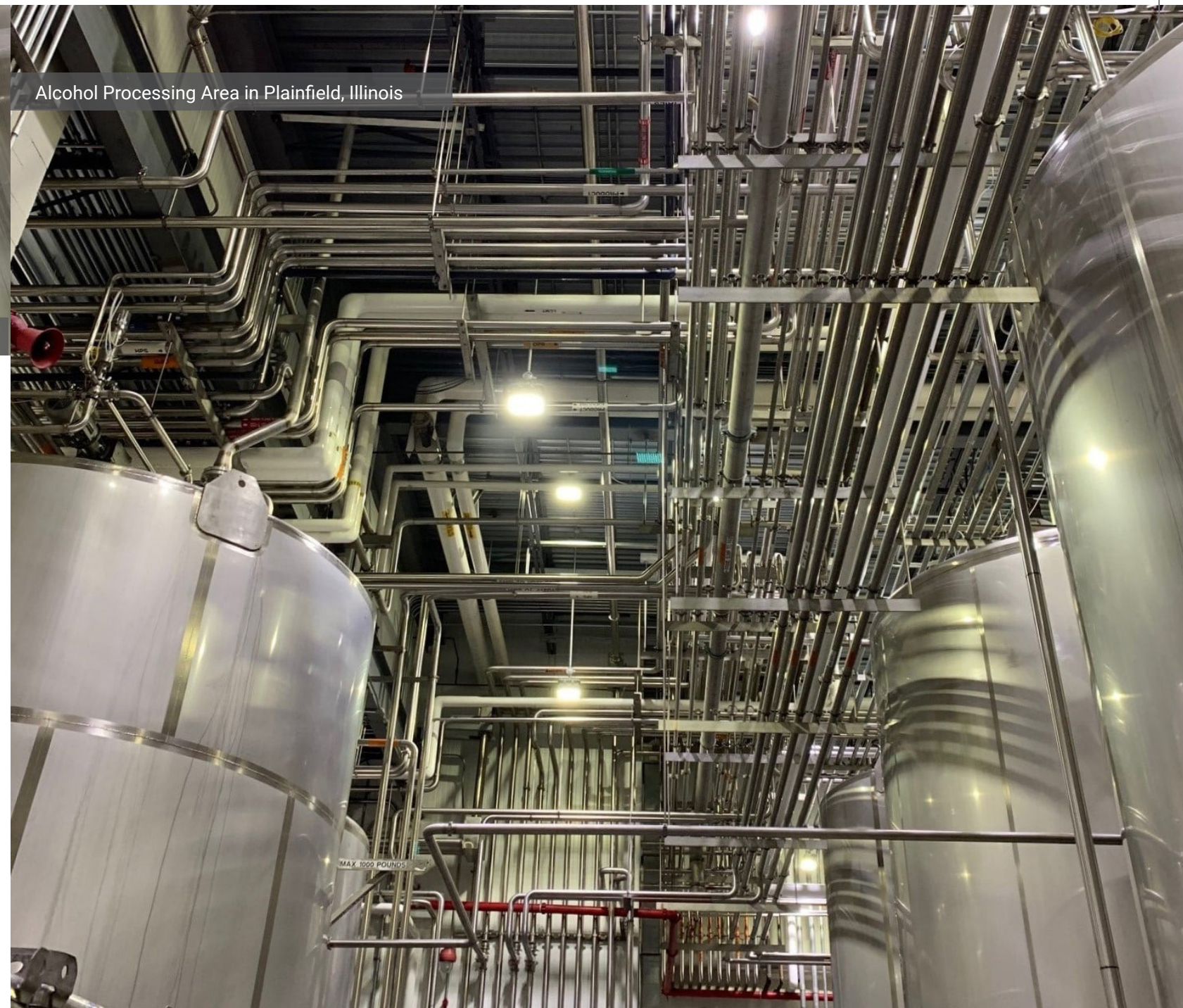


Alcohol Processing Area in Plainfield, Illinois



Alcohol Processing Area in Plainfield, Illinois

## HAZARDOUS LOCATION LIGHTING BASICS

### CLASSES

**Class I: Gases**  
Areas in which flammable gases or vapors in the air in sufficient quantities to ignite or explode.

**Class II: Dust**  
Areas in which combustible dust may be suspended in the air or accumulates on electrical equipment in quantities sufficient to ignite or explode.

