

Table 3A
Glass Heat Transfers Multipliers (Cooling)
No External Shade Screen
Clear Glass

Design Temperature Difference	Single Pane						Double Pane						Triple Pane					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
DIRECTION WINDOW FACES																		
N	23	27	31	35	39	43	19	21	23	25	27	29	17	18	19	20	21	22
NE and NW	56	60	64	68	72	76	47	49	51	53	55	57	43	44	45	46	47	48
E and W	81	85	89	93	97	101	68	70	72	74	76	78	62	63	64	65	66	67
SE and SW	70	74	78	82	86	90	59	61	63	65	67	69	53	54	55	56	57	58
S	40	44	48	52	56	60	34	36	38	40	42	44	30	31	32	33	34	35
DRAPERY OR VENETIAN BLINDS																		
N	14	18	22	26	30	34	12	14	16	18	20	22	10	11	12	13	14	15
NE and NW	33	37	41	45	49	53	29	31	33	35	37	39	25	26	27	28	29	30
E and W	48	52	56	60	64	68	42	44	46	48	50	52	37	38	39	40	41	42
SE and SW	41	45	49	53	57	61	37	39	41	43	45	47	32	33	34	35	36	37
S	24	28	32	36	40	44	21	23	25	27	29	31	18	19	20	21	22	23
ROLLER SHADES — HALF DRAWN																		
N	17	21	25	29	33	37	16	18	20	22	24	26	14	15	16	17	18	19
NE and NW	41	45	49	53	57	61	38	40	42	44	46	48	34	35	36	37	38	39
E and W	60	64	68	72	76	80	55	57	59	61	63	65	49	50	51	52	53	54
SE and SW	52	56	60	64	68	72	47	49	51	53	55	57	42	43	44	45	46	47
S	30	34	38	42	46	50	27	29	31	33	35	37	24	25	26	27	28	29
AWNNG. PORCHES. OR OTHER EXTERNAL SHADING																		
ALL DIRECTIONS	23	27	31	35	39	43	19	21	23	25	27	29	17	18	19	20	21	22

Tinted (Heat Absorbing) Glass

Design Temperature Difference	Single Pane						Double Pane						Triple Pane					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
DIRECTION WINDOW FACES																		
N	16	20	24	28	32	36	12	14	16	18	20	22	9	10	11	12	13	14
NE and NW	39	43	47	51	55	59	29	31	33	35	37	39	22	23	24	25	26	27
E and W	57	61	65	69	73	77	42	44	46	48	50	52	32	33	34	35	36	37
SE and SW	49	53	57	61	65	69	36	38	40	42	44	46	28	29	30	31	32	33
S	28	32	36	40	44	48	21	23	25	27	29	31	16	17	18	19	20	21
DRAPERY OR VENETIAN BLINDS																		
N	12	16	20	24	28	32	9	11	13	15	17	19	6	7	8	9	10	11
NE and NW	30	34	38	42	46	50	22	24	26	28	30	32	15	16	17	18	19	20
E and W	43	47	51	55	59	63	31	33	35	37	39	41	21	22	23	24	25	26
SE and SW	37	41	45	49	53	57	27	29	31	33	35	37	18	19	20	21	22	23
S	21	25	29	33	37	41	15	17	19	21	23	25	10	11	12	13	14	15
ROLLER SHADES — HALF DRAWN																		
N	14	18	22	26	30	34	10	12	14	16	18	20	7	8	9	10	11	12
NE and NW	34	38	42	46	50	54	25	27	29	31	33	35	18	19	20	21	22	23
E and W	49	53	57	61	65	69	36	38	40	42	44	46	26	27	28	29	30	31
SE and SW	42	46	50	54	58	62	31	33	35	37	39	41	22	23	24	25	26	27
S	24	28	32	36	40	44	18	20	22	24	26	28	13	14	15	16	17	18
AWNNG. PORCHES. OR OTHER EXTERNAL SHADING																		
ALL DIRECTIONS	16	20	24	28	32	36	12	14	16	18	20	22	9	10	11	12	13	14

