

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: P231540

Luminaire Tested: **S121-DR-2-30-X-0048-1-U-DD-3-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231540
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29630)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S121-DR-2-30-X-0048-1-U-DD-3-W
Description: DEFINE 1 LED LINEAR DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC LENS.
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4241.3 lumens
Efficiency: N/A
Efficacy: 99.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.39
Luminous Opening: Rectangular (W 3.92' x L: 0.1' x H: 0')
CIE Type: Direct

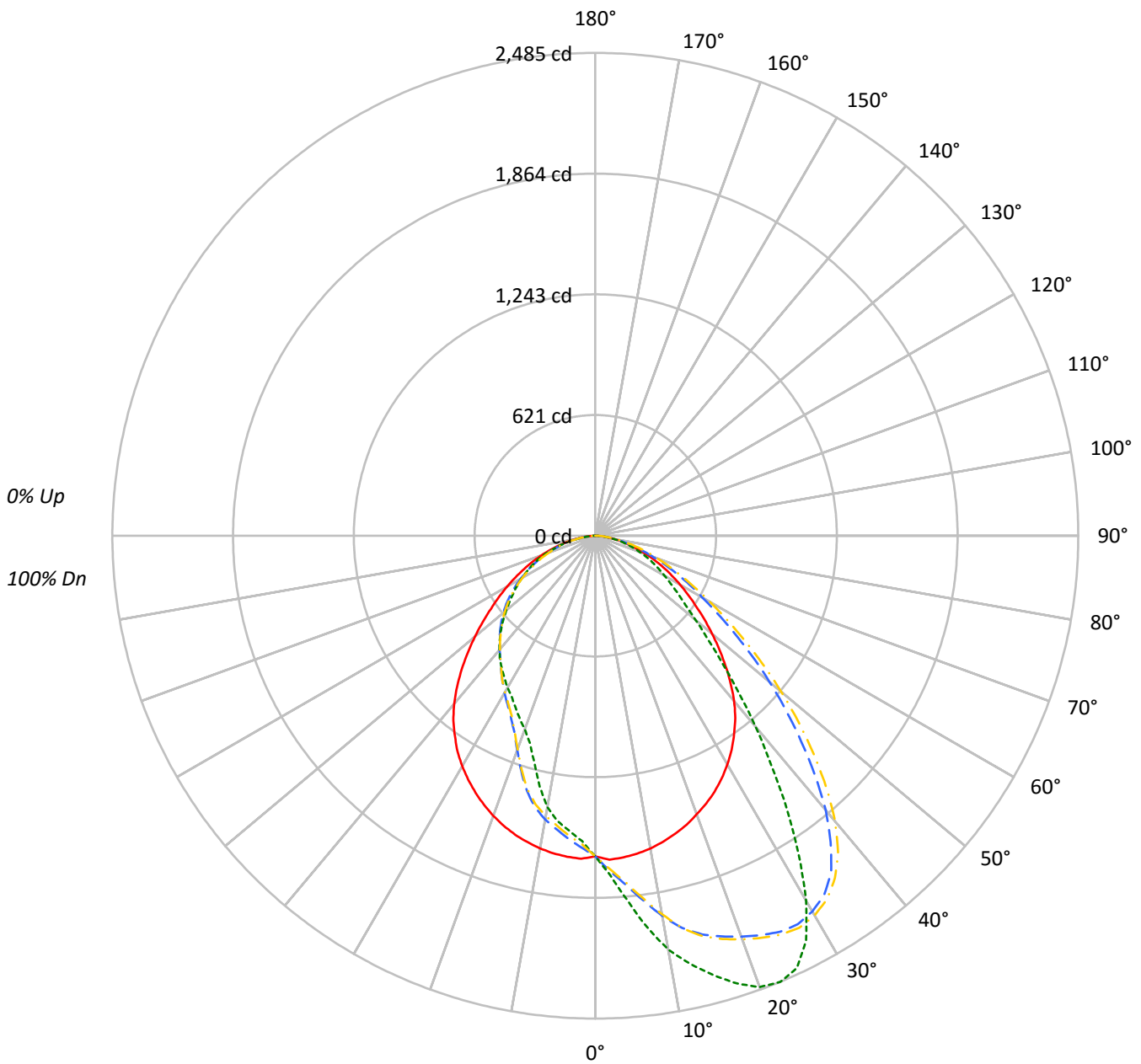
Input Watts (W): 42.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - - - 90°-270° - - - 135°-315°



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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	105	102	98	107	103	100	96	99	96	93	95	93	91	92	90	88	86
2	101	93	87	81	98	91	85	81	88	83	79	84	80	77	81	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	79	66	58	52	76	65	57	51	63	56	51	61	55	50	59	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	45	40	50	44	39	38
8	63	50	42	36	62	49	42	36	48	41	36	47	40	36	46	40	36	34
9	59	46	38	33	58	46	38	33	44	37	33	43	37	32	42	37	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	46127	46127	46127	46127
5°	46629	52825	46542	42806
10°	46390	61382	46390	40272
15°	45951	67719	46104	35004
20°	45380	73537	45630	31552
25°	44803	75725	44997	30008
30°	43885	70004	44191	29154
35°	42505	58689	42973	28587
40°	40554	46762	41248	27989
45°	37462	36248	38423	27147
50°	34091	29219	35147	26005
55°	30839	25278	31921	25073
60°	28170	22975	29294	24390
65°	25575	21453	26693	23617
70°	22880	19773	24089	22536
75°	19508	17910	20999	19400
80°	15649	15472	18032	15134
85°	11195	12542	13890	10489



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.2	3.8
10°-20°	481.0	11.3
20°-30°	738.4	17.4
30°-40°	840.9	19.8
40°-50°	764.3	18.0
50°-60°	596.2	14.1
60°-70°	403.8	9.5
70°-80°	206.9	4.9
80°-90°	48.6	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°	1380.5	32.5
0°-40°	2221.5	52.4
0°-60°	3582.0	84.5
0°-90°	4241.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4241.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1650	1650	1650	1650	1650	
5°	1662	1882	1658	1525	1662	158
15°	1588	2340	1593	1209	1588	448
25°	1452	2455	1459	973	1452	668
35°	1245	1720	1259	838	1245	777
45°	948	917	972	687	948	730
55°	633	519	655	514	633	570
65°	387	324	404	357	387	384
75°	181	166	194	180	181	193
85°	35	39	43	33	35	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9
2.5°	1668.9	1661.5	1665.8	1677.4	1690.0	1694.3	1696.4	1701.7	1708.0	1718.6	1727.0
5°	1661.5	1662.6	1675.3	1695.3	1715.4	1723.8	1731.2	1746.0	1762.9	1784.1	1803.1
7.5°	1649.9	1658.4	1681.6	1710.1	1740.7	1755.5	1767.2	1796.7	1827.4	1861.2	1893.9
