



# lightly

**butterfly**

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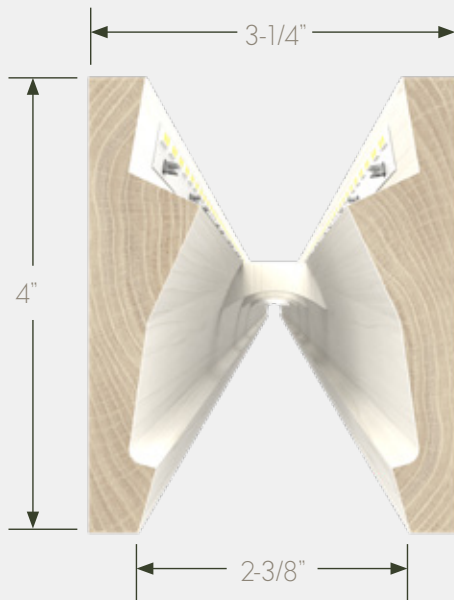
Specification Sheet 2022

## 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, wool, and hemp 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



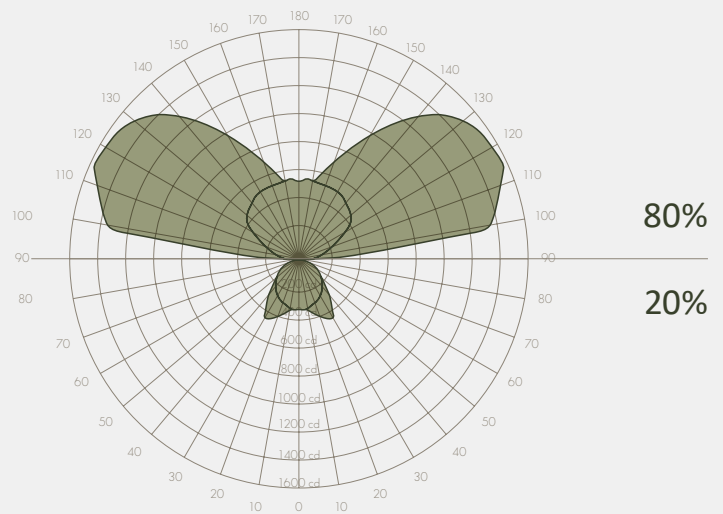
**HEIGHT:**  
4"

**LENGTH:**  
2'-32"  
(\*Custom lengths are available in 2" nominal increments. Submittals will be created)

**WEIGHT:**  
11 lbs.  
(\*8' Fixture)

**WIDTH:**  
3-1/4"

## performance



**LUMEN OUTPUT:**  
600-1400 lm/ft

**LPW:**  
136-141

**WATTAGE:**  
4.3-10.3 w/ft

**SDCM:**  
3

## ordering guide

lightly offers variations of finishes for components including wood species/color, wool felt color, & hemp cord color

### 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, high-strength hemp twine suspension cables (10' provided), non-toxic wood adhesive, and VoC-free wood stains. An 8' fixture weighs 11 lbs.

#### FINISH

Non-toxic, bioderived 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.

#### ELECTRICAL

All luminaires provided with remote drivers only. Standard 120-277 VAC constant current driver includes 0-10V analog dimming. Power factor > 95. Power cord length options are 12', 16', or 20'. Refer to pg. 7 for maximum run lengths to driver.

#### EMERGENCY

If emergency battery (B) is specified, this luminaire will be provided with a factory installed LED emergency lighting battery pack for both normal and emergency operation, 120-277 VAC only. This fixture integrated unit contains long-life Ni-Cad recyclable battery, 24 hour charger, and converter circuit. Test switch and charge indicator provided, to be installed by others in accordance with local code. Emergency mode provides constant power to a nominal 10W LED load for a period of 90 minutes. Unless otherwise specified, the emergency battery pack will illuminate up to the first 8' of a run. Emergency circuiting (C) provided as a separate circuit from normal power circuit according to NEC requirements, specify circuit length and location. Generator transfer device included with emergency circuiting.

