

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: P243787

Luminaire Tested: **S125RDR-H1270D930-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243787  
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-H1270D930-X4F0-XX-UDD-A-W  
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

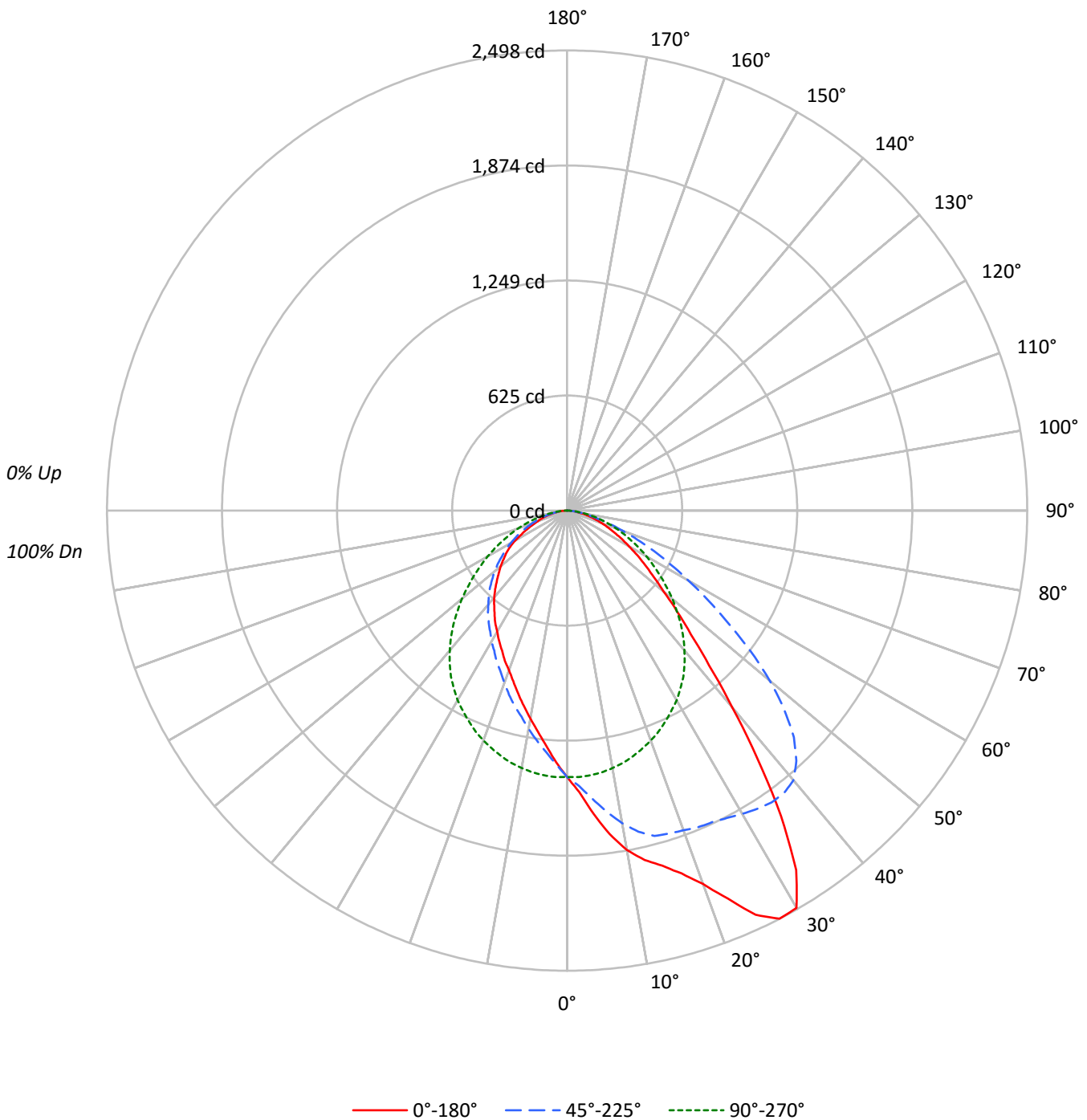
Lumens per Lamp: N/A  
Luminaire Lumens: 3848.6 lumens  
Efficiency: N/A  
Efficacy: 102.1 lumens/watt  
Spacing Criteria (0/90/45): 1.42 / 1.22 / 1.5  
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 37.7  
Input Voltage (V): 120  
Input Current (Ain): 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				
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	68	78	72	67	75	70	66	73	69	65					63				
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	66	61	56					54				
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50					48				
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44					42				
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39					37				
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35					33				
9	59	46	38	32	57	45	38	32	44	37	32	43	37	32	42	36	32					30				
10	55	42	35	29	54	42	34	29	41	34	29	40	34	29	39	33	29					27				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	10278	10278	10278
5°	11798	10292	9155
10°	13499	10242	8276
15°	14682	10159	7569
20°	16315	10044	6974
25°	18984	9901	6565
30°	20442	9755	6231
35°	17562	9537	5960
40°	12938	9193	5713
45°	9556	8766	5418
50°	7570	8242	5199
55°	6394	7638	5002
60°	5510	7075	4630
65°	4783	6441	4031
70°	4194	5898	3526
75°	3559	5165	3339
80°	2771	4318	2771
85°	2430	3458	2528



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.2	3.6
10°-20°	411.8	10.7
20°-30°	656.8	17.1
30°-40°	797.5	20.7
40°-50°	718.6	18.7
50°-60°	552.6	14.4
60°-70°	358.6	9.3
70°-80°	172.6	4.5
80°-90°	40.8	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°	1207.8	31.4
0°-40°	2005.3	52.1
0°-60°	3276.6	85.1
0°-90°	3848.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3848.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1446	1446	1446	1446	1446	
5°	1654	1571	1443	1315	1283	164
15°	1995	1828	1381	1099	1029	572
25°	2421	1866	1263	905	837	1107
35°	2024	1934	1099	742	687	1238
45°	951	1740	872	592	539	755
55°	516	1069	616	432	404	468
65°	284	520	383	274	240	285
75°	130	176	188	134	122	139
85°	30	32	42	34	31	34