Reflective Coated Glass

Design Temperature Difference	Single Pane						Double Pane						Triple Pane					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
DIRECTION WINDOW FACES																		
N	14	18	22	26	30	34	10	12	14	16	18	20	6	7	8	9	10	11
NE and NW	34	38	42	46	50	54	24	26	28	30	32	34	15	16	17	18	19	20
E and W	49	53	57	61	65	69	34	36	38	40	42	44	21	22	23	24	25	26
SE and SW	43	47	51	55	59	63	29	31	33	35	37	39	18	19	20	21	22	23
S	24	28	32	36	40	44	17	19	21	23	25	27	10	11	12	13	14	15
DRAPERY OR VENETIAN BLINDS																		
N	11	15	19	23	27	31	8	10	12	14	16	18	5	6	7	8	9	10
NE and NW	28	32	36	40	44	48	20	22	24	26	28	30	12	13	14	15	16	17
E and W	40	44	48	52	56	60	30	32	34	36	38	40	17	18	19	20	21	22
SE and SW	35	39	43	47	51	55	26	28	30	32	34	36	15	16	17	18	19	20
S	20	24	28	32	36	40	15	17	19	21	23	25	9	10	11	12	13	14
ROLLER SHADES — HALF DRAWN																		
N	12	16	20	24	28	32	9	11	13	15	17	19	5	6	7	8	9	10
NE and NW	30	34	38	42	46	50	21	23	25	27	29	31	13	14	15	16	17	18
E and W	44	48	52	56	60	64	31	33	35	37	39	41	18	19	20	21	22	23
SE and SW	38	42	46	50	54	58	27	29	31	33	35	37	16	17	18	19	20	21
S	22	26	30	34	38	42	15	17	19	21	23	25	9	10	11	12	13	14
AWNNG. PORCHES. OR OTHER EXTERNAL SHADING																		
ALL DIRECTIONS	14	18	22	26	30	34	10	12	14	16	18	20	6	7	8	9	10	11

Table 3B
Glass Heat Transfer Multipliers (Cooling)
External Shade Screen, Shading Coefficient = .15
Clear Glass

Design Temperature Difference	Single Pane						Double Pane						Triple Pane					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
DIRECTION WINDOW FACES																		
N	23	27	31	35	39	43	19	21	23	25	27	29	17	18	19	20	21	22
NE and NW	28	32	36	40	44	48	23	25	27	29	31	33	21	22	23	24	25	26
E and W	32	36	40	44	48	52	26	28	30	32	34	36	24	25	26	27	28	29
SE and SW	30	34	38	42	46	50	25	27	29	31	33	35	22	23	24	25	26	27
S	26	30	34	38	42	46	21	23	25	27	29	31	19	20	21	22	23	24
DRAPERY OR VENETIAN BLINDS																		
N	14	18	22	26	30	34	12	14	16	18	20	22	10	11	12	13	14	15
NE and NW	17	21	25	29	33	37	15	17	19	21	23	25	12	13	14	15	16	17
E and W	19	23	27	31	35	39	17	19	21	23	25	27	14	15	16	17	18	19
SE and SW	18	22	26	30	34	38	16	18	20	22	24	26	13	14	15	16	17	18
S	16	20	24	28	32	36	13	15	17	19	21	23	11	12	13	14	15	16
ROLLER SHADES - HALF DRAWN																		
N	17	17	17	17	17	17	16	18	20	22	24	26	14	15	16	17	18	19
NE and NW	21	25	29	33	37	41	19	21	23	25	27	29	17	18	19	20	21	22
E and W	23	27	31	35	39	43	22	24	26	28	30	32	19	20	21	22	23	24
SE and SW	22	26	30	34	38	42	21	23	25	27	29	31	18	19	20	21	22	23
S	19	23	27	31	35	39	18	20	22	24	26	28	16	17	18	19	20	21

