THE EMERGENCY LIGHTING AS WE NODE IT TOUR

2026 SOUVENIR PROGRAM

AimLite

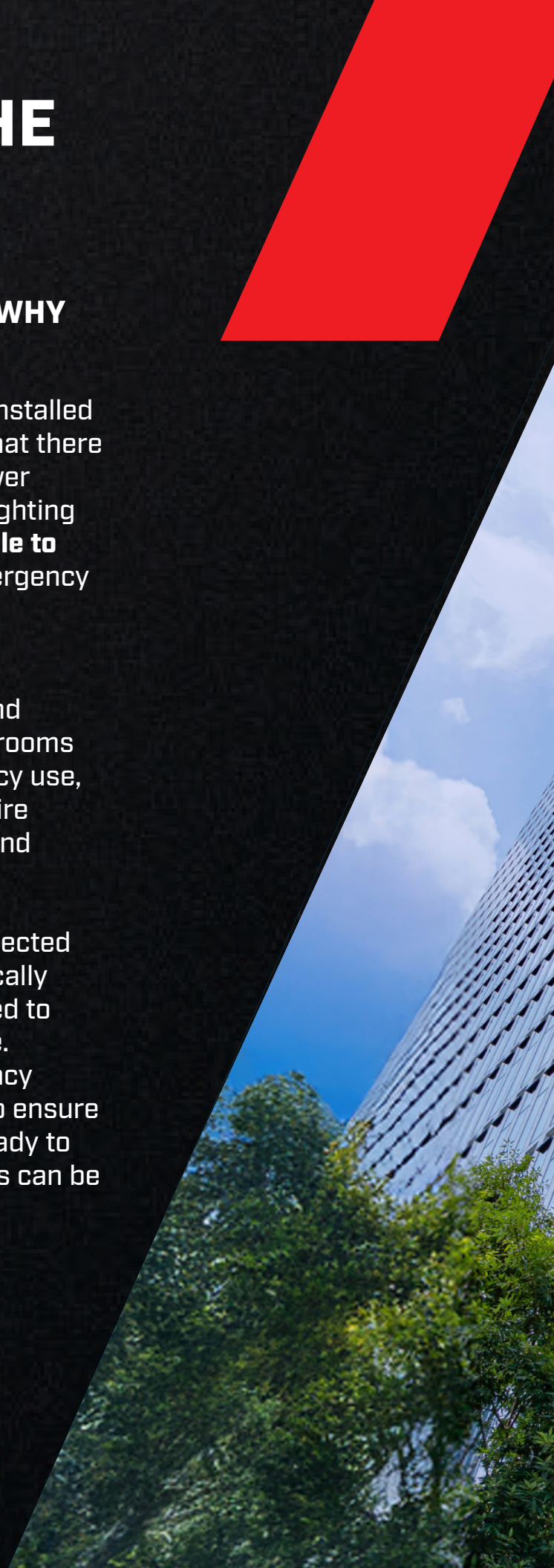
GOING BACK TO THE BEGINNING

WHAT IS EMERGENCY LIGHTING AND WHY DO WE NEED IT?

Emergency lighting refers to lighting that is installed in buildings and other structures to ensure that there is sufficient illumination in the event of a power outage or other emergency situations. This lighting is **designed to provide enough light for people to evacuate** the building safely, and to help emergency personnel respond to the situation.

Emergency lighting must be **installed in all exit routes,** including stairways, corridors, and passageways. It must also be provided in all rooms and spaces that are designated for emergency use, such as generator rooms, fire pump rooms, fire alarm control rooms, and emergency command centers.

In addition, emergency lighting must be connected to an emergency power supply, which is typically a battery or generator system that is designed to provide power in the event of a power outage. Regular maintenance and testing of emergency lighting systems is also required in Canada to ensure that they are functioning properly and are ready to use in the event of an emergency. These tests can be found in the National Fire Code of Canada.



WHAT ARE THE DIFFERENT CODES WHICH PERTAIN TO EMERGENCY LIGHTING IN CANADA? HOW DO THEY PLAY A ROLE WITH THE PRODUCT?

NATIONAL BUILDING CODE OF CANADA (NBCC):

The NBCC provides guidelines and regulations for construction and fire safety in buildings across Canada. It includes provisions for emergency lighting systems, specifying requirements for the placement, illumination levels, and types of emergency lighting to be installed in different types of buildings.
Role with the Product: Manufacturers and designers use the NBCC guidelines to develop emergency lighting products that comply with the specified standards for performance, durability, and functionality. Products must meet the requirements outlined in the NBCC to ensure they are suitable for installation in different building types.

CANADIAN ELECTRICAL CODE (CEC):

The CEC sets the standards for electrical installations in Canada, including guidelines for emergency lighting systems. It specifies the wiring, power sources, testing, and maintenance requirements for emergency lighting systems.
Role with the Product: Emergency lighting products need to adhere to the electrical standards outlined in the CEC. Manufacturers design their products to meet the wiring, power supply, and installation requirements specified by the code to ensure safe and compliant electrical installations.

CSA C22.2 NO. 141 (EMERGENCY LIGHTING EQUIPMENT):

This Canadian Standards Association (CSA) standard specifically focuses on emergency lighting equipment. It covers the design, construction, performance, and testing requirements for emergency lighting fixtures, batteries, and systems.
Role with the Product: Emergency lighting products must meet the standards outlined in CSA C22.2 No. 141 to ensure their quality, reliability, and compliance with Canadian safety regulations. Manufacturers develop products that undergo testing to meet or exceed these standards, ensuring their suitability for emergency lighting applications.

