

# Applications Guide

For DIAMOND High Bay™ and HORIZON High Bay™ Fixtures



## APPLICATIONS

Warehouse, Manufacturing, Air Craft Hangers, Trucking Terminals, Car Dealerships, Retail Marts, Indoor Sports and Recreation

## FEATURES & BENEFITS

### Sturdy Construction

.032 aluminum housing standard. Powder coating for high reflectivity and durability. Properly vented housing keeps ballast cool.

### Ballast Access Doors

For easy fixture maintenance.

### Mounting

Fixtures are designed for easy surface, chain or pendant installation.

**Uniform Color with Consistent Light Output**

## DIAMOND High Bay™

### DIAMOND HIGH BAY™ FIXTURES

- 54904 DIAMOND HIGH BAY™ 4/F54/120/277V NO LENS
- 54980 DIAMOND HIGH BAY™ 6/F32 120/277V NO LENS W/V-HOOKS
- 54982 DIAMOND HIGH BAY™ 6/F54 120/277V NO LENS W/V-HOOKS

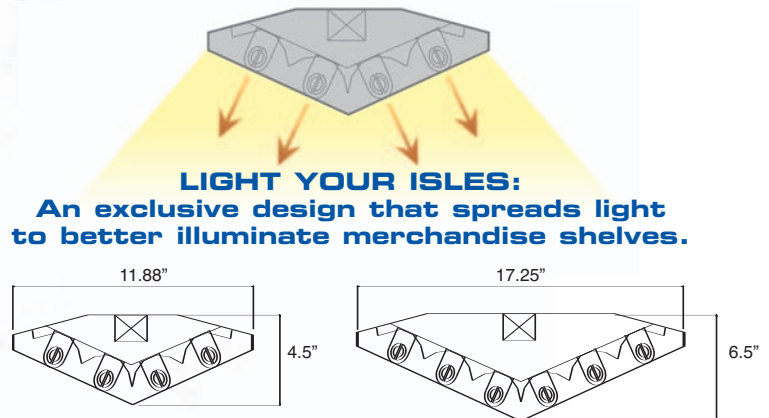
*480V Fixture Available.*

### LUMEN PACKAGE

- 20,000
- 18,600
- 30,000



Highly Specular Aluminum Reflector



## HORIZON High Bay™

### HORIZON HIGH BAY™ FIXTURES

- 54992 HORIZON HIGH BAY™ 4/F32 120/277V NO LENS W/V-HOOKS
- 54987 HORIZON HIGH BAY™ 4/F54 120/277V NO LENS W/V-HOOKS
- 54990 HORIZON HIGH BAY™ 6/F32 120/277V NO LENS W/V-HOOKS
- 54986 HORIZON HIGH BAY™ 6/F54 120/277V NO LENS W/V-HOOKS

*480V Fixture Available.*

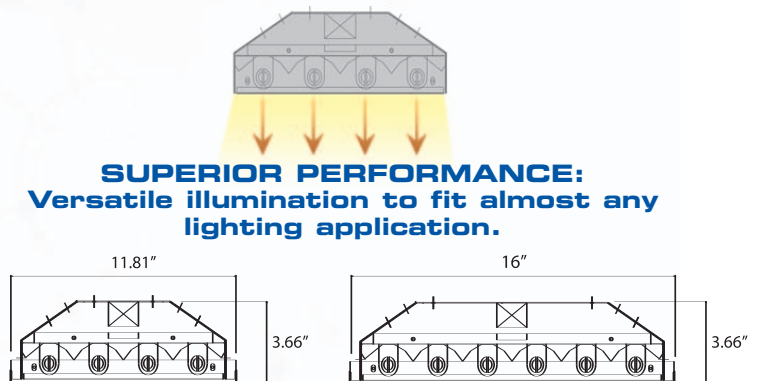
### LUMEN PACKAGE

- 12,400
- 20,000
- 18,600
- 30,000



### HORIZON HIGH BAY™ ACCESSORIES

- 54902 WIRE GUARD 4-LAMP WIRE GUARD
- 54903 WIRE GUARD 6-LAMP WIRE GUARD
- 54911 DOOR FRAME & LENS 4-LAMP T5
- 54912 DOOR FRAME & LENS 6-LAMP T8



**BALLAST SPECIFICATIONS**

Sylvania Quicktronic® ProStart Programmed Start T5HO Ballast

Sylvania Quicktronic® Professional Series Instant Start T8 Ballast

T8 fixtures with Instant Start Ballast

T5HO fixtures with Programmed Start Ballast



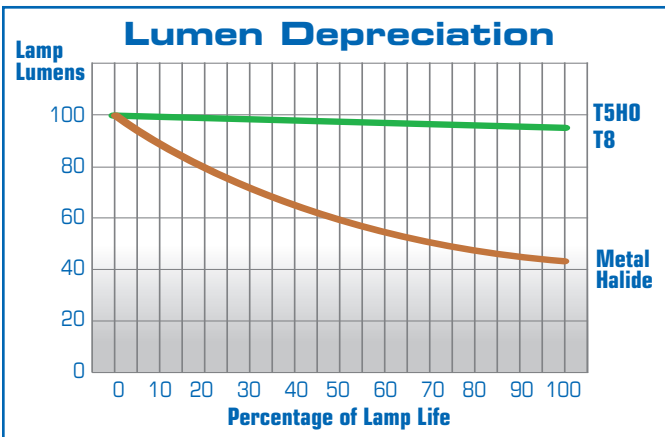
**SOME MATH AND FACTS THAT ARE GOOD TO KNOW...**

