ANNUAL LIGHTING SURVEY OF NORTHWEST ELECTRICAL DISTRIBUTORS 2022

SEPTEMBER 2023

Bonneville Power Administration
Northwest Energy Efficiency Alliance

PREPARED BY:
Cadeo Group

Report Highlights

0%

There was a 0% change in total unit sales between 2021 and 2022, marking a potential stabilization in sales volumes folliwing COVID-19.

67%

67% of all unit sales in 2022 were LEDs.

52%

In 2022, 52% of 4ft T8 sales were TLEDs, representing a continued shift away from the once-dominant linear fluorescent lamp.

Table of Contents

Report Overview

TOTAL DISTRIBUTORS	2022 PARTICIPANTS	2022 NEW PARTICIPANTS	MARKET SHARE REPRESENTATION	YEARS COVERED
48	24	+1	~40%	2018 – 2022

This report presents the results of the tenth annual Northwest Energy Efficiency Alliance (NEEA) and Bonneville Power Administration (BPA) Northwest Electrical Distributor Lighting Survey (lighting survey). The research team worked with NEEA program staff and Evergreen Consulting to recruit participants, successfully engaging 24 participants in the 2022 sales data collection effort. Combining these data submissions with past participating distributors' data, the Cadeo team's (research team) analysis included data from 48 total distributors. The total sales of these distributors represent roughly 40% of the total Northwest non-residential market.

FIGURE 1 Distributor Unit Sales, Floor Space, and Branches by State: 2022

Figure 1 shows the share of collected unit (lamp and fixture) sales by state along with state shares of total commercial floor space and known distributor branch locations for context. The percentages of unit sales by state are similar to the percentages of commercial floor space, with most units going to Washington (49%) and Oregon (30%).

