

lightly

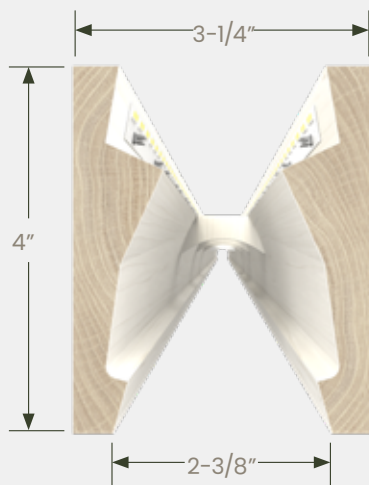
butterfly | specification sheet 2024

features

- Suspended direct / indirect LED Luminaire
- Carbon-conscious: designed with natural, renewable, non-toxic components. Red-list free. Fixture housing contains no metal, plastic, or glass
- Open-air internal reflector conceals LEDs, and offers low-glare illumination
- Lightweight wood and wool construction reduces the embodied carbon and cost of shipping as compared to traditional metal fixtures
- Excellent choice for projects with sustainability and embodied carbon requirements; net-zero, LEED, WELL v2



dimensional data



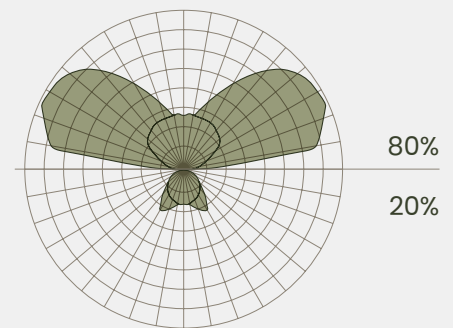
height:
4"

width:
3-1/4"

length:
2' minimum,
no maximum run length
(*Custom lengths are
available in 1" nominal
increments. Submittals
will be created)

weight: (*8' Fixture)
11 lbs.

performance



lumen output:
600-1400 lm/ft

wattage:
4.3-10.3 w/ft

LPW:
136-141

SDCM:
3

specifications

LED systems

Premium LEDs on a robust platform to achieve excellent thermal management. Available in 3000K, 3500K, 4000K with CRI>90. Also available in tunable white, ranging from 2700-6500K with CRI-90.

construction

Carefully curated materials to ensure reliable, durable construction with sustainability at the forefront. Sustainably harvested Pennsylvania poplar housing and end caps, 100% natural wool felt gaskets, non-toxic wood adhesive, and VoC-free wood stains. An 8' fixture weighs 11 lbs.

finish

Non-toxic, biodegraded wood finishes, pigmented stains, semi-opaque pigmented paint, or highly opaque paint are used to achieve our natural, honey, dark walnut, black, and white finishes. See pg. 5 for more details.

optic

lightly Butterfly challenges traditional luminaire design, typically reliant on translucent diffusers to distribute light. Instead, it delivers an 80% indirect / 20% direct distribution with a distinctive open-web optical profile finished in highly reflective matte white eco-friendly paint. The LED engines are concealed from viewing from below, reducing glare and creating a unique open-air experience.

labels

Our highly sustainable fixtures have Declare and EPD labels and certifications and are UL Dry, indoor use only.

electrical

All luminaires provided with remote drivers only. Standard 120-277 VAC constant current driver includes 0-10V analog dimming. Power factor > .95. Standard cable length provided is 12 ft. Refer to pg. 8 for maximum run length from fixture to driver.

emergency

If emergency battery (B) is specified, the luminaire will be provided with an emergency lighting battery pack unit for both normal and emergency operation, 120-277 VAC only. Emergency mode provides constant power to a nominal 10W LED load for a period of 90 minutes. The unit contains a long-life Li-Ion battery and inverter circuitry and requires connections to be made to the remote driver box on-site. Charge indicator light and test switch provided with mounting option to driver box. Refer to Lightly installation documentation for more details.

lumen maintenance

Tested in accordance with LM-80. Reported L70>100,000 hrs (105 C).