**Class III: Fibers**  
Areas in which easily ignitable fibers or flyings are present. Typically fibers and flyings are not suspended in the air, but can collect around machinery or on lighting fixtures.

### DIVISIONS

**Division 1: Always Present**  
Areas in which ignitable concentrations of hazards exist under normal operation conditions and/or where hazard is caused by frequent maintenance or repair work or frequent equipment failure.

**Division 2: Not Normally Present**  
Areas in which ignitable concentrations of hazards are normally in closed containers or closed systems. Hazards may be present due to accidental rupture or breakdown of such containers or systems.

### GROUPS

**Class I: Gases**  
Group A - Acetylene  
Group B - Hydrogen  
Group C - Ethylene  
Group D - Propane

**Class II: Dusts**  
Group E - Electrically conductive dust  
Group F - Carbonaceous dust  
Group G - Agricultural and polymer dust

For complete information, refer to the National Electric Code (NEC)

### IEC ZONE CLASSIFICATIONS

IEC publication 60079-10 uses Zones to define the guidelines for classifying hazardous areas.

**Zone 0** - Areas where explosive gas atmosphere is continuously present or present for long periods of time.

**Zone 1** - Areas where explosive gas atmosphere is likely to occur in normal operation or can be expected to be present frequently.

**Zone 2** - Areas where explosive gas atmosphere is not likely to occur and if it does, it will only be present for a short period of time.

**Zone 20** - Areas in which a combustible dust, as a cloud, is present continuously or frequently during normal operations in sufficient quantities to produce an explosive mixture.

**Zone 21** - Areas in which a combustible dust, as a cloud, is likely to occur during normal operations in sufficient quantities to produce an explosive mixture.

**Zone 22** - Areas in which combustible dust, as a cloud, is not likely to occur, but may occur infrequently and persist for only short periods of time.

### COMPARISON

Hazardous Material	NEC U.S. Standards	IEC Standards
Gas or Vapor	Class I, Division 1	Zone 0, 1
	Class I, Division 2	Zone 2
Dust	Class II, Division 1	Zone 20
	Class II, Division 2	Zone 22
Fibers or Flyings	Class III, Division 1	No Equivalent
	Class III, Division 2	No Equivalent

### UL STANDARDS

Number	Certified Usage
844	Lighting fixtures for use in hazardous classified areas
924	Emergency lighting and power equipment
1598	Lighting fixtures approved for wet locations
1598A	Lighting approved for use on marine vessels. Salt water corrosive rated.
8750	LED safety

### IP CODES

1st Number: Solid Objects	2nd Number: Liquids
0 - No protection	0 - No protection
1 - Objects greater than 50mm	1 - Vertically dripping
2 - Objects greater than 12.5mm	2 - Dripping up to 15°
3 - Objects greater than 2.5mm	3 - Limited spraying
4 - Objects greater than 1mm	4 - Splashing from all directions
5 - Dust protected	5 - Hosing jets from all directions
6 - Dust proof	6 - Strong hosing jets from all directions
	7 - Temporary immersion
	8 - Continuous immersion
	9K - Steam-jet cleaning

### IK RATINGS

IK Code	Level of Protection Achieved
IK00	Not protected
IK01	Protected against 0.14 joules impact
IK02	Protected against 0.2 joules impact
IK03	Protected against 0.35 joules impact
IK04	Protected against 0.5 joules impact
IK05	Protected against 0.7 joules impact
IK06	Protected against 1 joules impact
IK07	Protected against 2 joules impact
IK08	Protected against 5 joules impact
IK09	Protected against 10 joules impact
IK10	Protected against 20 joules impact

### T-CODES

Maximum Operating Temperatures	Temperature Class (T-Code)	
	°C	°F
450	842	T1
300	572	T2
280	536	T2A
260	500	T2B
230	446	T2C
215	419	T2D
200	392	T3
180	356	T3A
165	329	T3B
160	320	T3C
135	275	T4
120	248	T4A
100	212	T5
85	185	T6



