

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: P242823

Luminaire Tested: **S125DR-S1090D930-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242823
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-S1090D930-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: 3456.1 lumens
Efficiency: N/A
Efficacy: 99.3 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

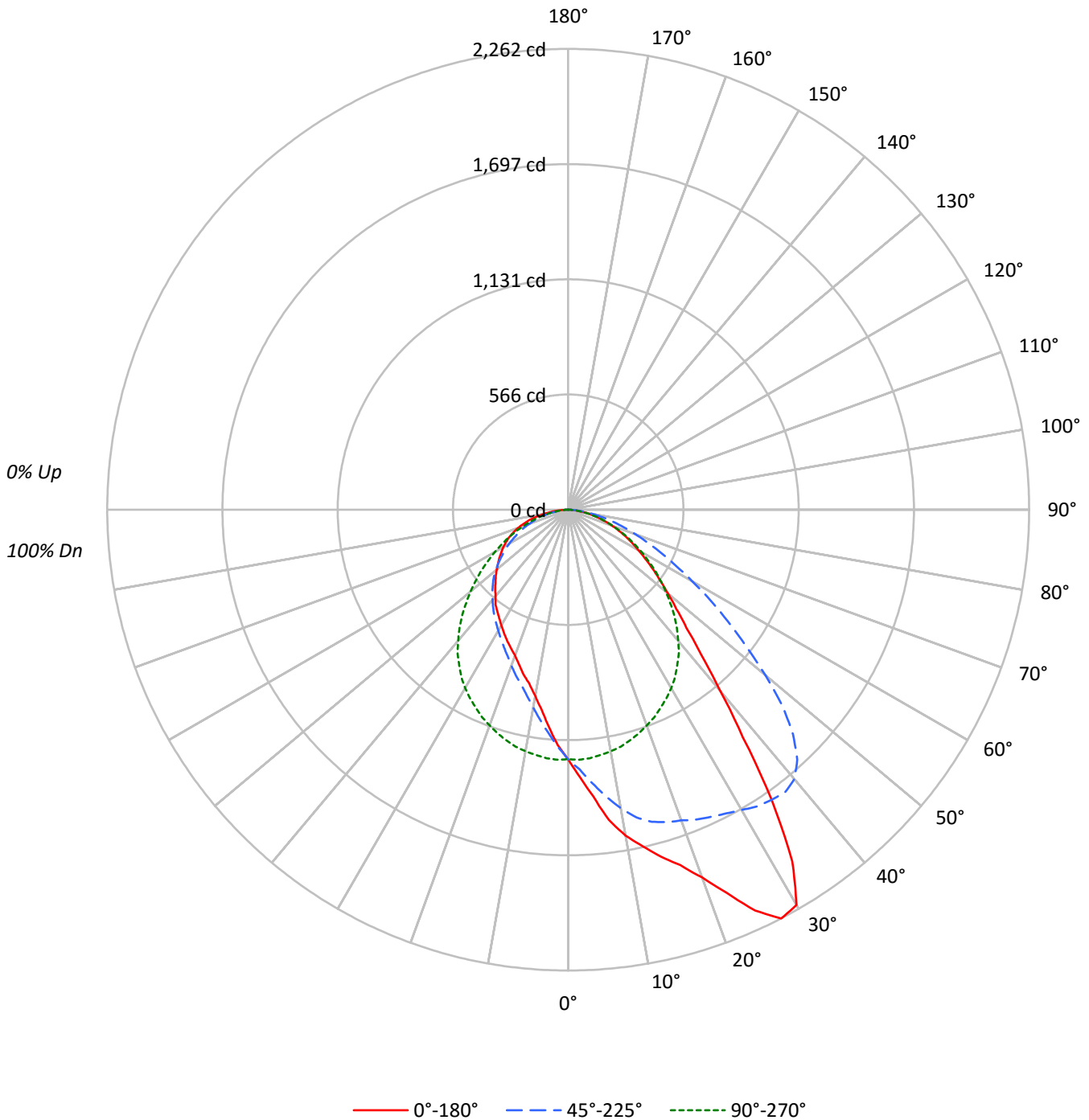
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242823

