

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: FAIL-SAFE

Report Number: P24518

Luminaire Tested: **MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P24518
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OL
Description: METALUX MPR3 2X4 AMBIENT/EXAM/READING LIGHT
Light Source: (4) 3500K LED LIGHT STRIPS
1UT217049835
Ballast/Driver: (2) 48W ADVANCE ELECTRONIC DRIVERS
LEDINTA2000C24DOM

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4409.8 lumens
Efficiency: N/A
Efficacy: 64.3 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.14 / 1.22
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 1.35' x H: 0.1')
CIE Type: Direct

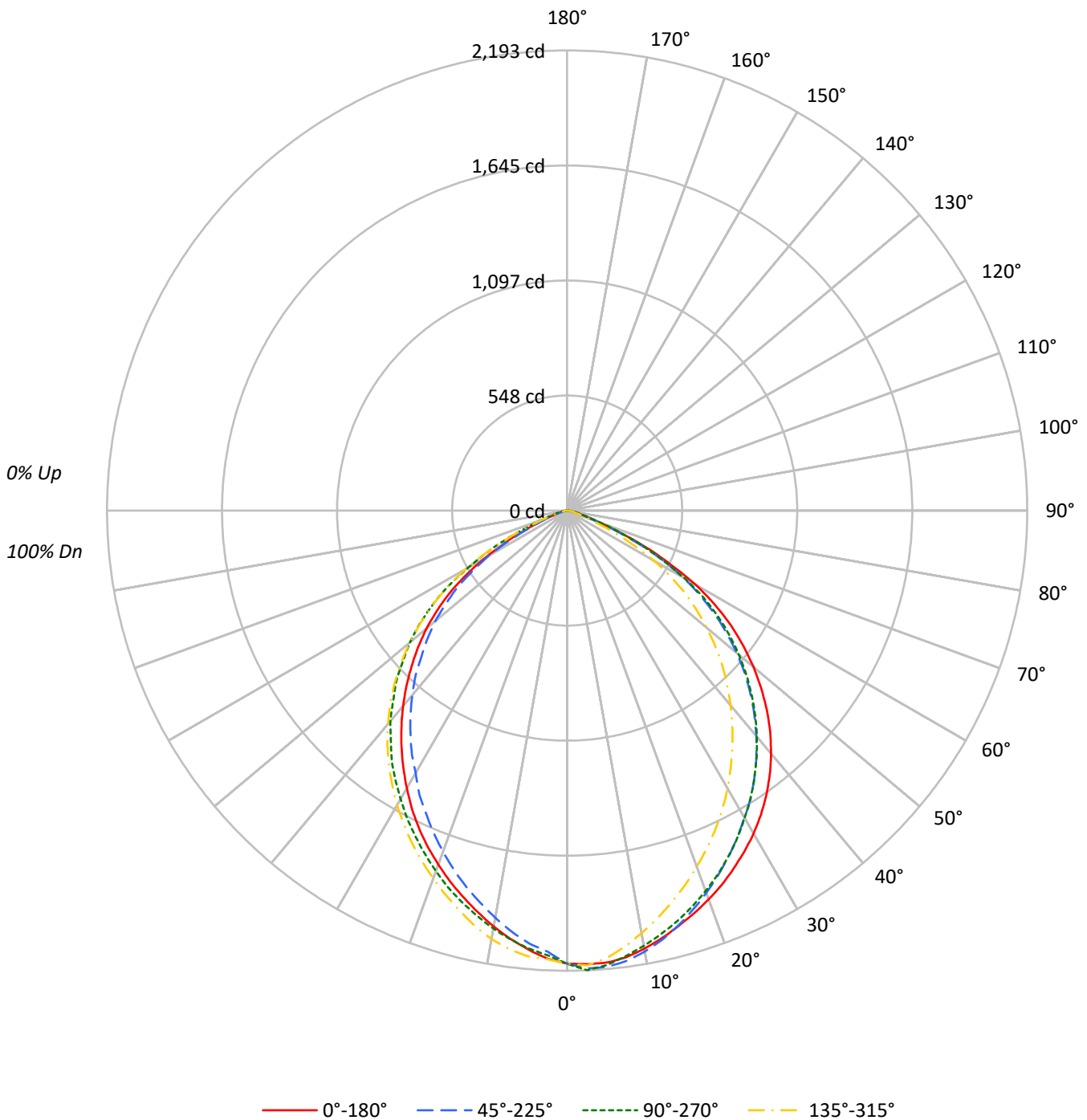
Input Watts (W): 68.6
Input Voltage (V): 120.05
Input Current (A_{in}): 0.573
Voltage Rise (V): NR
Power Factor: 0.9989
Total Harmonic Distortion (THDi): 7.16%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 5 HR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P24518

