

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: P242931

Luminaire Tested: **S125RDR-S1090D935-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242931
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-S1090D935-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED 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: 3464.8 lumens
Efficiency: N/A
Efficacy: 99.6 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

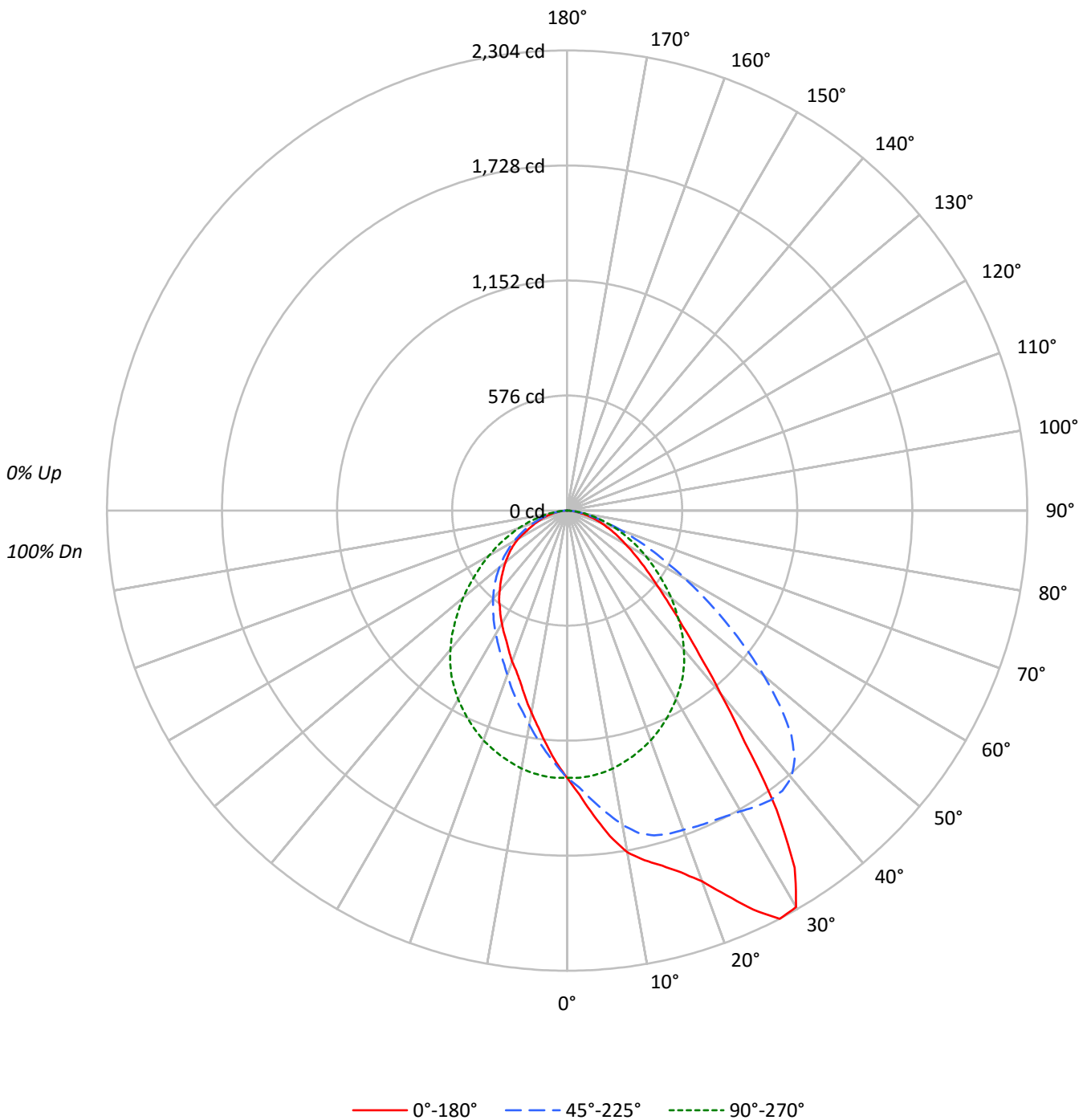
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73					73			
3	92	83	75	69	90	81	74	69	78	72	67	76	70	66	73	69	65	63					63			
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55					55			
5	79	66	58	52	77	65	57	51	63	56	51	61	55	50	60	54	50	48					48			
6	73	60	52	45	71	59	51	45	57	50	45	56	49	44	54	49	44	42					42			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	50	44	39	37					37			
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	42	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28					28			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	9505	9505	9505
5°	10935	9517	8405
10°	12543	9469	7417
15°	13548	9371	6592
20°	14939	9259	6087
25°	17289	9109	5648
30°	18814	8952	5362
35°	15870	8768	5097
40°	11083	8439	4869
45°	8222	7995	4646
50°	6556	7533	4455
55°	5564	6959	4285
60°	4807	6445	4011
65°	4283	5889	3453
70°	3765	5397	3148
75°	3257	4674	2955
80°	2472	3933	2472
85°	2063	3091	2324



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.2	3.7
10°-20°	376.0	10.9
20°-30°	596.1	17.2
30°-40°	720.3	20.8
40°-50°	641.4	18.5
50°-60°	491.8	14.2
60°-70°	319.4	9.2
70°-80°	155.0	4.5
80°-90°	36.4	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°	1100.3	31.8
0°-40°	1820.7	52.5
0°-60°	2953.9	85.3
0°-90°	3464.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3464.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1337	1337	1337	1337	1337	
5°	1533	1457	1334	1212	1178	153
15°	1841	1684	1274	981	896	527
25°	2205	1716	1162	790	720	1015
35°	1829	1772	1011	643	587	1109
45°	818	1586	795	510	462	649
55°	449	963	562	374	346	407
65°	255	459	350	240	205	253
75°	119	161	170	119	108	126
85°	25	27	38	30	28	30
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°	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3
2.5°	1424.0	1422.9	1425.1	1419.1	1419.6	1410.3	1410.3	1403.1	1393.8	1386.7	1383.4
