

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: P243782

Luminaire Tested: **S125RDR-H1270D840-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243782
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-71)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125RDR-H1270D840-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4767.0 lumens
Efficiency: N/A
Efficacy: 126.4 lumens/watt
Spacing Criteria (0/90/45): 1.42 / 1.22 / 1.5
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

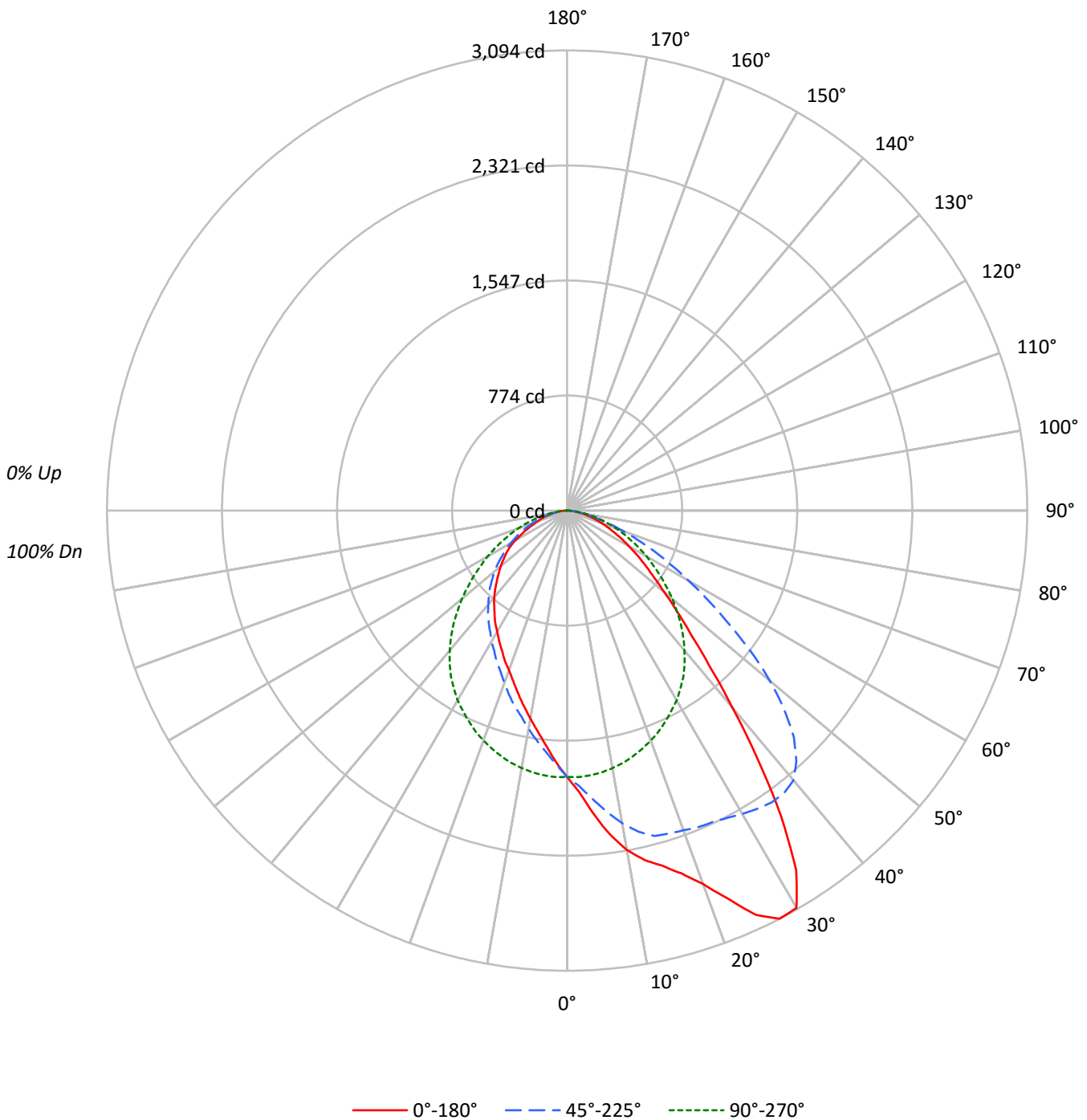
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73					73			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63					63			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	66	61	56	54					54			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48					48			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42					42			
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	33					33			
9	59	46	38	32	57	45	38	32	44	37	32	43	37	32	42	36	32	30					30			
10	55	42	35	29	54	42	34	29	41	34	29	40	34	29	39	33	29	27					27			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	12731	12731	12731
5°	14614	12749	11340
10°	16720	12686	10251
15°	18186	12584	9375
20°	20208	12441	8637
25°	23515	12264	8131
30°	25320	12083	7717
35°	21753	11813	7382
40°	16026	11387	7077
45°	11835	10857	6710
50°	9376	10209	6440
55°	7921	9461	6196
60°	6824	8763	5734
65°	5925	7978	4993
70°	5195	7306	4368
75°	4407	6398	4136
80°	3430	5349	3430
85°	3009	4289	3131



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.4	3.6
10°-20°	510.1	10.7
20°-30°	813.6	17.1
30°-40°	987.8	20.7
40°-50°	890.1	18.7
50°-60°	684.5	14.4
60°-70°	444.2	9.3
70°-80°	213.7	4.5
80°-90°	50.6	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°	1496.1	31.4
0°-40°	2483.9	52.1
0°-60°	4058.5	85.1
0°-90°	4767.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4767.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1791	1791	1791	1791	1791	
5°	2048	1946	1787	1629	1590	204
15°	2472	2265	1710	1362	1274	709
25°	2999	2311	1564	1121	1037	1371
35°	2507	2396	1362	919	851	1534
45°	1178	2156	1080	733	668	935
55°	639	1325	764	535	500	579
65°	352	644	474	340	297	353
75°	160	218	233	166	151	173
85°	37	39	53	42	38	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°	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2