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°	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1
2.5°	1529.8	1535.5	1530.9	1533.8	1529.2	1526.9	1521.2	1512.6	1504.0	1496.0	1495.4
5°	1653.6	1652.5	1647.9	1641.6	1637.0	1625.5	1619.8	1600.3	1587.1	1571.1	1563.0
7.5°	1771.8	1768.9	1762.0	1753.4	1749.4	1734.5	1718.4	1693.8	1673.1	1647.9	1629.0
10°	1870.4	1869.8	1864.7	1858.9	1843.4	1826.8	1811.3	1785.5	1754.6	1723.0	1696.6
12.5°	1942.6	1939.8	1933.5	1923.7	1911.1	1899.6	1879.0	1855.5	1817.6	1785.5	1749.4
15°	1995.4	1994.2	1985.1	1981.6	1957.0	1940.9	1913.4	1889.9	1860.6	1828.5	1789.5
17.5°	2065.3	2067.6	2059.6	2040.1	2017.7	1993.1	1954.1	1915.7	1875.0	1837.7	1806.2
20°	2157.1	2151.3	2137.6	2114.1	2073.9	2043.5	2004.6	1957.0	1901.9	1846.9	1801.6
22.5°	2279.8	2273.5	2251.7	2223.0	2172.6	2116.9	2057.3	1986.2	1923.1	1860.1	1800.4
25°	2420.8	2408.8	2376.7	2345.7	2274.0	2215.0	2126.1	2041.3	1949.5	1865.8	1798.7
27.5°	2497.7	2497.7	2482.8	2448.9	2392.2	2305.0	2214.4	2101.5	1995.4	1880.7	1785.5
30°	2490.8	2486.8	2492.5	2478.2	2441.5	2376.1	2286.1	2167.4	2032.1	1900.8	1786.7
32.5°	2313.0	2314.8	2349.2	2372.7	2391.0	2375.0	2316.5	2209.3	2074.5	1920.3	1782.1
35°	2024.1	2028.6	2089.4	2129.6	2211.5	2258.6	2272.3	2214.4	2093.4	1934.0	1774.1
37.5°	1693.8	1693.8	1764.3	1825.1	1916.8	2032.7	2119.2	2141.0	2082.0	1933.5	1767.2
40°	1394.5	1392.8	1448.4	1522.9	1621.0	1748.8	1877.8	1988.5	2002.8	1911.1	1743.1
42.5°	1141.0	1138.2	1198.9	1240.2	1343.4	1457.5	1629.0	1785.5	1875.0	1841.7	1707.5
45°	950.7	948.4	987.9	1035.0	1107.8	1226.5	1370.4	1544.1	1694.4	1740.2	1641.0
47.5°	807.3	808.5	829.7	869.3	931.2	1016.0	1145.1	1306.2	1491.9	1598.0	1557.3
50°	684.6	688.6	704.7	734.5	779.8	848.0	958.7	1104.3	1295.3	1435.8	1444.4
52.5°	592.9	598.6	615.8	631.9	669.7	717.9	803.9	930.0	1087.7	1256.3	1316.5
55°	516.0	518.9	528.7	545.9	574.0	614.1	676.6	772.9	919.1	1069.4	1175.4
57.5°	451.8	451.8	458.1	470.2	492.5	528.7	570.5	650.2	773.5	909.4	1022.3
60°	387.6	389.9	394.5	407.7	422.6	450.1	490.8	541.3	647.9	761.5	883.0
62.5°	333.7	337.7	342.3	348.6	362.4	381.9	410.5	457.0	528.7	633.6	742.0
65°	284.4	288.4	289.0	296.4	305.6	321.7	343.5	377.3	436.9	519.5	608.9
67.5°	240.8	242.5	244.3	250.0	258.6	268.9	283.3	308.5	355.5	411.1	498.3
70°	201.8	203.0	203.6	209.9	213.9	223.0	230.5	246.6	276.4	319.4	387.0
