

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: P242828

Luminaire Tested: **S125DR-S1090D935-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242828
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-S1090D935-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: 3649.9 lumens
Efficiency: N/A
Efficacy: 104.9 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

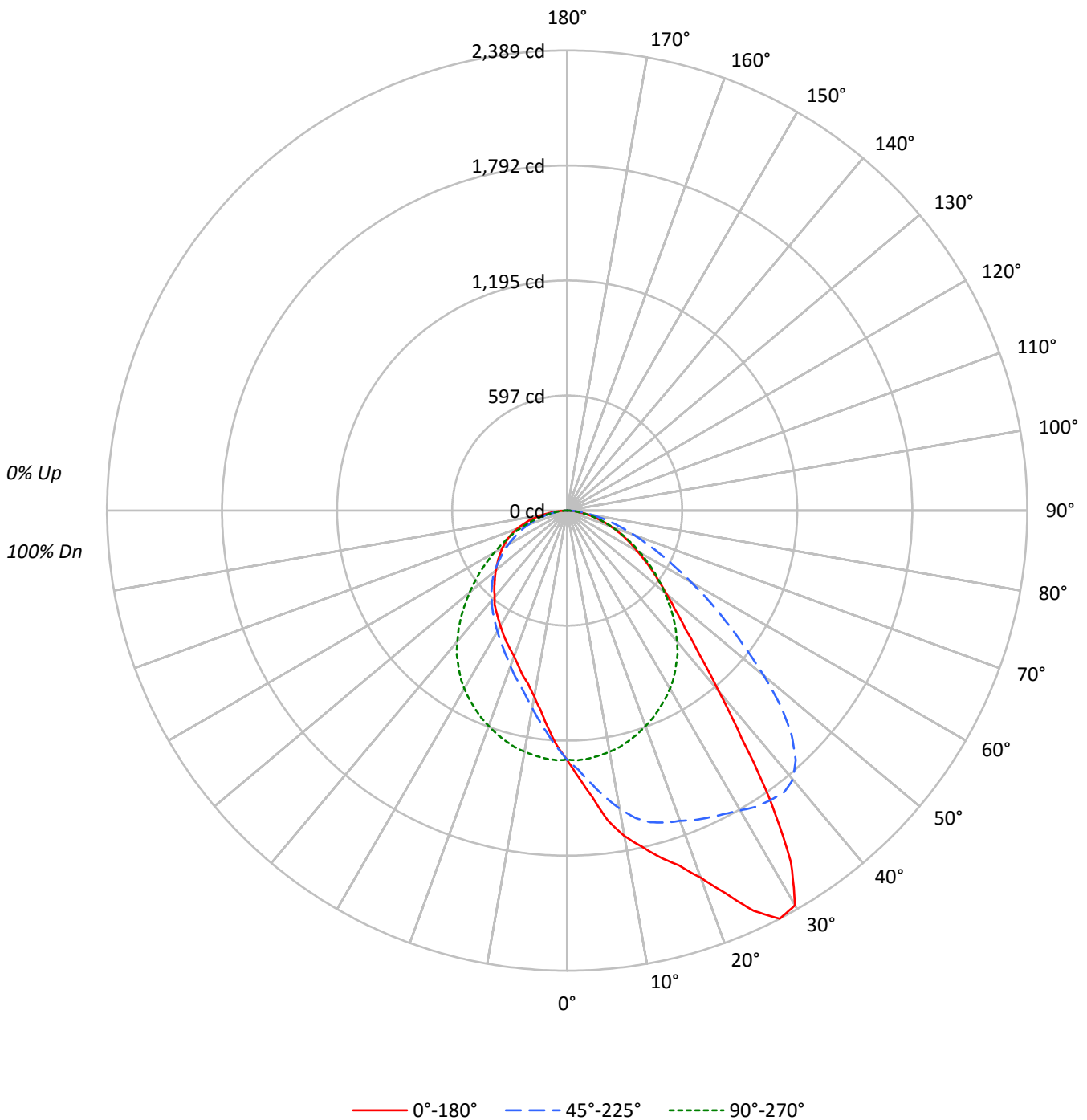
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	9193	9193	9193
5°	10645	9223	8076
10°	12385	9176	7076
15°	13710	9109	6527
20°	15346	9002	6087
25°	17978	8881	5872
30°	19418	8762	5686
35°	15966	8540	5563
40°	11348	8230	5429
45°	8718	7813	5352
50°	7441	7297	5342
55°	6626	6789	5388
60°	5977	6235	5525
65°	5521	5678	5669
70°	5018	5100	5750
75°	4432	4493	5698
80°	3729	3663	5214
85°	2952	2642	4208



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.5	3.4
10°-20°	370.8	10.2
20°-30°	602.3	16.5
30°-40°	736.0	20.2
40°-50°	667.8	18.3
50°-60°	531.8	14.6
60°-70°	370.4	10.1
70°-80°	197.3	5.4
80°-90°	48.9	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°	1097.5	30.1
0°-40°	1833.6	50.2
0°-60°	3033.2	83.1
0°-90°	3649.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3649.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1293	1293	1293	1293	1293	
5°	1492	1421	1293	1163	1132	150
15°	1863	1675	1238	939	887	533
25°	2292	1756	1132	787	749	1050
35°	1840	1836	984	667	641	1129
45°	867	1648	777	552	532	690
55°	535	1010	548	420	435	481
65°	328	535	338	284	337	326
75°	161	238	164	149	208	174
85°	36	48	32	35	52	42
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°	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4
2.5°	1386.7	1384.5	1382.3	1377.9	1381.2	1371.9	1367.5	1359.8	1350.5	1347.2	1343.3
5°	1492.1	1494.8	1497.6	1486.1	1487.2	1479.5	1461.9	1447.6	1436.1	1421.3	1410.8
7.5°	1622.7	1614.5	1615.1	1607.9	1595.3	1584.9	1567.9	1544.2	1522.8	1498.7	1477.8
10°	1716.1	1716.6	1711.7	1702.9	1689.2	1679.3	1655.1	1632.1	1604.1	1571.1	1547.5
12.5°	1786.3	1789.1	1782.5	1769.9	1764.9	1739.7	1722.1	1693.6	1659.0	1634.3	1595.3
15°	1863.2	1857.2	1852.8	1837.9	1826.4	1803.4	1773.2	1744.6	1708.4	1674.9	1641.4