#### LABELS

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

#### LUMEN MAINTENANCE

Tested in accordance with LM-80. Reported L70>54,000 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.

### performance chart

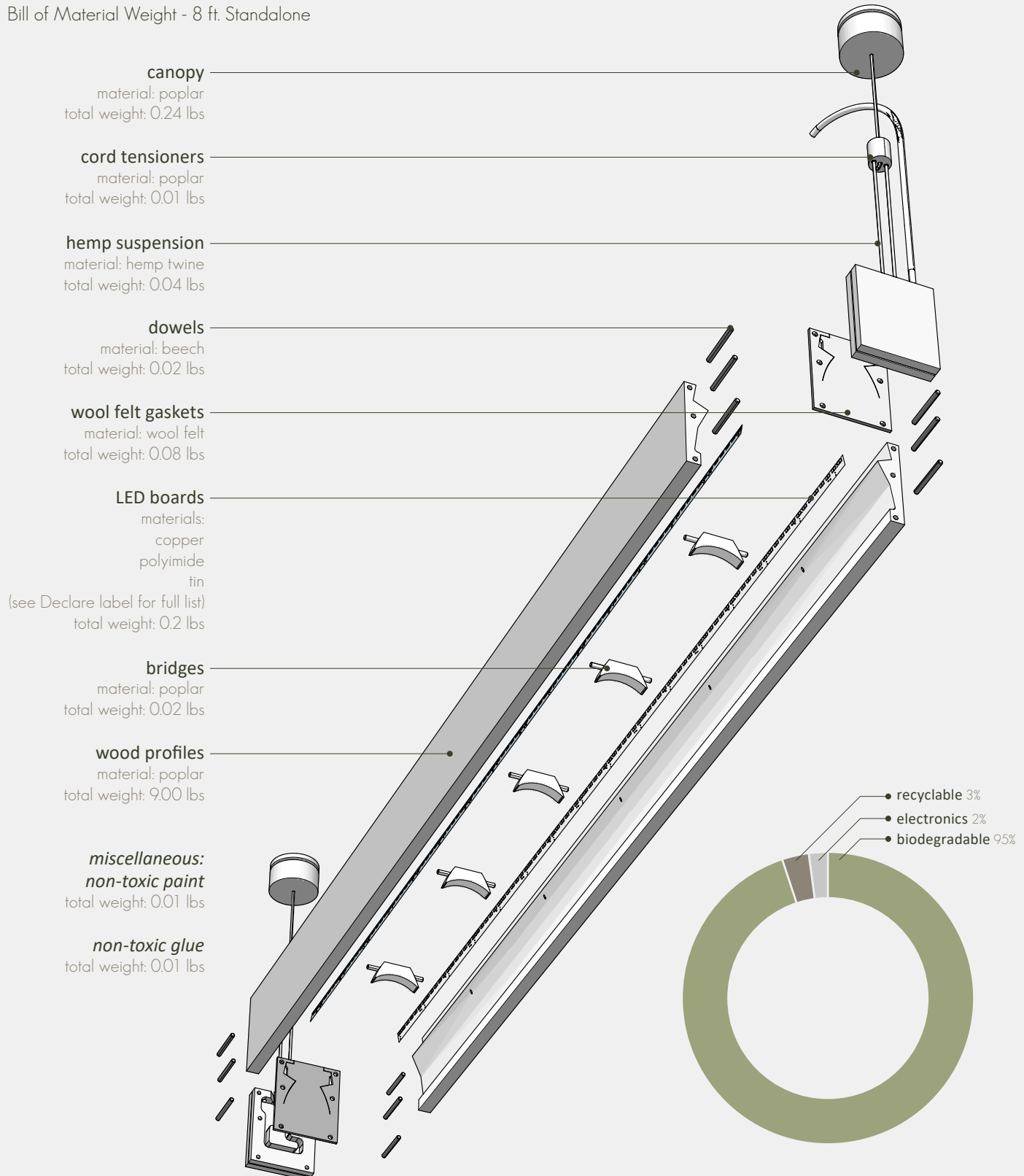
configuration	delivered lumens (lm/ft)			power (W/ft)	efficacy (lm/W)
	total	indirect	direct		
low	600	480	120	4.3	141
med	1000	800	200	7.2	139
high	1400	1120	280	10.3	136

\*Performance specifications are nominal.

