THER 1 Lipitely Calculation DERSE THES 2 Embodied Carbon Multi-lower Mode Calculation Dimension of the Star 2004 of the Calculation of the Calculation of the Star 2004 of the Calculat		UIPMENT DESIGI	LIGHTING							
		TM65.2 Lighting Ca	alculation							
Image: Index:	Image: Index:	Iris Type S								
		CIBSE TM65.2 Eml	odied Carbon Mid-level C	Calculation						
Content Bestelling Introduct Curbon Results with Md-Level TM85 Calculation' Method Total Introduct Curbon Results with Md-Level TM85 Calculation' Method Total Image: Curbon Curbon Results with Md-Level TM85 Calculation' Method Total Image: Curbon Results with Md-Level TM85 Calculation' Method Total Image: Curbon Curbon Results with Md-Level TM85 Calculation' Method Total Image: Curbon Results with Md-Level TM85 Calculation' Method Total Image: Curbon Curbon Results with Md-Level TM85 Calculation' Method Total Image: Curbon Results with Md-Level TM85 Calculation' Method Total Image: Curbon Curbon Results with Md-Level TM85 Calculation' Method Total Image: Curbon Results with Md-Level TM85 Calculation' Method Total Image: Curbon Results with Md-Level TM85 Calculation' Method Total Image: Curbon Results with Md-Level TM85 Calculation' Method Total Image: Curbon Results with Md-Level TM85 Calculation Method Total Image: Curbon Results with Md-Level TM85 Calculation' Method Total Image: Curbon Results with for the product Method Total Image: Curbon Results with Gale Results with Md-Level Results with Gale Results with G	Content Bestelline Marketbareling fundom Introduct Curbon Results with Md-Level TM85 Calculation Method Total Introduct Marketbareling fundom Introduct System Entroducted Carbon (kg/CO/e) Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration Integration]					
		Embodied Carbon F	kesults with 'Mid-Level TM65	calculation' Method Total	-					
					1.47 kg CO2e	1				
1 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 Zs year product life Product Information Luminaires 0.042 kg Bit Matrials resplaced as part of regain 0.021 kg/G20e Energy consumption of the factory per unit of product 0.073 kWh register 0.73 kWh register 0.73 kWh register Location of Menufacture 0.71 kWh register 0.73 kWh register 0.73 kWh register 0.73 kWh register	1 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 Z's year product life Product Information Luminaires 100.005 <t< td=""><td>Through Life (25 ye</td><td>ar) Embodied Carbon (kgC</td><td>O₂e)</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Through Life (25 ye	ar) Embodied Carbon (kgC	O ₂ e)						
25 year product He Product Information Iuminiares Type of Product Iuminiares Product Vergit 0.42 kg Material Breakdown for the starts 90% of the product weight. Breakdown 0.21 kg CO2e Energy consumption of the factory per unit of product Endrough, Collegory 2 Constrained 0.73 kWh Location of Manufacture Endrough, Collegory 2	25 year product life Product Information Type of Product Material Breakdown for the product weight. Breakdown Bits. Materials Breakdown for the factory per unit of product Energy consumption of the factory per unit of product Dotation of Manufacture Product Complexity Category 2 Materials by % of Product Weight 00% 00% 00% 00% 00% 00% 00% 00									
