

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.

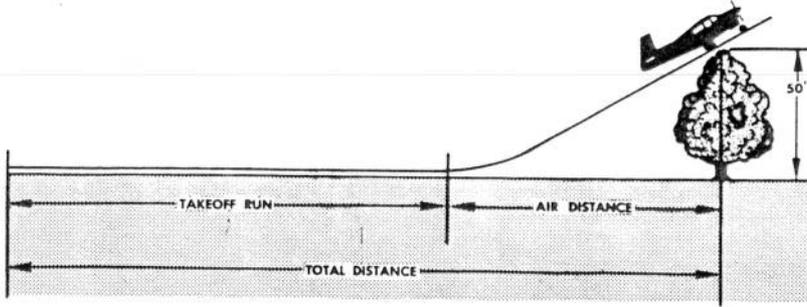
ASSOCIATED CONDITIONS:

TAKEOFF DISTANCES

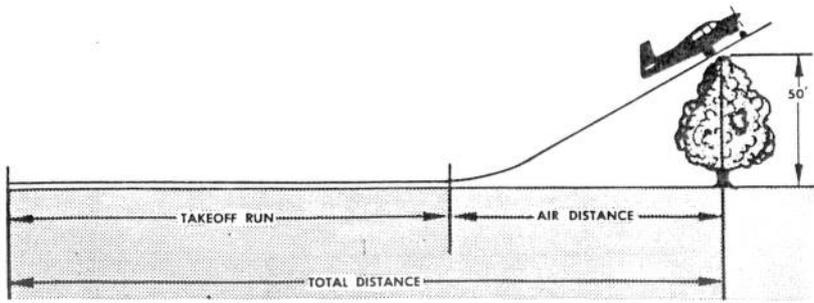
POWER----- FULL THROTTLE, 2700 RPM
 (Before Brake Release)
 WEIGHT----- 2740 LBS.
 TAKEOFF SPEED----- 73 MPH/63 KTS IAS
 CLIMB OUT----- 82 MPH/71 KTS IAS
 LDG. GEAR--- EXTENDED UNTIL OBSTACLE CLEARED
 COWL FLAPS----- FULL OPEN
 RUNWAY----- PAVED, LEVEL, DRY SURFACE
 TAKEOFF SPEED----- 73 MPH/63 KTS IAS
 CLIMB OUT----- 82 MPH/71 KTS IAS
 COWL FLAPS----- FULL OPEN

Wind Component Down Runway Knots	OAT °C	PRESSURE ALTITUDE															
		Sea Level			2000 FT.			4000 FT.			6000 FT.			8000 FT.			
		Ground Roll Feet	Obstacle Over 50 Ft. Feet	Total	Ground Roll Feet	Obstacle Over 50 Ft. Feet	Total	Ground Roll Feet	Obstacle Over 50 Ft. Feet	Total	Ground Roll Feet	Obstacle Over 50 Ft. Feet	Total	Ground Roll Feet	Obstacle Over 50 Ft. Feet	Total	
0	-20	704	1374	854	1646	1049	2074	1392	2808	1778	3820	1778	3820	1778	3820	1778	3820
	-10	765	1482	928	1776	1140	2327	1513	3028	1933	4118	1933	4118	1933	4118	1933	4118
	0	829	1594	1008	1910	1235	2406	1639	3256	2094	4426	2094	4426	2094	4426	2094	4426
	10	896	1711	1086	2050	1334	2581	1771	3494	2262	4746	2262	4746	2262	4746	2262	4746
10	20	965	1831	1170	2194	1438	2764	1908	3738	2437	5077	2437	5077	2437	5077	2437	5077
	30	1037	1955	1258	2344	1545	2951	2051	3992	2611	5383	2611	5383	2611	5383	2611	5383
	40	1112	2084	1349	2498	1657	3145	2199	4253	2778	5741	2778	5741	2778	5741	2778	5741
	-20	632	1255	769	1507	948	1906	1263	2490	1619	3537	1619	3537	1619	3537	1619	3537
20	-10	688	1356	837	1629	1032	2059	1375	2797	1763	3818	1763	3818	1763	3818	1763	3818
	0	747	1460	908	1754	1120	2217	1492	3011	1913	4109	1913	4109	1913	4109	1913	4109
	10	814	1575	983	1885	1212	2382	1615	3236	2070	4412	2070	4412	2070	4412	2070	4412
	20	872	1681	1061	2021	1309	2555	1743	3466	2233	4725	2233	4725	2233	4725	2233	4725
20	30	939	1788	1143	2162	1408	2730	1876	3705	2411	5016	2411	5016	2411	5016	2411	5016
	40	1008	1919	1227	2306	1513	2914	2014	3952	2611	5383	2611	5383	2611	5383	2611	5383
	-20	570	1446	696	1381	862	1753	1151	2389	1480	3275	1480	3275	1480	3275	1480	3275
	-10	622	1540	760	1495	940	1897	1255	2583	1615	3541	1615	3541	1615	3541	1615	3541
20	0	676	1638	826	1613	1021	2045	1365	2786	1755	3815	1755	3815	1755	3815	1755	3815
	10	738	1745	895	1738	1107	2200	1479	2997	1901	4101	1901	4101	1901	4101	1901	4101
	20	793	1846	967	1862	1197	2362	1598	3214	2054	4397	2054	4397	2054	4397	2054	4397
	30	854	1954	1043	1995	1290	2528	1723	3441	2144	4635	2144	4635	2144	4635	2144	4635
20	40	919	2068	1122	2131	1387	2700	1852	3674	2244	4876	2244	4876	2244	4876	2244	4876