CATALOG NUMBER: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OL

Luminous Intensity Polar Plot





TEST NUMBER: P24518

CATALOG NUMBER: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OL

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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77
3	95	85	78	73	92	84	77	72	81	76	71	78	74	70	76	72	69	67
4	87	77	69	63	85	75	68	63	73	67	62	71	65	61	69	64	60	58
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	57	52	47	45
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42	41
8	65	52	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37
9	61	48	41	35	60	48	40	35	47	40	35	46	39	35	45	39	35	33
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	42	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	9152	9152	9152	9152
5°	9144	9208	8884	8873
10°	9008	8982	8555	8629
15°	8821	8766	8211	8364
20°	8663	8538	7886	8094
25°	8502	8302	7556	7815
30°	8345	8036	7173	7536
35°	8142	7760	6772	7272
40°	7877	7449	6341	6943
45°	7515	7083	5855	6554
50°	7026	6627	5300	6067
55°	6357	6022	4562	5376
60°	5309	5005	3376	4225
65°	3585	3568	1955	2800
70°	1602	1790	930	1302
75°	790	1011	515	736
80°	389	729	260	446
85°	132	532	100	227



TEST NUMBER: P24518

CATALOG NUMBER: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.3	4.6
10°-20°	554.0	12.6
20°-30°	800.0	18.1
30°-40°	913.5	20.7
40°-50°	878.3	19.9
50°-60°	680.9	15.4
60°-70°	309.1	7.0
70°-80°	61.8	1.4
80°-90°	10.9	0.2
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°	1555.3	35.3
0°-40°	2468.9	56.0
0°-60°	4028.1	91.3
0°-90°	4409.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4409.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2159	2159	2159	2159	2159	
5°	2163	2174	2101	2095	2163	205
15°	2050	2026	1908	1933	2050	579
25°	1880	1819	1671	1712	1880	867
35°	1655	1556	1376	1458	1655	1034
45°	1346	1244	1049	1152	1346	1036
55°	951	877	682	783	951	843
65°	414	396	226	311	414	410
75°	62	74	40	54	62	75
85°	5	18	4	8	5	8
90°	0	0	0	0	0	



TEST NUMBER: P24518

CATALOG NUMBER: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OL

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8
2.5°	2163.8	2170.1	2172.6	2177.6	2182.7	2187.7	2190.2	2188.9	2183.9	2183.9	2187.7
5°	2162.6	2167.6	2171.4	2176.4	2181.4	2187.7	2190.2	2190.2	2183.9	2182.7	2186.4
7.5°	2147.5	2152.6	2156.3	2161.3	2170.1	2175.1	2176.4	2175.1	2168.9	2165.1	2168.9
10°	2119.9	2123.7	2128.7	2137.5	2141.3	2146.3	2147.5	2146.3	2137.5	2133.7	2137.5
12.5°	2087.3	2089.8	2094.8	2102.4	2104.9	2106.1	2111.2	2104.9	2098.6	2094.8	2099.9
15°	2049.7	2054.7	2058.5	2064.7	2064.7	2063.5	2064.7	2057.2	2049.7	2047.2	2052.2
17.5°	2012.1	2014.6	2020.8	2023.3	2019.6	2014.6	2015.8	2008.3	1998.3	1994.5	1999.5
20°	1971.9	1973.2	1976.9	1976.9	1970.7	1964.4	1963.1	1953.1	1943.1	1939.3	1944.3
22.5°	1929.3	1926.8	1930.5	1928.0	1918.0	1910.5	1907.9	1897.9	1887.9	1880.3	1885.4
25°	1880.3	1880.3	1881.6	1875.3	1864.0	1854.0	1850.2	1839.0	1826.4	1818.9	1823.9
27.5°	1830.2	1830.2	1827.7	1818.9	1805.1	1792.5	1788.8	1775.0	1762.4	1756.2	1759.9
30°	1777.5	1775.0	1771.2	1759.9	1742.4	1729.8	1724.8	1711.0	1697.2	1689.7	1694.7
32.5°	1718.5	1716.0	1709.7	1695.9	1675.9	1663.3	1657.1	1644.5	1628.2	1628.2	1625.7
35°	1654.6	1652.0	1643.3	1628.2	1606.9	1600.6	1588.1	1571.8	1556.7	1555.5	1551.7
37.5°	1586.8	1581.8	1570.5	1556.7	1541.7	1529.1	1515.3	1495.2	1482.7	1481.4	1476.4
40°	1511.6	1506.5	1494.0	1478.9	1463.9	1450.1	1435.0	1416.2	1404.9	1402.4	1399.9
42.5°	1432.5	1423.7	1409.9	1396.1	1379.8	1366.0	1351.0	1333.4	1323.4	1320.9	1318.4
45°	1346.0	1335.9	1323.4	1307.1	1292.0	1278.2	1263.2	1246.9	1238.1	1235.6	1233.1
47.5°	1254.4	1244.4	1230.6	1214.3	1199.2	1186.7	1172.9	1157.8	1149.0	1147.8	1145.3
50°	1159.1	1147.8	1131.5	1116.4	1101.4	1090.1	1076.3	1062.5	1053.7	1053.7	1052.4
52.5°	1057.5	1043.7	1028.6	1013.6	999.8	988.5	974.7	963.4	954.6	957.1	954.6
55°	950.8	937.0	922.0	904.4	893.1	883.1	871.8	860.5	851.7	858.0	855.5
57.5°	835.4	819.1	807.8	790.3	780.2	771.5	761.4	753.9	743.9	750.1	750.1
60°	706.2	689.9	682.4	667.3	658.6	653.5	644.8	638.5	629.7	638.5	637.2
62.5°	555.7	539.4	531.9	520.6	520.6	520.6	515.6	513.0	518.1	515.6	513.0
65°	414.0	398.9	395.1	383.8	380.1	376.3	375.1	375.1	383.8	380.1	380.1
67.5°	267.2	257.2	258.4	253.4	253.4	252.1	245.9	240.8	234.6	247.1	248.4
70°	155.5	149.3	150.5	148.0	151.8	150.5	146.8	141.7	144.3	144.3	149.3
72.5°	96.6	91.6	92.8	91.6	91.6	91.6	89.1	87.8	90.3	90.3	92.8
75°	61.5	59.0	59.0	59.0	60.2	60.2	59.0	59.0	61.5	61.5	62.7
77.5°	38.9	37.6	37.6	37.6	38.9	40.1	40.1	40.1	42.6	42.6	43.9
80°	22.6	22.6	22.6	23.8	25.1	26.3	27.6	27.6	28.9	30.1	31.4
82.5°	11.3	11.3	12.5	13.8	15.1	16.3	17.6	18.8	20.1	21.3	21.3
85°	5.0	5.0	6.3	7.5	8.8	10.0	11.3	11.3	12.5	13.8	13.8
87.5°	1.3	2.5	3.8	5.0	5.0	6.3	7.5	7.5	8.8	8.8	8.8
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: P24518

