

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: P242812

Luminaire Tested: **S125DR-S850D835-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242812
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-S850D835-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3324.2 lumens
Efficiency: N/A
Efficacy: 125.9 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

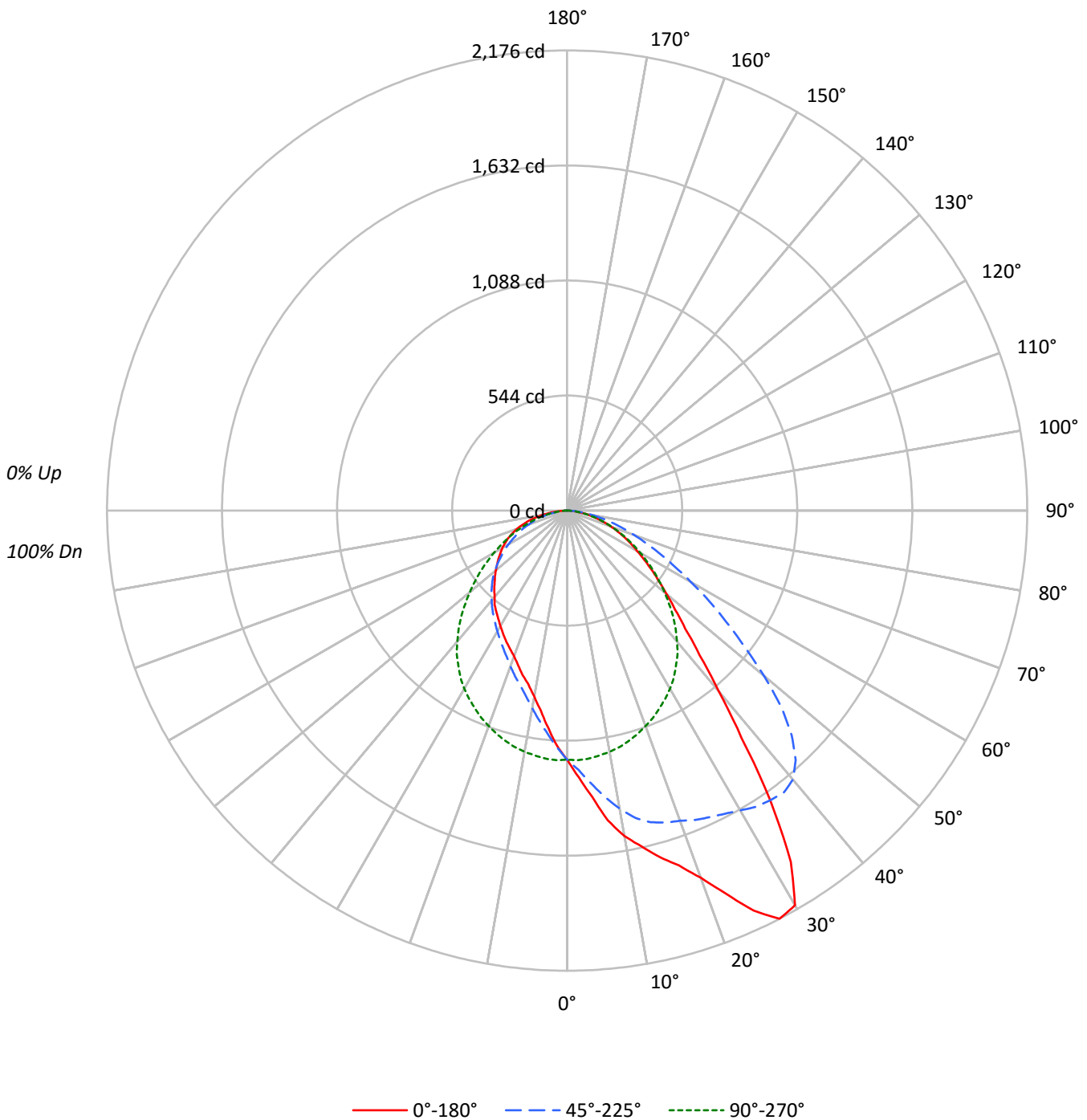
Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85				85
2	100	92	86	80	98	90	84	79	87	82	78	84	80	76	81	77	74	72				72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61				61
4	84	73	64	58	82	71	63	57	69	62	57	67	61	56	64	59	55	53				53
5	78	65	56	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46				46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41				41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36				36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32				32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29				29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26				26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	8372	8372	8372
5°	9695	8400	7356
10°	11279	8357	6445
15°	12486	8295	5945
20°	13977	8198	5544
25°	16373	8089	5348
30°	17685	7981	5179
35°	14541	7778	5067
40°	10335	7497	4945
45°	7941	7116	4875
50°	6778	6645	4865
55°	6035	6183	4907
60°	5444	5679	5032
65°	5028	5171	5163
70°	4572	4644	5237
75°	4037	4092	5190
80°	3397	3336	4748
85°	2691	2406	3833



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.4	3.4
10°-20°	337.7	10.2
20°-30°	548.5	16.5
30°-40°	670.4	20.2
40°-50°	608.2	18.3
50°-60°	484.4	14.6
60°-70°	337.4	10.1
70°-80°	179.7	5.4
80°-90°	44.6	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°	999.6	30.1
0°-40°	1670.0	50.2
0°-60°	2762.5	83.1
0°-90°	3324.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3324.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1178	1178	1178	1178	1178	
5°	1359	1294	1177	1059	1031	137
15°	1697	1525	1127	855	808	485
25°	2088	1599	1032	716	682	957
35°	1676	1672	896	608	584	1028
45°	790	1500	708	502	485	629
55°	487	920	499	383	396	438
65°	299	488	308	258	307	297
75°	147	217	149	136	189	158
85°	33	44	30	32	47	38
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°	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9
