

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: P242922

Luminaire Tested: **S125RDR-S1270D840-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242922
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-32)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125RDR-S1270D840-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4723.0 lumens
Efficiency: N/A
Efficacy: 114.9 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.21 / 1.48
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

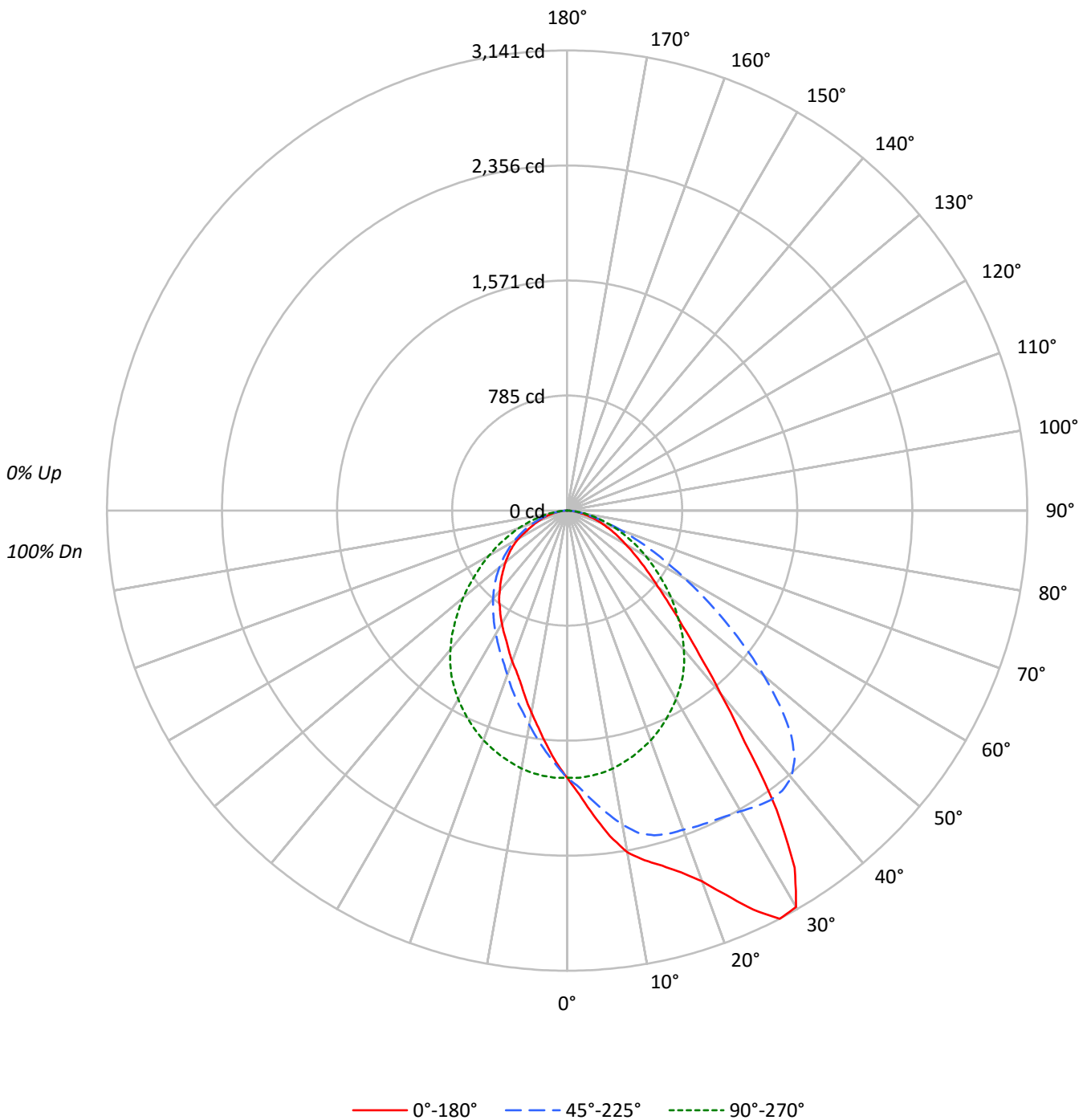
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	69	78	72	67	76	70	66	73	69	65	63
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55
5	79	66	58	52	77	65	57	51	63	56	51	61	55	50	60	54	50	48
6	73	60	52	45	71	59	51	45	57	50	45	56	49	44	54	49	44	42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	50	44	39	37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	42	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	12956	12956	12956
5°	14906	12973	11457
10°	17098	12907	10110
15°	18467	12774	8986
20°	20364	12621	8297
25°	23567	12417	7699
30°	25646	12203	7308
35°	21633	11953	6947
40°	15107	11504	6637
45°	11207	10899	6333
50°	8936	10268	6074
55°	7585	9486	5841
60°	6553	8786	5467
65°	5839	8029	4707
70°	5131	7354	4291
75°	4438	6371	4028
80°	3369	5362	3369
85°	2805	4208	3172



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.8	3.7
10°-20°	512.5	10.9
20°-30°	812.6	17.2
30°-40°	981.9	20.8
40°-50°	874.4	18.5
50°-60°	670.4	14.2
60°-70°	435.4	9.2
70°-80°	211.3	4.5
80°-90°	49.7	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°	1499.9	31.8
0°-40°	2481.8	52.5
0°-60°	4026.6	85.3
0°-90°	4723.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4723.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1823	1823	1823	1823	1823	
5°	2089	1986	1818	1652	1606	208
15°	2510	2295	1736	1337	1221	718
25°	3005	2338	1583	1077	982	1383
35°	2493	2416	1378	877	801	1511
45°	1115	2163	1084	695	630	884
55°	612	1312	766	510	471	554
65°	347	626	477	327	280	345
75°	162	219	232	162	147	172
85°	34	37	52	41	39	41
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°	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9
2.5°	1941.1	1939.6	1942.6	1934.4	1935.1	1922.4	1922.4	1912.7	1899.9	1890.2	1885.7
5°	2089.3	2090.8	2087.8	2076.5	2069.1	2057.8	2045.1	2022.7	2004.0	1986.0	1971.8
