CAN/CSA-C860-01 Standard

CAN / CSA-C860
Performance of Internally Lighted Exit Signs
Performance of Electrical Products
A National Standard of Canada

OVERVIEW

CSA-C860 is a standard that establishes test methods and minimum performance requirements for evaluating the visibility, legibility and power consumption of internally lighted signs. Visibility requirements have been developed based on assumed normal visual acuity and normal colour-sightedness in clear air at a maximum viewing distance of 30.5m (100ft.). The standard was prepared by the Subcommittee on Performance of Exit Signs under the jurisdiction of the Technical Committee on Commercial Equipment and the Standards Steering Committee on the Performance of Electrical Products and was formally approved by these committees.

CAN / CSA-C860-01 has been approved as a National Standard of Canada by the Standards Council of Canada in December of 1996. The standard does not apply to flashing exit signs.

REQUIREMENTS

Internally lighted signs shall comply with CSA standard 22.2 No. 9.0 and 22.2 No. 141 if the sign includes an internal power supply (self-powered).

An exit sign shall be illuminated by a light source contained within the assembly supporting the legend and directional indicator(s). The lighted elements and/or legend shall be uniformly luminous across their entire height, width and stroke width. The C860 standard specifies a minimum average of 15 candelas per square meter must be achieved. Another important criteria for legibility is uniformity of illumination. Existing signs may have one or more very bright points with other parts of the legend being virtually unlit. This makes the legend unreadable at a distance.

C860 uses a sliding scale of uniformity which requires that at minimum illumination levels the ration of the brightest to the dimmest point on the legend cannot be greater than 2.5: 1. This ratio may increase as the average illumination becomes brighter, but the overall effect which is maintained is one of a legend which appears to be very evenly illuminated to the eye.

The exit sign legend shall be uppercase sans-serif characters not less than 150mm (6” in legend height) with a stroke width of 19mm (3/4”) (Section 4). The existing codes did not specify the width of the letters that could be used. C860 rectifies this by specifying a minimum width to height ratio, (aspect ratio) which then dictates a certain minimum width for each letter to assist legibility.

C860 has mandated the shape and size of directional indicators (Section 4.2.1). No standard existed in the previous legislation for determining the size or shape of the directional indicator. The illumination level and uniformity must also be maintained during emergency power supply. C860 mandates a chevron rather than a triangle shape with minimum size requirements. This is designed to aid in rapid identification of the direction of travel to be followed when approaching a sign.

C860 also functions as an energy standard in that it specifies maximum levels of power above which a sign cannot obtain approval (Section 9).

As of 2002, the C860 visibility requirements have been incorporated into CSA 22.2 #141 making this a mandatory requirement for all signs with an emergency source.