CASE STUDY

Energy Savings Through Re-lighting

SpecLight has the expertise to provide lighting solutions that utilize leading edge advancements in lighting technologies.

Many end users find advantages in re-lighting their facilities by converting H.I.D. installations to T8 and T5HO fluorescent luminaires. Industrial, retail, school, and warehouse facilities have lowered energy consumption and improved lighting quality with SpecLight's products.

Energy Saving Features

- Energy consumption reductions of 25-50% for the same lighting effectiveness
- Superior optical systems improve fixture efficiency and put light where it is needed
- Instant On-Off control allows for the use of motion sensor or photocell control to further lower power usage
- Improved color rendering increases users ability to differentiate colors
- In many instances light levels can be raised without increasing overall energy consumption

1000 Watt MH High Bay Replacement Produces 35% Energy Savings

This manufacturing facility had conventional 1000 watt metal halide high bay lighting. Mounting heights of 45 to 60 feet combined with sensitive process equipment made normal re-lamping difficult resulting in dark areas from failed or over-aged lamps. New 12-lamp T5HO fluorescent high bay luminaires were installed that reduced energy approximately 35% and increased maintained illumination levels 30-40% throughout the facility.

Energy Savings - High Bay Manufacturing Area

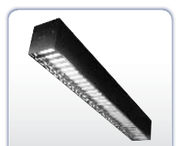
- Existing System - 62 - 1000 watt Metal Halide high bay - 1080 watts
- New System - 62 - 8' 12-F54T5HO FGB High Bay - 702 watts
- Overall Energy Savings - Metal Halide @ 66,960 watts to Fluorescent @ 43,524 watts
- Light Level Improvement - 30% in this area

Visit www.speclightsolutions.com to see additional high efficiency fluorescent products


Induction Recessed


High Efficiency Strip


Induction High Bay


Surface/Suspended


Wet Location


Recessed Indirect

SPECLIGHT™
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Form number 8904.3

SPECLIGHT™
An AcuityBrands Company

Featuring
COOL RUNNING TECHNOLOGY

5-YEAR WARRANTY
5/55°C
55°C AMBIENT
T5HO FLUORESCENT HIGH BAY BALLAST OPEN LUMINAIRES

HIGH BAY INDUSTRIAL

Energy Saving Fluorescent Lighting Systems

FLUORESCENT LUMINAIRES PROVIDE MAXIMUM ENERGY SAVINGS

Energy efficient fluorescent luminaires are fast becoming the choice for lighting spaces traditionally designed with H.I.D. fixtures. Advancements in lamp and ballast technology combined with superior optical qualities have moved fluorescent lighting to the forefront.

The Benefits of Fluorescent Lighting:

- Energy savings of up to 50% over equivalent metal halide systems
- Segmented optics provide superior performance with exceptional uniformity ratios
- Instant on-off allows for immediate restoration of lighting after power failures
- Integral motion sensor control options further increase energy savings
- Improved color rendering and lamp lumen depreciation over metal halide lamps
- Luminaires can include integral battery back-up for emergency lighting needs

Typical applications include retail, warehouse, cold storage, commercial, gymnasium, and manufacturing facilities. High fixture efficiency and optical control deliver the peak candlepower needed to produce desired illumination levels from high mounting heights.

FLUORESCENT OUTPERFORMS H.I.D.