7.5°	2240.4	2241.9	2232.2	2229.9	2210.5	2198.5	2170.1	2140.9	2115.5	2081.8	2057.8
10°	2369.1	2368.4	2357.9	2349.7	2333.2	2312.3	2284.6	2248.7	2215.0	2177.6	2141.6
12.5°	2444.0	2441.7	2440.2	2429.7	2414.8	2396.8	2374.4	2339.2	2295.8	2253.9	2210.5
15°	2509.8	2504.6	2494.8	2482.1	2460.4	2438.7	2412.5	2381.1	2341.4	2295.0	2256.1
17.5°	2589.1	2589.9	2574.9	2561.4	2533.0	2497.1	2458.2	2410.3	2359.4	2312.3	2273.3
20°	2692.4	2690.2	2675.2	2640.8	2607.1	2559.2	2512.8	2450.7	2384.8	2318.2	2266.6
22.5°	2840.6	2833.8	2818.1	2770.2	2713.4	2648.2	2571.2	2491.9	2408.8	2331.0	2259.1
25°	3005.2	3000.7	2970.0	2917.6	2844.3	2749.3	2656.5	2552.5	2438.0	2338.5	2256.1
27.5°	3141.4	3132.4	3104.7	3055.3	2983.5	2881.0	2753.0	2618.3	2482.1	2351.2	2238.2
30°	3124.9	3136.1	3133.2	3112.9	3062.1	2972.3	2856.3	2699.9	2530.0	2369.1	2227.7
32.5°	2890.0	2899.7	2933.4	2988.0	3004.4	2982.0	2902.7	2761.2	2583.9	2395.3	2219.5
35°	2493.3	2506.8	2557.7	2637.8	2742.5	2830.1	2848.0	2770.2	2612.3	2415.5	2211.2
37.5°	1989.0	2076.5	2111.0	2192.5	2357.2	2516.5	2655.0	2686.4	2601.1	2411.0	2201.5
40°	1628.3	1646.3	1722.6	1817.6	1950.8	2118.4	2339.2	2498.6	2503.8	2381.1	2170.1
42.5°	1335.0	1358.9	1405.3	1476.4	1585.7	1753.3	1983.0	2206.0	2326.5	2298.8	2128.9
45°	1115.0	1132.2	1170.3	1228.7	1316.3	1454.7	1650.8	1894.0	2087.0	2162.6	2048.9
47.5°	942.9	951.8	987.0	1034.2	1101.5	1206.3	1365.7	1585.7	1815.4	1968.8	1938.9
50°	808.2	818.6	844.1	877.8	932.4	1017.7	1138.9	1314.8	1553.5	1751.8	1791.4
52.5°	703.4	711.6	725.1	756.5	799.2	859.8	951.8	1106.7	1315.5	1529.5	1634.3
55°	612.1	618.1	630.8	648.8	684.7	731.8	816.4	926.4	1100.0	1312.5	1447.2
57.5°	534.3	537.3	544.8	562.7	588.9	624.1	688.4	788.7	914.4	1114.2	1262.4
60°	461.0	463.9	474.4	485.6	505.1	536.5	584.4	649.5	769.3	927.1	1077.6
62.5°	402.6	404.1	407.1	418.3	434.8	457.2	492.4	542.5	631.6	765.5	905.4
65°	347.2	348.0	349.5	358.4	368.9	386.9	411.6	449.0	520.8	625.6	751.3
67.5°	291.8	293.3	298.6	301.6	314.3	323.3	339.0	368.9	424.3	499.1	600.9
70°	246.9	246.2	251.4	255.2	258.9	270.1	279.9	303.1	334.5	388.4	469.9
72.5°	205.0	202.8	204.3	205.0	210.3	217.0	226.7	238.7	261.2	294.1	351.7
75°	161.6	162.4	162.4	163.9	167.6	170.6	173.6	181.1	194.6	219.3	252.9
77.5°	121.2	119.7	123.5	123.5	126.5	130.2	132.4	135.4	140.7	151.9	172.1
