

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: P243684

Luminaire Tested: **S125DR-H1270D930-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243684
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-H1270D930-X4F0-XX-UDD-A-W
Description: DEFINE 5 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: 4029.9 lumens
Efficiency: N/A
Efficacy: 106.9 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

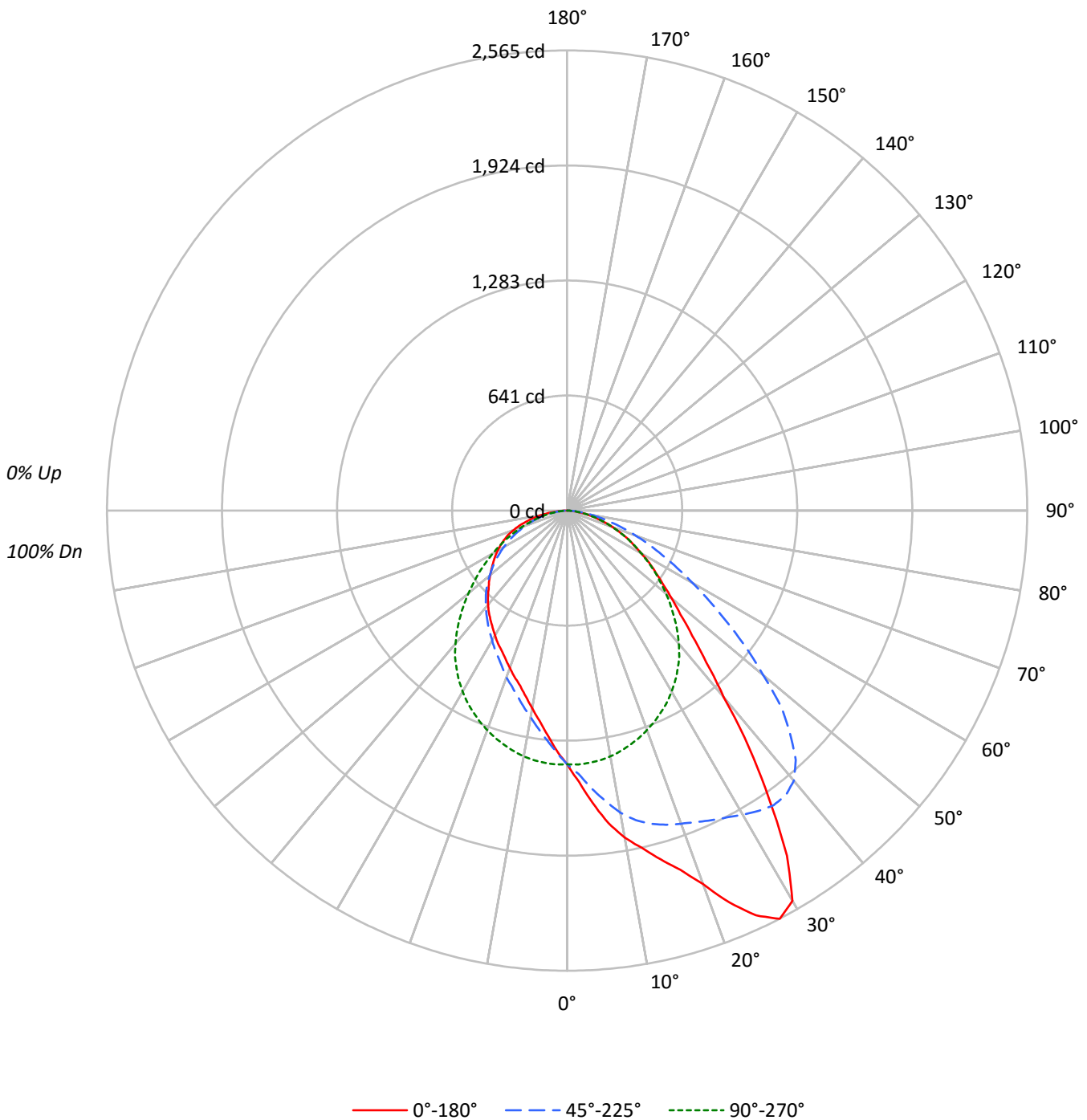
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	10050	10050	10050
5°	11675	10072	8951
10°	13358	10039	8077
15°	14809	9948	7442
20°	16766	9849	7061
25°	19524	9722	6763
30°	20611	9562	6597
35°	17044	9328	6458
40°	12608	8990	6363
45°	9913	8500	6225
50°	8395	7950	6201
55°	7474	7404	6224
60°	6782	6797	6357
65°	6286	6229	6539
70°	5648	5575	6577
75°	4819	4896	6486
80°	3942	4011	6053
85°	2716	2854	5146



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.6	3.4
10°-20°	408.2	10.1
20°-30°	663.6	16.5
30°-40°	807.3	20.0
40°-50°	738.7	18.3
50°-60°	591.2	14.7
60°-70°	411.7	10.2
70°-80°	218.8	5.4
80°-90°	53.7	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°	1208.3	30.0
0°-40°	2015.6	50.0
0°-60°	3345.6	83.0
0°-90°	4029.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4029.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1414	1414	1414	1414	1414	
5°	1636	1554	1412	1284	1255	163
15°	2013	1807	1352	1069	1011	577
25°	2490	1904	1240	905	862	1137
35°	1964	2005	1075	771	744	1218
45°	986	1758	846	638	619	778
55°	603	1091	598	487	502	544
65°	374	583	370	327	389	368
75°	176	258	178	171	236	190
85°	33	49	35	40	63	43
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°	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0
2.5°	1513.7	1507.4	1505.7	1506.3	1502.8	1500.0	1493.1	1483.9	1477.6	1469.6	1467.3
5°	1636.4	1621.0	1623.8	1619.2	1611.8	1602.0	1593.4	1579.7	1566.5	1553.9	1537.2
7.5°	1756.8	1754.0	1746.0	1744.8	1732.8	1716.1	1698.9	1680.0	1651.9	1632.4	1610.1
10°	1850.9	1856.6	1845.1	1845.7	1824.5	1807.9	1793.0	1768.3	1736.8	1710.4	1677.7
12.5°	1926.6	1928.9	1927.1	1919.7	1905.9	1877.8	1863.5	1837.7	1803.3	1767.2	1741.9
15°	2012.6	2006.3	1996.5	1987.3	1967.3	1947.2	1917.4	1887.0	1843.4	1807.3	1770.6