17.5°	1931.3	1936.2	1929.1	1918.1	1884.1	1857.2	1819.8	1783.6	1740.2	1698.5	1659.5
20°	2029.0	2033.4	2020.8	1997.1	1954.3	1927.4	1874.2	1823.7	1771.5	1713.9	1670.0
22.5°	2150.9	2145.4	2127.3	2088.3	2052.6	1997.1	1938.4	1874.2	1805.6	1738.6	1676.5
25°	2292.5	2269.4	2259.0	2214.5	2165.7	2092.7	2013.6	1923.6	1842.3	1756.1	1681.5
27.5°	2389.1	2379.8	2365.0	2328.7	2272.7	2189.8	2096.5	1988.9	1879.7	1774.3	1680.4
30°	2366.1	2367.1	2368.2	2358.4	2325.4	2266.7	2173.9	2055.9	1919.7	1797.3	1684.2
32.5°	2161.8	2186.5	2210.1	2240.9	2260.6	2261.2	2211.8	2108.0	1967.0	1823.7	1682.0
35°	1840.1	1846.2	1908.2	1969.7	2053.1	2117.9	2161.3	2114.1	1996.0	1836.3	1680.4
37.5°	1487.7	1517.9	1564.6	1633.7	1758.9	1861.0	1994.9	2041.1	1985.6	1846.7	1679.8
40°	1223.1	1250.5	1278.5	1349.4	1450.9	1581.6	1739.1	1873.6	1904.9	1823.7	1663.4
42.5°	1018.9	1039.2	1071.0	1119.9	1200.6	1312.6	1461.4	1647.5	1774.8	1756.7	1628.8
45°	867.4	881.1	905.2	947.5	1009.0	1099.6	1232.4	1424.6	1592.0	1647.5	1570.0
47.5°	759.8	760.3	780.1	810.3	856.9	940.4	1039.7	1197.8	1378.5	1506.4	1488.3
50°	673.0	670.3	685.1	710.4	745.5	796.6	890.4	1010.6	1182.5	1332.3	1374.1
52.5°	598.4	599.5	607.2	624.2	652.2	693.9	758.1	863.5	1004.1	1158.9	1246.7
55°	534.7	532.5	542.9	555.6	577.0	605.5	656.0	738.9	858.0	1009.6	1111.7
57.5°	473.2	479.2	483.6	492.4	511.1	530.9	575.9	639.5	737.8	872.3	980.5
60°	420.5	426.5	429.8	438.6	452.9	469.4	502.3	551.7	631.3	743.3	850.4
62.5°	373.3	377.7	378.2	385.9	396.9	412.8	437.0	476.5	535.2	629.7	734.0
65°	328.3	328.3	330.5	338.7	344.2	358.5	378.2	408.4	458.9	535.2	624.7
67.5°	284.4	287.1	286.6	290.4	295.3	307.4	322.2	347.5	387.6	445.2	519.3
70°	241.5	243.7	243.2	245.9	251.4	258.6	270.1	293.7	320.6	368.4	429.8
72.5°	203.1	203.7	202.0	205.9	208.6	214.6	227.8	237.7	262.4	300.8	348.6
75°	161.4	162.5	163.6	165.8	169.1	172.4	179.0	191.6	208.1	238.3	270.6
77.5°	128.5	125.7	129.0	128.5	130.1	132.9	138.9	146.0	160.3	180.6	207.5
80°	91.1	91.7	91.7	92.2	95.0	96.6	101.6	106.5	116.9	131.2	148.8
82.5°	60.4	62.0	60.9	62.0	64.2	65.3	67.5	71.4	76.3	86.7	98.3
85°	36.2	33.5	34.6	35.7	35.7	36.2	38.4	40.1	43.4	47.8	52.7
87.5°	13.2	14.3	14.8	14.8	15.4	15.4	17.6	17.6	19.2	20.9	23.1
