

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: P242803

Luminaire Tested: **S125DR-S1090D927-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242803
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-S1090D927-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3358.1 lumens
Efficiency: N/A
Efficacy: 96.5 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

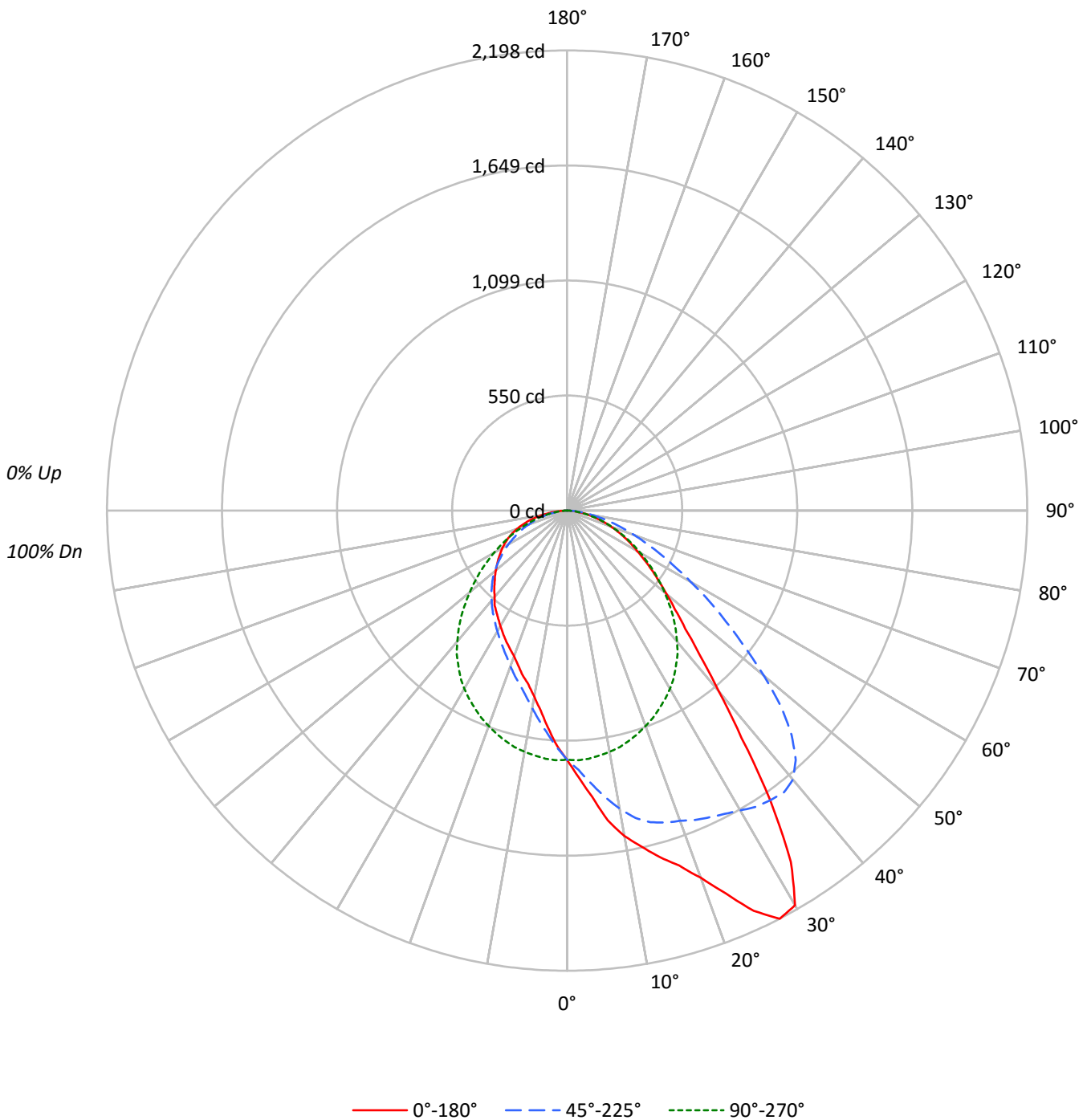
Input Watts (W): 34.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	90	84	79	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61
4	84	73	64	58	82	71	63	57	69	62	57	67	61	56	64	59	55	53
5	78	65	56	50	76	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	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	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°	8458	8458	8458
5°	9794	8486	7431
10°	11395	8442	6510
15°	12614	8381	6006
20°	14119	8282	5601
25°	16541	8171	5402
30°	17866	8062	5231
35°	14690	7857	5118
40°	10441	7573	4995
45°	8021	7189	4924
50°	6847	6713	4915
55°	6097	6246	4957
60°	5500	5737	5083
65°	5079	5223	5215
70°	4617	4692	5291
75°	4078	4133	5242
80°	3430	3369	4797
85°	2716	2430	3874



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.5	3.4
10°-20°	341.1	10.2
20°-30°	554.1	16.5
30°-40°	677.2	20.2
40°-50°	614.4	18.3
50°-60°	489.3	14.6
60°-70°	340.8	10.1
70°-80°	181.5	5.4
80°-90°	45.0	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°	1009.8	30.1
0°-40°	1687.0	50.2
0°-60°	2790.7	83.1
0°-90°	3358.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3358.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1190	1190	1190	1190	1190	
5°	1373	1308	1190	1070	1042	138
15°	1714	1541	1139	864	816	490
25°	2109	1616	1042	724	689	966
35°	1693	1690	906	614	590	1039
45°	798	1516	715	508	490	635
55°	492	929	504	387	400	442
65°	302	492	311	261	310	300
75°	148	219	150	137	191	160
85°	33	44	30	32	48	39
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°	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0
2.5°	1275.9	1273.8	1271.8	1267.8	1270.8	1262.2	1258.2	1251.1	1242.5	1239.5	1236.0
5°	1372.8	1375.4	1377.9	1367.3	1368.3	1361.2	1345.1	1331.9	1321.3	1307.7	1298.1
7.5°	1493.0	1485.5	1486.0	1479.4	1467.8	1458.2	1442.5	1420.8	1401.1	1378.9	1359.7