10°	1634.1	1651.0	1682.7	1721.7	1767.2	1788.3	1808.3	1852.7	1897.1	1943.6	1986.9
12.5°	1612.9	1638.3	1679.5	1731.2	1792.5	1821.0	1848.5	1906.6	1962.6	2017.5	2068.2
15°	1587.6	1621.4	1673.1	1738.6	1813.6	1848.5	1882.3	1949.9	2012.2	2070.3	2124.2
17.5°	1560.1	1601.3	1663.6	1742.9	1829.5	1867.5	1902.4	1975.2	2038.6	2100.9	2162.2
20°	1525.3	1579.1	1651.0	1739.7	1831.6	1870.7	1908.7	1982.6	2050.2	2123.1	2194.9
22.5°	1491.5	1547.4	1633.0	1726.0	1816.8	1859.0	1898.1	1978.4	2056.6	2141.1	2224.5
25°	1452.4	1515.8	1606.6	1699.6	1790.4	1832.6	1877.0	1967.8	2062.9	2158.0	2248.8
27.5°	1408.0	1475.6	1568.6	1659.4	1753.4	1802.0	1852.7	1958.3	2066.1	2166.4	2254.1
30°	1359.4	1433.4	1520.0	1608.7	1714.3	1769.3	1827.4	1945.7	2061.9	2152.7	2233.0
32.5°	1305.6	1379.5	1459.8	1559.1	1672.1	1734.4	1802.0	1922.4	2038.6	2118.9	2190.7
35°	1245.4	1311.9	1394.3	1503.1	1628.8	1697.4	1764.0	1887.6	1998.5	2066.1	2115.7
37.5°	1183.0	1249.6	1326.7	1445.0	1580.2	1655.2	1717.5	1835.8	1939.3	1987.9	1989.0
40°	1111.2	1172.5	1254.9	1384.8	1526.3	1596.0	1664.7	1773.5	1862.2	1881.2	1844.3
42.5°	1030.9	1095.4	1184.1	1322.5	1462.9	1535.8	1595.0	1699.6	1766.1	1753.4	1673.1
45°	947.5	1018.3	1112.3	1253.8	1389.0	1455.6	1515.8	1608.7	1649.9	1609.8	1498.9
47.5°	864.0	940.1	1038.3	1178.8	1305.6	1370.0	1426.0	1503.1	1520.0	1454.5	1329.9
50°	783.8	860.9	962.3	1097.5	1214.7	1278.1	1325.6	1384.8	1380.6	1296.1	1169.3
52.5°	706.7	785.9	892.6	1009.8	1119.7	1175.6	1220.0	1258.0	1239.0	1139.7	1015.1
55°	632.7	709.8	803.8	907.3	1022.5	1066.8	1107.0	1128.1	1096.4	996.1	872.5
57.5°	567.2	635.9	730.9	822.8	921.1	958.0	991.8	998.2	955.9	847.1	744.7
60°	503.8	565.1	648.6	720.4	814.4	849.2	873.5	870.4	825.0	734.1	635.9
62.5°	443.6	496.5	567.2	638.0	709.8	737.3	758.4	758.4	702.4	623.2	547.2
65°	386.6	431.0	486.9	538.7	609.5	630.6	647.5	632.7	592.6	517.6	461.6
67.5°	332.7	367.6	410.9	454.2	514.4	530.3	540.8	536.6	493.3	431.0	385.5
70°	279.9	307.4	341.2	375.0	422.5	434.1	443.6	439.4	405.6	360.2	312.7
72.5°	227.1	247.2	274.6	303.2	338.0	346.5	354.9	350.7	317.9	288.4	253.5
75°	180.6	194.4	213.4	235.6	260.9	269.4	274.6	272.5	247.2	222.9	199.6
77.5°	136.3	145.8	160.6	176.4	193.3	196.5	201.7	199.6	183.8	166.9	151.0
80°	97.2	102.5	113.0	122.5	134.1	137.3	139.4	139.4	127.8	117.2	108.8
82.5°	63.4	66.5	72.9	78.2	85.6	86.6	88.7	88.7	81.3	77.1	72.9
85°	34.9	37.0	41.2	43.3	46.5	45.4	47.5	48.6	45.4	44.4	42.3
87.5°	14.8	14.8	15.8	18.0	16.9	16.9	18.0	19.0	18.0	16.9	18.0
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9
2.5°	1733.4	1723.8	1736.5	1748.1	1751.3	1756.6	1746.0	1739.7	1737.6	1747.1	1740.7
5°	1817.9	1816.8	1837.9	1855.9	1861.2	1870.7	1865.4	1864.3	1866.4	1882.3	1874.9
7.5°	1919.3	1928.8	1960.5	1986.9	1995.3	2009.0	2008.0	2010.1	2014.3	2031.2	2024.9
10°	2033.3	2040.7	2078.8	2112.6	2123.1	2136.9	2128.4	2143.2	2148.5	2162.2	2153.8
12.5°	2115.7	2128.4	2168.5	2205.5	2215.0	2224.5	2223.5	2235.1	2244.6	2257.3	2252.0
