

MOONEY M20J LANDPLANES

SUPPLEMENTAL DATA

for

CERTIFICATION IN THE UNITED KINGDOM

The following information in this document is supplied to Meet CAA requirements, for Mooney M20J Landplane certification in the United Kingdom in the Transport Category (Passenger). Performance Group E.

This supplement is applicable to the following Mooney Model M20J landplanes.

| Year of Manufacture | Airplane Serial Numbers | Applicable Owners Manual Issue Date |
|---------------------|--------------------------|-------------------------------------|
| 1979 | 24-0084, 24-0764 & ON | 12-28-78 |

Published by the Manuals Group
MOONEY AIRCRAFT CORPORATION
KERRVILLE, TEXAS 78028

MANUAL NUMBER
79-20J-OM-S

1 of 8

CATEGORY

The Mooney M20J is eligible for certification in the United Kingdom in the Transport Category (Passenger). This aeroplane may, however, be restricted to another category and to a particular use and this will be stated in the certificate of airworthiness.

PERFORMANCE GROUP

The aeroplane is classified in performance group E.

MINIMUM CREW

The minimum crew is one pilot.

MAXIMUM NUMBER OF OCCUPANTS

The maximum number of occupants shall not exceed four and shall not exceed the number of approved seats fitted.

Children under the age of three years carried in the arms of passengers may be left out of this count.

NIGHT AND IFR FLIGHT

The aeroplane may be flown at night or in IFR conditions when permitted by the air navigation legislation and when the equipment required by the legislation is carried.

FLIGHT OVER WATER SPEED

The true airspeed to be used for the purpose of compliance with the legislation governing flight over water is 150 MPH.

ASSOCIATED CONDITIONS:

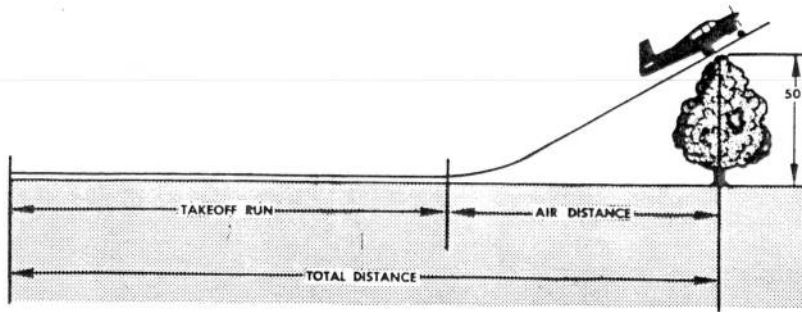
TAKEOFF DISTANCES

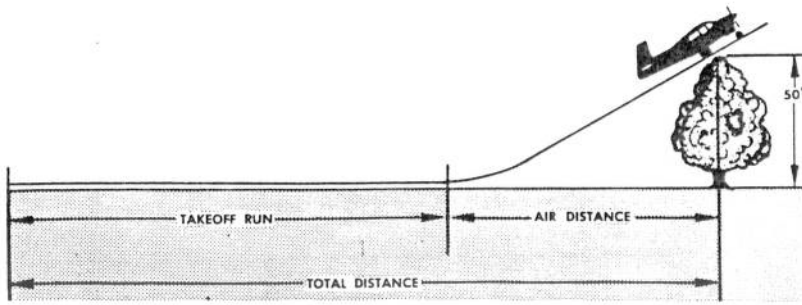
POWER----- FULL THROTTLE, 2700 RPM
(Before Brake Release)
MIXTURE --- LEAN FOR SMOOTH OPERATION
FLAPS ----- 15°
LDG. GEAR-- EXTENDED UNTIL OBSTACLE CLEARED

