

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: P243775

Luminaire Tested: **S125RDR-H850D835-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243775
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-H850D835-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3133.3 lumens
Efficiency: N/A
Efficacy: 132.8 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

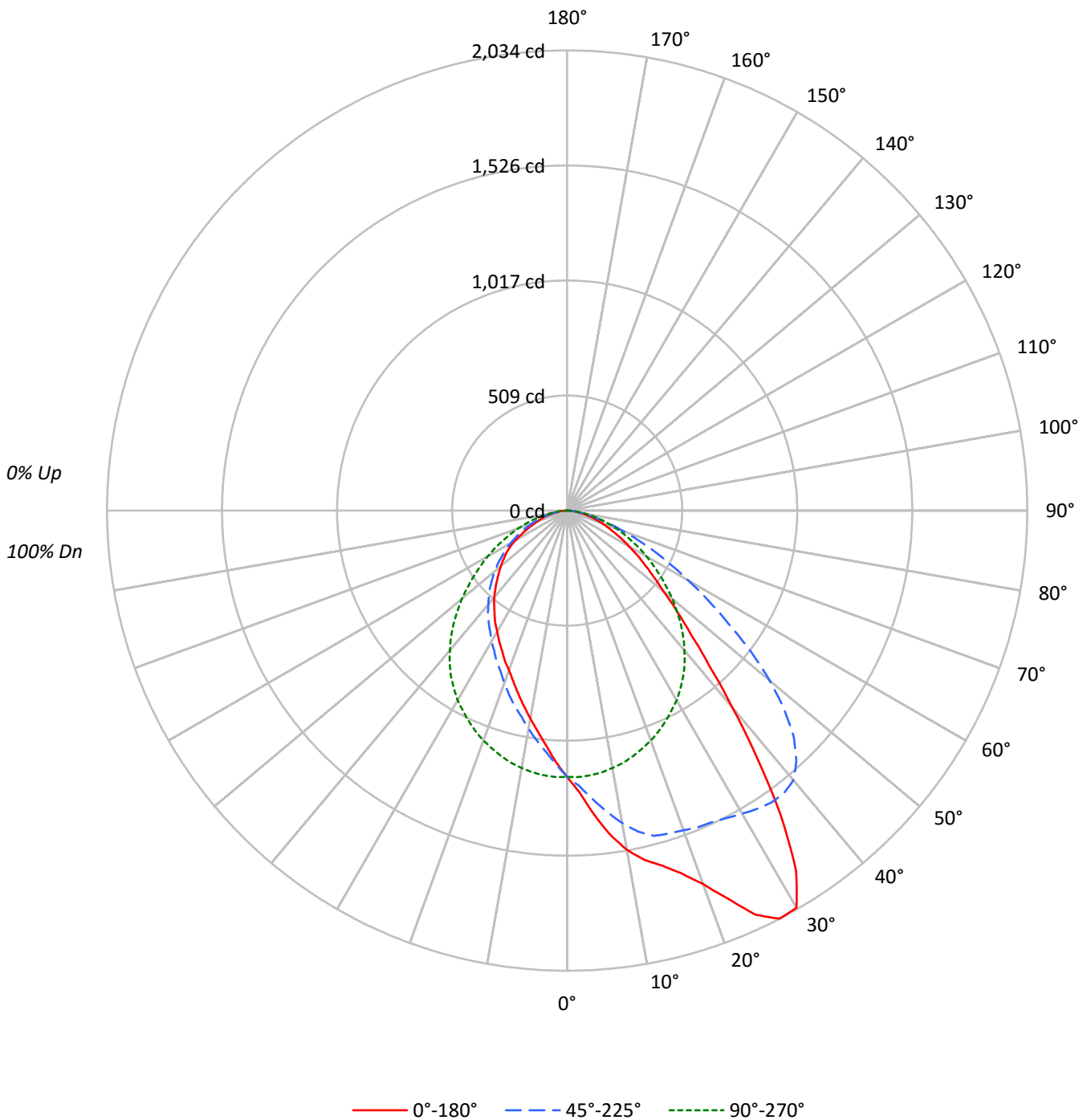
Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	8367	8367	8367
5°	9605	8379	7453
10°	10990	8339	6738
15°	11953	8271	6162
20°	13283	8178	5678
25°	15456	8061	5345
30°	16643	7942	5073
35°	14298	7765	4853
40°	10533	7485	4652
45°	7780	7136	4411
50°	6163	6711	4233
55°	5206	6218	4072
60°	4486	5760	3770
65°	3893	5244	3281
70°	3414	4802	2872
75°	2897	4204	2719
80°	2255	3516	2255
85°	1982	2813	2055



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.3	3.6
10°-20°	335.3	10.7
20°-30°	534.8	17.1
30°-40°	649.3	20.7
40°-50°	585.1	18.7
50°-60°	449.9	14.4
60°-70°	292.0	9.3
70°-80°	140.5	4.5
80°-90°	33.2	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°	983.3	31.4
0°-40°	1632.6	52.1
0°-60°	2667.6	85.1
0°-90°	3133.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3133.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1177	1177	1177	1177	1177	
5°	1346	1279	1174	1071	1045	134
15°	1624	1489	1124	895	838	466
25°	1971	1519	1028	737	682	901
35°	1648	1575	895	604	559	1008
45°	774	1417	710	482	439	615
55°	420	871	502	352	329	381
65°	232	423	312	223	195	232
75°	106	143	153	109	99	114
85°	24	26	34	28	25	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°	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3
2.5°	1245.5	1250.2	1246.4	1248.8	1245.0	1243.1	1238.5	1231.5	1224.5	1217.9	1217.5
5°	1346.3	1345.4	1341.6	1336.5	1332.8	1323.4	1318.8	1302.9	1292.2	1279.1	1272.6
7.5°	1442.5	1440.1	1434.5	1427.5	1424.3	1412.1	1399.1	1379.0	1362.2	1341.6	1326.2
10°	1522.8	1522.3	1518.1	1513.4	1500.8	1487.3	1474.7	1453.7	1428.5	1402.8	1381.3
12.5°	1581.6	1579.3	1574.1	1566.2	1555.9	1546.6	1529.8	1510.6	1479.8	1453.7	1424.3
15°	1624.5	1623.6	1616.1	1613.3	1593.3	1580.2	1557.8	1538.6	1514.8	1488.7	1457.0