15°	2170.7	2186.5	2234.0	2275.2	2287.9	2296.3	2297.4	2312.2	2322.8	2339.7	2346.0
17.5°	2212.9	2238.3	2292.1	2339.7	2353.4	2362.9	2369.2	2386.1	2399.9	2415.7	2421.0
20°	2252.0	2287.9	2349.2	2398.8	2411.5	2418.9	2428.4	2442.1	2458.0	2471.7	2474.9
22.5°	2285.8	2328.0	2387.2	2429.4	2438.9	2442.1	2448.5	2458.0	2474.9	2485.4	2490.7
25°	2304.8	2339.7	2392.5	2428.4	2435.8	2430.5	2434.7	2434.7	2448.5	2454.8	2466.4
27.5°	2297.4	2327.0	2368.2	2387.2	2384.0	2369.2	2350.2	2334.4	2347.1	2347.1	2362.9
30°	2262.5	2276.3	2289.0	2275.2	2245.6	2228.7	2194.9	2162.2	2172.8	2168.5	2184.4
32.5°	2189.7	2169.6	2149.5	2106.2	2064.0	2036.5	1985.8	1967.8	1950.9	1948.8	1962.6
35°	2074.5	2018.5	1965.7	1900.2	1852.7	1818.9	1758.7	1713.3	1717.5	1719.6	1730.2
37.5°	1921.4	1836.9	1761.9	1683.7	1640.4	1597.1	1537.9	1513.6	1496.7	1485.1	1505.2
40°	1745.0	1640.4	1553.8	1473.5	1434.4	1386.9	1332.0	1307.7	1290.8	1281.3	1295.0
42.5°	1563.3	1451.3	1360.5	1278.1	1236.9	1195.7	1142.9	1119.7	1100.6	1086.9	1102.8
45°	1386.9	1270.7	1176.7	1095.4	1054.2	1021.4	969.7	949.6	931.6	916.8	933.7
47.5°	1214.7	1117.5	1007.7	929.5	894.7	863.0	821.8	804.9	791.2	780.6	791.2
50°	1053.1	958.0	855.6	791.2	763.7	735.2	702.4	689.7	679.2	671.8	678.1
52.5°	905.2	816.5	729.9	668.6	653.8	632.7	607.4	597.9	585.2	583.1	590.5
55°	772.1	696.1	625.3	579.9	565.1	549.3	530.3	523.9	516.5	518.6	517.6
57.5°	659.1	595.7	537.6	506.0	492.2	479.6	465.8	462.6	459.5	460.5	459.5
60°	563.0	511.2	465.8	439.4	431.0	421.5	411.9	406.7	408.8	410.9	414.1
62.5°	478.5	438.4	402.4	382.4	377.1	370.8	365.5	362.3	364.4	366.5	369.7
65°	405.6	373.9	347.5	333.8	328.5	325.3	322.2	324.3	322.2	324.3	327.4
67.5°	341.2	316.9	296.8	288.4	285.2	282.0	279.9	283.1	282.0	283.1	285.2
70°	283.1	263.0	249.3	242.9	240.8	238.7	237.7	237.7	239.8	241.9	244.0
72.5°	228.2	216.5	208.1	202.8	200.7	199.6	198.6	200.7	200.7	202.8	204.9
75°	180.6	173.2	165.8	164.8	163.7	162.7	162.7	164.8	164.8	165.8	166.9
77.5°	141.5	135.2	128.9	128.9	127.8	129.9	127.8	129.9	127.8	129.9	131.0
80°	104.6	99.3	98.2	95.1	94.0	97.2	94.0	96.1	94.0	96.1	97.2
82.5°	70.8	67.6	66.5	64.4	64.4	66.5	64.4	65.5	64.4	65.5	66.5
85°	41.2	40.1	39.1	39.1	38.0	40.1	38.0	39.1	38.0	39.1	40.1
87.5°	18.0	18.0	16.9	18.0	15.8	18.0	16.9	18.0	19.0	18.0	18.0
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9
2.5°	1748.1	1737.6	1734.4	1726.0	1728.1	1738.6	1735.5	1741.8	1716.5	1696.4	1682.7
5°	1878.1	1860.1	1850.6	1835.8	1834.8	1837.9	1826.3	1826.3	1790.4	1760.8	1735.5
7.5°	2027.0	2002.7	1987.9	1967.8	1964.7	1960.5	1939.3	1928.8	1882.3	1836.9	1797.8
10°	2153.8	2129.5	2113.6	2094.6	2090.4	2084.0	2055.5	2035.4	1977.4	1919.3	1865.4
12.5°	2252.0	2226.6	2208.7	2191.8	2185.4	2179.1	2152.7	2120.0	2068.2	1996.4	1933.0
15°	2340.7	2313.2	2292.1	2272.1	2261.5	2248.8	2218.2	2187.6	2133.7	2056.6	1987.9
17.5°	2414.7	2385.1	2359.7	2339.7	2325.9	2309.0	2272.1	2229.8	2175.9	2094.6	2023.8