RUNWAY----- PAVED, LEVEL, DRY SURFACE
WEIGHT----- 2740 LBS.
TAKEOFF SPEED----- 73 MPH/63 KTS IAS
CLIMB OUT ----- 82 MPH/71 KTS IAS
COWL FLAPS----- FULL OPEN

| Wind Component Down Runway Knts | OAT °C | PRESSURE ALTITUDE | | | | | | | | | | | |
|---|-----------|------------------------|---------------------------------|-------|------------------------|---------------------------------|-------|------------------------|---------------------------------|-------|------------------------|---------------------------------|-------|
| | | Sea Level | | | 2000 FT. | | | 4000 FT. | | | 6000 FT. | | |
| | | Ground Roll Feet | Over 50 Ft. Obstacle Feet | Total | Ground Roll Feet | Over 50 Ft. Obstacle Feet | Total | Ground Roll Feet | Over 50 Ft. Obstacle Feet | Total | Ground Roll Feet | Over 50 Ft. Obstacle Feet | Total |
| 0 | -20 | 704 | 1374 | 854 | 1646 | 1049 | 2074 | 1392 | 2808 | 1778 | 3820 | 1778 | 3820 |
| | -10 | 765 | 1482 | 928 | 1776 | 1140 | 2237 | 1513 | 3028 | 1933 | 4118 | 1933 | 4118 |
| | 0 | 829 | 1594 | 1009 | 1910 | 1235 | 2406 | 1639 | 3256 | 2094 | 4426 | 2094 | 4426 |
| | 10 | 896 | 1711 | 1086 | 2050 | 1334 | 2581 | 1771 | 3494 | 2262 | 4746 | 2262 | 4746 |
| | 20 | 965 | 1831 | 1170 | 2194 | 1438 | 2764 | 1908 | 3738 | 2437 | 5077 | 2437 | 5077 |
| 10 | -20 | 1037 | 1955 | 1258 | 2344 | 1545 | 2951 | 2051 | 3992 | 2651 | 5543 | 2651 | 5543 |
| | -10 | 1112 | 2084 | 1349 | 2498 | 1657 | 3145 | 2199 | 4253 | 2851 | 5904 | 2851 | 5904 |
| | 0 | 1188 | 2218 | 1444 | 2656 | 1769 | 3335 | 2301 | 4406 | 2999 | 6065 | 2999 | 6065 |
| | 10 | 1267 | 2357 | 1543 | 2819 | 1882 | 3521 | 2406 | 4566 | 3104 | 6226 | 3104 | 6226 |
| | 20 | 1349 | 2501 | 1647 | 2988 | 1999 | 3701 | 2506 | 4729 | 3214 | 6387 | 3214 | 6387 |
| 20 | -20 | 1434 | 2650 | 1756 | 3156 | 2119 | 3875 | 2606 | 4891 | 3324 | 6548 | 3324 | 6548 |
| | -10 | 1519 | 2804 | 1869 | 3324 | 2235 | 4053 | 2725 | 5073 | 3439 | 6709 | 3439 | 6709 |
| | 0 | 1606 | 2963 | 1986 | 3497 | 2359 | 4241 | 2849 | 5261 | 3559 | 6871 | 3559 | 6871 |
| | 10 | 1695 | 3127 | 2108 | 3676 | 2488 | 4435 | 2974 | 5455 | 3684 | 7032 | 3684 | 7032 |
| | 20 | 1787 | 3296 | 2235 | 3859 | 2622 | 4635 | 3104 | 5655 | 3814 | 7193 | 3814 | 7193 |

NOTE: 1) Maximum demonstrated crosswind velocity is 12 MPH (11 Knots). 2) Where distance value has been deleted, climb performance after lift off is less than 130 ft./min. 3) Conditions of high humidity can result in an increase of up to 10% to the above take-off distances.