<b>SERIES</b>	butterfly	B	-----
<b>NOMINAL LENGTH (ft.)</b>			-----
*max. of 32' in 2' increments	2'	2	
	4'	4	
	6'	6	
	8'	8	
	X'-X"	custom	
<b>WOOD</b>			-----
	white	W	
	black	B	
	natural	N	
	honey	H	
	dark walnut	D	
<b>END CAP</b>			-----
	white	W	
	black	B	
	natural	N	
	honey	H	
	dark walnut	D	
<b>WOOL FELT</b>			-----
	thunderstorm (natural)	T	
	graphite	G	
	heather gray	H	
	fern green	F	
<b>COUPLER</b>			-----
	white	W	
	black	B	
	natural	N	
	honey	H	
	dark walnut	D	
	not applicable	Z	
<b>MOUNTING</b>			-----
	white hemp suspension	W	
	black hemp suspension	B	
	gray hemp suspension	G	
	natural hemp suspension	N	
	aircraft cable suspension	A	
<b>CANOPY &amp; TENSIONER</b>			-----
	white	W	
	black	B	
	natural	N	
	honey	H	
	dark walnut	D	
	not applicable	Z	
<b>POWER CORD FINISH</b>			-----
	white	W	
	black	B	
<b>POWER CORD LENGTH (ft.)</b>			-----
	12'	12	
	16'	16	
	20'	20	
<b>LIGHT OUTPUT</b>			-----
	600lm/ft (4.3 w/ft)	L	
	1000lm/ft (7.2 w/ft)	M	
	1400lm/ft (10.3 w/ft)	H	
<b>CCT</b>			-----
	3000K/90CRI	30	
	3500K/90CRI	35	
	4000K/90CRI	40	
	2700-6500K/90CRI	TW	
<b>DRIVER</b>			-----
	0-10V, 1.0% Dimming, 120-277 VAC	R	
<b>WIRING &amp; EMERGENCY</b>			-----
*for continuous runs, specify the number of units with emergency capability (ex. B2)	emergency battery	B_	
	emergency circuited	C_	
	not applicable	Z	
<b>CONTROLS</b>			-----
	(blank)	--	
<b>OPTIONS</b>			-----
	t-bar clip	T	
<b>SAMPLE ORDER CODE:</b>			
<b>B8'O-BBGZBB-B20HTWR-Z</b>			

## sustainable in every way

Bill of Material Weight - 8 ft. Standalone



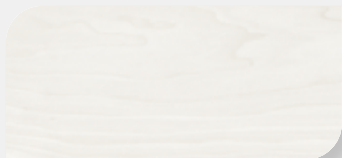
## finish key

lightly offers variations of finishes for components including wood species/color, wool felt color, & hemp cord color