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°	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4
2.5°	1340.0	1336.2	1331.8	1324.1	1314.8	1309.8	1302.2	1297.2	1287.3	1279.1	1270.3
5°	1398.2	1383.9	1370.8	1353.8	1335.1	1323.0	1308.7	1292.8	1276.4	1259.3	1240.7
7.5°	1456.4	1432.8	1407.0	1380.1	1353.8	1329.1	1306.0	1282.4	1261.0	1234.1	1211.6
10°	1515.2	1483.3	1449.3	1409.2	1370.2	1336.2	1301.6	1271.4	1240.7	1207.7	1178.6
12.5°	1573.9	1528.9	1477.3	1432.3	1383.4	1340.6	1298.3	1257.7	1217.1	1179.7	1144.6
15°	1595.3	1558.0	1513.5	1450.9	1398.2	1341.7	1287.9	1237.9	1191.3	1150.6	1107.8
17.5°	1616.2	1568.4	1521.2	1460.8	1392.2	1331.2	1270.3	1216.0	1164.4	1113.3	1074.3
20°	1621.1	1571.7	1521.7	1463.0	1392.2	1319.7	1258.8	1190.2	1133.6	1080.4	1029.9
22.5°	1619.5	1561.8	1506.4	1445.4	1376.8	1311.5	1234.6	1164.4	1101.8	1049.6	996.4
25°	1607.4	1547.5	1479.5	1418.5	1350.5	1279.6	1205.0	1132.5	1069.9	1010.1	957.9
27.5°	1600.2	1524.5	1449.8	1379.6	1314.2	1248.9	1176.4	1101.8	1033.2	972.2	923.9
30°	1584.3	1499.2	1412.5	1338.4	1270.9	1207.7	1140.2	1067.7	995.3	936.0	883.3
32.5°	1570.0	1467.4	1374.6	1292.3	1219.8	1158.9	1097.9	1029.9	959.0	898.7	846.0
35°	1550.8	1436.1	1331.2	1240.1	1163.8	1100.7	1048.5	984.3	919.0	860.8	810.3
37.5°	1528.3	1395.5	1284.6	1189.6	1106.7	1040.8	991.4	941.5	876.2	819.1	774.0
40°	1500.9	1351.6	1232.4	1134.7	1048.0	978.8	933.8	887.1	835.0	782.8	734.5
42.5°	1466.3	1312.0	1179.7	1072.7	987.0	920.1	872.3	834.4	790.0	742.2	698.3
45°	1422.4	1262.6	1122.1	1009.0	922.3	855.8	807.0	777.3	742.8	696.6	658.8
47.5°	1364.2	1206.6	1061.7	944.8	855.3	793.8	747.1	718.0	692.8	656.6	620.9
50°	1281.3	1142.4	995.3	879.4	790.0	727.9	685.7	659.9	639.0	612.6	583.6
52.5°	1188.5	1061.7	930.0	815.8	727.4	666.4	625.3	603.3	586.8	569.8	541.3
55°	1089.2	979.4	854.2	745.5	663.7	603.9	567.6	547.9	533.6	519.3	501.8
57.5°	982.1	893.2	778.4	676.9	601.1	545.1	511.1	490.8	479.2	471.6	460.6
60°	867.9	794.4	698.8	608.3	534.7	486.4	453.4	438.6	429.3	423.3	415.6
62.5°	762.0	704.9	618.1	537.4	475.4	430.4	401.8	387.6	378.8	376.6	370.6
65°	658.2	611.6	538.5	469.9	415.0	376.0	351.3	337.6	332.1	328.8	329.4
67.5°	553.9	523.7	462.8	402.4	357.4	322.8	302.5	292.1	289.3	284.4	284.4
