

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: P242926

Luminaire Tested: **S125RDR-S1090D930-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242926
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-32)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125RDR-S1090D930-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED 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: 3280.9 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.21 / 1.48
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

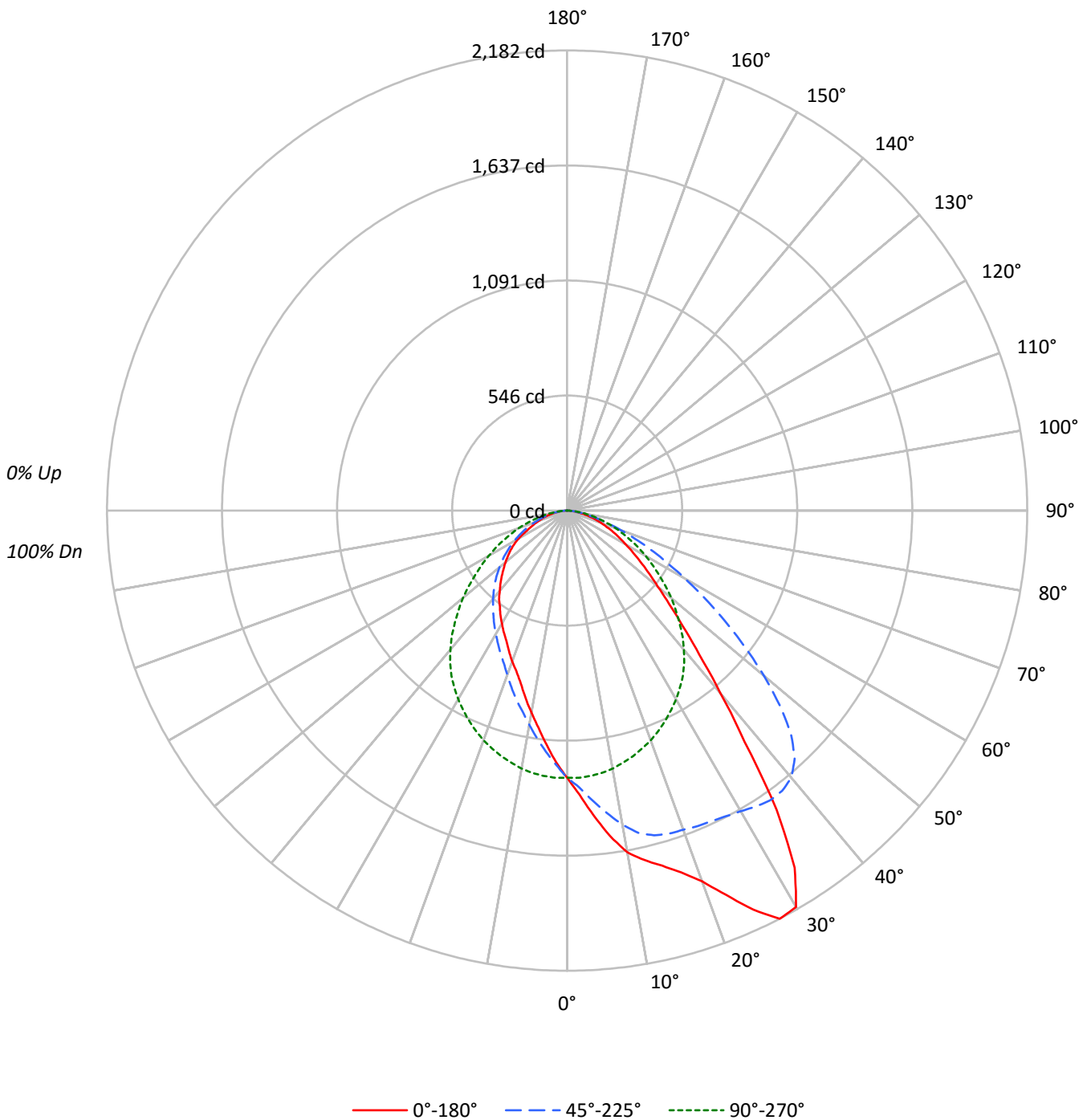
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	92	83	75	69	90	81	74	69	78	72	67	76	70	66	73	69	65	63
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55
5	79	66	58	52	77	65	57	51	63	56	51	61	55	50	60	54	50	48
6	73	60	52	45	71	59	51	45	57	50	45	56	49	44	54	49	44	42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	50	44	39	37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	42	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	9000	9000	9000
5°	10354	9012	7959
10°	11878	8966	7023
15°	12829	8874	6243
20°	14146	8768	5764
25°	16371	8626	5348
30°	17815	8477	5077
35°	15028	8303	4826
40°	10494	7991	4611
45°	7785	7571	4399
50°	6207	7133	4218
55°	5269	6590	4058
60°	4552	6104	3798
65°	4056	5577	3269
70°	3564	5110	2982
75°	3084	4424	2798
80°	2341	3725	2341
85°	1949	2928	2202



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.4	3.7
10°-20°	356.0	10.9
20°-30°	564.5	17.2
30°-40°	682.1	20.8
40°-50°	607.4	18.5
50°-60°	465.7	14.2
60°-70°	302.5	9.2
70°-80°	146.8	4.5
80°-90°	34.5	1.1
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°	1041.9	31.8
0°-40°	1724.0	52.5
0°-60°	2797.2	85.3
0°-90°	3280.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3280.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1266	1266	1266	1266	1266	
5°	1451	1380	1263	1148	1116	145
15°	1744	1594	1206	929	848	499
25°	2088	1624	1100	748	682	961
35°	1732	1678	957	609	556	1050
45°	774	1502	753	483	438	614
55°	425	912	532	354	328	385
65°	241	435	332	227	194	240
75°	112	152	161	112	102	119
85°	24	26	36	29	27	28
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°	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3
2.5°	1348.4	1347.4	1349.5	1343.7	1344.3	1335.4	1335.4	1328.7	1319.8	1313.1	1310.0
