

CPFD

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0.3m x 24m CPFD software BARRACUDA®  
air가 bed  
material MG-Si가 160 μm,  $\rho = 2,330 \text{ kg/m}^3$ ,  $\rho_{\text{bulk}} = 1,180 \text{ kg/m}^3$ ,  
 $U_{\text{mf}} = 0.02 \text{ m/s}$  inlet boundary  
bed material 75kg bed 0.8m cold bed  
radial axial  
optical probe optical probe  
radial optical probe 가