Air System Information

Air System Name: Packaged Rooftop AHU
Equipment Class: PKG ROOF
Air System Type: VAV

Number of zones: 11
Floor Area: 9700.0 ft²

Sizing Calculation Information

Zone and Space Sizing Method:

Zone CFM: Peak zone sensible load
Space CFM: Individual peak space loads
Calculation Months: May to Nov
Sizing Data: Calculated

Central Cooling Coil Sizing Data

Total coil load: 32.1 Tons
Total coil load: 384.9 MBH
Sensible coil load: 275.2 MBH
Coil load at Aug 1600: 7815 CFM
Max block CFM at Aug 1700: 8445 CFM
Sum of peak zone CFM: 8586 CFM
Sensible heat ratio: 0.715
ft²/Ton: 302.4
BTU/(hr-ft²): 39.7
Water flow @ 10.0 °F rise: N/A
Load occurs at: Aug 1600
OA DB / WB: 91.0 / 74.0 °F
Entering DB / WB: 86.5 / 68.9 °F
Leaving DB / WB: 53.1 / 52.4 °F
Coil ADP: 51.4 °F
Bypass Factor: 0.050
Resulting RH: 47%
Design supply temp.: 55.0 °F
Zone T-stat Check: 11 of 11 OK
Max zone temperature deviation: 0.0 °F

Preheat Coil Sizing Data

Max coil load: 191.7 MBH
Coil CFM at Des Htg: 3136 CFM
Max coil CFM: 8445 CFM
Water flow @ 20.0 °F drop: N/A
Load occurs at: Des Htg
Ent. DB / Lvg DB: -6.0 / 52.0 °F

Supply Fan Sizing Data

Actual max CFM at Aug 1700: 8445 CFM
Standard CFM: 8242 CFM
Actual max CFM/ft²: 0.87 CFM/ft²
Fan motor BHP: 7.38 BHP
Fan motor kW: 5.50 kW
Fan static: 3.00 in wg

Outdoor Ventilation Air Data

Design airflow CFM: 3142 CFM
CFM/ft²: 0.32 CFM/ft²
CFM/person: 15.55 CFM/person