20°	2468.5	2438.9	2411.5	2393.5	2381.9	2357.6	2318.5	2269.9	2210.8	2122.1	2041.8
22.5°	2486.5	2459.0	2434.7	2421.0	2409.4	2390.4	2355.5	2308.0	2239.3	2142.1	2051.3
25°	2464.3	2448.5	2431.6	2424.2	2415.7	2400.9	2375.6	2331.2	2264.7	2160.1	2056.6
27.5°	2367.1	2371.3	2373.5	2385.1	2383.0	2386.1	2371.3	2332.3	2274.2	2172.8	2059.7
30°	2200.2	2224.5	2246.7	2274.2	2279.4	2316.4	2328.0	2301.6	2256.2	2170.7	2058.7
32.5°	2005.9	2022.8	2060.8	2089.3	2120.0	2186.5	2229.8	2244.6	2218.2	2147.4	2043.9
35°	1772.4	1797.8	1847.4	1888.6	1923.5	2013.3	2085.1	2144.2	2149.5	2106.2	2010.1
37.5°	1547.4	1576.0	1626.7	1677.4	1704.8	1813.6	1907.6	2004.8	2051.3	2041.8	1964.7
40°	1337.2	1367.9	1417.5	1470.3	1492.5	1605.5	1709.1	1835.8	1919.3	1955.2	1901.3
42.5°	1142.9	1174.6	1223.2	1269.6	1316.1	1407.0	1511.5	1653.1	1759.8	1833.7	1816.8
45°	967.6	997.1	1044.7	1085.9	1116.5	1221.1	1323.5	1451.3	1587.6	1678.4	1706.9
47.5°	819.7	845.0	887.3	924.2	965.4	1046.8	1149.2	1276.0	1415.4	1540.1	1581.2
50°	701.4	722.5	758.4	788.0	818.6	891.5	985.5	1109.1	1247.5	1380.6	1441.8
52.5°	607.4	624.3	653.8	673.9	700.3	759.5	841.9	955.9	1085.9	1222.1	1297.1
55°	532.4	545.0	571.4	582.0	603.1	650.7	718.3	821.8	933.7	1066.8	1151.3
57.5°	470.0	478.5	500.7	508.1	523.9	560.9	614.8	702.4	799.6	922.1	1023.5
60°	418.3	424.6	438.4	444.7	457.4	485.9	528.1	596.8	680.2	790.1	873.5
62.5°	370.8	375.0	385.5	389.8	399.3	420.4	454.2	509.1	576.7	669.7	759.5
65°	328.5	330.6	339.1	339.1	347.5	363.4	388.7	434.1	485.9	565.1	642.2
67.5°	286.3	287.3	290.5	294.7	301.0	312.7	330.6	366.5	407.7	472.2	536.6
70°	244.0	245.1	249.3	249.3	253.5	262.0	278.9	305.3	337.0	388.7	441.5
72.5°	204.9	207.0	209.1	208.1	212.3	217.6	229.2	246.1	277.8	313.7	356.0
75°	167.9	166.9	171.1	170.1	173.2	176.4	185.9	197.5	218.6	244.0	277.8
77.5°	132.0	131.0	134.1	136.3	135.2	138.4	144.7	151.0	165.8	183.8	207.0
80°	98.2	99.3	99.3	101.4	101.4	102.5	106.7	109.9	120.4	131.0	146.8
82.5°	66.5	68.7	68.7	70.8	69.7	70.8	72.9	75.0	81.3	86.6	96.1
85°	40.1	40.1	41.2	42.3	42.3	42.3	44.4	44.4	47.5	49.6	54.9
87.5°	19.0	18.0	19.0	20.1	19.0	20.1	19.0	20.1	22.2	21.1	23.2
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: P231540

CATALOG NUMBER: S121-DR-2-30-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9
2.5°	1674.2	1677.4	1675.3	1672.1	1672.1	1681.6	1679.5	1663.6	1647.8	1629.8	1623.5
5°	1718.6	1713.3	1705.9	1698.5	1690.0	1691.1	1681.6	1658.4	1636.2	1612.9	1603.4
7.5°	1767.2	1749.2	1737.6	1724.9	1704.8	1698.5	1679.5	1648.9	1621.4	1593.9	1580.2
10°	1821.0	1787.2	1767.2	1748.1	1717.5	1699.6	1672.1	1634.1	1602.4	1569.6	1553.8
12.5°	1873.8	1825.2	1798.8	1771.4	1726.0	1698.5	1661.5	1615.0	1578.1	1542.2	1522.1
15°	1919.3	1862.2	1828.4	1794.6	1733.4	1691.1	1644.6	1592.9	1547.4	1510.5	1486.2
17.5°	1950.9	1886.5	1851.7	1812.6	1737.6	1681.6	1624.6	1565.4	1515.8	1473.5	1445.0