### wood finish

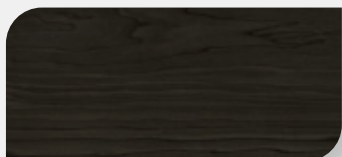
**W**

white paint



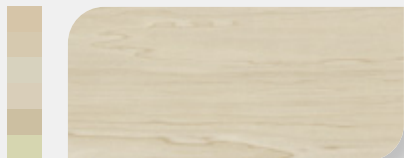
**B**

black stain



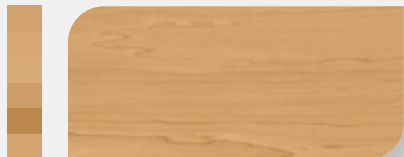
**N**

natural



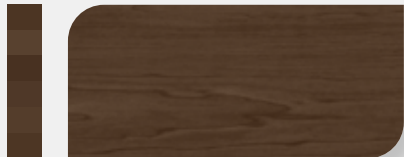
**H**

honey



**D**

dark walnut

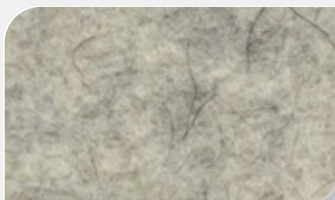


\*Wood is a natural material and is therefore subject to small variations in tone, texture, and grain. The swatch palettes for *Natural*, *Honey* and *Dark Walnut* represent a possible range of finishes.

### wool finish

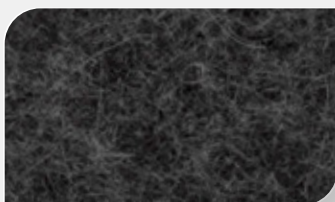
**T**

thunderstorm



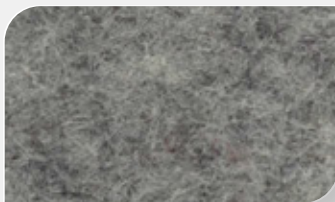
**G**

graphite



**H**

heather gray



**F**

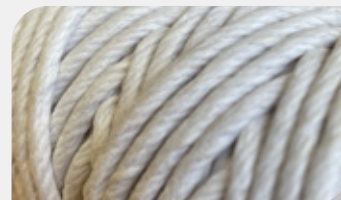
fern green



### hemp finish

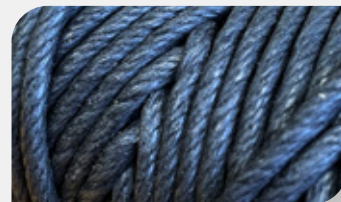
**W**

white



**B**

black



**G**

light gray



**N**

natural



## 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 thunderstorm wool felt accent and white hemp cord



black  
showing graphite wool felt accent and black hemp cord



honey  
showing fern green wool felt accent and natural hemp cord



dark walnut  
showing graphite wool felt accent and black hemp cord



## configuration

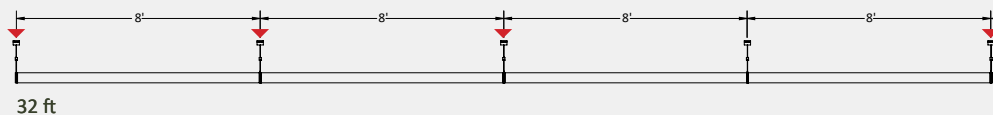
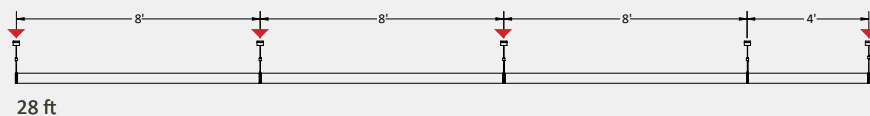
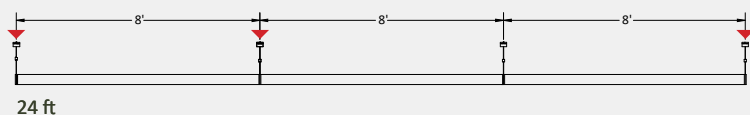
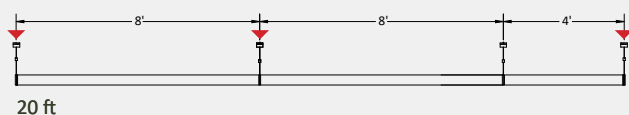
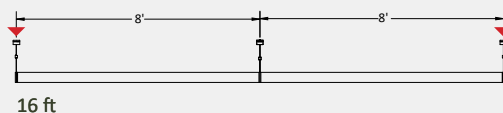
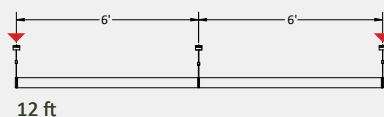
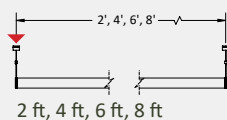
lightly butterfly has been designed for easy on-site installation and uniform runs