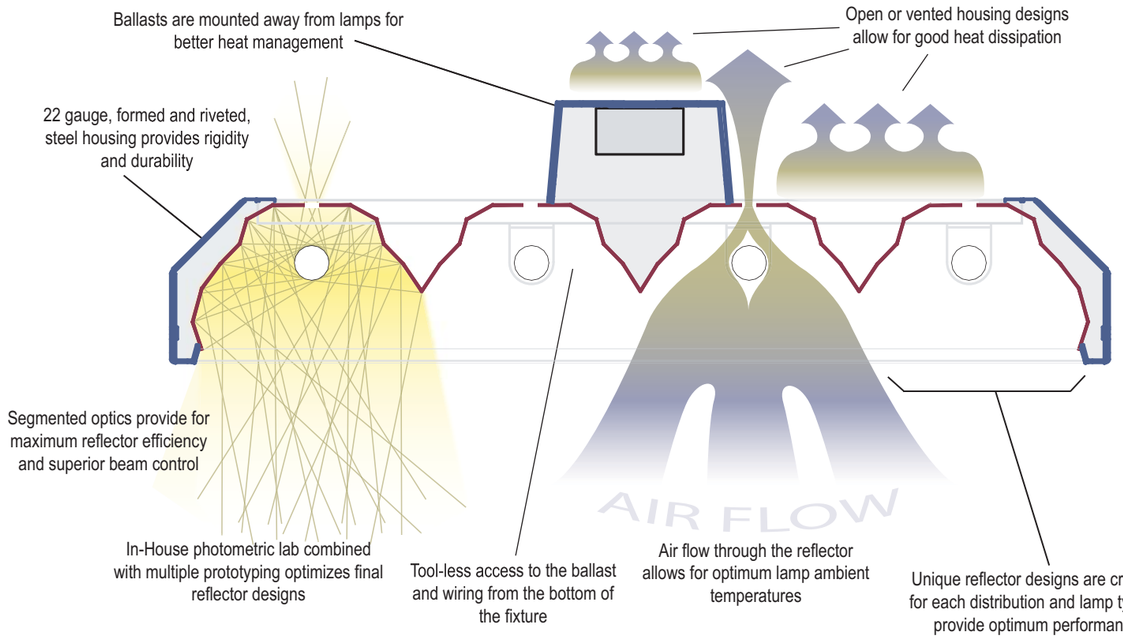
High Efficiency FLUORESCENT versus Traditional H.I.D. Lighting

High Bay Lighting	 FGB164	FGB24	 Spun Aluminum Reflector		 Acrylic Prismatic Reflector	
Fixture Comparison	**4-lamp T5HO, 1.0 BF**	**6-lamp T8, 1.2 BF**	**350 W Pulse Start MH**	**400 W Probe Start MH**	**350 W Pulse Start MH**	**400 W Probe Start MH**
Initial Lumens	20,000	22,320	33,000	36,000	33,000	36,000
Lamp Lumen Depreciation	0.95	0.92	0.74	0.65	0.74	0.65
Maintained Lumens	17,100	18,480	20,879	20,007	20,879	20,007
Input Watts/Luminaire	234	224	400	458	400	458
Maintained Lumens/Watt	73	81	52	44	52	44
Average Fixture Efficiency	92%	91%	82%	83%	92%	89%
Light Level Comparison						
Initial Footcandles	29	32	46	50	45	49
Footcandles at 8,000 hours (40% of MH rated lamp life)	25	27	31	30	30	29
Footcandles at 14,000 hours (70% of MH rated lamp life)	24	27	22	21	22	21

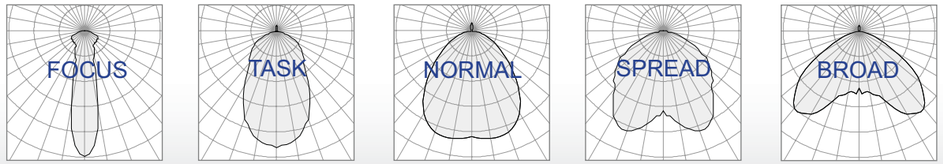
Calculations are based on an open area of 250' x 250', fixtures at 25' spacing and 25' above the floor. Work plane is at 30" above the floor. Published standard lamp data and industry standard light loss factors have been used.
See www.speclightsolutions.com for details about luminaire comparisons

SUPERIOR LUMINAIRE DESIGN

FGB Series High Bay



FIVE PHOTOMETRIC DISTRIBUTIONS are available to provide greater design flexibility



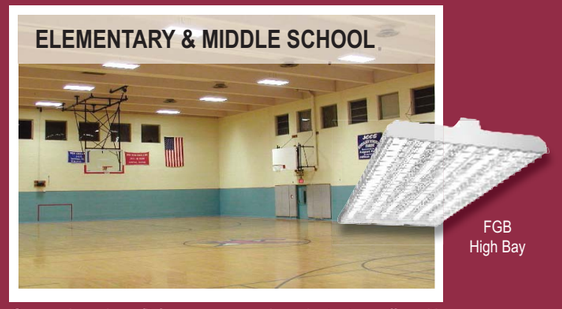
S.C < 0.9 Across | 0.9 ≤ S.C. < 1.2 Across | 1.2 ≤ S.C. ≤ 1.4 Across | 1.4 < S.C. ≤ 1.8 Across | 1.8 < S.C. Across

FGB
High Bay

A wide variety of photometric distributions and lamp combinations provide maximum design flexibility for applications with mounting heights of 18 to 50 feet.