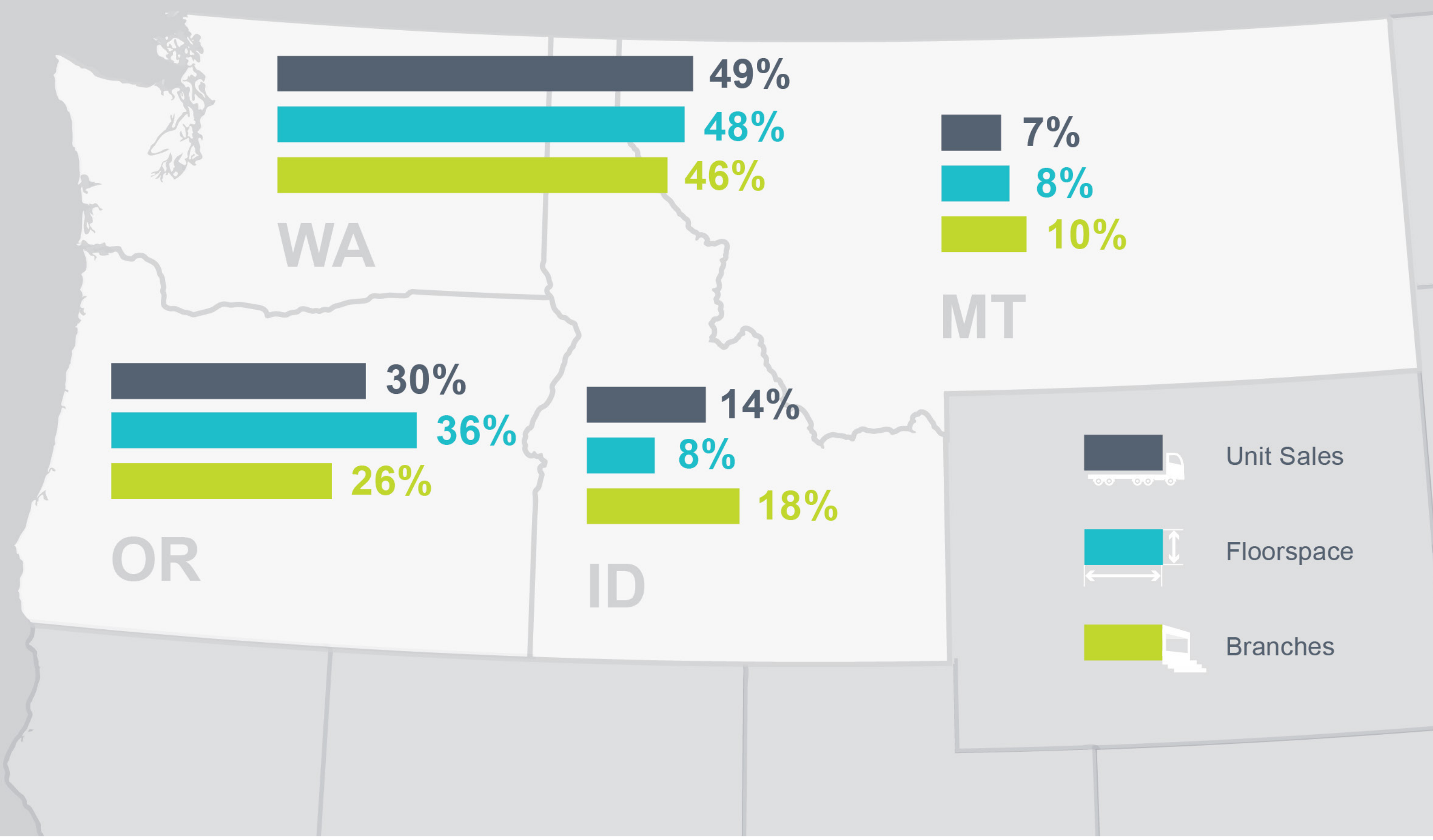


FIGURE 2

Mix of Distributors Submitting Data Compared to the Northwest Distributor Population

This year, 24 Northwest distributors, including one new participant, submitted sales data for 2022. **Figure 2** shows the mix of participating distributors (participant sample) by relative size, distribution area, and business model, compared to both the mix of the 48 distributors participating over the 10 years of the study (extrapolated sample) and the mix of the population of distributors in the Northwest (population).

Figure 2 Definitions

Large - more than 10 branches in the Northwest.

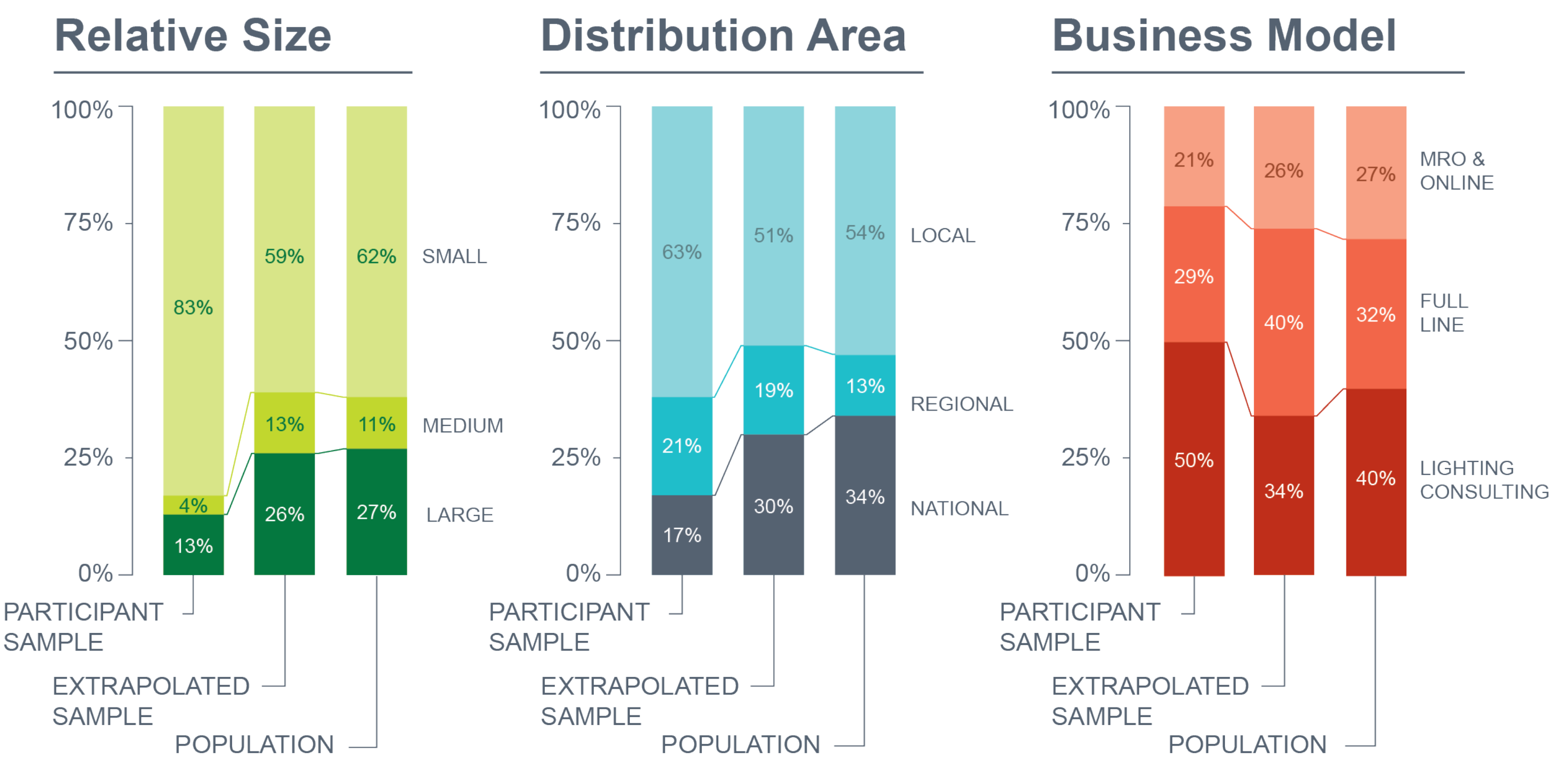
Medium - between 5 and 10 branches in the Northwest.