Product Information Luminaires Product Weight 0.042 kg Material Breakdown for at lease 95% of the product weight. Breakdown 0.042 kg Bis. Materials Breakdown for at lease 95% of the product weight. Breakdown 0.042 kg Bis. Materials Breakdown for at lease 95% of the product weight. Breakdown 0.042 kg Location of Marufacture 0.73 kWh Location of Marufacture 0.73 kWh Location of Marufacture Category 2 Product Complexity Category 2	Product Information Luminaires Product Weight 0.042 kg Material Breakdown for at lease 95% of the product weight. Breakdown 0.042 kg Bis. Materials Breakdown for at lease 95% of the product weight. Breakdown 0.042 kg Bis. Materials Breakdown for at lease 95% of the product weight. Breakdown 0.042 kg Location of Marufacture 0.73 kWh Location of Marufacture 0.73 kWh Location of Marufacture Category 2 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	4 25	
Product Information Luminaires Product Weight 0.042 kg Material Breakdown for at lease 95% of the product weight. Breakdown 0.042 kg Bis. Materials Breakdown for at lease 95% of the product weight. Breakdown 0.042 kg Bis. Materials Breakdown for at lease 95% of the product weight. Breakdown 0.042 kg Location of Marufacture 0.73 kWh Location of Marufacture 0.73 kWh Location of Marufacture Category 2 Product Complexity Category 2	Product Information Luminaires Product Weight 0.042 kg Material Breakdown for at lease 95% of the product weight. Breakdown 0.042 kg Bis. Materials Breakdown for at lease 95% of the product weight. Breakdown 0.042 kg Bis. Materials Breakdown for at lease 95% of the product weight. Breakdown 0.042 kg Location of Marufacture 0.73 kWh Location of Marufacture 0.73 kWh Location of Marufacture Category 2 Product Complexity Category 2									
Type of Product Luminaires Product Weight 0.042 kg Meterial Breakdown for al least 95% of the product weight. Breakdown 0.042 kg B3: Meterials replaced as part of repair 0.219 kgC02e Energy consumption of the factory per unit of product 0.73 kWh Location of Manufacture 0.73 kWh Product Weight Citiburgh, Editourgh, City Product Complexity Category 2	Type of Product Luminaires Product Weight 0.042 kg Meterial Breakdown for al least 95% of the product weight. Breakdown 0.042 kg B3: Meterials replaced as part of repair 0.219 kgC02e Energy consumption of the factory per unit of product 0.73 kWh Location of Manufacture 0.73 kWh Product Weight Citiburgh, Editourgh, City Product Complexity Category 2	25 year product life								
Type of Product Luminaires Product Weight 0.042 kg g Meterial Breakdown for at least 95% of the product weight. Breakdown 100.00% B3: Metrials replaced as part of repair 0.218 kgCO2e Energy consumption of the factory per unit of product 0.73 kWh Location of Manufacture 0.73 kWh Product Weight Category 2	Type of Product Luminaires Product Weight 0.042 kg g Meterial Breakdown for at least 95% of the product weight. Breakdown 0.042 kg g B3: Meterials replaced as part of repair 0.73 kWh Energy consumption of the factory per unit of product 0.73 kWh Location of Manufacture Cithburgh, Edinburgh, Cith Product Woight Category 2	Product Informatic	n							
Meterial Breakdown for at least 95% of the product weight. Breakdown 100.00% B3: Meterials prolocal a part of repair 0.218 kgO26e Energy consumption of the factory per unit of product 0.378 kWh Location of Manufacture 0.10 kgO26e Product Complexity Category 2	Meterial Breakdown for at least 95% of the product weight. Breakdown 0.000% B3: Meterials proleced as part of repair 0.218 kgC02e Energy consumption of the factory per unit of product 0.73 kWh Location of Manufacture 0.73 kWh Product Complexity Category 2 Materials by % of Product Weight 0.218 kgC02e 100% 0.4 kbite Kingdom Product Complexity Category 2	Type of Product								