reliability

At Lightly, our products are designed to stand the test of time, then be recycled, repurposed, or biodegraded at end of life. To ensure longevity, all products must pass rigorous testing in environmental chambers evaluating the potential for warping and humidity absorption.

ordering guide

12

12

1

2

3

4

5

6

7

8

9

10

11

12

-

1: SERIES	2: NOMINAL LENGTH (ft.)	3: WOOD FINISH	4: END CAP FINISH	5: WOOL FELT COLOR	6: MOUNTING
<div>Bbutterfly</div>	<div>2'08'0</div> <div>4'0X'X (custom)</div> <div>6'0</div> <div>*1" nominal increments</div>	<div>Wwhite</div> <div>Bblack</div> <div>Nnatural</div> <div>Hhoney</div> <div>Ddark walnut</div>	<div>Wwhite</div> <div>Bblack</div> <div>Nnatural</div> <div>Hhoney</div> <div>Ddark walnut</div>	<div>Tthunderstorm</div> <div>Ggraphite</div> <div>Hheather gray</div> <div>Ffern green</div>	<div>Aaircraft cable suspension</div> <div>*12 ft. length standard</div>
7: LIGHT OUTPUT (lm/ft.)	8: CCT (90 CRI)	9: DRIVER	10: WIRING & EMERGENCY	11: CONTROLS	12: OPTIONS
<div>L600 (4.3w/ft)</div> <div>M1000 (7.2w/ft)</div> <div>H1400 (10.3w/ft)</div>	<div>303000K</div> <div>353500K</div> <div>404000K</div> <div>TW2700-6500K</div>	<div>RRemote 0-10 V Dim 1.0% 120-277 V</div>	<div>B_*remote emerg. battery</div> <div>Cemerg. circuit</div> <div>Znot applicable</div> <div>*for continuous runs, specify the number of units with emergency battery capability (ex. B2)</div>	<div>_(blank)</div>	<div>Driver Box Faceplate</div> <div>-standard (paintable steel)</div> <div>Wwhite wood</div> <div>Bblack wood</div> <div>Nnatural wood</div> <div>Hhoney wood</div> <div>Ddark walnut</div> <div>*driver box is e-coat white steel, see install guide for dimensions and details</div>

performance chart

delivered lumens (lm/ft)					
config.	total	indirect	direct	power (w/ft)	efficacy (lm/w)
low	600	480	120	4.3	141
med	1000	800	200	7.2	139
high	1400	1120	280	10.3	136

*Performance specifications are nominal.

sustainable in every way

Bill of Material Weight - 8 ft. Standalone

wool felt gaskets
material: wool felt
total weight: 0.08 lbs

dowels
material: beech
total weight: 0.02 lbs

LED boards
materials:
copper
polyimide
tin
(see Declare label
for full list)
total weight: 0.2 lbs