72.5°	165.1	163.4	162.8	168.0	169.7	177.2	186.4	197.8	213.9	244.3	294.7
75°	129.6	130.2	130.7	133.6	134.2	137.6	143.3	150.8	158.3	176.0	208.1
77.5°	99.8	97.5	97.5	100.9	102.1	102.6	106.6	110.7	114.7	125.0	137.6
80°	67.7	68.8	68.8	68.8	69.4	70.5	72.8	76.3	79.1	85.4	87.7
82.5°	48.2	48.2	47.6	48.7	49.3	49.9	49.9	49.9	51.6	53.3	55.6
85°	29.8	30.4	28.7	29.8	30.4	30.4	30.4	30.4	32.1	31.5	32.1
87.5°	12.6	13.2	13.2	13.8	13.8	14.3	13.8	14.3	13.8	13.8	14.3
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°	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1
2.5°	1493.7	1486.8	1483.3	1476.5	1467.3	1461.6	1455.8	1447.8	1441.5	1431.7	1423.1
5°	1548.7	1535.0	1522.3	1505.1	1488.5	1474.2	1459.3	1442.6	1427.7	1411.1	1393.3
7.5°	1610.1	1588.3	1561.9	1531.5	1505.7	1483.3	1458.1	1433.5	1411.1	1384.7	1360.6
10°	1669.1	1634.1	1599.2	1558.5	1520.6	1487.4	1453.5	1419.1	1389.9	1357.2	1327.4
12.5°	1715.0	1681.7	1629.6	1579.1	1529.8	1486.8	1444.4	1402.5	1364.1	1328.0	1292.4
15°	1755.1	1700.1	1655.9	1600.9	1540.7	1482.2	1429.5	1380.7	1334.3	1291.8	1255.7
17.5°	1766.6	1717.3	1669.1	1604.9	1540.1	1473.6	1412.8	1354.9	1303.3	1256.3	1215.6
20°	1765.5	1715.6	1663.4	1602.0	1533.2	1460.4	1392.8	1328.0	1269.5	1215.6	1172.0
22.5°	1748.3	1700.1	1647.3	1585.4	1515.5	1440.3	1369.2	1297.6	1233.9	1177.7	1133.0
25°	1729.9	1669.1	1614.1	1551.6	1485.1	1415.7	1340.0	1262.6	1196.1	1137.6	1087.1
27.5°	1713.8	1641.0	1573.4	1512.0	1443.8	1381.3	1306.2	1225.3	1157.1	1095.7	1043.6
30°	1688.0	1611.2	1529.2	1462.1	1396.2	1330.8	1262.0	1188.6	1114.1	1051.6	999.4
32.5°	1665.7	1568.8	1479.9	1404.2	1338.3	1280.9	1215.0	1144.5	1071.7	1012.0	955.8
35°	1641.0	1525.2	1432.3	1343.4	1277.5	1215.0	1162.8	1099.2	1026.9	963.9	913.4
37.5°	1611.8	1480.5	1373.8	1283.2	1215.0	1150.8	1103.8	1047.0	981.6	919.1	869.3
40°	1579.1	1434.6	1311.9	1218.4	1145.1	1080.8	1041.3	990.8	935.2	873.3	826.8
42.5°	1537.8	1385.9	1255.7	1153.7	1072.2	1014.3	974.8	932.9	881.9	828.0	777.5
45°	1485.6	1325.1	1188.6	1080.8	1000.6	944.4	903.1	872.1	831.4	781.0	733.4
47.5°	1422.0	1261.4	1119.8	1008.0	930.6	876.7	838.3	807.3	776.4	732.8	687.5
50°	1337.7	1188.6	1052.7	938.6	856.6	804.5	770.1	745.4	717.3	681.8	640.5
52.5°	1244.8	1106.6	973.6	867.0	787.8	735.7	700.1	679.5	658.2	629.0	593.5
55°	1137.0	1024.6	897.9	793.6	716.2	664.6	636.5	616.4	598.6	576.3	546.4
57.5°	1022.9	924.3	814.2	717.9	645.1	596.3	571.7	555.0	540.1	524.1	499.4