NATIONAL FIRE CODE OF CANADA (NFCC):

An essential regulatory document concerning fire safety measures and requirements. While it doesn't specifically address emergency lighting in the same detailed manner as the National Building Code or Canadian Electrical Code, it plays a vital role in establishing fire safety standards, including aspects related to emergency egress and evacuation routes.
Role with the Product: The NFCC outlines requirements related to fire safety, including the need for illuminated exit signs, emergency lighting, and safe egress routes during fires or emergencies. While it might refer to standards specified in other codes (such as NBCC, CEC, or CSA standards), it emphasizes the importance of having adequate and reliable emergency lighting systems to facilitate safe evacuation.

IMPORTANT NOTION: TESTING

In Canada, **two tests are mandatory** for emergency lighting:

FUNCTIONAL TEST:
This is a **monthly test** to ensure that all the lights of your network are turning on in case of a power outage.

DISCHARGE TEST:
This test is **performed annually.** It is required to ensure that the battery can last the required duration. It will light up all the lights linked to the battery until it discharges completely.
To perform these tests, you have two options: manual or automatic.

MANUAL:
Simply go on site and press the test button to observe if everything is working properly, which is time-consuming and should only be reserved for small installations.

AUTOMATIC:
Different solutions for automatic testing exist. From the auto test option, which will perform the required test and blink if it needs maintenance, to the fully programmable smart system that will send notification describing exactly what is the failure. It is now easy to choose the most adapted solution for your needs.

AimLite
AUTOTEST

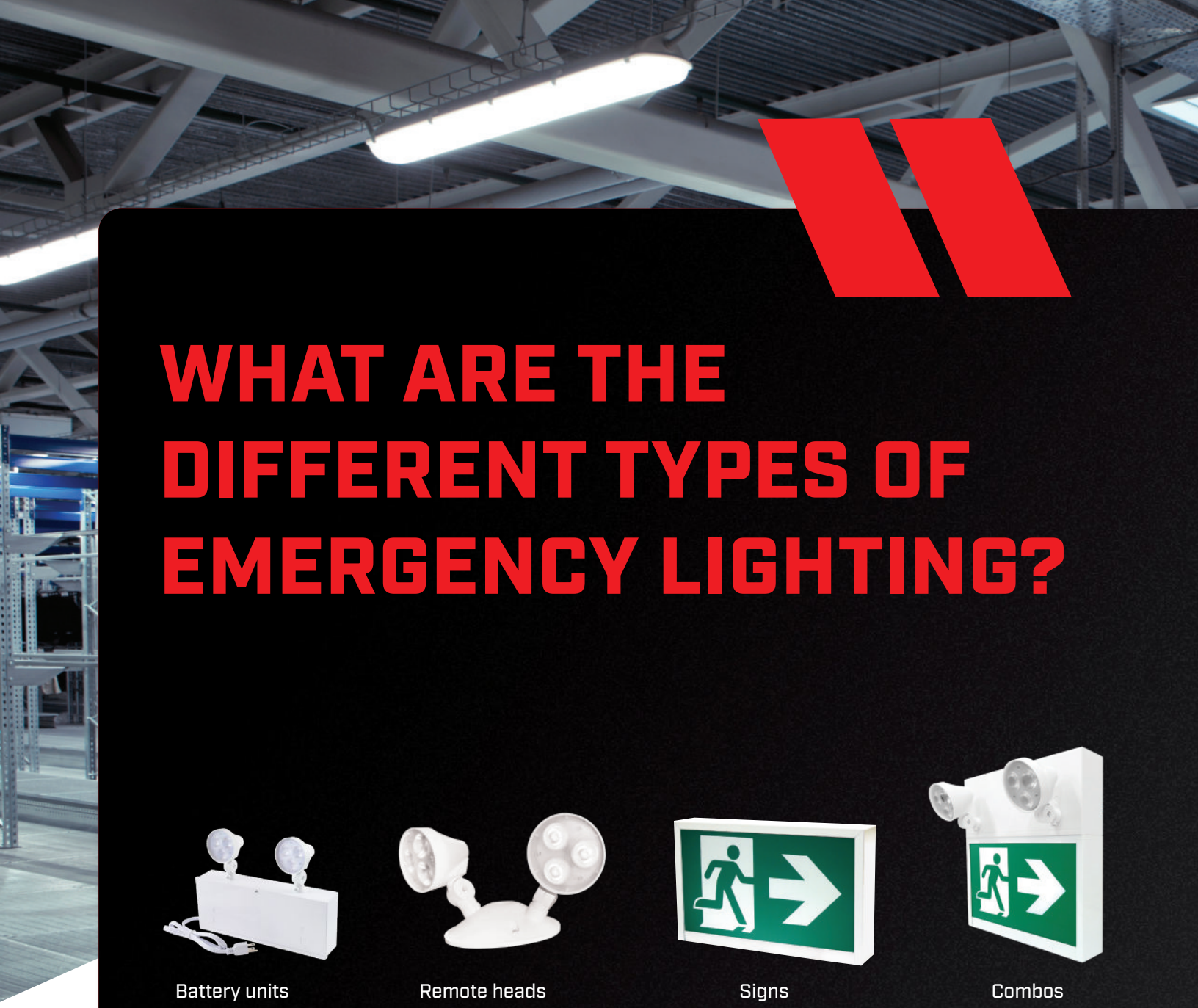
The auto-test option allows the unit to perform the test automatically, however you still need to go to site to visualize whether unit passed or failed

AimLite
wave

WAVE automatically performs all mandatory function and duration tests and stores the results in the app, giving you clear on-site visibility of which units passed or failed

AimLite
NUCLEUS

The Nucleus is a fully remote monitoring solution that will perform the tests automatically and notify you by email in case of failure



WHAT ARE THE DIFFERENT TYPES OF EMERGENCY LIGHTING?

