1
2.5°	1611.6	1609.0	1606.5	1601.4	1605.2	1594.4	1589.3	1580.3	1569.5	1565.7	1561.2
5°	1734.1	1737.3	1740.5	1727.1	1728.4	1719.4	1699.0	1682.4	1669.0	1651.8	1639.7
7.5°	1885.9	1876.4	1877.0	1868.7	1854.0	1841.9	1822.1	1794.7	1769.8	1741.8	1717.5
10°	1994.4	1995.0	1989.3	1979.1	1963.1	1951.7	1923.6	1896.8	1864.2	1826.0	1798.5
12.5°	2076.1	2079.3	2071.6	2056.9	2051.2	2021.8	2001.4	1968.2	1928.0	1899.3	1854.0
15°	2165.4	2158.4	2153.3	2136.0	2122.6	2095.8	2060.8	2027.6	1985.5	1946.6	1907.6
17.5°	2244.5	2250.2	2241.9	2229.2	2189.6	2158.4	2115.0	2072.9	2022.5	1974.0	1928.7
20°	2358.1	2363.2	2348.5	2321.1	2271.3	2240.0	2178.1	2119.5	2058.8	1991.8	1940.8
22.5°	2499.7	2493.3	2472.3	2427.0	2385.5	2321.1	2252.8	2178.1	2098.4	2020.6	1948.5
25°	2664.3	2637.5	2625.4	2573.7	2516.9	2432.1	2340.2	2235.6	2141.1	2041.0	1954.2
27.5°	2776.6	2765.7	2748.5	2706.4	2641.3	2545.0	2436.5	2311.5	2184.5	2062.0	1952.9
30°	2749.8	2751.1	2752.4	2740.9	2702.6	2634.3	2526.5	2389.3	2231.1	2088.8	1957.4
32.5°	2512.5	2541.2	2568.6	2604.3	2627.3	2627.9	2570.5	2449.9	2286.0	2119.5	1954.8
35°	2138.6	2145.6	2217.7	2289.2	2386.1	2461.4	2511.8	2457.0	2319.8	2134.1	1952.9
37.5°	1729.0	1764.1	1818.3	1898.7	2044.2	2162.8	2318.5	2372.1	2307.7	2146.2	1952.3
40°	1421.5	1453.4	1485.9	1568.2	1686.2	1838.1	2021.2	2177.5	2213.9	2119.5	1933.2
42.5°	1184.1	1207.7	1244.7	1301.5	1395.3	1525.5	1698.4	1914.7	2062.7	2041.6	1893.0
45°	1008.0	1024.0	1052.1	1101.2	1172.7	1277.9	1432.3	1655.6	1850.2	1914.7	1824.7
47.5°	883.0	883.6	906.6	941.7	995.9	1092.9	1208.4	1392.1	1602.0	1750.7	1729.6
50°	782.2	779.0	796.2	825.6	866.4	925.7	1034.8	1174.6	1374.3	1548.4	1596.9
52.5°	695.4	696.7	705.6	725.4	757.9	806.4	881.1	1003.6	1166.9	1346.8	1448.9
55°	621.4	618.9	631.0	645.7	670.5	703.7	762.4	858.8	997.2	1173.3	1292.0
57.5°	550.0	557.0	562.1	572.3	594.0	617.0	669.3	743.3	857.5	1013.8	1139.5
60°	488.7	495.7	499.6	509.8	526.4	545.5	583.8	641.2	733.7	863.9	988.3
62.5°	433.8	438.9	439.6	448.5	461.3	479.8	507.9	553.8	622.1	731.8	853.0
65°	381.5	381.5	384.1	393.6	400.0	416.6	439.6	474.7	533.4	622.1	726.0
67.5°	330.5	333.7	333.0	337.5	343.2	357.3	374.5	403.9	450.4	517.4	603.6
70°	280.7	283.3	282.6	285.8	292.2	300.5	313.9	341.3	372.6	428.1	499.6
72.5°	236.1	236.7	234.8	239.3	242.4	249.5	264.8	276.3	305.0	349.6	405.1
75°	187.6	188.8	190.1	192.7	196.5	200.3	208.0	222.7	241.8	276.9	314.5
