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entry:
  %workspace = alloca [64 x float], align 16
  %fdct1 = getelementptr inbounds %struct.jpeg_compress_struct,
... %struct.jpeg_compress_struct* %cinfo, i64 0, i32 58
  %0 = bitcast %struct.jpeg_forward_dct** %fdct1 to
... %struct.my_fdct_controller**
  %1 = load %struct.my_fdct_controller*, %struct.my_fdct_controller** %0,
... align 8, !tbaa !3
  %do_float_dct = getelementptr inbounds %struct.my_fdct_controller,
... %struct.my_fdct_controller* %1, i64 0, i32 3
  %2 = load void (float*)*, void (float*)** %do_float_dct, align 8, !tbaa !11
  %quant_tbl_no = getelementptr inbounds %struct.jpeg_component_info,
... %struct.jpeg_component_info* %comp_ptr, i64 0, i32 4
  %3 = load i32, i32* %quant_tbl_no, align 8, !tbaa !14
  %idxprom = sext i32 %3 to i64
  %arrayidx = getelementptr inbounds %struct.my_fdct_controller,
... %struct.my_fdct_controller* %1, i64 0, i32 4, i64 %idxprom
  %4 = load float*, float** %arrayidx, align 8, !tbaa !16
  %5 = bitcast [64 x float]* %workspace to i8*
  call void @llvm.lifetime.start(i64 256, i8* %5) #3
  %idx.ext = zext i32 %start_row to i64
  %add_ptr = getelementptr inbounds i8*, i8** %sample_data, i64 %idx.ext
  %cmp108 = icmp eq i32 %num_blocks, 0
  br i1 %cmp108, label %for.end69, label %for.body.lr.ph
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for.body.lr.ph:
  %arraydecay = getelementptr inbounds [64 x float], [64 x float]* %workspace,
... i64 0, i64 0
  br label %for.body
```

```
for.body:
  %indvars.iv114 = phi i64 [ 0, %for.body.lr.ph ], [ %indvars.iv.next115,
... %for.end65 ]
  %start_col.addr.0110 = phi i32 [ %start_col, %for.body.lr.ph ], [ %add68,
... %for.end65 ]
  %idx.ext7 = zext i32 %start_col.addr.0110 to i64
  br label %for.body4
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```
for.body4:
  %indvars.iv = phi i64 [ 0, %for.body ], [ %indvars.iv.next, %for.body4 ]
  %workspaceptr.0105 = phi float* [ %arraydecay, %for.body ], [ %incdec.ptr45,
... %for.body4 ]
  %arrayidx6 = getelementptr inbounds i8*, i8** %add_ptr, i64 %indvars.iv
  %6 = load i8*, i8** %arrayidx6, align 8, !tbaa !16
  %add_ptr8 = getelementptr inbounds i8, i8* %6, i64 %idx.ext7
  %incdec.ptr = getelementptr inbounds i8, i8* %add_ptr8, i64 1
  %7 = load i8, i8* %add_ptr8, align 1, !tbaa !17
  %conv = zext i8 %7 to i32
  %sub = add nsw i32 %conv, -128
  %conv9 = sitofp i32 %sub to float
  %incdec.ptr10 = getelementptr inbounds float, float* %workspaceptr.0105, i64
... 1
  store float %conv9, float* %workspaceptr.0105, align 4, !tbaa !18
  %incdec.ptr11 = getelementptr inbounds i8, i8* %incdec.ptr, i64 1
  %8 = load i8, i8* %incdec.ptr, align 1, !tbaa !17
  %conv12 = zext i8 %8 to i32
  %sub13 = add nsw i32 %conv12, -128
  %conv14 = sitofp i32 %sub13 to float
  %incdec.ptr15 = getelementptr inbounds float, float* %workspaceptr.0105, i64
... 2
  store float %conv14, float* %incdec.ptr10, align 4, !tbaa !18
  %incdec.ptr16 = getelementptr inbounds i8, i8* %incdec.ptr11, i64 1
  %9 = load i8, i8* %incdec.ptr11, align 1, !tbaa !17
  %conv17 = zext i8 %9 to i32
  %sub18 = add nsw i32 %conv17, -128
  %conv19 = sitofp i32 %sub18 to float
  %incdec.ptr20 = getelementptr inbounds float, float* %workspaceptr.0105, i64
... 3
  store float %conv19, float* %incdec.ptr15, align 4, !tbaa !18
  %incdec.ptr21 = getelementptr inbounds i8, i8* %incdec.ptr16, i64 1
  %10 = load i8, i8* %incdec.ptr16, align 1, !tbaa !17
  %conv22 = zext i8 %10 to i32
  %sub23 = add nsw i32 %conv22, -128
  %conv24 = sitofp i32 %sub23 to float
  %incdec.ptr25 = getelementptr inbounds float, float* %workspaceptr.0105, i64
... 4
  store float %conv24, float* %incdec.ptr20, align 4, !tbaa !18
  %incdec.ptr26 = getelementptr inbounds i8, i8* %incdec.ptr21, i64 1
  %11 = load i8, i8* %incdec.ptr21, align 1, !tbaa !17
  %conv27 = zext i8 %11 to i32
  %sub28 = add nsw i32 %conv27, -128
  %conv29 = sitofp i32 %sub28 to float
  %incdec.ptr30 = getelementptr inbounds float, float* %workspaceptr.0105, i64
... 5