17.5°	1681.5	1683.4	1676.8	1661.0	1642.7	1622.7	1590.9	1559.7	1526.5	1496.2	1470.5
20°	1756.2	1751.5	1740.3	1721.2	1688.5	1663.8	1632.0	1593.3	1548.5	1503.6	1466.8
22.5°	1856.1	1851.0	1833.2	1809.9	1768.8	1723.5	1675.0	1617.1	1565.7	1514.4	1465.8
25°	1970.9	1961.1	1935.0	1909.8	1851.4	1803.3	1731.0	1661.9	1587.2	1519.0	1464.4
27.5°	2033.5	2033.5	2021.3	1993.8	1947.6	1876.6	1802.9	1710.9	1624.5	1531.2	1453.7
30°	2027.9	2024.6	2029.3	2017.6	1987.7	1934.5	1861.2	1764.6	1654.4	1547.5	1454.6
32.5°	1883.2	1884.6	1912.6	1931.7	1946.7	1933.6	1886.0	1798.7	1689.0	1563.4	1450.9
35°	1647.9	1651.6	1701.1	1733.8	1800.5	1838.8	1850.0	1802.9	1704.4	1574.6	1444.3
37.5°	1379.0	1379.0	1436.4	1485.9	1560.6	1654.9	1725.4	1743.1	1695.0	1574.1	1438.7
40°	1135.3	1133.9	1179.2	1239.9	1319.7	1423.8	1528.8	1618.9	1630.6	1555.9	1419.1
42.5°	929.0	926.6	976.1	1009.7	1093.8	1186.7	1326.2	1453.7	1526.5	1499.4	1390.2
45°	774.0	772.1	804.3	842.6	901.9	998.5	1115.7	1257.2	1379.5	1416.8	1336.0
47.5°	657.3	658.2	675.5	707.7	758.1	827.2	932.2	1063.4	1214.7	1301.0	1267.9
50°	557.4	560.7	573.7	598.0	634.9	690.4	780.5	899.1	1054.6	1168.9	1175.9
52.5°	482.7	487.4	501.4	514.4	545.2	584.5	654.5	757.2	885.6	1022.8	1071.8
55°	420.1	422.5	430.4	444.4	467.3	500.0	550.9	629.3	748.3	870.6	957.0
57.5°	367.9	367.9	373.0	382.8	401.0	430.4	464.5	529.4	629.7	740.4	832.3
60°	315.6	317.4	321.2	331.9	344.0	366.5	399.6	440.7	527.5	619.9	718.9
62.5°	271.7	275.0	278.7	283.8	295.0	310.9	334.2	372.1	430.4	515.8	604.1
65°	231.5	234.8	235.3	241.3	248.8	261.9	279.6	307.2	355.7	422.9	495.8
67.5°	196.1	197.5	198.9	203.5	210.5	218.9	230.6	251.2	289.4	334.7	405.7
70°	164.3	165.3	165.7	170.9	174.1	181.6	187.7	200.7	225.0	260.0	315.1
72.5°	134.4	133.0	132.6	136.8	138.2	144.2	151.7	161.1	174.1	198.9	239.9
75°	105.5	106.0	106.4	108.8	109.2	112.0	116.7	122.8	128.8	143.3	169.5
77.5°	81.2	79.4	79.4	82.2	83.1	83.6	86.8	90.1	93.4	101.8	112.0
80°	55.1	56.0	56.0	56.0	56.5	57.4	59.3	62.1	64.4	69.6	71.4
82.5°	39.2	39.2	38.7	39.7	40.1	40.6	40.6	40.6	42.0	43.4	45.3
85°	24.3	24.7	23.3	24.3	24.7	24.7	24.7	24.7	26.1	25.7	26.1
87.5°	10.3	10.7	10.7	11.2	11.2	11.7	11.2	11.7	11.2	11.2	11.7
