	QUIPMENT DESIGN + MANUFACTURE
	TAKE 2 Liphting Colorida
	Assessor/Organisation: Stoane Lighting
	Contact: sales@mikestoanelighting.com
	Embodied Carbon Results with 'Mid-Level TM65 Calculation' Method Total
	15.91 kg CO2e
1   2   3   4   5   6   7   8   9   10   11   12   13   14   15   16   17   18   19   20   21   22   3   24   25     25 year product life         Type of Product   Iuminiares   Luminiares	Through Life (25 year) Embodied Carbon (kgCO <sub>z</sub> e)
25 year product life	
Product Information   Luminaires     Product Weight   0.813 kg     Material Breakdown for at least 95% of the product weight. Breakdown   0.019 kgCo2e     B3: Material Preakdown of the factory per unit of product   0.219 kgCo2e     Description of Manufacture   0.019 kgCo2e     Product Complexity   0.219 kgCo2e     Complexity   0.219 kgCo2e     Product Complexity   Category 2	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
Type of Product Luminates   Product Weight 0.813 kg   Material Breakdown for at least 95% of the product weight. Breakdown 0.013 kg   B3. Materials reakdown for at least 95% of the product 0.219 kgCO2e   Energy corsumption of the factory per unit of product 0.68 kWh   Location of Manufacture C. Uhited Kingdom   Product Work 0.68 kWh   Decision of Manufacture C. Uhited Kingdom   Product Complexity Category 2	25 year product life
Type of Product Luminates   Product Weight 0.813 kg   Material Breakdown for at least 95% of the product weight. Breakdown 0.013 kg   B3. Materials reakdown for at least 95% of the product 0.219 kgCO2e   Energy corsumption of the factory per unit of product 0.68 kWh   Location of Manufacture C. Uhited Kingdom   Product Work 0.68 kWh   Decision of Manufacture C. Uhited Kingdom   Product Complexity Category 2	Product Information
Material Breakdown     01000%       B3: Materials replaced as part of repair     0.219 kgCo2e       Energy consumption of the fackry per unit of product     10.66 kWh       Location of Manufacture     0.101 kgCo2e       Product Complexity     Category 2	Type of Product Luminaires
Energy consumption of the factory per unit of product 10.68 kWh Location of Manufacture Edihourgh, Chy of, United Kingdom Product Complexity Category 2 Materials by % of Product Weight 100% 90% 90% 90% 90% 90% 90% 90% 90% 90%	Material Breakdown for at least 95% of the product weight. Breakdown 100.00%
Decision of Main Inductor     of, United Kingdom       Product Complexity     Category 2	
Product Complexity     Category 2	Location of Manufacture Edinburgh, Edinburgh, City of. United Kinodom
100%     90%     80%     70%     60%     54.58%     60%     60%     60%     60%     60%     60%     60%     60%     60%     60%     60%     60%     60%     6.53%     1.14%     6.53%     1.14%     6.53%     1.14%     6.53%     1.14%     6.53%     1.14%     Numinium   PMMA (acyric), Nickel	
80% 70% 60% 54.58% 50% 40% 20% 4.32% 3.92% 4.32% 0.16% 0.49% 1.14% Copper Glass Plastice Pixeles Plaster Poter View Rubber Stainless steel Aluminium Aluminium PMMA (acrylic, Nickel program view) PMMA (a	100%
70%     60%   54.58%     50%   40%     40%   23.39%     20%   23.39%     10%   4.32%   3.92%   4.32%     0.16%   0.49%   1.14%     Copper   Glass   Plastics   Printed circuit     Plastics   Printed circuit   Rubber   Stainless stell   Aluminium   Pluminium   Plumini	90%
60%   54.58%     50%   40%     30%   23.39%     20%   6.53%     10%   4.32%     0.16%   0.49%     1.14%   1.14%     Copper   Glass     Plastice   Point direutit     Noted thread   Attininium     Auminium   Attininium     Plastice   Point direutit     Rubber   Stainless steel     Aluminium   Plastice     Vickel   plexiglass	80%
50% 40% 30% 20% 10% 4.32% 3.92% 4.32% 0.16% 0.49% 1.14% Copper Glass Plastics Printed circuit Rubber Stainless steel Aluminium PMMA (acylic, Nickel Ingot from old primary ingo PMMA (acylic, Nickel	70%
50%     40%       30%     23.39%       20%     6.53%       10%     4.32%       3.92%     4.32%       0.16%     0.49%       1.14%       Copper     Glass       Plastics     Printed circuit       Printed circuit     Rubber       Stainless steel     Aluminium       Ingot from old     primary ingot       primary ingot     primary ingot	60%
40% 30%   20% 23.39%   10% 4.32%   3.92% 4.32%   0.16% 0.49%   1.14%   Copper Glass   Plastics Printed circuit   Rubber Stainless steel   Aluminium PMMA (acrylic, Nickel   Inpot from old primary ingot plexiglass)	54.507
30% 23.39%   20% 6.53%   10% 4.32% 3.92% 4.32%   0.16% 0.49% 1.14%   Copper Glass Plastics (general)   Printed circuit Rubber Stainless steel   Aluminium PMMA (acrylic, primary ingot from oid	
20%   23.39%     10%   4.32%   3.92%   4.32%     0.16%   0.49%   1.14%     Copper   Glass   Plastics (general)   Printed circuit board mixed   Rubber   Stainless steel Ingot from old primary ingot   PlMA(acrylic, plexiglass)   Nickel	40%
10% 4.32% 3.92% 4.32% 0.16% 0.49% 1.14%   Copper Glass Plastics (general) Printed circuit board mixed Stainless steel Aluminium Ingot from old Aluminium primary ingot PIMAA (acrylic, plexiglass) Nickel	30% 23.39%
4.32% 3.92% 4.32% 0.16% 0.49% 1.14% 1.14%   Copper Glass Plastics (general) Printed circuit board mixed Rubber Stainless steel lood mixed Aluminium petriform old primary ingot PMMA (acrylic, plexiglass) Nickel	20%
Copper Glass Plastics Printed circuit Rubber Stainless steel Aluminium Aluminium PMMA (acrylic, Nickel (general) board mixed Ingot from old primary ingot plexiglass)	4.32% 3.92% 4.32%
mounted scrap	Copper Glass Plastics Printed circuit Rubber Stainless steel Aluminium Aluminium PMMA (acrytic, Nickel (general) board mixed Ingot from oid primary ingot plexiglass)
	mounted scrap

