Embodied carbon and *circularity* of luminaires

What TM65.2, TM66 and EPDs measure for a luminaire, and ten questions to ask a supplier.

AT A GLANCE

Document	What it is	What you get	Limit
CIBSE TM65 (method from 2021)	An estimate of the embodied carbon of building services products with no EPD	Conservative estimate from materials, processes and transport	Not an EPD or a life cycle assessment (CIBSE)
CIBSE TM65.2 (July 2023)	The lighting version: calculation methods, reduction actions, low-carbon material guidance	Estimate for a luminaire or its parts	"Does not aim to replace" EPDs (CIBSE)
CIBSE TM66 (October 2021)	Circular economy in the lighting industry: checklist, assessment method, examples	A circularity picture, not a carbon number	Says nothing about carbon on its own
CEAM-Make, CEAM-Specify	TM66's digital tools: Make for manufacturers, Specify as a quick comparison for specifiers	CEAM-Make gives a rating from 0 to 4 (CIBSE Journal, 2022)	Self-assessed unless someone verifies it
EPD	A third-party verified declaration of life-cycle impacts to EN 15804+A2	Verified impacts for a stated product and unit	Rare for a one-off decorative piece
What to ask for	Materials list, method and boundary, recycled content evidence, replaceability, spares, take-back	A written supplier statement	No figure is better than a figure with no method

From CIBSE's own listings and two CIBSE Journal articles (2022 and 2023), read 7 November 2026. TM65.2 and TM66 themselves are paid documents and were not read.



The question each document answers. Schematic. Original drawing by Make Bespoke Studio.

REMEMBER

An estimate is not a declaration, and carbon and circularity are different questions. Ask for a materials list, the method behind any figure and the replaceability of the light source and driver, in writing.

SPECIFICATION WORDING

DISCLOSURE AT TENDER

Tenderer to provide for each luminaire type [reference]: a materials list by mass; alloy and recycled content of metals with evidence; the embodied carbon figure if available, stating the method (CIBSE TM65.2 estimate or EPD), the person who calculated it, the version of the method, the boundary and the service life assumed; and where each major part is made.

CIRCULARITY

Tenderer to state whether the light source and driver are replaceable with commonly available tools without damaging the fitting; what spares are held and for how long; whether repair instructions and a unique product identifier are provided; and the route for return, refurbishment or recovery at end of use. Where the product has been assessed with CEAM-Make or CEAM-Specify, state the rating, who carried it out and whether it has been independently checked.

CLAIMS

Any statement of recycled content, low carbon or circularity to be supported by documents. Where no data exist, the tenderer is to say so; an estimate is not to be described as a verified declaration.

TERMS USED

Embodied carbon (luminaires)

The carbon emitted making and delivering a product. CIBSE TM65 gives a calculation method for building services, and TM65.2 applies it to lighting.

TM66

CIBSE guidance on assessing how repairable and recoverable a luminaire is, with two tools: CEAM-Make for manufacturers and CEAM-Specify for quick comparison by specifiers.

Environmental Product Declaration (EPD)

A verified document reporting a product's life-cycle environmental impacts in a standard format; two EPDs are only comparable if built on the same product category rules.

CEAM

Circular Economy Assessment Method, the pair of digital tools that go with TM66: CEAM-Make for manufacturers and CEAM-Specify, a quicker triage tool for designers and specifiers.

STANDARDS AND SOURCES

- CIBSE TM65.2: Embodied carbon in building services: lighting (July 2023): CIBSE listing read; document not read.
- CIBSE TM66: Creating a circular economy in the lighting industry (October 2021) and CEAM tools: summary only; not read.
- CIBSE Journal: TM65 and TM66 CPD (September 2022); TM65.2 (August 2023): trade press; read in full.
- BS EN 15804:2012+A2:2019 (EPD core rules for construction products): BSI Knowledge, via search summary: Current, Under Review. Not read.

Full guide: https://makebespoke.com/trade/technical/embodied-carbon-and-circularity-of-luminaires. Make Bespoke Studio coordinates manufacture through its partner workshops. Figures are guidance only and your specification governs; some may be superseded, so contact the studio to verify.