20°	1963.6	1896.0	1860.1	1818.9	1735.5	1665.8	1601.3	1533.7	1480.9	1437.6	1399.6
22.5°	1962.6	1890.7	1852.7	1810.5	1722.8	1647.8	1572.8	1497.8	1440.8	1391.1	1347.8
25°	1953.1	1872.8	1831.6	1788.3	1700.6	1623.5	1541.1	1458.7	1396.4	1339.4	1286.5
27.5°	1943.6	1847.4	1802.0	1757.6	1668.9	1590.8	1503.1	1415.4	1346.8	1281.3	1220.0
30°	1931.9	1820.0	1768.2	1717.5	1621.4	1545.3	1459.8	1368.9	1292.9	1218.9	1145.0
32.5°	1915.0	1792.5	1735.5	1675.3	1569.6	1492.5	1410.1	1319.3	1232.7	1148.2	1070.0
35°	1890.7	1760.8	1700.6	1634.1	1511.5	1430.2	1353.1	1259.1	1170.4	1076.3	998.2
37.5°	1851.7	1721.7	1657.3	1588.6	1451.3	1361.5	1286.5	1199.9	1101.7	1004.5	929.5
40°	1799.9	1671.0	1607.7	1534.8	1389.0	1288.7	1213.7	1130.2	1028.8	933.7	867.2
42.5°	1737.6	1607.7	1545.3	1476.7	1325.6	1214.7	1136.6	1053.1	954.9	867.2	808.1
45°	1655.2	1532.7	1468.2	1407.0	1258.0	1138.7	1056.3	971.8	884.1	807.0	752.1
47.5°	1558.0	1450.3	1385.8	1326.7	1184.1	1062.6	974.9	889.4	813.3	747.8	699.3
50°	1445.0	1359.4	1297.1	1234.8	1104.9	984.5	893.6	808.1	742.6	691.9	648.6
52.5°	1323.5	1261.2	1201.0	1142.9	1020.4	905.2	808.1	729.9	677.1	636.9	601.0
55°	1195.7	1156.6	1108.0	1044.7	930.6	822.8	732.0	654.9	612.6	583.1	553.5
57.5°	1064.7	1043.6	1002.4	944.3	837.6	740.5	657.0	587.3	551.4	529.2	507.0
60°	935.9	923.2	884.1	842.9	744.7	659.1	581.0	523.9	494.3	477.4	459.5
62.5°	808.1	807.0	782.7	739.4	653.8	579.9	510.2	461.6	438.4	426.7	411.9
65°	687.6	695.0	671.8	638.0	565.1	500.7	442.6	403.5	385.5	376.0	365.5
67.5°	575.7	586.2	568.3	539.8	480.6	425.7	380.3	348.6	333.8	326.4	317.9
70°	474.3	482.7	471.1	446.8	399.3	356.0	319.0	294.7	284.1	277.8	273.6
72.5°	383.4	387.7	378.1	360.2	324.3	291.5	259.8	241.9	233.4	228.2	222.9
75°	294.7	304.2	295.8	281.0	252.5	225.0	207.0	194.4	187.0	183.8	180.6
77.5°	218.6	225.0	219.7	209.1	191.2	171.1	158.4	153.2	148.9	141.5	139.4
80°	153.2	158.4	155.3	147.9	136.3	126.8	114.1	112.0	107.7	102.5	101.4
82.5°	103.5	102.5	101.4	95.1	88.7	83.4	75.0	75.0	68.7	67.6	66.5
85°	54.9	57.0	56.0	52.8	50.7	45.4	43.3	43.3	41.2	38.0	38.0
87.5°	22.2	23.2	23.2	21.1	21.1	19.0	20.1	19.0	18.0	15.8	15.8
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: P231540

CATALOG NUMBER: S121-DR-2-30-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9
2.5°	1619.3	1620.3	1617.2	1610.8	1607.7	1598.1	1606.6	1596.0	1582.3	1592.9	1589.7
5°	1595.0	1593.9	1587.6	1579.1	1572.8	1560.1	1566.5	1553.8	1537.9	1544.3	1540.1
7.5°	1567.5	1565.4	1557.0	1544.3	1533.7	1518.9	1524.2	1509.4	1492.5	1498.9	1494.6
10°	1537.9	1532.7	1522.1	1506.3	1494.6	1478.8	1483.0	1466.1	1447.1	1449.2	1440.8
12.5°	1502.0	1494.6	1483.0	1466.1	1452.4	1432.3	1431.3	1407.0	1379.5	1374.2	1357.3
15°	1461.9	1453.4	1441.8	1419.6	1399.6	1368.9	1359.4	1323.5	1285.5	1272.8	1250.6
17.5°	1422.8	1408.0	1394.3	1361.5	1329.9	1286.5	1268.6	1225.3	1186.2	1171.4	1151.3
20°	1366.8	1353.1	1333.0	1288.7	1246.4	1195.7	1173.5	1126.0	1099.6	1092.2	1080.6
