Pipelined Cycle Diagram

Instruction	Location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
irmovq stack, %rsp	0x0	F	D	E	M M_valE = 0x300	W																		
irmovq array, %rdi	0xa		F	D	E	M	W																	
call main	0x14			F	D valB = M_valE = 0x300	E	M	W																
irmovq $0, %rcx	0x60				F	D	E	M	W W_valE = 0x0															
irmovq $8, %rdx	0x6a					F	D	E	M	W														
irmovq $64, %rbx	0x74						F	D	E	M	W													
addq %rcx, %rdi	0x7e							F	D valA = W_valE = 0x0	E e_valE = 0x20	M	W												
mrmovq (%rdi), %rax	0x80								F	D valA = e_valE = 0x20	E	M m_valM = 0x0	W											
bubble												E	M	W										
pushq %rax	0x8a									F	D	D valA = m_valM = 0x0	E	M	W									
subq %rcx, %rdi	0x8c										F	F	D	E	M	W								
addq %rdx, %rcx	0x8e												F	D	E e_valE = 0x28	M	W							
subq %rcx, %rbx	0x90													F	D valA = e_valE = 0x28	E	M	W						
jne loop	0x92														F	D	E	M	W					
irmovq $64, %rbx	0x74															F	D	E	M	W				
addq %rcx, %rdi	0x7e																F	D	E e_valE = 0x28	M	W			
mrmovq (%rdi), %rax	0x80																	F	D valA = e_valE = 0x28	E	M m_valM = 0x1	W		
bubble																					E	M	W	
pushq %rax	0x8a																		F	D	D valA = m_valM = 0x1	E	M	W
subq %rcx, %rdi	0x8c																			F	F	D	E	M
addq %rdx, %rcx	0x8e																					F	D	E e_valE = 0x30
subq %rcx, %rbx	0x90																						F	D valA = e_valE = 0x30