

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: P243786

Luminaire Tested: **S125RDR-H1090D930-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243786
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-71)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125RDR-H1090D930-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3294.5 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 1.42 / 1.22 / 1.5
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

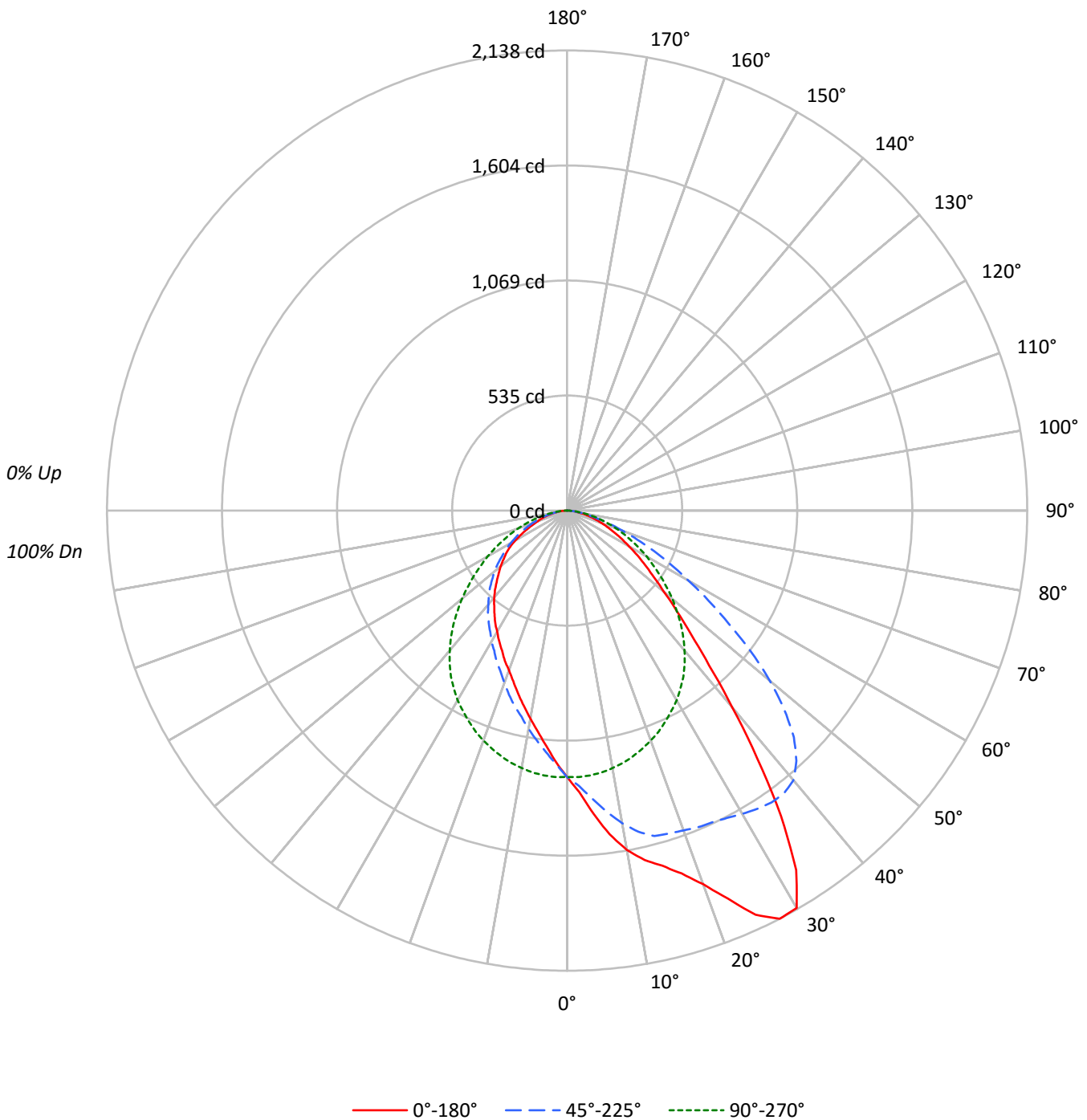
Input Watts (W): 31.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	78	72	67	75	70	66	73	69	65	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	66	61	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	33
9	59	46	38	32	57	45	38	32	44	37	32	43	37	32	42	36	32	30
10	55	42	35	29	54	42	34	29	41	34	29	40	34	29	39	33	29	27

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	8798	8798	8798
5°	10100	8810	7837
10°	11555	8767	7085
15°	12568	8696	6480
20°	13966	8598	5970
25°	16251	8476	5620
30°	17499	8350	5334
35°	15033	8164	5102
40°	11075	7870	4891
45°	8180	7504	4638
50°	6481	7056	4450
55°	5473	6538	4281
60°	4716	6055	3963
65°	4095	5514	3451
70°	3591	5050	3019
75°	3045	4421	2859
80°	2370	3696	2370
85°	2079	2960	2161



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.1	3.6
10°-20°	352.5	10.7
20°-30°	562.3	17.1
30°-40°	682.7	20.7
40°-50°	615.2	18.7
50°-60°	473.0	14.4
60°-70°	307.0	9.3
70°-80°	147.7	4.5
80°-90°	35.0	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°	1033.9	31.4
0°-40°	1716.6	52.1
0°-60°	2804.8	85.1
0°-90°	3294.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3294.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1238	1238	1238	1238	1238	
5°	1416	1345	1235	1126	1098	141
15°	1708	1565	1182	941	881	490
25°	2072	1597	1081	774	717	948
35°	1733	1656	941	635	588	1060
45°	814	1490	747	506	461	646
55°	442	915	528	370	346	400
65°	244	445	328	235	205	244
75°	111	151	161	115	104	119
85°	26	27	36	29	26	29
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°	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9
2.5°	1309.5	1314.4	1310.5	1313.0	1309.1	1307.1	1302.2	1294.8	1287.5	1280.6	1280.1
5°	1415.6	1414.6	1410.7	1405.3	1401.3	1391.5	1386.6	1369.9	1358.6	1344.9	1338.0
