



BEFORE



AFTER

24.40% ROI and \$212,031 in Lifecycle Savings: The Giles School's LED & Controls Upgrade

Lumen Solutions upgraded The Giles School's (80 Scarsdale Rd, North York, ON) campus with high-efficiency LED fixtures and a fixture-mounted Bluetooth Smart Networked Lighting System, giving every classroom independent control over its own lighting for the first time.

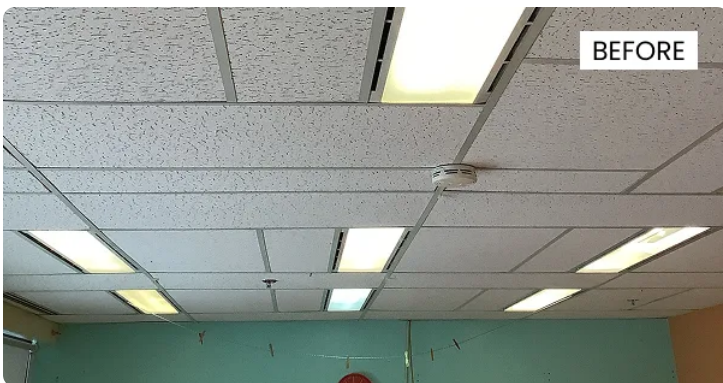
\$ FIRST-YEAR TOTAL SAVINGS \$21,203 (Includes \$16,085 Energy and \$5,118 Maintenance Savings)	REBATES SECURED \$39,558 (\$24,946 Instant Rebate + \$14,612 Bluetooth Controls Rebate)	ANNUAL KWH REDUCTION 89,363	PAYBACK PERIOD 5.0 Years
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THE CHALLENGE

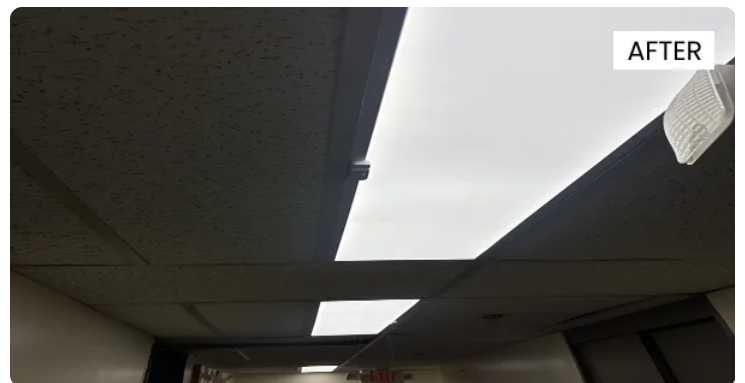
The Giles School's 80 Scarsdale Rd building had never been fitted with local light switches in its classrooms, hallways, or stairwells. Every fixture across all three floors and the basement was wired directly into breaker panels, with no way for staff to control lighting at the room level.

This created two compounding problems. First, teachers had no way to dim or shut off lights for classroom activities that required it for screening a video, kindergarten nap time, or simply adjusting for daylight without leaving the room to find a panel. Second, the school's maintenance manager had to manually switch breakers on every floor each morning and off again every night, a routine that was never intended for daily use. Breakers are rated for occasional switching, not twice-a-day cycling, and they began to wear out well ahead of their expected service life. Bulbs were failing regularly across the building's 795 fixtures, adding a steady stream of unplanned maintenance calls.

Metric	Before Upgrade
Total Fixtures	795
Room-Level Light Switches	None
Lighting Control Method	Central breaker panels, manually switched twice daily
Lighting System Energy Consumption	28.961 kW
Annual Lighting Energy Use	119,608 kWh
Utility Rate	\$0.18 / kWh



BEFORE



AFTER

THE SOLUTION

[Lumen Solutions designed a full LED retrofit](#) built around a Bluetooth Smart Networked Lighting System, giving the school both efficiency gains and the room-level control it had never had:

- Installed 484 fixture-mounted Bluetooth-enabled sensors and controllers, grouping fixtures by room so each classroom could be controlled independently - On/Off, brightness and automated scheduling.
- Installed Bluetooth-connected wall switches in classrooms, doubling as fixed wall controls and portable remotes teachers can use during presentations or video screenings.
- Gave the maintenance manager mobile app control of the entire building's lighting, eliminating the daily routine of manually switching breakers on every floor.
- Commissioned the full Bluetooth network to the school's specific scheduling needs, including automated on/off timing tied to occupancy and time of day, eliminating the need for day-to-day light management duties.

- Replaced all 795 fixtures with high-efficiency LED flat panels, linear strips and fixtures, each including integrated occupancy sensors to layer automatic energy savings on top of the new manual controls.
- Retrofitted the 20 classroom fixtures still tied into HVAC ductwork rather than disturbing the existing system, adding three dedicated return grilles per classroom to maintain proper airflow.
- Backed the installation with a 10-year manufacturer's warranty on fixtures and a 1-year service warranty on installation.

THE RESULTS

The upgrade cut The Giles School's annual lighting energy use from 119,608 kWh to 30,245 kWh – an 89,363 kWh reduction or roughly 75% – while eliminating the daily breaker-switching routine that had been wearing out panels across the building. Every classroom, hallway and stairwell now has dedicated lighting control, so teachers can adjust their own rooms without leaving to find a panel and the maintenance manager can manage/automate the entire building's lighting from a phone instead of walking every floor twice a day.

Combined with \$24,946 in instant provincial rebates and a further \$14,612 in post-installation rebates for the Bluetooth networked controls, the school's net project cost came in at \$106,957.07 against a 5.0-year simple payback, a 24.39% return on investment and an estimated \$212,031 in savings over the next 10 years.

ABOUT THE GILES SCHOOL

The Giles School (L'École Giles) is an educational institution based at 80 Scarsdale Rd, operating classrooms, common areas and a gymnasium across multiple floors of its campus.



THE GILES SCHOOL
L'ÉCOLE GILES

Lumen Solutions delivers [energy-efficient commercial and industrial lighting solutions](#) designed to reduce energy costs and improve lighting performance, specializing in LED upgrades, retrofits and smart lighting systems tailored to institutional and commercial facilities.



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