

N2LS™ Series Emergency Luminaires

Enclosed and Gasketed

Non-Metallic Emergency Lighting Systems with Remote or Direct Mounted Lamps.

Class I, Division 2, Groups B, C, D
Class I, Zone 2, Group IIB + H₂
NEMA 3R

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 B, C and D and Class I, Zone 2, Group II B + H₂.
- Typical applications include manufacturing plants, refineries, petrochemical and chemical plants, waste and sewerage treatment facilities, food processing facilities, and 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

- Certified for use in Class I, Division 2, Groups B, C, D; Class I, Zone 2, Group II B + H₂ Hazardous Locations.
- Enclosures are Type 3R (raintight) rated 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 test switch and AC "On" indicator light are mounted on the system housing utilizing a neoprene "O-ring" gasket to seal out moisture and liquids.
- Capacity is sufficient for the connection of 36 or 72 output Watts (maximum).
- Housing provisions allow for the attachment of single or dual, 8 or 12 Watt halogen sealed beam heads (Wattage cannot exceed unit capacity.)
- Provides 90 minutes of emergency operation.
- The solid-state charger maintains battery at full charge.
- Upon failure or 35% dip of utility voltage (AC), the DC emergency lighting load is connected to the battery.
- During emergency operation, automatic battery protection from deep discharge damage is provided by a low-voltage battery disconnect (LVD) circuit.
- Upon restoration of normal power, the charger will begin a recharge cycle. It will bring the battery to full capacity within acceptable UL time standards.
- A pilot light indicates the presence of AC line voltage, and a test switch is provided for checking transfer operation.
- A universal transformer allows operation on 120, 220, 240 or 277 Vac 60 Hz. lines.
- Emergency power source is a sealed cell, lead acid, maintenance-free battery suited for harsh temperature environments of 32° to 104°F / 0° to 40°C.
- 15 amp fuse provided as standard.
- Expected life is 10 years.
- Remote lamp head assemblies (one or two) are available for mounting of lamp heads away from main power supply system.
- Time delay relay (15 min.) provided as standard; allows time for HID lighting to reach desired illumination levels.



Standard Materials

- Lighting system:
 - Body: Compression molded, fiberglass reinforced polyester (FRP)
 - Gasket: continuous silicone gasket and FRP
 - Mounting feet: fiberglass reinforced polyester
- Remote unit:
 - Body: specially formulated fiberglass reinforced polyester with low surface resistivity that will not hold a static charge
 - Mounting feet: stainless steel
 - Screws (hold covers to bodies): stainless steel
 - Gasket (between covers to bodies): neoprene
- Gaskets (under pilot light and push to test switch): neoprene
- Hubs: glass filled polyester with zinc plated steel insert
- Lamphead: Noryl® thermoplastic

Certifications and Compliances

- UL Standard: UL 924
- UL Listed: E175025
- NFPA 101 Life Safety Code

N2LS™ Series Emergency Luminaire Technical Data

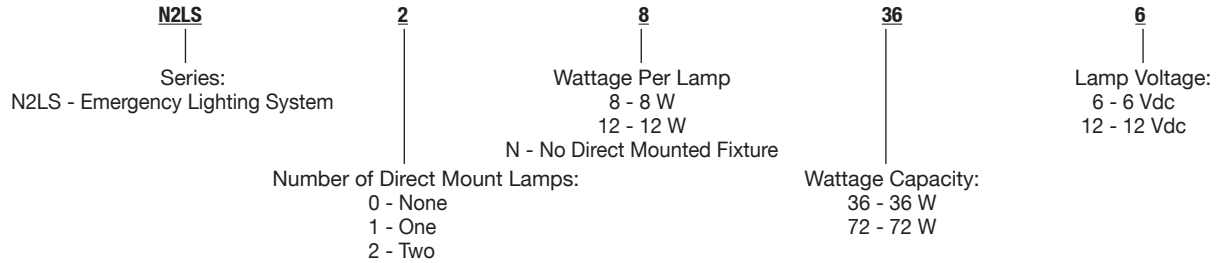
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Order using catalog numbering guide below or select catalog number from tables on following pages.