7.5°	1516.7	1514.2	1508.3	1501.0	1497.5	1484.8	1471.0	1449.9	1432.2	1410.7	1394.5
10°	1601.1	1600.6	1596.2	1591.3	1578.0	1563.8	1550.5	1528.5	1501.9	1475.0	1452.4
12.5°	1662.9	1660.5	1655.1	1646.7	1635.9	1626.1	1608.5	1588.3	1555.9	1528.5	1497.5
15°	1708.1	1707.1	1699.3	1696.3	1675.2	1661.5	1637.9	1617.8	1592.8	1565.3	1531.9
17.5°	1768.0	1769.9	1763.1	1746.4	1727.2	1706.1	1672.8	1639.9	1605.0	1573.1	1546.1
20°	1846.5	1841.6	1829.8	1809.7	1775.3	1749.3	1716.0	1675.2	1628.1	1581.0	1542.2
22.5°	1951.5	1946.2	1927.5	1903.0	1859.8	1812.2	1761.1	1700.2	1646.3	1592.3	1541.2
25°	2072.3	2062.0	2034.5	2008.0	1946.6	1896.1	1820.0	1747.4	1668.8	1597.2	1539.7
27.5°	2138.1	2138.1	2125.3	2096.3	2047.8	1973.1	1895.6	1798.9	1708.1	1609.9	1528.5
30°	2132.2	2128.7	2133.6	2121.4	2090.0	2034.0	1956.9	1855.3	1739.5	1627.1	1529.4
32.5°	1980.0	1981.5	2010.9	2031.1	2046.8	2033.0	1983.0	1891.2	1775.8	1643.8	1525.5
35°	1732.6	1736.6	1788.6	1823.0	1893.1	1933.4	1945.2	1895.6	1792.0	1655.6	1518.6
37.5°	1449.9	1449.9	1510.3	1562.3	1640.9	1740.0	1814.1	1832.8	1782.2	1655.1	1512.7
40°	1193.7	1192.2	1239.8	1303.7	1387.6	1497.0	1607.5	1702.2	1714.5	1635.9	1492.1
42.5°	976.8	974.3	1026.3	1061.7	1150.0	1247.7	1394.5	1528.5	1605.0	1576.6	1461.7
45°	813.8	811.8	845.7	886.0	948.3	1049.9	1173.1	1321.8	1450.4	1489.7	1404.8
47.5°	691.1	692.1	710.2	744.1	797.1	869.8	980.2	1118.1	1277.1	1368.0	1333.1
50°	586.1	589.5	603.2	628.8	667.5	725.9	820.7	945.3	1108.8	1229.0	1236.4
52.5°	507.5	512.4	527.2	540.9	573.3	614.5	688.1	796.1	931.1	1075.4	1127.0
55°	441.7	444.2	452.5	467.3	491.3	525.7	579.2	661.6	786.8	915.4	1006.2
57.5°	386.8	386.8	392.2	402.5	421.6	452.5	488.4	556.6	662.1	778.5	875.2
60°	331.8	333.8	337.7	349.0	361.7	385.3	420.2	463.3	554.6	651.8	755.9
62.5°	285.7	289.1	293.0	298.4	310.2	326.9	351.4	391.2	452.5	542.4	635.1
65°	243.5	246.9	247.4	253.8	261.6	275.4	294.0	323.0	374.0	444.7	521.3
67.5°	206.1	207.6	209.1	214.0	221.4	230.2	242.5	264.1	304.3	351.9	426.5
70°	172.8	173.8	174.2	179.6	183.1	190.9	197.3	211.1	236.6	273.4	331.3
72.5°	141.4	139.9	139.4	143.8	145.3	151.7	159.5	169.3	183.1	209.1	252.3
75°	110.9	111.4	111.9	114.4	114.9	117.8	122.7	129.1	135.5	150.7	178.2
77.5°	85.4	83.4	83.4	86.4	87.4	87.9	91.3	94.7	98.2	107.0	117.8
