

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: P242809

Luminaire Tested: **S125DR-S1270D830-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242809
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-S1270D830-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4643.6 lumens
Efficiency: N/A
Efficacy: 113.0 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

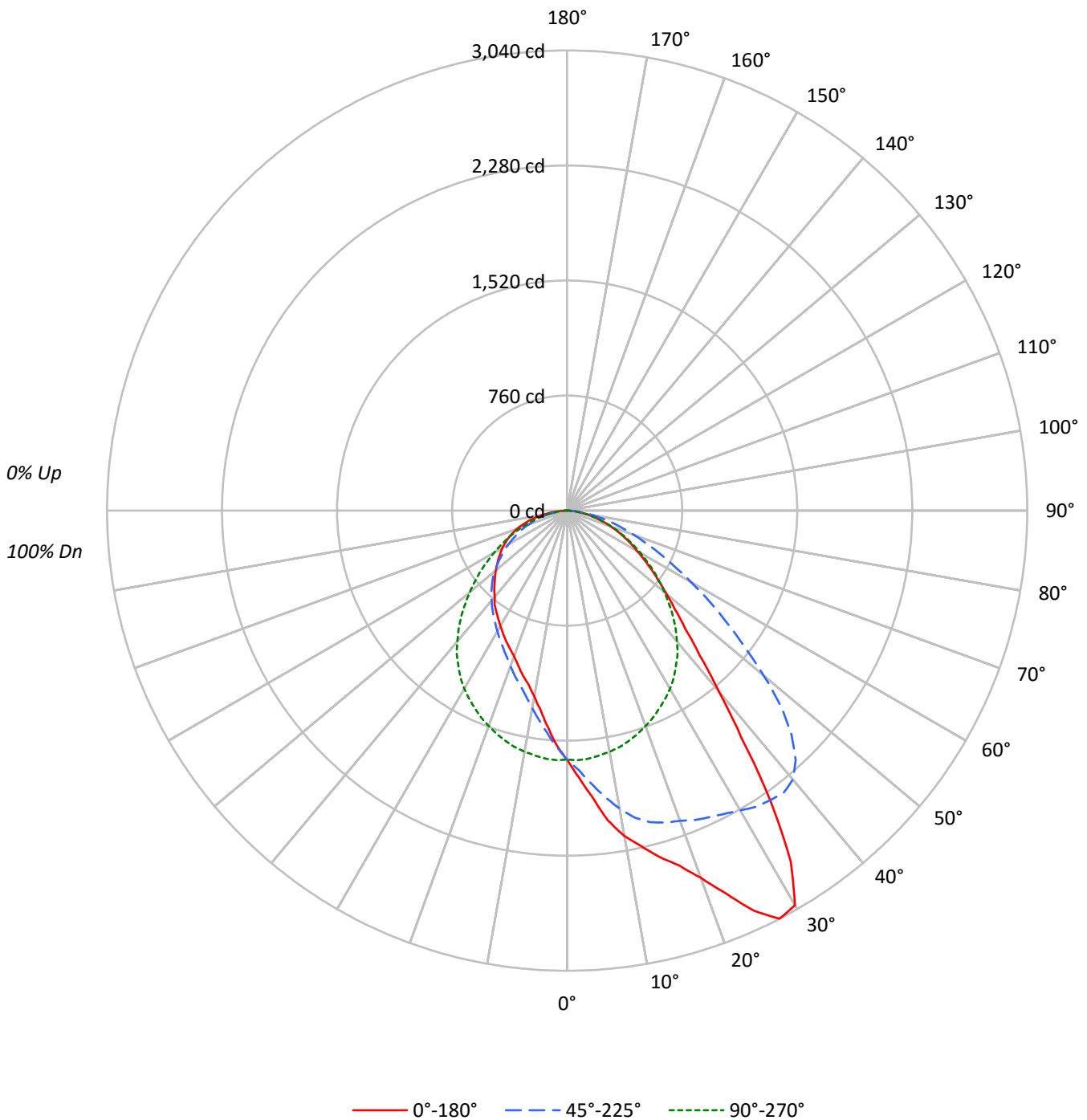
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	11695	11695	11695
5°	13543	11735	10275
10°	15757	11674	9002
15°	17442	11589	8305
20°	19524	11453	7744
25°	22872	11300	7471
30°	24704	11148	7234
35°	20312	10866	7078
40°	14437	10472	6907
45°	11092	9941	6810
50°	9468	9282	6796
55°	8430	8637	6855
60°	7605	7932	7029
65°	7025	7223	7211
70°	6386	6488	7315
75°	5638	5715	7250
80°	4744	4658	6631
85°	3759	3360	5358



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.4	3.4
10°-20°	471.7	10.2
20°-30°	766.3	16.5
30°-40°	936.4	20.2
40°-50°	849.6	18.3
50°-60°	676.6	14.6
60°-70°	471.3	10.1
70°-80°	251.0	5.4
80°-90°	62.3	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°	1396.4	30.1
0°-40°	2332.8	50.2
0°-60°	3859.0	83.1
0°-90°	4643.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4643.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1646	1646	1646	1646	1646	
5°	1898	1808	1645	1479	1440	191
15°	2370	2131	1575	1194	1129	678
25°	2917	2234	1441	1001	953	1336
35°	2341	2336	1252	849	816	1436
45°	1104	2096	989	702	678	878
55°	680	1284	697	535	553	612
65°	418	681	430	361	429	414
75°	205	303	208	190	264	221
85°	46	61	41	45	66	54
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°	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5
2.5°	1764.2	1761.4	1758.6	1753.1	1757.2	1745.4	1739.8	1730.0	1718.1	1713.9	1709.1
5°	1898.3	1901.8	1905.3	1890.6	1892.0	1882.3	1859.9	1841.8	1827.1	1808.2	1795.0
7.5°	2064.6	2054.1	2054.8	2045.7	2029.6	2016.4	1994.7	1964.7	1937.4	1906.7	1880.2
10°	2183.3	2184.0	2177.7	2166.5	2149.1	2136.5	2105.8	2076.4	2040.8	1998.9	1968.9
12.5°	2272.7	2276.2	2267.8	2251.7	2245.4	2213.3	2191.0	2154.6	2110.6	2079.2	2029.6
15°	2370.5	2362.8	2357.2	2338.3	2323.7	2294.3	2255.9	2219.6	2173.5	2130.9	2088.3