Small - fewer than 5 branches in the Northwest.

Maintenance, repair and operations (MRO) and online distributors may sell lighting products only or a mix of lighting and other products with a focus on maintenance sales.

Full line distributors sell a variety of electrical products including lighting.

Lighting consulting distributors focus on energy efficiency products and project-based work. This project-based work includes new construction, renovation, and retrofit sales, and tends to focus on LEDs and lighting control products.



Survey Results

FIGURE 3 Percent of Unit Sales by Technology Type, 2018–2022

LEDs remained the largest technology segment of Northwest total unit sales in 2022 at 67%. Linear fluorescents held consistent market share between 2021 and 2022 at 23%.

Total volume of unit sales stayed the same between 2021 and 2022, and the market share of all technologies remained consistent between the two years. While both total unit sales and LED unit sales are projected to decrease over time due to the extended lifetime of LEDs, the market is maintaining its recovery in lighting projects following decreases in sales volumes due to COVID-19.

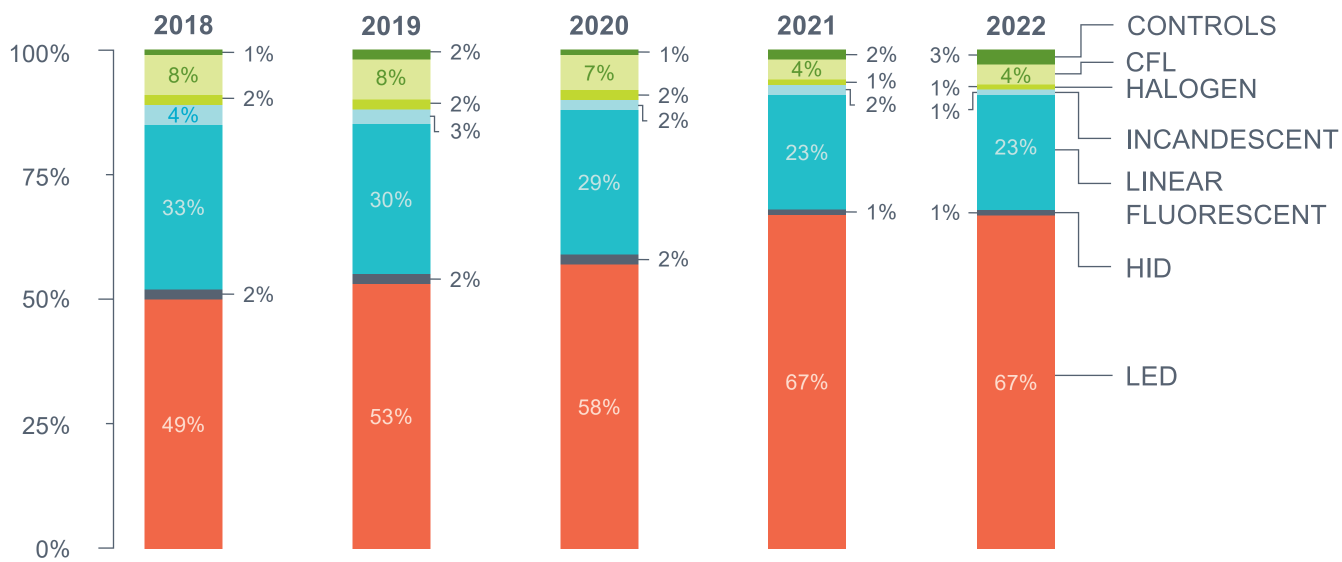


FIGURE 4 Percent of Unit Sales by Technology Type Across Business Models, 2018–2022

The technology sales mixes in 2022 for full line and for MRO and online look similar and have become increasingly alike over time. LEDs have gained market share in these distributor types, making up 71% of sales in full line and 54% of sales in MRO and online in 2022. The sales mix of lighting consultant distributors is distinct, with all lighting unit sales coming from LED technologies. Lighting consulting distributors tend to focus on energy efficient projects, so these distributors moved toward LED technologies more quickly. Lighting consulting was the only business model where controls made up a sizable portion of sales—34% in 2022, a large increase over previous years. While this change only affected lighting consulting distributors, it may indicate a market shift towards greater adoption of controls.

