ANNUAL LIGHTING SURVEY OF

NORTHWEST ELECTRICAL DISTRIBUTORS 2019

SEPTEMBER 2020

Bonneville Power Administration
Northwest Energy Efficiency Alliance

PREPARED BY:
Cadeo Group

Report Highlights

52%

For the first time ever, LEDs made up over half of all unit sales in 2019.

LED Fixtures

Within the ambient linear application, the sales share of integrated LED fixtures nearly doubled from 8% in 2018 to 14% in 2019.

Reduced Wattage

25W and 28W 4ft T8 sales remained at about a quarter of ambient linear lamp sales in 2019.

-11%

Total unit sales across technologies decreased in 2019 reflecting the dominance of long-lived LED products.

Table of Contents

Report Overview

TOTAL DISTRIBUTORS	2019 PARTICIPANTS	2019 NEW PARTICIPANTS	MARKET SHARE REPRESENTATION	YEARS COVERED
42	**23**	**+3**	**45%**	**2016 — 2019**

This report presents the results of the seventh annual NEEA and BPA Northwest Electrical Distributor Lighting Survey. This year, 23 Northwest distributors, including three new participants, submitted their sales data for 2016-2019. Combining these data submissions with past participants' data, the research team's analysis included data from 42 total distributors. The total sales of these distributors represented an estimated 45 percent of the total Northwest non-residential distributor market, depending on the product.

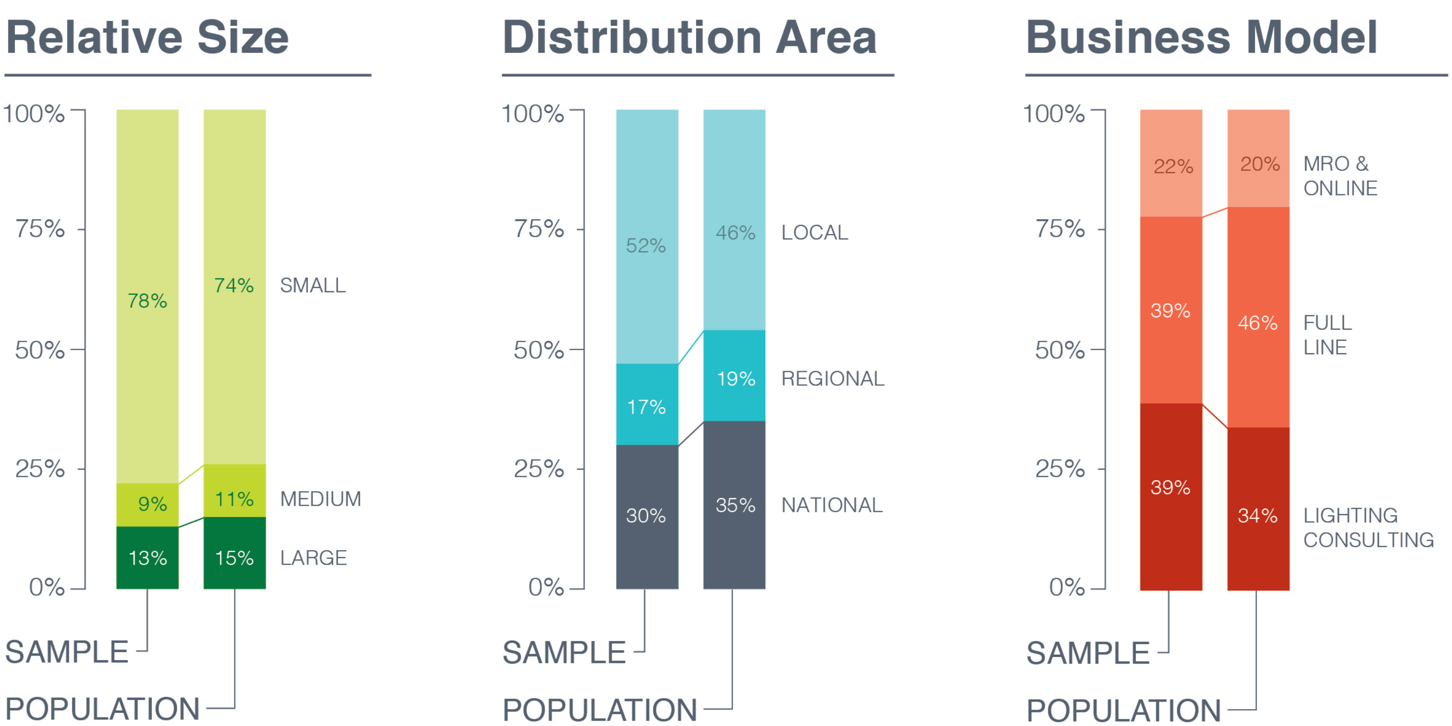


FIGURE 1

Mix of Distributors Submitting Data Compared to the Northwest Distributor Population

Once again, the team worked with NEEA program staff and Evergreen Consulting to recruit participants, successfully engaging 23 distributors in the 2019 sales data collection effort. The chart shows the mix of participating distributors by relative size, distribution area, and business model, compared to the mix of the population of distributors in the Northwest.