17.5°	2457.1	2463.4	2454.3	2440.3	2397.0	2362.8	2315.3	2269.2	2214.0	2160.9	2111.3
20°	2581.4	2587.0	2570.9	2540.9	2486.4	2452.2	2384.4	2320.2	2253.8	2180.5	2124.6
22.5°	2736.4	2729.5	2706.4	2656.8	2611.4	2540.9	2466.1	2384.4	2297.1	2211.9	2133.0
25°	2916.6	2887.3	2874.0	2817.5	2755.3	2662.4	2561.8	2447.3	2343.9	2234.3	2139.3
27.5°	3039.6	3027.7	3008.8	2962.7	2891.5	2786.0	2667.3	2530.4	2391.4	2257.3	2137.9
30°	3010.2	3011.6	3013.0	3000.4	2958.5	2883.8	2765.8	2615.6	2442.4	2286.7	2142.8
32.5°	2750.4	2781.8	2811.9	2851.0	2876.1	2876.8	2814.0	2682.0	2502.5	2320.2	2140.0
35°	2341.1	2348.8	2427.7	2506.0	2612.1	2694.5	2749.7	2689.6	2539.5	2336.2	2137.9
37.5°	1892.7	1931.2	1990.5	2078.5	2237.8	2367.7	2538.1	2596.8	2526.2	2349.5	2137.2
40°	1556.1	1591.0	1626.6	1716.7	1845.9	2012.2	2212.6	2383.7	2423.5	2320.2	2116.2
42.5°	1296.3	1322.1	1362.6	1424.8	1527.5	1669.9	1859.2	2096.0	2258.0	2235.0	2072.2
45°	1103.5	1121.0	1151.7	1205.5	1283.7	1399.0	1568.0	1812.4	2025.4	2096.0	1997.5
47.5°	966.6	967.3	992.5	1030.9	1090.2	1196.4	1322.8	1524.0	1753.8	1916.5	1893.4
50°	856.3	852.8	871.6	903.8	948.5	1013.4	1132.8	1285.8	1504.4	1695.1	1748.2
52.5°	761.3	762.7	772.5	794.1	829.7	882.8	964.5	1098.6	1277.4	1474.4	1586.1
55°	680.3	677.5	690.7	706.8	734.0	770.4	834.6	940.1	1091.6	1284.4	1414.3
57.5°	602.0	609.7	615.3	626.5	650.2	675.4	732.7	813.7	938.7	1109.8	1247.4
60°	535.0	542.7	546.9	558.0	576.2	597.2	639.1	701.9	803.2	945.7	1081.9
62.5°	474.9	480.5	481.2	491.0	505.0	525.2	555.9	606.2	681.0	801.1	933.8
65°	417.7	417.7	420.5	430.9	437.9	456.1	481.2	519.6	583.9	681.0	794.8
67.5°	361.8	365.3	364.6	369.5	375.8	391.1	410.0	442.1	493.1	566.4	660.7
70°	307.3	310.1	309.4	312.9	319.9	329.0	343.6	373.7	407.9	468.6	546.9
72.5°	258.4	259.1	257.0	261.9	265.4	273.1	289.8	302.4	333.8	382.7	443.5
75°	205.3	206.7	208.1	210.9	215.1	219.3	227.7	243.8	264.7	303.1	344.3
77.5°	163.4	159.9	164.1	163.4	165.5	169.0	176.7	185.8	203.9	229.8	264.0
80°	115.9	116.6	116.6	117.3	120.8	122.9	129.2	135.5	148.8	166.9	189.3
82.5°	76.8	78.9	77.5	78.9	81.7	83.1	85.9	90.8	97.1	110.4	125.0
85°	46.1	42.6	44.0	45.4	45.4	46.1	48.9	51.0	55.2	60.8	67.0
87.5°	16.8	18.2	18.9	18.9	19.6	19.6	22.3	22.3	24.4	26.5	29.3