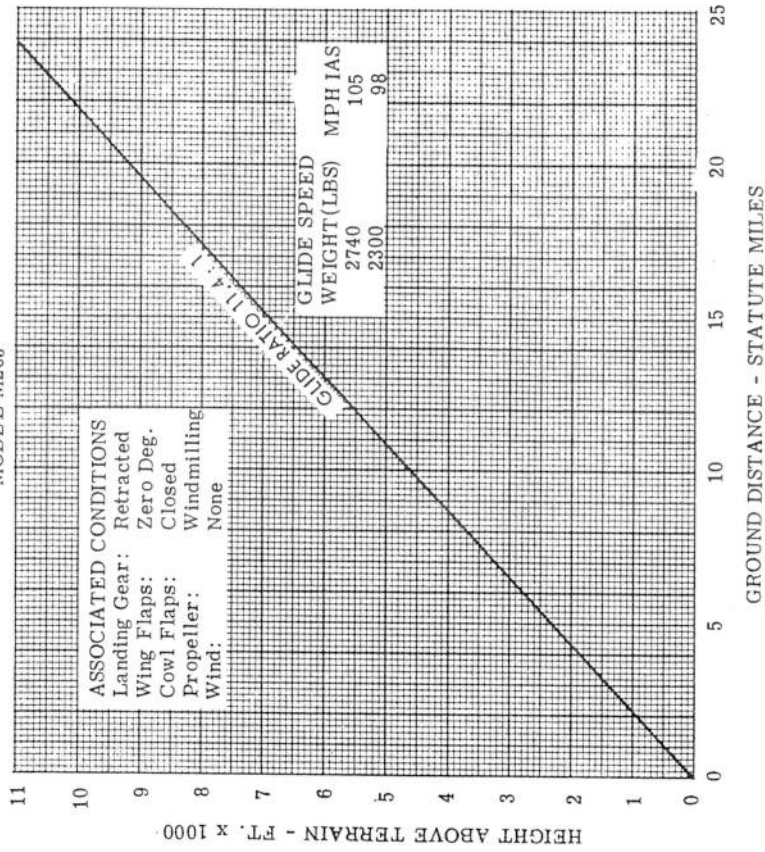
TAKEOFF DISTANCES

ASSOCIATED CONDITIONS:
 POWER - - - FULL THROTTLE, 2700 RPM
 (Before Brake Release)
 MIXTURE - - - LEAN FOR SMOOTH OPERATION!
 FLAPS - - - 15°
 LDG GEAR - EXTENDED UNTIL OBSTACLE CLEARED

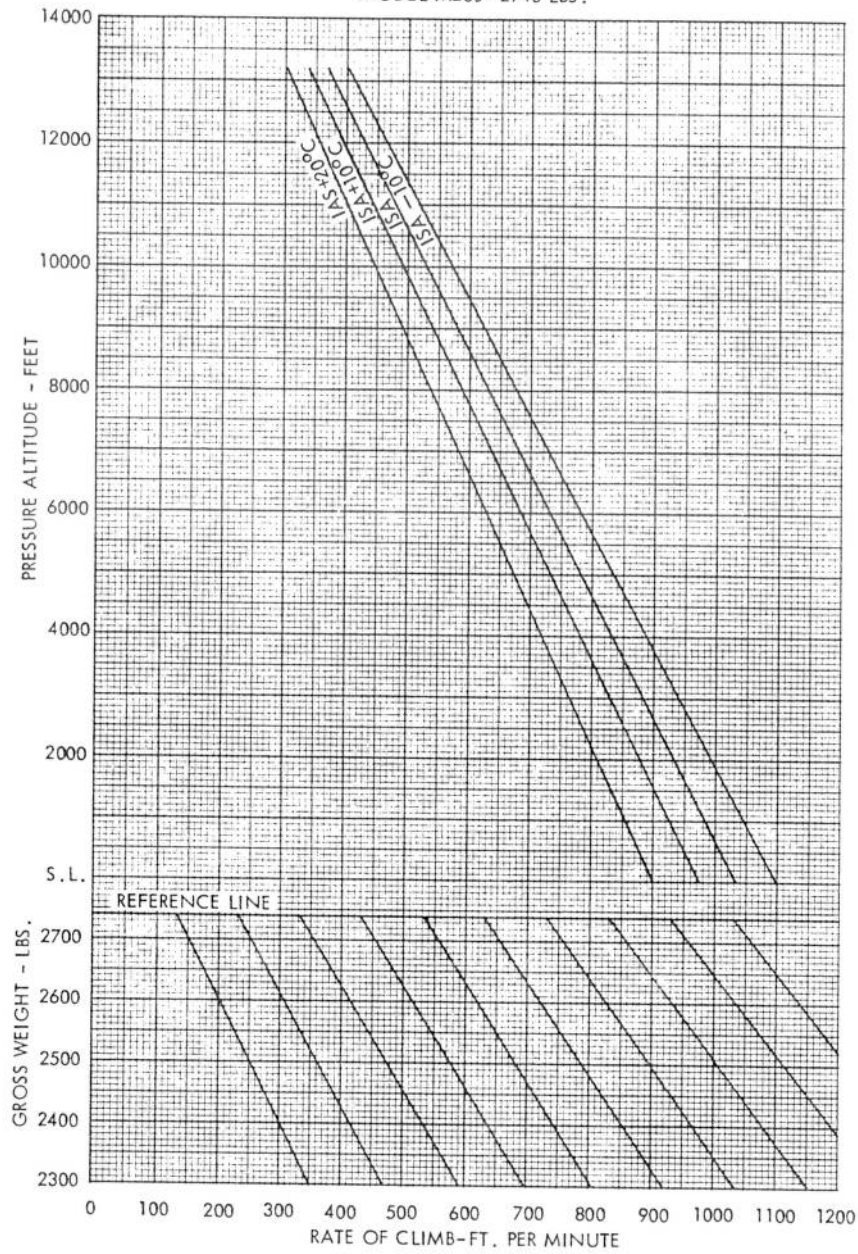
RUNWAY - - - SHORT DRY GRASS SURFACE
 WEIGHT - - - 2740' LBS.
 TAKEOFF SPEED - - - 73 MPH/63 KTS IAS
 CLIMB OUT - - - 82 MPH/71 KTS IAS
 COWL FLAPS - - - FULL OPEN