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.



294m



TAKEOFF DISTANCES

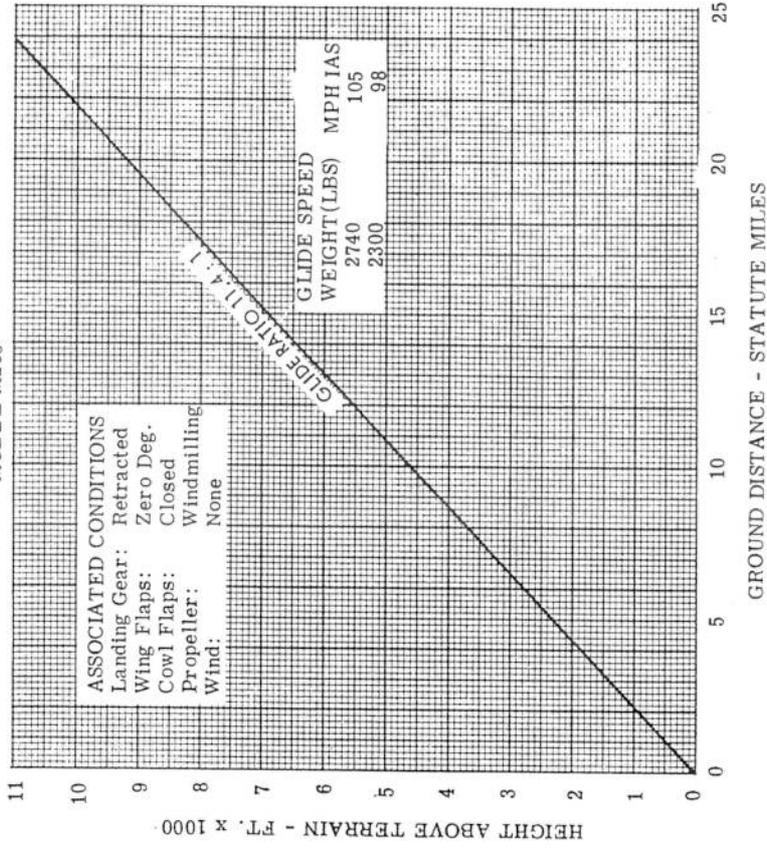
ASSOCIATED CONDITIONS:
 POWER - - - FULL THROTTLE, 2700 RPM
 (Before Brake Release)
 MIXTURE - - LEAN FOR SMOOTH OPERATION!
 FLAPS - - - 15°
 LDG GEAR - EXTENDED UNTIL OBSTACLE CLEARED