Battery units

Remote heads

Signs

Combos

BASIC EMERGENCY PRODUCTS CAN BE BROKEN DOWN INTO FOUR CATEGORIES: BATTERY UNITS, REMOTE HEADS, SIGNS AND COMBOS.

Inverters

Nucleus - Smart
Emergency Lighting

IN ADDITION TO THESE ARE COMPLEX SYSTEMS, DESIGN SPECIFIC SOLUTIONS THAT GO ABOVE AND BEYOND MEETING CODE REQUIREMENTS.

THE DIFFERENT TYPES OF EMERGENCY LIGHTING

I. BATTERY UNITS

EMERGENCY BATTERY UNITS:

These systems use a centralized battery to power providing either 6,12 or 24v of DC power to both emergency lighting fixtures, known as remote fixtures, and Running Man signs throughout a building. **Emergency battery systems or unit equipment can be more efficient and cost-effective than standalone battery-powered systems and require less maintenance over the life of the system.** However, it does incur higher up-front installation costs.

Emergency battery unit allows for remote capability and a wide choice of options.

SELF-CONTAINED SYSTEMS

These systems are **standalone units** and consist of either battery packs or Running Man signs (when fitted with an internal battery). Self-contained units offer **little or no remote capabilities** and are often used in smaller buildings or spaces where a central battery system is not practical.

Self-contained systems are easy to install and ideal for small projects.

IMPORTANT NOTION: DC VOLTAGE

In Canada, there are **four main DC voltages** emergency lighting:

6 VOLTS DC (VDC):
Stand-alone units, or to power short distance remote devices. Has a very limited range.
Typical application: Small commercial spaces, Single use facilities.

12 VOLTS DC (VDC):
The most used voltage due to the balance of capacity and distance.
Typical Applications: General use facilities, Medium-Large Commercials spaces, Schools

24 VOLTS DC (VDC):
Allows for the highest capacity, duration, and longest wire runs.
Typical Applications: Warehouses, Extra-large commercial spaces, Hospitals.

48 VOLTS DC (VDC):
Used by our complex emergency units for simultaneous power and communications with a single wire. Allows for maximum control and monitoring of emergency systems.
Typical Applications: Areas where it is difficult or cost prohibitive to monitor the systems.

IMPORTANT NOTION: AC VOLTAGE

In Canada, **there are three main AC voltages** emergency lighting:

120 VOLTS AC (VAC):
Typical Applications: 120V AC is the voltage supplied to residential homes and to average commercial spaces. It's the standard voltage for wall outlets across Canada.

277 VOLTS AC (VAC):
Typical Applications: 277V AC is primarily used for heavier industrial machinery and larger commercial equipment.

347 VOLTS AC (VAC):
Typical application: Certain industrial and commercial lighting applications, especially in larger buildings or industrial settings where higher voltage lighting fixtures are required. It's often used for fluorescent lighting and other high-intensity discharge (HID) fixtures in commercial and industrial environments.

IMPORTANT NOTION: CHOICE OF DURATION

As per the NBC, emergency lighting systems must provide illumination for a minimum duration of 30 minutes
after the loss of normal power. This duration ensures that occupants have sufficient time to evacuate safely. There
may be additional runtime requirements based upon the usage and characteristics of the building, extending to 60, 90 or 120 minutes.

For instance:
Special Occupancies: Certain high-risk or specialized occupancies might have different requirements. For example, in high-rise buildings, healthcare facilities, or areas with unique hazards, longer durations of emergency lighting may be mandated.

Local Building Codes: Some provinces or territories might have amendments or variations to the NBC regarding the duration of emergency lighting. Local codes may include specific provisions based on regional considerations or safety requirements.

Building Specifics: Certain buildings, such as those with unique architectural designs or critical functions, may have custom requirements for emergency lighting duration based on safety assessments or risk analyses.

To define the capacity of your battery unit, you can use these basic rules to remember for how long the lights should stay on:
- **30 minutes for the majority of Canadian emergency lighting application**
- **60 minutes for building between 4 to 5 floors**
- **90 minutes duration in Newfoundland and Labrador province.**
- **120 minutes duration for building with 6 floors and over and/or with special application such as hospital, nursing home, kindergarten, etc....**

It is recommended to always confirm in what category your building is in to make sure you are meeting the National Building Code requirements.

THE DIFFERENT TYPES OF EMERGENCY LIGHTING

II. REMOTES

Remote heads for emergency lighting are **fixtures without integrated backup power sources,** designed for illumination during power outages. They're strategically placed in buildings and exits to ensure visibility and safety during emergencies. Primarily available in LED, these heads come in various forms, such as weatherproof and Hazardous enclosures. **Crucial for guiding evacuations, they offer directional adjustability** and serve as essential components of building safety systems.