FIGURE 1 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.

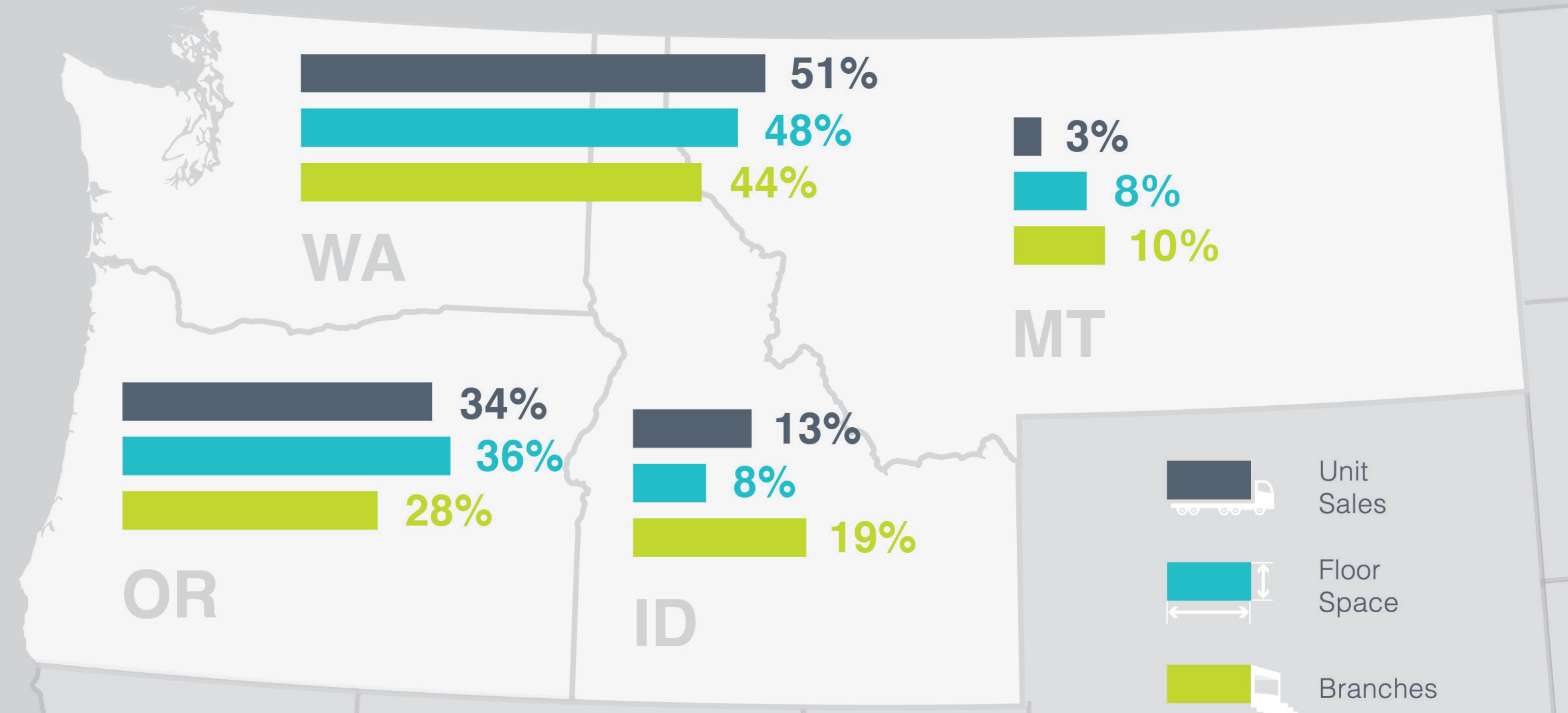


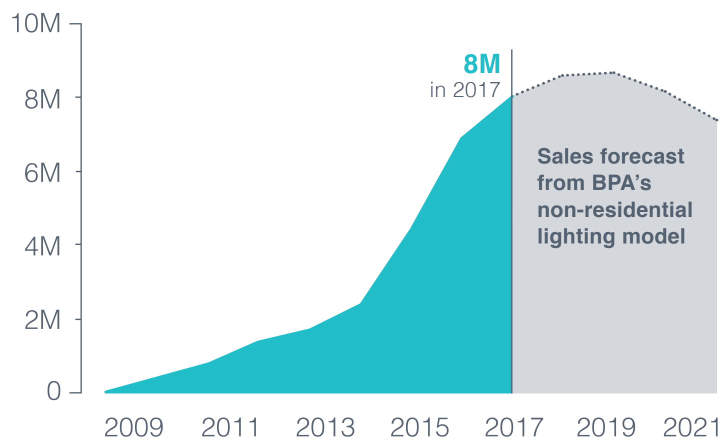
FIGURE 2 Distributor Unit Sales, Floor Space, and Branches by State: 2019

Figure 2 shows share of 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 (51%) and Oregon (34%).