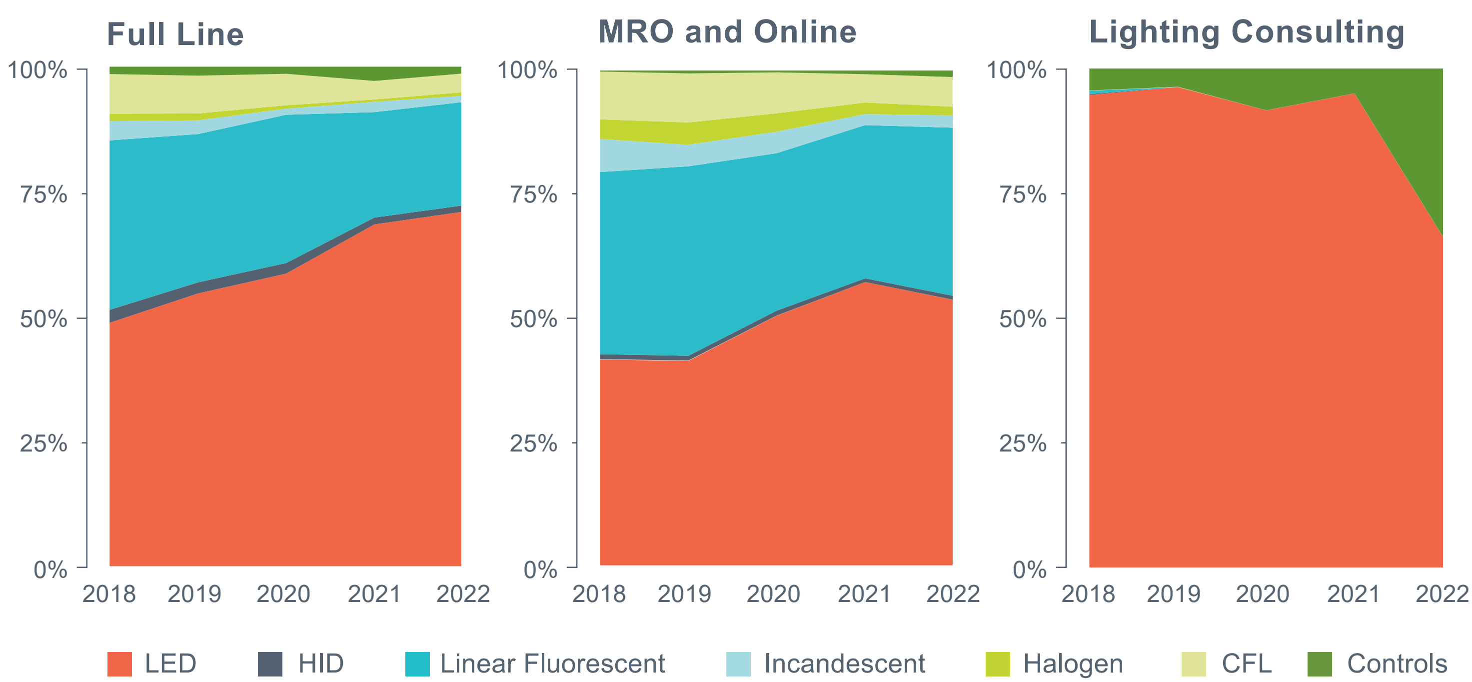


FIGURE 5

Estimated LED Percent Unit Sales, 2018–2022

The sales mix of LED technologies changed between 2021 and 2022. In 2022, reflectors and downlights made up the largest share of total LED unit sales at 36%, followed by TLEDs at 34% of total LED unit sales. Among LED technology types, TLEDs increased most from 2021 (31%) to 2022 (34%). A-type LEDs saw the largest decrease in sales mix from 13% in 2021 to 9% in 2022. This is likely due to post-COVID-19 stabilization of A-type LED sales volumes.