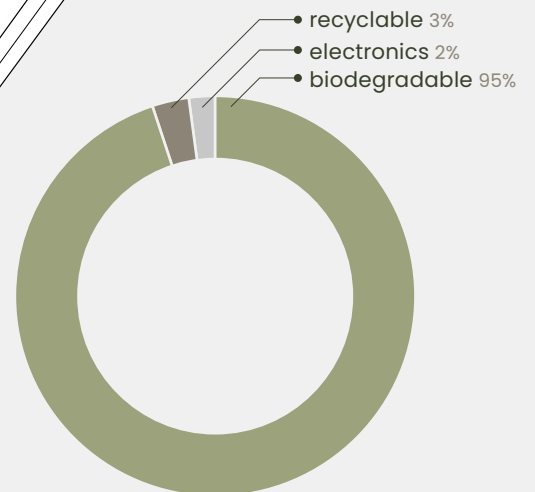
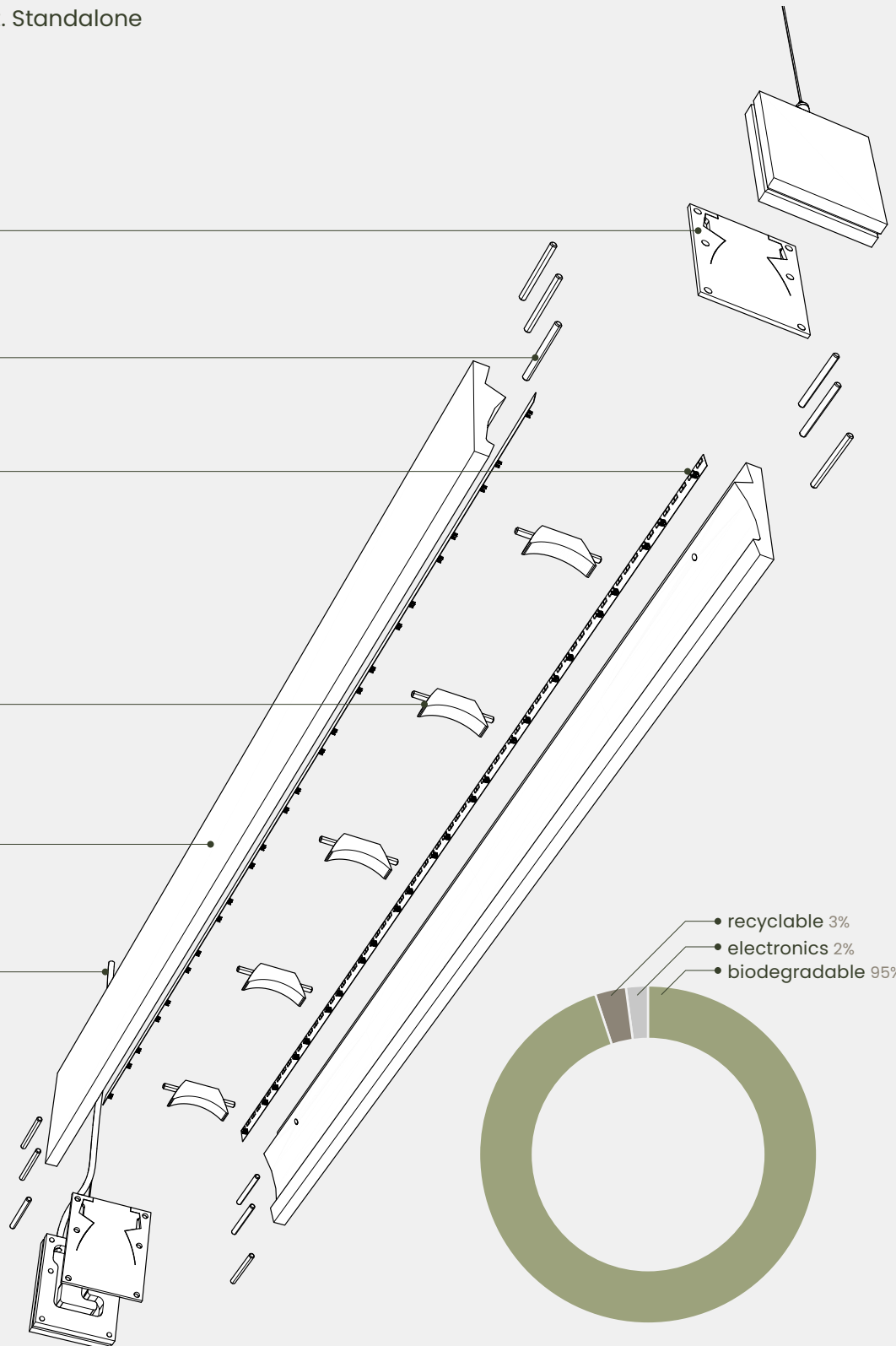
bridges
material: poplar
total weight: 0.02 lbs

wood profiles
material: poplar
total weight: 9.00 lbs

power cord
material: non-PVC
total weight: .8 lbs

miscellaneous:
non-toxic paint
total weight: 0.01 lbs

non-toxic glue
total weight: 0.01 lbs

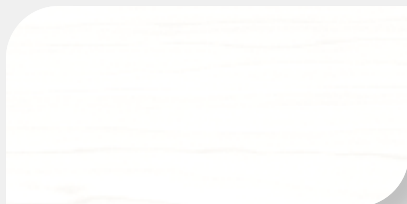


finish key

lightly offers variations of finishes for components including wood color & wool felt color