60°	903.1	833.1	728.8	640.5	576.8	536.7	513.2	497.7	483.9	470.7	452.4
62.5°	778.1	720.2	642.2	567.1	510.3	472.5	455.3	442.1	427.7	416.3	403.1
65°	651.4	618.1	564.2	493.7	441.5	410.5	393.9	383.0	376.1	363.0	352.6
67.5°	536.1	517.8	471.9	424.3	384.2	356.1	340.6	332.6	325.1	318.8	307.3
70°	426.6	413.4	387.0	353.2	321.7	297.6	286.1	283.8	273.5	267.2	261.5
72.5°	325.1	321.7	299.9	285.0	267.2	248.3	239.7	235.1	228.2	222.5	220.2
75°	231.1	236.2	229.4	221.9	213.3	197.8	190.4	188.1	181.8	180.0	177.2
77.5°	157.7	165.1	167.4	164.0	160.0	154.8	149.7	147.4	141.1	139.9	138.2
80°	99.2	110.1	114.1	113.5	111.8	112.4	106.1	105.5	102.6	100.9	102.6
82.5°	60.2	65.9	73.4	75.1	72.8	74.0	72.2	70.0	70.0	71.1	68.8
85°	32.7	33.3	36.7	39.0	41.9	44.2	41.9	42.4	41.9	41.9	40.1
87.5°	14.3	14.9	14.9	14.3	15.5	16.6	18.9	20.1	19.5	17.8	15.5
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°	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1	1446.1
2.5°	1416.3	1412.2	1405.4	1399.6	1386.4	1377.3	1376.1	1376.7	1375.6	1374.4	1373.8
5°	1381.9	1368.7	1356.1	1345.2	1330.3	1315.3	1308.5	1305.6	1304.5	1298.1	1301.6
7.5°	1345.2	1325.1	1310.2	1289.5	1271.8	1259.2	1247.1	1241.4	1240.2	1231.6	1229.3
10°	1306.2	1282.1	1259.7	1239.1	1221.3	1203.5	1189.2	1184.0	1177.2	1170.3	1160.0
12.5°	1267.8	1237.9	1213.3	1190.3	1166.3	1146.2	1134.7	1127.3	1118.7	1112.4	1108.9
15°	1221.9	1196.7	1166.3	1141.6	1117.0	1099.2	1083.7	1069.9	1061.9	1056.7	1042.4
17.5°	1180.6	1147.3	1118.7	1095.2	1068.2	1048.1	1032.1	1020.6	1006.9	996.5	987.4
20°	1136.5	1102.0	1075.7	1047.6	1020.1	995.4	975.3	966.2	956.4	946.7	941.5
22.5°	1088.9	1059.0	1029.2	1000.0	970.7	944.4	931.8	918.6	910.0	900.2	893.3
25°	1047.6	1014.9	985.1	952.4	920.3	904.8	887.6	874.4	867.5	857.8	850.3
27.5°	1003.4	971.9	936.3	902.5	883.6	857.2	845.7	835.4	826.2	816.5	811.3
30°	962.1	925.4	889.9	863.5	838.9	819.9	809.0	796.4	783.8	779.2	772.4
32.5°	918.6	879.0	848.0	821.7	801.0	778.1	767.8	757.4	745.4	739.7	733.4
35°	873.3	834.8	804.5	780.4	759.2	742.0	730.5	719.6	712.1	703.5	699.0
37.5°	825.7	792.4	763.2	739.1	719.6	705.8	691.5	682.9	672.6	664.6	661.1
40°	780.4	750.6	722.5	700.1	682.3	665.7	653.1	642.2	635.9	629.0	623.3
42.5°	739.7	708.7	684.6	661.1	645.1	629.0	616.4	608.4	597.5	594.6	586.6
45°	696.1	667.4	643.3	621.6	604.9	591.7	576.8	567.1	560.2	553.3	550.5
47.5°	651.9	625.6	603.2	583.1	565.9	551.0	539.6	529.2	521.8	515.5	512.0