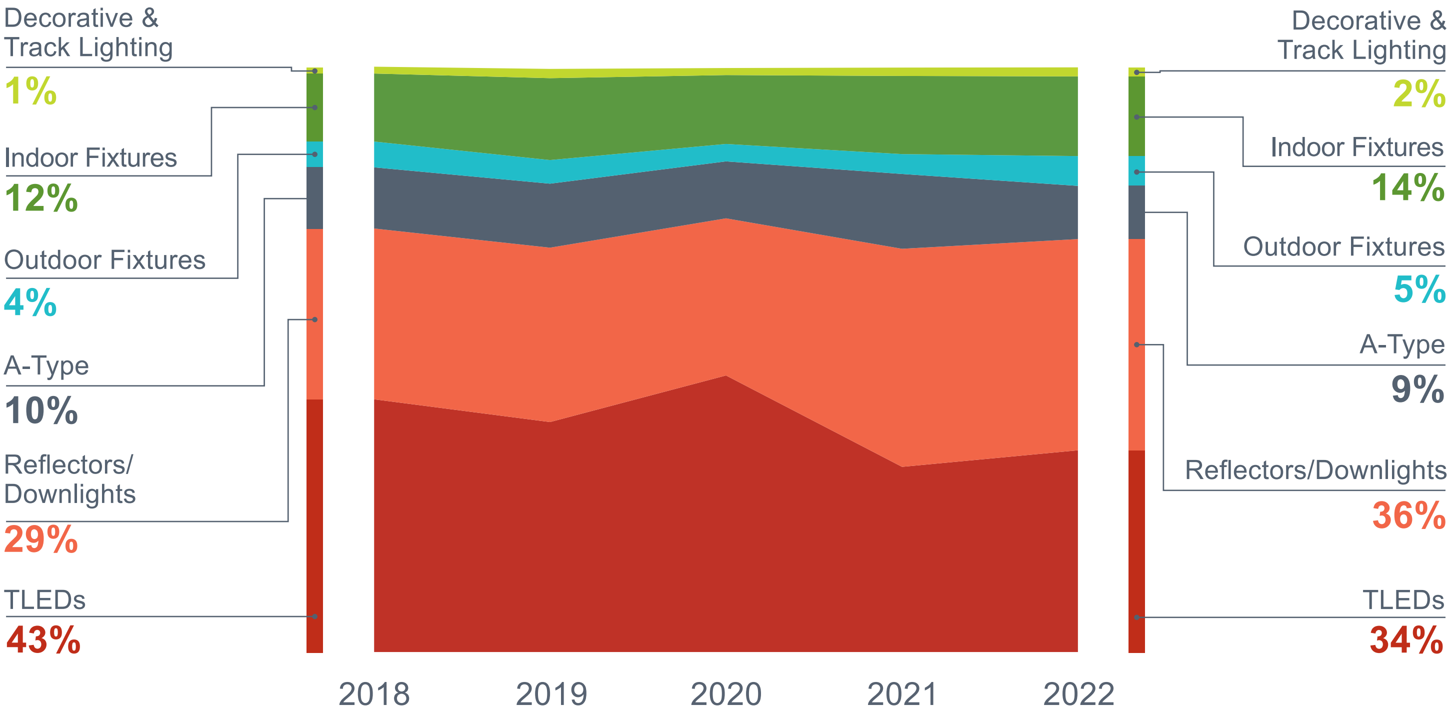


FIGURE 6

LED Penetration by Application, 2018–2022

Reflectors and A-type lamps showed the highest market penetration for LEDs in 2022 at 92% penetration for reflectors and 84% penetration for A-type lamps. Overall LED penetration in decorative and linear lamps was lower than in other categories. Decorative LED lamps showed a small decrease from 66% penetration in 2021 to 63% in 2022, but the long term trend is still indicating a growth in LED penetration in decorative lamps. LED penetration in Linear Lamps and Fixtures penetration only increased by 2% between 2021 and 2022.