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

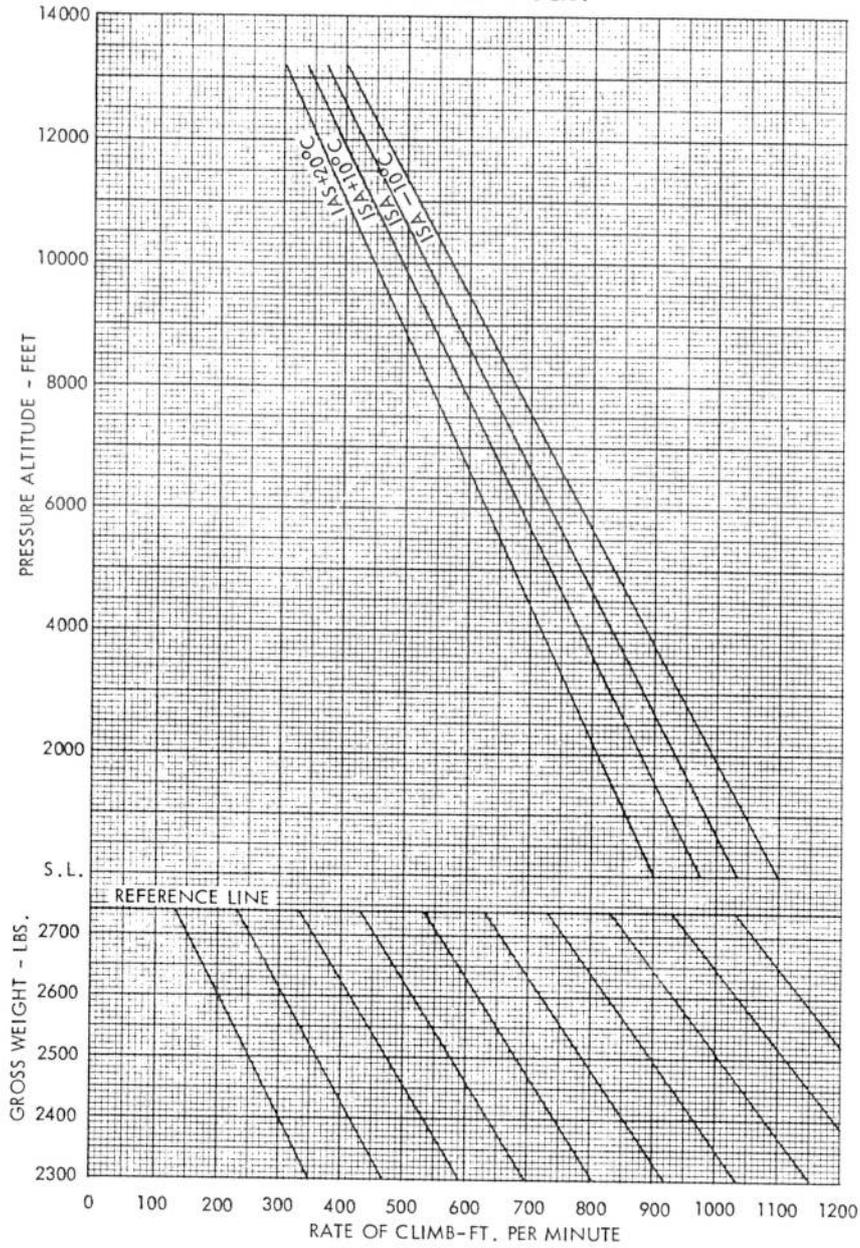
Headwind Component Down Runway Knots	QAT °C	PRESSURE ALTITUDE													
		Sea Level		2000		4000		6000		8000					
		Ground Roll Feet	Total Over 50' Obstacle Feet	Ground Roll Feet	Total Over 50' Obstacle Feet	Ground Roll Feet	Total Over 50' Obstacle Feet	Ground Roll Feet	Total Over 50' Obstacle Feet	Ground Roll Feet	Total Over 50' Obstacle Feet				
0	-20	812	1482	1004	1796	1265	2290	1762	3178	2367	4409	1939	3454	2613	4798
	-10	868	1605	1100	1948	1388	2362	1939	3744	2875	5207	2127	4050	3154	5638
	0	969	1734	1201	2106	1518	2689	2327	4370	3454	6094	2540	4707	3605	5059
	10	1055	1870	1309	2273	1665	2902	2540	4370	3454	6094	2828	5059	3607	5059
10	-20	724	1351	899	1637	1137	2095	1590	2917	2145	4063	1137	2095	1590	2917
	-10	783	1466	987	1779	1250	2277	1754	3176	2372	4427	1250	2277	1754	3176
	0	868	1581	1080	1926	1370	2467	1927	3446	2615	4811	1497	2667	2112	3733
	10	947	1708	1179	2081	1497	2667	2112	3733	2874	5644	2309	4032	3152	5644
20	-20	1029	1838	1283	2243	1632	2878	2309	4348	3454	6094	1774	3096	2519	4348
	-10	1114	1973	1394	2413	1774	3096	2519	4348	3454	6094	1926	3327	2741	4679
	0	1208	2119	1509	2588	1926	3327	2741	4679	3454	6094	1926	3327	2741	4679
	10	1283	2243	1632	2878	2112	3733	2874	5644	3454	6094	1926	3327	2741	4679
30	-20	640	1216	799	1484	1015	1806	1427	2665	1932	3727	799	1484	1015	1806
	-10	704	1322	879	1614	1119	2076	1577	2905	2142	4068	879	1614	1119	2076
	0	771	1433	964	1751	1229	2253	1737	3158	2366	4426	964	1751	1229	2253
	10	843	1550	1055	1896	1345	2438	1907	3425	2605	4805	1055	1896	1345	2438
40	-20	919	1672	1151	2046	1471	2636	2089	3705	2863	5206	1151	2046	1471	2636
	-10	997	1797	1253	2205	1601	2839	2283	4001	3063	5638	1253	2205	1601	2839
	0	1083	1932	1359	2368	1741	2977	2488	4310	3327	6094	1359	2368	1741	2977
	10	1168	2077	1466	2543	1856	3162	2665	4679	3607	6503	1466	2543	1856	3162