10°	1578.9	1579.4	1574.9	1566.8	1554.2	1545.1	1522.8	1501.6	1475.9	1445.6	1423.8
12.5°	1643.6	1646.1	1640.0	1628.4	1623.9	1600.6	1584.5	1558.2	1526.4	1503.7	1467.8
15°	1714.3	1708.7	1704.7	1691.0	1680.4	1659.2	1631.4	1605.2	1571.8	1541.0	1510.2
17.5°	1776.9	1781.5	1774.9	1764.8	1733.5	1708.7	1674.4	1641.0	1601.1	1562.7	1526.9
20°	1866.8	1870.9	1859.2	1837.5	1798.1	1773.4	1724.4	1677.9	1629.9	1576.9	1536.5
22.5°	1978.9	1973.9	1957.2	1921.4	1888.5	1837.5	1783.5	1724.4	1661.2	1599.6	1542.5
25°	2109.3	2088.0	2078.4	2037.5	1992.6	1925.4	1852.7	1769.8	1695.1	1615.8	1547.1
27.5°	2198.2	2189.6	2175.9	2142.6	2091.1	2014.8	1928.9	1829.9	1729.4	1632.5	1546.1
30°	2176.9	2177.9	2179.0	2169.9	2139.6	2085.5	2000.2	1891.6	1766.3	1653.7	1549.6
32.5°	1989.0	2011.8	2033.5	2061.8	2080.0	2080.5	2035.0	1939.5	1809.7	1677.9	1547.6
35°	1693.1	1698.6	1755.7	1812.3	1889.0	1948.6	1988.5	1945.1	1836.5	1689.5	1546.1
37.5°	1368.8	1396.6	1439.5	1503.1	1618.3	1712.3	1835.5	1877.9	1826.9	1699.1	1545.6
40°	1125.3	1150.6	1176.4	1241.5	1335.0	1455.2	1600.1	1723.9	1752.7	1677.9	1530.4
42.5°	937.4	956.1	985.4	1030.4	1104.6	1207.7	1344.5	1515.8	1633.0	1616.3	1498.6
45°	798.0	810.7	832.9	871.8	928.4	1011.7	1133.9	1310.7	1464.8	1515.8	1444.6
47.5°	699.0	699.5	717.7	745.5	788.4	865.2	956.6	1102.1	1268.3	1386.0	1369.3
50°	619.2	616.7	630.4	653.6	685.9	732.9	819.3	929.9	1088.0	1225.9	1264.2
52.5°	550.5	551.6	558.6	574.3	600.0	638.4	697.5	794.5	923.8	1066.2	1147.1
55°	492.0	489.9	499.5	511.2	530.8	557.1	603.6	679.9	789.5	928.9	1022.8
57.5°	435.4	440.9	445.0	453.1	470.2	488.4	529.8	588.4	678.8	802.6	902.1
60°	386.9	392.5	395.5	403.6	416.7	431.9	462.2	507.6	580.9	683.9	782.4
62.5°	343.5	347.5	348.0	355.1	365.2	379.8	402.1	438.4	492.5	579.3	675.3
65°	302.0	302.0	304.1	311.6	316.7	329.8	348.0	375.8	422.3	492.5	574.8
67.5°	261.6	264.2	263.7	267.2	271.7	282.9	296.5	319.7	356.6	409.6	477.8
70°	222.2	224.3	223.8	226.3	231.3	237.9	248.5	270.2	295.0	338.9	395.5
72.5°	186.9	187.4	185.9	189.4	191.9	197.5	209.6	218.7	241.4	276.8	320.7
75°	148.5	149.5	150.5	152.5	155.6	158.6	164.7	176.3	191.4	219.2	249.0
77.5°	118.2	115.7	118.7	118.2	119.7	122.2	127.8	134.4	147.5	166.2	190.9
80°	83.8	84.4	84.4	84.9	87.4	88.9	93.4	98.0	107.6	120.7	136.9