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°	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3
2.5°	1216.1	1210.5	1207.7	1202.1	1194.6	1189.9	1185.3	1178.7	1173.6	1165.7	1158.7
5°	1260.9	1249.7	1239.4	1225.4	1211.9	1200.2	1188.1	1174.5	1162.4	1148.9	1134.4
7.5°	1310.8	1293.1	1271.6	1246.9	1225.9	1207.7	1187.1	1167.1	1148.9	1127.4	1107.8
10°	1358.9	1330.4	1302.0	1268.8	1238.0	1210.9	1183.4	1155.4	1131.6	1105.0	1080.7
12.5°	1396.3	1369.2	1326.7	1285.6	1245.5	1210.5	1175.9	1141.8	1110.6	1081.2	1052.2
15°	1428.9	1384.1	1348.2	1303.4	1254.4	1206.7	1163.8	1124.1	1086.3	1051.8	1022.3
17.5°	1438.3	1398.1	1358.9	1306.6	1253.9	1199.7	1150.3	1103.1	1061.1	1022.8	989.7
20°	1437.3	1396.7	1354.3	1304.3	1248.3	1189.0	1133.9	1081.2	1033.5	989.7	954.2
22.5°	1423.3	1384.1	1341.2	1290.8	1233.8	1172.7	1114.8	1056.4	1004.6	958.9	922.4
25°	1408.4	1358.9	1314.1	1263.2	1209.1	1152.6	1091.0	1027.9	973.8	926.2	885.1
27.5°	1395.3	1336.0	1281.0	1231.0	1175.5	1124.6	1063.4	997.6	942.0	892.1	849.6
30°	1374.3	1311.8	1245.0	1190.4	1136.7	1083.5	1027.5	967.7	907.0	856.2	813.7
32.5°	1356.1	1277.2	1204.9	1143.2	1089.6	1042.9	989.2	931.8	872.5	823.9	778.2
35°	1336.0	1241.7	1166.1	1093.8	1040.1	989.2	946.7	894.9	836.1	784.7	743.6
37.5°	1312.2	1205.3	1118.5	1044.7	989.2	936.9	898.6	852.4	799.2	748.3	707.7
40°	1285.6	1168.0	1068.1	992.0	932.2	880.0	847.8	806.7	761.4	711.0	673.2
42.5°	1252.0	1128.3	1022.3	939.2	873.0	825.8	793.6	759.5	718.0	674.1	633.0
45°	1209.5	1078.8	967.7	880.0	814.6	768.9	735.2	710.0	676.9	635.8	597.1
47.5°	1157.7	1027.0	911.7	820.7	757.7	713.8	682.5	657.3	632.1	596.6	559.7
50°	1089.1	967.7	857.1	764.2	697.4	655.0	626.9	606.9	584.0	555.1	521.4
52.5°	1013.5	901.0	792.7	705.8	641.4	598.9	570.0	553.2	535.9	512.1	483.2
55°	925.7	834.2	731.0	646.1	583.1	541.0	518.2	501.8	487.4	469.2	444.9
57.5°	832.8	752.5	662.9	584.5	525.2	485.5	465.4	451.9	439.7	426.7	406.6
60°	735.2	678.3	593.3	521.4	469.6	436.9	417.8	405.2	394.0	383.3	368.3
62.5°	633.5	586.3	522.8	461.7	415.5	384.7	370.7	359.9	348.2	338.9	328.2
65°	530.3	503.2	459.4	401.9	359.5	334.2	320.7	311.8	306.2	295.5	287.1
67.5°	436.5	421.5	384.2	345.4	312.8	289.9	277.3	270.8	264.7	259.6	250.2