FHI
Industrial

Replacement of metal halide lighting systems with fluorescent luminaires can raise lighting levels by increasing luminaire count without adding new electrical circuits.



FGB
High Bay

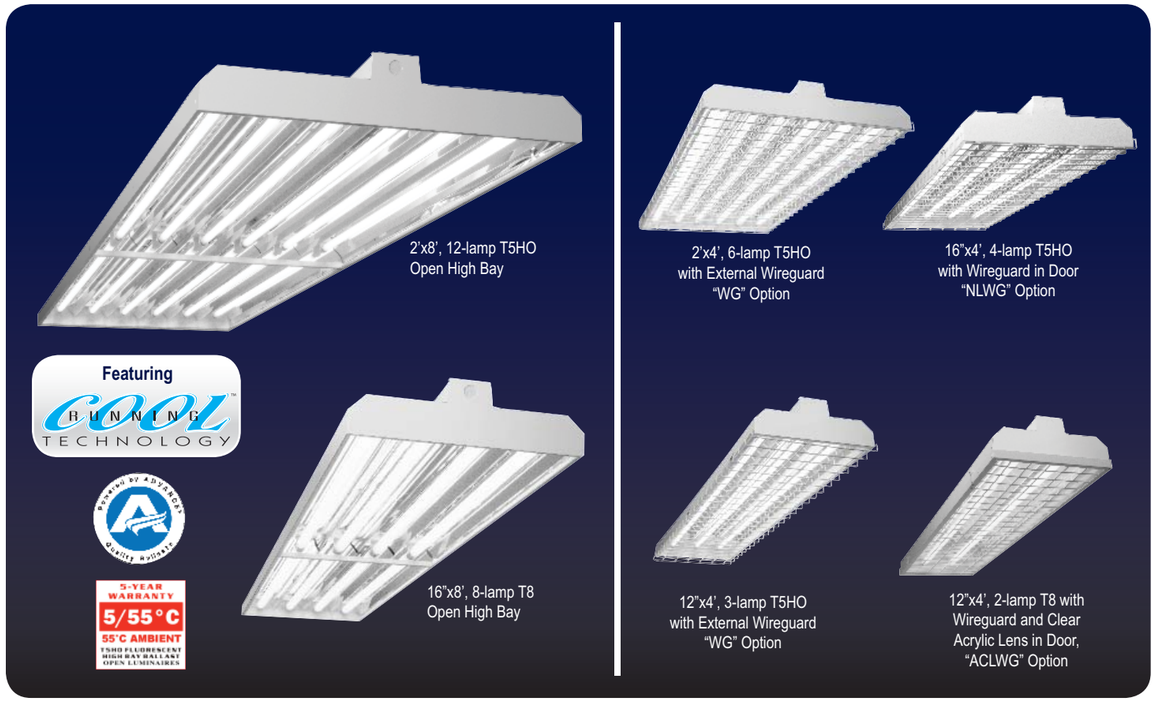
Gymnasiums benefit from energy savings, instant on-off, multi-level switching, improved CRI, better lamp life and superior lamp lumen depreciation.

FFB
Cold Storage
High Bay

Properly designed and tested enclosed T5HO fluorescent luminaires are capable of significant energy reductions when replacing H.I.D. systems in cold storage facilities to -20°F.

FLUORESCENT HIGH BAY

FGB Series



Features

T5HO luminaires are provided with Cool Running™ Technology ballasts and are C/UL listed for operation in 55°C ambient temperatures (For Open and Lensed Luminaires)

- Optical designs are individually created for each lamp type and distribution to provide maximum performance
- Precision formed, 95% reflectance, Alanod MIRO® 4 specular aluminum reflectors
- Tool-less access from the bottom of the luminaire to ballasts and wiring
- Mounting options include monopoint hangers (4' only), chain hangers and adjustable aircraft cable
- Wide variety of lamp shielding available mounted in a separate door frame
- Internal factory installed or external field mounted motion sensor controls are available

All FGB Series High Bays are built with open top standard. To protect reflector top, specify optional "TC" - Top Protective Cover.