80°	57.9	58.9	58.9	58.9	59.4	60.4	62.3	65.3	67.7	73.1	75.1
82.5°	41.2	41.2	40.7	41.7	42.2	42.7	42.7	42.7	44.2	45.6	47.6
85°	25.5	26.0	24.5	25.5	26.0	26.0	26.0	26.0	27.5	27.0	27.5
87.5°	10.8	11.3	11.3	11.8	11.8	12.3	11.8	12.3	11.8	11.8	12.3
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9
2.5°	1278.6	1272.7	1269.8	1263.9	1256.0	1251.1	1246.2	1239.4	1234.0	1225.6	1218.2
5°	1325.7	1314.0	1303.2	1288.4	1274.2	1261.9	1249.2	1234.9	1222.2	1207.9	1192.7
7.5°	1378.3	1359.6	1337.0	1311.0	1288.9	1269.8	1248.2	1227.1	1207.9	1185.4	1164.7
10°	1428.8	1398.9	1368.9	1334.1	1301.7	1273.2	1244.3	1214.8	1189.8	1161.8	1136.3
12.5°	1468.1	1439.6	1394.9	1351.8	1309.5	1272.7	1236.4	1200.6	1167.7	1136.8	1106.3
15°	1502.4	1455.3	1417.5	1370.4	1318.9	1268.8	1223.6	1181.9	1142.2	1105.8	1074.9
17.5°	1512.3	1470.0	1428.8	1373.8	1318.4	1261.4	1209.4	1159.8	1115.7	1075.4	1040.6
20°	1511.3	1468.6	1423.9	1371.4	1312.5	1250.2	1192.2	1136.8	1086.7	1040.6	1003.3
22.5°	1496.5	1455.3	1410.2	1357.2	1297.3	1233.0	1172.1	1110.8	1056.3	1008.2	969.9
25°	1480.8	1428.8	1381.7	1328.2	1271.3	1211.9	1147.1	1080.8	1023.9	973.8	930.6
27.5°	1467.1	1404.8	1346.8	1294.3	1235.9	1182.4	1118.1	1048.9	990.5	938.0	893.3
30°	1445.0	1379.2	1309.1	1251.6	1195.2	1139.2	1080.3	1017.5	953.7	900.2	855.5
32.5°	1425.9	1342.9	1266.8	1202.0	1145.6	1096.5	1040.1	979.7	917.4	866.3	818.2
35°	1404.8	1305.6	1226.1	1150.0	1093.6	1040.1	995.4	940.9	879.1	825.1	781.9
37.5°	1379.7	1267.3	1176.0	1098.5	1040.1	985.1	944.9	896.3	840.3	786.8	744.1
40°	1351.8	1228.1	1123.0	1043.0	980.2	925.2	891.4	848.2	800.5	747.5	707.8
42.5°	1316.4	1186.3	1074.9	987.6	917.9	868.3	834.4	798.6	754.9	708.8	665.6
45°	1271.7	1134.3	1017.5	925.2	856.5	808.4	773.1	746.6	711.7	668.5	627.8
47.5°	1217.3	1079.8	958.6	862.9	796.6	750.5	717.6	691.1	664.6	627.3	588.5
50°	1145.1	1017.5	901.2	803.5	733.3	688.6	659.2	638.1	614.0	583.6	548.3
52.5°	1065.6	947.3	833.4	742.1	674.4	629.7	599.3	581.6	563.5	538.4	508.0
55°	973.3	877.1	768.6	679.3	613.0	568.9	544.8	527.6	512.4	493.3	467.8
57.5°	875.6	791.2	697.0	614.5	552.2	510.5	489.4	475.1	462.4	448.6	427.5
60°	773.1	713.2	623.8	548.3	493.8	459.4	439.3	426.0	414.3	403.0	387.3
62.5°	666.1	616.5	549.7	485.4	436.8	404.4	389.7	378.4	366.2	356.3	345.1