### 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'	8'+4'	32'	8'+8'+8'+8'

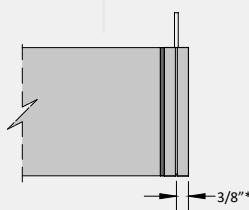
\* ▼ indicates standard power drop locations



### nominal length vs. actual length

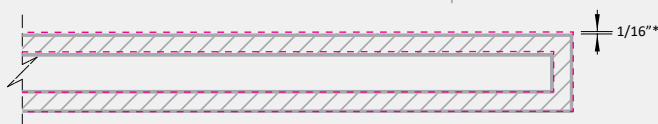
The nominal length of each section of a run is equal to the on-center spacing of the suspension points.

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



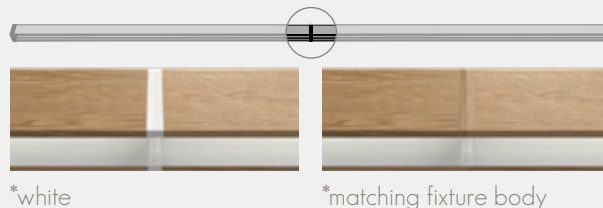
### natural wood deviations

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.



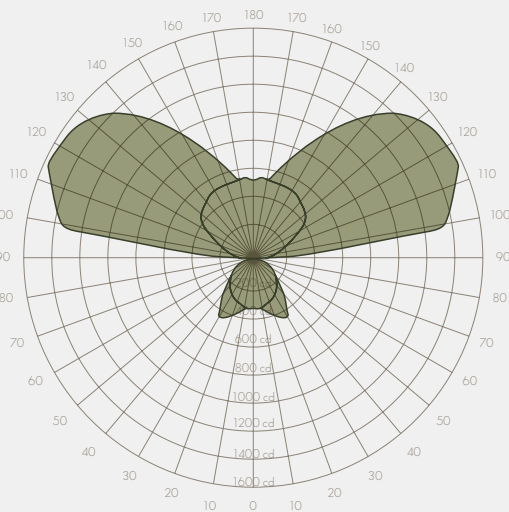
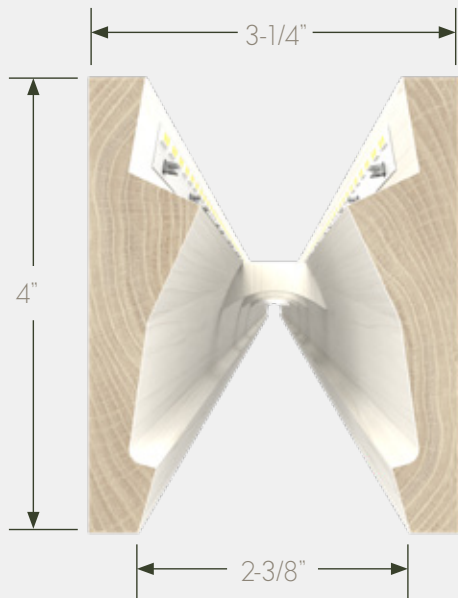
### coupler finish

The coupler is located at the joint of two sections in a run over 8 ft. As per the ordering guide on pg. 3, it can be specified as white finish or to match the fixture body finish.



## 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 per 8' section

\*Option for gang of drivers in a remote location.



## 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.

### hemp cord

Hemp fiber is strong and mold-resistant, making it an ideal material for suspension cables. It is also one of the most common and fastest growing plants on earth, and can be processed mechanically without chemical treatments.

### 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.