CATALOG NUMBER: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OL

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8
2.5°	2190.2	2192.7	2193.9	2192.7	2195.2	2196.5	2193.9	2192.7	2192.7	2192.7	2191.4
5°	2187.7	2187.7	2185.2	2182.7	2181.4	2180.1	2176.4	2173.9	2172.6	2170.1	2168.9
7.5°	2168.9	2167.6	2165.1	2161.3	2157.6	2152.6	2146.3	2141.3	2140.0	2135.0	2132.5
10°	2137.5	2136.2	2133.7	2130.0	2126.2	2121.2	2113.7	2106.1	2101.1	2093.6	2088.6
12.5°	2098.6	2098.6	2096.1	2093.6	2088.6	2084.8	2076.0	2067.3	2061.0	2054.7	2045.9
15°	2053.5	2053.5	2052.2	2049.7	2045.9	2042.2	2033.4	2025.9	2017.1	2008.3	1997.0
17.5°	2002.0	2005.8	2005.8	2004.5	2000.8	1995.8	1988.2	1979.4	1970.7	1959.4	1944.3
20°	1946.8	1950.6	1954.4	1955.6	1951.8	1946.8	1938.0	1929.3	1919.2	1904.2	1889.1
22.5°	1887.9	1892.9	1897.9	1900.4	1899.2	1894.1	1885.4	1876.6	1864.0	1847.7	1830.2
25°	1825.2	1830.2	1836.4	1840.2	1841.5	1839.0	1828.9	1818.9	1806.3	1786.3	1767.4
27.5°	1761.2	1766.2	1770.0	1776.2	1778.7	1776.2	1768.7	1757.4	1743.6	1722.3	1701.0
30°	1693.4	1698.5	1702.2	1708.5	1713.5	1711.0	1704.7	1692.2	1675.9	1653.3	1632.0
32.5°	1624.4	1628.2	1632.0	1637.0	1643.3	1643.3	1637.0	1625.7	1606.9	1583.1	1560.5
35°	1552.9	1555.5	1560.5	1563.0	1570.5	1573.0	1566.7	1555.5	1534.1	1509.0	1485.2
37.5°	1477.7	1480.2	1485.2	1487.7	1494.0	1499.0	1494.0	1482.7	1460.1	1432.5	1408.7
40°	1398.7	1401.2	1406.2	1407.4	1415.0	1421.2	1417.5	1406.2	1381.1	1354.8	1329.7
42.5°	1317.1	1319.6	1323.4	1325.9	1332.2	1341.0	1338.4	1327.2	1299.6	1273.2	1246.9
45°	1233.1	1234.3	1238.1	1239.3	1246.9	1255.7	1255.7	1244.4	1215.5	1189.2	1161.6
47.5°	1144.0	1146.5	1149.0	1150.3	1159.1	1169.1	1170.4	1159.1	1127.7	1101.4	1075.0
50°	1052.4	1052.4	1056.2	1058.7	1066.2	1078.8	1081.3	1068.7	1038.6	1012.3	983.4
52.5°	954.6	955.9	958.4	960.9	970.9	983.4	988.5	974.7	945.8	919.5	890.6
55°	854.2	856.8	858.0	861.8	871.8	885.6	890.6	876.8	848.0	821.6	795.3
57.5°	747.6	752.6	751.4	755.1	763.9	776.5	784.0	768.9	741.4	716.3	691.2
60°	636.0	638.5	636.0	638.5	646.0	654.8	661.1	644.8	618.4	597.1	575.8
62.5°	510.5	511.8	505.5	518.1	511.8	520.6	528.1	514.3	491.7	470.4	449.1
65°	376.3	378.8	378.8	386.4	395.1	403.9	410.2	396.4	377.6	361.3	341.2
67.5°	253.4	264.7	267.2	271.0	274.7	276.0	278.5	267.2	254.6	245.9	233.3
70°	155.5	164.3	166.8	169.3	171.9	171.9	173.1	165.6	159.3	154.3	146.8
72.5°	95.3	100.4	104.1	111.6	110.4	111.6	111.6	107.9	104.1	100.4	95.3
75°	64.0	66.5	69.0	75.3	75.3	76.5	76.5	74.0	71.5	69.0	65.2
77.5°	45.2	46.4	50.2	51.4	52.7	53.9	53.9	53.9	51.4	48.9	46.4
80°	32.6	33.9	35.1	37.6	36.4	37.6	37.6	38.9	36.4	35.1	33.9
82.5°	22.6	23.8	25.1	25.1	25.1	26.3	27.6	26.3	25.1	25.1	23.8
85°	15.1	16.3	16.3	16.3	16.3	17.6	17.6	17.6	16.3	16.3	15.1
87.5°	10.0	10.0	10.0	11.3	11.3	10.0	11.3	11.3	10.0	10.0	10.0
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: P24518