65°	557.6	529.1	483.0	422.6	377.9	351.4	337.2	327.9	322.0	310.7	301.9
67.5°	458.9	443.2	404.0	363.2	328.9	304.8	291.6	284.7	278.3	272.9	263.1
70°	365.2	353.9	331.3	302.4	275.4	254.7	244.9	243.0	234.1	228.7	223.8
72.5°	278.3	275.4	256.7	243.9	228.7	212.5	205.2	201.2	195.4	190.4	188.5
75°	197.8	202.2	196.3	190.0	182.6	169.3	163.0	161.0	155.6	154.1	151.7
77.5°	135.0	141.4	143.3	140.4	136.9	132.5	128.1	126.1	120.7	119.8	118.3
80°	84.9	94.2	97.7	97.2	95.7	96.2	90.8	90.3	87.9	86.4	87.9
82.5°	51.5	56.4	62.8	64.3	62.3	63.3	61.8	59.9	59.9	60.9	58.9
85°	28.0	28.5	31.4	33.4	35.8	37.8	35.8	36.3	35.8	35.8	34.4
87.5°	12.3	12.8	12.8	12.3	13.3	14.2	16.2	17.2	16.7	15.2	13.3
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°	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9	1237.9
2.5°	1212.4	1208.9	1203.0	1198.1	1186.8	1179.0	1178.0	1178.5	1177.5	1176.5	1176.0
5°	1182.9	1171.6	1160.8	1151.5	1138.7	1126.0	1120.1	1117.6	1116.6	1111.2	1114.2
7.5°	1151.5	1134.3	1121.6	1103.9	1088.7	1077.9	1067.6	1062.7	1061.7	1054.3	1052.3
10°	1118.1	1097.5	1078.4	1060.7	1045.5	1030.3	1018.0	1013.6	1007.7	1001.8	993.0
12.5°	1085.2	1059.7	1038.6	1019.0	998.4	981.2	971.4	965.0	957.6	952.2	949.3
15°	1046.0	1024.4	998.4	977.2	956.1	940.9	927.7	915.9	909.0	904.6	892.3
17.5°	1010.6	982.2	957.6	937.5	914.4	897.2	883.5	873.7	861.9	853.1	845.2
20°	972.8	943.4	920.8	896.8	873.2	852.1	834.9	827.1	818.7	810.4	805.9
22.5°	932.1	906.6	881.0	856.0	831.0	808.4	797.6	786.3	779.0	770.6	764.7
25°	896.8	868.8	843.3	815.3	787.8	774.5	759.8	748.5	742.6	734.3	727.9
27.5°	859.0	832.0	801.5	772.6	756.4	733.8	724.0	715.1	707.3	698.9	694.5
30°	823.6	792.2	761.8	739.2	718.1	701.9	692.6	681.8	671.0	667.0	661.2
32.5°	786.3	752.4	725.9	703.4	685.7	666.1	657.2	648.4	638.1	633.2	627.8
35°	747.5	714.7	688.6	668.0	649.9	635.1	625.3	616.0	609.6	602.3	598.3
37.5°	706.8	678.3	653.3	632.7	616.0	604.2	591.9	584.6	575.7	568.9	565.9
40°	668.0	642.5	618.4	599.3	584.1	569.9	559.1	549.7	544.3	538.4	533.5
42.5°	633.2	606.7	586.1	565.9	552.2	538.4	527.6	520.8	511.4	509.0	502.1
45°	595.9	571.3	550.7	532.1	517.8	506.5	493.8	485.4	479.5	473.7	471.2
47.5°	558.1	535.5	516.4	499.2	484.5	471.7	461.9	453.0	446.7	441.3	438.3
50°	521.3	501.6	482.5	465.8	450.6	441.3	429.5	419.7	414.8	408.9	405.4