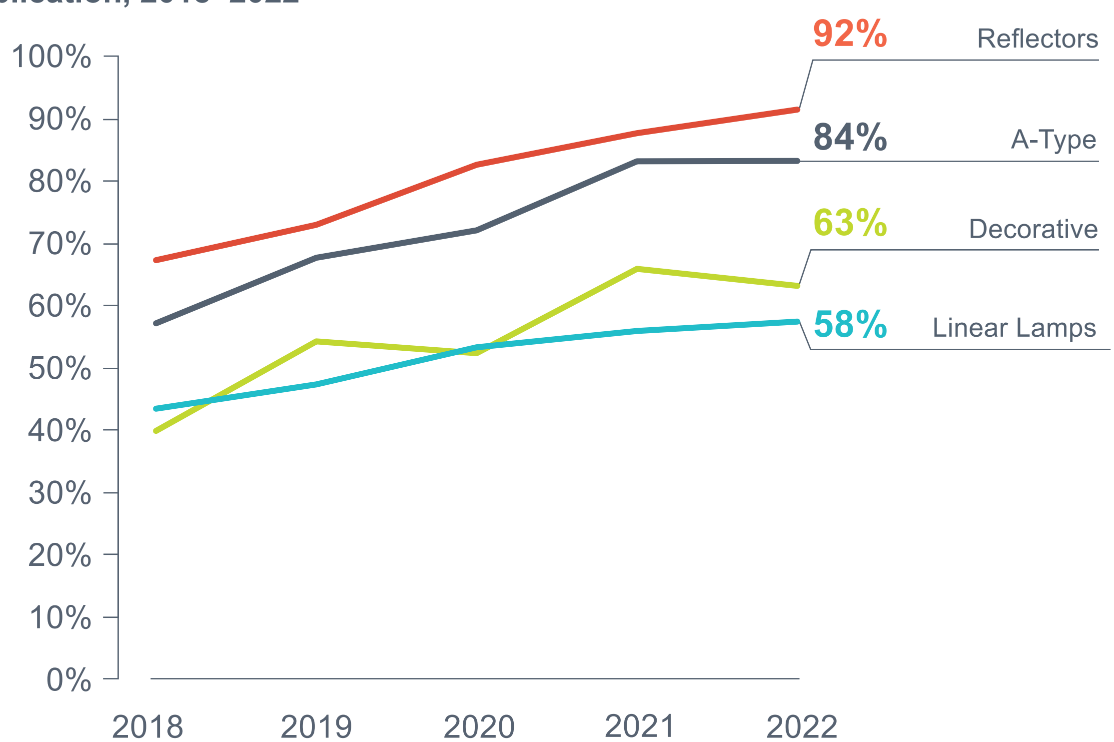


FIGURE 7

Downlight Sales by Technology Type, 2018–2022

For the four downlight products shown, the sales mix continued to favor LED lamp and fixture alternatives over compact fluorescent lamp (CFL) pin-based lamps. However, CFL pin-based lamps saw a small uptick in market share from 17% in 2021 to 19% in 2022. Growth in LED downlight fixtures and retrofit kits tapered off in 2022 compared to 2021, but they continue to hold the majority of market share over all lamps. LED technologies made up 81% of downlight applications in 2022—a slight decrease from 83% in 2021.

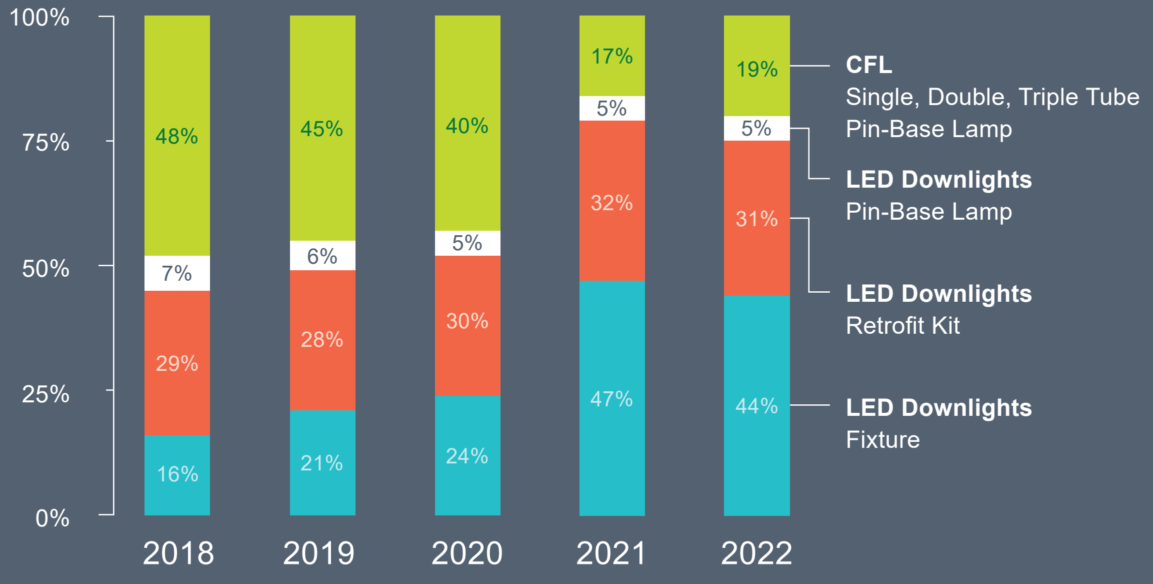


FIGURE 8

Percent Linear Lamp Sales by Type, 2018–2022

Among linear lamps, the sales mix between 4-foot T8 linear fluorescent lamps and TLEDs continued shifting towards TLEDs after becoming equivalent in 2020. In 2022, 4-foot T8 linear fluorescent lamps made up 48% of linear lamp sales and TLEDs made up 52%. Reduced wattage linear fluorescent lamp sales remained high in 2022 at 19% of linear lamps. Among TLEDs, UL Type B sales continue to hold the largest market share. The gap between UL Type B sales (33%) and UL Type A sales (14%) stayed the same between 2021 and 2022 after rapidly widening between 2020 and 2021. UL Type A+B represented 4% of the linear lamp category in 2022 for the fourth consecutive year, and UL Type C remained at 0% in 2022.

