Residential Cooling and Heating
Load Calculations Based on ASHRAE
Cooling & Heating Load Calculation
Manual. Second Edition.

					Job Name:	**NEW RESIDENCE**
						5125 SW 98th CT
						MIAMI, FL 33165
					Date:	04/02/23
Unit/ Area served:	AHU-1				Calculated by:	A.M.
					Checked by:	A.M.

ITEM	SOLAR	SHADE	T. AREA	BTU/HR		ITEM	△T	U	T. AREA	BTU/HR
N. Glass	37	x	x 74 =	2738		N. Wall	14	x 0.2 x	466 =	1304.8
NE. Glass	66	x	x 0 =	0		NE. Wall	20	x 0.2 x	0 =	0.0
E. Glass		x 37	x 115 =	4255		E. Wall	24	x 0.2 x	415 =	1992.0
SE. Glass	82	x	x 0 =	0		SE. Wall	22	x 0.2 x	0 =	0.0
S. Glass	56	x	x 110 =	6160		S. Wall	17	x 0.2 x	430 =	1462.0
SW. Glass	82	x	x 0 =	0		SW. Wall	22	x 0.2 x	0 =	0.0
W. Glass	47	x	x 40 =	1880		W. Wall	24	x 0.2 x	490 =	2352.0
NW. Glass	34	x	x 0 =	0		NW. Wall	22	x 0.2 x	0 =	0.0
Hor. Glass		x	x =	0		Knee wall		x x	=	0.0
T. Glass area =	339		Subtotal =	15033		T. Wall Area=	1801	Subtotal	=	7111

ITEM	△T	U	T. AREA	BTU/HR		ITEM	BTU/Unit	TOTAL		BTU/HR
Partition	13	x 0.09	x 0 =	0.0		People	230	x 4	=	920
Roof	48	x 0.03	x 1821 =	2622.2		Kitchen	1200	x 1	=	1200
Floor	13	x 0.09	x 1821 =	2130.6		Infil./Vent. =	1.1xQxDT	= 131.11 x	16.5 =	2163.3
Ceiling		x	x =	0.0		Miscellaneous			=	1200.0
			Subtotal =	4753				Subtotal	=	5483

TOTAL SENS.	=	33280 Btu/Hr	
GRAND TOTAL	=	43264 Btu/Hr (TOTAL SENSIBLE.+ LATENT) MAX. ALLOWED PER UNIT 1.15 % =	49753.54 Btu/Hr

TONS	=	3.6	
HEAT LOSS		USE = 4 Tons	

ITEM	T. AREA	△T	U	BTU/HR				
Walls	1801	x 27	x 0.2 =	9725.4		Cfm	=	1600
Roof	1821	x 27	x 0.03 =	1475.0		Sq.Ft./T	=	455.3
Floor	1821	x 27	x 0.09 =	4425.0		CFM/sq.ft	=	0.9
Glass	339	x 27	x 1.1 =	10068.3				
Ventilation = 1.1xDTxQ=	1.1	x 27	x 131.11 =	3894.0				
Partition	0	x 27	x 0.09 =	0.0				
TOTAL	29587.8	Btu/hr						
KW	8.7	Kw						

Q=ARCHxVOL./60=	0.48	x 16389 /	60	=	131.112	
Area A/C=	1821	Sq. ft.				
Volume A/C=	1821	x 9	=	16389	Cu. ft.	