FIGURE 3

Northwest Region LED Unit Sales by Year



Through seven years of conducting the lighting survey, the survey team has gathered a decade's worth of Northwest lighting sales data. The data collected in this annual survey informs the BPA nonresidential lighting market model and allows for forecasting of market trends in the Northwest. Figure 3 shows a forecast of regional LED unit sales from 2009 to 2021 from the lighting market model. This forecast shows that growth in LEDs was expected to plateau in 2018 before decreasing in 2020. This forecasted trend is verified by the 2019 sales data which show that LED sales growth slowed in 2018 and 2019 as predicted. The BPA nonresidential lighting market model was last updated in 2017, and BPA is beginning a market model update in 2020 that will include updating sales data inputs.

LED unit sales are projected to stall or decline as long-lived LEDs replace other, inefficient technologies. The table shows the applications that, to date, are most saturated with LED products and, therefore, have seen the largest impact to sales. Applications with short-lived incumbent technologies – like incandescent or halogen lamps – have generally had the most significant decrease in sales. These estimated changes in unit sales come from BPA's market model, which has not been updated with current sales data. However, current analysis indicates that these trends are holding true.

LED Saturation and Change in Unit Sales by Application

Application	How Saturated is this Application for LEDs?	Unit Sales in the NW, 2016-2019
Decorative	High	▼ 68%
Track Lighting	High	▼ 34%
Downlight Large	Medium	▼ 39%
General Purpose	Medium	▼ 26%
Ambient Linear	Medium	▼ 13%
High/Low Bay	Medium	▼ 42%
Exterior Applications	Medium	▼ 7%

Survey Results

FIGURE 4 Percent of Unit Sales by Technology Type, 2016–2019

Viewed by technology type, LEDs remained the largest segment of Northwest unit sales in 2019 at 52 percent after surpassing linear fluorescent lamps in 2018. Linear fluorescents dropped slightly in market share from 35 percent in 2018 to 32 percent in 2019. Total volume of unit sales across lighting technologies fell 11% between 2018 and 2019 due to the year-over-year increase in market penetration of long-lived LED products. Because installed LEDs require less frequent replacement, the team anticipates total unit sales of all lighting technologies to continue to decrease in coming years.

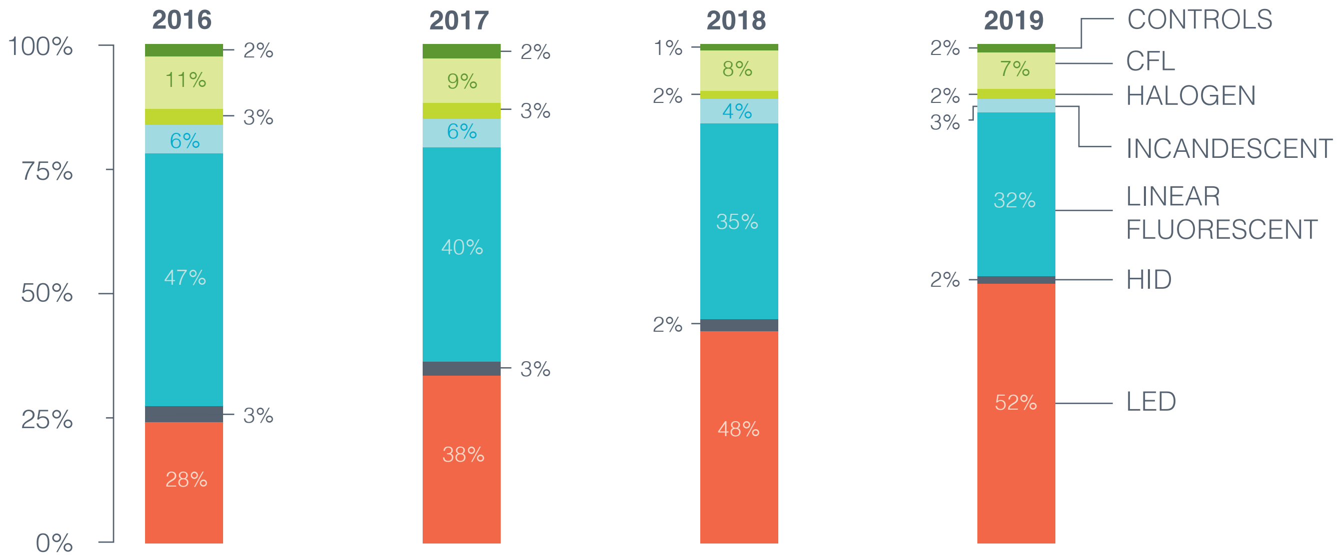


FIGURE 5 Percent of Unit Sales by Technology Type Across Business Models, 2016–2019

The technology sales mixes for Full Line and MRO & Online look very similar and have become increasingly similar over time. LEDs have gained market share in these distributor types making up around 55 percent of sales in Full Line and 41 percent of sales in MRO & Online. Lighting consultants look very different with 88 percent of unit sales coming from LED technologies. Lighting consulting distributors tend to focus on energy efficiency, and these distributors moved toward LED technologies more quickly. Lighting consulting is the only business model where controls make up a significant portion of sales at 11 percent.