Standard "Open Top" shown

Fixture Series/Lamp Configuration	
FGB14 2	12"x4', 2-lamp profile
FGB14 3	12"x4', 3-lamp profile
FGB164 4	16"x4', 4-lamp profile
FGB168 4	16"x8', 4-lamp profile
FGB24 6	24"x4', 6-lamp profile
FGB28 6	24"x8', 6-lamp profile

Lamp Type/Wattage	
32	F32T8
54T5HO	F54T5HO

Photometric Distribution	
F1	**Focus Beam
T1	Task Beam
N1	Normal Beam
S1	Spread Beam
B1	*Broad Beam

Reflector	
X12	MIRO® 4, 0.012"
X20U	Uplight, MIRO® 4, 0.020"
D20	***White Powder Coat, 0.020"
D20U	***Uplight, White Powder Coat

Lamp Shielding	
(blank)	No Shielding
A12	Pattern 12 Acrylic, 0.110"
A12WG	Pattern 12 Acrylic, 0.110" w/ wireguard in door frame
ACL	Clear Acrylic, 0.125"
ACLWG	Clear acrylic, 0.125" w/ wireguard in door
NLWG	Wireguard in door frame
PCL125	Clear Polycarbonate, 0.125"

Voltage	
MVOLT	120 - 277V, 60 Hz
HVOLT	347 - 480V, 60 Hz

Ballast Type	
GEB10PS (T5/T8)	1.0 BF, ≤10% THD, PRS
GEB10IS (T8)	Normal BF, ≤20% THD, IS
GEB10IH (T8)	High BF, ≤20% THD, IS
GEB10IL (T8)	Low BF, ≤20% THD, IS
ACRB (T5HO only)	Advance "Cool Running" Ballast

Ballast Configuration	
(blank)	All 2-lamp ballasts
1/4	(1) 4-lamp ballast
1/41/2	(1) 4-lamp ballast & (1) 2-lamp ballast
2/3	(2) 3-lamp ballasts
2/4	(2) 4-lamp ballasts
3/4	(3) 4-lamp ballasts

Lamps	
(blank)	No lamps
LP830	85 CRI, 3000°K, std. life
LP835	85 CRI, 3500°K, std. life
LP841	85 CRI, 4100°K, std. life
LP850	85 CRI, 5000°K, std. life
Amalgam lamps (T5HO only)	
LP830A	82 CRI, 3000°K, std. life
LP835A	82 CRI, 3500°K, std. life
LP841A	82 CRI, 4100°K, std. life
LP850A	82 CRI, 5000°K, std. life

Options	
TC	Top Protective Cover

For additional options, refer to page 7 of this brochure

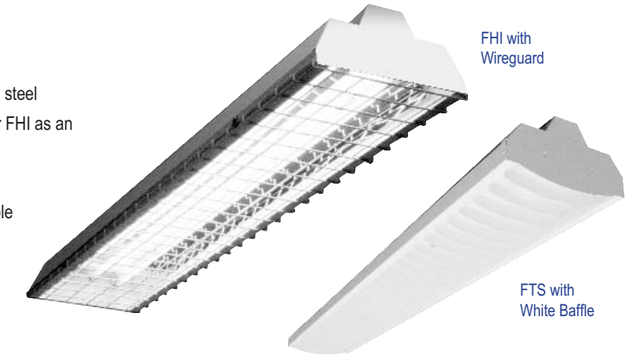
* Not available with A12 Prismatic Lens.
** Available only with T5HO lamps.
*** Available only with a normal beam distribution.

Note: 5/55 warranty is only avaiable with open, non-shielded luminaires

HEAVY DUTY UNIBODY INDUSTRIAL

FHI Series & FTS Series

- Luminaires are available with baffles, lenses or wire guards
- Standard housings are fabricated from 22 gauge pre-painted cold-rolled steel
- Powder coat after fabrication finish is standard for FTS and available for FHI as an option in standard high reflectance white or in custom colors
- Housings and baffles can be made from galvanized steel, or aluminum
- Reloc modular wiring, pre-wired flexible whips and cord sets are available



Fixture Series	
FTS4	7.5"x4'
FTS8	7.5"x8'
FHI4	1'x4'
FHI8	1'x8'