5°	1532.7	1533.8	1531.6	1523.4	1517.9	1509.6	1500.3	1483.8	1470.1	1456.9	1446.5
7.5°	1643.6	1644.7	1637.5	1635.9	1621.6	1612.8	1592.0	1570.6	1551.9	1527.2	1509.6
10°	1738.0	1737.5	1729.8	1723.7	1711.7	1696.3	1676.0	1649.6	1624.9	1597.5	1571.1
12.5°	1792.9	1791.3	1790.2	1782.5	1771.5	1758.3	1741.9	1716.1	1684.2	1653.5	1621.6
15°	1841.2	1837.4	1830.2	1820.9	1805.0	1789.1	1769.8	1746.8	1717.7	1683.7	1655.1
17.5°	1899.4	1900.0	1889.0	1879.1	1858.2	1831.9	1803.3	1768.2	1730.9	1696.3	1667.7
20°	1975.2	1973.5	1962.5	1937.3	1912.6	1877.4	1843.4	1797.8	1749.5	1700.7	1662.8
22.5°	2083.9	2078.9	2067.4	2032.3	1990.5	1942.8	1886.2	1828.0	1767.1	1710.0	1657.3
25°	2204.6	2201.3	2178.8	2140.4	2086.6	2016.9	1948.8	1872.5	1788.5	1715.5	1655.1
27.5°	2304.5	2297.9	2277.6	2241.4	2188.7	2113.5	2019.6	1920.8	1820.9	1724.8	1641.9
30°	2292.5	2300.7	2298.5	2283.7	2246.3	2180.5	2095.4	1980.7	1856.0	1738.0	1634.3
32.5°	2120.1	2127.2	2151.9	2192.0	2204.1	2187.6	2129.4	2025.7	1895.6	1757.2	1628.2
35°	1829.1	1839.0	1876.3	1935.1	2011.9	2076.2	2089.3	2032.3	1916.4	1772.0	1622.2
37.5°	1459.1	1523.4	1548.6	1608.5	1729.2	1846.2	1947.7	1970.8	1908.2	1768.8	1615.0
40°	1194.5	1207.7	1263.7	1333.4	1431.1	1554.1	1716.1	1833.0	1836.8	1746.8	1592.0
42.5°	979.3	996.9	1030.9	1083.1	1163.2	1286.2	1454.7	1618.3	1706.7	1686.4	1561.8
45°	818.0	830.6	858.6	901.4	965.6	1067.2	1211.0	1389.4	1531.1	1586.5	1503.1
47.5°	691.7	698.3	724.1	758.7	808.1	884.9	1001.9	1163.2	1331.8	1444.3	1422.4
50°	592.9	600.6	619.2	643.9	684.0	746.6	835.5	964.5	1139.6	1285.1	1314.2
52.5°	516.0	522.1	531.9	555.0	586.3	630.8	698.3	811.9	965.1	1122.1	1198.9
55°	449.0	453.4	462.8	475.9	502.3	536.9	598.9	679.6	807.0	962.9	1061.7
57.5°	392.0	394.2	399.6	412.8	432.0	457.8	505.0	578.6	670.8	817.4	926.1
60°	338.2	340.4	348.0	356.3	370.5	393.6	428.7	476.5	564.3	680.2	790.5
62.5°	295.3	296.4	298.6	306.9	318.9	335.4	361.2	398.0	463.3	561.6	664.2
65°	254.7	255.3	256.4	263.0	270.6	283.8	301.9	329.4	382.1	458.9	551.2
67.5°	214.1	215.2	219.0	221.2	230.6	237.2	248.7	270.6	311.3	366.2	440.8
70°	181.2	180.6	184.5	187.2	189.9	198.2	205.3	222.3	245.4	284.9	344.7
72.5°	150.4	148.8	149.9	150.4	154.3	159.2	166.3	175.1	191.6	215.7	258.0
75°	118.6	119.1	119.1	120.2	123.0	125.2	127.4	132.8	142.7	160.8	185.5