2.5°	1262.9	1260.9	1258.9	1254.9	1257.9	1249.4	1245.4	1238.4	1229.9	1226.9	1223.4
5°	1358.9	1361.4	1363.9	1353.4	1354.4	1347.4	1331.4	1318.4	1307.9	1294.4	1284.9
7.5°	1477.9	1470.4	1470.9	1464.4	1452.9	1443.4	1427.9	1406.4	1386.9	1364.9	1345.9
10°	1562.9	1563.4	1558.9	1550.9	1538.4	1529.4	1507.4	1486.4	1460.9	1430.9	1409.4
12.5°	1626.9	1629.4	1623.4	1611.9	1607.4	1584.4	1568.4	1542.4	1510.9	1488.4	1452.9
15°	1696.9	1691.4	1687.4	1673.9	1663.4	1642.4	1614.9	1588.9	1555.9	1525.4	1494.9
17.5°	1758.9	1763.4	1756.9	1746.9	1715.9	1691.4	1657.4	1624.4	1584.9	1546.9	1511.4
20°	1847.9	1851.9	1840.4	1818.9	1779.9	1755.4	1706.9	1660.9	1613.4	1560.9	1520.9
22.5°	1958.9	1953.9	1937.4	1901.9	1869.4	1818.9	1765.4	1706.9	1644.4	1583.4	1526.9
25°	2087.9	2066.9	2057.4	2016.9	1972.4	1905.9	1833.9	1751.9	1677.9	1599.4	1531.4
27.5°	2175.9	2167.4	2153.9	2120.9	2069.9	1994.4	1909.4	1811.4	1711.9	1615.9	1530.4
30°	2154.9	2155.9	2156.9	2147.9	2117.9	2064.4	1979.9	1872.4	1748.4	1636.9	1533.9
32.5°	1968.9	1991.4	2012.9	2040.9	2058.9	2059.4	2014.4	1919.9	1791.4	1660.9	1531.9
35°	1675.9	1681.4	1737.9	1793.9	1869.9	1928.9	1968.4	1925.4	1817.9	1672.4	1530.4
37.5°	1354.9	1382.4	1424.9	1487.9	1601.9	1694.9	1816.9	1858.9	1808.4	1681.9	1529.9
40°	1113.9	1138.9	1164.4	1228.9	1321.4	1440.4	1583.9	1706.4	1734.9	1660.9	1514.9
42.5°	928.0	946.5	975.5	1020.0	1093.4	1195.4	1330.9	1500.4	1616.4	1599.9	1483.4
45°	790.0	802.5	824.5	863.0	919.0	1001.5	1122.4	1297.4	1449.9	1500.4	1429.9
47.5°	692.0	692.5	710.5	738.0	780.5	856.5	947.0	1090.9	1255.4	1371.9	1355.4
50°	613.0	610.5	624.0	647.0	679.0	725.5	811.0	920.5	1076.9	1213.4	1251.4
52.5°	545.0	546.0	553.0	568.5	594.0	632.0	690.5	786.5	914.5	1055.5	1135.4
55°	487.0	485.0	494.5	506.0	525.5	551.5	597.5	673.0	781.5	919.5	1012.5
57.5°	431.0	436.5	440.5	448.5	465.5	483.5	524.5	582.5	672.0	794.5	893.0
60°	383.0	388.5	391.5	399.5	412.5	427.5	457.5	502.5	575.0	677.0	774.5
62.5°	340.0	344.0	344.5	351.5	361.5	376.0	398.0	434.0	487.5	573.5	668.5
65°	299.0	299.0	301.0	308.5	313.5	326.5	344.5	372.0	418.0	487.5	569.0
67.5°	259.0	261.5	261.0	264.5	269.0	280.0	293.5	316.5	353.0	405.5	473.0
70°	220.0	222.0	221.5	224.0	229.0	235.5	246.0	267.5	292.0	335.5	391.5
72.5°	185.0	185.5	184.0	187.5	190.0	195.5	207.5	216.5	239.0	274.0	317.5
75°	147.0	148.0	149.0	151.0	154.0	157.0	163.0	174.5	189.5	217.0	246.5