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## HARSH & HAZARDOUS

### BLOCK-MINI SERIES H1

For low wattage explosion proof applications  
Class I Division 1, Class I Division 2  
Class II Division 1, Class III  
IP66, IP67

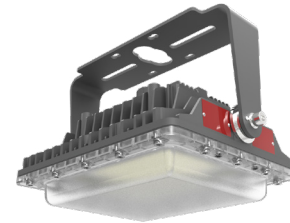


**Wattage:** 21W 40W 50W 60W  
**Lumens (Lm):** 4200/6500/7180/8515  
**Warranty:** LEDs: 10 Years, Driver: 7 Years

## HARSH & HAZARDOUS

### BLOCK-MINI SERIES H2

For a lower wattage, compact hazardous location light  
Class I Division 2, Class II Division 1  
Class III, IP66  
IP67



**Wattage:** 21W 40W 50W 60W  
**Lumens (Lm):** 4220/6500/7180/8515  
**Warranty:** LEDs: 10 Years, Driver: 7 Years

## HARSH & HAZARDOUS

### ROUND SERIES

For corrosive & hazardous locations  
Class I Division 2, Class II Division 1  
Class II Division 2, Class III  
IP66



**Wattage:** 40W 45W 60W\* 65W  
**Lumens (Lm):** 6,150/6,750/10,050/10150  
**Warranty:** LEDs: 10 Years, Driver: 7 Years

## HIGH TEMPERATURE

### HIGH BAY HOT SERIES

For harsh, extreme heat environments

Operating Temperature:  
-40°F to + 176°F (-40°C to + 80°C)



**Wattage:** 150W 300W  
**Lumens (Lm):** 19,600 (110°), 17,223 (60°)  
**Warranty:** Standard: 3 Years; Extended: 5 Years

### BLOCK SERIES H1

For explosion proof environments  
Class I Division 1, Class I Division 2  
Class II Division 2, Class III  
IP66



**Wattage:** 80W, 100W, 150W  
**Lumens (Lm):** 10400/13000/19500  
**Warranty:** LEDs: 10 Years, Driver: 7 Years

### BLOCK SERIES H2

For harsh and hazardous environments  
Class I Division 2, Class II Division 2,  
Class III, IP66



**Wattage:** 80W 100W 150W  
**Lumens (Lm):** 10400/13000/19500  
**Warranty:** LEDs: 10 Years, Driver: 7 Years

### ROUND-MAX SERIES

For indoor high/mid bay & outdoor  
Class I Division 2, Class II Division 1  
Class II Division 2, Class III, IP66



**Wattage:** 80W 120W 150W 200W  
**Lumens (Lm):** 12000/18000/22500/30000  
**Warranty:** LEDs: 10 Years, Driver: 7 Years

### MODULAR HOT SERIES

For indoor high/low bay and outdoor flood  
lighting for high temperature locations

Operating Temperature:  
-40°F to + 158°F (-40°C to + 70°C) - TG  
-40°F to + 149°F (-40°C to + 65°C) - PC



**Wattage:** 200W 400W 600W 800W  
**Lumens (Lm):** 30500/57500/87500/114500  
**Warranty:** 5 Years

### LINEAR TUFF SERIES (Battery option available)

For explosion proof environments with low ceiling applications  
Class I Division 1, Class I Division 2  
IP66



**Wattage:** 40W 80W  
**Lumens (Lm):** 4425/9160  
**Warranty:** LEDs: 10 Years, Driver: 7 Years

### LINEAR SERIES (Battery option available)

For hazardous environments with low ceiling applications  
Class I Division 2, Class II Division 1  
Class III, IP66



**Wattage:** 40W 80W  
**Lumens (Lm):** 5533/11548  
**Warranty:** LEDs: 10 Years, Driver: 7 Years

### EMERGENCY EXIT SERIES

Class I Division 2 / Contact factory for available options



## INDUSTRIAL

### TUFF TUBE SERIES

For harsh conditions in polluted environments where a high  
level of quality lighting is needed. Handles water, dust, humidity,  
corrosion, vibration, and sudden impact with ease



**Wattage:** 20W 36W 45W  
**Lumens (Lm):** 2700/4860/6075  
**Warranty:** 5 Years



### SCAN TO LEARN MORE

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