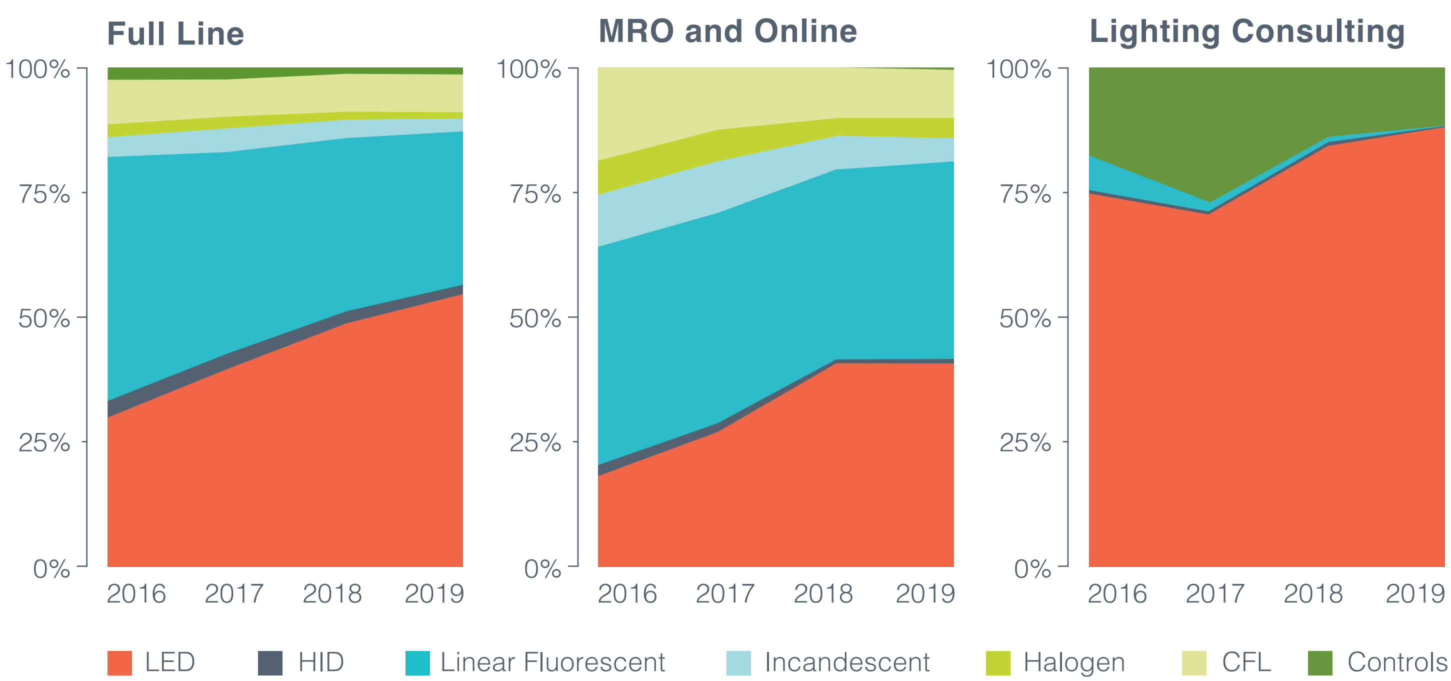


FIGURE 6 Estimated LED Percent Unit Sales, 2016–2019

The mix of LED unit sales stayed consistent between 2018 and 2019. TLEDs again made up the largest component of LED sales in 2019 at 42 percent. However, there was a slight downtick in market share of TLEDs from 45 percent in 2018 while LED indoor fixtures saw a slight uptick in market share from 10 percent in 2018 to 12 percent in 2019.