82.5°	55.6	57.1	56.1	57.1	59.1	60.1	62.1	65.7	70.2	79.8	90.4
85°	33.3	30.8	31.8	32.8	32.8	33.3	35.4	36.9	39.9	43.9	48.5
87.5°	12.1	13.1	13.6	13.6	14.1	14.1	16.2	16.2	17.7	19.2	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°	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0
2.5°	1232.9	1229.4	1225.3	1218.3	1209.7	1205.1	1198.1	1193.5	1184.4	1176.9	1168.8
5°	1286.5	1273.3	1261.2	1245.6	1228.4	1217.3	1204.1	1189.5	1174.3	1158.7	1141.5
7.5°	1340.0	1318.3	1294.5	1269.8	1245.6	1222.8	1201.6	1179.9	1160.2	1135.4	1114.7
10°	1394.0	1364.8	1333.4	1296.6	1260.7	1229.4	1197.6	1169.8	1141.5	1111.2	1084.4
12.5°	1448.1	1406.7	1359.2	1317.8	1272.8	1233.4	1194.5	1157.2	1119.8	1085.4	1053.1
15°	1467.8	1433.4	1392.5	1335.0	1286.5	1234.4	1184.9	1139.0	1096.0	1058.7	1019.3
17.5°	1487.0	1443.0	1399.6	1344.0	1280.9	1224.8	1168.8	1118.8	1071.3	1024.3	988.5
20°	1491.5	1446.1	1400.1	1346.1	1280.9	1214.2	1158.2	1095.0	1043.0	994.0	947.5
22.5°	1490.0	1437.0	1386.0	1329.9	1266.8	1206.7	1135.9	1071.3	1013.7	965.7	916.7
25°	1478.9	1423.8	1361.2	1305.2	1242.5	1177.4	1108.7	1042.0	984.4	929.4	881.4
27.5°	1472.3	1402.6	1333.9	1269.3	1209.2	1149.1	1082.4	1013.7	950.6	894.5	850.1
30°	1457.7	1379.4	1299.6	1231.4	1169.3	1111.2	1049.1	982.4	915.7	861.2	812.7
32.5°	1444.6	1350.1	1264.7	1189.0	1122.3	1066.2	1010.2	947.5	882.4	826.8	778.3
35°	1426.9	1321.3	1224.8	1141.0	1070.8	1012.7	964.7	905.6	845.5	792.0	745.5
37.5°	1406.2	1283.9	1181.9	1094.5	1018.3	957.7	912.2	866.2	806.1	753.6	712.2
40°	1380.9	1243.5	1133.9	1044.0	964.2	900.6	859.2	816.2	768.2	720.3	675.8
42.5°	1349.1	1207.2	1085.4	986.9	908.2	846.5	802.6	767.7	726.8	682.9	642.5
45°	1308.7	1161.7	1032.4	928.4	848.6	787.4	742.5	715.2	683.4	641.0	606.1
47.5°	1255.1	1110.2	976.8	869.3	786.9	730.4	687.4	660.7	637.4	604.1	571.3
50°	1178.9	1051.1	915.7	809.2	726.8	669.7	630.9	607.1	587.9	563.7	536.9
52.5°	1093.5	976.8	855.6	750.6	669.2	613.2	575.3	555.1	539.9	524.3	498.0
55°	1002.1	901.1	785.9	685.9	610.7	555.6	522.3	504.1	490.9	477.8	461.7
57.5°	903.6	821.8	716.2	622.8	553.1	501.6	470.2	451.6	440.9	433.9	423.8
60°	798.5	730.9	643.0	559.6	492.0	447.5	417.2	403.6	395.0	389.4	382.4
62.5°	701.1	648.5	568.7	494.5	437.4	396.0	369.7	356.6	348.5	346.5	340.9
65°	605.6	562.7	495.5	432.4	381.8	346.0	323.3	310.6	305.6	302.5	303.1
