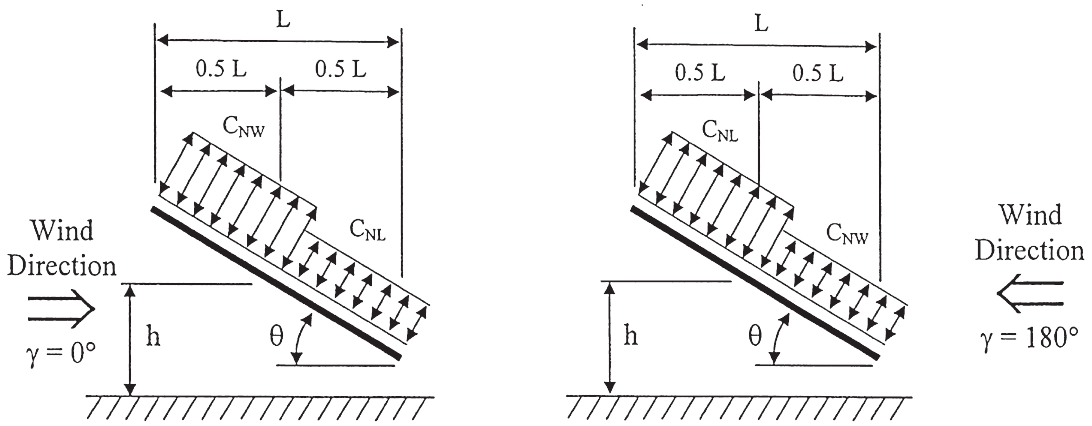
Table 13 — Net pressure coefficients C_p for free-standing monopitch canopy roofs

Pitch angle α	Load case	Overall coefficients	Local coefficients		
			A	B	C
0°	Maximum, all ζ	+ 0.2	+ 0.5	+ 1.8	+ 1.1
	Minimum $\zeta = 0$	– 0.5	– 0.6	– 1.3	– 1.4
	Minimum $\zeta = 1$	– 1.2	– 1.3	– 1.8	– 2.2
5°	Maximum, all ζ	+ 0.4	+ 0.8	+ 2.1	+ 1.3
	Minimum $\zeta = 0$	– 0.7	– 1.1	– 1.7	– 1.8
	Minimum $\zeta = 1$	– 1.4 (– 1.2)	– 1.4 (– 1.2)	– 2.6	– 2.6 (– 2.1)
10°	Maximum, all ζ	+ 0.5	+ 1.2	+ 2.4	+ 1.6
	Minimum $\zeta = 0$	– 0.9	– 1.5	– 2.0	– 2.1
	Minimum $\zeta = 1$	– 1.4 (– 1.1)	– 1.4 (– 1.1)	– 2.6	– 2.7 (– 1.8)
15°	Maximum, all ζ	+ 0.7	+ 1.4	+ 2.7	+ 1.8
	Minimum $\zeta = 0$	– 1.1	– 1.8	– 2.4	– 2.5
	Minimum $\zeta = 1$	– 1.5 (– 1.0)	– 1.5 (– 1.0)	– 2.9	– 2.8 (– 1.6)
20°	Maximum, all ζ	+ 0.8	+ 1.7	+ 2.9	+ 2.1
	Minimum $\zeta = 0$	– 1.3	– 2.2	– 2.8	– 2.9
	Minimum $\zeta = 1$	– 1.5 (– 0.9)	– 1.5 (– 0.9)	– 2.9	– 2.7 (– 1.5)
25°	Maximum, all ζ	+ 1.0	+ 2.0	+ 3.1	+ 2.3
	Minimum $\zeta = 0$	– 1.6	– 2.6	– 3.2	– 3.2
	Minimum $\zeta = 1$	– 1.4 (– 0.8)	– 1.4 (– 0.8)	– 2.5	– 2.5 (– 1.4)
30°	Maximum, all ζ	+ 1.2	+ 2.2	+ 3.2	+ 2.4
	Minimum $\zeta = 0$	– 1.8	– 3.0	– 3.8	– 3.6
	Minimum $\zeta = 1$	– 1.4 (– 0.8)	– 1.4 (– 0.8)	– 2.0	– 2.3 (– 1.2)

NOTE 1 Interpolation may be used for solidity ratio in the range $0 < \zeta < 1$ and for intermediate pitch angles.
NOTE 2 Where two values are given for $\zeta = 1$, the first value is for blockage to the low downwind eaves and the second value (in parentheses) is for blockage to the high downwind eaves.
NOTE 3 Load cases cover all possible wind directions. When using directional effective wind speeds, use:
a) these values of C_p with the largest value of V_e found; or
b) directional values of C_p from reference [6].

Main Wind Force Resisting System – Part 1		0.25 ≤ h/L ≤ 1.0
Figure 27.4-4	Net Pressure Coefficient, C_N	**Monoslope Free Roofs**
Open Buildings		**θ ≤ 45°, γ = 0°, 180°**



Roof Angle θ	Load Case	Wind Direction, γ = 0°				Wind Direction, γ = 180°			
		Clear Wind Flow		Obstructed Wind Flow		Clear Wind Flow		Obstructed Wind Flow	
		C_{NW}	C_{NL}	C_{NW}	C_{NL}	C_{NW}	C_{NL}	C_{NW}	C_{NL}
0°	A	1.2	0.3	-0.5	-1.2	1.2	0.3	-0.5	-1.2
	B	-1.1	-0.1	-1.1	-0.6	-1.1	-0.1	-1.1	-0.6
7.5°	A	-0.6	-1	-1	-1.5	0.9	1.5	-0.2	-1.2
	B	-1.4	0	-1.7	-0.8	1.6	0.3	0.8	-0.3
15°	A	-0.9	-1.3	-1.1	-1.5	1.3	1.6	0.4	-1.1
	B	-1.9	0	-2.1	-0.6	1.8	0.6	1.2	-0.3
22.5°	A	-1.5	-1.6	-1.5	-1.7	1.7	1.8	0.5	-1
	B	-2.4	-0.3	-2.3	-0.9	2.2	0.7	1.3	0
30°	A	-1.8	-1.8	-1.5	-1.8	2.1	2.1	0.6	-1
	B	-2.5	-0.5	-2.3	-1.1	2.6	1	1.6	0.1
37.5°	A	-1.8	-1.8	-1.5	-1.8	2.1	2.2	0.7	-0.9
	B	-2.4	-0.6	-2.2	-1.1	2.7	1.1	1.9	0.3
45°	A	-1.6	-1.8	-1.3	-1.8	2.2	2.5	0.8	-0.9
	B	-2.3	-0.7	-1.9	-1.2	2.6	1.4	2.1	0.4

Notes:
1. C_{NW} and C_{NL} denote net pressures (contributions from top and bottom surfaces) for windward and leeward half of roof surfaces, respectively.
2. Clear wind flow denotes relatively unobstructed wind flow with blockage less than or equal to 50%. Obstructed wind flow denotes objects below roof inhibiting wind flow (>50% blockage).
3. For values of θ between 7.5° and 45°, linear interpolation is permitted. For values of θ less than 7.5°, use load coefficients for 0°.
4. Plus and minus signs signify pressures acting towards and away from the top roof surface, respectively.
5. All load cases shown for each roof angle shall be investigated.
6. Notation:
   L : horizontal dimension of roof, measured in the along wind direction, ft. (m)
   h : mean roof height, ft. (m)
   γ : direction of wind, degrees
   θ : angle of plane of roof from horizontal, degrees