

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: P243664

Luminaire Tested: **S125DR-H1270D927-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243664
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-61)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DR-H1270D927-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3915.6 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

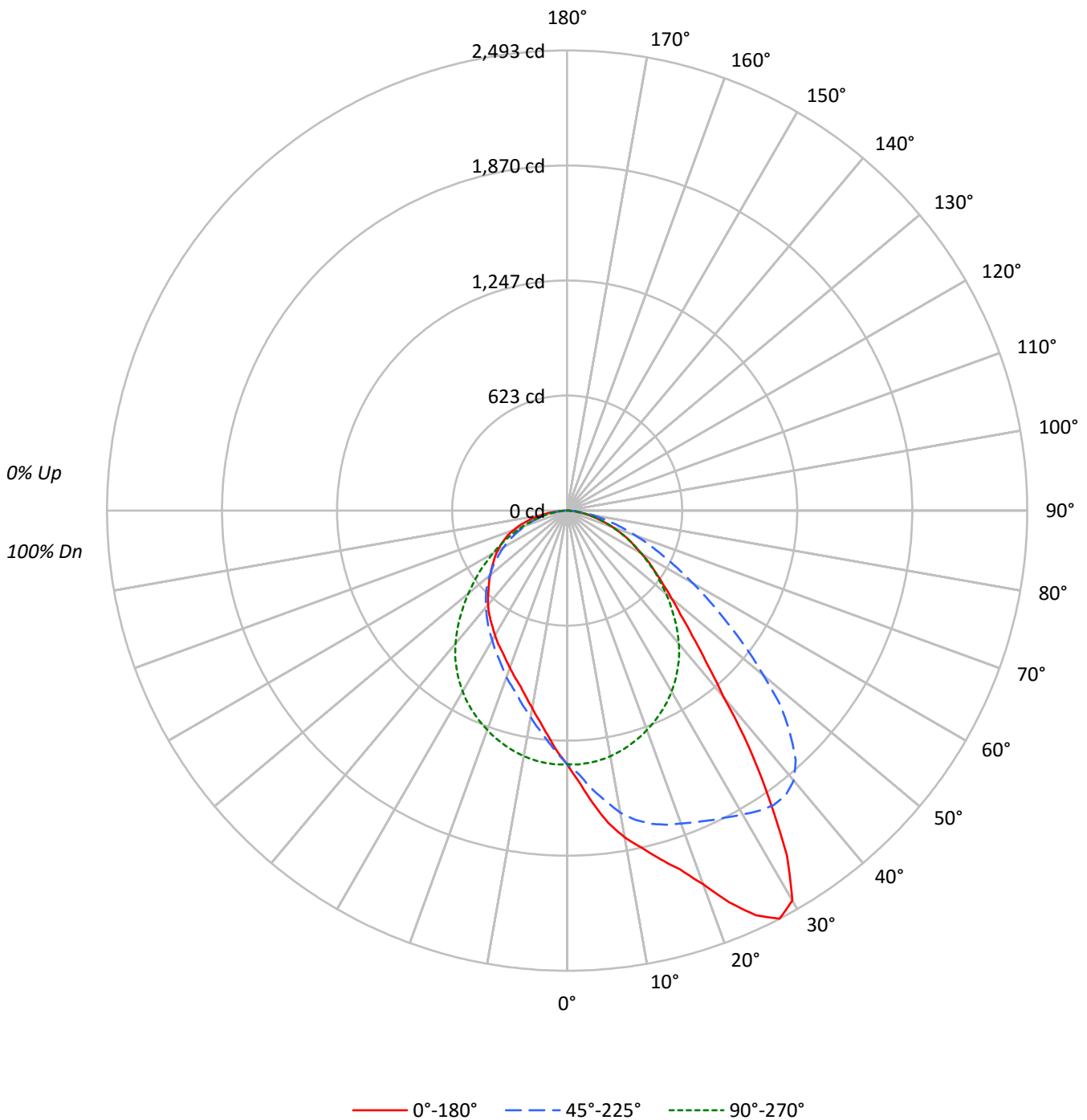
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	63	61
4	84	73	64	58	82	71	63	57	69	62	56	66	61	56	64	59	55	53
5	78	65	56	50	75	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	40
7	67	53	45	39	65	53	44	39	51	44	38	50	43	38	48	42	38	36
8	62	49	40	35	60	48	40	35	47	40	34	46	39	34	44	38	34	32
9	58	45	37	31	57	44	36	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	9765	9765	9765
5°	11344	9786	8697
10°	12979	9754	7848
15°	14389	9666	7232
20°	16290	9569	6860
25°	18970	9446	6571
30°	20026	9291	6410
35°	16561	9063	6274
40°	12251	8735	6182
45°	9632	8260	6048
50°	8156	7724	6025
55°	7263	7193	6047
60°	6589	6604	6178
65°	6108	6053	6352
70°	5488	5417	6390
75°	4682	4759	6302
80°	3831	3901	5882
85°	2634	2773	4999



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.7	3.4
10°-20°	396.6	10.1
20°-30°	644.8	16.5
30°-40°	784.4	20.0
40°-50°	717.8	18.3
50°-60°	574.4	14.7
60°-70°	400.1	10.2
70°-80°	212.6	5.4
80°-90°	52.2	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°	1174.0	30.0
0°-40°	1958.5	50.0
0°-60°	3250.7	83.0
0°-90°	3915.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3915.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1374	1374	1374	1374	1374	
5°	1590	1510	1372	1248	1219	158
15°	1956	1756	1314	1039	983	561
25°	2419	1850	1204	880	838	1104
35°	1909	1948	1045	749	723	1183
45°	958	1708	822	620	602	756
55°	586	1060	580	474	488	529
65°	363	566	360	318	378	358
75°	170	251	173	166	230	184
85°	32	48	34	38	61	42
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°	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9
2.5°	1470.8	1464.7	1463.0	1463.6	1460.2	1457.4	1450.8	1441.8	1435.7	1427.9	1425.7
5°	1590.0	1575.0	1577.8	1573.3	1566.1	1556.6	1548.3	1534.9	1522.1	1509.8	1493.7
7.5°	1707.0	1704.2	1696.4	1695.3	1683.6	1667.5	1650.8	1632.4	1605.1	1586.1	1564.4