Tinted (Heat Absorbing) Glass

Design Temperature Difference	Single Pane						Double Pane						Triple Pane					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
DIRECTION WINDOW FACES																		
N	16	20	24	28	32	36	12	14	16	18	20	22	9	10	11	12	13	14
NE and NW	19	23	27	31	35	39	15	17	19	21	23	25	11	12	13	14	15	16
E and W	22	26	30	34	38	42	17	19	21	23	25	27	12	13	14	15	16	17
SE and SW	21	25	29	33	37	41	16	18	20	22	24	26	12	13	14	15	16	17
S	18	22	26	30	34	38	13	15	17	19	21	23	10	11	12	13	14	15
DRAPERY OR VENETIAN BLINDS																		
N	12	16	20	24	28	32	9	11	13	15	17	19	8	7	8	9	10	11
NE and NW	15	19	23	27	31	35	11	13	15	17	19	21	7	8	9	10	11	12
E and W	17	21	25	29	33	37	12	14	16	18	20	22	8	9	10	11	12	13
SE and SW	16	20	24	28	32	36	12	14	16	18	20	22	8	9	10	11	12	13
S	13	17	21	25	29	33	10	12	14	16	18	20	7	8	9	10	11	12
ROLLER SHADES - HALF DRAWN																		
N	14	18	22	26	30	34	10	12	14	16	18	20	7	8	9	10	11	12
NE and NW	17	21	25	29	33	37	12	14	16	18	20	22	9	10	11	12	13	14
E and W	19	23	27	31	35	39	14	16	18	20	22	24	10	11	12	13	14	15
SE and SW	18	22	26	30	34	38	13	15	17	19	21	23	9	10	11	12	13	14
S	16	20	24	28	32	36	11	13	15	17	19	21	8	9	10	11	12	13

Reflective Coated Glass

Design Temperature Difference	Single Pane						Double Pane						Triple Pane					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
DIRECTION WINDOW FACES																		
N	14	18	22	26	30	34	10	12	14	16	18	20	8	7	8	9	10	11
NE and NW	17	21	25	29	33	37	12	14	16	18	20	22	7	8	9	10	11	12
E and W	19	23	27	31	35	39	14	16	18	20	22	24	8	9	10	11	12	13
SE and SW	18	22	26	30	34	38	13	15	17	19	21	23	8	9	10	11	12	13
S	16	20	24	28	32	36	11	13	15	17	19	21	7	8	9	10	11	12
DRAPERY OR VENETIAN BLINDS																		
N	11	15	19	23	27	31	8	10	12	14	16	18	5	6	7	8	9	10
NE and NW	14	18	22	26	30	34	10	12	14	16	18	20	6	7	8	9	10	11
E and W	15	19	23	27	31	35	11	13	15	17	19	21	7	8	9	10	11	12
SE and SW	15	19	23	27	31	35	11	13	15	17	19	21	7	8	9	10	11	12
S	12	16	20	24	28	32	9	11	13	15	17	19	6	7	8	9	10	11
ROLLER SHADES - HALF DRAWN																		
N	12	16	20	24	28	32	9	11	13	15	17	19	5	6	7	8	9	10
NE and NW	15	19	23	27	31	35	11	13	15	17	19	21	6	7	8	9	10	11
E and W	17	21	25	29	33	37	12	14	16	18	20	22	7	8	9	10	11	12
SE and SW	16	20	24	28	32	36	12	14	16	18	20	22	7	8	9	10	11	12
S	14	18	22	26	30	34	10	12	14	16	18	20	6	7	8	9	10	11

Table 3C
Glass Heat Transfer Multipliers (Cooling)
External Shade Screen, Shading Coefficient = .25
Clear Glass

