

N2LED Series Emergency Luminaires

Non-Metallic Emergency Egress Lighting Systems with Remote or Direct Mounted Lamps Hazardous Locations

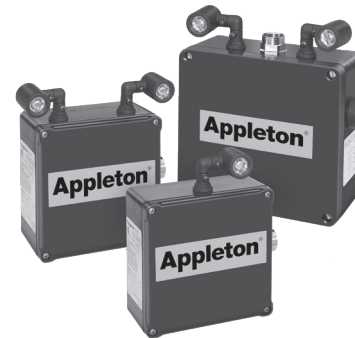
NEC/CEC: Class I, Division 2, Groups A, B, C, D | Class I, Zone 2, Group IIC | NEMA Type 4X | IP66 | Marine Outside Type (Salt Water)

Applications

- Enclosed and gasketed, non-metallic emergency lighting system suitable for use in areas where flammable gases or vapors may become present due to abnormal, unusual or accidental conditions defined by NEC as Class I, Division 2, Groups A, B, C, D and Class I, Zone 2, Group IIC.
- Typical applications include:
 - Manufacturing plants
 - Refineries
 - Petrochemical and chemical plants
 - Waste and sewerage treatment facilities
 - Food processing facilities
 - Hydrogen and Biofuels plants
 - LNG (Liquid Natural Gas) plants
 - Other industrial manufacturing or process facilities subject to wet or corrosive conditions
 - Non-hazardous areas where dirt, dust or corrosion would reduce life of ordinary emergency lighting systems

Features

- Enclosures are raintight and suited for operation in highly corrosive and wet locations.
- The electronics consist of a solid-state charger, transfer circuit and low voltage battery disconnect circuit.
- The integrated, illuminated push to test button is mounted on the system housing using a neoprene O-ring gasket to seal out moisture and liquids.
- Capacity is sufficient for the connection of 6 output watts (maximum).
- System supports 4 light heads (at 1.5 Watts each) in any main/remote combination utilizing up to 6 Watts of output power.
 - This allows for a main unit without any light heads to drive up to 4 remote units or any other combination of 4 lights.
- Provides 100% lumen output for 90 minutes of operation with four light heads or 180 minutes of operation with two light heads.
- The solid-state charger maintains battery at full charge
- Upon power failure or utility voltage (AC) below 50 V, the DC emergency lighting load is connected to the battery.
- During emergency operation, the battery is automatically protected from deep discharge damage by a low-voltage battery disconnect (LVD) circuit.
- Upon restoration of normal power, the charger brings the battery to full capacity within acceptable UL time standards (typically within 24 hours).
- Integrated, illuminated push to test button:
 - Indicates presence of AC line voltage and system error codes.
 - Activates push to test function.
- A universal input circuit allows operation from 120-277 Vac, 50/60 Hz lines.
- Maintenance-free NiCd battery is suited for harsh temperature environments of 0 °C to +55 °C (+32 °F to +131 °F).
- Remote lamp head assemblies (one or two) are available for mounting of lamp heads away from main power supply system.
- An automatic test feature provides periodic self-test of the system functions every 30 days.
- Status indicator light allows easy monitoring of system status and failure modes.
- 5 year standard warranty.



Standard Materials

- Lighting system:
 - Body: fiberglass reinforced polyester
 - Cover gasket: continuous silicone
 - Push to test switch: fiberglass reinforced polyester (FRP), neoprene gaskets
 - Hub: nickel plated brass
 - Cover screws: stainless steel
 - Lampheads: aluminum
- Remote unit:
 - Body: fiberglass reinforced polyester (FRP); specially formulated with low resistivity, will not hold static charge
 - Cover screws: stainless steel
 - Gasket: neoprene gasket

NEC/CEC Certifications and Compliances

- UL Standards: UL 1598A; UL 924; UL 844
- CSA Standards: C22.2 No. 141-M1985; C22.2 No. 137-M1981
- cCSAus Certified: 2715744
- Life Safety Code NFPA101® – Section 5-9 (Emergency Lighting)
- Marine wet locations suitability, Type 4X