2.5°	1894.9	1902.0	1896.3	1899.8	1894.2	1891.3	1884.2	1873.6	1862.9	1853.0	1852.3
5°	2048.3	2046.9	2041.2	2033.4	2027.7	2013.5	2006.4	1982.2	1965.9	1946.0	1936.1
7.5°	2194.6	2191.0	2182.5	2171.9	2166.9	2148.4	2128.5	2098.0	2072.4	2041.2	2017.7
10°	2316.7	2316.0	2309.6	2302.5	2283.4	2262.8	2243.6	2211.6	2173.3	2134.2	2101.5
12.5°	2406.2	2402.7	2394.9	2382.8	2367.2	2353.0	2327.4	2298.3	2251.4	2211.6	2166.9
15°	2471.6	2470.1	2458.8	2454.5	2424.0	2404.1	2370.0	2340.9	2304.7	2264.9	2216.6
17.5°	2558.2	2561.1	2551.1	2527.0	2499.3	2468.7	2420.4	2372.8	2322.4	2276.3	2237.2
20°	2671.8	2664.7	2647.7	2618.6	2568.9	2531.2	2482.9	2424.0	2355.8	2287.6	2231.5
22.5°	2823.8	2816.0	2789.0	2753.5	2691.0	2622.1	2548.3	2460.2	2382.1	2304.0	2230.1
25°	2998.6	2983.6	2943.9	2905.5	2816.7	2743.6	2633.5	2528.4	2414.7	2311.1	2228.0
27.5°	3093.7	3093.7	3075.3	3033.4	2963.0	2855.1	2742.9	2603.0	2471.6	2329.5	2211.6
30°	3085.2	3080.2	3087.3	3069.6	3024.1	2943.2	2831.6	2684.6	2517.0	2354.4	2213.0
32.5°	2865.0	2867.2	2909.8	2938.9	2961.6	2941.7	2869.3	2736.5	2569.6	2378.5	2207.4
35°	2507.1	2512.8	2588.0	2637.8	2739.3	2797.6	2814.6	2742.9	2593.0	2395.6	2197.4
37.5°	2098.0	2098.0	2185.3	2260.6	2374.3	2517.7	2625.0	2652.0	2578.8	2394.9	2188.9
40°	1727.3	1725.1	1794.0	1886.3	2007.8	2166.2	2326.0	2463.0	2480.8	2367.2	2159.1
42.5°	1413.3	1409.8	1485.1	1536.2	1664.0	1805.4	2017.7	2211.6	2322.4	2281.2	2115.0
45°	1177.5	1174.7	1223.7	1281.9	1372.1	1519.2	1697.4	1912.6	2098.7	2155.5	2032.7
47.5°	1000.0	1001.4	1027.7	1076.7	1153.4	1258.5	1418.3	1617.9	1848.0	1979.4	1929.0
50°	848.0	853.0	872.9	909.8	965.9	1050.4	1187.5	1367.9	1604.4	1778.4	1789.0
52.5°	734.4	741.5	762.8	782.7	829.5	889.2	995.7	1152.0	1347.3	1556.1	1630.7
55°	639.2	642.7	654.8	676.1	710.9	760.6	838.1	957.4	1138.5	1324.6	1456.0
57.5°	559.7	559.7	567.5	582.4	610.1	654.8	706.7	805.4	958.1	1126.4	1266.3
60°	480.1	482.9	488.6	505.0	523.4	557.5	607.9	670.4	802.5	943.2	1093.7
62.5°	413.3	418.3	424.0	431.8	448.9	473.0	508.5	566.0	654.8	784.8	919.0
65°	352.3	357.2	358.0	367.2	378.5	398.4	425.4	467.3	541.2	643.5	754.3
67.5°	298.3	300.4	302.6	309.7	320.3	333.1	350.8	382.1	440.3	509.2	617.2
70°	250.0	251.4	252.1	259.9	264.9	276.3	285.5	305.4	342.3	395.6	479.4
72.5°	204.5	202.4	201.7	208.1	210.2	219.5	230.8	245.0	264.9	302.6	365.1
75°	160.5	161.2	161.9	165.5	166.2	170.5	177.6	186.8	196.0	218.0	257.8