50°	608.9	586.0	563.6	544.1	526.4	515.5	501.7	490.2	484.5	477.6	473.6
52.5°	563.6	544.7	520.6	504.0	487.4	473.0	459.3	451.8	446.1	440.4	437.5
55°	521.2	501.1	480.5	462.7	446.7	431.8	420.9	415.1	407.7	404.2	403.7
57.5°	477.6	457.0	439.8	423.7	405.4	393.9	384.2	377.3	371.0	368.1	368.1
60°	430.0	413.4	397.4	379.6	366.4	353.2	342.9	338.3	332.0	330.8	326.8
62.5°	386.5	371.0	355.5	338.9	326.8	313.6	306.2	299.9	296.4	291.9	287.3
65°	341.2	327.4	312.5	298.2	288.4	274.1	267.2	259.7	255.7	250.6	244.8
67.5°	297.6	284.4	270.6	257.5	249.4	235.7	231.1	221.9	219.0	213.3	208.1
70°	251.7	242.5	231.6	218.5	211.6	200.7	196.1	187.5	182.9	179.5	176.6
72.5°	212.2	203.6	190.9	182.3	173.7	166.9	159.4	155.4	151.4	148.5	147.9
75°	173.2	162.3	154.8	146.8	141.1	134.2	130.7	127.9	126.1	124.4	122.7
77.5°	132.5	127.9	120.4	112.4	107.8	104.9	102.6	101.5	99.8	99.2	97.5
80°	98.6	92.3	87.7	84.9	81.4	79.1	77.4	73.4	71.1	70.0	68.8
82.5°	65.4	63.6	60.2	57.3	54.5	53.9	52.2	51.0	50.5	50.5	49.9
85°	39.6	35.0	35.0	34.4	34.4	33.8	32.7	32.7	31.5	33.3	33.3
87.5°	16.1	16.1	14.9	14.9	15.5	14.3	13.8	13.8	13.8	13.2	13.8
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: P243787

CATALOG NUMBER: S125RDR-H1270D930-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1446.1	1446.1	1446.1	1446.1
2.5°	1373.8	1371.0	1371.5	1368.1
5°	1295.3	1293.6	1287.8	1283.2
7.5°	1223.6	1216.2	1215.6	1211.0
10°	1156.5	1149.6	1146.2	1146.8
12.5°	1098.0	1090.6	1090.6	1086.0
15°	1035.5	1028.1	1029.2	1028.7
17.5°	983.9	978.8	974.8	971.3
20°	933.5	927.2	924.9	922.0
22.5°	887.0	882.4	883.0	883.0
25°	842.9	843.5	838.3	837.1
27.5°	803.9	802.7	801.6	799.3
30°	767.2	762.6	761.5	759.2
32.5°	729.3	728.8	724.2	725.9
35°	690.9	689.2	688.1	686.9
37.5°	655.4	651.9	651.4	650.2
40°	619.3	618.1	612.9	615.8
42.5°	580.3	578.0	578.0	578.0
45°	547.6	541.3	541.3	539.0
47.5°	510.9	508.6	507.4	503.4
50°	474.8	471.3	470.2	470.2
52.5°	437.5	436.9	438.1	435.8
55°	404.8	405.4	404.8	403.7
57.5°	369.3	366.4	366.4	367.0
60°	326.8	326.8	328.0	325.7
62.5°	286.1	285.0	281.0	279.8
65°	244.3	239.7	239.1	239.7
67.5°	207.0	205.3	202.4	203.0
70°	174.9	174.3	171.4	169.7
72.5°	146.2	146.2	144.5	144.5
75°	122.1	121.0	120.4	121.6
77.5°	94.0	91.2	92.3	90.6
80°	68.2	69.4	68.2	67.7
82.5°	50.5	49.3	49.9	49.3
85°	32.1	31.0	31.5	31.0
87.5°	13.2	13.8	13.8	12.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)