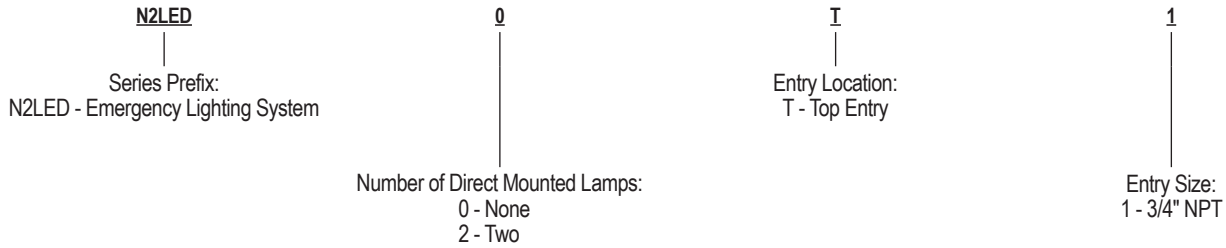
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Hazardous Locations

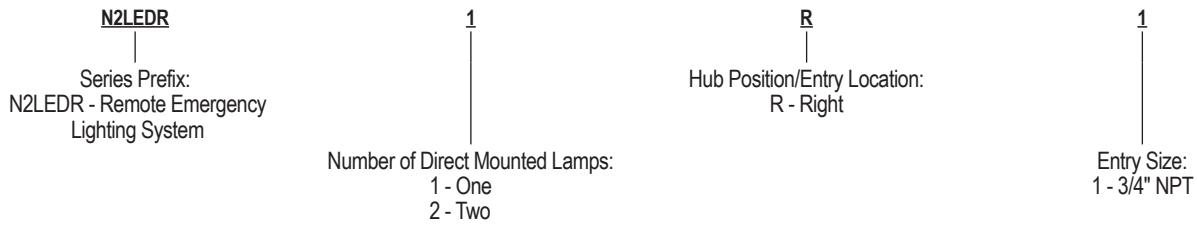
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Order Using Catalog Numbering Guide — N2LED Series Emergency Luminaires

Master Unit — With or Without Direct Mounted Lamps



Remote Unit — With One or Two Direct Mounted Lamps



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Lumen Output (Efficacy) ① ②

Model	Halogen Equivalency	Number of LED Lamps	Base Orientation	CCT (Correlated Color Temperature)	CRI (Color Rendering Index)	Lumen Output	Efficacy (lm/W)	Absolute Luminous Flux (Lumens)
N2LEDR	8 or 12W	1	Up	5000K	70	131.0	104.3	131.0
N2LED(R)	8 or 12W	2	Up	5000K	70	257.8	102.6	257.8

Electrical Specifications ① ③

Model	Number of LED Lamps	Voltage (V)	Input Voltage Vdc	Input Power (Watts)	Input Current (Amps)	Power Factor (PF)
N2LEDR	1	120 to 277 Vac	2.9	1.256	0.437	1.000
N2LED(R)	2	120 to 277 Vac	2.9	2.513	0.874	1.000

Temperature Codes

Model	Ambient Temperature °C (°F)	Supply Wire °C (°F)	Class I, Division 2 and Class I, Zone 2
N2LEDR	0 °C to +55 °C (+32 °F to +131 °F).	+60 °C (+140 °F)	T6
N2LED(R)			

NEC/CEC — “T” Numbers Represent the Maximum Internal Temperature or Maximum Surface Temperature ④ ⑤

“T” #	T1	350	325	T2	T2A	T2B	T2C	T2D	T3	T3A	T3B	T3C	T4	T4A	T5	T6
Temp. Range °C (°F)	+351 to +450 (+664 to +842)	+326 to +350 (+619 to +662)	+301 to +325 (+574 to +617)	+281 to +300 (+538 to +572)	+261 to +280 (+502 to +536)	+231 to +260 (+448 to +500)	+216 to +230 (+421 to +446)	+201 to +215 (+394 to +419)	+181 to +200 (+358 to +392)	+166 to +180 (+331 to +356)	+161 to +165 (+322 to +329)	+136 to +160 (+277 to +320)	+121 to +135 (+250 to +275)	+101 to +120 (+214 to +248)	+86 to +100 (+187 to +212)	+85 (+185)

① Measurements at Ambient Temperature (+25 °C +/- +1 °C)

② All lumen values are typical (tolerance +/- 10%).