CATALOG NUMBER: S125DR-S1090D930-X4F0-XX-UDD-A-W

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°	8704	8704	8704
5°	10080	8734	7647
10°	11728	8689	6700
15°	12982	8625	6181
20°	14532	8524	5764
25°	17024	8410	5560
30°	18387	8298	5384
35°	15119	8087	5268
40°	10746	7794	5141
45°	8255	7399	5068
50°	7047	6908	5058
55°	6274	6429	5101
60°	5660	5903	5231
65°	5229	5377	5368
70°	4752	4829	5444
75°	4196	4254	5396
80°	3532	3467	4936
85°	2797	2504	3988



TEST NUMBER: P242823

CATALOG NUMBER: S125DR-S1090D930-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.9	3.4
10°-20°	351.1	10.2
20°-30°	570.3	16.5
30°-40°	697.0	20.2
40°-50°	632.3	18.3
50°-60°	503.6	14.6
60°-70°	350.8	10.1
70°-80°	186.8	5.4
80°-90°	46.3	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°	1039.3	30.1
0°-40°	1736.3	50.2
0°-60°	2872.2	83.1
0°-90°	3456.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3456.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1225	1225	1225	1225	1225	
5°	1413	1346	1224	1101	1072	142
15°	1764	1586	1172	889	840	504
25°	2171	1663	1072	745	709	995
35°	1742	1739	932	632	607	1069
45°	821	1560	736	522	504	654
55°	506	956	519	398	412	455
65°	311	507	320	269	319	308
75°	153	226	155	141	196	165
85°	34	45	31	33	49	40
90°	0	0	0	0	0	



TEST NUMBER: P242823

CATALOG NUMBER: S125DR-S1090D930-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7
2.5°	1313.1	1311.0	1308.9	1304.8	1307.9	1299.1	1294.9	1287.6	1278.8	1275.7	1272.0
5°	1412.9	1415.5	1418.1	1407.2	1408.2	1400.9	1384.3	1370.8	1359.9	1345.8	1336.0
7.5°	1536.6	1528.8	1529.3	1522.6	1510.6	1500.7	1484.6	1462.3	1442.0	1419.1	1399.4
10°	1625.0	1625.5	1620.8	1612.5	1599.5	1590.2	1567.3	1545.5	1518.9	1487.8	1465.4
12.5°	1691.5	1694.1	1687.9	1675.9	1671.3	1647.3	1630.7	1603.7	1570.9	1547.5	1510.6
15°	1764.3	1758.6	1754.4	1740.4	1729.5	1707.6	1679.0	1652.0	1617.7	1586.0	1554.3
17.5°	1828.8	1833.4	1826.7	1816.3	1784.1	1758.6	1723.2	1688.9	1647.9	1608.4	1571.4
20°	1921.3	1925.4	1913.5	1891.1	1850.6	1825.1	1774.7	1726.9	1677.5	1622.9	1581.3
22.5°	2036.7	2031.5	2014.3	1977.4	1943.6	1891.1	1835.5	1774.7	1709.7	1646.3	1587.6
25°	2170.8	2149.0	2139.1	2097.0	2050.7	1981.6	1906.7	1821.5	1744.5	1662.9	1592.2
27.5°	2262.3	2253.5	2239.4	2205.1	2152.1	2073.6	1985.2	1883.3	1779.9	1680.1	1591.2
30°	2240.5	2241.5	2242.5	2233.2	2202.0	2146.4	2058.5	1946.8	1817.8	1701.9	1594.8
32.5°	2047.1	2070.5	2092.8	2121.9	2140.7	2141.2	2094.4	1996.1	1862.5	1726.9	1592.8
35°	1742.5	1748.2	1806.9	1865.1	1944.2	2005.5	2046.6	2001.9	1890.1	1738.8	1591.2
37.5°	1408.7	1437.3	1481.5	1547.0	1665.5	1762.2	1889.1	1932.7	1880.2	1748.7	1590.7
40°	1158.2	1184.2	1210.7	1277.7	1373.9	1497.6	1646.8	1774.2	1803.8	1726.9	1575.1
42.5°	964.8	984.0	1014.2	1060.5	1136.9	1242.9	1383.8	1560.0	1680.6	1663.5	1542.3
45°	821.3	834.3	857.2	897.2	955.4	1041.2	1167.0	1349.0	1507.5	1560.0	1486.7
47.5°	719.4	720.0	738.7	767.3	811.5	890.5	984.6	1134.3	1305.3	1426.4	1409.3
50°	637.3	634.7	648.7	672.7	705.9	754.3	843.2	957.0	1119.7	1261.6	1301.1
52.5°	566.6	567.7	574.9	591.0	617.6	657.1	717.9	817.7	950.8	1097.4	1180.5
55°	506.3	504.2	514.1	526.1	546.3	573.4	621.2	699.7	812.5	956.0	1052.7
57.5°	448.1	453.8	458.0	466.3	484.0	502.7	545.3	605.6	698.7	826.0	928.4
60°	398.2	403.9	407.0	415.3	428.9	444.5	475.6	522.4	597.8	703.8	805.2
62.5°	353.5	357.6	358.2	365.4	375.8	390.9	413.8	451.2	506.8	596.2	695.0
65°	310.9	310.9	312.9	320.7	325.9	339.4	358.2	386.8	434.6	506.8	591.6
67.5°	269.3	271.9	271.4	275.0	279.7	291.1	305.1	329.1	367.0	421.6	491.8
70°	228.7	230.8	230.3	232.9	238.1	244.8	255.8	278.1	303.6	348.8	407.0
72.5°	192.3	192.9	191.3	194.9	197.5	203.3	215.7	225.1	248.5	284.9	330.1
75°	152.8	153.9	154.9	157.0	160.1	163.2	169.5	181.4	197.0	225.6	256.3
77.5°	121.6	119.0	122.2	121.6	123.2	125.8	131.5	138.3	151.8	171.0	196.5
80°	86.3	86.8	86.8	87.3	89.9	91.5	96.2	100.8	110.7	124.2	140.9
82.5°	57.2	58.7	57.7	58.7	60.8	61.9	63.9	67.6	72.3	82.1	93.0
85°	34.3	31.7	32.7	33.8	33.8	34.3	36.4	37.9	41.1	45.2	49.9
87.5°	12.5	13.5	14.0	14.0	14.6	14.6	16.6	16.6	18.2	19.8	21.8
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: P242823

