

```
# Min distance between points
min_distance = map_dbl(colors, ~ min_distance(.x, "hunterlab")),
min_distance_deutan = map_dbl(colors, ~ min_distance(deutan(.x), "hunterlab")),
min_distance_protan = map_dbl(colors, ~ min_distance(protan(.x), "hunterlab")),
min_distance_tritan = map_dbl(colors, ~ min_distance(tritan(.x), "hunterlab")),
# Max distance between points
max_distance = map_dbl(colors, ~ max_distance(.x, "hunterlab")),
max_distance_deutan = map_dbl(colors, ~ max_distance(deutan(.x), "hunterlab")),
max_distance_protan = map_dbl(colors, ~ max_distance(protan(.x), "hunterlab")),
max_distance_tritan = map_dbl(colors, ~ max_distance(tritan(.x), "hunterlab")),
# IQR distance between points
iqr_distance = map_dbl(colors, ~ iqr_distance(.x, "hunterlab")),
iqr_distance_deutan = map_dbl(colors, ~ iqr_distance(deutan(.x), "hunterlab")),
iqr_distance_protan = map_dbl(colors, ~ iqr_distance(protan(.x), "hunterlab")),
iqr_distance_tritan = map_dbl(colors, ~ iqr_distance(tritan(.x), "hunterlab"))
)
```

SCALING

```
data_meta <- data_num %>%  
  mutate(id = as.character(str_glue("{package}-{palette}-{group}"))))  
  
data_prescaled <- data_meta %>%  
  select(-package, -palette, -colors) %>%  
  mutate_at(vars(type, group), funs(as.factor))  
  
library(recipes)  
  
re <- recipe(id ~ ., data = data_prescaled) %>%  
  step_dummy(type, group) %>%  
  step_center(all_predictors()) %>%  
  step_scale(all_predictors()) %>%  
  prep()  
  
data_scaled <- bake(re, newdata = data_prescaled)
```