

**Agricultural** Lighting Solutions



# Dairy Production



**Lighting can increase milk production\***

**Typical Dairy Barn Lighting Layout**

Studies have shown that an increase in the amount of continuous illuminated hours can increase milk production between 5% to 15%. The increased illumination is very important for winter months when daylight hours are significantly reduced. Studies have suggested that 16 hours of continuous light with 8 hours of darkness or very low illumination level provides the best results. (Note, twenty-four hours of light will not increase milk production.) Typical payback is around 8 to 16 months. Light levels need to be in the 20 footcandle range for illuminated hours and 1 to 2 footcandles for dark hours. Not only is the increased illumination good for milk production, the added light will create a safer and more pleasant work environment. The uniform illumination can also increase the care of the herd and movement throughout the facility. The “night-light” low illumination level will allow workers to still move throughout the work environment during the off hours.


\* Lighting is only one of the components which will increase milk production. Please reference University of Wisconsin Healthy Farmers, Healthy Profits Project; August, 2000; Second Edition; “Long-Day lighting in dairy barns” by Gunnar Josefsson, Marcia Miquelon and Larry Chapman.

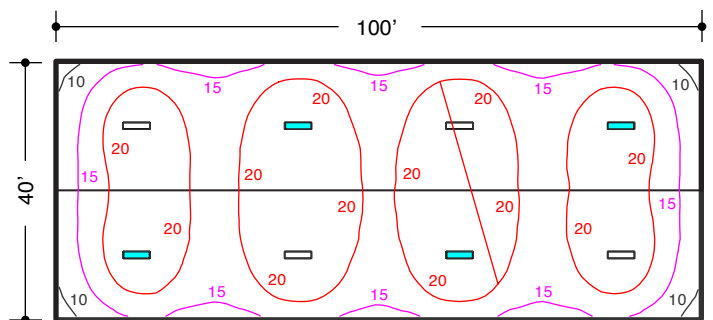
## Why use the Nulite INT-HB luminaire?

The Nulite INT-HB fluorescent high bay luminaire is an ideal solution for lighting agricultural environments such as dairy barns. The rugged housing holds up to these tough conditions and provide quality illumination year after year. Advantages of using fluorescent sources are instant on, excellent color rendering and long lamp life (20,000 to 30,000 hours). Nulite offers a 3 year warranty on luminaire and ballast.

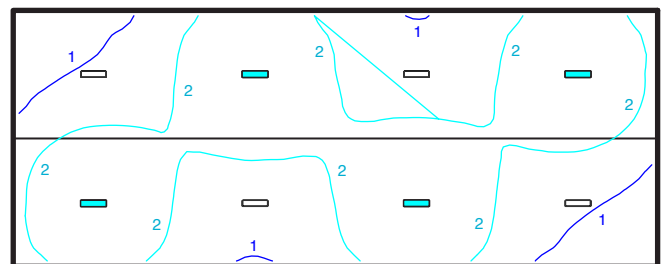
Nulite Lighting will not guarantee increased milk production.

Reflectances - 50/30/10 assumed  
 Ceiling Height - 16’ to 24’ at center peak  
 Luminaire - INT-HB-4-54WT5HO mounted at 15’ AFF, 25’ on-center and rows spaced 20’ on-center. (4) of the (8) units have “Multi-Level Switching”. See below for “full on” and “night-light” levels.

 Luminaire with “Multi-Level Switching” option with 1-lamp for “night-light”.



**Illumination Level “full on” - (footcandles)\*\***



**Illumination Level “night-light” - (footcandles)\*\***

\*\*Illumination levels will vary with many factors, such as room geometry, reflectances, dirt depreciation, and maintenance. Please consult a lighting professional for layout assistance.

# Energy Efficient Lighting

## Luminaire Features

### Tool-free Access

### Housing

White back-housing is constructed of glass fiber reinforced polyester.

### Gasket

Seamless closed-cell polyurethane gasket which is resistant to fungal growth.

### Hardware

Stainless steel captive hardware for maximum durability.



