Ask Mike

About all things emergency lighting

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Q When I am selecting emergency lights, there is a reference to a "classification" of D40 or D50 or other letter and number combination. What does this mean?

The "classification" indicates the light coverage for an emergency light or exit sign under power fail conditions. It can be used to determine the number of fittings required for a certain area and how far apart they can be spaced in an installation.

The number itself represents the relative light output for a specific plane (e.g. off the end of a batten or side of a batten) A higher classification number (D63 vs D20 or C40 vs C32) covers a larger area.

Here's how it works:

The approvals process for emergency lighting requires thermal testing and photometric testing:

- The luminaire light output is measured at different angles on each plane (transverse and longitudinal vertical) to produce a luminaire photometric report.
- These test results are used to produce the luminaire classifications, which represent the relative light output (luminous intensity)
- There are 5 "classes" or shapes of intensity distribution curve: Class A, B, C, D and E.
- Generally a fitting is assigned a classification for two planes for a single light source and three planes for two light sources (like a twin lamp fluorescent) The C90 and C180 planes are off the side of a fitting and C0 is off the end.

Most emergency lighting designs use the photometric file directly in lighting design software, however the classifications can also be used to design or check emergency lighting spacing.

To derive the maximum spacing between emergency light fittings at a range of mounting heights, spacing tables can be used providing they comply with the standard

Classifications can also be used to check whether replacement fittings have the same or better coverage than the originals. This ensures continued compliance with the standard and makes maintenance and replacement choices easier for you.