wood finish

W
white paint



N
natural



H
honey



D
dark walnut



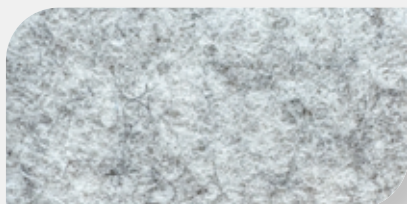
B
black stain



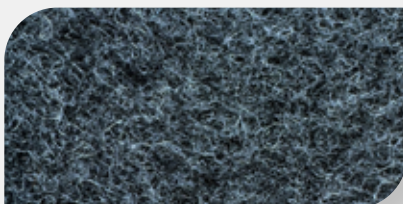
*Wood is a natural material and is therefore subject to small variations in tone, texture, and grain. The swatch palettes for *Natural*, *Honey* and *Dark Walnut* represent a possible range of finishes.

wool finish

T
thunderstorm



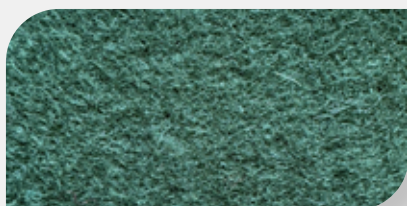
G
graphite



H
heather gray

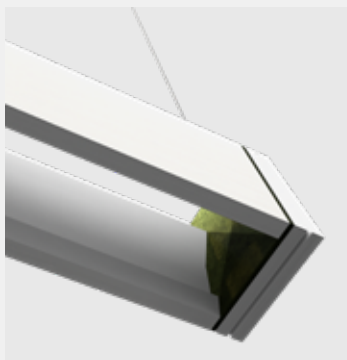
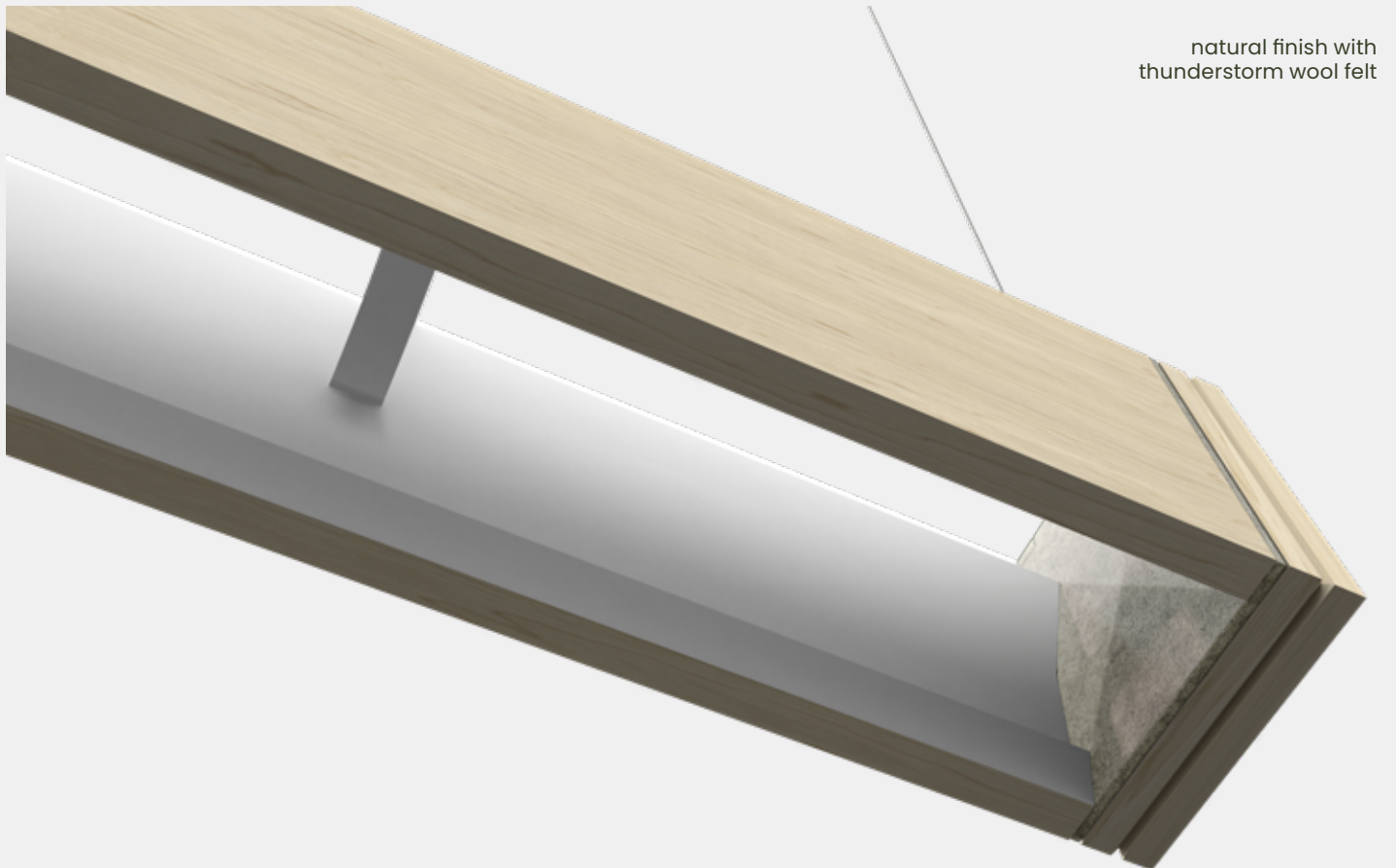