MH400 initial lumens 36,000, mean lumens 24,000. Fixture CU 70% = 16,800 LUMENS

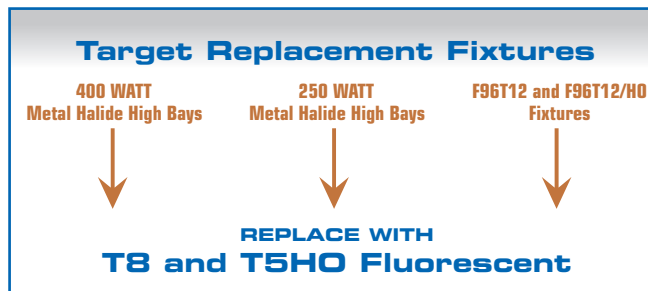
MH250 initial lumens 20,500, mean lumens 13,500. Fixture CU 70% = 9,450 LUMENS

A 6 lamp T8 High Bay Fixture uses only 1/3<sup>rd</sup> the power of a 400W Metal Halide

Mean Lumens = Design lumens at 40% of life. CU = Coefficient of Utilization efficiency of the fixture to deliver lumens.



HID High Bay



**EMERGENCY BACKUP BALLASTS**

- 82200 500 LUMENS 1 LAMP 2' - 4' T8/T10/T12/U-BEND/CIRCLINE
- 82195 700 LUMENS 1 OR 2 LAMP 2' - 8' T8/T10/T12/U-BEND/CIRCLINE
- 82233 1300 LUMENS 1 OR 2 LAMP 2' - 8' T8/T10/T12/U-BEND/CIRCLINE

**SENSORS**

- 16330 OCCUPANCY SENSOR POWER MODULE, LENS REQUIRED
- 16332 OCCUPANCY SENSOR MOUNTING BRACKET EXTENDER
- 16336 OCCUPANCY SENSOR LENS 20-40 FEET
- 16331 INSTALLATION BOX

## Fixture Efficiency Comparison

### HIGH BAY COMPARISON

**Area Square Foot** 100,000 ft (L 100' x W 100' = 100,000 sqft)  
**Luminaire Mounting Height** 20 ft  
**Workplane Height** 2.5 ft



<b>Fixture Type</b>	Metal Halide High Bay	<b>HORIZON High Bay™ Fluorescent Fixture</b>	
<b>Catalog Name / Number</b>	MH400/U	F32T8/ High Lumen	
<b>Lamp Description</b>			VS.
<b>Number of Lamps</b>	1	6	
<b>Lamp Lumens</b>	36000	3100	
<b>Light Loss Factor</b>	0.88	0.95	
<b>Coefficient of Utilization</b>	0.7	0.95	
<b>Fixture Wattage</b>	465	171	
<b>Output</b>			
<b>Illuminance; Foot Candles</b>	30	24	
<b>Number of Fixturess</b>	16	12	
<b>Power Density, Watts per SQFT</b>	0.74	0.27	
<b>Annual Power Cost</b>	<b>\$4,333</b>	<b>\$1,195</b>	
<b>Power Cost Reduction</b>		<b>\$3,138</b>	<b>72%</b>

### LOW BAY COMPARISON

**Application Sample**  
**Area Square Foot** 100,000 ft (L 100' x W 100' = 100,000 sqft)  
**Luminaire Mounting Height** 16 ft  
**Workplane Height** 2.5 ft



<b>Fixture Type</b>	Metal Halide Low Bay	<b>DIAMOND High Bay™ Fluorescent Fixture</b>	
<b>Catalog Name / Number</b>	MH250/U	F32T8/ High Lumen	
<b>Lamp Description</b>			VS.
<b>Number of Lamps</b>	1	4	
<b>Lamp Lumens</b>	20500	3100	
<b>Light Loss Factor</b>	0.88	0.95	
<b>Coefficient of Utilization</b>	0.7	0.95	
<b>Fixture Wattage</b>	297	112	
<b>Output</b>			
<b>Illuminance; Foot Candles</b>	25	23	
<b>Number of fixtures</b>	20	20	
<b>Power Density, Watts per SQFT</b>	0.74	0.22	
<b>Power Cost</b>	<b>\$3,459</b>	<b>\$1,304</b>	
<b>Power Cost Reduction</b>		<b>\$2,155</b>	<b>62%</b>

**Quick Rule of Thumb** to calculate for a larger or smaller area

**Example:** To compare at 140,000 SQFT divide the power cost of 100,000 SQFT by 10 and then multiply by 14

Power cost calculated at \$0.16 per KWH at 3,640 hours of operation per year (14 hour day - 5 days per week)

As Metal Halide lamps age the voltage in the arc tube rises. This raises the wattage draw. Near end of life wattage exceeds 500 watts

# Lighting Upgrade Worksheet

Customer Name \_\_\_\_\_ SAMPLE

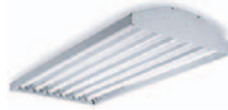
## One for One Fixture Replacement

### Existing



Metal Halide High Bay

### Recommended



**HORIZON High Bay™  
Fluorescent Fixture**

**Fixture Type**

**Lamp Type**

**Fixture Wattage**

**Number of Fixtures**

**Total Watts**

**Annual Operating Hours**

**Cost Per KWH**

**Annual Power Cost**

MH400

465

24

11160

3,640

0.16

**\$6,499**

F32T8/SKY-BRITE®

171

24

4104

3,640

0.16

**\$2,390**

VS.



**Power Cost Reduction**

**\$4,109**

**63%**



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