77.5°	88.9	87.8	90.6	90.6	92.8	95.5	97.2	99.4	103.2	111.4	126.3
80°	60.4	60.4	60.9	62.6	62.0	63.1	65.9	68.1	73.0	77.4	81.8
82.5°	42.8	42.3	42.8	42.8	42.8	43.9	44.5	44.5	45.6	47.2	50.0
85°	25.3	25.3	25.8	25.8	26.4	26.4	26.9	26.9	26.9	27.4	28.0
87.5°	12.1	11.5	11.0	11.0	11.5	12.6	12.1	11.5	11.5	11.5	12.1
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°	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3
2.5°	1383.4	1379.5	1372.4	1365.8	1357.6	1350.4	1345.5	1339.5	1331.8	1322.4	1314.8
5°	1435.0	1422.9	1407.0	1393.3	1375.7	1362.0	1347.7	1334.0	1320.3	1302.7	1287.3
7.5°	1492.1	1468.5	1446.5	1418.0	1392.2	1369.7	1347.7	1325.2	1303.8	1279.6	1257.1
10°	1543.7	1513.5	1480.0	1441.6	1406.4	1373.0	1342.2	1312.0	1280.2	1252.2	1222.0
12.5°	1592.0	1550.8	1511.3	1460.2	1416.3	1373.5	1332.3	1292.8	1258.2	1219.8	1186.9
15°	1617.2	1578.8	1536.0	1476.7	1418.0	1368.6	1322.4	1273.6	1231.3	1190.7	1154.5
17.5°	1632.1	1591.4	1542.0	1484.4	1421.3	1359.8	1301.6	1249.4	1201.1	1154.5	1114.4
20°	1625.5	1586.5	1535.4	1481.1	1412.5	1347.7	1283.5	1224.2	1168.7	1118.8	1075.4
22.5°	1609.6	1568.9	1520.1	1461.9	1397.7	1327.9	1258.2	1194.0	1135.3	1083.1	1034.8
25°	1593.6	1538.7	1488.2	1432.2	1370.2	1302.1	1231.3	1161.6	1099.6	1046.9	995.3
27.5°	1578.3	1511.8	1449.3	1395.5	1329.0	1267.6	1198.4	1126.5	1061.7	1008.4	955.7
30°	1555.8	1478.9	1408.1	1345.0	1282.9	1225.3	1160.5	1090.8	1023.8	968.4	914.6
32.5°	1527.8	1444.9	1365.3	1290.1	1230.8	1173.7	1116.6	1050.7	985.9	928.3	873.4
35°	1505.3	1400.9	1316.4	1239.0	1172.6	1117.1	1064.4	1010.6	945.3	886.0	832.8
37.5°	1474.0	1359.2	1263.7	1179.2	1110.0	1055.1	1012.8	961.8	900.8	843.2	793.8
40°	1446.0	1313.1	1206.1	1122.6	1049.1	990.3	951.3	909.6	855.3	802.0	752.6
42.5°	1408.6	1270.8	1147.9	1060.0	985.9	929.9	890.4	855.3	811.9	762.5	708.7
45°	1357.6	1213.8	1088.0	994.7	920.1	864.6	827.8	795.4	760.9	714.7	668.6
47.5°	1296.6	1159.4	1027.1	924.4	852.5	800.4	764.2	737.3	712.0	671.9	625.3
50°	1220.3	1089.1	960.7	861.9	783.9	735.1	701.6	681.3	658.8	623.1	585.7
52.5°	1130.3	1016.7	891.5	790.0	717.5	672.5	640.6	620.3	602.8	575.3	540.2
55°	1034.8	932.1	816.9	725.2	657.7	611.5	580.8	561.6	550.6	525.9	497.9
57.5°	926.6	847.6	743.3	653.8	592.9	546.8	523.7	506.7	494.1	475.9	455.1
60°	812.5	760.9	669.7	585.7	530.8	487.5	467.2	453.4	441.9	427.1	411.7