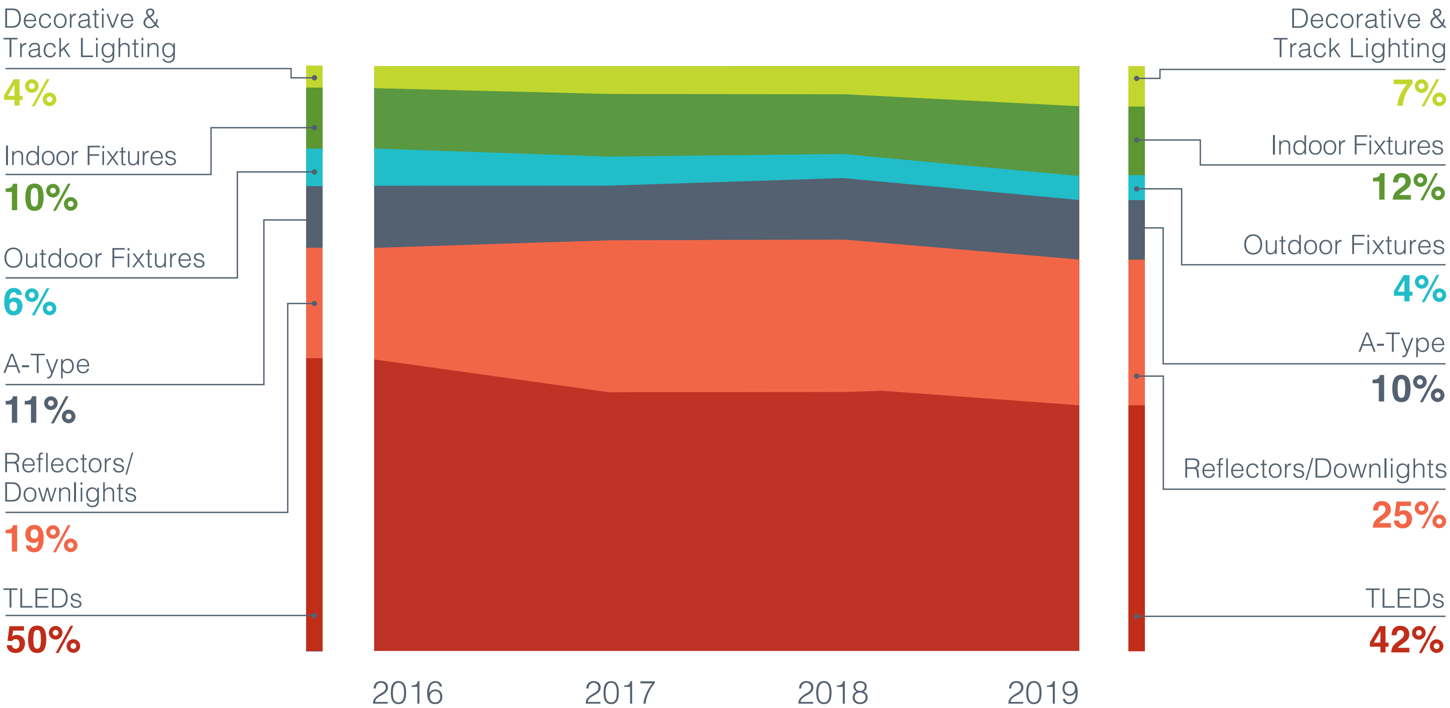


FIGURE 7 LED Penetration by Application, 2016–2019

Looking at LED penetration in specific applications, decorative LED lamps have seen a different trajectory from other technologies. In recent years, decorative lamps have shifted more quickly to LEDs with LEDs reaching 55 percent penetration in 2019, a 27 percent growth from 2018. LED penetration in linear lamps leveled off between 2018 and 2019. This leveling off could be due to the slight slowdown in adoption of TLEDs shown in Figure 6, an increase in integrated LED fixtures as an alternative to linear fluorescent fixtures, or a decline in TLED incentives across the region.

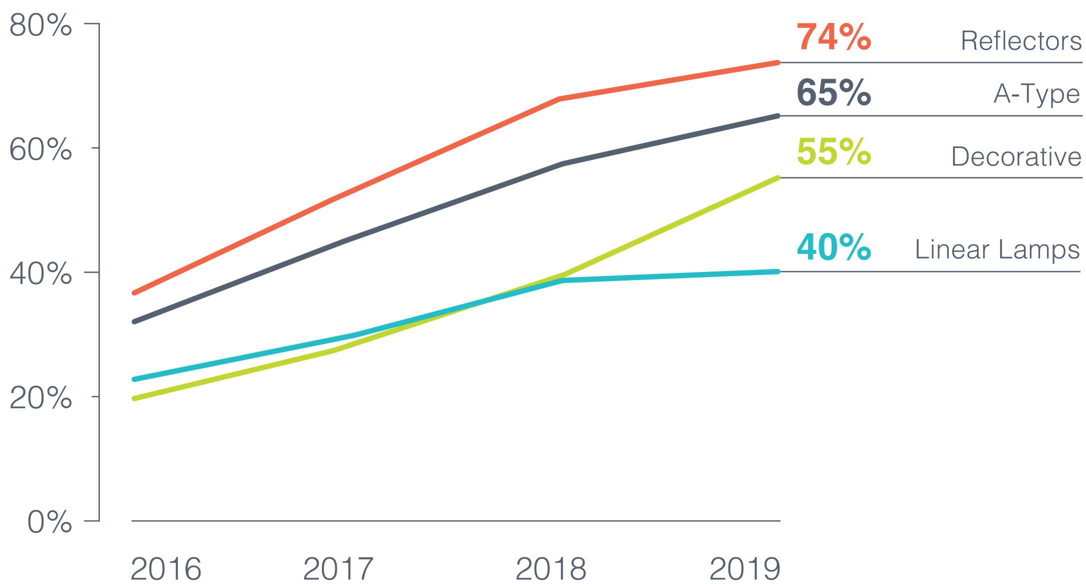


FIGURE 8

Downlight Sales by Technology Type, 2016–2019

For the four downlight products shown, the sales mix continued to shift from CFL pin-based lamps to LED lamp and fixture alternatives in 2019, and LED downlight fixtures and retrofit kits continued to steal market share from all lamps. LED technologies made up 57 percent of the downlight application in 2019, while CFLs represented less than half of downlight sales, declining from 48 percent in 2018 to 44 percent in 2019.