5°	1451.3	1452.4	1450.3	1442.5	1437.3	1429.5	1420.7	1405.1	1392.1	1379.6	1369.7
7.5°	1556.3	1557.4	1550.6	1549.1	1535.6	1527.2	1507.5	1487.2	1469.5	1446.1	1429.5
10°	1645.8	1645.2	1638.0	1632.2	1620.8	1606.3	1587.0	1562.1	1538.7	1512.7	1487.7
12.5°	1697.7	1696.2	1695.1	1687.9	1677.5	1665.0	1649.4	1625.0	1594.8	1565.7	1535.6
15°	1743.5	1739.8	1733.1	1724.3	1709.2	1694.1	1675.9	1654.1	1626.5	1594.3	1567.3
17.5°	1798.6	1799.1	1788.7	1779.4	1759.6	1734.6	1707.6	1674.3	1639.0	1606.3	1579.2
20°	1870.3	1868.8	1858.4	1834.5	1811.1	1777.8	1745.6	1702.4	1656.7	1610.4	1574.5
22.5°	1973.2	1968.6	1957.7	1924.4	1884.9	1839.7	1786.1	1731.0	1673.3	1619.2	1569.3
25°	2087.6	2084.5	2063.2	2026.8	1975.8	1909.8	1845.4	1773.1	1693.6	1624.4	1567.3
27.5°	2182.2	2176.0	2156.7	2122.4	2072.5	2001.3	1912.4	1818.9	1724.3	1633.3	1554.8
30°	2170.8	2178.6	2176.5	2162.5	2127.1	2064.7	1984.2	1875.5	1757.5	1645.8	1547.5
32.5°	2007.6	2014.3	2037.7	2075.7	2087.1	2071.5	2016.4	1918.1	1794.9	1664.0	1541.8
35°	1732.0	1741.4	1776.8	1832.4	1905.1	1966.0	1978.4	1924.4	1814.7	1678.0	1536.1
37.5°	1381.7	1442.5	1466.4	1523.1	1637.4	1748.2	1844.3	1866.2	1806.9	1674.9	1529.3
40°	1131.1	1143.6	1196.6	1262.6	1355.2	1471.6	1625.0	1735.7	1739.3	1654.1	1507.5
42.5°	927.4	944.0	976.2	1025.6	1101.5	1217.9	1377.5	1532.4	1616.1	1596.9	1478.9
45°	774.5	786.5	813.0	853.5	914.4	1010.5	1146.7	1315.7	1449.8	1502.3	1423.3
47.5°	655.0	661.2	685.6	718.4	765.2	838.0	948.7	1101.5	1261.1	1367.7	1346.9
50°	561.4	568.7	586.4	609.8	647.7	707.0	791.2	913.3	1079.2	1216.9	1244.5
52.5°	488.6	494.4	503.7	525.5	555.2	597.3	661.2	768.8	913.8	1062.5	1135.3
55°	425.2	429.4	438.2	450.7	475.6	508.4	567.1	643.5	764.1	911.8	1005.3
57.5°	371.2	373.2	378.4	390.9	409.1	433.5	478.2	547.9	635.2	774.0	876.9
60°	320.2	322.3	329.6	337.4	350.9	372.7	406.0	451.2	534.4	644.1	748.5
62.5°	279.7	280.7	282.8	290.6	302.0	317.6	342.0	376.9	438.7	531.8	629.0
65°	241.2	241.7	242.8	249.0	256.3	268.7	285.9	311.9	361.8	434.6	521.9
67.5°	202.7	203.8	207.4	209.5	218.3	224.6	235.5	256.3	294.7	346.7	417.4
70°	171.5	171.0	174.7	177.3	179.9	187.7	194.4	210.5	232.4	269.8	326.4
72.5°	142.4	140.9	141.9	142.4	146.1	150.7	157.5	165.8	181.4	204.3	244.3
75°	112.3	112.8	112.8	113.8	116.4	118.5	120.6	125.8	135.2	152.3	175.7