17.5°	2098.6	2097.4	2085.4	2065.9	2040.7	2014.3	1969.6	1930.6	1884.1	1836.5	1790.7
20°	2216.7	2210.4	2192.6	2170.3	2123.8	2086.5	2030.9	1977.6	1916.8	1857.2	1803.9
22.5°	2364.6	2344.0	2326.2	2291.8	2238.5	2173.7	2111.2	2033.8	1948.9	1879.0	1812.5
25°	2489.6	2480.5	2461.5	2423.1	2362.3	2284.4	2191.5	2103.7	1997.1	1904.2	1817.6
27.5°	2565.3	2561.3	2549.8	2513.7	2463.3	2385.9	2286.7	2174.8	2053.9	1928.3	1824.5
30°	2511.4	2512.0	2518.3	2514.3	2491.9	2442.0	2353.7	2241.4	2101.5	1957.0	1826.2
32.5°	2279.8	2295.3	2344.6	2368.1	2399.6	2409.9	2370.4	2276.9	2141.6	1985.6	1832.0
35°	1964.4	2002.3	2035.5	2104.3	2186.3	2253.4	2292.4	2262.0	2158.2	2005.1	1834.8
37.5°	1667.4	1664.5	1716.1	1790.7	1877.8	1991.9	2102.6	2163.4	2129.5	2001.1	1829.7
40°	1358.9	1385.3	1417.4	1483.3	1585.4	1725.9	1857.8	1987.9	2034.9	1965.6	1809.6
42.5°	1147.9	1160.0	1192.1	1243.7	1317.1	1460.4	1590.6	1758.0	1878.4	1886.4	1765.4
45°	986.2	999.4	1008.6	1059.6	1127.8	1224.2	1357.8	1526.3	1688.0	1758.0	1693.8
47.5°	856.6	864.1	884.2	915.1	959.8	1045.3	1151.9	1305.0	1481.1	1616.9	1595.2
50°	759.2	764.9	780.9	798.2	834.8	897.9	983.9	1109.5	1278.6	1427.2	1475.9
52.5°	673.2	680.6	688.6	705.3	739.1	781.5	851.5	949.5	1106.6	1258.6	1336.0
55°	603.2	606.1	614.7	627.3	653.1	685.2	740.8	829.7	939.8	1091.1	1197.8
57.5°	542.4	539.6	548.7	557.3	574.5	601.5	641.6	707.6	812.5	941.5	1052.7
60°	477.1	479.9	486.8	493.7	505.7	529.2	560.8	613.5	690.4	806.2	919.7
62.5°	420.9	423.2	424.9	434.6	445.5	462.1	487.9	531.0	594.6	690.4	791.8
65°	373.8	369.8	372.1	379.0	387.6	401.4	425.5	457.0	504.6	582.6	666.8
67.5°	318.8	319.9	320.5	324.5	332.0	345.2	362.4	388.2	427.2	488.5	562.5
70°	271.8	272.4	272.9	276.4	282.7	290.1	302.2	322.2	355.5	403.1	461.0
72.5°	223.6	225.9	225.9	228.8	233.4	237.4	248.8	265.5	290.7	328.5	377.3
75°	175.5	179.5	180.6	184.1	188.1	189.2	197.8	211.0	227.1	258.0	296.4
77.5°	136.5	136.5	138.8	142.8	142.8	146.2	155.4	161.1	173.7	195.0	224.2
80°	96.3	98.0	98.0	99.2	101.5	104.4	108.4	113.5	124.4	139.9	155.4
82.5°	63.1	63.6	64.2	67.1	65.9	68.8	70.5	76.8	82.0	89.4	99.2
85°	33.3	33.3	33.8	35.5	37.3	37.8	39.0	41.9	45.9	49.3	55.0
87.5°	13.8	13.2	13.2	14.3	14.3	14.9	15.5	16.6	18.9	18.9	21.2