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 150 ft./min. 3) Conditions of high humidity can result in an increase of up to 10% to the above take-off distances.

MAXIMUM GLIDE DISTANCE
MODEL M20J



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



NORMAL LANDING DISTANCES

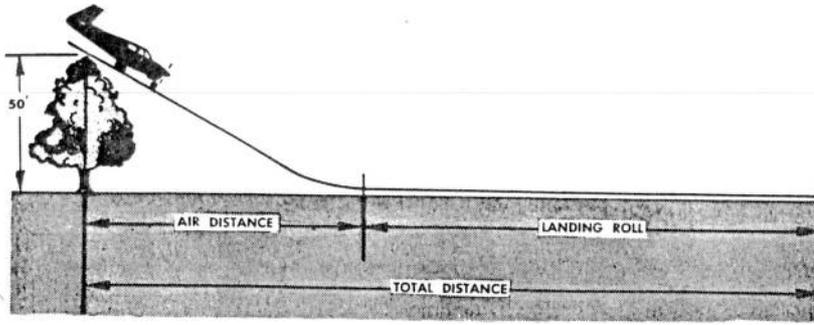
ASSOCIATED CONDITIONS:
 POWER..... THROTTLE CLOSED
 LANDING GEAR..... DOWN
 WING FLAPS..... FULL PC-WN (33°)
 WEIGHT 2740 LBS.

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.			8000 FT.		
		Ground Roll Feet	Total Over 50 Ft. Obstacle Feet	Total Over 50 Ft. Obstacle Feet	Ground Roll Feet	Total Over 50 Ft. Obstacle Feet	Total Over 50 Ft. Obstacle Feet	Ground Roll Feet	Total Over 50 Ft. Obstacle Feet	Total Over 50 Ft. Obstacle Feet	Ground Roll Feet	Total Over 50 Ft. Obstacle Feet	Total Over 50 Ft. Obstacle Feet	Ground Roll Feet	Total Over 50 Ft. Obstacle Feet	Total Over 50 Ft. Obstacle Feet
0	-20	773	1805	1911	1046	2103	2373	1193	2132	2450	1348	2667	1281	2534	2620	
	-10	804	1851	1969	1087	2170	2450	1240	2238	2526	1401	2755	1332	2620	2706	
	0	834	1906	2028	1129	2238	2526	1287	2305	2603	1454	2842	1384	2706	2791	
	10	865	1962	2089	1170	2305	2680	1334	2372	2680	1508	2930	1436	2877	2963	
10	20	896	2018	2149	1211	2439	2757	1382	2439	2757	1561	3017	1488	2963	3036	
	30	926	2074	2209	1253	2439	2757	1429	2439	2757	1614	3105	1540	2963	3036	
	40	956	2129	2269	1294	2507	2834	1476	2507	2834	1667	3193	1592	2963	3036	
	-20	728	1700	1805	990	1990	2250	1131	1990	2250	1281	2534	1218	2406	2491	
20	-10	758	1746	1862	1030	2056	2326	1177	2056	2326	1332	2620	1269	2491	2574	
	0	788	1800	1920	1070	2122	2400	1223	2122	2400	1384	2706	1319	2574	2658	
	10	818	1855	1979	1110	2187	2475	1268	2187	2475	1436	2791	1370	2658	2742	
	20	848	1910	2038	1150	2253	2551	1315	2253	2551	1488	2877	1421	2742	2827	
20	30	877	1964	2097	1191	2319	2626	1361	2319	2626	1540	2963	1471	2827	2912	
	40	906	2018	2155	1231	2386	2702	1407	2386	2702	1592	3036	1522	2912	2997	
	-20	688	1601	1703	838	1882	2132	1074	1882	2132	1218	2406	1173	2269	2354	
	-10	717	1646	1758	877	1946	2206	1119	1946	2206	1269	2491	1218	2406	2491	
20	0	745	1698	1814	917	2012	2279	1163	2012	2279	1319	2574	1269	2491	2574	
	10	774	1751	1874	955	2075	2353	1208	2075	2353	1370	2658	1319	2574	2658	
	20	804	1806	1931	1094	2139	2426	1253	2139	2426	1421	2742	1370	2658	2742	
	30	832	1859	1989	1134	2204	2501	1298	2204	2501	1471	2827	1421	2742	2827	
20	40	860	1911	2046	1173	2269	2575	1343	2269	2575	1522	2884	1471	2827	2912	