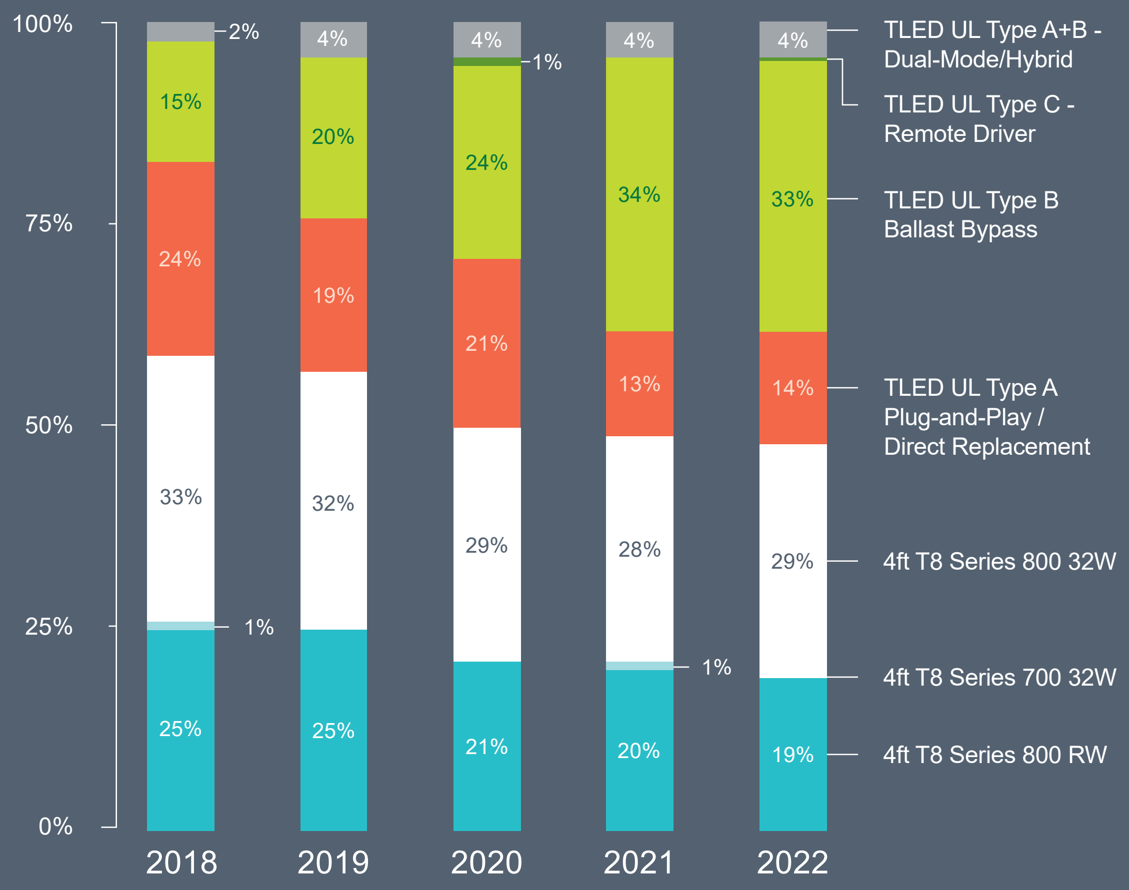
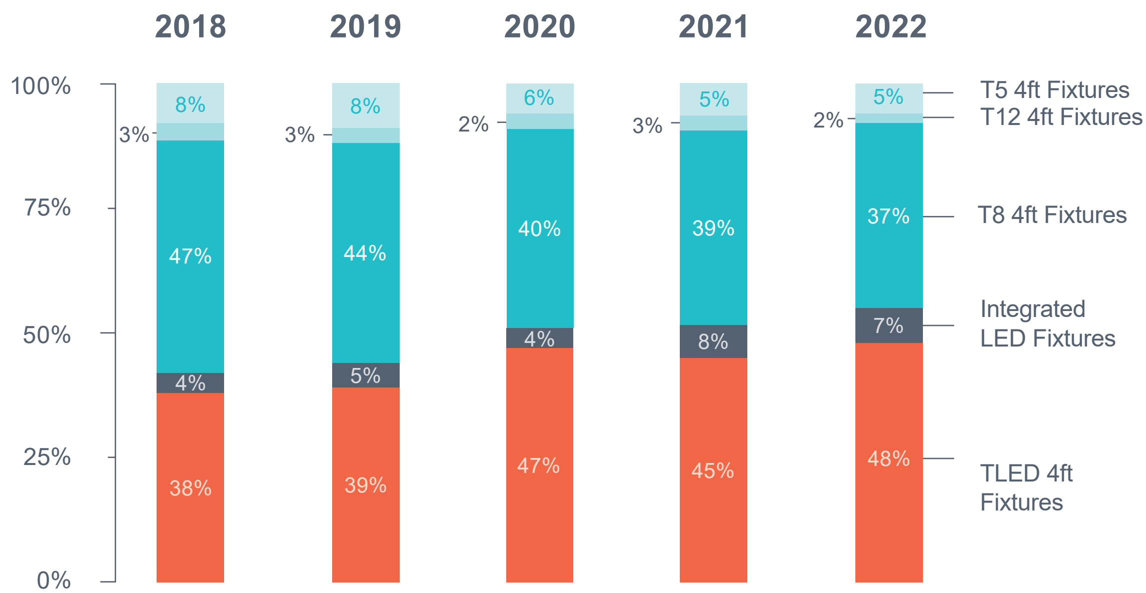