80°	82.3	82.3	83.1	85.3	84.6	86.1	89.8	92.8	99.5	105.5	111.5
82.5°	58.4	57.6	58.4	58.4	58.4	59.9	60.6	60.6	62.1	64.4	68.1
85°	34.4	34.4	35.2	35.2	35.9	35.9	36.7	36.7	36.7	37.4	38.2
87.5°	16.5	15.7	15.0	15.0	15.7	17.2	16.5	15.7	15.7	15.7	16.5
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9
2.5°	1885.7	1880.5	1870.8	1861.8	1850.6	1840.8	1834.1	1825.9	1815.4	1802.7	1792.2
5°	1956.1	1939.6	1917.9	1899.2	1875.3	1856.5	1837.1	1818.4	1799.7	1775.7	1754.8
7.5°	2033.9	2001.7	1971.8	1932.9	1897.7	1867.0	1837.1	1806.4	1777.2	1744.3	1713.6
10°	2104.2	2063.1	2017.4	1965.0	1917.2	1871.5	1829.6	1788.4	1745.0	1706.9	1665.7
12.5°	2170.1	2114.0	2060.1	1990.5	1930.6	1872.3	1816.1	1762.3	1715.1	1662.7	1617.8
15°	2204.5	2152.1	2093.8	2012.9	1932.9	1865.5	1802.7	1736.1	1678.4	1623.1	1573.7
17.5°	2224.7	2169.3	2102.0	2023.4	1937.4	1853.5	1774.2	1703.1	1637.3	1573.7	1519.1
20°	2215.7	2162.6	2093.0	2018.9	1925.4	1837.1	1749.5	1668.7	1593.1	1525.0	1465.9
22.5°	2194.0	2138.7	2072.1	1992.7	1905.2	1810.1	1715.1	1627.6	1547.5	1476.4	1410.6
25°	2172.3	2097.5	2028.7	1952.3	1867.8	1775.0	1678.4	1583.4	1498.9	1427.0	1356.7
27.5°	2151.4	2060.8	1975.5	1902.2	1811.6	1727.8	1633.5	1535.5	1447.2	1374.6	1302.8
30°	2120.7	2015.9	1919.4	1833.3	1748.8	1670.2	1581.9	1486.9	1395.6	1320.0	1246.7
32.5°	2082.5	1969.5	1861.0	1758.5	1677.7	1599.9	1522.1	1432.3	1344.0	1265.4	1190.6
35°	2051.9	1909.7	1794.4	1688.9	1598.4	1522.8	1451.0	1377.6	1288.6	1207.8	1135.2
37.5°	2009.2	1852.8	1722.6	1607.4	1513.1	1438.2	1380.6	1311.0	1228.0	1149.4	1082.0
40°	1971.0	1789.9	1644.0	1530.3	1430.0	1349.9	1296.8	1239.9	1165.9	1093.3	1025.9
42.5°	1920.1	1732.3	1564.7	1445.0	1344.0	1267.6	1213.7	1165.9	1106.7	1039.4	966.1
45°	1850.6	1654.5	1483.1	1355.9	1254.2	1178.6	1128.4	1084.3	1037.1	974.3	911.4
47.5°	1767.5	1580.4	1400.1	1260.1	1162.1	1091.0	1041.6	1005.0	970.6	915.9	852.3
50°	1663.5	1484.6	1309.5	1174.8	1068.6	1002.0	956.3	928.6	898.0	849.3	798.4
52.5°	1540.8	1385.9	1215.2	1076.8	978.0	916.7	873.3	845.6	821.6	784.2	736.3
55°	1410.6	1270.6	1113.5	988.5	896.5	833.6	791.7	765.5	750.5	716.9	678.7
57.5°	1263.1	1155.4	1013.2	891.2	808.2	745.3	713.9	690.7	673.5	648.8	620.3
60°	1107.5	1037.1	912.9	798.4	723.6	664.5	636.8	618.1	602.4	582.2	561.2
62.5°	949.6	903.2	799.2	704.9	637.6	590.4	565.0	548.5	529.8	517.8	497.6