52.5°	482.5	466.3	445.7	431.4	417.2	404.9	393.2	386.8	381.9	377.0	374.5
55°	446.2	429.0	411.3	396.1	382.4	369.6	360.3	355.4	349.0	346.0	345.5
57.5°	408.9	391.2	376.5	362.7	347.0	337.2	328.9	323.0	317.6	315.1	315.1
60°	368.1	353.9	340.1	324.9	313.6	302.4	293.5	289.6	284.2	283.2	279.8
62.5°	330.8	317.6	304.3	290.1	279.8	268.5	262.1	256.7	253.8	249.8	245.9
65°	292.0	280.3	267.5	255.2	246.9	234.6	228.7	222.3	218.9	214.5	209.6
67.5°	254.7	243.5	231.7	220.4	213.5	201.7	197.8	190.0	187.5	182.6	178.2
70°	215.5	207.6	198.3	187.0	181.1	171.8	167.9	160.5	156.6	153.6	151.2
72.5°	181.6	174.2	163.4	156.1	148.7	142.8	136.5	133.0	129.6	127.1	126.6
75°	148.2	138.9	132.5	125.7	120.7	114.9	111.9	109.5	108.0	106.5	105.0
77.5°	113.4	109.5	103.1	96.2	92.3	89.8	87.9	86.9	85.4	84.9	83.4
80°	84.4	79.0	75.1	72.6	69.7	67.7	66.3	62.8	60.9	59.9	58.9
82.5°	56.0	54.5	51.5	49.1	46.6	46.1	44.7	43.7	43.2	43.2	42.7
85°	33.9	29.9	29.9	29.4	29.4	29.0	28.0	28.0	27.0	28.5	28.5
87.5°	13.7	13.7	12.8	12.8	13.3	12.3	11.8	11.8	11.8	11.3	11.8
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: P243786

CATALOG NUMBER: S125RDR-H1090D930-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1237.9	1237.9	1237.9	1237.9
2.5°	1176.0	1173.6	1174.1	1171.1
5°	1108.8	1107.3	1102.4	1098.5
7.5°	1047.4	1041.1	1040.6	1036.6
10°	990.0	984.1	981.2	981.7
12.5°	939.9	933.6	933.6	929.6
15°	886.4	880.1	881.0	880.6
17.5°	842.3	837.9	834.4	831.5
20°	799.1	793.7	791.7	789.3
22.5°	759.3	755.4	755.9	755.9
25°	721.5	722.0	717.6	716.6
27.5°	688.1	687.2	686.2	684.2
30°	656.7	652.8	651.8	649.9
32.5°	624.3	623.8	619.9	621.4
35°	591.5	590.0	589.0	588.0
37.5°	561.0	558.1	557.6	556.6
40°	530.1	529.1	524.7	527.2
42.5°	496.7	494.8	494.8	494.8
45°	468.7	463.3	463.3	461.4
47.5°	437.3	435.4	434.4	431.0
50°	406.4	403.5	402.5	402.5
52.5°	374.5	374.0	375.0	373.0
55°	346.5	347.0	346.5	345.5
57.5°	316.1	313.6	313.6	314.1
60°	279.8	279.8	280.8	278.8
62.5°	244.9	243.9	240.5	239.5
65°	209.1	205.2	204.7	205.2
67.5°	177.2	175.7	173.3	173.8
70°	149.7	149.2	146.8	145.3
72.5°	125.2	125.2	123.7	123.7
75°	104.5	103.6	103.1	104.1
77.5°	80.5	78.0	79.0	77.6
80°	58.4	59.4	58.4	57.9
82.5°	43.2	42.2	42.7	42.2
85°	27.5	26.5	27.0	26.5
87.5°	11.3	11.8	11.8	10.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)