



F-BAY^{ULTRA}47

Industrial Fluorescent

Ultra 47 F-Bay



Maximize Energy Savings Without Sacrificing Performance With The Ultra 47 Fluorescent High-Bay

Cooper Lighting researches, develops and utilizes the latest lamp and ballast technology on the market.

With the launch of the GE T5HO 47W UltraStart® Watt Miser® System, Cooper Lighting is now offering the Ultra 47 HBI, HBL, HBE, I5 and VT4 series of products with the most energy efficient T5 high-output fluorescent system. The design of these products utilizing the GE T5HO 47W UltraStart® Watt Miser® System allows Cooper Lighting to achieve increased fixture efficiency resulting in a similar amount of light as a 54-watt T5HO system while delivering increased energy savings.

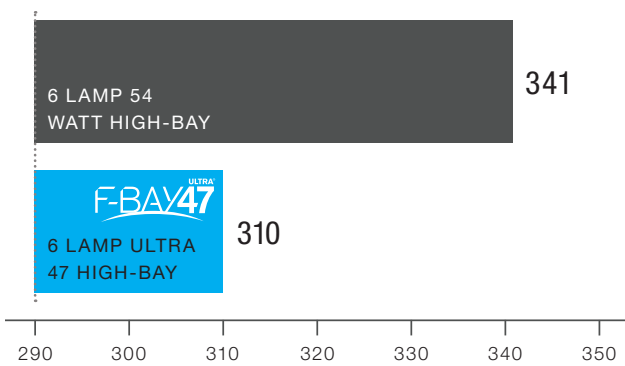


System Benefits

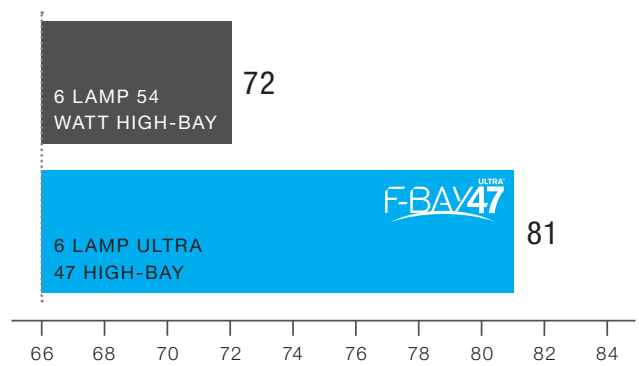
- Increased Energy Savings
- Equivalent Light Output
- Lower Maintenance Costs
- Lower Watts / Sq. ft.
- 5 – Year 55C Warranty on Lamps and Ballasts*



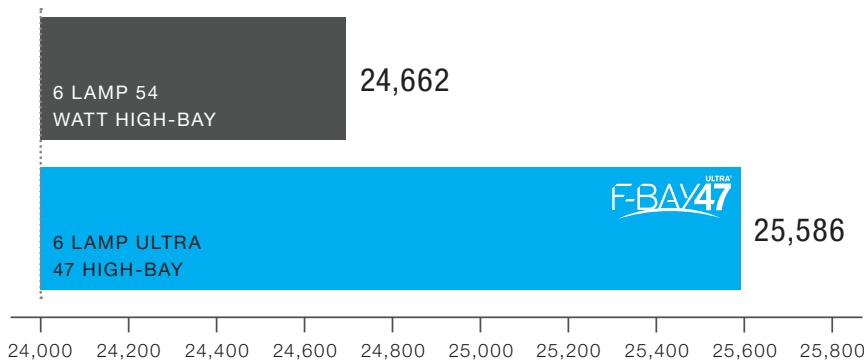
SYSTEM WATTS**



LUMENS PER WATT**



SYSTEM LUMENS**



*GE warranty applies to 4 and 6 lamp open upright configurations in the HBI, HBL and HBE series.

**Data based upon in-fixture testing of catalog number HBI647-UPL utilizing IESNA LM-63-02 photometric testing standard.

Industrial Fluorescent

Energy Solutions



SYSTEM BENEFITS
 Energy Savings
 Increased Light Output
 Lower Watts / Sq. ft.