77.5°	84.2	83.2	85.8	85.8	87.9	90.4	92.0	94.1	97.7	105.5	119.6
80°	57.2	57.2	57.7	59.3	58.7	59.8	62.4	64.5	69.1	73.3	77.5
82.5°	40.5	40.0	40.5	40.5	40.5	41.6	42.1	42.1	43.1	44.7	47.3
85°	23.9	23.9	24.4	24.4	25.0	25.0	25.5	25.5	25.5	26.0	26.5
87.5°	11.4	10.9	10.4	10.4	10.9	12.0	11.4	10.9	10.9	10.9	11.4
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°	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3
2.5°	1310.0	1306.3	1299.6	1293.3	1285.5	1278.8	1274.1	1268.4	1261.1	1252.3	1245.0
5°	1358.8	1347.4	1332.3	1319.3	1302.7	1289.7	1276.2	1263.2	1250.2	1233.5	1219.0
7.5°	1412.9	1390.5	1369.7	1342.7	1318.3	1297.0	1276.2	1254.9	1234.6	1211.7	1190.4
10°	1461.7	1433.2	1401.4	1365.1	1331.8	1300.1	1271.0	1242.4	1212.2	1185.7	1157.1
12.5°	1507.5	1468.5	1431.1	1382.7	1341.1	1300.6	1261.6	1224.2	1191.4	1155.0	1123.9
15°	1531.4	1495.0	1454.5	1398.3	1342.7	1295.9	1252.3	1206.0	1166.0	1127.5	1093.2
17.5°	1545.4	1507.0	1460.2	1405.6	1345.8	1287.6	1232.5	1183.1	1137.4	1093.2	1055.2
20°	1539.2	1502.3	1453.9	1402.5	1337.5	1276.2	1215.3	1159.2	1106.7	1059.4	1018.3
22.5°	1524.1	1485.7	1439.4	1384.3	1323.5	1257.5	1191.4	1130.6	1075.0	1025.6	979.9
25°	1509.0	1457.1	1409.2	1356.2	1297.5	1233.0	1166.0	1099.9	1041.2	991.3	942.4
27.5°	1494.5	1431.6	1372.3	1321.4	1258.5	1200.3	1134.8	1066.7	1005.3	954.9	905.0
30°	1473.2	1400.4	1333.3	1273.6	1214.8	1160.2	1098.9	1032.9	969.5	917.0	866.0
32.5°	1446.7	1368.2	1292.8	1221.6	1165.4	1111.4	1057.3	994.9	933.6	879.0	827.0
35°	1425.4	1326.6	1246.5	1173.2	1110.3	1057.8	1007.9	957.0	895.1	839.0	788.6
37.5°	1395.7	1287.1	1196.6	1116.6	1051.1	999.1	959.1	910.7	853.0	798.4	751.7
40°	1369.2	1243.4	1142.1	1063.0	993.4	937.8	900.9	861.3	809.9	759.5	712.7
42.5°	1333.9	1203.4	1086.9	1003.8	933.6	880.6	843.2	809.9	768.8	722.0	671.1
45°	1285.5	1149.3	1030.3	941.9	871.2	818.7	783.9	753.2	720.5	676.8	633.1
47.5°	1227.8	1097.9	972.6	875.4	807.3	757.9	723.6	698.1	674.2	636.3	592.1
50°	1155.6	1031.3	909.7	816.1	742.3	696.0	664.3	645.1	623.8	590.0	554.7
52.5°	1070.3	962.7	844.2	748.0	679.4	636.8	606.6	587.4	570.8	544.8	511.5
55°	979.9	882.7	773.5	686.7	622.7	579.1	550.0	531.8	521.4	498.0	471.5
57.5°	877.5	802.6	703.8	619.1	561.4	517.7	495.9	479.8	467.8	450.7	430.9
60°	769.3	720.5	634.2	554.7	502.7	461.6	442.4	429.4	418.5	404.4	389.9