F
fern green

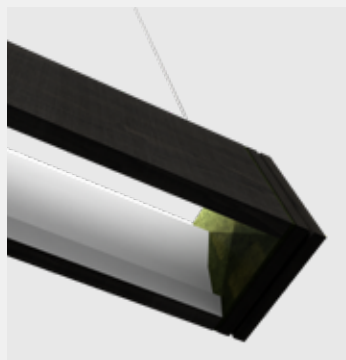


our butterfly finishes

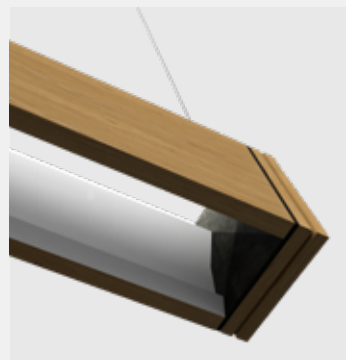
lightly offers a range of gorgeous natural materials that sequester carbon, harvested from fast growth sources that don't deplete precious natural resources.



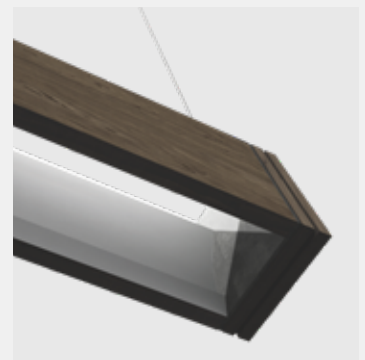
white
showing fern green wool felt



black
showing fern green wool felt



honey
showing graphite wool felt



dark walnut
showing heather gray wool felt

configuration

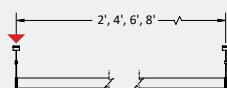
lightly butterfly has been designed for easy on-site installation and uniform runs

standard run configurations

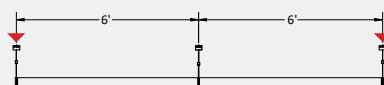
The table below shows how the standard run lengths are configured. For other run lengths or layouts, contact customer support.

nominal run length	section lengths	nominal run length	section lengths
2'	2'	16'	8'+8'
4'	4'	20'	8'+8'+4'
6'	6'	24'	8'+8'+8'
8'	8'	28'	8'+8'+8'+4'
12'	6'+6'	32'	8'+8'+8'+8'