FIGURE 9

Percent of Ambient Linear Lamp and Fixture Sales by Type, 2018–2022

In the ambient linear application, LED products continued to replace linear fluorescent products. LED products made up over half (51%) of sales in this application for the first time in 2020 and has grown to 55% in 2022. While the sales mix for integrated LED fixtures has trended upward since 2017, there was a small dip in this category in 2022. Total unit sales of integrated LED fixtures actually increased between 2021 and 2022. But, these fixtures decreased as a portion of the sales mix in this category because integrated LED fixture unit sales increased less than total unit sales of TLEDs.

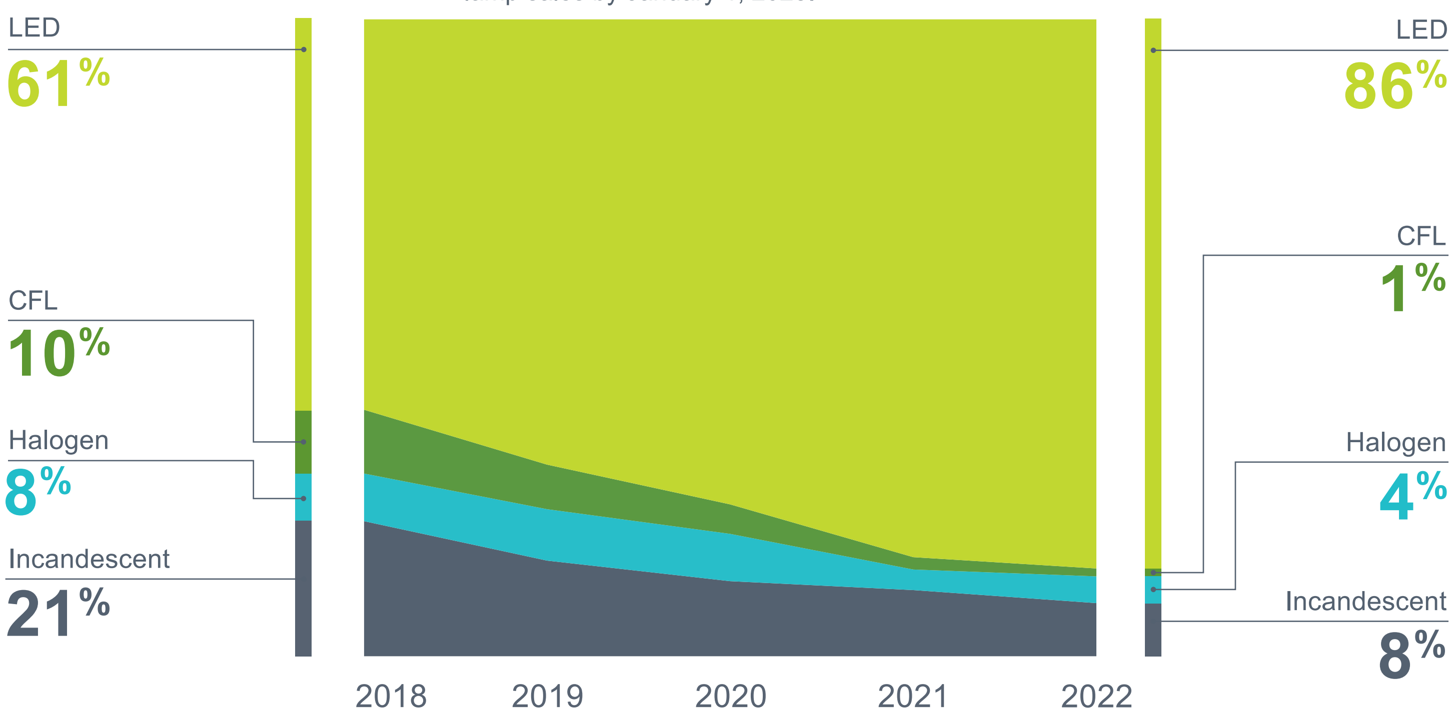


NOTE: Sales are normalized to an average of two lamps per fixture.

FIGURE 10

Screw-In Lamp Sales by Type, 2018–2022

Among screw-in products, LED products have consistently grown in market share since 2018 and held 86% market share in 2022. CFLs and halogens continued to lose market share and account for a smaller portion of the sales mix each year (except a small uptick in halogens in 2022). Incandescent products held 8% market share in 2022, but this will approach zero soon due to the US Department of Energy's backstop requirement for general service lamps (GSLs). This regulation requires 45 lumens per watt for GSLs with few exemptions, effectively pushing all non-LED products from the market for screw-in lamp sales by January 1, 2023.



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