Catalog Numbering Guide For N2LS



Thermal Performance — Operating Temperatures

Wire Supply	Ambient Temperature	“T” Number
140 °F/60 °C	Min. 32 °F to max 104 °F / 0 °C to max 40 °C	T6

“T” Numbers Represent the Maximum Lamp Temperature for Class I, Division 2 Locations

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

Wire Sizing For Remote Installations

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

Wire Size	For 6 Volt Units – Load in Watts				For 12 Volt Units – Load in Watts			
	8	16	24	32	8	16	24	32
16 AWG	26	13	6	3	52	26	12	6
14 AWG	42	21	10	5	84	42	20	10
12 AWG	66	33	16	8	132	66	32	16
10 AWG	106	53	26	13	212	106	52	26
8 AWG	168	84	42	21	336	168	84	42
6 AWG	270	135	67	33	540	270	134	66

Capacity of Standard N2LS Units

Up to two lamps may be direct mounted. The remainder must be remote mounted.
Number of lamps accommodated is dependent on whether 36 or 72 Watt unit is used.

Combination Number	1	2	3	4	6	7	8	9	10	11	12	13	14	15
Number of Lamps	1	1	2	2	3	3	4	4	5	5	6	7	8	9
Watts per Lamp	8	12	8	12	8	12	8	12	8	12	12	8	8	8
Total Wattage	8	12	16	24	24	36	32	48	40	60	72	56	64	72

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Lighting


LIGHTING: ENCLOSED AND GASKETED – EMERGENCY

	Number of Lamps	Watts Per Lamp	Lamp Voltage (DC)	Wattage Capacity	Hub Size	Input Voltage *	Frequency	Weight lbs/kg	Catalog Number
Emergency Lighting System With Two Direct Mount Lamps									
	2	8	6	36	3/4"	120-277	60 Hz	19.50/8.8	N2LS28366
	2	8	12	36	3/4"	120-277	60 Hz	19.50/8.8	N2LS283612
	2	8	6	72	3/4"	120-277	60 Hz	19.50/8.8	N2LS28726
	2	8	12	72	3/4"	120-277	60 Hz	19.50/8.8	N2LS287212
	2	12	6	36	3/4"	120-277	60 Hz	19.50/8.8	N2LS212366
	2	12	12	36	3/4"	120-277	60 Hz	19.50/8.8	N2LS2123612
	2	12	6	72	3/4"	120-277	60 Hz	19.50/8.8	N2LS212726
	2	12	12	72	3/4"	120-277	60 Hz	19.50/8.8	N2LS2127212

Emergency Lighting System With One Direct Mount Lamp									
	1	8	6	36	3/4"	120-277	60 Hz	18.50/8.4	N2LS18366
	1	8	12	36	3/4"	120-277	60 Hz	18.50/8.4	N2LS183612
	1	8	6	72	3/4"	120-277	60 Hz	18.50/8.4	N2LS18726
	1	8	12	72	3/4"	120-277	60 Hz	18.50/8.4	N2LS187212
	1	12	6	36	3/4"	120-277	60 Hz	18.50/8.4	N2LS112366
	1	12	12	36	3/4"	120-277	60 Hz	18.50/8.4	N2LS1123612
	1	12	6	72	3/4"	120-277	60 Hz	18.50/8.4	N2LS112726
	1	12	12	72	3/4"	120-277	60 Hz	18.50/8.4	N2LS1127212

Emergency Lighting System Without Direct Mount Lamps									
	—	—	6	36	3/4"	120-277	60 Hz	17.50/7.9	N2LS0N366
	—	—	12	36	3/4"	120-277	60 Hz	17.50/7.9	N2LS0N3612
	—	—	6	72	3/4"	120-277	60 Hz	17.50/7.9	N2LS0N726
	—	—	12	72	3/4"	120-277	60 Hz	17.50/7.9	N2LS0N7212

	Number of Lamps	Watts Per Lamp	Lamp Voltage (DC)	Hub Size	Hub Position *	Weight lbs/kg	Catalog Number
Remote Mount With One Lamp							
	1	8	6	3/4"	Dead End Hub on Right	4.00/1.8	N2RR186
	1	8	12	3/4"	Dead End Hub on Right	4.00/1.8	N2RR1812
	1	12	6	3/4"	Dead End Hub on Right	4.00/1.8	N2RR1126
	1	12	12	3/4"	Dead End Hub on Right	4.00/1.8	N2RR11212