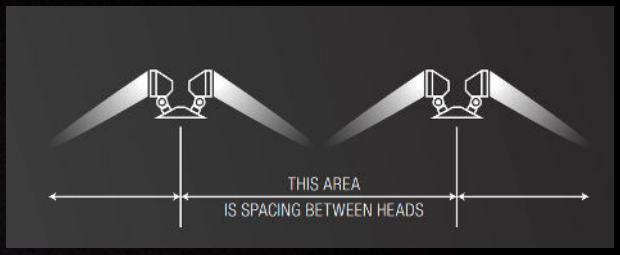
Primarily available in LED, these heads come in various forms, such as weatherproof and hazardous enclosures.

IMPORTANT NOTION: MINIMUM ILLUMINATION

In Canad, it is required that paths of egress are illuminated in emergency mode with a minimum of **10 lux on average, and no less than 1 lux at tread level for a duration of at least 30 minutes.** It is important to note that generator rooms have their own minimum levels of light and duration, and they are an average of 50 lux for 120 minutes.

IMPORTANT NOTION: SPACING

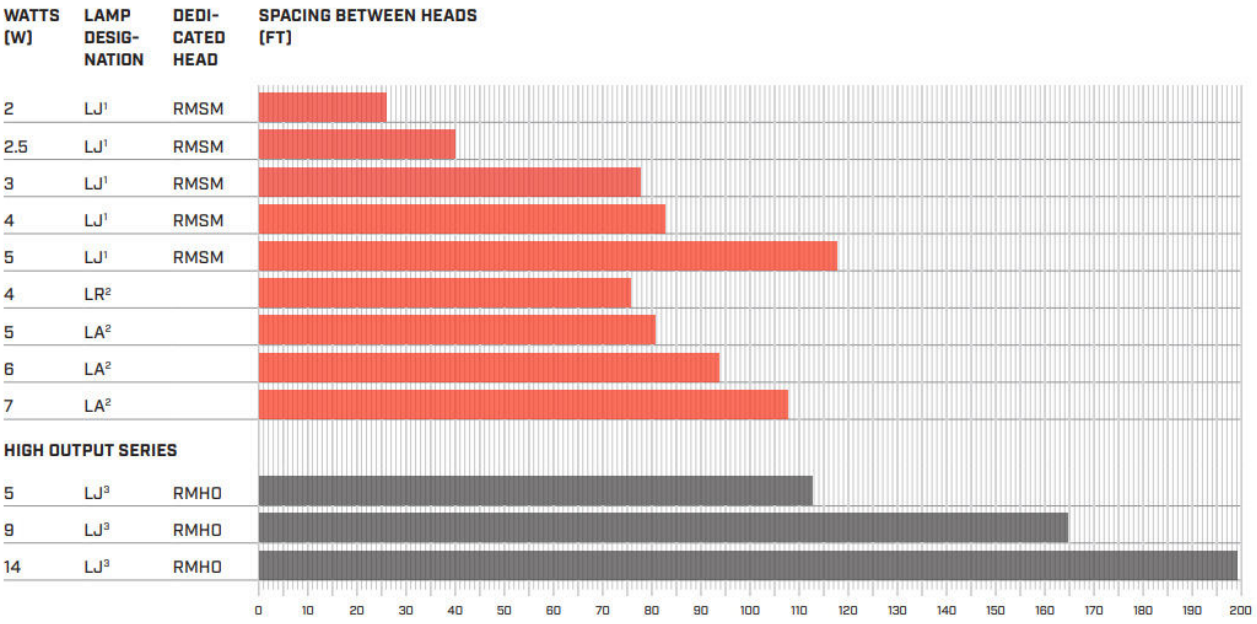
Spacing in emergency lighting refers to **the distance between individual emergency light fixtures** within a given area. The spacing is determined by the mounting position and output of the fixture to meet the code requirements. Proper spacing ensures sufficient light levels across an area to guide individuals to exits and maintain visibility during emergencies.



SPACING GUIDELINE

The spacing guideline is here to help you compare the spacing of our lamp offering, and decide which one suits the best to your project.
Our complete spacing guideline can be found on our website.

10' MOUNTING HEIGHT



THE DIFFERENT TYPES OF EMERGENCY LIGHTING

III. SIGNS

A running man sign is a universally recognized safety sign commonly used to **indicate the direction of emergency exits** in buildings. Typically, it features a symbol of a person running, in white on a green background. This sign helps individuals quickly locate and follow the path toward the nearest exit during emergencies. Running man signs are strategically placed along paths of egress, guiding occupants to safety by pointing out the direction to evacuation points or emergency exits. They play a crucial role in ensuring swift and efficient evacuation procedures in buildings or public spaces, enhancing overall safety and preparedness.

Signs come in many forms, from the calssic steel sign, to decorative edgelit and weatherproof applications.

IMPORTANT NOTION: RUNNING MAN VS EXIT/SORTIE SIGNS

Since 2014, the running man sign is the only accepted sign by the National Building Code of Canada. It means that for any new construction, it is now forbidden to use Exit or Sortie signs and Running Man signs
must be used. However, it is tolerated to replace an old defective Exit/Sortie unit by a new Exit/Sortie. This is because is not allowed to mix Running Man and Exit/Sortie signs in the same area. Nevertheless, we recommend installing running man sign as soon as possible to comply with the current NBC.