62.5°	696.6	662.6	586.3	517.1	467.7	433.1	414.5	402.4	388.7	379.9	365.1
65°	595.6	562.1	507.2	450.7	404.0	374.9	361.2	350.2	342.0	331.0	320.6
67.5°	483.6	468.3	427.6	385.4	351.3	323.3	311.3	302.5	293.1	286.6	278.9
70°	382.1	375.5	348.6	322.8	291.5	273.9	263.0	259.7	247.6	241.0	236.1
72.5°	292.0	289.9	277.2	261.3	241.5	226.7	216.8	213.0	206.4	201.5	198.7
75°	212.4	213.5	210.8	199.3	191.0	181.2	172.4	170.2	164.7	160.3	157.6
77.5°	144.9	150.4	149.3	148.8	144.9	137.8	133.9	132.3	126.3	124.6	124.1
80°	92.2	98.3	103.8	103.2	102.1	100.5	97.7	96.1	93.3	91.7	90.6
82.5°	53.8	59.3	63.7	67.5	67.5	65.9	64.2	63.7	63.7	62.6	62.6
85°	29.1	30.2	31.8	35.7	38.4	39.0	38.4	37.9	36.2	36.8	37.3
87.5°	12.6	12.6	13.2	13.2	12.6	15.4	17.0	17.6	16.5	15.4	14.3
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°	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3	1337.3
2.5°	1309.3	1301.6	1296.1	1285.1	1277.4	1274.1	1268.1	1266.5	1272.5	1268.1	1267.6
5°	1275.8	1259.9	1247.2	1234.6	1220.9	1212.1	1198.9	1196.7	1193.4	1188.5	1187.4
7.5°	1236.8	1217.0	1202.2	1181.4	1164.3	1150.6	1134.2	1127.6	1124.3	1118.2	1108.4
10°	1197.3	1172.6	1150.6	1129.8	1107.3	1089.1	1072.7	1060.0	1051.8	1044.1	1040.8
12.5°	1158.3	1133.1	1103.4	1077.1	1051.3	1030.4	1011.7	1004.6	995.3	985.9	977.1
15°	1117.7	1084.2	1053.5	1024.4	1003.0	981.0	963.4	951.3	937.6	933.8	919.0
17.5°	1074.3	1043.0	1006.8	975.5	951.3	928.3	909.1	894.8	884.4	869.6	862.4
20°	1034.2	995.3	960.1	932.1	904.7	876.1	856.4	844.9	835.0	823.4	818.0
22.5°	991.4	953.5	917.3	883.3	855.3	827.3	814.7	802.6	791.1	780.6	772.9
25°	949.7	911.3	873.4	839.4	810.3	790.0	773.5	759.8	753.7	743.3	735.6
27.5°	908.0	867.4	828.9	793.2	770.7	750.4	737.3	726.3	714.7	705.4	698.3
30°	867.9	826.2	783.4	756.5	732.3	713.1	698.3	687.8	679.6	671.4	666.4
32.5°	827.8	784.5	747.7	718.0	695.5	679.6	664.2	654.4	645.6	636.2	630.2
35°	784.5	740.5	709.8	681.3	658.8	643.4	633.0	618.7	611.5	605.0	598.9
37.5°	745.5	703.8	669.7	645.0	624.2	609.3	595.6	588.5	579.2	573.7	568.7
40°	701.6	664.2	634.0	607.7	593.4	576.4	563.8	553.9	547.3	539.6	534.1
42.5°	662.0	628.0	598.9	575.9	557.2	543.5	531.4	521.5	512.7	507.8	503.4
45°	625.3	590.7	562.1	540.2	523.7	510.0	497.4	492.4	481.4	474.9	472.7
47.5°	586.8	555.5	527.6	507.2	490.2	477.6	465.5	454.5	449.0	442.5	439.2
50°	547.9	518.2	492.4	472.7	456.2	441.9	430.9	424.3	416.1	410.1	405.7