22.5°	1304.5	1285.5	1263.3	1204.2	1157.7	1109.1	1091.1	1055.2	1039.4	1037.3	1030.9
25°	1232.7	1209.4	1174.6	1118.6	1074.2	1036.2	1027.8	1002.4	994.0	995.0	989.7
27.5°	1164.0	1130.2	1098.5	1039.4	1004.5	980.2	978.1	958.0	954.9	953.8	946.4
30°	1078.5	1052.1	1020.4	970.7	946.4	933.7	934.8	916.8	912.6	910.5	906.3
32.5°	1004.5	981.3	951.7	912.6	898.9	894.7	888.3	873.5	875.7	873.5	873.5
35°	935.9	910.5	891.5	863.0	856.6	854.5	845.0	834.5	836.6	842.9	840.8
37.5°	873.5	854.5	836.6	818.6	814.4	813.3	802.8	799.6	808.1	808.1	805.9
40°	816.5	800.7	785.9	776.4	773.2	771.1	764.7	764.7	773.2	772.1	771.1
42.5°	764.7	750.0	740.5	735.2	732.0	732.0	728.8	734.1	738.3	737.3	732.0
45°	715.1	703.5	698.2	692.9	690.8	694.0	692.9	696.1	701.4	698.2	691.9
47.5°	666.5	658.1	654.9	650.7	653.8	654.9	655.9	658.1	661.2	655.9	649.6
50°	621.1	614.8	612.6	607.4	615.8	614.8	617.9	621.1	619.0	611.6	606.3
52.5°	576.7	572.5	571.4	571.4	575.7	575.7	577.8	579.9	574.6	567.2	561.9
55°	534.5	530.3	529.2	526.0	532.4	534.5	534.5	534.5	528.1	519.7	515.5
57.5°	492.2	486.9	485.9	489.1	489.1	489.1	490.1	489.1	482.7	476.4	473.2
60°	447.9	443.6	442.6	445.7	444.7	448.9	444.7	442.6	437.3	434.1	435.2
62.5°	403.5	398.2	398.2	401.4	401.4	403.5	399.3	396.1	392.9	390.8	394.0
65°	354.9	352.8	352.8	357.0	357.0	354.9	351.7	351.7	350.7	349.6	349.6
67.5°	309.5	308.4	309.5	313.7	312.7	309.5	307.4	308.4	308.4	309.5	309.5
70°	269.4	262.0	262.0	269.4	269.4	269.4	262.0	264.1	264.1	268.3	272.5
72.5°	222.9	218.6	218.6	222.9	219.7	223.9	219.7	222.9	223.9	226.0	228.2
75°	176.4	180.6	177.5	181.7	179.6	181.7	178.5	181.7	182.7	181.7	180.6
77.5°	139.4	140.5	137.3	141.5	140.5	141.5	139.4	141.5	141.5	139.4	141.5
80°	101.4	102.5	100.3	104.6	102.5	103.5	101.4	103.5	102.5	98.2	99.3
82.5°	67.6	68.7	66.5	70.8	67.6	69.7	66.5	67.6	66.5	62.3	63.4
85°	39.1	40.1	38.0	41.2	39.1	40.1	37.0	38.0	37.0	34.9	34.9
87.5°	15.8	16.9	14.8	16.9	15.8	15.8	13.7	14.8	14.8	12.7	13.7
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: P231540

CATALOG NUMBER: S121-DR-2-30-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9
2.5°	1589.7	1582.3	1578.1	1573.9	1569.6	1572.8	1574.9	1576.0	1582.3	1580.2	1581.2
5°	1537.9	1530.5	1524.2	1520.0	1518.9	1525.3	1528.4	1527.4	1530.5	1526.3	1528.4
7.5°	1493.6	1486.2	1479.8	1473.5	1474.6	1482.0	1486.2	1486.2	1490.4	1484.1	1484.1
10°	1440.8	1431.3	1420.7	1413.3	1412.2	1418.6	1419.6	1417.5	1426.0	1426.0	1430.2
12.5°	1356.3	1342.5	1335.1	1316.1	1315.1	1321.4	1324.6	1330.9	1334.1	1338.3	1346.8
15°	1247.5	1234.8	1224.2	1204.2	1203.1	1209.4	1205.2	1222.1	1228.5	1234.8	1243.2
17.5°	1148.2	1139.7	1129.2	1114.4	1112.3	1118.6	1117.5	1129.2	1133.4	1137.6	1145.0
20°	1078.5	1067.9	1065.8	1056.3	1056.3	1060.5	1059.4	1064.7	1066.8	1066.8	1071.1
22.5°	1029.9	1023.5	1020.4	1014.0	1014.0	1017.2	1018.3	1020.4	1020.4	1017.2	1019.3
25°	988.7	982.3	977.1	968.6	969.7	972.8	973.9	976.0	977.1	976.0	978.1