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④ T numbers represent the maximum internal temperature for Class I, Division 1 and Class II, Division 1 locations designated by the NEC.

⑤ T numbers represent the maximum surface temperature under a dust blanket for Class II, Division 2 as designated by the NEC.

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Wire Sizing For Remote Installations

For copper wire, maximum distance (feet) between power supply and remote unit to limit voltage drop to 5%.

Wire Gage	Maximum Wire Length in Meters (Feet)
18 AWG	23.8 (78)
16 AWG	38.1 (125)
14 AWG	60.4 (198)
12 AWG	96.0 (315)
10 AWG	152.4 (500)

Status Indicator Codes for Push-to-Test Switch — When AC is Present

- * Equals status LED ON
- Equals status LED OFF

Status Indication	Status Description	Status Definition
	No light	AC power removed from circuit
*	Continuous red steady light	Battery fully charged
* - * -	Red light blinks once every second	Battery charging
** - ** -	Red light blinks twice repeatedly	Battery failure
*** - *** -	Red light blinks three times repeatedly	LED lamp head failure
**** - **** -	Red light blinks four times repeatedly	Emergency circuit charger board failure

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	Number of LED Lamps	Total Watts of LED Lamps	Hub Size	Input Voltage	Frequency	Weight kg (lb)	Catalog Number
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Master Unit With Two Direct Mount Lamps



2	3	3/4" NPT	120-277	50/60 Hz	3.27 (7.2)	N2LED2T1
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Master Unit Without Direct Mount Lamps



—	—	3/4" NPT	120-277	50/60 Hz	3.04 (6.7)	N2LED0T1
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	Number of LED Lamps	Total Watts of LED Lamps	Hub Size	Hub Position	Weight kg (lb)	Catalog Number
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Remote Unit With One Lamp



1	1.5	3/4" NPT	Dead End Hub on Right	1.45 (3.2)	N2LEDR1R1
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Remote Unit With Two Lamps



2	3	3/4" NPT	Dead End Hub on Right	1.59 (3.5)	N2LEDR2R1
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Replacement Parts

Description	Catalog Number
Emergency Lamp Kit	N2LEDLH
Emergency Battery Pack Kit	N2LEDBP
Emergency Circuit Charger Board Kit	N2LEDCB
Nickel Plated Brass M25 Male, 3/4" NPT Female Hub	737DM3T25