Lamp Configuration	
1	*1-lamp profile
2	2-lamp profile
3	3-lamp profile

Lamp Type/Wattage	
32	F32T8
54T5HO	F54T5HO

Photometric Distribution	
(blank)	No reflector
T1	Task Beam
N1	Normal Beam
S1	Spread Beam
B1	**Broad Beam

Reflector	
(blank)	No reflector
X12	MIRO® 4, 0.012"
X12U	Uplight, MIRO® 4, 0.012"
X20	MIRO® 4, 0.020"
X20U	Uplight, MIRO® 4, 0.020"
D20	***White Powder Coat, 0.020"
D20U	***Uplight, White Powder Coat

Lamp Shielding	
(blank)	No Shielding
A12	Pattern 12 Acrylic, 0.110"
A12U	Uplight, MIRO® 4, 0.012"
ACL	Clear Acrylic, 0.125"
BAF75	White Baffle, 0.75" ht, 1.5" Spacing(FTS only)
BAF1	White Baffle, 1"hx2" Spacing(FHI only)
PCL125	Clear Polycarbonate, 0.125"

Voltage	
MVOLT	120 - 277V, 60 Hz
HVOLT	347 - 480V, 60 Hz

Ballast Configuration	
(blank)	All 2-lamp ballasts
1/3	(1) 3-lamp ballast
1/4	(1) 4-lamp ballast
1/41/2	(1) 4-lamp ballast & (1) 2-lamp ballast
2/3	(2) 3-lamp ballasts

Ballast Type	
GEB10PS(T5/T8)	1.0 BF, ≤10% THD, PRS
GEB10IS (T8)	Normal BF, ≤20% THD, IS
GEB10IH (T8)	High BF, ≤20% THD, IS
GEB10IL (T8)	Low BF, ≤20% THD, IS

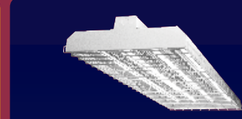
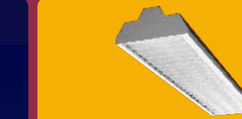
Lamps	
(blank)	No lamps
LP830	85 CRI, 3000°K, standard life
LP835	85 CRI, 3500°K, standard life
LP841	85 CRI, 4100°K, standard life
LP850	85 CRI, 5000°K, standard life

Options	
PAF	Powder coat After Fabrication (must be specified for FTS)

For additional options, refer to page 7 of this brochure

* Available only with FTS series. T5HO only.
** Available only with FTS 2-lamp T5HO.
*** Available only with FHI and with a normal beam distribution.

GYMNASIUM APPLICATION GUIDE

		FGB24 654T5HO 6-lamp T5HO	FGB24 632 6-lamp T8 1.18 BF	FGB164 454T5HO 4-lamp T5HO	FGB164 432 4-lamp T8 1.18 BF	FHI 8 354T5HO 6-lamp T5HO	FHI 8 332 6-lamp T8 1.18 BF
		Square Feet per Luminaire to Achieve Desired Footcandle Level					
High School	125 ftc	138	122			152	102
	100 ftc	204	152			196	112
	75 ftc	229	196			262	153
	50 ftc	314	275	229	196	367	224
Middle	100 ftc	171	137			160	100
	75 ftc	200	160			240	133
	50 ftc	320	267	200	160	400	192
Elementary	75 ftc	208	156			280	125
	50 ftc	250	208	208	156	313	188

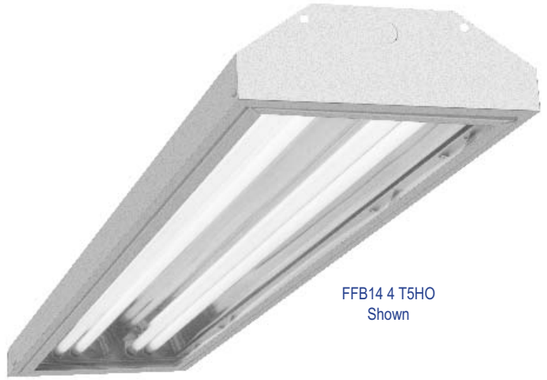
Note: Work plane is at the floor. Footcandle levels are average on the court surface. Published standard lamp data and industry standard light loss factors have been used.