CATALOG NUMBER: S125DR-S1090D930-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7
2.5°	1268.9	1265.3	1261.1	1253.8	1245.0	1240.3	1233.0	1228.4	1219.0	1211.2	1202.9
5°	1324.0	1310.5	1298.0	1281.9	1264.2	1252.8	1239.3	1224.2	1208.6	1192.5	1174.8
7.5°	1379.1	1356.8	1332.3	1306.9	1281.9	1258.5	1236.7	1214.3	1194.0	1168.6	1147.3
10°	1434.7	1404.6	1372.3	1334.4	1297.5	1265.3	1232.5	1203.9	1174.8	1143.6	1116.1
12.5°	1490.4	1447.7	1398.9	1356.2	1310.0	1269.4	1229.4	1190.9	1152.5	1117.1	1083.8
15°	1510.6	1475.3	1433.2	1373.9	1324.0	1270.5	1219.5	1172.2	1128.0	1089.6	1049.0
17.5°	1530.4	1485.2	1440.4	1383.3	1318.3	1260.6	1202.9	1151.4	1102.6	1054.2	1017.3
20°	1535.1	1488.3	1441.0	1385.3	1318.3	1249.7	1192.0	1127.0	1073.4	1023.0	975.2
22.5°	1533.5	1478.9	1426.4	1368.7	1303.7	1241.9	1169.1	1102.6	1043.3	993.9	943.5
25°	1522.1	1465.4	1400.9	1343.2	1278.8	1211.7	1141.0	1072.4	1013.1	956.5	907.1
27.5°	1515.3	1443.6	1372.9	1306.3	1244.5	1182.6	1114.0	1043.3	978.3	920.6	874.9
30°	1500.2	1419.7	1337.5	1267.3	1203.4	1143.6	1079.7	1011.1	942.5	886.3	836.4
32.5°	1486.7	1389.5	1301.7	1223.7	1155.1	1097.4	1039.7	975.2	908.1	851.0	801.1
35°	1468.5	1359.9	1260.6	1174.3	1102.0	1042.3	992.9	932.1	870.2	815.1	767.3
37.5°	1447.2	1321.4	1216.4	1126.5	1048.0	985.6	938.8	891.5	829.6	775.6	733.0
40°	1421.2	1279.8	1167.0	1074.5	992.4	926.9	884.2	840.0	790.7	741.3	695.5
42.5°	1388.5	1242.4	1117.1	1015.7	934.7	871.2	826.0	790.1	748.0	702.8	661.2
45°	1346.9	1195.6	1062.5	955.4	873.3	810.4	764.1	736.1	703.3	659.7	623.8
47.5°	1291.8	1142.6	1005.3	894.6	809.9	751.7	707.5	679.9	656.0	621.7	587.9
50°	1213.3	1081.8	942.5	832.8	748.0	689.3	649.3	624.8	605.1	580.1	552.6
52.5°	1125.4	1005.3	880.6	772.5	688.8	631.1	592.1	571.3	555.7	539.6	512.6
55°	1031.3	927.4	808.9	705.9	628.5	571.8	537.5	518.8	505.3	491.8	475.1
57.5°	930.0	845.8	737.1	640.9	569.2	516.2	484.0	464.7	453.8	446.5	436.1
60°	821.9	752.2	661.7	576.0	506.3	460.6	429.4	415.3	406.5	400.8	393.5
62.5°	721.5	667.5	585.3	508.9	450.2	407.5	380.5	367.0	358.7	356.6	350.9
65°	623.3	579.1	510.0	445.0	393.0	356.1	332.7	319.7	314.5	311.4	311.9
67.5°	524.5	495.9	438.2	381.0	338.4	305.7	286.4	276.5	274.0	269.3	269.3
70°	435.6	415.3	368.6	320.2	283.3	259.4	242.8	232.4	229.8	227.7	227.2
72.5°	357.1	340.0	301.0	264.6	232.4	212.1	199.1	193.9	189.2	188.2	188.2
75°	280.2	270.3	238.1	207.4	184.5	170.0	160.6	154.9	151.8	151.3	151.8
77.5°	211.6	202.2	179.9	157.0	141.9	130.5	121.6	120.1	115.9	116.4	115.4
80°	149.7	144.0	131.0	113.8	101.9	92.5	88.4	84.7	83.7	82.1	83.7
82.5°	98.2	92.0	84.2	74.9	65.5	60.8	56.7	56.1	55.6	55.1	55.1
85°	53.5	54.1	48.9	40.5	36.4	33.3	30.7	30.7	30.2	29.6	30.2
87.5°	22.9	21.8	19.8	18.2	15.6	14.0	13.5	14.0	12.5	12.0	12.5
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: P242823