		Single Pane						Double Pane						Triple Pane					
		Single Pane			Double Pane & Low e Coating			Single Pane & Low e Coating			Double Pane & Low e Coating			Triple Pane			Double Pane & Low e Coating		
Design Temperature Difference		10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
DIRECTION WINDOW FACES																			
N		23	27	31	35	39	43	19	21	23	25	27	29	17	18	19	20	21	22
NE and NW		31	35	39	43	47	51	26	28	30	32	34	36	24	25	26	27	28	29
E and W		38	42	46	50	54	58	31	33	35	37	39	41	28	29	30	31	32	33
SE and SW		35	39	43	47	51	55	29	31	33	35	37	39	26	27	28	29	30	31
S		27	31	35	39	43	47	23	25	27	29	31	33	20	21	22	23	24	25
DRAPERYES OR VENETIAN BLINDS																			
N		14	18	22	26	30	34	12	14	16	18	20	22	10	11	12	13	14	15
NE and NW		19	23	27	31	35	39	16	18	20	22	24	26	14	15	16	17	18	19
E and W		23	27	31	35	39	43	20	22	24	26	28	30	17	18	19	20	21	22
SE and SW		21	25	29	33	37	41	18	20	22	24	26	28	16	17	18	19	20	21
S		17	21	25	29	33	37	14	16	18	20	22	24	12	13	14	15	16	17
ROLLER SHADES — HALF DRAWN																			
N		17	17	17	17	17	17	16	18	20	22	24	26	14	15	16	17	18	19
NE and NW		23	27	31	35	39	43	22	24	26	28	30	32	19	20	21	22	23	24
E and W		28	32	36	40	44	48	26	28	30	32	34	36	23	24	25	26	27	28
SE and SW		26	30	34	38	42	46	24	26	28	30	32	34	21	22	23	24	25	26
S		20	24	28	32	36	40	19	21	23	25	27	29	17	18	19	20	21	22

Tinted (Heat Absorbing) Glass

WALLS (FOOT ABSORBING) CLASS																			
Design Temperature Difference	Single Pane						Double Pane						Triple Pane						
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35	
DIRECTION WINDOW FACES	NO INTERNAL SHADING												Double Pane & Low e Coating						
N	16	20	24	28	32	36	12	14	16	18	20	22	9	10	11	12	13	14	
NE and NW	22	26	30	34	38	42	16	18	20	22	24	26	12	13	14	15	16	17	
E and W	26	30	34	38	42	46	20	22	24	26	28	30	15	16	17	18	19	20	
SE and SW	24	28	32	36	40	44	18	20	22	24	26	28	14	15	16	17	18	19	
S	19	23	27	31	35	39	14	16	18	20	22	24	11	12	13	14	15	16	
DRAPERY OR VENETIAN BLINDS																			
N	12	16	20	24	28	32	9	11	13	15	17	19	6	7	8	9	10	11	
NE and NW	17	21	25	29	33	37	12	14	16	18	20	22	8	9	10	11	12	13	
E and W	20	24	28	32	36	40	15	17	19	21	23	25	10	11	12	13	14	15	
SE and SW	18	22	26	30	34	38	14	16	18	20	22	24	9	10	11	12	13	14	
S	14	18	22	26	30	34	11	13	15	17	19	21	7	8	9	10	11	12	
ROLLER SHADES — HALF DRAWN																			
N	14	18	22	26	30	34	10	12	14	6	18	20	7	8	9	10	11	12	
NE and NW	19	23	27	31	35	39	14	16	18	20	22	24	10	11	12	13	14	15	
E and W	23	27	31	35	39	43	17	19	21	23	25	27	12	13	14	15	16	17	
SE and SW	21	25	29	33	37	41	15	17	19	21	23	25	11	12	13	14	15	16	
S	17	21	25	29	33	37	12	14	16	18	20	22	9	10	11	12	13	14	

Reflective Coated Glass

Reflective Coated Glass																		
Design Temperature Difference	Single Pane						Double Pane						Triple Pane					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
DIRECTION WINDOW FACES																		
N	14	18	22	26	30	34	10	12	14	16	18	20	6	7	8	9	10	11
NE and NW	19	23	27	31	35	39	14	16	18	20	22	24	8	9	10	11	12	13
E and W	23	27	31	35	39	43	16	18	20	22	24	26	10	11	12	13	14	15
SE and SW	21	25	29	33	37	41	15	17	19	21	23	25	9	10	11	12	13	14
S	17	21	25	29	33	37	12	14	16	18	20	22	7	8	9	10	11	12
DRAPERY OR VENETIAN BLINDS																		
N	11	15	19	23	27	31	8	10	12	14	16	18	5	6	7	8	9	10
NE and NW	15	19	23	27	31	35	11	13	15	17	19	21	7	8	9	10	11	12
E and W	18	22	26	30	34	38	14	16	18	20	22	24	8	9	10	11	12	13
SE and SW	17	21	25	29	33	37	13	15	17	19	21	23	8	9	10	11	12	13
S	13	17	21	25	29	33	10	12	14	16	18	20	6	7	8	9	10	11
ROLLER SHADES — HALF DRAWN																		
N	12	16	20	24	28	32	9	11	13	15	17	19	5	6	7	8	9	10
NE and NW	17	21	25	29	33	37	12	14	16	18	20	22	7	8	9	10	11	12
E and W	20	24	28	32	36	40	15	17	19	21	23	25	8	9	10	11	12	13
SE and SW	19	23	27	31	35	39	14	16	18	20	22	24	8	9	10	11	12	13
S	15	19	23	27	31	35	11	13	15	17	19	21	6	7	8	9	10	11