| Headwind Component Down Runway Knots | QAT °C | PRESSURE ALTITUDE | | | | | | | | | |
|--|-----------|------------------------|---------------------------------------|------------------------|---------------------------------------|------------------------|---------------------------------------|------------------------|---------------------------------------|------------------------|---------------------------------------|
| | | Sea Level | | 2000 | | 4000 | | 6000 | | 8000 | |
| | | Ground Roll Feet | Total Over 50' Obstacle Feet | Ground Roll Feet | Total Over 50' Obstacle Feet | Ground Roll Feet | Total Over 50' Obstacle Feet | Ground Roll Feet | Total Over 50' Obstacle Feet | Ground Roll Feet | Total Over 50' Obstacle Feet |
| 0 | -20 | 812 | 1482 | 1004 | 1796 | 1265 | 2290 | 1762 | 3178 | 2367 | 4409 |
| | -10 | 888 | 1605 | 1100 | 1948 | 1388 | 2362 | 1939 | 3454 | 2613 | 4798 |
| | 0 | 969 | 1734 | 1201 | 2106 | 1518 | 2689 | 2127 | 3744 | 2875 | 5207 |
| | 10 | 1055 | 1870 | 1309 | 2273 | 1655 | 2902 | 2327 | 4050 | 3154 | 5638 |
| | 20 | 1145 | 2011 | 1422 | 2446 | 1802 | 3128 | 2540 | 4370 | 3454 | 6094 |
| 10 | 30 | 1211 | 2129 | 1542 | 2628 | 1955 | 3361 | 2766 | 4707 | --- | --- |
| | 40 | 1339 | 2311 | 1667 | 2816 | 2119 | 3607 | 3005 | 5059 | --- | --- |
| | -20 | 724 | 1351 | 899 | 1637 | 1137 | 2095 | 1590 | 2917 | 2145 | 4063 |
| | -10 | 793 | 1466 | 987 | 1779 | 1250 | 2277 | 1754 | 3176 | 2372 | 4427 |
| | 0 | 868 | 1581 | 1080 | 1926 | 1370 | 2467 | 1927 | 3446 | 2615 | 4811 |
| 20 | 10 | 947 | 1708 | 1179 | 2081 | 1497 | 2667 | 2112 | 3733 | 2874 | 5216 |
| | 20 | 1029 | 1838 | 1283 | 2243 | 1632 | 2878 | 2309 | 4032 | 3152 | 5644 |
| | 30 | 1114 | 1973 | 1394 | 2413 | 1774 | 3096 | 2519 | 4348 | --- | --- |
| | 40 | 1208 | 2119 | 1509 | 2588 | 1926 | 3327 | 2741 | 4679 | --- | --- |
| | -20 | 640 | 1216 | 799 | 1484 | 1015 | 1906 | 1427 | 2665 | 1932 | 3727 |
| 30 | -10 | 704 | 1322 | 879 | 1614 | 1119 | 2076 | 1577 | 2905 | 2142 | 4068 |
| | 0 | 771 | 1433 | 964 | 1751 | 1229 | 2253 | 1737 | 3158 | 2366 | 4426 |
| | 10 | 843 | 1550 | 1055 | 1896 | 1345 | 2438 | 1907 | 3425 | 2605 | 4805 |
| | 20 | 919 | 1672 | 1151 | 2046 | 1471 | 2636 | 2089 | 3705 | 2863 | 5206 |
| | 30 | 997 | 1797 | 1253 | 2205 | 1601 | 2839 | 2283 | 4001 | --- | --- |
| 40 | 40 | 1083 | 1932 | 1359 | 2368 | 1741 | 2477 | 2488 | 4310 | --- | --- |