52.5°	508.9	482.0	456.2	437.5	423.8	409.5	396.9	390.3	382.6	379.3	376.6
55°	472.1	443.0	421.1	402.4	387.6	374.4	362.9	356.3	351.3	347.5	346.4
57.5°	429.8	406.2	385.4	368.9	353.0	340.4	329.9	323.9	319.5	318.9	315.1
60°	388.7	367.8	349.1	331.0	317.8	306.3	297.5	290.4	286.0	285.5	284.4
62.5°	347.5	327.7	310.7	295.3	283.8	272.8	264.6	256.4	254.2	250.9	248.1
65°	306.9	288.8	274.5	261.9	249.2	239.9	231.7	226.7	220.7	217.4	211.3
67.5°	266.8	252.0	238.2	227.8	217.4	208.1	200.9	193.8	189.4	186.6	181.7
70°	227.3	216.3	202.6	191.0	183.4	176.2	170.7	162.5	159.7	157.6	155.4
72.5°	189.9	180.6	169.6	160.8	153.2	146.6	140.0	137.2	134.5	132.3	131.2
75°	155.4	146.0	136.1	129.6	124.1	118.6	115.3	112.5	111.4	110.9	108.7
77.5°	120.8	115.3	107.0	101.0	97.2	95.0	91.7	90.6	91.1	88.4	87.8
80°	87.3	84.5	78.0	75.8	73.0	70.8	69.2	66.4	63.7	62.6	60.9
82.5°	59.3	56.5	54.9	51.1	48.9	47.8	46.1	45.6	46.7	45.0	44.5
85°	34.6	31.8	30.7	30.2	29.1	30.2	29.6	29.1	28.5	28.0	28.5
87.5°	13.7	13.7	13.2	14.3	12.6	13.2	13.2	12.6	12.6	12.6	12.1
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: P242931

CATALOG NUMBER: S125RDR-S1090D935-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1337.3	1337.3	1337.3	1337.3
2.5°	1267.0	1261.0	1259.3	1261.5
5°	1181.9	1176.4	1179.2	1178.1
7.5°	1110.0	1102.9	1094.6	1096.8
10°	1033.7	1028.2	1024.9	1027.7
12.5°	969.5	966.7	964.0	961.8
15°	912.4	905.8	903.0	895.9
17.5°	857.5	855.3	848.1	843.2
20°	809.7	807.5	800.4	804.8
22.5°	770.2	764.7	763.6	760.9
25°	733.4	726.3	723.5	720.2
27.5°	696.1	692.2	688.4	687.3
30°	659.9	656.0	653.3	653.3
32.5°	627.5	624.7	622.0	621.4
35°	596.2	591.8	590.7	587.4
37.5°	563.2	559.4	559.4	559.9
40°	531.9	529.2	528.6	524.8
42.5°	498.5	497.4	495.2	494.1
45°	468.8	465.0	465.0	462.2
47.5°	437.5	434.2	434.8	431.5
50°	406.2	404.6	404.0	402.9
52.5°	374.9	374.4	377.1	374.4
55°	347.5	345.8	349.1	345.8
57.5°	315.1	314.0	317.3	315.1
60°	283.3	280.0	281.6	282.2
62.5°	245.4	243.7	244.8	241.5
65°	210.3	208.6	206.4	205.3
67.5°	182.8	177.9	177.9	179.0
70°	152.1	152.1	151.5	151.5
72.5°	130.7	130.1	129.0	128.5
75°	108.7	109.2	108.1	107.6
77.5°	85.1	82.3	83.4	82.3
80°	60.9	60.4	62.0	60.4
82.5°	45.0	44.5	45.0	43.9
85°	29.1	28.5	28.0	28.5
87.5°	12.6	12.1	12.1	12.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)