77.5°	149.3	146.1	149.9	149.3	151.2	154.4	161.4	169.7	186.3	209.9	241.2
80°	105.9	106.5	106.5	107.2	110.4	112.3	118.0	123.8	135.9	152.5	172.9
82.5°	70.2	72.1	70.8	72.1	74.6	75.9	78.5	82.9	88.7	100.8	114.2
85°	42.1	38.9	40.2	41.5	41.5	42.1	44.7	46.6	50.4	55.5	61.2
87.5°	15.3	16.6	17.2	17.2	17.9	17.9	20.4	20.4	22.3	24.2	26.8
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°	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1
2.5°	1557.4	1552.9	1547.8	1538.9	1528.0	1522.3	1513.3	1507.6	1496.1	1486.6	1476.3
5°	1625.0	1608.4	1593.1	1573.3	1551.6	1537.6	1521.0	1502.5	1483.4	1463.6	1441.9
7.5°	1692.6	1665.2	1635.2	1603.9	1573.3	1544.6	1517.8	1490.4	1465.5	1434.2	1408.1
10°	1760.9	1723.9	1684.3	1637.8	1592.5	1552.9	1512.7	1477.6	1441.9	1403.6	1369.8
12.5°	1829.2	1776.8	1716.9	1664.6	1607.8	1558.0	1508.9	1461.7	1414.5	1371.1	1330.2
15°	1854.0	1810.7	1759.0	1686.2	1625.0	1559.3	1496.8	1438.7	1384.5	1337.3	1287.5
17.5°	1878.3	1822.8	1767.9	1697.7	1618.0	1547.2	1476.3	1413.2	1353.2	1293.9	1248.6
20°	1884.0	1826.6	1768.5	1700.3	1618.0	1533.8	1462.9	1383.2	1317.5	1255.6	1196.9
22.5°	1882.1	1815.1	1750.7	1679.9	1600.1	1524.2	1434.9	1353.2	1280.5	1219.9	1158.0
25°	1868.1	1798.5	1719.4	1648.6	1569.5	1487.2	1400.4	1316.2	1243.5	1173.9	1113.3
27.5°	1859.8	1771.7	1685.0	1603.3	1527.4	1451.5	1367.2	1280.5	1200.7	1129.9	1073.8
30°	1841.3	1742.4	1641.6	1555.5	1477.0	1403.6	1325.1	1240.9	1156.7	1087.8	1026.5
32.5°	1824.7	1705.4	1597.6	1501.9	1417.6	1346.8	1276.0	1196.9	1114.6	1044.4	983.2
35°	1802.4	1669.0	1547.2	1441.3	1352.6	1279.2	1218.6	1143.9	1068.0	1000.4	941.7
37.5°	1776.2	1621.8	1492.9	1382.6	1286.2	1209.7	1152.2	1094.2	1018.3	951.9	899.6
40°	1744.3	1570.8	1432.3	1318.8	1218.0	1137.6	1085.2	1031.0	970.4	909.8	853.6
42.5°	1704.1	1524.8	1371.1	1246.7	1147.1	1069.3	1013.8	969.8	918.1	862.6	811.5
45°	1653.1	1467.4	1304.1	1172.7	1071.8	994.6	937.9	903.4	863.2	809.6	765.6
47.5°	1585.4	1402.3	1233.9	1098.0	994.0	922.6	868.3	834.5	805.2	763.1	721.6
50°	1489.1	1327.7	1156.7	1022.1	918.1	846.0	796.9	766.9	742.6	712.0	678.2
52.5°	1381.3	1233.9	1080.8	948.1	845.4	774.5	726.7	701.2	682.0	662.2	629.1
55°	1265.8	1138.2	992.7	866.4	771.3	701.8	659.7	636.7	620.1	603.6	583.1
57.5°	1141.4	1038.0	904.7	786.7	698.6	633.5	594.0	570.4	557.0	548.0	535.3
60°	1008.7	923.2	812.2	706.9	621.4	565.3	527.0	509.8	498.9	491.9	483.0