77.5°	123.6	120.7	120.7	125.0	126.4	127.1	132.1	137.1	142.0	154.8	170.5
80°	83.8	85.2	85.2	85.2	85.9	87.4	90.2	94.5	98.0	105.8	108.7
82.5°	59.7	59.7	58.9	60.4	61.1	61.8	61.8	61.8	63.9	66.1	68.9
85°	36.9	37.6	35.5	36.9	37.6	37.6	37.6	37.6	39.8	39.1	39.8
87.5°	15.6	16.3	16.3	17.0	17.0	17.8	17.0	17.8	17.0	17.0	17.8
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°	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2
2.5°	1850.1	1841.6	1837.3	1828.8	1817.5	1810.4	1803.2	1793.3	1785.5	1773.4	1762.8
5°	1918.3	1901.3	1885.6	1864.3	1843.7	1826.0	1807.5	1786.9	1768.4	1747.9	1725.8
7.5°	1994.3	1967.3	1934.6	1897.0	1865.0	1837.3	1806.1	1775.6	1747.9	1715.2	1685.4
10°	2067.5	2024.1	1980.8	1930.4	1883.5	1842.3	1800.4	1757.8	1721.6	1681.1	1644.2
12.5°	2124.3	2083.1	2018.4	1955.9	1894.9	1841.6	1789.0	1737.2	1689.6	1644.9	1600.8
15°	2174.0	2105.8	2051.1	1982.9	1908.4	1835.9	1770.6	1710.2	1652.7	1600.1	1555.4
17.5°	2188.2	2127.1	2067.5	1987.9	1907.7	1825.3	1750.0	1678.3	1614.3	1556.1	1505.7
20°	2186.8	2125.0	2060.3	1984.4	1899.1	1808.9	1725.1	1644.9	1572.4	1505.7	1451.7
22.5°	2165.5	2105.8	2040.5	1963.8	1877.1	1784.1	1696.0	1607.2	1528.4	1458.8	1403.4
25°	2142.7	2067.5	1999.3	1921.9	1839.5	1753.5	1659.8	1563.9	1481.5	1409.1	1346.6
27.5°	2122.8	2032.7	1948.8	1872.9	1788.3	1710.9	1617.9	1517.7	1433.2	1357.2	1292.6
30°	2090.9	1995.7	1894.2	1811.1	1729.4	1648.4	1563.2	1472.3	1380.0	1302.5	1237.9
32.5°	2063.2	1943.2	1833.1	1739.3	1657.7	1586.6	1505.0	1417.6	1327.4	1253.5	1183.9
35°	2032.7	1889.2	1774.1	1664.0	1582.4	1505.0	1440.3	1361.5	1272.0	1193.9	1131.4
37.5°	1996.4	1833.8	1701.7	1589.5	1505.0	1425.4	1367.2	1296.9	1215.9	1138.5	1076.7
40°	1955.9	1777.0	1625.0	1509.2	1418.3	1338.8	1289.8	1227.3	1158.4	1081.7	1024.1
42.5°	1904.8	1716.6	1555.4	1429.0	1328.1	1256.4	1207.4	1155.5	1092.3	1025.6	963.1
45°	1840.2	1641.3	1472.3	1338.8	1239.3	1169.7	1118.6	1080.2	1029.8	967.3	908.4
47.5°	1761.3	1562.5	1387.1	1248.6	1152.7	1085.9	1038.3	1000.0	961.6	907.7	851.6
50°	1656.9	1472.3	1304.0	1162.6	1061.1	996.4	953.8	923.3	888.5	844.5	793.3
52.5°	1541.9	1370.7	1206.0	1073.9	975.8	911.2	867.2	841.6	815.3	779.1	735.1
55°	1408.4	1269.2	1112.2	982.9	887.1	823.1	788.3	763.5	741.5	713.8	676.8
57.5°	1267.0	1144.9	1008.5	889.2	799.0	738.6	708.1	687.5	669.0	649.1	618.6
60°	1118.6	1032.0	902.7	793.3	714.5	664.8	635.6	616.5	599.4	583.1	560.4