CATALOG NUMBER: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OL

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8
2.5°	2187.7	2185.2	2182.7	2178.9	2175.1	2170.1	2163.8	2157.6	2155.1	2158.8	2155.1
5°	2163.8	2161.3	2156.3	2151.3	2146.3	2141.3	2135.0	2126.2	2122.4	2123.7	2118.7
7.5°	2130.0	2122.4	2114.9	2108.6	2102.4	2097.4	2091.1	2084.8	2081.0	2084.8	2078.5
10°	2078.5	2074.8	2066.0	2056.0	2049.7	2044.7	2039.7	2032.1	2034.6	2034.6	2030.9
12.5°	2034.6	2023.3	2014.6	2003.3	1994.5	1989.5	1982.0	1975.7	1979.4	1979.4	1976.9
15°	1982.0	1968.2	1956.9	1945.6	1936.8	1930.5	1924.2	1916.7	1919.2	1920.5	1920.5
17.5°	1928.0	1913.0	1900.4	1886.6	1876.6	1870.3	1862.8	1857.8	1859.0	1861.5	1862.8
20°	1871.6	1854.0	1840.2	1823.9	1813.9	1806.3	1798.8	1793.8	1796.3	1798.8	1801.3
22.5°	1810.1	1792.5	1776.2	1761.2	1748.6	1741.1	1733.6	1724.8	1728.6	1731.1	1733.6
25°	1747.4	1727.3	1711.0	1694.7	1682.2	1673.4	1665.8	1657.1	1658.3	1662.1	1665.8
27.5°	1679.6	1659.6	1642.0	1625.7	1611.9	1603.1	1594.3	1586.8	1586.8	1590.6	1593.1
30°	1609.4	1586.8	1569.3	1551.7	1539.1	1529.1	1519.1	1510.3	1511.6	1512.8	1516.6
32.5°	1536.6	1514.1	1491.5	1475.2	1462.6	1451.3	1442.6	1430.0	1432.5	1432.5	1435.0
35°	1460.1	1437.5	1415.0	1396.1	1383.6	1372.3	1363.5	1358.5	1351.0	1351.0	1353.5
37.5°	1382.3	1361.0	1335.9	1317.1	1304.6	1293.3	1284.5	1278.2	1270.7	1269.5	1274.5
40°	1303.3	1280.7	1255.7	1236.8	1224.3	1211.8	1201.7	1196.7	1187.9	1186.7	1189.2
42.5°	1220.5	1196.7	1171.6	1154.0	1145.3	1129.0	1118.9	1112.7	1103.9	1101.4	1103.9
45°	1135.2	1112.7	1087.6	1072.5	1055.0	1047.4	1033.6	1026.1	1017.3	1014.8	1017.3
47.5°	1047.4	1024.8	999.8	984.7	974.7	957.1	945.8	939.5	929.5	927.0	928.3
50°	957.1	934.5	917.0	895.6	879.3	868.0	855.5	854.2	840.4	837.9	837.9
52.5°	864.3	846.7	820.4	802.8	787.8	776.5	767.7	758.9	748.9	745.1	746.4
55°	771.5	745.1	725.0	706.2	692.4	684.9	668.6	664.8	656.1	649.8	649.8
57.5°	669.8	643.5	620.9	605.9	595.8	582.0	568.2	564.5	553.2	548.2	548.2
60°	557.0	535.6	514.3	499.3	488.0	479.2	459.1	456.6	445.3	436.5	430.3
62.5°	432.8	410.2	395.1	385.1	368.8	360.0	343.7	339.9	326.1	321.1	321.1
65°	322.4	297.3	277.2	267.2	250.9	243.4	228.3	234.6	230.8	222.0	220.8
67.5°	220.8	200.7	181.9	165.6	154.3	149.3	145.5	145.5	148.0	143.0	140.5
70°	138.0	124.2	112.9	102.9	96.6	94.1	92.8	95.3	92.8	89.1	89.1
72.5°	89.1	80.3	74.0	69.0	65.2	64.0	62.7	61.5	60.2	60.2	60.2
75°	61.5	56.4	52.7	48.9	46.4	45.2	43.9	42.6	42.6	43.9	43.9
77.5°	43.9	40.1	37.6	36.4	33.9	32.6	31.4	30.1	28.9	27.6	28.9
80°	31.4	28.9	27.6	26.3	25.1	23.8	22.6	21.3	20.1	18.8	18.8
82.5°	22.6	21.3	20.1	18.8	17.6	16.3	16.3	15.1	13.8	12.5	11.3
85°	15.1	13.8	13.8	12.5	12.5	11.3	11.3	10.0	8.8	8.8	7.5
87.5°	10.0	10.0	8.8	8.8	8.8	7.5	7.5	6.3	6.3	5.0	5.0
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: P24518