Remote Mount With Two Lamps							
	2	8	6	3/4"	Dead End Hub on Right	5.00/2.3	N2RR286
	2	8	12	3/4"	Dead End Hub on Right	5.00/2.3	N2RR2812
	2	12	6	3/4"	Dead End Hub on Right	5.00/2.3	N2RR2126
	2	12	12	3/4"	Dead End Hub on Right	5.00/2.3	N2RR21212

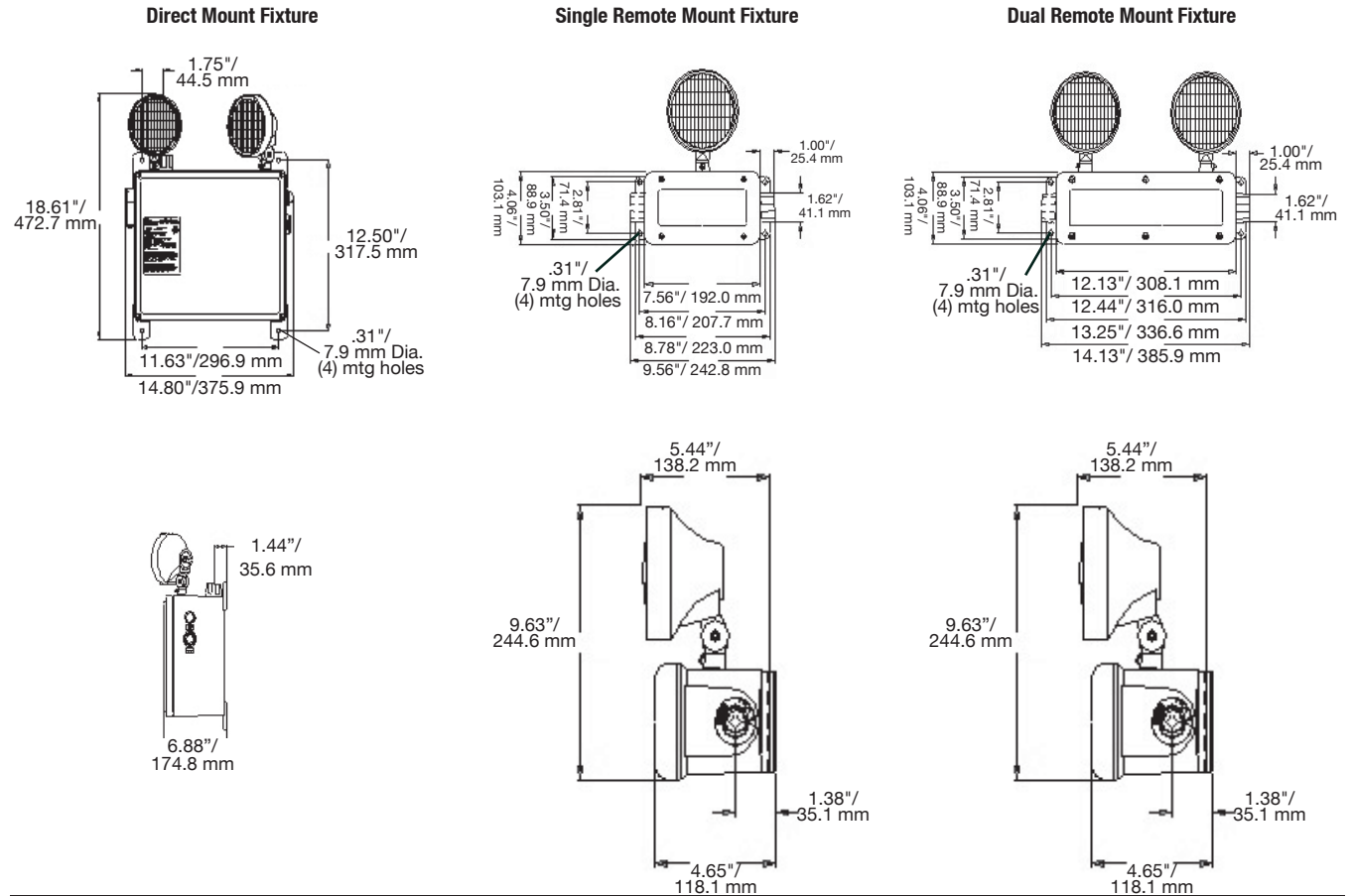
* Input voltage is 120, 220, 240 and 277