62.5°	885.6	819.2	718.4	624.6	552.5	500.2	467.0	450.4	440.2	437.7	430.7
65°	765.0	710.7	625.9	546.1	482.3	437.0	408.3	392.4	386.0	382.2	382.8
67.5°	643.7	608.7	537.8	467.7	415.3	375.1	351.5	339.4	336.2	330.5	330.5
70°	534.6	509.8	452.3	393.0	347.7	318.4	297.9	285.2	282.0	279.4	278.8
72.5°	438.3	417.3	369.4	324.7	285.2	260.3	244.4	238.0	232.2	231.0	231.0
75°	343.9	331.8	292.2	254.6	226.5	208.6	197.1	190.1	186.3	185.7	186.3
77.5°	259.7	248.2	220.7	192.7	174.2	160.1	149.3	147.4	142.3	142.9	141.6
80°	183.7	176.7	160.8	139.7	125.0	113.6	108.5	104.0	102.7	100.8	102.7
82.5°	120.6	112.9	103.4	91.9	80.4	74.6	69.5	68.9	68.3	67.6	67.6
85°	65.7	66.4	60.0	49.8	44.7	40.8	37.6	37.6	37.0	36.4	37.0
87.5°	28.1	26.8	24.2	22.3	19.1	17.2	16.6	17.2	15.3	14.7	15.3
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°	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1	1503.1
2.5°	1470.6	1463.6	1457.8	1445.1	1438.1	1428.5	1420.8	1429.1	1420.2	1424.0	1418.3
5°	1431.0	1413.2	1400.4	1381.9	1366.0	1351.3	1340.4	1338.5	1333.4	1330.9	1323.2
7.5°	1383.8	1363.4	1342.4	1319.4	1300.3	1279.8	1267.7	1256.2	1249.2	1240.3	1233.3
10°	1343.0	1313.0	1287.5	1258.1	1232.6	1210.3	1192.4	1183.5	1175.2	1163.1	1158.6
12.5°	1292.6	1261.3	1228.8	1196.9	1172.7	1147.1	1132.5	1117.8	1112.7	1098.6	1098.0
15°	1254.3	1207.7	1177.1	1145.2	1111.4	1091.0	1078.2	1063.6	1057.2	1047.6	1040.6
17.5°	1207.1	1165.0	1126.7	1094.2	1063.6	1047.0	1030.4	1020.2	1009.3	1002.3	990.8
20°	1154.8	1115.2	1077.0	1041.9	1019.5	999.8	987.0	977.4	965.9	962.7	951.3
22.5°	1110.8	1066.1	1029.7	1001.7	976.8	953.8	939.8	934.0	927.0	915.5	915.5
25°	1062.3	1017.0	985.7	956.4	934.7	914.3	904.7	896.4	888.7	881.7	879.2
27.5°	1021.4	981.3	943.0	916.2	897.7	878.5	870.2	859.4	853.6	847.9	840.3
30°	978.1	936.6	904.1	878.5	858.1	841.5	832.6	825.6	820.5	815.4	811.5
32.5°	933.4	895.8	864.5	839.6	819.2	807.7	800.1	795.6	789.8	783.5	778.4
35°	895.1	853.0	822.4	800.7	784.7	775.2	766.2	761.8	755.4	755.4	750.3
37.5°	849.8	812.8	785.4	765.6	751.6	742.6	732.4	729.9	725.4	722.9	720.9
40°	810.3	776.5	750.9	731.2	715.8	708.8	701.2	696.1	693.5	690.3	689.0
42.5°	769.4	737.5	713.3	695.4	682.7	676.9	669.9	666.7	661.0	656.5	655.9
45°	728.0	696.7	674.4	659.7	648.2	641.2	636.7	629.1	626.5	621.4	620.8
47.5°	689.7	659.1	636.7	624.6	614.4	609.3	602.3	594.0	590.8	587.6	587.0