CATALOG NUMBER: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OL

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8
2.5°	2151.3	2148.8	2146.3	2137.5	2125.0	2116.2	2111.2	2112.4	2113.7	2111.2	2112.4
5°	2114.9	2111.2	2109.9	2101.1	2087.3	2079.8	2073.5	2076.0	2078.5	2076.0	2078.5
7.5°	2073.5	2069.8	2067.3	2059.7	2044.7	2035.9	2030.9	2033.4	2035.9	2030.9	2032.1
10°	2027.1	2022.1	2018.3	2013.3	1997.0	1988.2	1982.0	1988.2	1984.5	1979.4	1979.4
12.5°	1975.7	1971.9	1968.2	1961.9	1950.6	1936.8	1931.8	1935.5	1929.3	1923.0	1923.0
15°	1920.5	1919.2	1914.2	1907.9	1891.6	1884.1	1876.6	1877.8	1871.6	1864.0	1864.0
17.5°	1865.3	1865.3	1859.0	1854.0	1837.7	1828.9	1820.1	1820.1	1811.4	1803.8	1803.8
20°	1803.8	1806.3	1801.3	1795.0	1778.7	1768.7	1758.7	1757.4	1748.6	1739.9	1738.6
22.5°	1738.6	1742.4	1738.6	1734.8	1723.5	1707.2	1694.7	1692.2	1682.2	1672.1	1670.9
25°	1670.9	1677.1	1674.6	1670.9	1659.6	1640.8	1627.0	1623.2	1611.9	1601.9	1600.6
27.5°	1599.4	1606.9	1605.6	1601.9	1590.6	1568.0	1552.9	1549.2	1537.9	1526.6	1525.4
30°	1521.6	1529.1	1531.6	1527.9	1516.6	1492.7	1476.4	1472.7	1460.1	1450.1	1450.1
32.5°	1443.8	1450.1	1456.4	1452.6	1441.3	1415.0	1406.2	1394.9	1382.3	1373.6	1374.8
35°	1362.3	1371.1	1377.3	1376.1	1363.5	1338.4	1328.4	1315.9	1305.8	1303.3	1298.3
37.5°	1282.0	1289.5	1298.3	1297.0	1285.8	1259.4	1249.4	1235.6	1224.3	1224.3	1221.8
40°	1198.0	1205.5	1216.8	1216.8	1204.2	1177.9	1167.8	1154.0	1144.0	1144.0	1141.5
42.5°	1111.4	1120.2	1132.7	1132.7	1121.4	1095.1	1083.8	1070.0	1060.0	1061.2	1060.0
45°	1024.8	1033.6	1047.4	1048.7	1037.4	1009.8	999.8	986.0	975.9	978.4	980.9
47.5°	937.0	947.1	960.9	963.4	952.1	924.5	913.2	900.7	891.9	895.6	894.4
50°	846.7	856.8	869.3	874.3	863.0	835.4	825.4	811.6	802.8	807.8	815.4
52.5°	752.6	762.7	776.5	780.2	768.9	741.4	731.3	718.8	713.8	717.5	716.3
55°	656.1	664.8	678.6	682.4	672.4	653.5	636.0	623.4	615.9	628.5	620.9
57.5°	548.2	554.4	567.0	569.5	562.0	544.4	530.6	521.8	515.6	511.8	521.8
60°	426.5	434.0	445.3	449.1	432.8	425.2	411.4	405.2	403.9	406.4	411.4
62.5°	319.9	324.9	334.9	336.2	321.1	317.4	306.1	298.5	289.8	296.0	294.8
65°	217.0	219.5	224.5	225.8	223.3	214.5	208.2	205.7	196.9	193.2	195.7
67.5°	136.7	138.0	140.5	140.5	139.2	133.0	129.2	126.7	126.7	126.7	122.9
70°	87.8	87.8	90.3	90.3	89.1	85.3	85.3	81.5	77.8	82.8	82.8
72.5°	60.2	59.0	59.0	60.2	59.0	56.4	55.2	55.2	52.7	55.2	50.2
75°	43.9	38.9	38.9	40.1	38.9	37.6	40.1	41.4	40.1	33.9	33.9
77.5°	27.6	26.3	25.1	25.1	23.8	25.1	23.8	22.6	22.6	21.3	21.3
80°	17.6	16.3	15.1	15.1	15.1	15.1	13.8	13.8	13.8	13.8	13.8
82.5°	11.3	10.0	8.8	8.8	7.5	7.5	8.8	7.5	7.5	8.8	8.8
85°	6.3	6.3	5.0	3.8	3.8	3.8	3.8	3.8	3.8	5.0	5.0
87.5°	3.8	3.8	2.5	2.5	1.3	2.5	2.5	2.5	2.5	2.5	2.5
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: P24518