B3: Materials replaced as part of repair Energy consumption of the factory per unit of product Energy consumption of the factory per unit of product Location of Manufacture Product Complexity Materials by % of Product Weight 100% 90% 80% 70% 60% 55.00% 55.00% 50% 40% 50% 55.00% 50% 50% 50% 2.38%	B3: Materials replaced as part of repair Energy consumption of the factory per unit of product Energy consumption of the factory per unit of product Location of Manufacture Product Complexity Materials by % of Product Weight 100% 90% 80% 70% 60% 55.00% 55.00% 50% 40% 50% 55.00% 50% 50% 50% 2.38%		for at least 95% of the proc	luct weight. Breakdown						
Location of Manufacture Edinburgh, E	Location of Manufacture Edinburgh, E	B3: Materials replace	ed as part of repair					0.219 kgC	O2e	
Decide of Maintacuture of, United Kingdom Product Complexity Category 2	Decide of Maintacuture of, United Kingdom Product Complexity Category 2			roduct			-			
Materials by % of Product Weight	Materials by % of Product Weight 100% 90%		;ture				-	of, United Kir	ngdom	
100% 90% 80% 70% 60% 50% 60% 50% 60% 50% 60% 50% 50% 50% 50% 50% 50% 50% 50% 50% 5	100% 90% 80% 70% 60% 50% 60% 50% 60% 50% 60% 50% 50% 50% 50% 50% 50% 50% 50% 50% 5	Product Complexity						Category	2	
80% 70% 60% 55.00% 50% 40% 30% 23.57% 2.38%	80% 70% 60% 50% 40% 30% 23.57% 2.38%	100%								
70% 55:00% 60% 55:00% 50% 23.57% 20% 23.57% 10% 5.95% 2.38% 20% 2.38% Copper Glass Printed circuit Printed circuit Rubber Stainless steel Aluminium Ingot Aluminium Ingot PMMA (acrylic, primary ingot PMMA (acrylic, primary ingot PMMA (acrylic, primary ingot PMMA (acrylic, primary ingot	70% 55.00% 60% 55.00% 50% 23.57% 20% 23.57% 10% 5.95% 2.38% 20% 2.38% 2.38% Copper Glass Printed circuit Plastics printed circuit Rubber Stainless steel Aluminium Ingt Aluminium Ingt primary ingo PMMA (acrylic, primary ingo	90%								
60% 55.00% 50% 23.57% 20% 23.57% 10% 5.95% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% Plastics Printed circuit Rubber Stainless steel Aluminium Ingot Aluminium PMMA (acrylic, primary ingot	60% 55.00% 50% 23.57% 20% 23.57% 10% 5.95% 2.38% 2.38% 2.38% 2.38% 2.38% Copper Glass Plastics Printed circuit Rubber Stainless steel Aluminium Ingot Aluminium primary ingot PMMA (acrylic, primary ingot PMMA (acrylic, primary ingot	80%								
60% 55.00% 50% 23.57% 20% 23.57% 10% 5.95% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% Plastics Printed circuit Rubber Stainless steel Aluminium Ingot Aluminium PMMA (acrylic, primary ingot	60% 55.00% 50% 23.57% 20% 23.57% 10% 5.95% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% Plastics Printed circuit Rubber Stainless steel Aluminium Ingot Aluminium PMMA (acrylic, primary ingot	70%								
50% 40% 30% 20% 10% 3.57% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% Printed circuit Rubber Stainless steel Aluminium Ingot primary ingot PMMA (acrylic, primary ing	50% 40% 30% 20% 10% 3.57% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% 2.38% Printed circuit Rubber Stainless steel Aluminium Ingot primary ingot PMMA (acrylic, primary ing									
40% 30% 20% 10% 3.57% 2.38% 5.95% 2.38% 2.3	40% 30% 20% 10% 3.57% 2.38% 5.95% 2.38% 2.3						55.00%			
30% 23.57% 20% 3.57% 2.38% 2.38% 2.38% 2.38% Copper Glass Plastics Printed circuit Rubber Stainless steel Aluminium Ingot Aluminium primary ingot PMMA (acrylic, primary ingot PMMA (acrylic, primary ingot	30% 23.57% 20% 3.57% 2.38% 2.38% 2.38% 2.38% Copper Glass Plastics Printed circuit Rubber Stainless steel Aluminium Ingot Aluminium primary ingot PMMA (acrylic, primary ingot PMMA (acrylic, primary ingot	50%								