62.5°	659.7	627.4	555.2	489.7	442.9	410.1	392.5	381.0	368.0	359.7	345.7
65°	564.0	532.3	480.3	426.8	382.6	355.0	342.0	331.6	323.8	313.5	303.6
67.5°	458.0	443.4	404.9	364.9	332.7	306.2	294.7	286.4	277.6	271.3	264.1
70°	361.8	355.6	330.1	305.7	276.0	259.4	249.0	245.9	234.4	228.2	223.5
72.5°	276.5	274.5	262.5	247.4	228.7	214.7	205.3	201.7	195.5	190.8	188.2
75°	201.2	202.2	199.6	188.7	180.9	171.5	163.2	161.1	155.9	151.8	149.2
77.5°	137.2	142.4	141.4	140.9	137.2	130.5	126.8	125.3	119.6	118.0	117.5
80°	87.3	93.0	98.2	97.7	96.7	95.1	92.5	91.0	88.4	86.8	85.8
82.5°	50.9	56.1	60.3	63.9	63.9	62.4	60.8	60.3	60.3	59.3	59.3
85°	27.6	28.6	30.1	33.8	36.4	36.9	36.4	35.9	34.3	34.8	35.3
87.5°	12.0	12.0	12.5	12.5	12.0	14.6	16.1	16.6	15.6	14.6	13.5
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°	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3	1266.3
2.5°	1239.8	1232.5	1227.3	1216.9	1209.6	1206.5	1200.8	1199.2	1204.9	1200.8	1200.3
5°	1208.1	1193.0	1181.0	1169.1	1156.1	1147.8	1135.3	1133.2	1130.1	1125.4	1124.4
7.5°	1171.2	1152.4	1138.4	1118.7	1102.5	1089.5	1074.0	1067.7	1064.6	1058.9	1049.5
10°	1133.7	1110.3	1089.5	1069.8	1048.5	1031.3	1015.7	1003.8	996.0	988.7	985.6
12.5°	1096.8	1072.9	1044.8	1019.9	995.5	975.7	958.0	951.3	942.4	933.6	925.3
15°	1058.4	1026.6	997.5	970.0	949.7	928.9	912.3	900.9	887.9	884.2	870.2
17.5°	1017.3	987.7	953.4	923.7	900.9	879.0	860.8	847.3	837.4	823.4	816.6
20°	979.3	942.4	909.2	882.7	856.7	829.6	810.9	800.0	790.7	779.7	774.5
22.5°	938.8	902.9	868.6	836.4	809.9	783.4	771.4	760.0	749.1	739.2	731.9
25°	899.3	862.9	827.0	794.8	767.3	748.0	732.4	719.4	713.7	703.8	696.6
27.5°	859.8	821.3	784.9	751.1	729.8	710.6	698.1	687.7	676.8	668.0	661.2
30°	821.8	782.3	741.8	716.3	693.4	675.2	661.2	651.3	643.5	635.7	631.1
32.5°	783.9	742.8	708.0	679.9	658.6	643.5	629.0	619.6	611.3	602.5	596.8
35°	742.8	701.2	672.1	645.1	623.8	609.2	599.4	585.8	579.1	572.8	567.1
37.5°	705.9	666.4	634.2	610.8	591.0	577.0	564.0	557.2	548.4	543.2	538.5
40°	664.3	629.0	600.4	575.4	561.9	545.8	533.9	524.5	518.3	511.0	505.8
42.5°	626.9	594.7	567.1	545.3	527.6	514.6	503.2	493.8	485.5	480.8	476.7
45°	592.1	559.3	532.3	511.5	495.9	482.9	471.0	466.3	455.9	449.6	447.6
47.5°	555.7	526.1	499.5	480.3	464.2	452.2	440.8	430.4	425.2	419.0	415.9
50°	518.8	490.7	466.3	447.6	432.0	418.5	408.1	401.8	394.0	388.3	384.1