Table 3D
Glass Heat Transfer Multipliers (Cooling)
External Shade Screen, Shading Coefficient = .35
Clear Glass

Design Temperature Difference	Single Pane						Double Pane Single Pane & Low e Coating						Triple Pane Double Pane & Low e Coating					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
DIRECTION WINDOW FACES																		
N	23	27	31	35	39	43	19	21	23	25	27	29	17	18	19	20	21	22
NE and NW	35	39	43	47	51	55	29	31	33	35	37	39	26	27	28	29	30	31
E and W	43	47	51	55	59	63	36	38	40	42	44	46	33	34	35	36	37	38
SE and SW	39	43	47	51	55	59	33	35	37	39	41	43	30	31	32	33	34	35
S	29	33	37	41	45	49	24	26	28	30	32	34	22	23	24	25	26	27
DRAPERYES OR VENETIAN BLINDS																		
N	14	18	22	26	30	34	12	14	16	18	20	22	10	11	12	13	14	15
NE and NW	21	25	29	33	37	41	18	20	22	24	26	28	15	16	17	18	19	20
E and W	26	30	34	38	42	46	23	25	27	29	31	33	19	20	21	22	23	24
SE and SW	23	27	31	35	39	43	21	23	25	27	29	31	18	19	20	21	22	23
S	18	22	26	30	34	38	15	17	19	21	23	25	13	14	15	16	17	18
ROLLER SHADES - HALF DRAWN																		
N	17	17	17	17	17	17	16	18	20	22	24	26	14	15	16	17	18	19
NE and NW	25	29	33	37	41	45	24	26	28	30	32	34	21	22	23	24	25	26
E and W	32	36	40	44	48	52	30	32	34	36	38	40	26	27	28	29	30	31
SE and SW	29	33	37	41	45	49	27	29	31	33	35	37	24	25	26	27	28	29
S	22	26	30	34	38	42	20	22	24	26	28	30	18	19	20	21	22	23

Tinted (Heat Absorbing) Glass

Design Temperature Difference	Single Pane						Double Pane Single Pane & Low e Coating						Triple Pane Double Pane & Low e Coating					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
DIRECTION WINDOW FACES																		
N	16	20	24	28	32	36	12	14	16	18	20	22	9	10	11	12	13	14
NE and NW	24	28	32	36	40	44	18	20	22	24	26	28	14	15	16	17	18	19
E and W	30	34	38	42	46	50	23	25	27	29	31	33	17	18	19	20	21	22
SE and SW	28	32	36	40	44	48	20	22	24	26	28	30	16	17	18	19	20	21
S	20	24	28	32	36	40	15	17	19	21	23	25	11	12	13	14	15	16
DRAPERYES OR VENETIAN BLINDS																		
N	12	16	20	24	28	32	9	11	13	15	17	19	6	7	8	9	10	11
NE and NW	18	22	26	30	34	38	14	16	18	20	22	24	9	10	11	12	13	14
E and W	23	27	31	35	39	43	17	19	21	23	25	27	11	12	13	14	15	16
SE and SW	21	25	29	33	37	41	15	17	19	21	23	25	10	11	12	13	14	15
S	15	19	23	27	31	35	11	13	15	17	19	21	7	8	9	10	11	12
ROLLER SHADES - HALF DRAWN																		
N	14	18	22	26	30	34	10	12	14	6	18	20	7	8	9	10	11	12
NE and NW	21	25	29	33	37	41	15	17	19	21	23	25	11	12	13	14	15	16
E and W	26	30	34	38	42	46	19	21	23	25	27	29	14	15	16	17	18	19
SE and SW	24	28	32	36	40	44	17	19	21	23	25	27	12	13	14	15	16	17
S	18	22	26	30	34	38	13	15	17	19	21	23	9	10	11	12	13	14