10°	1798.4	1804.0	1792.8	1793.4	1772.8	1756.6	1742.1	1718.2	1687.5	1661.9	1630.2
12.5°	1871.9	1874.2	1872.5	1865.3	1851.9	1824.6	1810.7	1785.6	1752.2	1717.1	1692.5
15°	1955.5	1949.4	1939.9	1931.0	1911.5	1892.0	1863.0	1833.5	1791.2	1756.1	1720.4
17.5°	2039.1	2038.0	2026.3	2007.3	1982.8	1957.2	1913.7	1875.8	1830.7	1784.5	1739.9
20°	2153.8	2147.7	2130.5	2108.7	2063.6	2027.4	1973.3	1921.5	1862.5	1804.5	1752.7
22.5°	2297.6	2277.5	2260.3	2226.8	2175.0	2112.1	2051.3	1976.1	1893.7	1825.7	1761.1
25°	2419.0	2410.1	2391.7	2354.4	2295.4	2219.6	2129.3	2044.1	1940.5	1850.2	1766.1
27.5°	2492.6	2488.7	2477.5	2442.4	2393.4	2318.2	2221.8	2113.2	1995.6	1873.6	1772.8
30°	2440.2	2440.8	2446.9	2443.0	2421.3	2372.8	2287.0	2177.8	2041.9	1901.5	1774.4
32.5°	2215.1	2230.2	2278.1	2300.9	2331.6	2341.6	2303.2	2212.3	2080.9	1929.3	1780.0
35°	1908.7	1945.5	1977.8	2044.7	2124.3	2189.5	2227.4	2197.9	2097.0	1948.3	1782.8
37.5°	1620.1	1617.3	1667.5	1739.9	1824.6	1935.5	2043.0	2102.0	2069.2	1944.4	1777.8
40°	1320.4	1346.0	1377.2	1441.3	1540.5	1676.9	1805.1	1931.6	1977.2	1909.8	1758.3
42.5°	1115.4	1127.1	1158.3	1208.4	1279.7	1419.0	1545.5	1708.1	1825.1	1832.9	1715.4
45°	958.3	971.1	980.0	1029.6	1095.9	1189.5	1319.3	1483.1	1640.2	1708.1	1645.8
47.5°	832.3	839.6	859.1	889.2	932.6	1015.6	1119.3	1268.0	1439.1	1571.1	1549.9
50°	737.6	743.2	758.8	775.5	811.2	872.5	956.0	1078.0	1242.4	1386.7	1434.0
52.5°	654.1	661.3	669.1	685.3	718.1	759.4	827.3	922.6	1075.3	1222.9	1298.1
55°	586.1	588.9	597.2	609.5	634.6	665.8	719.8	806.2	913.1	1060.2	1163.8
57.5°	527.0	524.3	533.2	541.5	558.2	584.4	623.4	687.5	789.4	914.8	1022.9
60°	463.5	466.3	473.0	479.7	491.4	514.2	544.9	596.1	670.8	783.3	893.6
62.5°	408.9	411.2	412.8	422.3	432.9	449.0	474.1	515.9	577.7	670.8	769.4
65°	363.2	359.3	361.6	368.3	376.6	390.0	413.4	444.0	490.3	566.0	647.9
67.5°	309.8	310.9	311.4	315.3	322.6	335.4	352.1	377.2	415.1	474.7	546.5
70°	264.1	264.6	265.2	268.5	274.7	281.9	293.6	313.1	345.4	391.7	447.9
72.5°	217.3	219.5	219.5	222.3	226.8	230.7	241.8	257.9	282.5	319.2	366.6
75°	170.5	174.4	175.5	178.8	182.7	183.9	192.2	205.0	220.6	250.7	288.0
77.5°	132.6	132.6	134.8	138.7	138.7	142.1	151.0	156.6	168.8	189.4	217.8
80°	93.6	95.3	95.3	96.4	98.6	101.4	105.3	110.3	120.9	135.9	151.0