CATALOG NUMBER: S125DR-S1090D930-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7	1224.7
2.5°	1198.2	1192.5	1187.8	1177.4	1171.7	1163.9	1157.7	1164.4	1157.1	1160.3	1155.6
5°	1166.0	1151.4	1141.0	1126.0	1113.0	1101.0	1092.2	1090.6	1086.4	1084.4	1078.1
7.5°	1127.5	1110.9	1093.7	1075.0	1059.4	1042.8	1032.9	1023.5	1017.8	1010.5	1004.8
10°	1094.2	1069.8	1049.0	1025.1	1004.3	986.1	971.6	964.3	957.5	947.6	944.0
12.5°	1053.2	1027.7	1001.2	975.2	955.4	934.7	922.7	910.7	906.6	895.1	894.6
15°	1022.0	984.0	959.1	933.1	905.5	888.9	878.5	866.6	861.4	853.6	847.8
17.5°	983.5	949.2	918.0	891.5	866.6	853.0	839.5	831.2	822.4	816.7	807.3
20°	940.9	908.7	877.5	848.9	830.7	814.6	804.2	796.4	787.0	784.4	775.1
22.5°	905.0	868.6	839.0	816.1	795.9	777.1	765.7	761.0	755.3	746.0	746.0
25°	865.5	828.6	803.1	779.2	761.5	744.9	737.1	730.4	724.1	718.4	716.3
27.5°	832.2	799.5	768.3	746.5	731.4	715.8	709.0	700.2	695.5	690.9	684.6
30°	796.9	763.1	736.6	715.8	699.2	685.7	678.4	672.7	668.5	664.3	661.2
32.5°	760.5	729.8	704.4	684.1	667.5	658.1	651.9	648.2	643.5	638.4	634.2
35°	729.3	695.0	670.1	652.4	639.4	631.6	624.3	620.7	615.5	615.5	611.3
37.5°	692.4	662.3	639.9	623.8	612.4	605.1	596.8	594.7	591.0	589.0	587.4
40°	660.2	632.6	611.8	595.7	583.2	577.5	571.3	567.1	565.1	562.5	561.4
42.5°	626.9	600.9	581.2	566.6	556.2	551.5	545.8	543.2	538.5	534.9	534.4
45°	593.1	567.7	549.5	537.5	528.1	522.4	518.8	512.6	510.5	506.3	505.8
47.5°	561.9	537.0	518.8	508.9	500.6	496.4	490.7	484.0	481.4	478.8	478.2
50°	526.1	503.7	487.1	477.7	469.9	463.2	457.4	453.3	451.7	451.7	452.8
52.5°	489.7	471.5	458.0	446.0	438.7	431.5	426.3	424.2	421.6	424.7	426.8
55°	454.3	435.1	424.7	413.8	406.5	398.2	395.6	394.6	393.0	397.1	399.2
57.5°	416.4	403.4	390.9	379.5	373.2	368.0	363.9	363.4	366.5	367.5	373.8
60°	380.5	364.9	354.0	345.7	337.9	334.8	333.7	332.7	334.8	340.5	349.3
62.5°	341.0	329.1	317.1	311.4	306.2	300.5	300.5	301.5	306.2	312.9	321.8
65°	302.5	291.6	283.8	276.5	271.9	268.8	269.8	271.9	276.5	285.4	295.3
67.5°	263.0	255.8	248.5	241.7	237.0	237.6	238.1	240.7	246.4	256.8	266.2
70°	225.1	216.8	211.1	208.5	204.8	202.7	205.9	211.1	215.7	225.1	232.9
72.5°	187.1	180.4	176.2	174.7	173.6	172.1	172.6	178.3	185.1	194.4	203.8
75°	149.7	147.1	144.0	141.9	140.4	141.4	142.4	147.6	152.8	162.7	173.1
77.5°	115.9	112.8	110.7	110.2	109.2	109.7	112.3	116.4	121.6	128.9	137.2
80°	82.7	81.6	80.6	80.1	80.1	80.6	84.7	87.3	92.0	98.8	105.0
82.5°	54.6	54.1	54.1	54.1	54.6	54.6	56.7	60.3	63.9	68.6	73.8
85°	31.7	30.7	32.2	32.7	31.7	33.3	34.3	36.4	37.9	40.5	43.1
87.5°	13.0	14.0	13.5	14.0	14.0	15.1	14.6	16.6	17.7	18.7	18.2
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: P242823