70°	347.3	336.6	315.1	287.6	261.9	242.3	232.9	231.1	222.7	217.5	212.9
72.5°	264.7	261.9	244.1	232.0	217.5	202.1	195.1	191.4	185.8	181.1	179.3
75°	188.1	192.3	186.7	180.7	173.7	161.1	155.0	153.1	148.0	146.6	144.2
77.5°	128.4	134.4	136.3	133.5	130.2	126.0	121.8	120.0	114.8	113.9	112.5
80°	80.8	89.6	92.9	92.4	91.0	91.5	86.4	85.9	83.6	82.2	83.6
82.5°	49.0	53.7	59.8	61.2	59.3	60.2	58.8	57.0	57.0	57.9	56.0
85°	26.6	27.1	29.9	31.7	34.1	35.9	34.1	34.5	34.1	34.1	32.7
87.5°	11.7	12.1	12.1	11.7	12.6	13.5	15.4	16.3	15.9	14.5	12.6
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°	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3	1177.3
2.5°	1153.1	1149.8	1144.2	1139.5	1128.8	1121.3	1120.4	1120.8	1119.9	1119.0	1118.5
5°	1125.0	1114.3	1104.0	1095.2	1083.0	1070.9	1065.3	1063.0	1062.0	1056.9	1059.7
7.5°	1095.2	1078.8	1066.7	1049.9	1035.4	1025.1	1015.3	1010.7	1009.7	1002.7	1000.9
10°	1063.4	1043.8	1025.6	1008.8	994.3	979.9	968.2	964.0	958.4	952.8	944.4
12.5°	1032.1	1007.9	987.8	969.1	949.5	933.2	923.8	917.8	910.8	905.6	902.8
15°	994.8	974.3	949.5	929.4	909.4	894.9	882.3	871.1	864.6	860.4	848.7
17.5°	961.2	934.1	910.8	891.6	869.7	853.4	840.3	830.9	819.7	811.3	803.9
20°	925.2	897.2	875.8	852.9	830.5	810.4	794.1	786.6	778.7	770.7	766.5
22.5°	886.5	862.2	837.9	814.1	790.3	768.9	758.6	747.9	740.8	732.9	727.3
25°	852.9	826.3	802.0	775.4	749.3	736.6	722.6	711.9	706.3	698.4	692.3
27.5°	816.9	791.3	762.3	734.8	719.4	697.9	688.6	680.2	672.7	664.8	660.6
30°	783.3	753.5	724.5	703.0	683.0	667.6	658.7	648.4	638.1	634.4	628.8
32.5°	747.9	715.6	690.4	669.0	652.2	633.5	625.1	616.7	606.9	602.2	597.1
35°	711.0	679.7	655.0	635.3	618.1	604.1	594.7	585.9	579.8	572.8	569.1
37.5°	672.2	645.1	621.3	601.7	585.9	574.7	563.0	556.0	547.6	541.0	538.2
40°	635.3	611.1	588.2	570.0	555.5	542.0	531.7	522.8	517.7	512.1	507.4
42.5°	602.2	577.0	557.4	538.2	525.2	512.1	501.8	495.3	486.4	484.1	477.6
45°	566.7	543.4	523.8	506.0	492.5	481.8	469.6	461.7	456.1	450.5	448.1
47.5°	530.8	509.3	491.1	474.8	460.8	448.6	439.3	430.9	424.8	419.7	416.9
50°	495.8	477.1	458.9	443.0	428.5	419.7	408.5	399.1	394.5	388.9	385.6
52.5°	458.9	443.5	423.9	410.3	396.8	385.1	373.9	367.9	363.2	358.5	356.2