82.5°	61.3	61.8	62.4	65.2	64.1	66.9	68.5	74.7	79.7	86.9	96.4
85°	32.3	32.3	32.9	34.5	36.2	36.8	37.9	40.7	44.6	47.9	53.5
87.5°	13.4	12.8	12.8	13.9	13.9	14.5	15.0	16.2	18.4	18.4	20.6
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9
2.5°	1424.0	1419.6	1411.8	1405.1	1396.7	1390.6	1384.5	1376.7	1368.9	1360.5	1351.6
5°	1480.8	1467.5	1452.4	1437.4	1419.6	1405.1	1389.5	1371.6	1356.6	1339.9	1322.1
7.5°	1546.0	1522.6	1496.4	1466.9	1439.1	1414.0	1388.4	1363.8	1341.6	1316.5	1292.0
10°	1609.0	1568.3	1535.4	1495.3	1455.8	1419.0	1383.9	1351.6	1319.3	1288.1	1258.0
12.5°	1651.9	1605.6	1564.4	1518.2	1471.9	1425.7	1379.4	1334.9	1296.4	1258.5	1226.8
15°	1681.4	1649.1	1594.5	1538.8	1478.1	1417.9	1365.5	1313.7	1268.0	1224.0	1186.1
17.5°	1699.8	1658.0	1604.5	1546.0	1479.2	1416.2	1353.3	1291.4	1239.0	1191.7	1148.8
20°	1704.8	1655.8	1600.1	1539.3	1472.5	1403.4	1332.6	1265.2	1208.4	1154.4	1110.9
22.5°	1699.8	1643.0	1583.4	1524.3	1454.1	1383.9	1309.8	1236.3	1171.1	1115.4	1069.7
25°	1691.4	1622.9	1560.5	1490.9	1425.7	1358.8	1282.5	1204.5	1136.5	1078.6	1027.3
27.5°	1680.8	1602.3	1525.4	1456.9	1386.1	1320.4	1250.2	1170.5	1099.8	1036.3	988.3
30°	1668.6	1575.0	1489.8	1408.4	1341.6	1275.8	1207.3	1132.1	1060.8	1000.0	948.2
32.5°	1654.7	1546.0	1445.7	1358.3	1287.0	1226.2	1162.2	1090.3	1020.1	954.9	909.8
35°	1635.2	1506.5	1398.4	1303.7	1229.6	1163.8	1107.6	1044.6	975.0	914.2	867.4
37.5°	1612.3	1471.4	1350.5	1248.0	1167.2	1099.8	1048.0	996.7	931.5	873.0	827.9
40°	1581.7	1429.0	1299.8	1188.9	1102.6	1036.3	985.6	941.5	887.5	828.4	787.8
42.5°	1541.6	1382.2	1242.4	1124.3	1040.7	970.0	922.6	882.5	836.2	785.0	744.9
45°	1495.9	1328.7	1178.3	1062.4	971.6	904.2	858.0	821.8	786.7	741.0	703.7
47.5°	1424.6	1265.8	1120.4	992.2	903.1	837.9	794.5	759.9	733.7	697.5	660.8
50°	1339.9	1194.5	1051.9	923.2	832.9	769.9	728.7	698.6	676.4	648.5	620.6
52.5°	1246.8	1114.3	976.6	856.3	766.0	706.4	663.0	636.2	621.8	599.5	577.7
55°	1138.2	1024.0	895.9	786.1	697.5	636.8	599.5	580.5	564.4	553.2	533.7
57.5°	1029.0	932.6	818.4	709.8	628.4	574.4	541.0	519.8	508.1	500.3	486.4
60°	909.8	834.0	729.3	635.1	562.7	511.4	481.9	464.6	454.1	449.6	440.1
62.5°	796.1	738.2	642.9	564.4	499.7	454.6	425.1	411.2	404.5	399.5	393.9
65°	684.2	638.5	563.3	489.7	435.1	394.4	371.0	359.9	354.9	349.3	348.8