CATALOG NUMBER: S125DR-S1090D930-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1224.7	1224.7	1224.7	1224.7
2.5°	1152.5	1156.1	1153.0	1157.1
5°	1075.5	1070.8	1074.0	1071.9
7.5°	1004.3	1000.2	993.9	991.8
10°	938.3	932.6	932.1	928.4
12.5°	889.9	884.7	877.5	876.4
15°	844.7	840.6	836.9	840.0
17.5°	806.3	802.6	801.6	798.5
20°	770.4	767.8	768.8	762.1
22.5°	741.8	736.1	735.0	735.0
25°	711.6	709.0	706.4	709.0
27.5°	685.1	682.5	681.5	682.0
30°	661.2	656.0	656.5	656.0
32.5°	635.2	632.1	631.1	630.0
35°	609.8	609.8	607.2	607.2
37.5°	586.4	585.8	584.3	585.3
40°	559.3	558.8	557.3	554.1
42.5°	533.3	531.3	530.7	530.2
45°	505.8	505.8	504.8	504.2
47.5°	478.8	479.8	481.9	481.4
50°	454.9	455.4	456.9	457.4
52.5°	428.3	432.0	434.1	433.5
55°	403.9	407.5	411.2	411.7
57.5°	379.5	384.2	387.8	388.8
60°	354.5	361.3	366.0	368.0
62.5°	330.6	338.4	343.1	343.1
65°	304.1	311.9	316.1	319.2
67.5°	276.5	284.3	288.5	291.1
70°	245.9	253.7	259.9	262.0
72.5°	215.7	222.5	227.2	229.8
75°	179.9	189.2	193.9	196.5
77.5°	145.6	154.9	157.5	159.1
80°	111.2	116.4	120.1	120.6
82.5°	79.0	83.2	83.7	85.3
85°	46.8	48.9	49.4	48.9
87.5°	19.2	18.7	18.7	19.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)