CATALOG NUMBER: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OL

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8
2.5°	2108.6	2104.9	2101.1	2099.9	2101.1	2103.6	2109.9	2116.2	2119.9	2119.9	2121.2
5°	2074.8	2071.0	2067.3	2069.8	2071.0	2076.0	2082.3	2088.6	2091.1	2092.3	2094.8
7.5°	2028.4	2024.6	2020.8	2023.3	2027.1	2033.4	2040.9	2049.7	2053.5	2057.2	2062.2
10°	1974.4	1970.7	1968.2	1971.9	1975.7	1984.5	1995.8	2005.8	2013.3	2017.1	2023.3
12.5°	1918.0	1914.2	1918.0	1918.0	1924.2	1935.5	1946.8	1959.4	1966.9	1973.2	1979.4
15°	1859.0	1856.5	1861.5	1862.8	1869.1	1874.1	1892.9	1904.2	1915.5	1923.0	1933.0
17.5°	1800.1	1795.0	1800.1	1802.6	1811.4	1823.9	1839.0	1849.0	1862.8	1871.6	1884.1
20°	1733.6	1729.8	1736.1	1737.3	1744.9	1759.9	1775.0	1788.8	1803.8	1815.1	1828.9
22.5°	1667.1	1663.3	1669.6	1672.1	1680.9	1694.7	1709.7	1727.3	1742.4	1754.9	1771.2
25°	1595.6	1591.8	1599.4	1603.1	1610.6	1625.7	1642.0	1658.3	1678.4	1693.4	1712.3
27.5°	1522.8	1525.4	1525.4	1530.4	1540.4	1558.0	1573.0	1590.6	1613.2	1632.0	1652.0
30°	1446.3	1443.8	1453.8	1458.9	1470.2	1489.0	1505.3	1522.8	1546.7	1565.5	1586.8
32.5°	1371.1	1377.3	1381.1	1387.4	1401.2	1416.2	1432.5	1452.6	1477.7	1500.3	1522.8
35°	1294.5	1302.1	1307.1	1313.4	1327.2	1343.5	1363.5	1386.1	1411.2	1433.8	1457.6
37.5°	1216.8	1226.8	1229.3	1238.1	1258.2	1272.0	1284.5	1304.6	1330.9	1356.0	1379.8
40°	1139.0	1147.8	1154.0	1165.3	1176.6	1189.2	1205.5	1230.6	1258.2	1285.8	1310.8
42.5°	1057.5	1070.0	1076.3	1080.0	1095.1	1113.9	1130.2	1150.3	1174.1	1199.2	1225.5
45°	978.4	980.9	991.0	1002.3	1017.3	1026.1	1042.4	1067.5	1096.3	1123.9	1151.5
47.5°	898.2	901.9	913.2	917.0	928.3	945.8	964.6	983.4	1008.5	1032.4	1060.0
50°	804.1	820.4	822.9	831.7	845.5	853.0	873.1	898.2	925.7	950.8	978.4
52.5°	718.8	726.3	733.8	740.1	750.1	767.7	781.5	801.6	830.4	855.5	884.4
55°	618.4	638.5	638.5	648.5	654.8	669.8	689.9	708.7	733.8	763.9	782.7
57.5°	523.1	531.9	546.9	544.4	563.2	565.7	584.6	605.9	631.0	657.3	673.6
60°	408.9	432.8	435.3	442.8	449.1	457.9	469.1	486.7	509.3	531.9	544.4
62.5°	297.3	314.9	318.6	331.2	333.7	342.5	350.0	371.3	396.4	417.7	429.0
65°	200.7	204.5	207.0	218.3	227.0	238.3	252.1	269.7	288.5	303.6	311.1
67.5°	117.9	122.9	122.9	129.2	139.2	149.3	160.6	170.6	183.1	193.2	195.7
70°	82.8	79.0	77.8	79.0	82.8	89.1	96.6	104.1	112.9	119.2	120.4
72.5°	50.2	50.2	50.2	51.4	53.9	57.7	62.7	67.7	74.0	77.8	79.0
75°	33.9	33.9	35.1	35.1	37.6	40.1	42.6	45.2	48.9	52.7	53.9
77.5°	22.6	22.6	23.8	23.8	25.1	26.3	28.9	31.4	32.6	35.1	36.4
80°	15.1	15.1	16.3	16.3	16.3	17.6	18.8	20.1	21.3	23.8	23.8
82.5°	8.8	8.8	10.0	10.0	10.0	11.3	11.3	12.5	13.8	13.8	13.8
85°	5.0	5.0	5.0	5.0	6.3	6.3	6.3	6.3	7.5	7.5	7.5
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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: P24518