Reflective Coated Glass

Design Temperature Difference	Single Pane						Double Pane Single Pane & Low e Coating						Triple Pane Double Pane & Low e Coating					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
DIRECTION WINDOW FACES																		
N	14	18	22	26	30	34	10	12	14	16	18	20	6	7	8	9	10	11
NE and NW	21	25	29	33	37	41	15	17	19	21	23	25	9	10	11	12	13	14
E and W	26	30	34	38	42	46	18	20	22	24	26	28	11	12	13	14	15	16
SE and SW	24	28	32	36	40	44	17	19	21	23	25	27	10	11	12	13	14	15
S	18	22	26	30	34	38	12	14	16	18	20	22	7	8	9	10	11	12
DRAPERYES OR VENETIAN BLINDS																		
N	11	15	19	23	27	31	8	10	12	14	16	18	5	6	7	8	9	10
NE and NW	17	21	25	29	33	37	12	14	16	18	20	22	7	8	9	10	11	12
E and W	21	25	29	33	37	41	16	18	20	22	24	26	9	10	11	12	13	14
SE and SW	19	23	27	31	35	39	14	16	18	20	22	24	9	10	11	12	13	14
S	14	18	22	26	30	34	10	12	14	16	18	20	6	7	8	9	10	11
ROLLER SHADES - HALF DRAWN																		
N	12	16	20	24	28	32	9	11	13	15	17	19	5	6	7	8	9	10
NE and NW	18	22	26	30	34	38	13	15	17	19	21	23	8	9	10	11	12	13
E and W	23	27	31	35	39	43	17	19	21	23	25	27	10	11	12	13	14	15
SE and SW	21	25	29	33	37	41	15	17	19	21	23	25	9	10	11	12	13	14
S	16	20	24	28	32	36	11	13	15	17	19	21	6	7	8	9	10	11

Table 3E
Glass Heat Transfer Multipliers (Cooling)
External Shade Screen, Shading Coefficient = .45
Or Adjustable Blinds Between Glazing, (Double Pane Only)
Clear Glass

Design Temperature Difference	Single Pane						Double Pane Single Pane & Low e Coating						Triple Pane Double Pane & Low e Coating					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
NO INTERNAL SHADING																		
N	23	27	31	35	39	43	19	21	23	25	27	29	17	18	19	20	21	22
NE and NW	38	42	46	50	54	58	32	34	36	38	40	42	29	30	31	32	33	34
E and W	49	53	57	61	65	69	41	43	45	47	49	51	37	38	39	40	41	42
SE and SW	44	48	52	56	60	64	37	39	41	43	45	47	33	34	35	36	37	38
S	31	35	39	43	47	51	26	28	30	32	34	36	23	24	25	26	27	28
DRAPERIES OR VENETIAN BLINDS																		
N	14	18	22	26	30	34	12	14	16	18	20	22	10	11	12	13	14	15
NE and NW	23	27	31	35	39	43	20	22	24	26	28	30	17	18	19	20	21	22
E and W	29	33	37	41	45	49	26	28	30	32	34	36	22	23	24	25	26	27
SE and SW	26	30	34	38	42	46	23	25	27	29	31	33	20	21	22	23	24	25
S	19	23	27	31	35	39	16	18	20	22	24	26	14	15	16	17	18	19
ROLLER SHADES - HALF DRAWN																		
N	17	17	17	17	17	17	16	18	20	22	24	26	14	15	16	17	18	19
NE and NW	28	32	36	40	44	48	26	28	30	32	34	36	23	24	25	26	27	28
E and W	36	40	44	48	52	56	34	36	38	40	42	44	30	31	32	33	34	35
SE and SW	33	37	41	45	49	53	30	32	34	36	38	40	27	28	29	30	31	32
S	23	27	31	35	39	43	21	23	25	27	29	31	19	20	21	22	23	24