Room Size for calculation is as follows:			Court Size
High School:	100' x 110' x 25' H	Mounting Height = 22'	50 x 84
Middle School:	60' x 80' x 23' H	Mounting Height = 20'	42 x 74
Elementary:	50' x 75' x 21' H	Mounting Height = 19'	42 x 70

COLD STORAGE FULL BODY HIGH BAY

FFB Series

- Full body housing design with double gasketed door
- Standard housings are fabricated from 22-gauge cold-rolled steel, powder coated after fabrication
- Sensors are recommended for applications at 0°F and above. Consult factory for all sensor installations
- Pattern 12 Acrylic, Clear Acrylic, and Polycarbonate Shieldings are available
- Fixtures may be chain hung or aircraft cable mounted



FFB14 4 T5HO
Shown

			X12					AB		PAF

Lamp Type/Wattage

32*	F32T8
54T5HO	F54T5HO

Fixture Series/Lamp Configuration

FFB14 4	1'x4', 4-lamp profile
FFB164 4	16"x4', 4-lamp profile
FFB24 6	2'x4', 6-lamp profile

Reflector

X12	MIRO® 4, 0.012"

Photometric Distribution

T1	Task Beam
N1	**Normal Beam
S1	**Spread Beam
B1	**Broad Beam

Lamp Shielding (Must be Specified)

A12***	Pattern 12 Acrylic, 0.110"
ACL	Clear Acrylic, 0.125"
PCL125	Clear Polycarbonate, 0.125"

Ballast Configuration

(blank)	All 2-lamp ballasts
1/4	(1) 4-lamp ballast
1/41/2	(1) 4-lamp ballast & (1) 2-lamp ballast

Voltage

MVOLT	120 - 277V, 60 Hz
HVOLT	347 - 480V, 60 Hz

Ballast Type

GEB10PS(T5/T8)	1.0 BF, ≤10% THD, PRS
GEB10IS (T8)	Normal BF, ≤20% THD, IS
GEB10IH (T8)	High BF, ≤20% THD, IS
GEB10IL (T8)	Low BF, ≤20% THD, IS

Gasketing

AB	Double Gasketing

Lamps

(blank)	No lamps
LP830	85 CRI, 3000ºK, std. life
LP835	85 CRI, 3500ºK, std. life
LP841	85 CRI, 4100ºK, std. life
LP850	85 CRI, 5000ºK, std. life

Amalgam lamps (T5HO only)

LP830A	82 CRI, 3000ºK, std. life
LP835A	82 CRI, 3500ºK, std. life
LP841A	82 CRI, 4100ºK, std. life
LP850A	82 CRI, 5000ºK, std. life

Options

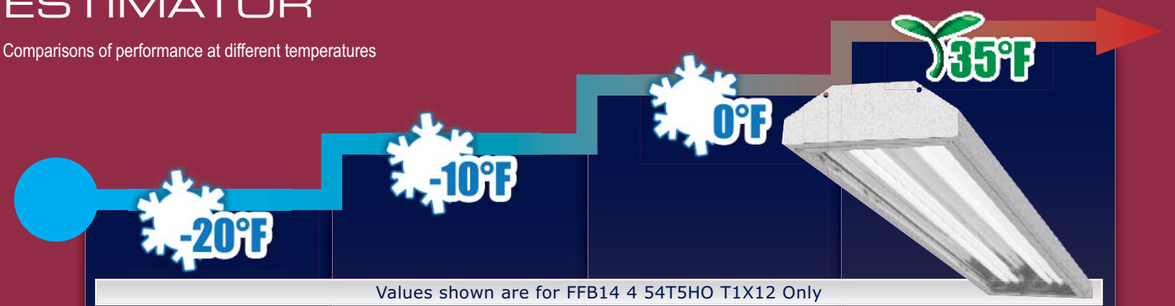
PAF	Powder coat After Fabrication (must be specified)

For additional options, refer to page 7 of this brochure

* Available only with FFB164 and FFB24 series.
** Not available with FFB14 series.
*** Not available with Broad Distribution.

COLD STORAGE AISLE FOOTCANDLE ESTIMATOR

Comparisons of performance at different temperatures



Values shown are for FFB14 4 54T5HO T1X12 Only

Mounting Height	T5HO at -20°F		T5HO at -10°F		T5HO at 0°F		T5HO at 35°F	
	16' Spacing	20' Spacing	16' Spacing	20' Spacing	16' Spacing	20' Spacing	16' Spacing	20' Spacing
20'	19	15	25	20	28	22	**28**	**22**
25'	15	12	20	16	23	18	**23**	**18**
30'	13	10	17	14	19	15	**19**	**15**
35'	11	9	15	12	16	13	**16**	**13**

Note: Calculations are based on an aisle 200' long and 10' wide with fixtures at 16' and 20' spacing. Work plane is at the floor. Published standard lamp data and industry standard light loss factors have been used.