70°	460.0	438.6	389.2	338.2	299.2	273.9	256.4	245.4	242.6	240.4	239.9
72.5°	377.1	359.0	317.9	279.4	245.4	224.0	210.3	204.8	199.8	198.7	198.7
75°	295.9	285.5	251.4	219.0	194.9	179.5	169.6	163.6	160.3	159.7	160.3
77.5°	223.4	213.5	189.9	165.8	149.9	137.8	128.5	126.8	122.4	123.0	121.9
80°	158.1	152.1	138.3	120.2	107.6	97.7	93.3	89.5	88.4	86.7	88.4
82.5°	103.8	97.2	88.9	79.1	69.2	64.2	59.8	59.3	58.7	58.2	58.2
85°	56.5	57.1	51.6	42.8	38.4	35.1	32.4	32.4	31.8	31.3	31.8
87.5°	24.2	23.1	20.9	19.2	16.5	14.8	14.3	14.8	13.2	12.6	13.2
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°	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4	1293.4
2.5°	1265.4	1259.3	1254.4	1243.4	1237.4	1229.1	1222.6	1229.7	1222.0	1225.3	1220.4
5°	1231.3	1216.0	1205.0	1189.1	1175.3	1162.7	1153.4	1151.7	1147.3	1145.1	1138.6
7.5°	1190.7	1173.1	1155.0	1135.3	1118.8	1101.2	1090.8	1080.9	1074.9	1067.2	1061.2
10°	1155.6	1129.8	1107.8	1082.6	1060.6	1041.4	1026.0	1018.3	1011.2	1000.8	996.9
12.5°	1112.2	1085.3	1057.3	1029.9	1009.0	987.0	974.4	961.8	957.4	945.3	944.8
15°	1079.3	1039.2	1012.8	985.4	956.3	938.7	927.8	915.1	909.6	901.4	895.4
17.5°	1038.6	1002.4	969.5	941.5	915.1	900.9	886.6	877.8	868.5	862.4	852.5
20°	993.6	959.6	926.7	896.5	877.3	860.2	849.3	841.0	831.1	828.4	818.5
22.5°	955.8	917.3	886.0	861.9	840.5	820.7	808.6	803.7	797.7	787.8	787.8
25°	914.0	875.1	848.2	822.9	804.2	786.7	778.4	771.3	764.7	758.7	756.5
27.5°	878.9	844.3	811.4	788.3	772.4	755.9	748.8	739.5	734.5	729.6	723.0
30°	841.6	805.9	777.9	755.9	738.4	724.1	716.4	710.4	706.0	701.6	698.3
32.5°	803.1	770.8	743.9	722.4	704.9	695.0	688.4	684.6	679.6	674.1	669.7
35°	770.2	734.0	707.6	689.0	675.2	667.0	659.3	655.5	650.0	650.0	645.6
37.5°	731.2	699.4	675.8	658.8	646.7	639.0	630.2	628.0	624.2	622.0	620.3
40°	697.2	668.1	646.1	629.1	615.9	609.9	603.3	598.9	596.7	594.0	592.9
42.5°	662.1	634.6	613.7	598.4	587.4	582.5	576.4	573.7	568.7	564.9	564.3
45°	626.4	599.5	580.3	567.6	557.8	551.7	547.9	541.3	539.1	534.7	534.1
47.5°	593.4	567.1	547.9	537.4	528.7	524.3	518.2	511.1	508.3	505.6	505.1
50°	555.6	531.9	514.4	504.5	496.3	489.1	483.1	478.7	477.1	477.1	478.2
52.5°	517.1	497.9	483.6	471.0	463.3	455.6	450.2	448.0	445.2	448.5	450.7