67.5°	583.3	541.5	481.4	421.2	375.5	341.0	320.3	309.2	303.6	304.2	301.4
70°	484.1	451.8	402.8	353.8	314.8	287.5	268.0	260.7	258.5	257.9	255.7
72.5°	391.7	373.3	330.4	289.1	258.5	237.3	221.7	215.6	212.8	211.7	211.7
75°	310.3	296.9	260.2	229.0	205.6	188.3	177.7	173.3	169.4	171.6	169.9
77.5°	232.9	221.7	196.7	174.4	156.6	142.1	137.1	133.2	130.9	130.4	132.6
80°	163.8	157.1	141.5	123.7	110.3	102.0	98.6	95.3	93.6	92.5	93.6
82.5°	105.3	101.4	90.3	79.7	71.9	67.4	64.1	62.4	59.6	60.2	61.3
85°	57.4	56.3	49.0	45.7	38.4	37.9	35.7	34.0	34.5	33.4	35.1
87.5°	23.4	22.3	20.6	18.9	16.7	15.0	13.9	15.0	13.4	15.0	14.5
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°	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9	1373.9
2.5°	1347.1	1341.0	1333.8	1327.1	1317.0	1310.4	1307.0	1308.1	1304.2	1303.1	1302.6
5°	1311.5	1297.5	1284.2	1273.0	1261.3	1248.0	1238.5	1235.7	1234.6	1231.8	1225.7
7.5°	1274.7	1256.9	1239.6	1223.4	1206.7	1191.1	1181.7	1173.9	1169.4	1161.6	1159.9
10°	1235.7	1214.0	1195.6	1172.2	1152.1	1136.0	1123.7	1117.0	1113.1	1105.9	1099.8
12.5°	1198.4	1175.5	1147.1	1126.0	1104.8	1088.1	1074.1	1063.0	1060.2	1050.7	1045.7
15°	1158.3	1130.4	1104.8	1080.3	1060.2	1039.0	1030.7	1020.7	1010.6	1002.3	1000.6
17.5°	1119.8	1086.4	1061.3	1037.4	1012.9	997.3	986.1	979.4	971.6	967.2	959.4
20°	1073.6	1046.3	1018.4	996.1	975.0	961.6	946.6	940.4	934.9	924.3	920.9
22.5°	1034.6	1001.7	978.3	956.0	937.1	918.1	907.6	901.4	893.1	887.5	883.0
25°	993.9	966.6	937.1	914.8	898.6	879.7	872.5	864.7	857.4	852.4	847.9
27.5°	954.4	924.3	900.3	878.0	861.3	847.9	837.9	829.6	824.5	820.6	817.9
30°	913.1	885.3	863.0	842.4	823.4	812.3	802.8	799.5	793.9	791.1	786.7
32.5°	875.8	847.4	826.2	808.4	791.7	780.5	775.0	769.9	764.4	759.4	758.8
35°	833.5	808.9	789.4	769.9	757.7	748.8	742.6	737.6	733.2	729.3	727.0
37.5°	796.1	772.7	751.0	737.1	723.7	715.9	709.2	707.6	703.1	703.7	700.3
40°	756.0	734.8	716.5	702.5	693.6	685.3	680.8	675.2	672.5	673.0	670.2
42.5°	717.0	697.5	680.8	668.0	658.5	652.4	648.5	644.0	640.7	638.5	637.9
45°	677.5	660.2	646.3	633.5	625.7	620.1	615.1	609.5	606.7	605.6	605.0
47.5°	638.5	622.9	607.8	598.9	591.7	586.7	581.6	577.2	575.0	573.3	570.5
50°	598.4	582.8	572.2	561.0	554.9	548.2	542.6	540.4	537.6	537.1	539.9