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°	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5
2.5°	1704.9	1700.0	1694.4	1684.6	1672.7	1666.4	1656.7	1650.4	1637.8	1627.3	1616.2
5°	1778.9	1760.7	1744.0	1722.3	1698.6	1683.2	1665.1	1644.8	1623.8	1602.2	1578.4
7.5°	1852.9	1822.9	1790.1	1755.8	1722.3	1690.9	1661.6	1631.5	1604.3	1570.1	1541.4
10°	1927.7	1887.2	1843.8	1792.9	1743.3	1700.0	1656.0	1617.6	1578.4	1536.5	1499.5
12.5°	2002.4	1945.1	1879.5	1822.2	1760.0	1705.6	1651.8	1600.1	1548.4	1500.9	1456.2
15°	2029.6	1982.1	1925.6	1845.9	1778.9	1707.0	1638.5	1575.0	1515.6	1463.9	1409.4
17.5°	2056.2	1995.4	1935.3	1858.5	1771.2	1693.7	1616.2	1547.0	1481.4	1416.4	1366.8
20°	2062.5	1999.6	1936.0	1861.3	1771.2	1679.0	1601.5	1514.2	1442.3	1374.5	1310.3
22.5°	2060.4	1987.0	1916.5	1839.0	1751.7	1668.5	1570.8	1481.4	1401.7	1335.4	1267.6
25°	2045.0	1968.9	1882.3	1804.7	1718.1	1628.0	1533.0	1440.9	1361.2	1285.1	1218.8
27.5°	2035.9	1939.5	1844.5	1755.1	1672.0	1588.9	1496.7	1401.7	1314.4	1236.9	1175.5
30°	2015.7	1907.4	1797.1	1702.8	1616.9	1536.5	1450.6	1358.4	1266.2	1190.8	1123.8
32.5°	1997.5	1866.9	1748.9	1644.1	1551.9	1474.4	1396.9	1310.3	1220.2	1143.3	1076.3
35°	1973.1	1827.1	1693.7	1577.7	1480.7	1400.3	1334.0	1252.3	1169.2	1095.1	1030.9
37.5°	1944.4	1775.4	1634.3	1513.5	1408.0	1324.2	1261.4	1197.8	1114.7	1042.1	984.8
40°	1909.5	1719.5	1568.0	1443.7	1333.3	1245.3	1188.0	1128.7	1062.3	996.0	934.5
42.5°	1865.5	1669.2	1500.9	1364.7	1255.8	1170.6	1109.8	1061.6	1005.0	944.3	888.4
45°	1809.6	1606.4	1427.6	1283.7	1173.4	1088.8	1026.7	989.0	945.0	886.3	838.1
47.5°	1735.6	1535.1	1350.8	1202.0	1088.2	1009.9	950.6	913.5	881.4	835.3	789.9
50°	1630.1	1453.4	1266.2	1118.9	1005.0	926.1	872.3	839.5	813.0	779.4	742.4
52.5°	1512.1	1350.8	1183.1	1037.9	925.4	847.9	795.5	767.6	746.6	725.0	688.6
55°	1385.7	1246.0	1086.8	948.5	844.4	768.3	722.2	697.0	678.9	660.7	638.4
57.5°	1249.5	1136.3	990.4	861.2	764.8	693.5	650.2	624.4	609.7	599.9	586.0
60°	1104.2	1010.6	889.1	773.9	680.3	618.8	576.9	558.0	546.2	538.5	528.7
62.5°	969.4	896.8	786.4	683.8	604.8	547.6	511.2	493.1	481.9	479.1	471.4
65°	837.4	778.0	685.2	597.9	528.0	478.4	447.0	429.5	422.5	418.4	419.1
67.5°	704.7	666.3	588.8	511.9	454.7	410.7	384.8	371.6	368.1	361.8	361.8