67.5°	509.6	481.9	425.8	370.2	328.8	297.0	278.3	268.7	266.2	261.6	261.6
70°	423.3	403.6	358.1	311.1	275.3	252.0	235.9	225.8	223.2	221.2	220.7
72.5°	347.0	330.3	292.4	257.1	225.8	206.1	193.4	188.4	183.9	182.8	182.8
75°	272.2	262.6	231.3	201.5	179.3	165.2	156.1	150.5	147.5	147.0	147.5
77.5°	205.6	196.5	174.8	152.5	137.9	126.8	118.2	116.7	112.6	113.1	112.1
80°	145.5	139.9	127.3	110.6	99.0	89.9	85.9	82.3	81.3	79.8	81.3
82.5°	95.5	89.4	81.8	72.7	63.6	59.1	55.1	54.5	54.0	53.5	53.5
85°	52.0	52.5	47.5	39.4	35.4	32.3	29.8	29.8	29.3	28.8	29.3
87.5°	22.2	21.2	19.2	17.7	15.2	13.6	13.1	13.6	12.1	11.6	12.1
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°	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0
2.5°	1164.2	1158.7	1154.1	1144.0	1138.5	1130.9	1124.8	1131.4	1124.3	1127.4	1122.8
5°	1132.9	1118.8	1108.7	1094.0	1081.4	1069.8	1061.2	1059.7	1055.6	1053.6	1047.6
7.5°	1095.5	1079.4	1062.7	1044.5	1029.4	1013.2	1003.6	994.5	989.0	981.9	976.3
10°	1063.2	1039.5	1019.3	996.0	975.8	958.2	944.0	936.9	930.4	920.8	917.2
12.5°	1023.3	998.6	972.8	947.5	928.4	908.2	896.5	884.9	880.9	869.8	869.3
15°	993.0	956.1	931.9	906.6	879.9	863.7	853.6	842.0	836.9	829.4	823.8
17.5°	955.6	922.3	892.0	866.2	842.0	828.9	815.7	807.6	799.1	793.5	784.4
20°	914.2	882.9	852.6	824.8	807.1	791.5	781.4	773.8	764.7	762.2	753.1
22.5°	879.4	844.0	815.2	793.0	773.3	755.1	744.0	739.5	733.9	724.8	724.8
25°	841.0	805.1	780.4	757.1	740.0	723.8	716.2	709.7	703.6	698.0	696.0
27.5°	808.6	776.8	746.5	725.3	710.7	695.5	688.9	680.4	675.8	671.3	665.2
30°	774.3	741.5	715.7	695.5	679.3	666.2	659.1	653.6	649.5	645.5	642.5
32.5°	738.9	709.1	684.4	664.7	648.5	639.4	633.4	629.8	625.3	620.3	616.2
35°	708.6	675.3	651.1	633.9	621.3	613.7	606.6	603.1	598.0	598.0	594.0
37.5°	672.8	643.5	621.8	606.1	595.0	587.9	579.8	577.8	574.3	572.3	570.8
40°	641.5	614.7	594.5	578.8	566.7	561.2	555.1	551.1	549.0	546.5	545.5
42.5°	609.1	583.9	564.7	550.5	540.4	535.9	530.3	527.8	523.3	519.7	519.2
45°	576.3	551.6	533.9	522.3	513.2	507.6	504.1	498.0	496.0	492.0	491.5
47.5°	546.0	521.8	504.1	494.5	486.4	482.4	476.8	470.2	467.7	465.2	464.7
50°	511.2	489.4	473.3	464.2	456.6	450.0	444.5	440.4	438.9	438.9	439.9