62.5°	963.8	892.0	795.4	702.4	632.1	585.2	563.9	547.6	529.8	515.6	499.3
65°	806.8	765.6	698.9	611.5	546.9	508.5	487.9	474.4	465.9	449.6	436.8
67.5°	664.1	641.3	584.5	525.6	475.8	441.0	421.9	411.9	402.7	394.9	380.7
70°	528.4	512.1	479.4	437.5	398.4	368.6	354.4	351.6	338.8	331.0	323.9
72.5°	402.7	398.4	371.4	353.0	331.0	307.5	296.9	291.2	282.7	275.6	272.7
75°	286.2	292.6	284.1	274.9	264.2	245.0	235.8	233.0	225.1	223.0	219.5
77.5°	195.3	204.5	207.4	203.1	198.2	191.8	185.4	182.5	174.7	173.3	171.2
80°	122.9	136.4	141.3	140.6	138.5	139.2	131.4	130.7	127.1	125.0	127.1
82.5°	74.6	81.7	90.9	93.0	90.2	91.6	89.5	86.6	86.6	88.1	85.2
85°	40.5	41.2	45.5	48.3	51.8	54.7	51.8	52.6	51.8	51.8	49.7
87.5°	17.8	18.5	18.5	17.8	19.2	20.6	23.4	24.9	24.1	22.0	19.2
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2	1791.2
2.5°	1754.2	1749.3	1740.8	1733.6	1717.3	1705.9	1704.5	1705.2	1703.8	1702.4	1701.7
5°	1711.6	1695.3	1679.7	1666.2	1647.7	1629.2	1620.7	1617.2	1615.8	1607.9	1612.2
7.5°	1666.2	1641.3	1622.9	1597.3	1575.3	1559.6	1544.7	1537.6	1536.2	1525.6	1522.7
10°	1617.9	1588.1	1560.4	1534.8	1512.8	1490.8	1473.0	1466.6	1458.1	1449.6	1436.8
12.5°	1570.3	1533.4	1502.8	1474.4	1444.6	1419.7	1405.5	1396.3	1385.6	1377.8	1373.6
15°	1513.5	1482.2	1444.6	1414.0	1383.5	1361.5	1342.3	1325.3	1315.3	1308.9	1291.2
17.5°	1462.3	1421.2	1385.6	1356.5	1323.1	1298.3	1278.4	1264.2	1247.1	1234.4	1223.0
20°	1407.7	1365.0	1332.4	1297.6	1263.5	1232.9	1208.1	1196.7	1184.6	1172.6	1166.2
22.5°	1348.7	1311.8	1274.8	1238.6	1202.4	1169.7	1154.1	1137.8	1127.1	1115.0	1106.5
25°	1297.6	1257.1	1220.2	1179.7	1139.9	1120.7	1099.4	1083.1	1074.6	1062.5	1053.3
27.5°	1242.9	1203.8	1159.8	1117.9	1094.4	1061.8	1047.6	1034.8	1023.4	1011.4	1005.0
30°	1191.7	1146.3	1102.3	1069.6	1039.1	1015.6	1002.1	986.5	970.9	965.2	956.7
32.5°	1137.8	1088.8	1050.4	1017.7	992.2	963.8	951.0	938.2	923.3	916.2	908.4
35°	1081.7	1034.1	996.4	966.6	940.3	919.0	904.8	891.3	882.1	871.4	865.8
37.5°	1022.7	981.5	945.3	915.5	891.3	874.3	856.5	845.9	833.1	823.1	818.9
40°	966.6	929.7	894.9	867.2	845.2	824.6	808.9	795.4	787.6	779.1	772.0
42.5°	916.2	877.8	848.0	818.9	799.0	779.1	763.5	753.5	740.0	736.5	726.6
45°	862.2	826.7	796.9	769.9	749.3	732.9	714.5	702.4	693.9	685.4	681.8
47.5°	807.5	774.9	747.2	722.3	701.0	682.5	668.3	655.5	646.3	638.5	634.2