LED Luminaires | Emergency Egress | Hazardous Location | NEC / CEC

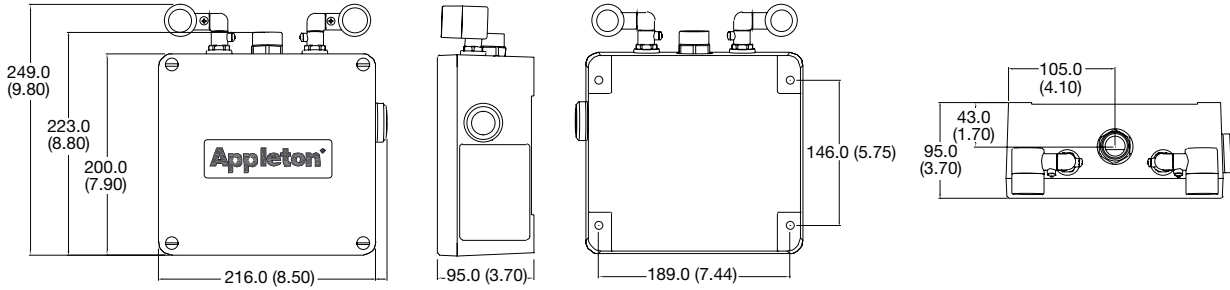
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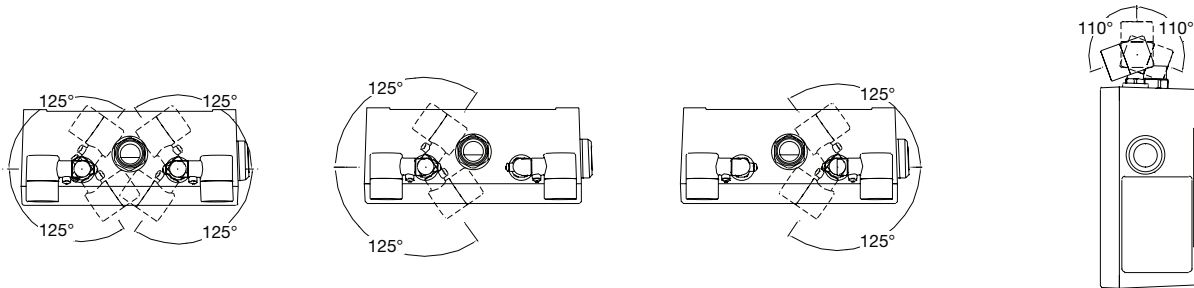
Emergency Lighting System — Dimensions in Millimeters (Inches)

Master Unit — With Two Direct Mount Lamps

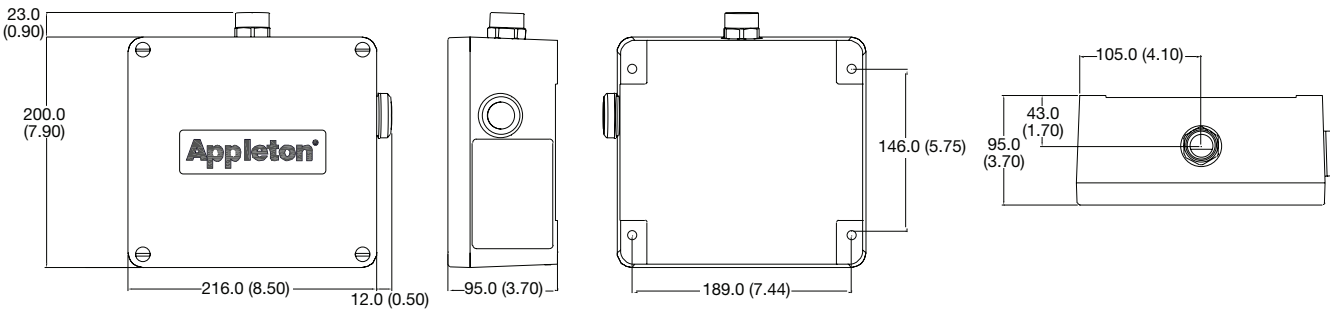


Adjustment Angle — Top View

Side View



Master Unit — Without Direct Mount Lamps



LED Luminaires | Emergency Egress | Hazardous Location | NEC / CEC

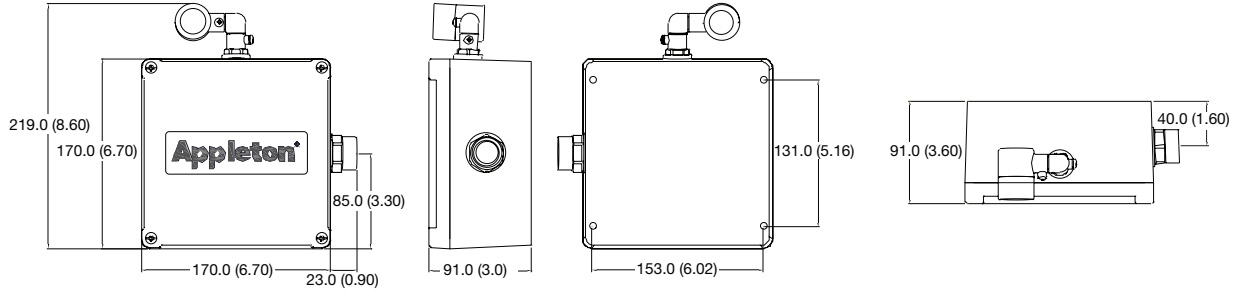
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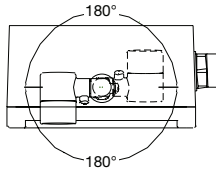
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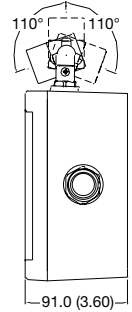
Remote Unit — With One Lamp