Electrical running man signs and non-electrical signs serve the same purpose of indicating emergency exit routes, but they operate differently and are employed based on specific needs and circumstances:

Non-Electrical Running Man Signs:
These signs use LED lights for illumination. They are energy-efficient, long-lasting, and often comply with modern building codes and standards. LED signs provide consistent and visible illumination, even during power outages, thanks to backup battery systems.

- **Tritium:** These signs utilize tritium gas to produce continuous illumination without an external power source. Tritium, a radioactive isotope of hydrogen, is sealed within glass tubes coated with a phosphor material. When the tritium decays, it interacts with the phosphor, emitting light without requiring electricity.

- **Glow-in-the-Dark Signs:** These signs absorb light and emit it in the dark. They are non-electrical and are suitable for low-light conditions, serving as a backup or alternative to electrical signage. These units come with a significant drawback as they require a constant light source to charge.

IMPORTANT NOTION: VIEWING DISTANCE
A commonly accepted guideline for the minimum viewing distance of a running man exit sign is around **30 meters (100') for a 30-centimeter-high sign.**
This guideline ensures that the sign is visible from a considerable distance, aiding in quick identification and direction towards emergency exits during situations where visibility may be compromised due to smoke, darkness, or other factors.
It's important to consult the specific building codes or regulations applicable to your area within Canada, as these requirements might vary slightly between jurisdictions.

THE DIFFERENT TYPES OF EMERGENCY LIGHTING

IV. COMBOS

A combo unit in emergency lighting merges a running man sign and a battery unit into one fixture. These units feature LED lights and a rechargeable battery backup for continued functionality in emergencies. **They offer the same characteristics as battery units and signs.** Combining both functions into a single unit saves space and ensures clear guidance for safe evacuation

Like their signs and battery units siblings. combos come in various form and materials to suit every projects.

THE DIFFERENT TYPES OF EMERGENCY LIGHTING

V. INVERTERS

a. Inverters

An inverter is a crucial component responsible for converting direct current (DC) power, previously stored in its internal batteries, into alternating current (AC) power. This conversion ensures that lighting fixtures remain operational during power outages or emergencies. The inverter enables a swift transition from normal power to backup power, providing immediate illumination for safety. It is reliable, delivering consistent power, and compatible with various lighting fixtures. Some systems feature remote testing and monitoring capabilities. Overall, the inverter plays a vital role in maintaining visibility and ensuring the safety of occupants in emergency situations.

It exists three main types of inverter:

Fast transfer

A fast transfer inverter refers to an inverter system designed with rapid switchover capabilities between power sources. This type of inverter ensures a **quick transition from the primary power source to the inverter's batteries** in the event of a power outage or disruption.
The term "fast transfer" emphasizes the speed at which these inverters can detect a power loss and seamlessly switch to the backup power source. **The transition happens within milliseconds,** ensuring uninterrupted power supply to critical appliances or systems connected to the inverter. This swift transfer is vital for sensitive equipment, computers, medical devices, or any machinery where even a brief power interruption could lead to data loss or operational issues.
Fast transfer inverters often incorporate advanced circuitry, sensors, and switching mechanisms to detect power anomalies and swiftly engage the backup power supply. Their efficiency in ensuring a **seamless transition from primary to secondary power sources** makes them essential in critical applications where uninterrupted power supply is crucial.

Aimlite offers a wide variety of fast transfer inverters. Single phase or triple phase, from 1 kW to 50 kW

Uninterrupted power supply (UPS) or dual conversion system

A UPS inverter, comprising a rechargeable battery, an inverter, and often an Automatic Voltage Regulator (AVR), functions as a safeguard against power interruptions by providing uninterrupted power to devices during outages or voltage fluctuations. When the primary power supply fails, the UPS draws stored energy from its battery and uses the inverter to convert it from direct current (DC) to alternating current (AC), ensuring a seamless and continuous power flow to connected devices.

Interrupted power supply (IPS)

Like every other inverter, the IPS are switching DC current from their batteries into AC to provide electricity in case of a power outage. The main difference is within the transfer time. It is around 1 second or above. This is enough to shut down computers, servers, or other critical equipment. It is only recommended for projects where a short power fluctuation can be accepted. We usually find this technology in the mini-inverters.

IMPORTANT NOTION: MINI-INVERTER

Advantages:

Quick Installation: Their compact size often translates to easier installation, requiring minimal space and typically simpler mounting options.

Cost-Effectiveness: Mini inverters tend to be more affordable than larger inverters, making them a budget-friendly choice for emergency lighting setups.

Sufficient for Low-Power Lighting: In situations where only low-power emergency lighting is necessary, a mini inverter can adequately power these lights without needing excessive capacity.

Disadvantages:

Inrush current protection: Mini inverters typically lack inrush current protection, potentially leading to initial power surges when starting up, which can occasionally impact the connected devices or electronics.

Limited Power Capacity: Mini inverters usually have a power output limited to 1440 W, which might not be sufficient for larger emergency lighting systems or high-power lights.

Only one output: Mini inverters usually feature a single output, limiting their capacity to power multiple devices simultaneously.

Limited Features: They may lack certain advanced features like extensive battery backup or monitoring capabilities that larger, more sophisticated inverters offer.

IPS technolgy is usually found in mini inverter

SMART EMERGENCY LIGHTING

a. Wave is an automated emergency lighting testing system that uses Bluetooth mesh connectivity to monitor all connected fixtures in a building. It schedules and performs tests in compliance with the National Fire Code of Canada, checking battery performance, duration, and functionality. Results are recorded in real time, generating organized digital reports for easy audits and compliance tracking.