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

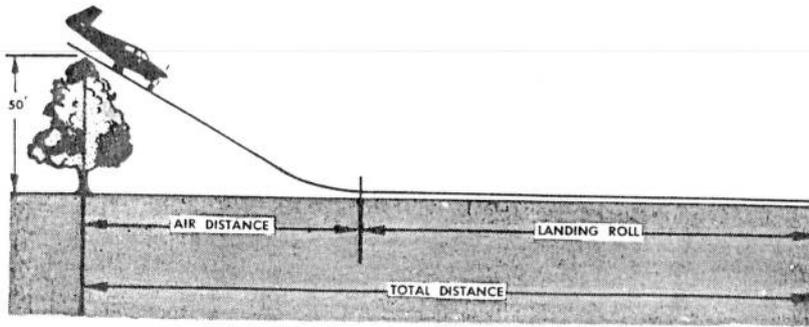
WING FLAPS - - - FULL DOWN (33°)

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			8000		
		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	2888	2042	3361	1836	2737	1913	3201	
	-10	1218	2265	1424	2453	1647	2730	1879	3089	2123	3477	1886	2835	1930	3211	
	0	1264	2336	1479	2526	1711	2820	1950	3189	2203	3591	1753	2930	1989	3311	
	10	1311	2408	1532	2560	1773	2908	2021	3290	2285	3707	1820	3027	2066	3421	
10	20	1358	2480	1586	2688	1835	2996	2094	3392	2365	3821	1890	3126	2143	3532	
	30	1403	2551	1641	2767	1898	3084	2165	3493	2445	3936	1957	3222	2219	3642	
	40	1448	2621	1694	2845	1961	3174	2236	3594	2526	4052	2025	3320	2296	3740	
	40	1034	2006	1216	2167	1413	2413	1618	2737	1836	3089	1471	2497	1686	2835	
20	-20	1078	2066	1267	2240	1471	2497	1686	2835	1913	3201	1532	2584	1753	3211	
	-10	1122	2134	1318	2314	1532	2584	1753	2930	1989	3311	1590	2667	1820	3027	
	0	1166	2203	1368	2389	1590	2667	1820	2930	2066	3421	1649	2752	1890	3126	
	10	1210	2272	1420	2465	1649	2752	1890	2930	2143	3532	1709	2837	1957	3222	
30	20	1253	2340	1472	2541	1709	2837	1957	3027	2285	3707	1769	2924	2025	3320	
	30	1296	2408	1522	2615	1769	2924	2025	3126	2445	3936	1820	3027	2066	3421	
	40	1340	2476	1574	2689	1820	3027	2066	3126	2445	3936	1871	3113	2116	3474	
	40	1384	2544	1626	2763	1871	3113	2116	3211	2526	4052	1922	3200	2167	3527	
40	-20	909	1818	1070	1965	1249	2193	1439	2497	1640	2828	1305	2274	1502	2589	
	-10	947	1876	1118	2035	1305	2274	1502	2589	1712	2934	1362	2357	1566	2682	
	0	987	1940	1166	2105	1362	2357	1566	2682	1784	3039	1417	2437	1629	2774	
	10	1029	2006	1214	2179	1417	2437	1629	2774	1858	3146	1473	2518	1695	2868	
40	20	1071	2073	1262	2250	1473	2518	1695	2868	1930	3251	1529	2599	1759	2962	
	30	1111	2138	1311	2323	1529	2599	1759	2962	2003	3359	1586	2682	1823	3055	
	40	1151	2202	1358	2394	1586	2682	1823	3055	2076	3438	1637	2763	1874	3148	
	40	1191	2266	1405	2465	1637	2763	1874	3148	2149	3527	1688	2844	1925	3243	

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.