

# BUILDING ENVELOPE COOLING LOADS

at Space Peak

By RLF

## Alternative 1

		WALL				WINDOW						
System Zone Room		Plenum Load Btu/h	Plenum CLTD °F	Space Load Btu/h	Space CLTD °F	Space Solar Btu/h	Plenum Solar Btu/h	Solar CLF	Space Conduction Btu/h	Space CLTD °F	Plenum Conduction Btu/h	Plenum CLTD °F
174E-OFFICE	Zn Tot/Ave	341	24.3	1,325	28.6	0	0	0.000	154	16.1	0	0.0
175A-OFFICE	Zn Tot/Ave	0	0.0	0	0.0	0	0	0.000	0	0.0	0	0.0
175B-OFFICE	Zn Tot/Ave	0	0.0	0	0.0	0	0	0.000	0	0.0	0	0.0
175C-OFFICE	Zn Tot/Ave	0	0.0	0	0.0	0	0	0.000	0	0.0	0	0.0
175D-OFFICE	Zn Tot/Ave	0	0.0	0	0.0	0	0	0.000	0	0.0	0	0.0
174-ENTRY/RECEPTION	Zn Tot/Ave	391	21.2	895	26.6	3,980	0	0.828	1,765	18.6	0	0.0
175-ELEC	Zn Tot/Ave	127	30.9	576	35.2	0	0	0.000	0	0.0	0	0.0
174F-CORRIDOR	Zn Tot/Ave	0	0.0	0	0.0	0	0	0.000	0	0.0	0	0.0
AHU	Sys Tot/Ave	859	23.5	2,796	29.0	3,980	0	0.828	1,920	18.4	0	0.0
AHU	Sys Block	826	22.5	2,694	28.0	3,980	0	0.828	1,937	18.5	0	0.0

		ROOF				SKYLIGHT						
System Zone Room		Plenum Sensible Load Btu/h	Plenum CLTD °F	Space Sensible Load Btu/h	Space CLTD °F	Plenum Solar Btu/h	Space Solar Btu/h	Solar CLF	Plenum Conduction Load Btu/h	Plenum CLTD °F	Space Conduction Load Btu/h	Space CLTD °F
174E-OFFICE	Zn Tot/Ave	1,147	58.6	0	62.8	0	0	0.000	0	0.0	0	0.0
175A-OFFICE	Zn Tot/Ave	891	89.3	0	95.4	0	0	0.000	0	0.0	0	0.0
175B-OFFICE	Zn Tot/Ave	891	89.3	0	95.4	0	0	0.000	0	0.0	0	0.0
175C-OFFICE	Zn Tot/Ave	891	89.3	0	95.4	0	0	0.000	0	0.0	0	0.0
175D-OFFICE	Zn Tot/Ave	891	89.3	0	95.4	0	0	0.000	0	0.0	0	0.0
174-ENTRY/RECEPTION	Zn Tot/Ave	2,146	72.6	0	78.0	0	0	0.000	0	0.0	0	0.0
175-ELEC	Zn Tot/Ave	357	62.2	0	66.5	0	0	0.000	0	0.0	0	0.0
174F-CORRIDOR	Zn Tot/Ave	2,888	87.7	0	93.8	0	0	0.000	0	0.0	0	0.0
AHU	Sys Tot/Ave	10,103	79.1	0	83.0	0	0	0.000	0	0.0	0	0.0
AHU	Sys Block	9,196	72.0	0	77.4	0	0	0.000	0	0.0	0	0.0

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System Zone Room		FLOOR		PARTITION		INFILTRATION			CEILING		Envelope Total Btu/h
		Load Btu/h	CLTD °F	Load Btu/h	CLTD °F	Airflow cfm	Sensible Btu/h	Latent Btu/h	Plenum Dry Bulb °F	Load Btu/h	
174E-OFFICE	Zn Tot/Ave	0	0.0	1,020	20.0	0	0	0	79.2	211	4,197
175A-OFFICE	Zn Tot/Ave	0	0.0	739	20.0	0	0	0	81.1	154	1,784
175B-OFFICE	Zn Tot/Ave	0	0.0	732	20.0	0	0	0	81.1	154	1,777
175C-OFFICE	Zn Tot/Ave	0	0.0	739	20.0	0	0	0	81.1	154	1,784
175D-OFFICE	Zn Tot/Ave	0	0.0	739	20.0	0	0	0	81.1	154	1,784
174-ENTRY/RECEPTION	Zn Tot/Ave	0	0.0	2,504	20.0	0	0	0	80.4	404	12,085
175-ELEC	Zn Tot/Ave	0	0.0	728	14.1	0	0	0	79.2	62	1,850
174F-CORRIDOR	Zn Tot/Ave	0	0.0	4,136	20.0	0	0	0	81.1	509	7,532
AHU	Sys Tot/Ave	0	0.0	11,335	19.5	0	0	0	80.6	1,802	32,794
AHU	Sys Block	0	0.0	11,281	19.4	0	0	0	80.4	1,745	31,659

UNDER FLOOR		SUPPLY AIR TEMPERATURES AIRFLOWS					CONDUCTION HEAT GAIN / LOSSES				
		Supply Airflow into Uflr Plen cfm	Uflr Plen Air Leakage To Space cfm	--- Supply Temperature --- Entering Uflr Plen °F	Leaving Uflr Plen °F	Uflr Plenum Air Heat Pickup °F	Conduction From Adj Ceiling Plen Btu/h	Conduction From Adj Ceiling No Plen Btu/h	Conduction From Exp Floor Slab Btu/h	Conduction From Ext Wall Btu/h	Conduction Into Space Btu/h
174E-OFFICE	Zn Tot/Ave	0	0	0.0	0.0	0.0	0	0	0	0	0
175A-OFFICE	Zn Tot/Ave	0	0	0.0	0.0	0.0	0	0	0	0	0
175B-OFFICE	Zn Tot/Ave	0	0	0.0	0.0	0.0	0	0	0	0	0
175C-OFFICE	Zn Tot/Ave	0	0	0.0	0.0	0.0	0	0	0	0	0
175D-OFFICE	Zn Tot/Ave	0	0	0.0	0.0	0.0	0	0	0	0	0
174-ENTRY/RECEPTION	Zn Tot/Ave	0	0	0.0	0.0	0.0	0	0	0	0	0
175-ELEC	Zn Tot/Ave	0	0	0.0	0.0	0.0	0	0	0	0	0
174F-CORRIDOR	Zn Tot/Ave	0	0	0.0	0.0	0.0	0	0	0	0	0
AHU	Sys Tot/Ave	0	0	0.0	0.0	0.0	0	0	0	0	0
AHU	Sys Block	0	0	0.0	0.0	0.0	0	0	0	0	0