Key Benefits:

Automated Efficiency:
Eliminates manual inspections and reduces labor.

Compliance Confidence:
Automatically logs detailed reports for audits and regulatory requirements.

Improved Safety:
Ensures emergency lighting is always tested and ready for use.

Wave streamlines emergency lighting maintenance, helping facilities of all types stay compliant, save time, and ensure safety with a smarter, automated approach.

RMSM
REMOTE HEAD

RPES
RUNNING MAN SIGN

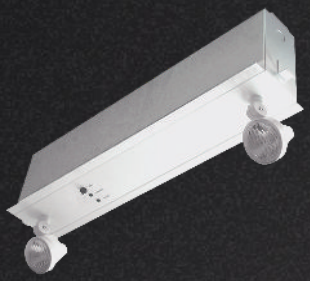
EBST
STEEL BATTERY UNIT

SYSTEM COMPARISON

	AimLite AUTOTEST	AimLite wave	AimLite NUCLEUS
CONNECTIVITY	NONE	BLUETOOTH	DC WIRES
SCHEDULING	✗	✓	✓
AUTO-REPORT	✗	✓	✓
INDIVIDUAL DETECTION	✗	✗	✓
REMOTE MONITORING	✗	✗	✓
NOTIFICATIONS	✗	✗	✓

PRODUCTS AT LAUNCH

EBST



EBTB

EBQV

EBWD

EBWP

EBDT

CSRP

CARPW

CRRP

b. Nucleus

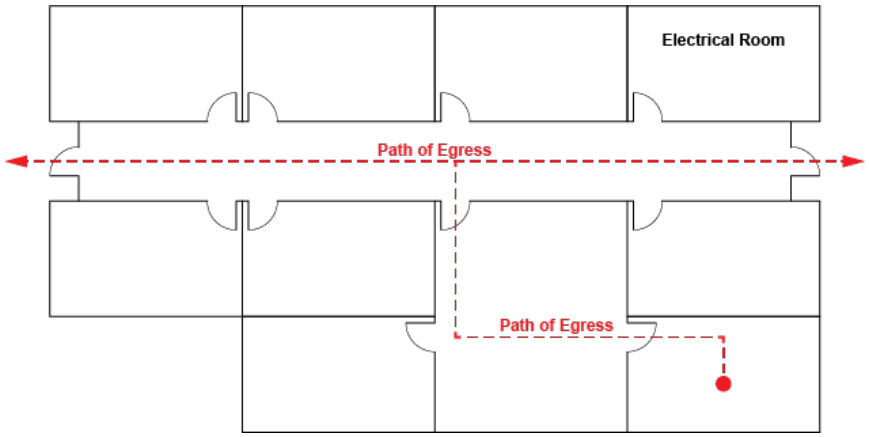
These systems use software and computer control to monitor and manage emergency lighting systems throughout a building. Computer-based systems can provide detailed monitoring and reporting capabilities, making it easier to track system performance and ensure compliance with regulations. Our Nucleus is a complete emergency lighting management system, allowing you to program the type of testing you want, when you want it. It will perform these tests and send notifications if it ever detects a failure, letting you know exactly what unit failed. It will also automatically generate a report to prove all your testing is up to date. This is truly the next generation of emergency lighting.

The Nucleus is complete emergency lighting management system, allowing to perform test automatically, generate a report and notify you by email in case of failure. All this is remotely controlled and fully customizable, perfectly suited for projects with extensive maintenance.