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°	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0
2.5°	1465.6	1461.0	1453.0	1446.1	1437.5	1431.2	1424.9	1416.8	1408.8	1400.2	1391.0
5°	1524.1	1510.3	1494.8	1479.3	1461.0	1446.1	1430.0	1411.7	1396.2	1379.0	1360.6
7.5°	1591.1	1567.1	1540.1	1509.7	1481.1	1455.2	1428.9	1403.6	1380.7	1354.9	1329.7
10°	1655.9	1614.1	1580.2	1539.0	1498.3	1460.4	1424.3	1391.0	1357.8	1325.7	1294.7
12.5°	1700.1	1652.5	1610.1	1562.5	1514.9	1467.3	1419.7	1373.8	1334.3	1295.3	1262.6
15°	1730.5	1697.2	1641.0	1583.7	1521.2	1459.3	1405.4	1352.0	1305.0	1259.7	1220.7
17.5°	1749.4	1706.4	1651.3	1591.1	1522.3	1457.5	1392.7	1329.1	1275.2	1226.5	1182.3
20°	1754.6	1704.1	1646.8	1584.3	1515.5	1444.4	1371.5	1302.2	1243.7	1188.1	1143.3
22.5°	1749.4	1690.9	1629.6	1568.8	1496.5	1424.3	1348.0	1272.3	1205.3	1147.9	1100.9
25°	1740.8	1670.3	1606.0	1534.4	1467.3	1398.5	1319.9	1239.7	1169.7	1110.1	1057.3
27.5°	1729.9	1649.1	1569.9	1499.4	1426.6	1358.9	1286.7	1204.7	1131.9	1066.5	1017.2
30°	1717.3	1621.0	1533.2	1449.5	1380.7	1313.0	1242.5	1165.1	1091.7	1029.2	975.9
32.5°	1703.0	1591.1	1487.9	1397.9	1324.5	1262.0	1196.1	1122.1	1049.9	982.8	936.3
35°	1682.9	1550.4	1439.2	1341.7	1265.5	1197.8	1139.9	1075.1	1003.4	940.9	892.8
37.5°	1659.4	1514.3	1389.9	1284.4	1201.2	1131.9	1078.5	1025.8	958.7	898.5	852.0
40°	1627.8	1470.7	1337.7	1223.6	1134.7	1066.5	1014.3	969.0	913.4	852.6	810.8
42.5°	1586.6	1422.6	1278.6	1157.1	1071.1	998.3	949.5	908.2	860.6	807.9	766.6
45°	1539.5	1367.5	1212.7	1093.4	1000.0	930.6	883.0	845.7	809.6	762.6	724.2
47.5°	1466.1	1302.7	1153.1	1021.2	929.5	862.4	817.6	782.1	755.1	717.9	680.0
50°	1379.0	1229.3	1082.5	950.1	857.2	792.4	750.0	719.0	696.1	667.4	638.7
52.5°	1283.2	1146.8	1005.1	881.3	788.4	727.1	682.3	654.8	639.9	617.0	594.6
55°	1171.4	1053.9	922.0	809.0	717.9	655.4	617.0	597.5	580.8	569.4	549.3
57.5°	1059.0	959.8	842.3	730.5	646.8	591.2	556.8	535.0	522.9	514.9	500.6
60°	936.3	858.4	750.6	653.7	579.1	526.4	496.0	478.2	467.3	462.7	453.0
62.5°	819.4	759.7	661.7	580.8	514.3	467.9	437.5	423.2	416.3	411.1	405.4
65°	704.1	657.1	579.7	504.0	447.8	406.0	381.9	370.4	365.2	359.5	358.9
67.5°	600.3	557.3	495.4	433.5	386.5	350.9	329.7	318.2	312.5	313.1	310.2