70°	585.3	558.0	495.2	430.2	380.6	348.5	326.2	312.2	308.7	305.9	305.2
72.5°	479.8	456.8	404.4	355.5	312.2	285.0	267.5	260.5	254.2	252.8	252.8
75°	376.5	363.2	319.9	278.7	247.9	228.4	215.8	208.1	203.9	203.2	203.9
77.5°	284.3	271.7	241.7	210.9	190.7	175.3	163.4	161.3	155.7	156.4	155.1
80°	201.1	193.5	176.0	153.0	136.9	124.3	118.7	113.8	112.4	110.4	112.4
82.5°	132.0	123.6	113.1	100.6	88.0	81.7	76.1	75.4	74.7	74.0	74.0
85°	71.9	72.6	65.7	54.5	48.9	44.7	41.2	41.2	40.5	39.8	40.5
87.5°	30.7	29.3	26.5	24.4	21.0	18.9	18.2	18.9	16.8	16.1	16.8
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5	1645.5
2.5°	1609.9	1602.2	1595.9	1581.9	1574.3	1563.8	1555.4	1564.5	1554.7	1558.9	1552.6
5°	1566.6	1547.0	1533.0	1512.8	1495.3	1479.3	1467.4	1465.3	1459.7	1456.9	1448.5
7.5°	1514.9	1492.5	1469.5	1444.3	1423.4	1401.0	1387.8	1375.2	1367.5	1357.7	1350.1
10°	1470.2	1437.4	1409.4	1377.3	1349.4	1324.9	1305.4	1295.6	1286.5	1273.2	1268.3
12.5°	1415.0	1380.8	1345.2	1310.3	1283.7	1255.8	1239.7	1223.6	1218.1	1202.7	1202.0
15°	1373.1	1322.1	1288.6	1253.7	1216.7	1194.3	1180.3	1164.3	1157.3	1146.8	1139.1
17.5°	1321.4	1275.3	1233.4	1197.8	1164.3	1146.1	1128.0	1116.8	1104.9	1097.2	1084.7
20°	1264.2	1220.9	1178.9	1140.5	1116.1	1094.4	1080.5	1070.0	1057.4	1053.9	1041.4
22.5°	1216.0	1167.1	1127.3	1096.5	1069.3	1044.1	1028.8	1022.5	1014.8	1002.2	1002.2
25°	1162.9	1113.3	1079.1	1046.9	1023.2	1000.8	990.4	981.3	972.9	965.2	962.4
27.5°	1118.2	1074.2	1032.3	1002.9	982.7	961.7	952.7	940.8	934.5	928.2	919.8
30°	1070.7	1025.3	989.7	961.7	939.4	921.2	911.4	903.8	898.2	892.6	888.4
32.5°	1021.8	980.6	946.4	919.1	896.8	884.2	875.8	870.9	864.7	857.7	852.1
35°	979.9	933.8	900.3	876.5	859.1	848.6	838.8	833.9	826.9	826.9	821.4
37.5°	930.3	889.8	859.8	838.1	822.7	813.0	801.8	799.0	794.1	791.3	789.2
40°	887.0	850.0	822.0	800.4	783.6	776.0	767.6	762.0	759.2	755.7	754.3
42.5°	842.3	807.4	780.8	761.3	747.3	741.0	733.3	729.9	723.6	718.7	718.0
45°	796.9	762.7	738.2	722.2	709.6	701.9	697.0	688.6	685.9	680.3	679.6
47.5°	755.0	721.5	697.0	683.8	672.6	667.0	659.3	650.2	646.7	643.3	642.6
50°	706.8	676.8	654.4	641.9	631.4	622.3	614.6	609.0	606.9	606.9	608.3
52.5°	657.9	633.5	615.3	599.3	589.5	579.7	572.7	569.9	566.4	570.6	573.4