Note: Performance indicated in the chart is for specific luminaire shown based on independent lab tests. Different housing, lamp type, and lamp configurations will vary from values shown. Consult factory for specific recommendations.

OPTIONS & ACCESSORIES

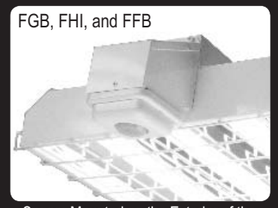
Motion Sensor Control

Installation of motion sensor control maximizes energy savings
Sensors are available in a wide variety of coverages
- 360° for large areas
- Aisle coverage for the center or the end of aisle
- Conveyor pick aisle applications
- Not recommended for applications below 0°F

FGB only

Sensor Mounted Integral to Fixture Body (Factory Installed for open luminaire only)

FGB, FHI, and FFB



Sensor Mounted on the Exterior of the Fixture Body (Factory wired, field installed)

Integral Motion Sensors - FGB only

SNS	360° for heights of 25' or above
SNR	360° for heights less than 25'
SNA	Aisle single wedge (end)
SNB	Aisle double wedge (center)

External Mount Motion Sensors (FGB, FHI, FFB)

SNSE	360° for heights of 25' or above
SNRE	360° for heights less than 25'
SNAE	Aisle single wedge (end)
SNBE	Aisle double wedge (center)

NOTE: Program Rapid Start ballast recommended for use with Motion Sensor control where more than 10 on/off cycles occur in each 24-hour period.

Options (Factory Installed) - All Luminaires

PAF	Powder coat after fabrication
PAFAL	All aluminum construction (Specify PAF)
WG	Wire guard, 11 gauge, PAF (External)
GALV	Pre-galvanized steel housing

Cordsets (6' white w/ plug)

120 CP1S	120V, w/ NEMA 5-15P
277 CP1T	277V, w/ NEMA L-15P
480 CP2T	480V, w/ NEMA L8-20P

Accessories (Field Installed)

MHYTGB10	Aircraft cable, 2-toggle, 18" legs, 10 FT
SCKFV	Safety Chain, 24"

Mounting Accessories (Field Installed)

FGB only

THSD*	Monopoint hanger, w/ 3/4" KO
THSDHB*	Monopoint hanger, w/ 3/4" hub
THSDSK*	Side covers for monopoint hangers
HSD36	Chain hanger, 36" (2 per kit)

FHI & FTS only

HC36	Chain Hanger 136" (2 per kit)

FFB only

HFV	Chain Hanger 36" (2 per kit)

Packaging & Shipping

Our products are packaged carefully to assure arrival at the job site in pristine condition. All luminaire apertures are protected with plastic wrap to keep interior reflector surfaces clean during construction. Luminaires are then individually cartoned and palletized with heavy-duty corner reinforcements for protection during transport.

Additional Options - Consult Factory

- **Emergency Battery Packs** (Specify Voltage)
- **Fusing** (Specify Voltage)
- **Specialty Cordsets** (Specify Voltage)
- **Specialty Powder Coat Finishes (Supply RAL and Finish)**
- **Stainless Steel, Galvanized, or Aluminum Housings**
- **RELOC Flexible Wiring Systems** (Specify Voltage)
- **Flexible Whips** (Specify Voltage)

Mounting Accessories

FGB24 High Bay shown with MHYTGB10 Aircraft Cable Mounting

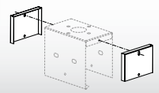
Aircraft Cable
MHYTGB10
(2 hangers per kit)

Available with FGB only

Chain Hanger
HSD36
(2 hangers per kit)

Monopoint Hanger
THSD

Monopoint Hanger with 3/4" hub
THSDHB



Side Cover **THSDSK**
(order separately when using hanger for wiring connections)

NOTE: Monopoint hangers are not available for 8-FT luminaires

NOTE: All product configurations do not support all possible options. Consult factory and detailed product specification pages for each application.
* Not available for 8 FT luminaires.