55°	479.8	459.5	448.5	437.0	429.3	420.5	417.8	416.7	415.0	419.4	421.6
57.5°	439.7	426.0	412.8	400.7	394.2	388.7	384.3	383.7	387.0	388.1	394.7
60°	401.8	385.4	373.8	365.1	356.8	353.5	352.4	351.3	353.5	359.6	368.9
62.5°	360.1	347.5	334.9	328.8	323.3	317.3	317.3	318.4	323.3	330.5	339.8
65°	319.5	308.0	299.7	292.1	287.1	283.8	284.9	287.1	292.1	301.4	311.8
67.5°	277.8	270.1	262.4	255.3	250.3	250.9	251.4	254.2	260.2	271.2	281.1
70°	237.7	228.9	222.9	220.1	216.3	214.1	217.4	222.9	227.8	237.7	245.9
72.5°	197.6	190.5	186.1	184.5	183.4	181.7	182.3	188.3	195.4	205.3	215.2
75°	158.1	155.4	152.1	149.9	148.2	149.3	150.4	155.9	161.4	171.8	182.8
77.5°	122.4	119.1	116.9	116.4	115.3	115.8	118.6	123.0	128.5	136.1	144.9
80°	87.3	86.2	85.1	84.5	84.5	85.1	89.5	92.2	97.2	104.3	110.9
82.5°	57.6	57.1	57.1	57.1	57.6	57.6	59.8	63.7	67.5	72.5	78.0
85°	33.5	32.4	34.0	34.6	33.5	35.1	36.2	38.4	40.1	42.8	45.6
87.5°	13.7	14.8	14.3	14.8	14.8	15.9	15.4	17.6	18.7	19.8	19.2
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: P242828

CATALOG NUMBER: S125DR-S1090D935-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1293.4	1293.4	1293.4	1293.4
2.5°	1217.1	1220.9	1217.6	1222.0
5°	1135.8	1130.9	1134.2	1132.0
7.5°	1060.6	1056.2	1049.6	1047.4
10°	990.9	984.8	984.3	980.5
12.5°	939.8	934.3	926.7	925.6
15°	892.1	887.7	883.8	887.1
17.5°	851.4	847.6	846.5	843.2
20°	813.6	810.8	811.9	804.8
22.5°	783.4	777.3	776.2	776.2
25°	751.5	748.8	746.0	748.8
27.5°	723.5	720.8	719.7	720.2
30°	698.3	692.8	693.3	692.8
32.5°	670.8	667.5	666.4	665.3
35°	643.9	643.9	641.2	641.2
37.5°	619.2	618.7	617.0	618.1
40°	590.7	590.1	588.5	585.2
42.5°	563.2	561.0	560.5	559.9
45°	534.1	534.1	533.0	532.5
47.5°	505.6	506.7	508.9	508.3
50°	480.3	480.9	482.5	483.1
52.5°	452.3	456.2	458.4	457.8
55°	426.5	430.4	434.2	434.8
57.5°	400.7	405.7	409.5	410.6
60°	374.4	381.5	386.5	388.7
62.5°	349.1	357.4	362.3	362.3
65°	321.1	329.4	333.8	337.1
67.5°	292.1	300.3	304.7	307.4
70°	259.7	267.9	274.5	276.7
72.5°	227.8	235.0	239.9	242.6
75°	189.9	199.8	204.8	207.5
77.5°	153.7	163.6	166.3	168.0
80°	117.5	123.0	126.8	127.4
82.5°	83.4	87.8	88.4	90.0
85°	49.4	51.6	52.2	51.6
87.5°	20.3	19.8	19.8	20.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)