  store float %conv29, float* %incdec.ptr25, align 4, !tbaa !18
  %incdec.ptr31 = getelementptr inbounds i8, i8* %incdec.ptr26, i64 1
  %12 = load i8, i8* %incdec.ptr26, align 1, !tbaa !17
  %conv32 = zext i8 %12 to i32
  %sub33 = add nsw i32 %conv32, -128
  %conv34 = sitofp i32 %sub33 to float
  %incdec.ptr35 = getelementptr inbounds float, float* %workspaceptr.0105, i64
... 6
  store float %conv34, float* %incdec.ptr30, align 4, !tbaa !18
  %incdec.ptr36 = getelementptr inbounds i8, i8* %incdec.ptr31, i64 1
  %13 = load i8, i8* %incdec.ptr31, align 1, !tbaa !17
  %conv37 = zext i8 %13 to i32
  %sub38 = add nsw i32 %conv37, -128
  %conv39 = sitofp i32 %sub38 to float
  %incdec.ptr40 = getelementptr inbounds float, float* %workspaceptr.0105, i64
... 7
  store float %conv39, float* %incdec.ptr35, align 4, !tbaa !18
  %14 = load i8, i8* %incdec.ptr36, align 1, !tbaa !17
  %conv42 = zext i8 %14 to i32
  %sub43 = add nsw i32 %conv42, -128
  %conv44 = sitofp i32 %sub43 to float
  %incdec.ptr45 = getelementptr inbounds float, float* %workspaceptr.0105, i64
... 8
  store float %conv44, float* %incdec.ptr40, align 4, !tbaa !18
  %indvars.iv.next = add nuw nsw i64 %indvars.iv, 1
  %exitcond = icmp eq i64 %indvars.iv.next, 8
  br i1 %exitcond, label %for.end, label %for.body4
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for.end:
  call void @2(float* %arraydecay) #3
  br label %vector.body
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vector.body:
  %index = phi i64 [ 0, %for.end ], [ %index.next.1, %vector.body ]
  %15 = getelementptr inbounds [64 x float], [64 x float]* %workspace, i64 0,
... i64 %index
  %16 = bitcast float* %15 to <4 x float>*
  %wide.load = load <4 x float>, <4 x float>* %16, align 16, !tbaa !18
  %17 = getelementptr inbounds float, float* %4, i64 %index
  %18 = bitcast float* %17 to <4 x float>*
  %wide.load117 = load <4 x float>, <4 x float>* %18, align 4, !tbaa !18
  %19 = fmul <4 x float> %wide.load, %wide.load117
  %20 = fadd <4 x float> %19, <float 1.638450e+04, float 1.638450e+04, float
... 1.638450e+04, float 1.638450e+04>
  %21 = fptosi <4 x float> %20 to <4 x i32>
  %22 = add <4 x i32> %21, <i32 49152, i32 49152, i32 49152, i32 49152>
  %23 = trunc <4 x i32> %22 to <4 x i16>
  %24 = getelementptr inbounds [64 x i16], [64 x i16]* %coef_blocks, i64
... %indvars.iv114, i64 %index
  %25 = bitcast i16* %24 to <4 x i16>*
  store <4 x i16> %23, <4 x i16>* %25, align 2, !tbaa !20
  %index.next = or i64 %index, 4
  %26 = getelementptr inbounds [64 x float], [64 x float]* %workspace, i64 0,
... i64 %index.next
  %27 = bitcast float* %26 to <4 x float>*
  %wide.load.1 = load <4 x float>, <4 x float>* %27, align 16, !tbaa !18
  %28 = getelementptr inbounds float, float* %4, i64 %index.next
  %29 = bitcast float* %28 to <4 x float>*
  %wide.load117.1 = load <4 x float>, <4 x float>* %29, align 4, !tbaa !18
  %30 = fmul <4 x float> %wide.load.1, %wide.load117.1
  %31 = fadd <4 x float> %30, <float 1.638450e+04, float 1.638450e+04, float
... 1.638450e+04, float 1.638450e+04>
  %32 = fptosi <4 x float> %31 to <4 x i32>
  %33 = add <4 x i32> %32, <i32 49152, i32 49152, i32 49152, i32 49152>
  %34 = trunc <4 x i32> %33 to <4 x i16>
  %35 = getelementptr inbounds [64 x i16], [64 x i16]* %coef_blocks, i64
... %indvars.iv114, i64 %index.next
  %36 = bitcast i16* %35 to <4 x i16>*
  store <4 x i16> %34, <4 x i16>* %36, align 2, !tbaa !20
  %index.next.1 = add nsw i64 %index, 8
  %37 = icmp eq i64 %index.next.1, 64
  br i1 %37, label %for.end65, label %vector.body, !llvm.loop !21
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for.end65:
  %indvars.iv.next115 = add nuw nsw i64 %indvars.iv114, 1
  %add68 = add i32 %start_col.addr.0110, 8
  %lfr.wideiv = trunc i64 %indvars.iv.next115 to i32
  %exitcond116 = icmp eq i32 %lfr.wideiv, %num_blocks
  br i1 %exitcond116, label %for.end69.loopexit, label %for.body
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```
for.end69.loopexit:
  br label %for.end69
```

```
for.end69:
  call void @llvm.lifetime.end(i64 256, i8* %5) #3
  ret void
```