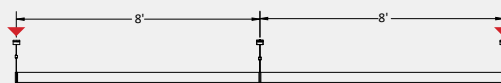
* ▼ indicates standard power drop locations



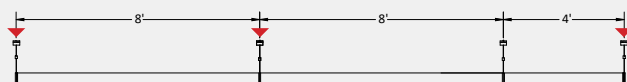
2 ft, 4 ft, 6 ft, 8 ft



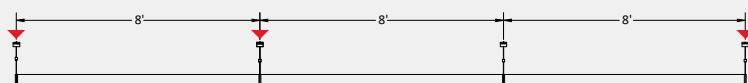
12 ft



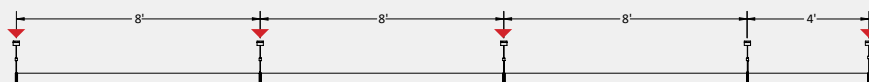
16 ft



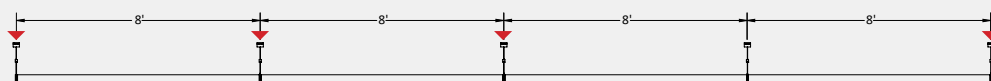
20 ft



24 ft



28 ft

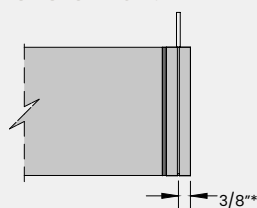


32 ft

nominal length vs. actual length

The nominal length of each section of a run is equal to the on-center spacing of the suspension points.

The actual length of the overall run is 3/8" longer at each end than the nominal length of the overall run.



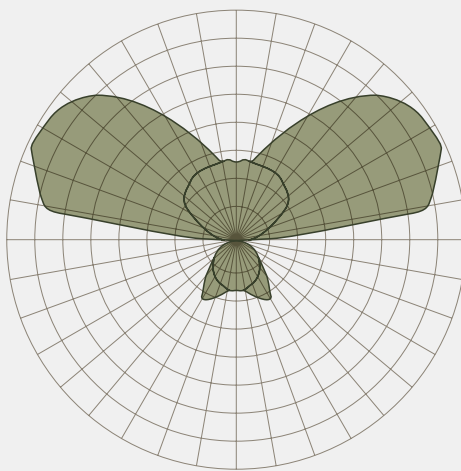
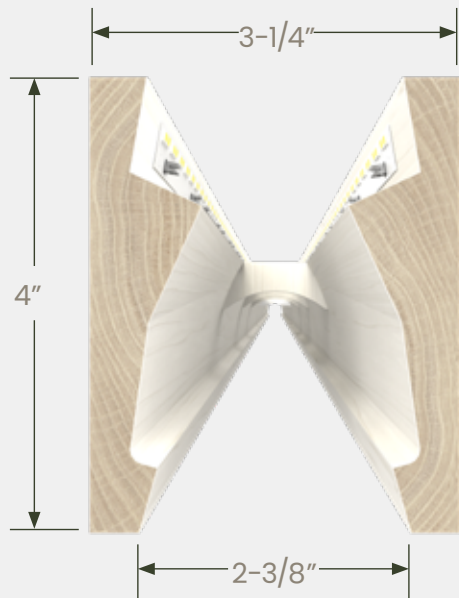
natural wood deviations

Lightly maintains a straightness tolerance of $\pm 1/16"$ on standalone units and $\pm 1/8"$ on continuous units. Fixtures are intended for indoor use only and must be stored and installed in a climate controlled area to remain within specified limits.



profile & optical distribution

an open-air internal reflector offers low-glare illumination in a minimalistic design.



optical distribution

80% indirect/20% direct optical distribution. The fixture uses an open vertical see-through optical reflective cavity finished in high reflective matte white eco-friendly paint. LED engine concealed from view at all angles from below the top of the fixture. Glare is mitigated through the diffusion achieved by the internal reflective surfaces.

photometrics

uncompromised performance in a variety of color temperature and lumen outputs.

configuration	delivered lumens (lm/ft)			power (w/ft)	efficacy (lm/w)
	total	indirect	direct		
low	600	480	120	4.3	141
med	1000	800	200	7.2	139
high	1400	1120	280	10.3	136

*Performance specifications are nominal.

remote mounting of drivers

Wire size (max distance from canopy to drivers)

20 AWG - 50'

18 AWG - 80'

16 AWG - 125'

14 AWG - 200'

*Drivers must be accessible after installation.