52.5°	475.8	458.1	445.0	433.4	426.3	419.2	414.2	412.2	409.6	412.7	414.7
55°	441.4	422.8	412.7	402.1	395.0	386.9	384.4	383.4	381.8	385.9	387.9
57.5°	404.6	391.9	379.8	368.7	362.7	357.6	353.6	353.1	356.1	357.1	363.2
60°	369.7	354.6	344.0	335.9	328.3	325.3	324.3	323.3	325.3	330.8	339.4
62.5°	331.3	319.7	308.1	302.5	297.5	291.9	291.9	293.0	297.5	304.1	312.7
65°	294.0	283.4	275.8	268.7	264.2	261.1	262.1	264.2	268.7	277.3	286.9
67.5°	255.6	248.5	241.4	234.9	230.3	230.8	231.3	233.9	239.4	249.5	258.6
70°	218.7	210.6	205.1	202.5	199.0	197.0	200.0	205.1	209.6	218.7	226.3
72.5°	181.8	175.3	171.2	169.7	168.7	167.2	167.7	173.2	179.8	188.9	198.0
75°	145.5	142.9	139.9	137.9	136.4	137.4	138.4	143.4	148.5	158.1	168.2
77.5°	112.6	109.6	107.6	107.1	106.1	106.6	109.1	113.1	118.2	125.3	133.3
80°	80.3	79.3	78.3	77.8	77.8	78.3	82.3	84.9	89.4	96.0	102.0
82.5°	53.0	52.5	52.5	52.5	53.0	53.0	55.1	58.6	62.1	66.7	71.7
85°	30.8	29.8	31.3	31.8	30.8	32.3	33.3	35.4	36.9	39.4	41.9
87.5°	12.6	13.6	13.1	13.6	13.6	14.6	14.1	16.2	17.2	18.2	17.7
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: P242803

CATALOG NUMBER: S125DR-S1090D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1190.0	1190.0	1190.0	1190.0
2.5°	1119.8	1123.3	1120.3	1124.3
5°	1045.0	1040.5	1043.5	1041.5
7.5°	975.8	971.8	965.7	963.7
10°	911.7	906.1	905.6	902.1
12.5°	864.7	859.7	852.6	851.6
15°	820.8	816.7	813.2	816.2
17.5°	783.4	779.9	778.8	775.8
20°	748.5	746.0	747.0	740.5
22.5°	720.8	715.2	714.2	714.2
25°	691.5	688.9	686.4	688.9
27.5°	665.7	663.2	662.2	662.7
30°	642.5	637.4	637.9	637.4
32.5°	617.2	614.2	613.2	612.2
35°	592.5	592.5	589.9	589.9
37.5°	569.7	569.2	567.7	568.7
40°	543.5	543.0	541.5	538.4
42.5°	518.2	516.2	515.7	515.2
45°	491.5	491.5	490.4	489.9
47.5°	465.2	466.2	468.2	467.7
50°	442.0	442.5	444.0	444.5
52.5°	416.2	419.7	421.8	421.2
55°	392.5	396.0	399.5	400.0
57.5°	368.7	373.3	376.8	377.8
60°	344.5	351.0	355.6	357.6
62.5°	321.2	328.8	333.4	333.4
65°	295.5	303.1	307.1	310.1
67.5°	268.7	276.3	280.3	282.9
70°	238.9	246.5	252.5	254.6
72.5°	209.6	216.2	220.7	223.2
75°	174.8	183.9	188.4	190.9
77.5°	141.4	150.5	153.0	154.6
80°	108.1	113.1	116.7	117.2
82.5°	76.8	80.8	81.3	82.8
85°	45.5	47.5	48.0	47.5
87.5°	18.7	18.2	18.2	19.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)