77.5°	117.0	114.5	117.5	117.0	118.5	121.0	126.5	133.0	146.0	164.5	189.0
80°	83.0	83.5	83.5	84.0	86.5	88.0	92.5	97.0	106.5	119.5	135.5
82.5°	55.0	56.5	55.5	56.5	58.5	59.5	61.5	65.0	69.5	79.0	89.5
85°	33.0	30.5	31.5	32.5	32.5	33.0	35.0	36.5	39.5	43.5	48.0
87.5°	12.0	13.0	13.5	13.5	14.0	14.0	16.0	16.0	17.5	19.0	21.0
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°	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9
2.5°	1220.4	1216.9	1212.9	1205.9	1197.4	1192.9	1185.9	1181.4	1172.4	1164.9	1156.9
5°	1273.4	1260.4	1248.4	1232.9	1215.9	1204.9	1191.9	1177.4	1162.4	1146.9	1129.9
7.5°	1326.4	1304.9	1281.4	1256.9	1232.9	1210.4	1189.4	1167.9	1148.4	1123.9	1103.4
10°	1379.9	1350.9	1319.9	1283.4	1247.9	1216.9	1185.4	1157.9	1129.9	1099.9	1073.4
12.5°	1433.4	1392.4	1345.4	1304.4	1259.9	1220.9	1182.4	1145.4	1108.4	1074.4	1042.5
15°	1452.9	1418.9	1378.4	1321.4	1273.4	1221.9	1172.9	1127.4	1084.9	1048.0	1009.0
17.5°	1471.9	1428.4	1385.4	1330.4	1267.9	1212.4	1156.9	1107.4	1060.5	1014.0	978.5
20°	1476.4	1431.4	1385.9	1332.4	1267.9	1201.9	1146.4	1083.9	1032.5	984.0	938.0
22.5°	1474.9	1422.4	1371.9	1316.4	1253.9	1194.4	1124.4	1060.5	1003.5	956.0	907.5
25°	1463.9	1409.4	1347.4	1291.9	1229.9	1165.4	1097.4	1031.5	974.5	920.0	872.5
27.5°	1457.4	1388.4	1320.4	1256.4	1196.9	1137.4	1071.4	1003.5	941.0	885.5	841.5
30°	1442.9	1365.4	1286.4	1218.9	1157.4	1099.9	1038.5	972.5	906.5	852.5	804.5
32.5°	1429.9	1336.4	1251.9	1176.9	1110.9	1055.5	1000.0	938.0	873.5	818.5	770.5
35°	1412.4	1307.9	1212.4	1129.4	1060.0	1002.5	955.0	896.5	837.0	784.0	738.0
37.5°	1391.9	1270.9	1169.9	1083.4	1008.0	948.0	903.0	857.5	798.0	746.0	705.0
40°	1366.9	1230.9	1122.4	1033.5	954.5	891.5	850.5	808.0	760.5	713.0	669.0
42.5°	1335.4	1194.9	1074.4	977.0	899.0	838.0	794.5	760.0	719.5	676.0	636.0
45°	1295.4	1149.9	1022.0	919.0	840.0	779.5	735.0	708.0	676.5	634.5	600.0
47.5°	1242.4	1098.9	967.0	860.5	779.0	723.0	680.5	654.0	631.0	598.0	565.5
50°	1166.9	1040.5	906.5	801.0	719.5	663.0	624.5	601.0	582.0	558.0	531.5
52.5°	1082.4	967.0	847.0	743.0	662.5	607.0	569.5	549.5	534.5	519.0	493.0
55°	992.0	892.0	778.0	679.0	604.5	550.0	517.0	499.0	486.0	473.0	457.0
57.5°	894.5	813.5	709.0	616.5	547.5	496.5	465.5	447.0	436.5	429.5	419.5
60°	790.5	723.5	636.5	554.0	487.0	443.0	413.0	399.5	391.0	385.5	378.5