N2LS™ Series Emergency Luminaire Dimensions

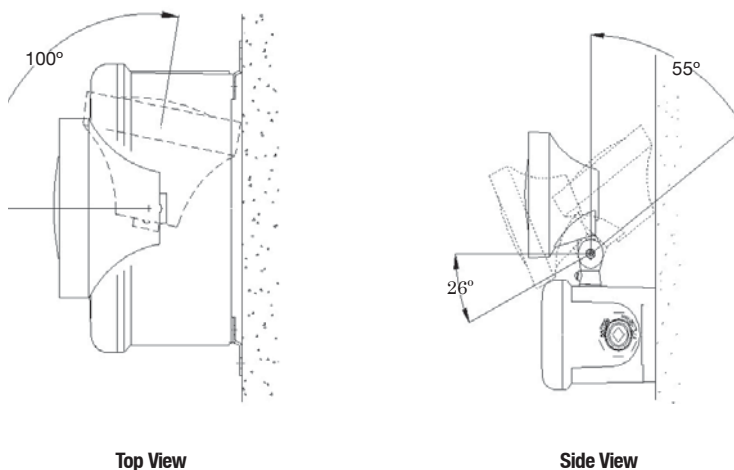
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Dimensions (In/mm)



Adjustment Angle Data For Remote Unit



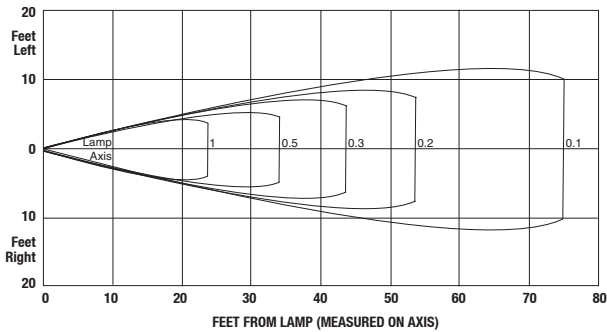
N2LS™ Series Emergency Luminaire Photometric Data

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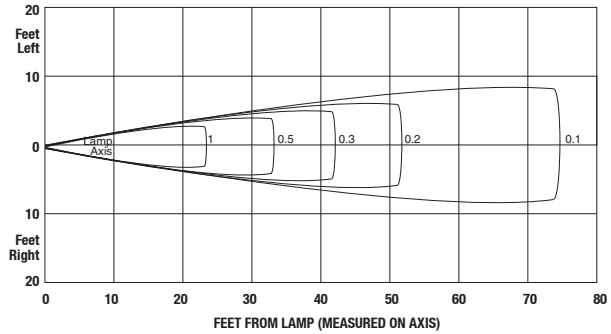
Non-Metallic Emergency Lighting Systems with Remote or Direct Mounted Lamps.

Photometric Data

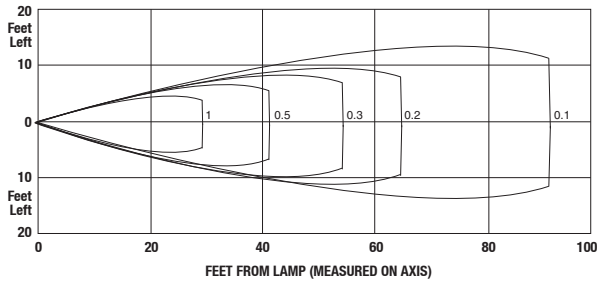
Horizontal Isofootcandle Distribution Curves for 8 Watts



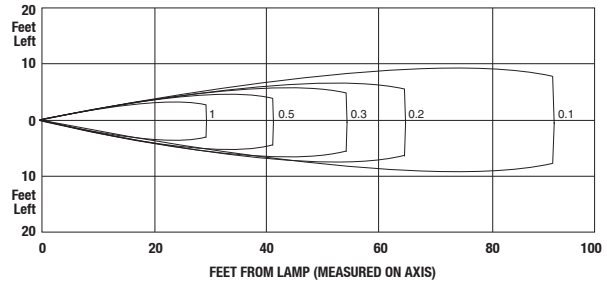
Vertical Isofootcandle Distribution Curves for 8 Watts



Horizontal Isofootcandle Distribution Curves for 12 Watts



Vertical Isofootcandle Distribution Curves for 12 Watts



Lighting

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