27.5°	944.3	938.0	933.7	928.5	929.5	932.7	931.6	933.7	933.7	933.7	935.9
30°	905.2	901.0	901.0	897.8	901.0	903.1	902.1	902.1	899.9	895.7	895.7
32.5°	871.4	870.4	870.4	869.3	869.3	869.3	870.4	871.4	869.3	866.1	865.1
35°	839.7	837.6	837.6	834.5	837.6	837.6	837.6	838.7	836.6	834.5	831.3
37.5°	807.0	807.0	804.9	804.9	803.8	805.9	804.9	804.9	803.8	800.7	798.5
40°	772.1	771.1	766.9	765.8	764.7	766.9	764.7	766.9	766.9	765.8	764.7
42.5°	732.0	730.9	728.8	726.7	725.7	727.8	725.7	726.7	727.8	727.8	725.7
45°	690.8	691.9	687.6	682.4	686.6	686.6	685.5	686.6	686.6	687.6	685.5
47.5°	649.6	649.6	645.4	643.3	642.2	642.2	640.1	642.2	644.3	646.4	644.3
50°	605.2	604.2	598.9	593.6	596.8	597.9	594.7	596.8	597.9	601.0	601.0
52.5°	559.8	559.8	555.6	552.4	556.7	555.6	553.5	553.5	554.5	553.5	554.5
55°	515.5	517.6	514.4	512.3	513.4	514.4	513.4	513.4	513.4	512.3	511.2
57.5°	474.3	476.4	473.2	472.2	474.3	475.3	472.2	472.2	472.2	472.2	470.0
60°	434.1	435.2	434.1	432.0	435.2	436.2	434.1	433.1	432.0	429.9	429.9
62.5°	392.9	394.0	395.0	394.0	396.1	397.2	395.0	394.0	392.9	388.7	387.7
65°	351.7	353.9	356.0	356.0	358.1	357.0	356.0	354.9	352.8	349.6	346.5
67.5°	310.5	313.7	315.8	315.8	317.9	316.9	315.8	314.8	312.7	309.5	306.3
70°	270.4	273.6	273.6	274.6	274.6	275.7	272.5	272.5	272.5	268.3	263.0
72.5°	225.0	228.2	227.1	228.2	228.2	226.0	226.0	226.0	227.1	222.9	220.8
75°	181.7	183.8	182.7	183.8	180.6	179.6	182.7	179.6	179.6	179.6	177.5
77.5°	137.3	138.4	137.3	138.4	133.1	137.3	136.3	133.1	134.1	134.1	138.4
80°	96.1	97.2	95.1	95.1	90.8	94.0	94.0	91.9	91.9	91.9	96.1
82.5°	61.3	61.3	60.2	60.2	57.0	60.2	59.2	57.0	57.0	58.1	60.2
85°	34.9	33.8	32.7	33.8	30.6	32.7	32.7	31.7	31.7	31.7	32.7
87.5°	13.7	12.7	12.7	12.7	12.7	12.7	12.7	11.6	11.6	12.7	12.7
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: P231540

CATALOG NUMBER: S121-DR-2-30-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9	1649.9
2.5°	1587.6	1592.9	1603.4	1614.0	1588.6	1592.9	1598.1	1605.5	1611.9	1615.0	1618.2
5°	1533.7	1542.2	1553.8	1568.6	1549.6	1550.6	1562.2	1572.8	1582.3	1586.5	1591.8
7.5°	1488.3	1494.6	1510.5	1521.0	1505.2	1507.3	1522.1	1537.9	1549.6	1555.9	1563.3
10°	1436.5	1446.0	1467.2	1477.7	1464.0	1465.1	1477.7	1496.7	1513.6	1521.0	1530.5
12.5°	1357.3	1372.1	1402.7	1418.6	1417.5	1420.7	1434.4	1453.4	1471.4	1480.9	1493.6
15°	1246.4	1272.8	1311.9	1335.1	1349.9	1361.5	1382.7	1409.1	1428.1	1436.5	1447.1
17.5°	1149.2	1172.5	1209.4	1234.8	1261.2	1283.4	1313.0	1351.0	1377.4	1389.0	1401.7
20°	1074.2	1086.9	1116.5	1138.7	1168.2	1193.6	1228.5	1279.2	1316.1	1332.0	1348.9
22.5°	1021.4	1032.0	1046.8	1061.6	1084.8	1107.0	1139.7	1197.8	1245.4	1265.4	1290.8
25°	979.2	987.6	997.1	1004.5	1019.3	1024.6	1056.3	1113.3	1167.2	1191.5	1223.2
27.5°	938.0	948.5	957.0	962.3	970.7	968.6	991.8	1033.0	1086.9	1114.4	1146.1
30°	895.7	903.1	914.7	920.0	929.5	920.0	931.6	962.3	1009.8	1036.2	1067.9