Based on:
 Room Size: 250' x 182'
 Ceiling Height: 30'
 Workplace: 2.5'
 Rack Height: 15'
 Rack Width: 16'

	6 LAMP 54 WATT T5 HIGH-BAY	6 LAMP ULTRA 47 HIGH-BAY
FIXTURE	HBI654-UPL	HBI647-UPL
QUANTITY	77	77
INPUT WATTS	341	310
TOTAL WATTS	26257	23870
ENERGY SAVINGS		9%
ENERGY SAVED kW		2.387
\$/kW * Hr		\$ 0.12
HOURS ON PER DAY		12
ENERGY SAVINGS / YEAR		\$1,254.61

6 LAMP 54 WATT T5

Aisle Vertical fc	12.8
Aisle Horizontal fc	27.45
Warehouse Open Area fc	28.89
Watts / Sq. ft.	0.57
Total Watts	26257
No. of Fixtures	77

6 LAMP ULTRA 47

Aisle Vertical fc	13.04
Aisle Horizontal fc	27.58
Warehouse Open Area fc	29
Watts / Sq. ft.	0.52
Total Watts	23870
No. of Fixtures	77



SYSTEM BENEFITS
 Energy Savings
 Equivalent Light Output
 Lower Watts / Sq. ft.

Based on:
 Room Size: 250' x 182'
 Ceiling Height: 30'
 Workplace: 2.5'
 Rack Height: 15'
 Rack Width: 16'

	400 WATT HID	6 LAMP ULTRA 47 HIGH-BAY
FIXTURE	MHSS40	HBI647-UPL
QUANTITY	104	77
INPUT WATTS	452	310
TOTAL WATTS	47008	23870
ENERGY SAVINGS		49%
ENERGY SAVED kW		23.138
\$/kW * Hr		\$ 0.12
HOURS ON PER DAY		12
ENERGY SAVINGS / YEAR		\$12,161.33

400 WATT HID

Aisle Vertical fc	15.74
Aisle Horizontal fc	27.77
Warehouse Open Area fc	29.52
Watts / Sq. ft.	1.03
Total Watts	47008
No. of Fixtures	104

6 LAMP ULTRA 47

Aisle Vertical fc	13.04
Aisle Horizontal fc	27.58
Warehouse Open Area fc	29
Watts / Sq. ft.	0.52
Total Watts	23870
No. of Fixtures	77

GE T5HO 47W UltraStart® Watt-Miser®



T5HO 47W
UltraStart® Watt-Miser® System

3 Advantages You Can't Deny

Energy Savings Advantage

	54W System	Ultra 47W System**
Lamp Lumens	5,000	4,800
System Lumens (4 Lamp)	20,000	19,200
System Watts	234W	202W
Cathode Energy Cut Ballast	NO	YES – 94% efficiency
Lumens per Watt	85 LPW	95 LPW

Life Advantage

	54W System	Ultra 47W System**
Lamp Life (3hrs / 12hrs)	30K / 36K	30K / 36K
Warranty (Lamp / Ballast)	3 yr + 5 yr	5 yr + 5 yr
UL Certified 55C Ambient	NO	YES – 5 yr warranty
Thermal fold-back protection	NO	YES – protects against overheating

Maintenance Advantage

	54W System	Ultra 47W System**
Lamp Operation	Ser-par	Parallel – one fails others remain on
Starting Time	> 1.1 Sec	< 700ms – important with sensors
Striation Control	NO	YES – reduces striations
Independent Lamp End of Life	NO	YES – only one lamp shuts down @EOL
UL Type CC Anti-arcing	YES	YES – arcing protection
RoHS Reduction Hazardous Substance	NO	YES – think of future disposal today

Energy Savings

4 Lamp	5 Lamp	6 Lamp
\$116	\$145	\$174

\$29 SAVINGS PER LAMP vs 54W*

*Energy savings per one 54W T5 lamp, 30,000 hour burn, & \$0.12 kWhr energy cost.

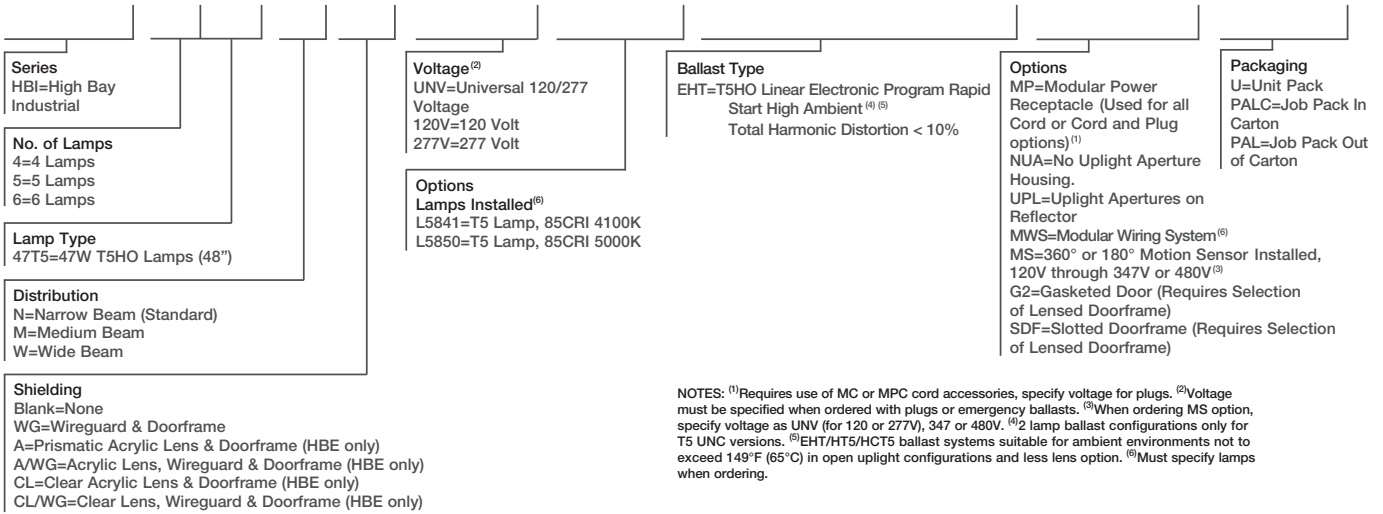
**Data based upon GE lamp and ballast specifications per ANSI test procedures.