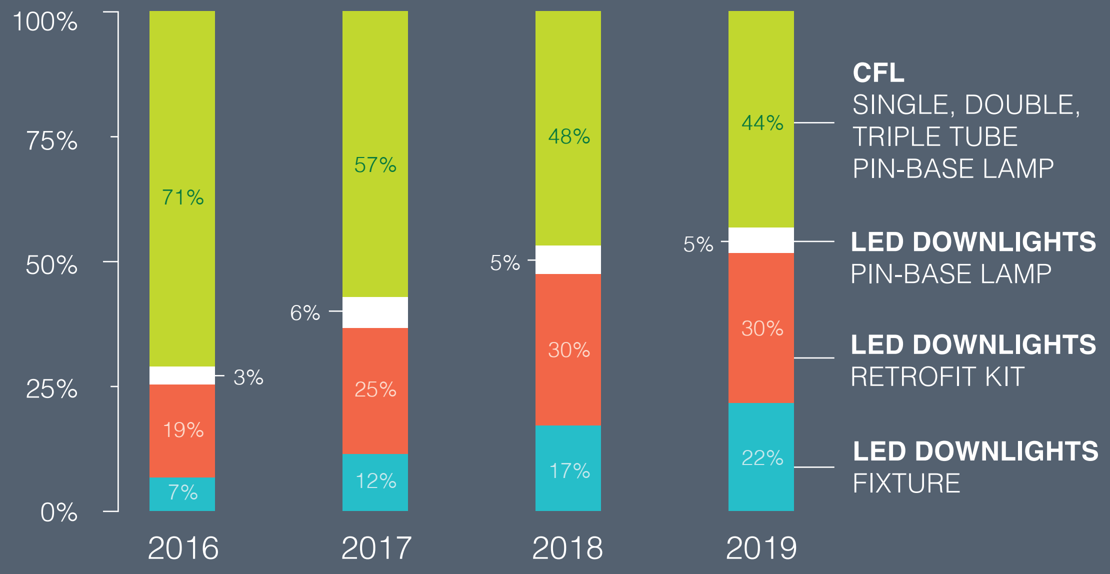


FIGURE 9

Percent Linear Lamp Sales by Type, 2016–2019

Among linear lamps, the sales mix between 4ft T8 linear fluorescent lamps and TLEDs remained similar between 2018 and 2019. Reduced wattage lamp sales remained high in 2019 at 25 percent of linear lamps. Looking at TLEDs, UL Type B sales (21 percent) overtook UL Type A sales (19 percent) for the first time, albeit by a small margin. UL Type A+B represented 2 percent of the linear lamp category, while other TLEDs, including UL Type C, did not represent a significant share of lamps and are not included in this graph.