50°	754.3	725.8	698.1	674.0	652.0	638.5	621.4	607.2	600.1	591.6	586.6
52.5°	698.1	674.7	644.9	624.3	603.7	585.9	568.9	559.7	552.6	545.4	541.9
55°	645.6	620.7	595.2	573.1	553.3	534.8	521.3	514.2	505.0	500.7	500.0
57.5°	591.6	566.0	544.7	524.9	502.1	487.9	475.8	467.3	459.5	456.0	456.0
60°	532.7	512.1	492.2	470.2	453.8	437.5	424.7	419.0	411.2	409.8	404.8
62.5°	478.7	459.5	440.3	419.7	404.8	388.5	379.3	371.4	367.2	361.5	355.8
65°	422.6	405.5	387.1	369.3	357.2	339.5	331.0	321.7	316.8	310.4	303.3
67.5°	368.6	352.3	335.2	318.9	308.9	291.9	286.2	274.9	271.3	264.2	257.8
70°	311.8	300.4	286.9	270.6	262.1	248.6	242.9	232.2	226.6	222.3	218.7
72.5°	262.8	252.1	236.5	225.9	215.2	206.7	197.4	192.5	187.5	183.9	183.2
75°	214.5	201.0	191.8	181.8	174.7	166.2	161.9	158.4	156.2	154.1	152.0
77.5°	164.1	158.4	149.1	139.2	133.5	130.0	127.1	125.7	123.6	122.9	120.7
80°	122.2	114.3	108.7	105.1	100.9	98.0	95.9	90.9	88.1	86.6	85.2
82.5°	81.0	78.8	74.6	71.0	67.5	66.8	64.6	63.2	62.5	62.5	61.8
85°	49.0	43.3	43.3	42.6	42.6	41.9	40.5	40.5	39.1	41.2	41.2
87.5°	19.9	19.9	18.5	18.5	19.2	17.8	17.0	17.0	17.0	16.3	17.0
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: P243782

CATALOG NUMBER: S125RDR-H1270D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1791.2	1791.2	1791.2	1791.2
2.5°	1701.7	1698.1	1698.8	1694.6
5°	1604.4	1602.3	1595.2	1589.5
7.5°	1515.6	1506.4	1505.7	1500.0
10°	1432.5	1424.0	1419.7	1420.4
12.5°	1360.1	1350.8	1350.8	1345.2
15°	1282.7	1273.4	1274.8	1274.1
17.5°	1218.7	1212.3	1207.4	1203.1
20°	1156.2	1148.4	1145.6	1142.0
22.5°	1098.7	1093.0	1093.7	1093.7
25°	1044.0	1044.7	1038.3	1036.9
27.5°	995.7	994.3	992.9	990.0
30°	950.3	944.6	943.2	940.3
32.5°	903.4	902.7	897.0	899.1
35°	855.8	853.7	852.3	850.8
37.5°	811.8	807.5	806.8	805.4
40°	767.0	765.6	759.2	762.8
42.5°	718.7	715.9	715.9	715.9
45°	678.3	670.4	670.4	667.6
47.5°	632.8	630.0	628.5	623.6
50°	588.1	583.8	582.4	582.4
52.5°	541.9	541.2	542.6	539.8
55°	501.4	502.1	501.4	500.0
57.5°	457.4	453.8	453.8	454.5
60°	404.8	404.8	406.2	403.4
62.5°	354.4	353.0	348.0	346.6
65°	302.6	296.9	296.2	296.9
67.5°	256.4	254.3	250.7	251.4
70°	216.6	215.9	212.4	210.2
72.5°	181.1	181.1	179.0	179.0
75°	151.3	149.9	149.1	150.6
77.5°	116.5	112.9	114.3	112.2
80°	84.5	85.9	84.5	83.8
82.5°	62.5	61.1	61.8	61.1
85°	39.8	38.4	39.1	38.4
87.5°	16.3	17.0	17.0	15.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)