65°	811.9	766.3	691.4	614.4	550.8	511.1	492.4	477.4	466.2	451.2	437.0
67.5°	659.3	638.3	582.9	525.3	478.9	440.8	424.3	412.3	399.6	390.6	380.1
70°	520.8	511.8	475.2	440.0	397.3	373.4	358.4	353.9	337.5	328.5	321.8
72.5°	398.1	395.1	377.9	356.2	329.3	309.0	295.6	290.3	281.4	274.6	270.9
75°	289.6	291.1	287.3	271.6	260.4	246.9	235.0	232.0	224.5	218.5	214.8
77.5°	197.6	205.0	203.5	202.8	197.6	187.8	182.6	180.3	172.1	169.9	169.1
80°	125.7	133.9	141.4	140.7	139.2	136.9	133.2	131.0	127.2	125.0	123.5
82.5°	73.3	80.8	86.8	92.0	92.0	89.8	87.6	86.8	86.8	85.3	85.3
85°	39.7	41.2	43.4	48.6	52.4	53.1	52.4	51.6	49.4	50.1	50.9
87.5°	17.2	17.2	18.0	18.0	17.2	21.0	23.2	23.9	22.4	21.0	19.5
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°	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9	1822.9
2.5°	1784.7	1774.2	1766.7	1751.8	1741.3	1736.8	1728.6	1726.3	1734.6	1728.6	1727.8
5°	1739.1	1717.4	1700.1	1682.9	1664.2	1652.3	1634.3	1631.3	1626.8	1620.1	1618.6
7.5°	1685.9	1659.0	1638.8	1610.4	1587.2	1568.4	1546.0	1537.0	1532.5	1524.3	1510.8
10°	1632.1	1598.4	1568.4	1540.0	1509.3	1484.6	1462.2	1445.0	1433.8	1423.3	1418.8
12.5°	1578.9	1544.5	1504.1	1468.2	1433.0	1404.6	1379.1	1369.4	1356.7	1344.0	1332.0
15°	1523.5	1477.9	1436.0	1396.3	1367.2	1337.2	1313.3	1296.8	1278.1	1272.9	1252.7
17.5°	1464.4	1421.8	1372.4	1329.7	1296.8	1265.4	1239.2	1219.7	1205.5	1185.3	1175.6
20°	1409.8	1356.7	1308.8	1270.6	1233.2	1194.3	1167.4	1151.6	1138.2	1122.5	1115.0
22.5°	1351.4	1299.8	1250.4	1204.0	1165.9	1127.7	1110.5	1094.0	1078.3	1064.1	1053.6
25°	1294.6	1242.2	1190.6	1144.2	1104.5	1076.8	1054.4	1035.7	1027.4	1013.2	1002.7
27.5°	1237.7	1182.3	1129.9	1081.3	1050.6	1022.9	1005.0	990.0	974.3	961.6	951.8
30°	1183.1	1126.2	1067.8	1031.2	998.2	972.0	951.8	937.6	926.4	915.2	908.4
32.5°	1128.4	1069.3	1019.2	978.8	948.1	926.4	905.4	892.0	880.0	867.3	859.1
35°	1069.3	1009.5	967.6	928.6	898.0	877.0	862.8	843.3	833.6	824.6	816.4
37.5°	1016.2	959.3	912.9	879.3	850.8	830.6	811.9	802.2	789.5	782.0	775.2
40°	956.3	905.4	864.3	828.4	808.9	785.7	768.5	755.0	746.1	735.6	728.1
42.5°	902.5	856.1	816.4	785.0	759.5	740.8	724.4	710.9	698.9	692.2	686.2
45°	852.3	805.2	766.3	736.3	713.9	695.2	678.0	671.2	656.3	647.3	644.3
47.5°	799.9	757.3	719.1	691.4	668.2	651.0	634.6	619.6	612.1	603.1	598.6
50°	746.8	706.4	671.2	644.3	621.8	602.4	587.4	578.4	567.2	559.0	553.0