Vernetzung

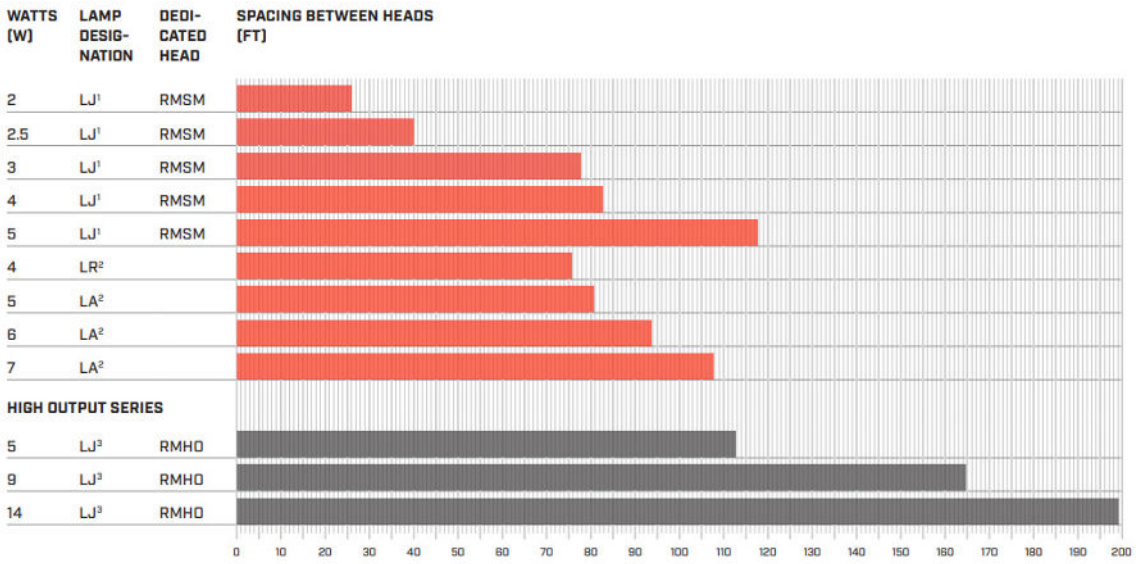
HOW TO DO A LAYOUT

STEP 1: IDENTIFY YOUR PATH OF EGRESS AND MEASURE THE DISTANCE

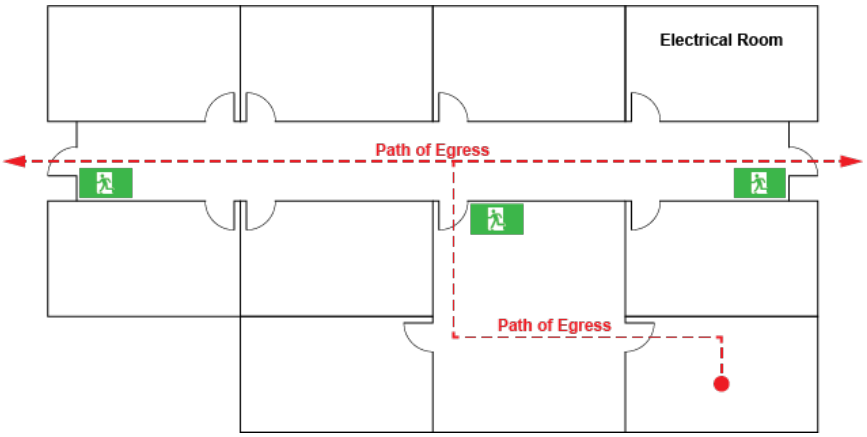


STEP 2: CHOOSE YOUR DESIRED REMOTE HEAD WATTAGE BASED ON YOUR REQUIRED SPACING AND MOUNTING HEIGHT

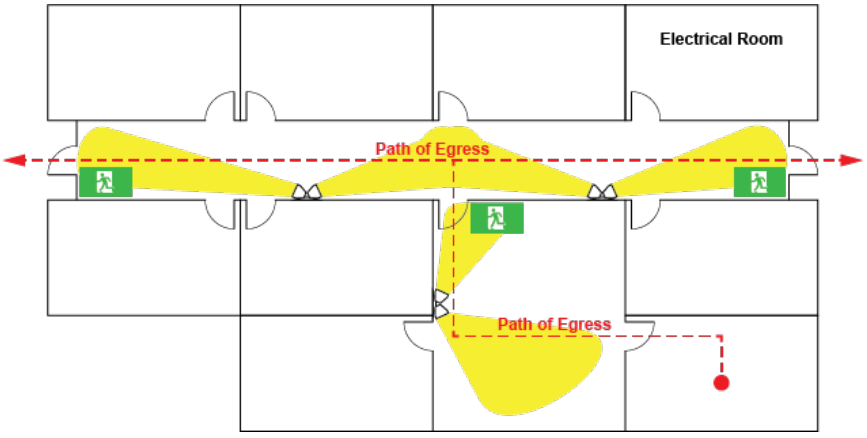
10' MOUNTING HEIGHT



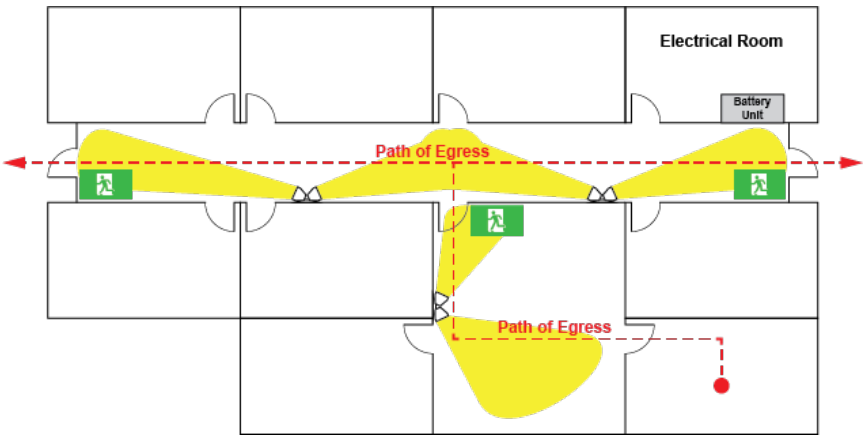
STEP 3: PLACE YOUR RUNNING MAN SIGNS AT ALL EXIT DOORS



STEP 4: PLACE YOUR REMOTE HEADS IN ORDER TO ACHIEVE LIGHT LEVELS



STEP 5: PLACE YOUR BATTERY PACK PREFERABLY IN AN ELECTRICAL ROOM, UTILITY CLOSET OR STAIRWELL



STEP 6: VALIDATE THE VOLTAGE DROP

VOLTAGE	WATTS																							
	#Wire	4	6	8	10	12	13	16	18	20	24	25	28	35	44	50	75	100	150	200	250	300	400
6 Volts	12	111	89	67	53	45	41	33	30	27	22	21	19	15	12	11	8	6	4	-	-		
	10	177	141	106	85	71	65	53	47	42	35	32	30	24	19	17	11	9	6	-	-		
	8	281	225	169	135	118	110	84	75	68	56	54	48	39	31	27	18	14	9	7	-		
	6	447	358	268	215	179	165	134	120	107	89	86	77	62	49	43	29	22	15	11	9		
12 Volts	12	534		267		178	165	184	110		89	85	76	61	49	42	29	21	14	10	8	-	
	10	849		425		283	260	212	190		142	136	121	97	77	68	45	34	23	17	14	11	
	8	1351		675		450	415	338	300		225	215	193	154	123	108	72	54	36	27	21	18	
	6	2148		1073		716	660	537	475		358	340	307	245	195	170	114	86	57	43	34	28	
24 Volts	12						660		440			340	305	244	194	168	116	84	56	40	32	26	21
	10						1040		760			544	485	388	309	272	180	136	92	68	52	44	34
	8						1668		1200			860	772	616	491	432	288	216	144	108	84	72	54
	6						2640		1900			1360	1227	960	781	680	456	344	228	172	136	112	85
32 Volts	12						1170		940			600	543	435	345	300	200	150	100	75	60	50	42
	10						-		1340			960	863	690	549	480	320	240	160	120	86	80	63
	8						-		-			1540	1372	1100	873	770	510	385	255	192	154	128	100
	6						-		-			-	2180	1740	1388	1220	815	610	405	305	240	200	163

IMPORTANT NOTION: VOLTAGE DROP

Voltage drop in emergency lighting refers to **the reduction in voltage that occurs as electrical current flows through the wiring** and components of the lighting system. This drop happens due to the inherent resistance in the conductors and connections, potentially impacting the effectiveness of the emergency lights by reducing the voltage available to power the fixtures at the end of the circuit.

STEP 7: CHOOSE YOUR RUNTIME ACCORDING TO THE NBC: IN THIS EXAMPLE, 30 MINUTES

STEP 8: CALCULATE YOUR TOTAL LOAD AND CREATE TAKE OFF

The take off is the total counts of emergency lighting will be installed in the building

3x Double remotes 06-12V3WLJ = 18W
3x Running man signs WH-UDC = 6W (average 2W each)
Sub total for remotes and signs = 24W

Add 20% for life safety buffer = 4.8W

Total load consumed = 28.8W

Use the model rating table available on our spec sheet to decide what capacity you need

WATTAGE CAPACITIES (W)[2]						
MODEL	VOLTS (V)	30 MIN.	60 MIN.	90 MIN.	120 MIN.	CABINET[1]
EBST06018	6	18	18	12	10	1
EBST06036	6	36	18	12	9	1
EBST06050	6	50	25	16	12	1
EBST06072	6	72	36	24	18	2
EBST06100	6	100	50	33	25	2