62.5°	694.0	642.0	563.0	489.5	433.0	392.0	366.0	353.0	345.0	343.0	337.5
65°	599.5	557.0	490.5	428.0	378.0	342.5	320.0	307.5	302.5	299.5	300.0
67.5°	504.5	477.0	421.5	366.5	325.5	294.0	275.5	266.0	263.5	259.0	259.0
70°	419.0	399.5	354.5	308.0	272.5	249.5	233.5	223.5	221.0	219.0	218.5
72.5°	343.5	327.0	289.5	254.5	223.5	204.0	191.5	186.5	182.0	181.0	181.0
75°	269.5	260.0	229.0	199.5	177.5	163.5	154.5	149.0	146.0	145.5	146.0
77.5°	203.5	194.5	173.0	151.0	136.5	125.5	117.0	115.5	111.5	112.0	111.0
80°	144.0	138.5	126.0	109.5	98.0	89.0	85.0	81.5	80.5	79.0	80.5
82.5°	94.5	88.5	81.0	72.0	63.0	58.5	54.5	54.0	53.5	53.0	53.0
85°	51.5	52.0	47.0	39.0	35.0	32.0	29.5	29.5	29.0	28.5	29.0
87.5°	22.0	21.0	19.0	17.5	15.0	13.5	13.0	13.5	12.0	11.5	12.0
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°	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9	1177.9
2.5°	1152.4	1146.9	1142.4	1132.4	1126.9	1119.4	1113.4	1119.9	1112.9	1115.9	1111.4
5°	1121.4	1107.4	1097.4	1082.9	1070.4	1059.0	1050.5	1049.0	1045.0	1043.0	1037.0
7.5°	1084.4	1068.4	1052.0	1034.0	1019.0	1003.0	993.5	984.5	979.0	972.0	966.5
10°	1052.5	1029.0	1009.0	986.0	966.0	948.5	934.5	927.5	921.0	911.5	908.0
12.5°	1013.0	988.5	963.0	938.0	919.0	899.0	887.5	876.0	872.0	861.0	860.5
15°	983.0	946.5	922.5	897.5	871.0	855.0	845.0	833.5	828.5	821.0	815.5
17.5°	946.0	913.0	883.0	857.5	833.5	820.5	807.5	799.5	791.0	785.5	776.5
20°	905.0	874.0	844.0	816.5	799.0	783.5	773.5	766.0	757.0	754.5	745.5
22.5°	870.5	835.5	807.0	785.0	765.5	747.5	736.5	732.0	726.5	717.5	717.5
25°	832.5	797.0	772.5	749.5	732.5	716.5	709.0	702.5	696.5	691.0	689.0
27.5°	800.5	769.0	739.0	718.0	703.5	688.5	682.0	673.5	669.0	664.5	658.5
30°	766.5	734.0	708.5	688.5	672.5	659.5	652.5	647.0	643.0	639.0	636.0
32.5°	731.5	702.0	677.5	658.0	642.0	633.0	627.0	623.5	619.0	614.0	610.0
35°	701.5	668.5	644.5	627.5	615.0	607.5	600.5	597.0	592.0	592.0	588.0
37.5°	666.0	637.0	615.5	600.0	589.0	582.0	574.0	572.0	568.5	566.5	565.0
40°	635.0	608.5	588.5	573.0	561.0	555.5	549.5	545.5	543.5	541.0	540.0
42.5°	603.0	578.0	559.0	545.0	535.0	530.5	525.0	522.5	518.0	514.5	514.0
45°	570.5	546.0	528.5	517.0	508.0	502.5	499.0	493.0	491.0	487.0	486.5
47.5°	540.5	516.5	499.0	489.5	481.5	477.5	472.0	465.5	463.0	460.5	460.0
50°	506.0	484.5	468.5	459.5	452.0	445.5	440.0	436.0	434.5	434.5	435.5