*One driver box per 8' section

*Option for gang of drivers in a remote location.

*Refer to installation guide for more details.

transparent to the core

wood sourcing

The wood is sourced sustainably in compliance with AHEC (American Hardwood Export Council) regulations from the State of Pennsylvania and has the optional ability to be provided with FSC certified chain of custody.

wood processing

The wood frame is furniture-grade dried wood at 7-8% moisture content, tested to numerous QC standards to ensure its minimum stress, the right humidity uniformity, and exceeds the grading standards for FAS Lumber. The wood is processed via continuous moulding cutting processes to ensure consistent characteristics. The wood end caps are made from matching wood formed via a precision CNC milling process.

wood housing

The primary body consists of a continuous wood perimeter frame with wood endcaps and an open optical reflector cavity finished in high reflectance bright white.

wood finishes

Wood body and endcap finish options include non-toxic, bioderived wood finishes, pigmented stains, semi-opaque pigmented paint, or highly opaque paint. All paint options and reflective surfaces utilize air-purifying paint which neutralizes chemicals, pollutants, and VOCs for improved indoor air quality.

natural wood glue

Gelatin glue and jelly glue are the modern terms for protein-based adhesives. Additional ingredients include water, Epsom salts, corn sugar, and glycerin. Non-toxic, recyclable and eco-friendly.

wool felt pad

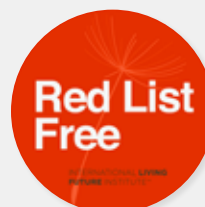
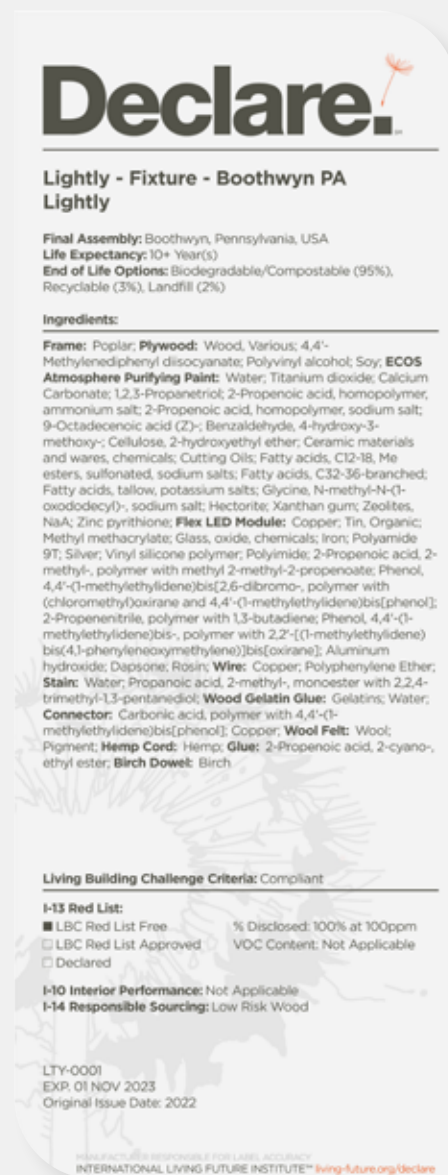
Biodegradable, naturally dyed, 100% wool. Creates distinctive contrasting design feature while preventing any light leakage at end cap joint.

LED engine

Flexible PCB with mid-power LED packages adhered to fixture body in continuous rows. LED engine can be easily stripped from fixture at end of life without removing any fasteners.

power supply

Remote driver solution with multiple mounting options.





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