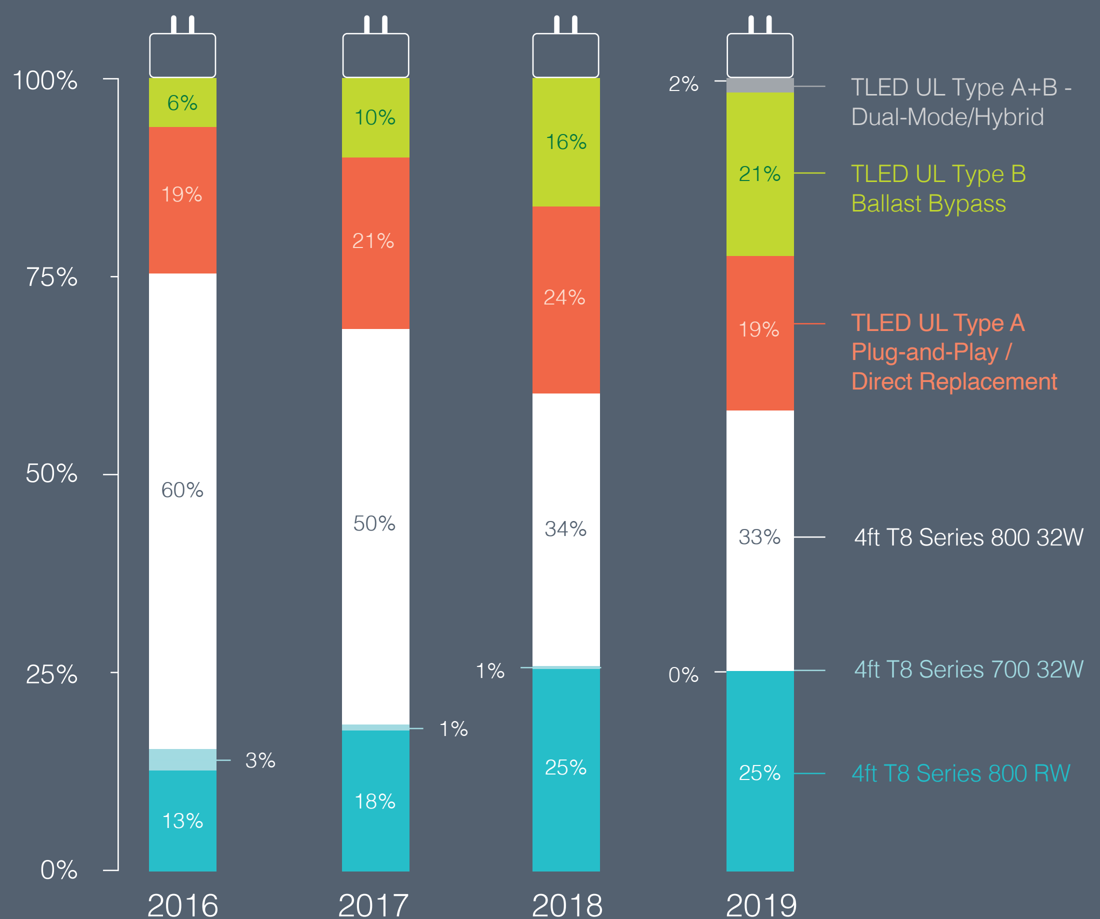
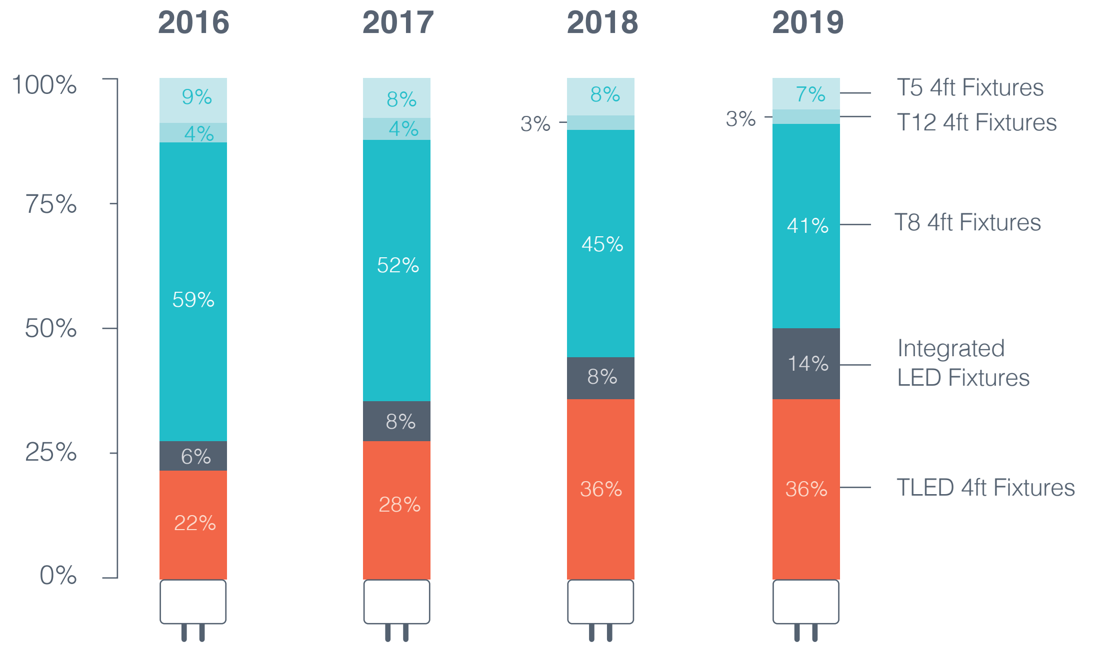


FIGURE 10

Percent of Ambient Linear Lamp and Fixture Sales by Type, 2016–2019

In the ambient linear application, LED products continue to replace linear fluorescent products, driven by a growth in integrated LED fixtures from 8 percent in 2018 to 14 percent in 2019. The increase in integrated LED fixtures between 2018 and 2019 is more significant than previous years' increases. This may indicate that the market is beginning to adopt LED fixtures at a higher rate.



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

FIGURE 11

Percent of Integrated LED Linear Fixtures by Type, 2016-2019

Looking at the increase in integrated LED fixtures from Figure 10 more closely, linear strip fixtures (lightbars) made up 34 percent of all integrated LED fixtures in 2019, up from 21 percent in 2018. This jump could indicate that lightbars are gaining popularity and could be an indicator of the shift away from linear fluorescent fixtures towards LED products that serve that same lighting application need.