MAXIMUM GLIDE DISTANCE
MODEL M20J



EFFECT OF AMBIENT TEMPERATURE ON CLIMB PERFORMANCE
MODEL M20J- 2740 LBS.



NORMAL LANDING DISTANCES

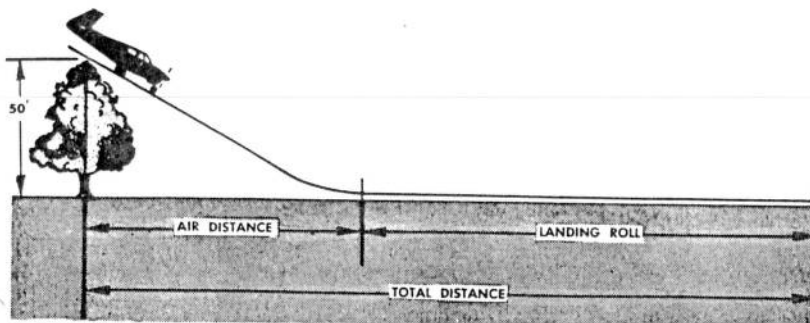
ASSOCIATED CONDITIONS:
 POWER..... THROTTLE CLOSED
 LANDING GEAR..... DOWN
 WING FLAPS..... FULL DOWN (33°)
 WEIGHT 2740 LBS.