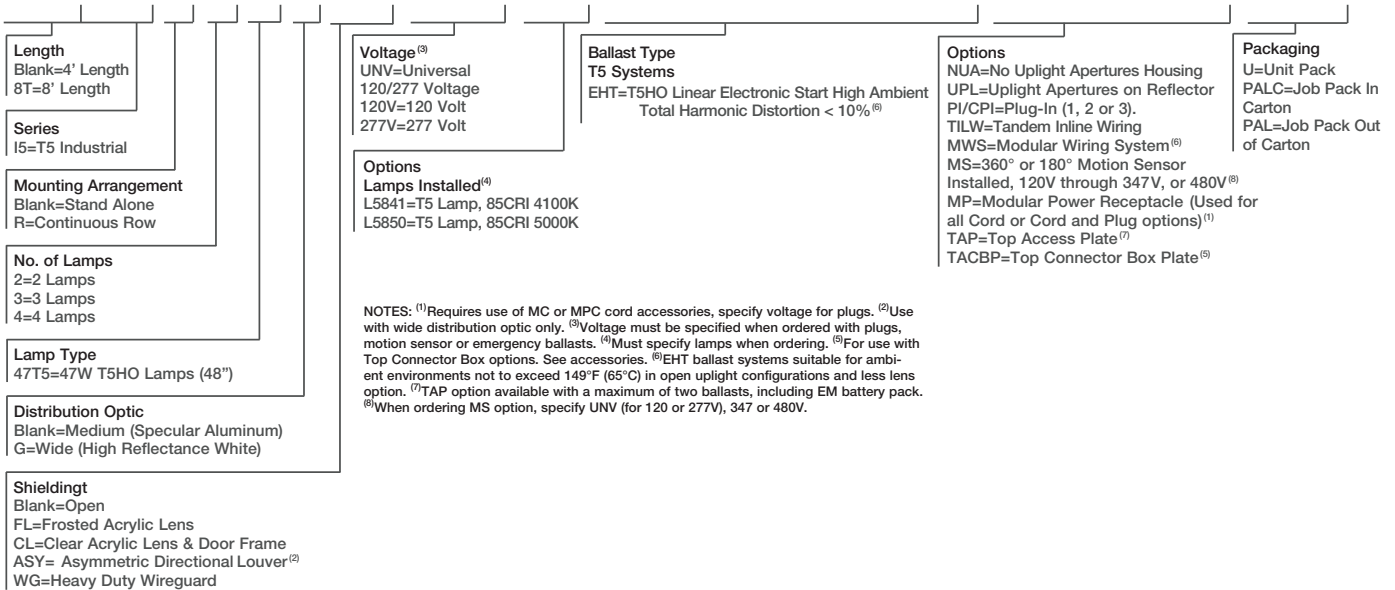
imagination at work

Ordering Information & Photometry

HBI T5



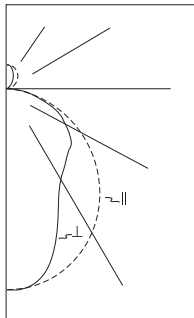
I5



HBE T5 & HBL T5

<p>Series HBE=High Bay Efficiency HBL=High Bay Linear</p>	<p>Voltage⁽¹⁾ UNV=Universal 120/277 Voltage 120V=120 Volt 277V=277 Volt</p>	<p>Ballast Type EHT=T5HO Linear Electronic Program Rapid Start High Ambient⁽⁴⁾ Total Harmonic Distortion < 10%</p>	<p>Options MP=Modular Power Receptacle (Used for all Cord or Cord and Plug options)⁽³⁾ UPL=Uplight Apertures on Reflector MWS=Modular Wiring System⁽⁶⁾ MS=360° or 180° Motion Sensor Installed, 120V through 347V or 480V⁽²⁾</p>
<p>No. of Lamps 4=4 Lamps 6=6 Lamps 8=8 Lamps 10=10 Lamps</p>	<p>Options Lamps Installed⁽⁵⁾ L5841=T5 Lamp, 85CRI 4100K L5850=T5 Lamp, 85CRI 5000K</p>	<p>Packaging U=Unit Pack PALC=Job Pack In Carton PAL=Job Pack Out of Carton</p>	
<p>Lamp Type 47T5=47W T5HO Lamps (48")</p>	<p>NOTES: ⁽¹⁾Voltage must be specified when ordered with plugs or emergency ballasts. ⁽²⁾When ordering MS option, specify as UNV (for 120 or 277V), 347 or 480V. ⁽³⁾Requires use of MC or MPC cord accessories, specify voltage for plugs. ⁽⁴⁾EHT/HT5/HCT5 ballast systems suitable for ambient environments not to exceed 149°F (65°C) in open upright configurations and less lens option. ⁽⁵⁾Must specify lamps when ordering. ⁽⁶⁾Cannot be com- bined with Modular Power Receptacle (MP). For MWS with MP, choose MP in figure logic and then choose MWS.</p>		
<p>Distribution N=Narrow Beam (Standard) M=Medium Beam W=Wide Beam</p>	<p>Shielding Blank=None WG=Wireguard A=Prismatic Acrylic Lens & Doorframe (HBE only) A/WG=Acrylic Lens, Wireguard & Doorframe (HBE only) CL=Clear Acrylic Lens & Doorframe (HBE only) CL/WG=Clear Lens, Wireguard & Doorframe (HBE only)</p>		

PHOTOMETRICS



Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance 20%									
	80%		50%		30%					
	70	50	30	10	50	30	10			