52.5°	471.0	453.5	440.5	429.0	422.0	415.0	410.0	408.0	405.5	408.5	410.5
55°	437.0	418.5	408.5	398.0	391.0	383.0	380.5	379.5	378.0	382.0	384.0
57.5°	400.5	388.0	376.0	365.0	359.0	354.0	350.0	349.5	352.5	353.5	359.5
60°	366.0	351.0	340.5	332.5	325.0	322.0	321.0	320.0	322.0	327.5	336.0
62.5°	328.0	316.5	305.0	299.5	294.5	289.0	289.0	290.0	294.5	301.0	309.5
65°	291.0	280.5	273.0	266.0	261.5	258.5	259.5	261.5	266.0	274.5	284.0
67.5°	253.0	246.0	239.0	232.5	228.0	228.5	229.0	231.5	237.0	247.0	256.0
70°	216.5	208.5	203.0	200.5	197.0	195.0	198.0	203.0	207.5	216.5	224.0
72.5°	180.0	173.5	169.5	168.0	167.0	165.5	166.0	171.5	178.0	187.0	196.0
75°	144.0	141.5	138.5	136.5	135.0	136.0	137.0	142.0	147.0	156.5	166.5
77.5°	111.5	108.5	106.5	106.0	105.0	105.5	108.0	112.0	117.0	124.0	132.0
80°	79.5	78.5	77.5	77.0	77.0	77.5	81.5	84.0	88.5	95.0	101.0
82.5°	52.5	52.0	52.0	52.0	52.5	52.5	54.5	58.0	61.5	66.0	71.0
85°	30.5	29.5	31.0	31.5	30.5	32.0	33.0	35.0	36.5	39.0	41.5
87.5°	12.5	13.5	13.0	13.5	13.5	14.5	14.0	16.0	17.0	18.0	17.5
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: P242812

CATALOG NUMBER: S125DR-S850D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1177.9	1177.9	1177.9	1177.9
2.5°	1108.4	1111.9	1108.9	1112.9
5°	1034.5	1030.0	1033.0	1031.0
7.5°	966.0	962.0	956.0	954.0
10°	902.5	897.0	896.5	893.0
12.5°	856.0	851.0	844.0	843.0
15°	812.5	808.5	805.0	808.0
17.5°	775.5	772.0	771.0	768.0
20°	741.0	738.5	739.5	733.0
22.5°	713.5	708.0	707.0	707.0
25°	684.5	682.0	679.5	682.0
27.5°	659.0	656.5	655.5	656.0
30°	636.0	631.0	631.5	631.0
32.5°	611.0	608.0	607.0	606.0
35°	586.5	586.5	584.0	584.0
37.5°	564.0	563.5	562.0	563.0
40°	538.0	537.5	536.0	533.0
42.5°	513.0	511.0	510.5	510.0
45°	486.5	486.5	485.5	485.0
47.5°	460.5	461.5	463.5	463.0
50°	437.5	438.0	439.5	440.0
52.5°	412.0	415.5	417.5	417.0
55°	388.5	392.0	395.5	396.0
57.5°	365.0	369.5	373.0	374.0
60°	341.0	347.5	352.0	354.0
62.5°	318.0	325.5	330.0	330.0
65°	292.5	300.0	304.0	307.0
67.5°	266.0	273.5	277.5	280.0
70°	236.5	244.0	250.0	252.0
72.5°	207.5	214.0	218.5	221.0
75°	173.0	182.0	186.5	189.0
77.5°	140.0	149.0	151.5	153.0
80°	107.0	112.0	115.5	116.0
82.5°	76.0	80.0	80.5	82.0
85°	45.0	47.0	47.5	47.0
87.5°	18.5	18.0	18.0	19.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)