RUNWAY..... PAVED, LEVEL DRY SURFACE
 APPROACH SPEED AT 50 FT..... 81 MPH (71 KTS.) IAS
 BRAKING..... MAXIMUM EFFORT

| Wind Component Down Runway Knots | OAT °C | Pressure Altitude | | | | | | | | | | | |
|--|-----------|------------------------|--|------------------------|------------------------|--|------------------------|------------------------|--|------------------------|------------------------|--|------------------------|
| | | Sea Level | | | 2000 FT. | | | 4000 FT. | | | 6000 FT. | | |
| | | Ground Roll Feet | Total Over 50 Ft. Obstacle Feet | Ground Roll Feet | Ground Roll Feet | Total Over 50 Ft. Obstacle Feet | Ground Roll Feet | Ground Roll Feet | Total Over 50 Ft. Obstacle Feet | Ground Roll Feet | Ground Roll Feet | Total Over 50 Ft. Obstacle Feet | Ground Roll Feet |
| 0 | -20 | 773 | 1805 | 904 | 1911 | 2103 | 1046 | 2170 | 1193 | 2373 | 1348 | 2667 | 1401 |
| | -10 | 804 | 1851 | 940 | 1969 | 2238 | 1087 | 2287 | 1240 | 2450 | 1401 | 2755 | 1454 |
| | 0 | 834 | 1906 | 976 | 2028 | 2372 | 1129 | 2382 | 1287 | 2526 | 1454 | 2842 | 1508 |
| | 10 | 865 | 1962 | 1011 | 2089 | 2439 | 1170 | 2439 | 1334 | 2680 | 1508 | 2930 | 1561 |
| | 20 | 896 | 2018 | 1047 | 2149 | 2507 | 1211 | 2507 | 1382 | 2757 | 1561 | 3017 | 1614 |
| 10 | 30 | 926 | 2074 | 1083 | 2209 | 2575 | 1253 | 2575 | 1429 | 2834 | 1614 | 3105 | 1667 |
| | 40 | 956 | 2129 | 1118 | 2269 | 2642 | 1294 | 2642 | 1476 | 2902 | 1667 | 3193 | 1720 |
| | -20 | 728 | 1700 | 854 | 1805 | 1990 | 990 | 2056 | 1131 | 2250 | 1281 | 2534 | 1332 |
| | -10 | 758 | 1746 | 889 | 1862 | 2056 | 1030 | 2122 | 1177 | 2326 | 1332 | 2620 | 1384 |
| | 0 | 788 | 1800 | 924 | 1920 | 2122 | 1070 | 2187 | 1223 | 2400 | 1384 | 2706 | 1436 |
| 20 | 10 | 818 | 1855 | 958 | 1979 | 2187 | 1110 | 2253 | 1268 | 2475 | 1436 | 2791 | 1488 |
| | 20 | 848 | 1910 | 993 | 2038 | 2253 | 1150 | 2319 | 1315 | 2551 | 1488 | 2877 | 1540 |
| | 30 | 877 | 1964 | 1028 | 2097 | 2319 | 1191 | 2386 | 1361 | 2619 | 1540 | 2963 | 1592 |
| | 40 | 906 | 2018 | 1062 | 2155 | 2386 | 1231 | 2453 | 1407 | 2686 | 1592 | 3036 | 1644 |
| | -20 | 688 | 1601 | 808 | 1703 | 1882 | 938 | 1946 | 1074 | 2132 | 1218 | 2406 | 1269 |
| | -10 | 717 | 1646 | 841 | 1758 | 1946 | 977 | 2012 | 1119 | 2206 | 1269 | 2491 | 1319 |
| | 0 | 745 | 1698 | 875 | 1814 | 2012 | 1017 | 2075 | 1163 | 2279 | 1319 | 2574 | 1370 |
| | 10 | 774 | 1751 | 909 | 1874 | 2075 | 1055 | 2139 | 1208 | 2353 | 1370 | 2658 | 1421 |
| | 20 | 804 | 1806 | 943 | 1931 | 2139 | 1094 | 2204 | 1253 | 2426 | 1421 | 2742 | 1471 |
| | 30 | 832 | 1859 | 977 | 1989 | 2204 | 1134 | 2269 | 1278 | 2501 | 1471 | 2827 | 1522 |
| | 40 | 860 | 1911 | 1010 | 2046 | 2269 | 1173 | 2334 | 1343 | 2575 | 1522 | 2894 | 1574 |

NOTE: Maximum demonstrated crosswind velocity is 12 MPH (11 Knots)

For operation with wing flaps retracted, increase ground roll by 25%. Increase total distance by 60%.
 Approach speed at 50 ft.: 91 MPH (79 KTS) IAS.



LANDING DISTANCES

ASSOCIATED CONDITIONS:

POWER - - - - - THROTTLE CLOSED

LANDING GEAR- DOWN

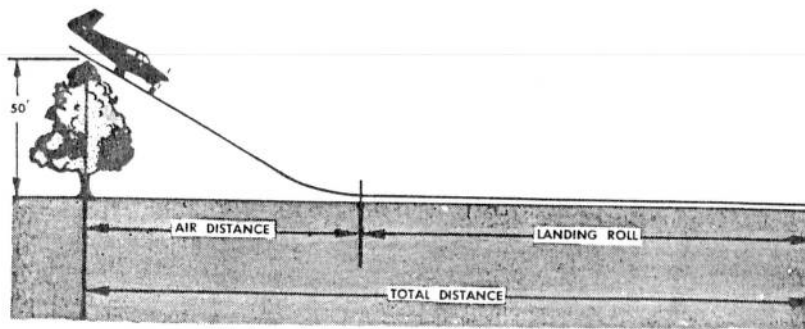
WING FLAPS - - - FULL DOWN (33°)

WEIGHT - - - - - 2740 LBS.