Adjustment Angle — Top View



Side View



LED Luminaires | Emergency Egress | Hazardous Location | NEC / CEC

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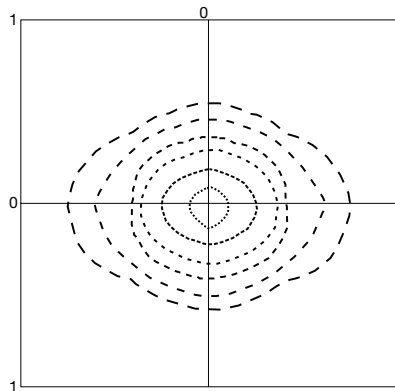
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Photometric Data — DATA SHOWN IS ABSOLUTE

Wall Mount LED Emergency Luminaire, Single Lamp

Luminaire Lumens 131.0

ISOFOOTCANDLE PLOT



Distance in units of mounting height (10 ft)
 5 fc 0.5 fc - - - -
 2.5 fc 0.2 fc - - -
 1 fc 0.1 fc - - -

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	117.9	90.0
0-40	125.5	95.8
0-60	130.2	99.4
60-90	0.8	0.6
0-90	131.0	100.0
90-180	0.0	0.0
0-180	131.0	100.0

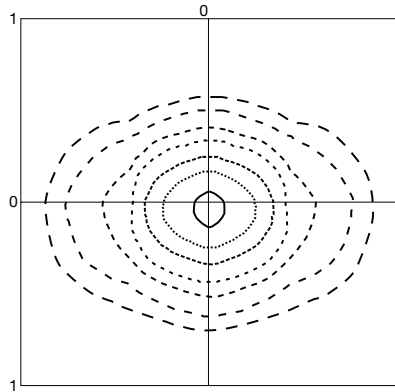
CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	663	663	663	663	663
5	603	569	547	540	527
10	377	350	370	394	391
15	188	172	202	249	255
20	86	80	97	123	119
25	36	34	42	41	46
30	15	14	16	30	36
35	6	6	9	20	25
40	3	3	6	11	14
45	2	2	4	5	3
50	2	2	3	2	2
55	2	2	2	2	2
60	1	1	1	1	1
65	0	0	1	1	1
70	0	0	0	0	0
75	0	0	0	0	0
80	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0

Wall Mount LED Emergency Luminaire, Two Lamp

Luminaire Lumens 257.8

ISOFOOTCANDLE PLOT



Distance in units of mounting height (10 ft)
 10 fc 0.5 fc - - - -
 5 fc 0.2 fc - - -
 2.5 fc 0.1 fc - - -
 1 fc - - -

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	230.9	89.6
0-40	246.7	95.7
0-60	255.9	99.3
60-90	1.8	0.7
0-90	257.8	100.0
90-180	0.0	0.0
0-180	257.8	100.0

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	1241	1241	1241	1241	1241
5	1196	1110	1049	1011	989
10	844	764	761	763	737
15	469	426	461	506	486
20	225	206	239	264	234
25	93	87	107	91	97
30	40	37	40	66	74
35	17	16	23	44	51
40	7	7	14	26	28
45	4	5	8	11	6
50	4	4	6	5	4
55	4	4	5	4	3
60	2	2	3	3	2
65	1	1	2	2	1
70	0	1	1	1	1
75	0	0	0	1	0
80	0	0	0	0	0
85	0	0	0	0	0
90	0	0	0	0	0