Embodied Carbon Calculation (TM65: 2020)

This calculation has been carried out by EGG Lighting according to the CIBSE TM65: 2020"Embodied carbon in building services: a calculation methodology"

For any questions about this document or product please contact: circular@egglighting.com

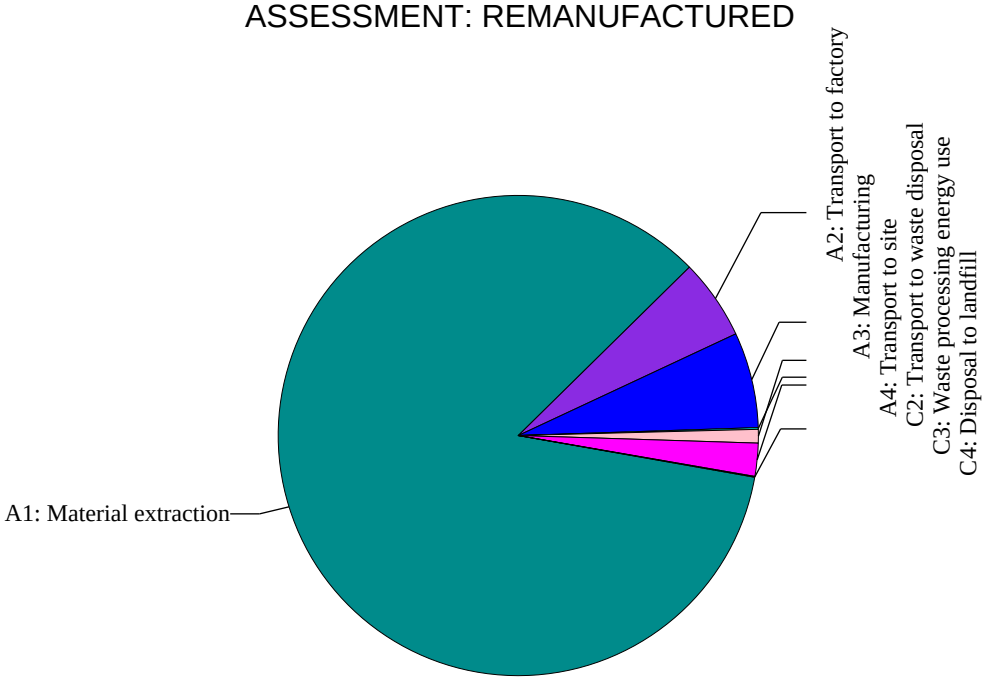
PRODUCT SPEC

Product name	Remanufactured Rectangular high-bay
Power consumption (W)	69
Service life of the product (years)	10

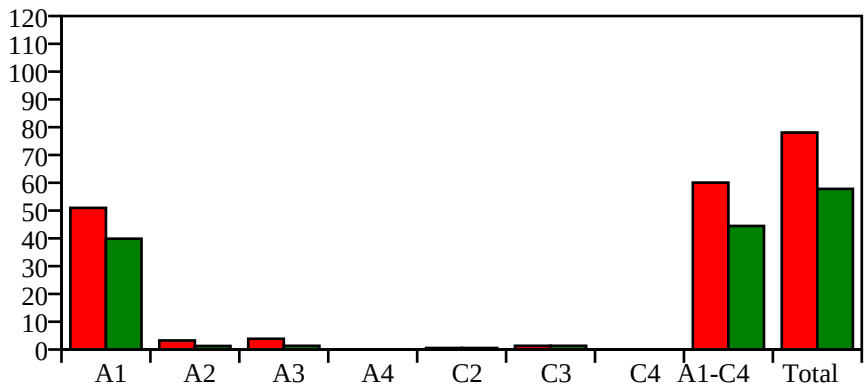
RESULTS SUMMARY

Total embodied carbon - remanufactured luminaire (kgCO2e)	57.8
Total embodied carbon - equivalent new luminaire (kgCO2e)	78.08

ASSESSMENT: REMANUFACTURED



ASSESSMENT: REMANUFACTURED VS NEW EQUIVALENT



Mid-level calculation	Remanufactured Product	New Product	
Name of assessor and assessor organisation	EGG Lighting	EGG Lighting	
Contact details of assessor	circular@egglighting.com	circular@egglighting.com	
Product information			
Product name	Remanufactured Rectangular high-bay		ASD Luminaire (Edinburgh)
Power Consumption	69	69	W
Product weight (kg)	6.419	6.419	kg
Material % breakdown for at least 95% of the product weight? (Y/N)	Y	Y	97%
Service life of the product (years)	10	10	Life depends on usage
Location of manufacture	Glasgow, Scotland	Glasgow, Scotland	
Embodied carbon results (kg CO2e) breakdown			
A1: Material extraction	39.87	50.96	
A2: Transport to factory	1.27	3.25	
A3: Manufacturing	1.33	3.86	
A4: Transport to site	0.07	0.07	
C2: Transport to waste disposal	0.55	0.55	Assuming transport to national waste processing
C3: Waste processing energy use	1.33	1.33	Assuming same energy use as final assembly
C4: Disposal to landfill	0.03	0.03	Assume 55% sent to landfill as per CIBSE TM65 assumption
Embodied carbon results (kg CO2e) — without refrigerant leakage			
A1–C4 (excluding A5-C1)	44.46	60.06	
A1–C4 (excluding A5-C1) with buffer factor	57.8	78.08	Assuming 1.3 buffer - scaleup factor is assumed to be 1.3 in the mid level calculation
Embodied carbon result with ‘mid-level calculation’ method (kg CO2e) — total			
Result of ‘mid-level’ calculation	57.8	78.08	