52.5°	556.6	544.3	534.8	525.9	518.7	511.4	505.9	503.1	504.8	504.8	508.1
55°	517.0	504.2	495.3	488.0	480.2	473.6	468.0	468.0	468.0	471.3	475.8
57.5°	473.0	461.9	455.2	446.8	439.6	435.1	431.2	430.7	432.9	438.5	443.5
60°	428.4	420.6	413.4	406.7	399.5	396.1	395.6	394.4	397.8	403.4	413.9
62.5°	384.4	379.4	370.5	367.1	361.0	357.1	357.1	358.2	363.2	372.2	381.6
65°	342.1	334.8	328.1	324.8	320.9	317.6	317.6	322.0	329.3	337.6	349.3
67.5°	298.6	292.5	288.0	284.7	280.2	278.6	280.2	285.2	294.2	302.5	314.8
70°	251.8	250.7	246.8	242.3	240.1	240.1	241.8	247.4	254.0	266.9	277.4
72.5°	208.9	208.9	206.7	203.9	202.2	203.9	205.0	210.6	219.0	230.1	241.8
75°	169.9	168.3	166.6	165.5	164.9	166.0	167.7	172.2	182.2	192.8	202.2
77.5°	131.5	130.4	128.7	129.8	129.8	130.4	135.4	140.4	146.0	154.3	164.4
80°	94.7	95.3	93.6	93.0	95.8	96.9	100.8	104.7	108.6	118.1	125.4
82.5°	62.4	63.5	63.0	64.1	65.2	65.2	69.6	73.5	76.9	83.6	89.1
85°	35.7	36.2	36.2	37.9	39.0	38.4	42.3	44.6	46.2	51.3	54.6
87.5°	15.6	16.2	16.7	16.7	16.7	18.9	19.5	20.6	21.2	22.3	24.0
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: P243664

CATALOG NUMBER: S125DR-H1270D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1373.9	1373.9	1373.9	1373.9
2.5°	1297.5	1297.0	1299.8	1301.4
5°	1221.8	1220.1	1217.9	1219.0
7.5°	1154.4	1149.9	1148.8	1148.8
10°	1094.8	1090.3	1089.2	1087.5
12.5°	1044.1	1037.4	1034.6	1031.8
15°	996.1	995.0	988.9	982.8
17.5°	952.1	953.8	947.7	944.9
20°	915.4	910.3	908.1	907.0
22.5°	878.0	874.1	874.1	870.2
25°	844.6	841.3	841.8	837.9
27.5°	813.4	812.8	812.3	811.2
30°	784.4	782.2	780.0	781.1
32.5°	756.6	753.2	751.6	751.0
35°	727.6	726.5	724.3	723.1
37.5°	699.2	699.8	697.0	696.4
40°	668.6	668.0	667.4	666.3
42.5°	636.2	634.6	635.7	635.1
45°	603.9	602.3	603.4	601.7
47.5°	572.2	573.3	573.3	573.8
50°	541.0	543.2	543.2	544.9
52.5°	512.0	516.5	516.5	515.9
55°	480.8	485.8	487.5	488.0
57.5°	451.3	456.3	461.3	462.4
60°	419.5	428.4	433.4	434.6
62.5°	391.1	399.5	406.1	406.7
65°	359.3	369.4	375.5	377.7
67.5°	327.0	334.8	343.2	346.5
70°	290.3	299.7	305.3	307.5
72.5°	251.8	262.4	269.6	270.8
75°	215.1	222.9	228.4	229.5
77.5°	173.3	181.1	186.1	187.2
80°	131.5	138.2	141.5	143.7
82.5°	93.0	97.5	99.2	101.4
85°	57.4	60.7	61.3	61.3
87.5°	25.1	25.6	25.6	26.7
90°	0.0	0.0	0.0	0.0

(END OF REPORT)