55°	610.4	584.6	570.6	555.9	546.2	535.0	531.5	530.1	528.0	533.6	536.4
57.5°	559.4	542.0	525.2	509.9	501.5	494.5	488.9	488.2	492.4	493.8	502.2
60°	511.2	490.3	475.6	464.5	454.0	449.8	448.4	447.0	449.8	457.5	469.3
62.5°	458.2	442.1	426.0	418.4	411.4	403.7	403.7	405.1	411.4	420.5	432.3
65°	406.5	391.8	381.3	371.6	365.3	361.1	362.5	365.3	371.6	383.4	396.7
67.5°	353.4	343.6	333.8	324.8	318.5	319.2	319.9	323.4	331.1	345.0	357.6
70°	302.4	291.2	283.6	280.1	275.2	272.4	276.6	283.6	289.8	302.4	312.9
72.5°	251.4	242.4	236.8	234.7	233.3	231.2	231.9	239.6	248.6	261.2	273.8
75°	201.1	197.7	193.5	190.7	188.6	190.0	191.4	198.4	205.3	218.6	232.6
77.5°	155.7	151.6	148.8	148.1	146.7	147.4	150.9	156.4	163.4	173.2	184.4
80°	111.1	109.7	108.3	107.6	107.6	108.3	113.8	117.3	123.6	132.7	141.1
82.5°	73.3	72.6	72.6	72.6	73.3	73.3	76.1	81.0	85.9	92.2	99.2
85°	42.6	41.2	43.3	44.0	42.6	44.7	46.1	48.9	51.0	54.5	58.0
87.5°	17.5	18.9	18.2	18.9	18.9	20.3	19.6	22.3	23.7	25.1	24.4
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: P242809

CATALOG NUMBER: S125DR-S1270D830-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1645.5	1645.5	1645.5	1645.5
2.5°	1548.4	1553.3	1549.1	1554.7
5°	1445.0	1438.8	1443.0	1440.2
7.5°	1349.4	1343.8	1335.4	1332.6
10°	1260.7	1253.0	1252.3	1247.4
12.5°	1195.7	1188.7	1178.9	1177.5
15°	1134.9	1129.4	1124.5	1128.7
17.5°	1083.3	1078.4	1077.0	1072.8
20°	1035.1	1031.6	1033.0	1023.9
22.5°	996.7	989.0	987.6	987.6
25°	956.1	952.7	949.2	952.7
27.5°	920.5	917.0	915.6	916.3
30°	888.4	881.4	882.1	881.4
32.5°	853.5	849.3	847.9	846.5
35°	819.3	819.3	815.8	815.8
37.5°	787.8	787.1	785.0	786.4
40°	751.5	750.8	748.7	744.5
42.5°	716.6	713.8	713.1	712.4
45°	679.6	679.6	678.2	677.5
47.5°	643.3	644.6	647.4	646.7
50°	611.1	611.8	613.9	614.6
52.5°	575.5	580.4	583.2	582.5
55°	542.7	547.6	552.5	553.2
57.5°	509.9	516.1	521.0	522.4
60°	476.3	485.4	491.7	494.5
62.5°	444.2	454.7	461.0	461.0
65°	408.6	419.1	424.6	428.8
67.5°	371.6	382.0	387.6	391.1
70°	330.4	340.8	349.2	352.0
72.5°	289.8	298.9	305.2	308.7
75°	241.7	254.2	260.5	264.0
77.5°	195.6	208.1	211.6	213.7
80°	149.5	156.4	161.3	162.0
82.5°	106.2	111.7	112.4	114.5
85°	62.9	65.7	66.4	65.7
87.5°	25.8	25.1	25.1	26.5
90°	0.0	0.0	0.0	0.0

(END OF REPORT)