Tinted (Heat Absorbing) Glass

Design Temperature Difference	Single Pane						Double Pane Single Pane & Low e Coating						Triple Pane Double Pane & Low e Coating					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
NO INTERNAL SHADING																		
N	16	20	24	28	32	36	12	14	16	18	20	22	9	10	11	12	13	14
NE and NW	26	30	34	38	42	46	20	22	24	26	28	30	15	16	17	18	19	20
E and W	34	38	42	46	50	54	26	28	30	32	34	36	19	20	21	22	23	24
SE and SW	31	35	39	43	47	51	23	25	27	29	31	33	18	19	20	21	22	23
S	21	25	29	33	37	41	16	18	20	22	24	26	12	13	14	15	16	17
DRAPERIES OR VENETIAN BLINDS																		
N	12	16	20	24	28	32	9	11	13	15	17	19	6	7	8	9	10	11
NE and NW	20	24	28	32	36	40	15	17	19	21	23	25	10	11	12	13	14	15
E and W	26	30	34	38	42	46	19	21	23	25	27	29	13	14	15	16	17	18
SE and SW	23	27	31	35	39	43	17	19	21	23	25	27	11	12	13	14	15	16
S	16	20	24	28	32	36	12	14	16	18	20	22	8	9	10	11	12	13
ROLLER SHADES - HALF DRAWN																		
N	14	18	22	26	30	34	10	12	14	16	18	20	7	8	9	10	11	12
NE and NW	23	27	31	35	39	43	17	19	21	23	25	27	12	13	14	15	16	17
E and W	30	34	38	42	46	50	22	24	26	28	30	32	16	17	18	19	20	21
SE and SW	27	31	35	39	43	47	19	21	23	25	27	29	14	15	16	17	18	19
S	19	23	27	31	35	39	14	16	18	20	22	24	10	11	12	13	14	15

Reflective Coated Glass

Design Temperature Difference	Single Pane						Double Pane Single Pane & Low e Coating						Triple Pane Double Pane & Low e Coating					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
NO INTERNAL SHADING																		
N	14	18	22	26	30	34	10	12	14	16	18	20	6	7	8	9	10	11
NE and NW	23	27	31	35	39	43	16	18	20	22	24	26	10	11	12	13	14	15
E and W	30	34	38	42	46	50	21	23	25	27	29	31	13	14	15	16	17	18
SE and SW	27	31	35	39	43	47	19	21	23	25	27	29	11	12	13	14	15	16
S	19	23	27	31	35	39	13	15	17	19	21	23	8	9	10	11	12	13
DRAPERIES OR VENETIAN BLINDS																		
N	11	15	19	23	27	31	8	10	12	14	16	18	5	6	7	8	9	10
NE and NW	19	23	27	31	35	39	13	15	17	19	21	23	8	9	10	11	12	13
E and W	24	28	32	36	40	44	18	20	22	24	26	28	10	11	12	13	14	15
SE and SW	22	26	30	34	38	42	16	18	20	22	24	26	10	11	12	13	14	15
S	15	19	23	27	31	35	11	13	15	17	19	21	7	8	9	10	11	12
ROLLER SHADES - HALF DRAWN																		
N	12	16	20	24	28	32	9	11	13	15	17	19	5	6	7	8	9	10
NE and NW	20	24	28	32	36	40	14	16	18	20	22	24	9	10	11	12	13	14
E and W	26	30	34	38	42	46	19	21	23	25	27	29	11	12	13	14	15	16
SE and SW	24	28	32	36	40	44	17	19	21	23	25	27	10	11	12	13	14	15
S	17	21	25	29	33	37	12	14	16	18	20	22	7	8	9	10	11	12

Table 3F
Glass Heat Transfers Multipliers (Cooling)
Skylights
Clear Glass or Plastic

