

3.9.8 Advanced Energy Design Guide for Typical Educational Facilities (1)**Shell**

Percent Glass	Maximum 35%
Window U-Factor	0.33 - 0.56
Wall R-Value	5.7 - 15.2
Roof R-Value	
Attic	30.0 - 60.0
Insulation Above Deck	25.0
Wall Material	Mass: Heat Capacity > 7 Btu/SF*F

Lighting

Average Power Density(Watts/ft.^2)	
With Daylighting	1.2
Without Daylighting	0.9 - 1.1

System and Plant

System and Plant	1 Central System Packaged Multi-Zone w/ Economizer	Comply with ASHRAE 90.1
Heating Plant:	Gas Boiler	80-85 Combustion Efficiency
Cooling Plant:	Water-Cooled Chiller	Comply with ASHRAE 90.1
Service Hot Water:	Gas Boiler	90 Combustion Efficiency

Note(s): 1) Guide provides approximate parameters for constructing a building which is 30% more efficient than ASHRAE 90.1-1999. Ranges are because of climate zone dependencies.

Source(s): ASHRAE, Advanced Energy Design Guide for K-12 School Buildings, 2008.