## **STOANE** LIGHTING

## EQUIPMENT DESIGN + MANUFACTURE

## TM65.2 Lighting Calculation: Luminaire

## Frog type X

CIBSE TM65 Embodied Carbon Mid-level Calculation

Embodied Carbon Results Breakdown (kg CO2e)	
A1: Material Extraction	3.263
A2: Transport	0.243
A3: Manufacturing	5.688
A4: Transport to Site	0.024
B3: Repair	0.168
C2: Transport	0.008
C3: Waste Processing	2.844
C4: Disposal	0.003
Embodied Carbon Results (kg CO <sub>2</sub> e)	
A1-C4	12.24
A1-C4 with Buffer Factor	15.91
Assumptions	
A1: Material carbon coefficient source	TM65, Table 2.1; TM65.2 Table 9
C4 Percentage of product going to landfill(%)	55% - TM65 Table 4.14

This report was generated using the CIBSE TM65 Manufacturers form 'beta' version V1.3. Released in August 2023

This feport Was generated on a Standard' version of the fitting and may not include version virtue. Thereased in August 2220 Stoare Lighting are a UK based company. Files are generated for a 'standard' version of the fitting and may not include calculations for accessories or derivatives. Only if LED drivers or Power supplies are integral will they be included in the calculation. Repair embodied carbon is calculated based on light source and control gear replacement once in the 25 year product life Regional variations of the TM65 methodology are being developed; please contact us if there is a requirement for a speific regional assessment where such a local addendum exists. For more inoformation please contact us via our website shown below.



This report was produced using the CIBSE documents; TM65 Embodied Carbon of MEP Products - June 2021 TM65.2 Lighting - August 2023

www.stoanelighting.com