52.5°	693.7	657.0	621.8	596.4	577.7	558.2	541.0	532.0	521.6	517.1	513.3
55°	643.5	603.9	573.9	548.5	528.3	510.3	494.6	485.6	478.9	473.7	472.2
57.5°	585.9	553.7	525.3	502.9	481.2	463.9	449.7	441.5	435.5	434.8	429.5
60°	529.8	501.4	475.9	451.2	433.3	417.6	405.6	395.9	389.9	389.1	387.6
62.5°	473.7	446.7	423.5	402.6	386.9	371.9	360.7	349.5	346.5	342.0	338.2
65°	418.3	393.6	374.2	356.9	339.7	327.0	315.8	309.0	300.8	296.3	288.1
67.5°	363.7	343.5	324.8	310.5	296.3	283.6	273.9	264.2	258.2	254.4	247.7
70°	309.8	294.8	276.1	260.4	249.9	240.2	232.7	221.5	217.8	214.8	211.8
72.5°	258.9	246.2	231.2	219.3	208.8	199.8	190.8	187.1	183.3	180.3	178.8
75°	211.8	199.0	185.6	176.6	169.1	161.6	157.1	153.4	151.9	151.2	148.2
77.5°	164.6	157.1	145.9	137.7	132.4	129.5	125.0	123.5	124.2	120.5	119.7
80°	119.0	115.2	106.3	103.3	99.5	96.5	94.3	90.5	86.8	85.3	83.1
82.5°	80.8	77.1	74.8	69.6	66.6	65.1	62.9	62.1	63.6	61.4	60.6
85°	47.1	43.4	41.9	41.2	39.7	41.2	40.4	39.7	38.9	38.2	38.9
87.5°	18.7	18.7	18.0	19.5	17.2	18.0	18.0	17.2	17.2	17.2	16.5
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: P242922

CATALOG NUMBER: S125RDR-S1270D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1822.9	1822.9	1822.9	1822.9
2.5°	1727.1	1718.9	1716.6	1719.6
5°	1611.1	1603.6	1607.4	1605.9
7.5°	1513.1	1503.3	1492.1	1495.1
10°	1409.1	1401.6	1397.1	1400.8
12.5°	1321.5	1317.8	1314.0	1311.0
15°	1243.7	1234.7	1231.0	1221.2
17.5°	1168.9	1165.9	1156.1	1149.4
20°	1103.7	1100.8	1091.0	1097.0
22.5°	1049.9	1042.4	1040.9	1037.1
25°	999.7	990.0	986.3	981.8
27.5°	948.8	943.6	938.4	936.9
30°	899.5	894.2	890.5	890.5
32.5°	855.3	851.6	847.8	847.1
35°	812.7	806.7	805.2	800.7
37.5°	767.8	762.5	762.5	763.3
40°	725.1	721.4	720.6	715.4
42.5°	679.5	678.0	675.0	673.5
45°	639.1	633.8	633.8	630.1
47.5°	596.4	591.9	592.7	588.2
50°	553.7	551.5	550.8	549.3
52.5°	511.1	510.3	514.1	510.3
55°	473.7	471.4	475.9	471.4
57.5°	429.5	428.0	432.5	429.5
60°	386.1	381.6	383.9	384.6
62.5°	334.5	332.2	333.7	329.3
65°	286.6	284.4	281.4	279.9
67.5°	249.2	242.5	242.5	243.9
70°	207.3	207.3	206.5	206.5
72.5°	178.1	177.3	175.9	175.1
75°	148.2	148.9	147.4	146.7
77.5°	116.0	112.2	113.7	112.2
80°	83.1	82.3	84.6	82.3
82.5°	61.4	60.6	61.4	59.9
85°	39.7	38.9	38.2	38.9
87.5°	17.2	16.5	16.5	16.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)