CATALOG NUMBER: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OL

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8
2.5°	2118.7	2119.9	2122.4	2123.7	2125.0	2128.7	2133.7	2136.2	2140.0	2143.8	2147.5
5°	2094.8	2098.6	2104.9	2108.6	2112.4	2117.4	2122.4	2127.5	2132.5	2137.5	2143.8
7.5°	2064.7	2069.8	2076.0	2081.0	2084.8	2091.1	2096.1	2102.4	2108.6	2116.2	2122.4
10°	2025.9	2030.9	2038.4	2043.4	2044.7	2054.7	2061.0	2066.0	2073.5	2078.5	2084.8
12.5°	1983.2	1989.5	1997.0	2003.3	2008.3	2012.1	2017.1	2020.8	2028.4	2033.4	2039.7
15°	1938.0	1944.3	1951.8	1955.6	1955.6	1963.1	1965.6	1970.7	1974.4	1983.2	1989.5
17.5°	1887.9	1894.1	1900.4	1905.4	1904.2	1909.2	1911.7	1914.2	1921.7	1930.5	1938.0
20°	1832.7	1840.2	1847.7	1852.7	1849.0	1852.7	1854.0	1859.0	1865.3	1875.3	1884.1
22.5°	1777.5	1785.0	1792.5	1796.3	1795.0	1792.5	1795.0	1801.3	1808.8	1818.9	1827.7
25°	1719.8	1727.3	1733.6	1736.1	1733.6	1732.3	1734.8	1741.1	1748.6	1758.7	1775.0
27.5°	1660.8	1667.1	1672.1	1672.1	1670.9	1668.4	1672.1	1678.4	1685.9	1697.2	1714.8
30°	1598.1	1604.4	1610.6	1609.4	1605.6	1601.9	1605.6	1611.9	1620.7	1630.7	1650.8
32.5°	1534.1	1539.1	1540.4	1539.1	1535.4	1535.4	1537.9	1542.9	1551.7	1563.0	1583.1
35°	1470.2	1475.2	1475.2	1470.2	1462.6	1461.4	1466.4	1470.2	1480.2	1490.2	1511.6
37.5°	1392.4	1394.9	1392.4	1394.9	1393.6	1391.1	1389.9	1394.9	1407.4	1415.0	1437.5
40°	1324.6	1324.6	1317.1	1312.1	1309.6	1313.4	1312.1	1318.4	1328.4	1337.2	1358.5
42.5°	1239.3	1241.9	1236.8	1236.8	1234.3	1228.1	1230.6	1235.6	1246.9	1255.7	1277.0
45°	1165.3	1162.8	1151.5	1146.5	1146.5	1144.0	1145.3	1151.5	1162.8	1169.1	1191.7
47.5°	1075.0	1075.0	1066.2	1066.2	1055.0	1056.2	1057.5	1062.5	1072.5	1088.8	1101.4
50°	992.2	989.7	977.2	969.7	963.4	964.6	965.9	969.7	978.4	986.0	1007.3
52.5°	896.9	891.9	881.8	878.1	869.3	868.0	869.3	873.1	880.6	898.2	908.2
55°	796.5	794.0	787.8	774.0	770.2	768.9	770.2	774.0	780.2	786.5	806.6
57.5°	686.2	684.9	679.9	666.1	663.6	662.3	663.6	669.8	673.6	689.9	698.7
60°	557.0	555.7	554.4	545.7	546.9	548.2	550.7	558.2	559.5	577.0	584.6
62.5°	440.3	437.8	429.0	419.0	419.0	422.7	426.5	435.3	436.5	454.1	460.4
65°	319.9	321.1	319.9	313.6	309.8	303.6	299.8	306.1	306.1	322.4	327.4
67.5°	202.0	203.2	207.0	205.7	205.7	202.0	194.4	190.7	195.7	196.9	203.2
70°	124.2	124.2	125.4	122.9	122.9	120.4	115.4	111.6	114.2	114.2	117.9
72.5°	80.3	80.3	80.3	77.8	76.5	72.8	70.2	69.0	70.2	70.2	72.8
75°	53.9	53.9	52.7	51.4	50.2	47.7	46.4	45.2	46.4	46.4	46.4
77.5°	36.4	36.4	35.1	33.9	32.6	31.4	30.1	28.9	30.1	30.1	30.1
80°	23.8	23.8	22.6	22.6	21.3	20.1	20.1	20.1	18.8	18.8	18.8
82.5°	13.8	13.8	13.8	13.8	12.5	12.5	11.3	11.3	11.3	11.3	11.3
85°	7.5	7.5	7.5	6.3	6.3	6.3	6.3	5.0	5.0	5.0	5.0
87.5°	3.8	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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: P24518