32.5°	863.0	863.0	868.3	874.6	888.3	879.9	883.0	902.1	941.1	964.4	995.0
35°	831.3	830.2	831.3	832.3	844.0	841.9	840.8	850.3	880.9	899.9	926.4
37.5°	797.5	796.4	796.4	795.4	801.7	802.8	802.8	804.9	826.0	837.6	863.0
40°	761.6	760.5	761.6	760.5	762.6	761.6	762.6	764.7	777.4	785.9	802.8
42.5°	724.6	725.7	725.7	725.7	724.6	721.4	722.5	723.6	733.1	736.2	750.0
45°	684.5	687.6	687.6	686.6	686.6	684.5	680.2	683.4	689.7	689.7	700.3
47.5°	644.3	645.4	647.5	647.5	647.5	646.4	640.1	642.2	647.5	645.4	652.8
50°	600.0	603.1	605.2	607.4	608.4	606.3	601.0	600.0	600.0	602.1	605.2
52.5°	554.5	558.8	561.9	565.1	567.2	566.2	563.0	558.8	559.8	559.8	561.9
55°	511.2	512.3	517.6	522.9	523.9	523.9	521.8	516.5	519.7	516.5	519.7
57.5°	467.9	469.0	472.2	472.2	478.5	480.6	479.6	475.3	477.4	474.3	476.4
60°	427.8	427.8	427.8	431.0	433.1	436.2	436.2	432.0	433.1	432.0	433.1
62.5°	386.6	385.5	384.5	386.6	386.6	390.8	391.9	388.7	388.7	390.8	388.7
65°	345.4	344.3	343.3	339.1	341.2	344.3	347.5	345.4	344.3	345.4	344.3
67.5°	305.3	303.2	302.1	296.8	297.9	298.9	302.1	301.0	301.0	301.0	300.0
70°	268.3	259.8	258.8	256.7	252.5	253.5	254.6	254.6	253.5	254.6	252.5
72.5°	223.9	218.6	215.5	215.5	215.5	211.3	212.3	212.3	210.2	211.3	209.1
75°	181.7	177.5	176.4	176.4	174.3	171.1	171.1	169.0	169.0	169.0	166.9
77.5°	138.4	136.3	136.3	136.3	135.2	132.0	133.1	131.0	128.9	129.9	131.0
80°	97.2	96.1	96.1	97.2	98.2	95.1	96.1	94.0	93.0	93.0	90.8
82.5°	61.3	61.3	61.3	63.4	64.4	65.5	63.4	61.3	61.3	61.3	62.3
85°	33.8	32.7	33.8	34.9	34.9	33.8	34.9	34.9	34.9	34.9	32.7
87.5°	12.7	11.6	12.7	12.7	12.7	11.6	12.7	12.7	12.7	13.7	13.7
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: P231540

CATALOG NUMBER: S121-DR-2-30-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	1649.9	1649.9	1649.9	1649.9
2.5°	1629.8	1648.9	1662.6	1668.9
5°	1606.6	1629.8	1648.9	1661.5
7.5°	1581.2	1606.6	1631.9	1649.9
10°	1551.7	1583.4	1609.8	1634.1
12.5°	1517.9	1552.7	1582.3	1612.9
15°	1479.8	1518.9	1552.7	1587.6
17.5°	1436.5	1480.9	1517.9	1560.1
20°	1386.9	1437.6	1479.8	1525.3
22.5°	1334.1	1390.1	1438.7	1491.5
25°	1274.9	1337.2	1394.3	1452.4
27.5°	1206.3	1280.2	1345.7	1408.0
30°	1133.4	1214.7	1290.8	1359.4
32.5°	1057.3	1146.1	1232.7	1305.6
35°	985.5	1075.3	1170.4	1245.4
37.5°	917.9	1002.4	1103.8	1183.0
40°	852.4	929.5	1030.9	1111.2
42.5°	793.3	861.9	958.0	1030.9
45°	736.2	797.5	882.0	947.5
47.5°	682.4	738.3	809.1	864.0
50°	631.7	680.2	737.3	783.8
52.5°	582.0	624.3	669.7	706.7
55°	533.4	569.3	601.0	632.7
57.5°	486.9	514.4	537.6	567.2
60°	440.5	461.6	476.4	503.8
62.5°	394.0	409.8	419.3	443.6
65°	347.5	359.1	366.5	386.6
67.5°	302.1	310.5	314.8	332.7
70°	253.5	256.7	262.0	279.9
72.5°	210.2	212.3	215.5	227.1
75°	167.9	171.1	172.2	180.6
77.5°	132.0	131.0	134.1	136.3
80°	91.9	93.0	96.1	97.2
82.5°	59.2	60.2	63.4	63.4
85°	32.7	33.8	35.9	34.9
87.5°	12.7	13.7	14.8	14.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)