EBST06160	6	160	80	53	40	3
EBST06180	6	180	126	87	72	3
EBST12036	12	36	36	24	20	1
EBST12050	12	50	36	24	20	1
EBST12072	12	72	36	24	18	1
EBST12100	12	100	50	33	25	2
EBST12144	12	144	84	48	36	3
EBST12160	12	160	80	53	40	3
EBST12200	12	200	100	66	50	3
EBST12250	12	250	219	169	136	4
EBST12360	12	360	233	164	144	4
EBST24144	24	144	72	48	36	3
EBST24200	24	200	100	66	50	4
EBST24320	24	320	160	106	80	4
EBST24350	24	350	175	116	88	5
EBST24550	24	550	438	338	272	5
EBST24720	24	720	466	328	288	5

Final take off:

3x Double remotes 06-12V3WLJ
3x Running man signs WH-UDC
1x Battery unit 06036-0WH/AT

IMPORTANT NOTION: 20% BUFFER
Sizing the load on an emergency lighting unit to 80% of its capacity ensures a **safety margin, preventing overloading and optimizing reliability** during critical situations.

EMERGENCY LIGHTING TERMS

Float Charge
Float charge in emergency lighting is a continuous, lower-level charging voltage applied to fully charged batteries to maintain their optimal charge state and readiness for immediate use during power outages or emergencies.

Layout
Floor plan showing where the emergency lighting will be installed in the building.

Low Voltage Disconnect
The Low Voltage Disconnect in emergency lighting safeguards the battery by disconnecting it from the lights when its voltage drops to a critical level, preventing over-discharge and preserving its functionality for future use.

Normally On
Emergency lighting luminaires which are illuminated 24/7 (i.e. running man signs and night lights).

Normally Off
Units that are energized only in emergency situations (i.e. remote heads).

Reverse polarity
Reverse polarity in emergency lighting refers to an incorrect connection of the positive and negative wires, causing the electrical current to flow in the opposite direction than intended, potentially leading to malfunction or damage to the lighting system.

Spacing
Spacing in emergency lighting refers to the distance between individual emergency light fixtures within a given area. The spacing is determined by the mounting position and output of the fixture to meet the code requirements. Proper spacing ensures sufficient light levels across an area to guide individuals to exits and maintain visibility during emergencies.

Take Off
Total counts of emergency lighting equipment in each space with an established path of egress.

Voltage Drop
Voltage drop in emergency lighting refers to the reduction in voltage that occurs as electrical current flows through the wiring and components of the lighting system. This drop happens due to the inherent resistance in the conductors and connections, potentially impacting the effectiveness of the emergency lights by reducing the voltage available to power the fixtures at the end of the circuit.

20% Buffer
Sizing the load on an emergency lighting unit to 80% of its capacity ensures a safety margin, preventing overloading and optimizing reliability during critical situations.

NOTES

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