RUNWAY - - - - - SHORT DRY GRASS SURFACE

APPROACH SPEED AT 50 FT 81 MPH (71 KTS)IAS

BRAKING - - - - - MAXIMUM



| Headwind Component Down Runway Knots | QAT %C | PRESSURE ALTITUDE | | | | | | | | | | | |
|--------------------------------------|--------|-------------------|-----------------------------|------------------|-----------------------------|------------------|-----------------------------|------------------|-----------------------------|------------------|-----------------------------|------------------|-----------------------------|
| | | Sea Level | | | 2000 | | | 4000 | | | 6000 | | |
| | | Ground Roll Feet | Total Over 50' Obstacle Ft. | Ground Roll Feet | Total Over 50' Obstacle Ft. | Ground Roll Feet | Total Over 50' Obstacle Ft. | Ground Roll Feet | Total Over 50' Obstacle Ft. | Ground Roll Feet | Total Over 50' Obstacle Ft. | Ground Roll Feet | Total Over 50' Obstacle Ft. |
| 0 | -20 | 1171 | 2203 | 1370 | 2377 | 1585 | 2642 | 1808 | 2988 | 2042 | 3361 | 2042 | 3361 |
| | -10 | 1218 | 2265 | 1424 | 2453 | 1647 | 2730 | 1879 | 3089 | 2123 | 3477 | 2123 | 3477 |
| | 0 | 1264 | 2336 | 1479 | 2526 | 1711 | 2820 | 1950 | 3189 | 2203 | 3591 | 2203 | 3591 |
| | 10 | 1311 | 2408 | 1532 | 2619 | 1773 | 2908 | 2021 | 3290 | 2285 | 3707 | 2285 | 3707 |
| | 20 | 1358 | 2480 | 1586 | 2688 | 1835 | 2996 | 2094 | 3392 | 2365 | 3821 | 2365 | 3821 |
| 10 | 30 | 1403 | 2551 | 1641 | 2767 | 1898 | 3084 | 2165 | 3493 | 2445 | 3936 | 2445 | 3936 |
| | 40 | 1448 | 2621 | 1694 | 2845 | 1961 | 3174 | 2236 | 3594 | 2526 | 4052 | 2526 | 4052 |
| | -20 | 1034 | 2006 | 1216 | 2167 | 1413 | 2413 | 1618 | 2737 | 1836 | 3089 | 1836 | 3089 |
| | -10 | 1078 | 2066 | 1267 | 2240 | 1471 | 2497 | 1666 | 2835 | 1913 | 3201 | 1913 | 3201 |
| | 0 | 1122 | 2134 | 1318 | 2314 | 1532 | 2584 | 1753 | 2930 | 1989 | 3311 | 1989 | 3311 |
| 20 | 10 | 1166 | 2203 | 1368 | 2389 | 1590 | 2667 | 1820 | 3027 | 2066 | 3421 | 2066 | 3421 |
| | 20 | 1210 | 2272 | 1420 | 2465 | 1649 | 2752 | 1890 | 3126 | 2143 | 3532 | 2143 | 3532 |
| | 30 | 1253 | 2340 | 1472 | 2541 | 1709 | 2837 | 1957 | 3222 | 2219 | 3642 | 2219 | 3642 |
| | 40 | 1296 | 2408 | 1522 | 2615 | 1769 | 2924 | 2025 | 3320 | 2296 | 3740 | 2296 | 3740 |
| | -20 | 909 | 1818 | 1070 | 1965 | 1249 | 2193 | 1439 | 2497 | 1640 | 2828 | 1640 | 2828 |
| | -10 | 947 | 1876 | 1118 | 2035 | 1305 | 2274 | 1502 | 2589 | 1712 | 2934 | 1712 | 2934 |
| | 0 | 987 | 1940 | 1165 | 2105 | 1362 | 2357 | 1566 | 2682 | 1784 | 3039 | 1784 | 3039 |
| | 10 | 1029 | 2006 | 1214 | 2179 | 1417 | 2437 | 1629 | 2774 | 1858 | 3146 | 1858 | 3146 |
| | 20 | 1071 | 2073 | 1262 | 2250 | 1473 | 2518 | 1695 | 2868 | 1930 | 3251 | 1930 | 3251 |
| | 30 | 1111 | 2138 | 1311 | 2323 | 1529 | 2599 | 1759 | 2962 | 2003 | 3359 | 2003 | 3359 |
| | 40 | 1151 | 2202 | 1358 | 2394 | 1586 | 2682 | 1823 | 3055 | 2076 | 3438 | 2076 | 3438 |

NOTE: Maximum demonstrated crosswind velocity is 12 MPH (11 Knots).

For operation with wing flaps retracted, increase ground roll by 25%. Increase total distance by 60%.

Approach speed at 50 ft.: 91 MPH (79 KTS) IAS.