50°	645.7	618.2	597.8	586.3	576.8	568.5	561.4	556.3	554.4	554.4	555.7
52.5°	601.0	578.7	562.1	547.4	538.5	529.5	523.2	520.6	517.4	521.2	523.8
55°	557.6	534.0	521.2	507.9	498.9	488.7	485.5	484.2	482.3	487.4	490.0
57.5°	511.0	495.1	479.8	465.7	458.1	451.7	446.6	446.0	449.8	451.1	458.7
60°	467.0	447.9	434.5	424.3	414.7	410.9	409.6	408.3	410.9	417.9	428.7
62.5°	418.5	403.9	389.2	382.2	375.8	368.8	368.8	370.0	375.8	384.1	394.9
65°	371.3	357.9	348.4	339.4	333.7	329.8	331.1	333.7	339.4	350.3	362.4
67.5°	322.8	313.9	305.0	296.7	290.9	291.6	292.2	295.4	302.4	315.2	326.7
70°	276.3	266.0	259.0	255.8	251.4	248.8	252.6	259.0	264.8	276.3	285.8
72.5°	229.7	221.4	216.3	214.4	213.1	211.2	211.8	218.8	227.1	238.6	250.1
75°	183.7	180.6	176.7	174.2	172.3	173.5	174.8	181.2	187.6	199.7	212.5
77.5°	142.3	138.4	135.9	135.3	134.0	134.6	137.8	142.9	149.3	158.2	168.4
80°	101.4	100.2	98.9	98.3	98.3	98.9	104.0	107.2	112.9	121.2	128.9
82.5°	67.0	66.4	66.4	66.4	67.0	67.0	69.5	74.0	78.5	84.2	90.6
85°	38.9	37.6	39.6	40.2	38.9	40.8	42.1	44.7	46.6	49.8	53.0
87.5°	16.0	17.2	16.6	17.2	17.2	18.5	17.9	20.4	21.7	23.0	22.3
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: P242829

CATALOG NUMBER: S125DR-S1270D935-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1503.1	1503.1	1503.1	1503.1
2.5°	1414.5	1418.9	1415.1	1420.2
5°	1320.0	1314.3	1318.1	1315.6
7.5°	1232.6	1227.5	1219.9	1217.3
10°	1151.6	1144.6	1143.9	1139.5
12.5°	1092.3	1085.9	1077.0	1075.7
15°	1036.8	1031.7	1027.2	1031.0
17.5°	989.5	985.1	983.8	980.0
20°	945.5	942.3	943.6	935.3
22.5°	910.4	903.4	902.1	902.1
25°	873.4	870.2	867.0	870.2
27.5°	840.9	837.7	836.4	837.1
30°	811.5	805.2	805.8	805.2
32.5°	779.6	775.8	774.5	773.3
35°	748.4	748.4	745.2	745.2
37.5°	719.7	719.0	717.1	718.4
40°	686.5	685.9	683.9	680.1
42.5°	654.6	652.0	651.4	650.8
45°	620.8	620.8	619.5	618.9
47.5°	587.6	588.9	591.4	590.8
50°	558.3	558.9	560.8	561.4
52.5°	525.7	530.2	532.7	532.1
55°	495.7	500.2	504.7	505.3
57.5°	465.7	471.5	476.0	477.2
60°	435.1	443.4	449.2	451.7
62.5°	405.8	415.3	421.1	421.1
65°	373.2	382.8	387.9	391.7
67.5°	339.4	349.0	354.1	357.3
70°	301.8	311.3	319.0	321.6
72.5°	264.8	273.1	278.8	282.0
75°	220.7	232.2	238.0	241.2
77.5°	178.6	190.1	193.3	195.2
80°	136.5	142.9	147.4	148.0
82.5°	97.0	102.1	102.7	104.6
85°	57.4	60.0	60.6	60.0
87.5°	23.6	23.0	23.0	24.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)