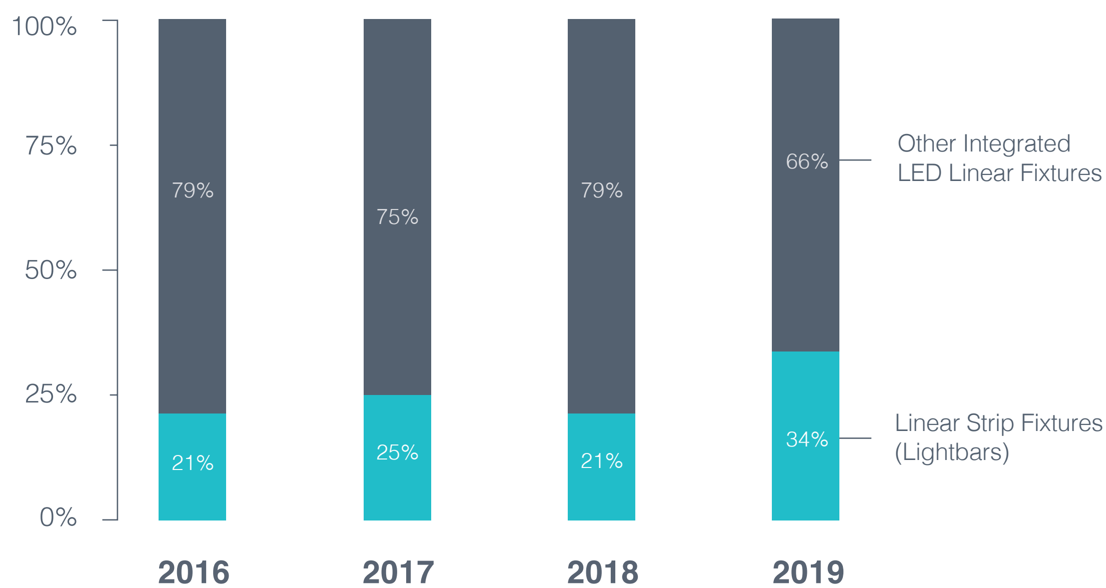
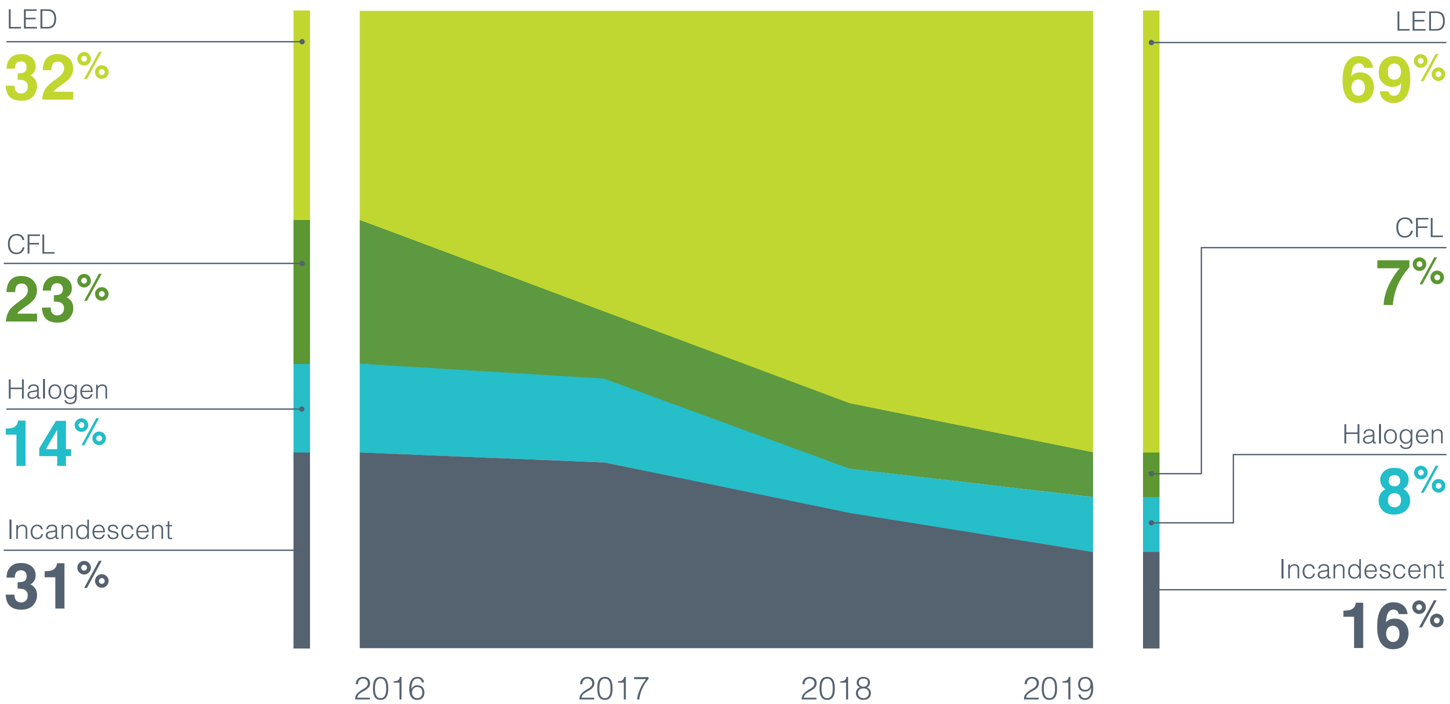


FIGURE 12

Screw-In Lamp Sales by Type, 2016–2019

Among screw-in products, LED products are now the norm and held nearly 70 percent market share in 2019. CFLs and halogens continued to lose market share and trend towards insignificance in the sales mix. Incandescents held 16 percent market share in 2019, but changes in regulations could drive incandescent market share down in future years.



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