CATALOG NUMBER: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OL

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8	2158.8
2.5°	2152.6	2155.1	2158.8	2155.1	2158.8	2161.3	2163.8
5°	2148.8	2152.6	2155.1	2152.6	2155.1	2158.8	2162.6
7.5°	2128.7	2135.0	2140.0	2135.0	2138.8	2143.8	2147.5
10°	2097.4	2102.4	2108.6	2104.9	2108.6	2113.7	2119.9
12.5°	2053.5	2061.0	2068.5	2068.5	2073.5	2078.5	2087.3
15°	2005.8	2013.3	2024.6	2027.1	2035.9	2042.2	2049.7
17.5°	1955.6	1965.6	1979.4	1984.5	1997.0	2003.3	2012.1
20°	1902.9	1915.5	1929.3	1938.0	1951.8	1961.9	1971.9
22.5°	1847.7	1861.5	1877.8	1886.6	1904.2	1915.5	1929.3
25°	1791.3	1806.3	1823.9	1833.9	1852.7	1867.8	1880.3
27.5°	1731.1	1746.1	1764.9	1777.5	1802.6	1820.1	1830.2
30°	1668.4	1684.7	1704.7	1723.5	1744.9	1759.9	1777.5
32.5°	1601.9	1619.4	1639.5	1659.6	1683.4	1699.7	1718.5
35°	1530.4	1549.2	1571.8	1591.8	1616.9	1635.7	1654.6
37.5°	1456.4	1476.4	1499.0	1520.3	1545.4	1573.0	1586.8
40°	1378.6	1397.4	1420.0	1441.3	1467.6	1489.0	1511.6
42.5°	1295.8	1314.6	1337.2	1359.8	1384.9	1407.4	1432.5
45°	1209.2	1228.1	1249.4	1272.0	1299.6	1320.9	1346.0
47.5°	1118.9	1137.7	1157.8	1180.4	1206.7	1229.3	1254.4
50°	1022.3	1041.2	1061.2	1083.8	1110.1	1132.7	1159.1
52.5°	923.2	940.8	958.4	982.2	1009.8	1039.9	1057.5
55°	820.4	836.7	851.7	875.6	903.2	922.0	950.8
57.5°	711.2	726.3	740.1	762.7	789.0	819.1	835.4
60°	594.6	609.6	619.7	639.7	664.8	678.6	706.2
62.5°	466.6	477.9	480.4	496.7	519.3	543.2	555.7
65°	329.9	341.2	348.7	365.0	385.1	405.2	414.0
67.5°	212.0	223.3	227.0	238.3	250.9	262.2	267.2
70°	124.2	130.5	131.7	139.2	145.5	151.8	155.5
72.5°	74.0	77.8	80.3	85.3	89.1	94.1	96.6
75°	47.7	48.9	51.4	53.9	57.7	60.2	61.5
77.5°	30.1	31.4	31.4	33.9	35.1	37.6	38.9
80°	18.8	18.8	18.8	20.1	21.3	21.3	22.6
82.5°	10.0	10.0	10.0	10.0	11.3	11.3	11.3
85°	5.0	5.0	5.0	5.0	5.0	5.0	5.0
87.5°	2.5	1.3	1.3	1.3	1.3	1.3	1.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)