52.5°	481.9	456.4	432.0	414.3	401.3	387.8	375.8	369.6	362.3	359.2	356.6
55°	447.0	419.5	398.7	381.0	367.0	354.5	343.6	337.4	332.7	329.0	328.0
57.5°	407.0	384.7	364.9	349.3	334.2	322.3	312.4	306.7	302.5	302.0	298.4
60°	368.0	348.3	330.6	313.5	301.0	290.1	281.7	275.0	270.8	270.3	269.3
62.5°	329.0	310.3	294.2	279.7	268.7	258.4	250.6	242.8	240.7	237.6	235.0
65°	290.6	273.4	259.9	248.0	236.0	227.2	219.4	214.7	209.0	205.8	200.1
67.5°	252.6	238.6	225.6	215.7	205.8	197.0	190.3	183.5	179.3	176.7	172.1
70°	215.2	204.8	191.8	180.9	173.6	166.9	161.7	153.9	151.3	149.2	147.1
72.5°	179.9	171.0	160.6	152.3	145.0	138.8	132.6	130.0	127.4	125.3	124.2
75°	147.1	138.3	128.9	122.7	117.5	112.3	109.2	106.6	105.5	105.0	102.9
77.5°	114.4	109.2	101.4	95.6	92.0	89.9	86.8	85.8	86.3	83.7	83.2
80°	82.7	80.1	73.8	71.7	69.1	67.1	65.5	62.9	60.3	59.3	57.7
82.5°	56.1	53.5	52.0	48.3	46.3	45.2	43.7	43.1	44.2	42.6	42.1
85°	32.7	30.1	29.1	28.6	27.6	28.6	28.1	27.6	27.0	26.5	27.0
87.5°	13.0	13.0	12.5	13.5	12.0	12.5	12.5	12.0	12.0	12.0	11.4
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: P242926

CATALOG NUMBER: S125RDR-S1090D930-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1266.3	1266.3	1266.3	1266.3
2.5°	1199.8	1194.0	1192.5	1194.6
5°	1119.2	1114.0	1116.6	1115.5
7.5°	1051.1	1044.3	1036.5	1038.6
10°	978.8	973.6	970.5	973.1
12.5°	918.0	915.4	912.8	910.7
15°	863.9	857.7	855.1	848.4
17.5°	812.0	809.9	803.1	798.4
20°	766.7	764.7	757.9	762.1
22.5°	729.3	724.1	723.1	720.5
25°	694.5	687.7	685.1	682.0
27.5°	659.1	655.5	651.9	650.8
30°	624.8	621.2	618.6	618.6
32.5°	594.2	591.6	589.0	588.4
35°	564.5	560.4	559.3	556.2
37.5°	533.3	529.7	529.7	530.2
40°	503.7	501.1	500.6	497.0
42.5°	472.0	471.0	468.9	467.8
45°	443.9	440.3	440.3	437.7
47.5°	414.3	411.2	411.7	408.6
50°	384.7	383.1	382.6	381.5
52.5°	355.0	354.5	357.1	354.5
55°	329.0	327.5	330.6	327.5
57.5°	298.4	297.3	300.5	298.4
60°	268.2	265.1	266.7	267.2
62.5°	232.4	230.8	231.8	228.7
65°	199.1	197.5	195.5	194.4
67.5°	173.1	168.4	168.4	169.5
70°	144.0	144.0	143.5	143.5
72.5°	123.7	123.2	122.2	121.6
75°	102.9	103.4	102.4	101.9
77.5°	80.6	78.0	79.0	78.0
80°	57.7	57.2	58.7	57.2
82.5°	42.6	42.1	42.6	41.6
85°	27.6	27.0	26.5	27.0
87.5°	12.0	11.4	11.4	11.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)