70°	498.3	465.0	414.6	364.1	324.0	295.9	275.8	268.3	266.1	265.5	263.2
72.5°	403.1	384.2	340.0	297.6	266.1	244.3	228.2	221.9	219.0	217.9	217.9
75°	319.4	305.6	267.8	235.7	211.6	193.8	182.9	178.3	174.3	176.6	174.9
77.5°	239.7	228.2	202.4	179.5	161.1	146.2	141.1	137.0	134.7	134.2	136.5
80°	168.6	161.7	145.6	127.3	113.5	104.9	101.5	98.0	96.3	95.2	96.3
82.5°	108.4	104.4	92.9	82.0	74.0	69.4	65.9	64.2	61.4	61.9	63.1
85°	59.1	57.9	50.5	47.0	39.6	39.0	36.7	35.0	35.5	34.4	36.1
87.5°	24.1	22.9	21.2	19.5	17.2	15.5	14.3	15.5	13.8	15.5	14.9
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°	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0	1414.0
2.5°	1386.4	1380.1	1372.7	1365.8	1355.5	1348.6	1345.2	1346.3	1342.3	1341.1	1340.6
5°	1349.7	1335.4	1321.6	1310.2	1298.1	1284.4	1274.6	1271.8	1270.6	1267.8	1261.4
7.5°	1311.9	1293.6	1275.8	1259.2	1241.9	1225.9	1216.1	1208.1	1203.5	1195.5	1193.8
10°	1271.8	1249.4	1230.5	1206.4	1185.8	1169.1	1156.5	1149.6	1145.6	1138.2	1131.9
12.5°	1233.3	1209.8	1180.6	1158.8	1137.0	1119.8	1105.5	1094.0	1091.1	1081.4	1076.2
15°	1192.1	1163.4	1137.0	1111.8	1091.1	1069.4	1060.8	1050.4	1040.1	1031.5	1029.8
17.5°	1152.5	1118.1	1092.3	1067.6	1042.4	1026.4	1014.9	1008.0	1000.0	995.4	987.4
20°	1104.9	1076.8	1048.1	1025.2	1003.4	989.7	974.2	967.9	962.1	951.2	947.8
22.5°	1064.8	1030.9	1006.9	983.9	964.4	944.9	934.0	927.7	919.1	913.4	908.8
25°	1022.9	994.8	964.4	941.5	924.9	905.4	897.9	889.9	882.4	877.3	872.7
27.5°	982.2	951.2	926.6	903.7	886.5	872.7	862.4	853.8	848.6	844.6	841.7
30°	939.8	911.1	888.2	867.0	847.5	836.0	826.2	822.8	817.1	814.2	809.6
32.5°	901.4	872.1	850.3	832.0	814.8	803.3	797.6	792.4	786.7	781.5	780.9
35°	857.8	832.6	812.5	792.4	779.8	770.6	764.3	759.2	754.6	750.6	748.3
37.5°	819.4	795.3	772.9	758.6	744.8	736.8	729.9	728.2	723.6	724.2	720.7
40°	778.1	756.3	737.4	723.0	713.9	705.3	700.7	694.9	692.1	692.6	689.8
42.5°	737.9	717.9	700.7	687.5	677.7	671.4	667.4	662.8	659.4	657.1	656.5
45°	697.2	679.5	665.1	651.9	643.9	638.2	633.0	627.3	624.4	623.3	622.7
47.5°	657.1	641.0	625.6	616.4	608.9	603.8	598.6	594.0	591.7	590.0	587.1
50°	615.8	599.8	588.9	577.4	571.1	564.2	558.5	556.2	553.3	552.7	555.6
52.5°	572.8	560.2	550.4	541.3	533.8	526.4	520.6	517.8	519.5	519.5	522.9