20% 23.57% 2.38% 23.8% 10% 3.57% 2.38% 2.38% 2.38% Copper Glass Plastics (general) Printed circuit bioard mixed Rubber Stainless steel Aluminium from old scrap PMMA (acrylic, pirmary ingot	20% 23.57% 2.38% 23.8% 10% 3.57% 2.38% 2.38% 2.38% Copper Glass Plastics (general) Printed circuit bioard mixed Rubber Stainless steel Aluminium from old scrap PMMA (acrylic, pirmary ingot	40%								
10% 3.57% 2.38% 2.38% 2.38% 2.38% Copper Glass Plastics (general) Printed circuit Rubber Stainless steel Aluminium Ingot from old scrap Aluminium primary ingot PMMA (acrylic, primary ingot	10% 3.57% 2.38% 2.38% 2.38% 2.38% Copper Glass Plastics (general) Printed circuit Rubber Stainless steel Aluminium Ingot from old scrap Aluminium primary ingot PMMA (acrylic, primary ingot	30%						23.57%		
3.57% 2.38% 2.38% 2.38% 2.38% Copper Glass Plastics (general) Printed circuit board mixed Rubber Stainless steel Aluminium Ingot from old scrap Aluminium pirmary ingot PMMA (acrylic, plexiglass)	3.57% 2.38% 2.38% 2.38% 2.38% Copper Glass Plastics (general) Printed circuit board mixed Rubber Stainless steel Aluminium Ingot from old scrap Aluminium pirmary ingot PMMA (acrylic, plexiglass)									
Copper Glass Plastics Printed circuit Rubber Stainless steel Aluminium Ingot Aluminium PMMA (acrylic, (general) board mixed from old scrap primary ingot plexiglass)	Copper Glass Plastics Printed circuit Rubber Stainless steel Aluminium Ingot Aluminium PMMA (acrylic, (general) board mixed from old scrap primary ingot plexiglass)	20%		5.95%	2.38%	2.38%			2.38%	
(general) board mixed from old scrap primary ingot plexiglass)	(general) board mixed from old scrap primary ingot plexiglass)	10%	3.57% 2.38%				uminium Ingot	Aluminium	PMMA (acrylic,	
		10%	2100/0		Rubber	Stainless steel Ali			plevialass)	
		10%	2100/0	Plastics Printed circuit (general) board mixed	Rubber	Stainless steel All	rom old scrap	primary ingot	pickigidaa)	
		10%	2100/0	Plastics Printed circuit (general) board mixed	Rubber	Stainless steel Ali fr	rom old scrap	primary ingot	pickigitass)	
		10%	2100/0	Plastics Printed circuit (general) board mixed	Rubber	Stainless steel Ali fr	rom old scrap	primary ingot	роходаза)	
		10%	2100/0	Plastics Printed circuit (general) board mixed	Rubber	Stainless steel Ali	rom old scrap	primary ingot	proxigious)	
		10%	2100/0	Plastics Printed circuit (general) board mixed	Rubber	Stainiess steel Ali	rom old scrap	primary ingot	proviginasa)	
		10%	2100/0	Plastics Printed circuit (general) board mixed	Rubber	Stainless steel Ali	rom old scrap	primary ingot	provigraza)	
		10%	2100/0	Plastics Printed circuit (general) board mixed	Rubber	Stainless steel Al	rom old scrap	primary ingot	provigraza)	
		10%	2100/0	Plastics Printed circuit (general) board mixed	Rubber	Stainless steel Al	rom old scrap	primary ingot	provigraza)	
		10%	2100/0	Plastics Printed circuit (general) board mixed	Rubber	Stainless steel Al	rom old scrap	primary ingot	provigious (
		10%	2100/0	Plastics Printed circuit (general) board mixed	Rubber	Stainless steel Al	rom old scrap	primary ingot	provigious (

STOANE LIGHTING

EQUIPMENT DESIGN + MANUFACTURE

TM65.2 Lighting Calculation: Luminaire

Iris Type S

CIBSE TM65 Embodied Carbon Mid-level Calculation

Embodied Carbon Results Breakdown (kg CO2e)	
A1: Material Extraction	0.360
A2: Transport	0.017
A3: Manufacturing	0.390
A4: Transport to Site	0.002
B3: Repair	0.168
C2: Transport	0.001
C3: Waste Processing	0.195
C4: Disposal	0.000
Embodied Carbon Results (kg CO ₂ e)	
A1-C4	1.13
A1-C4 with Buffer Factor	1.47
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