55°	424.3	408.0	391.2	376.7	363.7	351.5	342.6	338.0	331.9	329.1	328.6
57.5°	388.9	372.1	358.1	345.0	330.0	320.7	312.8	307.2	302.0	299.7	299.7
60°	350.1	336.6	323.5	309.0	298.3	287.6	279.2	275.4	270.3	269.4	266.1
62.5°	314.6	302.0	289.4	275.9	266.1	255.4	249.3	244.1	241.3	237.6	233.9
65°	277.8	266.6	254.4	242.7	234.8	223.1	217.5	211.5	208.2	204.0	199.3
67.5°	242.3	231.5	220.3	209.6	203.1	191.9	188.1	180.7	178.3	173.7	169.5
70°	204.9	197.5	188.6	177.9	172.3	163.4	159.7	152.7	148.9	146.1	143.8
72.5°	172.7	165.7	155.5	148.4	141.4	135.8	129.8	126.5	123.2	120.9	120.4
75°	141.0	132.1	126.0	119.5	114.8	109.2	106.4	104.1	102.7	101.3	99.9
77.5°	107.8	104.1	98.0	91.5	87.8	85.4	83.6	82.6	81.2	80.8	79.4
80°	80.3	75.2	71.4	69.1	66.3	64.4	63.0	59.8	57.9	57.0	56.0
82.5°	53.2	51.8	49.0	46.7	44.3	43.9	42.5	41.5	41.1	41.1	40.6
85°	32.2	28.5	28.5	28.0	28.0	27.5	26.6	26.6	25.7	27.1	27.1
87.5°	13.1	13.1	12.1	12.1	12.6	11.7	11.2	11.2	11.2	10.7	11.2
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: P243775

CATALOG NUMBER: S125RDR-H850D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1177.3	1177.3	1177.3	1177.3
2.5°	1118.5	1116.2	1116.6	1113.8
5°	1054.6	1053.2	1048.5	1044.7
7.5°	996.2	990.1	989.7	985.9
10°	941.6	936.0	933.2	933.6
12.5°	894.0	887.9	887.9	884.2
15°	843.1	837.0	837.9	837.5
17.5°	801.1	796.9	793.6	790.8
20°	760.0	754.9	753.0	750.7
22.5°	722.2	718.4	718.9	718.9
25°	686.2	686.7	682.5	681.6
27.5°	654.5	653.6	652.6	650.8
30°	624.6	620.9	619.9	618.1
32.5°	593.8	593.3	589.6	591.0
35°	562.5	561.1	560.2	559.3
37.5°	533.6	530.8	530.3	529.4
40°	504.2	503.2	499.0	501.4
42.5°	472.4	470.6	470.6	470.6
45°	445.8	440.7	440.7	438.8
47.5°	415.9	414.1	413.1	409.9
50°	386.5	383.7	382.8	382.8
52.5°	356.2	355.7	356.7	354.8
55°	329.6	330.0	329.6	328.6
57.5°	300.6	298.3	298.3	298.8
60°	266.1	266.1	267.0	265.2
62.5°	232.9	232.0	228.7	227.8
65°	198.9	195.1	194.7	195.1
67.5°	168.5	167.1	164.8	165.3
70°	142.4	141.9	139.6	138.2
72.5°	119.0	119.0	117.6	117.6
75°	99.4	98.5	98.0	99.0
77.5°	76.6	74.2	75.2	73.8
80°	55.6	56.5	55.6	55.1
82.5°	41.1	40.1	40.6	40.1
85°	26.1	25.2	25.7	25.2
87.5°	10.7	11.2	11.2	10.3
90°	0.0	0.0	0.0	0.0

(END OF REPORT)