55°	532.1	518.9	509.7	502.3	494.3	487.4	481.6	481.6	481.6	485.1	489.7
57.5°	486.8	475.3	468.5	459.9	452.4	447.8	443.8	443.2	445.5	451.3	456.4
60°	440.9	432.9	425.5	418.6	411.1	407.7	407.1	406.0	409.4	415.1	426.0
62.5°	395.6	390.5	381.3	377.9	371.6	367.5	367.5	368.7	373.8	383.0	392.8
65°	352.1	344.6	337.7	334.3	330.3	326.8	326.8	331.4	338.9	347.5	359.5
67.5°	307.3	301.0	296.4	293.0	288.4	286.7	288.4	293.6	302.7	311.3	324.0
70°	259.2	258.0	254.0	249.4	247.1	247.1	248.8	254.6	261.5	274.7	285.5
72.5°	215.0	215.0	212.7	209.9	208.1	209.9	211.0	216.7	225.3	236.8	248.8
75°	174.9	173.2	171.4	170.3	169.7	170.9	172.6	177.2	187.5	198.4	208.1
77.5°	135.3	134.2	132.5	133.6	133.6	134.2	139.3	144.5	150.2	158.8	169.1
80°	97.5	98.0	96.3	95.8	98.6	99.8	103.8	107.8	111.8	121.6	129.0
82.5°	64.2	65.4	64.8	65.9	67.1	67.1	71.7	75.7	79.1	86.0	91.7
85°	36.7	37.3	37.3	39.0	40.1	39.6	43.6	45.9	47.6	52.8	56.2
87.5°	16.1	16.6	17.2	17.2	17.2	19.5	20.1	21.2	21.8	22.9	24.7
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: P243684

CATALOG NUMBER: S125DR-H1270D930-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1414.0	1414.0	1414.0	1414.0
2.5°	1335.4	1334.8	1337.7	1339.4
5°	1257.4	1255.7	1253.4	1254.6
7.5°	1188.1	1183.5	1182.3	1182.3
10°	1126.7	1122.1	1121.0	1119.2
12.5°	1074.5	1067.6	1064.8	1061.9
15°	1025.2	1024.1	1017.8	1011.4
17.5°	979.9	981.6	975.3	972.5
20°	942.1	936.9	934.6	933.5
22.5°	903.7	899.6	899.6	895.6
25°	869.3	865.8	866.4	862.4
27.5°	837.1	836.6	836.0	834.8
30°	807.3	805.0	802.7	803.9
32.5°	778.7	775.2	773.5	772.9
35°	748.8	747.7	745.4	744.3
37.5°	719.6	720.2	717.3	716.7
40°	688.1	687.5	686.9	685.8
42.5°	654.8	653.1	654.2	653.7
45°	621.5	619.8	621.0	619.3
47.5°	588.9	590.0	590.0	590.6
50°	556.8	559.0	559.0	560.8
52.5°	526.9	531.5	531.5	531.0
55°	494.8	500.0	501.7	502.3
57.5°	464.4	469.6	474.8	475.9
60°	431.8	440.9	446.1	447.2
62.5°	402.5	411.1	418.0	418.6
65°	369.8	380.2	386.5	388.8
67.5°	336.6	344.6	353.2	356.6
70°	298.7	308.5	314.2	316.5
72.5°	259.2	270.1	277.5	278.7
75°	221.3	229.4	235.1	236.2
77.5°	178.3	186.3	191.5	192.7
80°	135.3	142.2	145.6	147.9
82.5°	95.8	100.3	102.1	104.4
85°	59.1	62.5	63.1	63.1
87.5°	25.8	26.4	26.4	27.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)