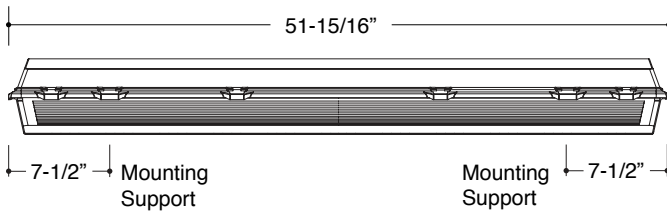
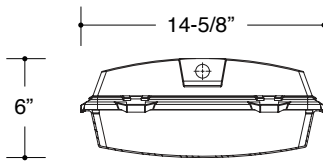
### Lens

Injection molded, impact resistant, UV stabilized, acrylic 50/50 DR lens. Frosted ends and linear prisms sides reduce brightness. Polycarbonate lens optional.

### Components

Ballast tray is constructed of high reflectance white painted cold rolled steel with built in stiffeners to insure rigidity. Optional multi-faceted die formed Miro 4 highly specular anodized aluminum reflector. 4 or 6, T5 or T8 lamp options with energy efficient electronic ballast(s).





Project Name:	
Type:	Date:
Catalog #:	

**Description:**

The Nulite INT-HB high bay is an ideal solution for lighting cold storage, food processing, agricultural and warehouse environments where moisture is an issue. The rugged housing holds up to these tough conditions and provide quality illumination year after year. This luminaire is NSF certified.

**Specifications:**

**Construction:** Rugged corrosion resistant white housing is comprised of fiberglass reinforced polyester coupled with an acrylic 50/50 DR lens. Stainless steel latches and seamless closed-cell gasket provides a dust proof seal.

**Diffuser:** Injection molded, impact resistant, UV stabilized, acrylic 50/50 DR lens. Optional polycarbonate (not recommended for food processing applications).

**Reflector / Ballast:** Formed of 20 ga. CRS and finished with a high reflective white paint to provide a minimum reflectance of 87%. (4) stainless steel spring fittings support the reflector tray and can be opened from either side. Optional die formed Miro®4 highly specular anodized aluminum reflector. Standard electronic, class P, ballast. Universal (UNV) voltage ballast is from 120 to 277V.

**Lamping:** 4 or 6 lamp cross-section T5, T5HO or T8. Luminaire can be ordered with lamps, consult factory.

**Mounting:** V-Hook standard. Optional aircraft cable or stainless steel surface mounting brackets.

**Labels:** UL / cUL listed, suitable for Wet Locations, NSF/ANSI Standard 2, NEMA 4X, IP 66 & IP67 rated, RoHS Compliant.

**Ordering Information**

Sample: INT-HB-454T5HO-277-PSN-EM-VH

Series	Lamp	Wattage	Voltage	Ballast	Options	Mounting
INT-HB	4 <sup>1</sup>	28T5 <sup>1</sup>	UNV	T8 Options	EM <sup>4</sup> Emergency Battery Pack	VH V-Hook (Standard)
	6 <sup>1</sup>	54T5HO <sup>1</sup>	120	IS (Standard)	-20 -20°F Start Temp. Ballast	
				PS	M4 Miro®4 Reflector	
	32T8 <sup>1</sup>	277	HEIS	HEPS	MLT Multi-Level Switching	AC10 10' Aircraft Cable
				T5/T5HO	HE	
480 <sup>2</sup>	347 <sup>2</sup>	PS (Standard)	HEPS <sup>2</sup>	SJT/6 <sup>3</sup> 6' SJT Cord	SSB Stainless Steel Ceiling Surface Mounting Bracket	
			All Lamp Dimming Options	HE		HEPS=High Efficiency Program Start
			DIM <sup>2</sup> Dimming	CP3/6 <sup>3</sup> 6' SJT Cord Plug	GLR Fusing	
			SD <sup>2</sup> Step Dimming	CP3/6 (NEMA) <sup>3</sup> 6' SJT Cord - (NEMA Plug Designation) ie. CP3/6-(L7-20)	POLY <sup>5</sup> Polycarbonate Lens	
			IS=Instant Start		OS65 IP65 Occupancy Sensor (Refer to technical page for distribution)	
			PS=Program Start			
			HEIS=High Efficiency Instant Start			
			HEPS=High Efficiency Program Start			

Notes:

1. Total wattage for maximum operating ambient temperature: 250 watts, Max 104°F; 340 watts, Max 77°F.
2. Consult factory.
3. Luminaire is listed for Damp Location for this option. Consult factory for Wet Location with cord.
4. Specific voltage code must be ordered for this option.
5. Polycarbonate lens is not recommended for food processing applications.

Specifications and dimensions are subject to change without notification. Specification sheets on our website supersede all other versions. Nulite reserves the right to bulk package any order.