0	117	117	117	117	107	107	107	101	101	101
1	107	102	97	94	93	90	87	88	86	83
2	97	89	82	76	82	77	72	77	73	70
3	89	78	70	64	72	66	61	69	63	59
4	81	70	61	54	64	58	52	61	55	51
5	75	62	54	47	58	51	45	55	49	44
6	69	56	48	41	53	45	40	50	44	39
7	64	51	43	37	48	41	36	46	40	35
8	60	47	39	33	44	37	32	42	36	31
9	56	43	35	30	41	34	29	39	33	29
10	53	40	32	27	38	31	27	36	30	26

HBL-647-N-UPL

Electronic Ballasts

(6) F54T5-47W Lamps 4285 Lumens

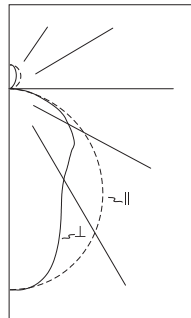
Spacing Criterion: (II) 1.2 x
mounting height (L) 0.8 x
mounting height

Efficiency 99.5%

Test Report P30628-R2

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	7212	28.0	28.2
0-40	11157	43.4	43.6
0-60	18599	72.3	72.7
0-90	23829	92.7	93.1
90-120	137	0.5	0.5
90-130	307	1.2	1.2
90-150	965	3.8	3.8
90-180	1757	6.8	6.9
0-180	25586	99.5	100.0



Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance 20%									
	80%		50%		30%					
	70	50	30	10	50	30	10			
0	99	99	99	99	91	91	91	86	86	86
1	89	84	80	76	77	74	71	73	70	68
2	80	73	66	61	66	61	57	60	59	55
3	73	63	56	50	58	52	47	55	50	46
4	66	56	48	42	51	45	40	48	43	38
5	61	49	41	35	45	39	34	43	37	33
6	56	44	36	31	41	34	29	39	33	29
7	52	40	32	27	37	31	26	35	30	25
8	48	36	29	24	34	27	23	32	27	22
9	45	33	26	21	31	25	21	30	24	20
10	42	31	24	19	29	23	19	27	22	18

HBI-647-N-UPL

Electronic Ballasts

(6) F54T5-47W Lamps 4285 Lumens

Spacing Criterion: (II) 1.2 x
mounting height (L) 0.8 x
mounting height

Efficiency 97.2%

Test Report P30629-R2

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	7543	29.3	30.2
0-40	11643	45.3	46.6
0-60	19248	74.9	77.0
0-90	23832	92.7	95.4
90-120	140	0.5	0.6
90-130	259	1.0	1.0
90-150	607	2.4	2.4
90-180	1155	4.5	4.6
0-180	24988	97.2	100.0

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The Cooper Lighting Family

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Canadian Facility

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