```
entry:
                           %downsample1 = getelementptr inbounds %struct.jpeg_compress_struct,
                          ... %struct.jpeg_compress_struct* %cinfo, i64 0, i32 57
                           %0 = bitcast %struct.jpeg_downsampler** %downsample1 to
                           ... %struct.my_downsampler**
                           %1 = load %struct.my_downsampler*, %struct.my_downsampler** %0, align 8,
                           ...!tbaa!3
                           %num_components = getelementptr inbounds %struct.jpeg_compress_struct,
                           ... %struct.jpeg_compress_struct* %cinfo, i64 0, i32 12
                           %2 = load i32, i32* %num_components, align 4, !tbaa !11
                           %cmp22 = icmp sgt i32 %2, 0
                           br i1 %cmp22, label %for.body.lr.ph, label %for.end, !prof!12
                                                                                      F
     for.body.lr.ph:
      %comp_info = getelementptr inbounds %struct.jpeg_compress_struct,
     ... %struct.jpeg_compress_struct* %cinfo, i64 0, i32 14
      %3 = load %struct.jpeg_component_info*, %struct.jpeg_component_info**
     ... %comp_info, align 8, !tbaa !13
      %idx.ext = zext i32 %in_row_index to i64
      br label %for.body
for.body:
%indvars.iv = phi i64 [ 0, %for.body.lr.ph ], [ %indvars.iv.next, %for.body ]
%compptr.023 = phi %struct.jpeg_component_info* [ %3, %for.body.lr.ph ], [
... %incdec.ptr, %for.body ]
%arrayidx = getelementptr inbounds i8**, i8*** %input buf, i64 %indvars.iv
%4 = load i8**, i8*** % arrayidx, align 8, !tbaa !14
%add.ptr = getelementptr inbounds i8*, i8** %4, i64 %idx.ext
%arrayidx3 = getelementptr inbounds i8**, i8*** %output buf, i64 %indvars.iv
%5 = load i8**, i8*** %arrayidx3, align 8, !tbaa !14
%v_samp_factor = getelementptr inbounds %struct.jpeg_component_info,
... %struct.jpeg_component_info* %compptr.023, i64 0, i32 3
%6 = load i32, i32* %v_samp_factor, align 4, !tbaa !15
%mul = mul i32 %6, %out_row_group_index
\%idx.ext4 = zext i32 \%mul to i64
%add.ptr5 = getelementptr inbounds i8*, i8** %5, i64 %idx.ext4
%arrayidx7 = getelementptr inbounds %struct.my_downsampler,
... %struct.my_downsampler* %1, i64 0, i32 1, i64 %indvars.iv
%7 = load void (%struct.jpeg_compress_struct*, %struct.jpeg_component_info*,
... i8**, i8**)*, void (%struct.jpeg_compress_struct*,
... %struct.jpeg_component_info*, i8**, i8**)** %arrayidx7, align 8, !tbaa !14
tail call void %7(%struct.jpeg_compress_struct* nonnull %cinfo,
... %struct.jpeg_component_info* %compptr.023, i8** %add.ptr, i8** %add.ptr5) #5
%indvars.iv.next = add nuw nsw i64 %indvars.iv, 1
%incdec.ptr = getelementptr inbounds %struct.jpeg_component_info,
... %struct.jpeg_component_info* %compptr.023, i64 1
%8 = load i32, i32* %num components, align 4, !tbaa !11
\%9 = \text{sext i} 32 \% 8 \text{ to i} 64
%cmp = icmp slt i64 %indvars.iv.next, %9
br i1 %cmp, label %for.body, label %for.end.loopexit, !prof!12
                                                             F
                                                           for.end.loopexit:
                                                            br label %for.end
                                                                          for.end:
                                                                           ret void
```