Design Temperature Difference	Single Pane						Double Pane						Triple Pane					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
DIRECTION OPENING FACES																		
N	100	105	111	116	122	127	86	89	91	94	97	100						
NE and NW	128	134	139	145	150	156	110	113	116	118	121	124						
E and W	150	156	161	167	172	177	128	131	134	137	139	142						
SE and SW	141	146	152	157	162	168	121	123	126	129	132	134						
S	115	120	126	131	136	142	99	102	104	107	110	113						
INCLINATION = 60 DEGREES																		
N	129	135	141	146	152	158	112	115	117	120	123	126						
NE and NW	153	158	164	170	175	181	132	134	137	140	143	146						
E and W	170	176	182	187	193	199	146	149	152	155	158	161						
SE and SW	163	168	174	180	185	191	140	143	146	148	151	154						
S	141	147	153	158	164	170	122	125	128	131	134	136						
INCLINATION = 45 DEGREES																		
N	150	156	161	166	172	177	130	133	135	138	141	144						
NE and NW	167	172	177	183	188	194	144	147	149	152	155	158						
E and W	179	185	190	195	201	206	154	157	160	163	165	168						
SE and SW	174	179	184	190	195	201	150	153	155	158	161	164						
S	159	164	169	175	180	186	137	140	143	146	148	151						
INCLINATION = 30 DEGREES																		
HORIZONTAL	160	164	168	172	176	180	139	141	143	145	147	149						

Tinted (Heat Absorbing) Glass or Opaque Plastic Skylights

Design Temperature Difference	Single Pane						Double Pane						Triple Pane					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
DIRECTION OPENING FACES																		
N	70	75	81	86	92	97	55	58	60	63	66	69						
NE and NW	90	95	101	106	112	117	70	72	75	78	81	83						
E and W	106	111	116	122	127	133	81	84	86	89	92	95						
SE and SW	99	104	109	115	120	126	76	78	81	84	87	89						
S	80	86	91	97	102	108	63	65	68	71	74	76						
INCLINATION = 45 DEGREES																		
N	91	96	102	107	113	119	71	74	77	80	83	86						
NE and NW	107	112	118	124	129	135	83	86	89	92	95	98						
E and W	120	125	131	136	142	148	93	95	98	101	104	107						
SE and SW	114	120	125	131	136	142	88	91	94	97	100	103						
S	99	105	110	116	122	127	78	81	83	86	89	92						
INCLINATION = 30 DEGREES																		
N	105	110	116	121	127	132	83	86	89	91	94	97						
NE and NW	117	122	127	133	138	144	92	94	97	100	103	105						
E and W	126	131	136	142	147	153	98	101	104	106	109	112						
SE and SW	122	127	132	138	143	149	95	98	101	103	106	109						
S	111	116	122	127	133	138	88	90	93	96	99	101						
INCLINATION = 0 DEGREES																		
HORIZONTAL	112	116	120	124	128	132	89	91	93	95	97	99						

Reflective Coated Skylights

Design Temperature Difference	Single Pane						Double Pane						Triple Pane					
	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35
DIRECTION OPENING FACES																		
N	52	58	63	69	74	79	41	43	46	49	52	54						
NE and NW	70	75	80	86	91	97	53	56	58	61	64	66						
E and W	83	88	93	99	104	110	62	64	67	70	72	75						
SE and SW	77	83	88	94	99	105	57	60	63	65	68	71						
S	61	66	72	77	83	88	47	49	52	55	58	60						
INCLINATION = 45 DEGREES																		
N	65	70	76	81	87	93	51	54	57	59	62	65						
NE and NW	77	82	88	93	99	105	60	62	65	68	71	74						
E and W	85	91	96	102	107	113	67	69	72	75	78	81						
SE and SW	82	87	93	98	104	110	64	66	69	72	75	78						
S	71	76	82	88	93	99	56	59	62	64	67	70						
INCLINATION = 30 DEGREES																		
N	76	81	86	92	97	103	60	63	65	68	71	74						
NE and NW	85	90	95	101	106	112	66	69	71	74	77	80						
E and W	92	97	102	108	113	119	71	74	76	79	82	85						
SE and SW	89	94	99	105	110	116	69	72	74	77	80	83						
S	81	86	91	97	102	108	63	66	68	71	74	77						
INCLINATION = 0 DEGREES																		
HORIZONTAL	80	84	88	92	96	100	64	66	68	70	72	74						