

# COOPER LIGHTING - METALUX®

## DESCRIPTION

The F-Bay I5 series is an outstanding solution for high mounting height industrial or retail applications. The F-Bay I5 optic has been optimized to provide maximum performance from T5 lamps. Optional uplight component is provided to enable excellent ceiling uniformity. The I5's high lumen package allows the benefits of fluorescent to be applied at high mounting heights that were traditionally exclusive to H.I.D. The primary benefits include exceptional color rendering, high system efficacy, 95% lumen maintenance, long lamp life, instant on/instant re-strike, economical dimming, and uniform brightness control. Primary applications include "big box" retail, shopping malls, light industrial, school gymnasiums, etc.

<b>Catalog #</b>		<b>Type</b>
<b>Project</b>		
<b>Comments</b>		<b>Date</b>
<b>Prepared by</b>		

## SPECIFICATION FEATURES

### Construction

Specification grade full body housing, end plates and socket tracks are die formed cold rolled steel in 4' or 8' lengths. The housing features an integral ballast channel that adds strength and provides numerous KO's for easy installation.

### Electrical

Class "P" ballasts are positively secured by mounting bolts. Rotor-lock Bi-Pin lampholders and optional top ballast access plate enables service from above without disturbing the internal optics. Optional modular power receptacle meets UL2459 and NEC 410.73 and is UL/cUL rated for make and break under load from outside the luminaire to speed maintenance. UL/cUL listed. Suitable for damp locations.

### Finish

Electrostatically applied baked white enamel finish is preceded by a multistage cleaning cycle, iron phosphate coating with rust inhibitor.

### Downlight/Uplight Optics

Optical modules are fully enclosed inside housing to protect against damage. Die formed reflectors are faceted for efficiency and control with two optical distributions – medium and wide. Medium beam optical modules utilize 95% specular aluminum finish. Open downlight design optimizes performance with uplight slots available as an option for nominal 8% uplight component. An optional attractive thin blade white baffle adds longitudinal shielding. A clear or frosted white acrylic lens is also available. Optional heavy duty wireguard can be used with or without the lens or baffle. Latched retention of shielding options (safety leader restraints) allows for easy access.

### Mounting

The I5 series is suited for surface, suspension mounting with optional wire hook and chain set, stem or cable mounting. Top connector box mounting is also available. Narrow 11" housing allows mounting within 12" horizontally from the nearest edge of the sprinkler deflector.

### Options

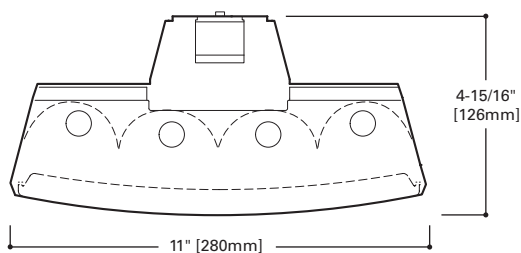
Integral Occupancy Sensor available and provides from 600 sq. ft. (MS) up to 1250 sq. ft. (MSO) of coverage at a maximum mounting height of 40'.



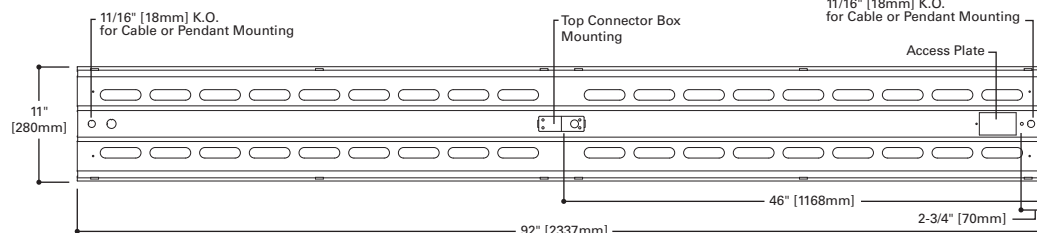
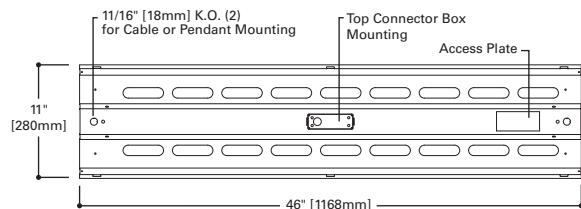
## F-BAY I5 Series

4' OR 8'  
4 LAMPS

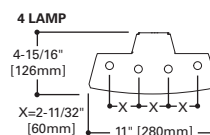
T5 Linear Fluorescent  
High Bay  
Lighting System



## MOUNTING DATA



## LAMP CONFIGURATIONS



## ENERGY DATA

Input Watts:  
EB Ballast & T5HO Lamps  
454T5 = (229)  
8T454T5 = (458)

Luminaire Efficacy Rating  
LER =75  
Catalog Number: I5-454T5-UPL

Yearly Cost of 1000 lumens,  
3000 hrs at .08 KWH = \$3.20

\* Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements

\*\* Consult Pre Sales Technical Support.

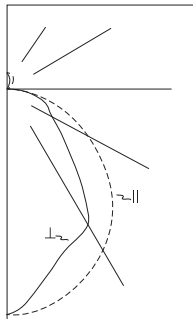
LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

**LINEAR DISCONNECT**

Safe and convenient means of disconnecting power.

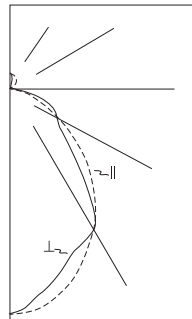


PHOTOMETRICS



**I5-454T5-UPL**  
 (1) Electronic Ballast  
 (4) 54WT5 Lamps  
 4400 lumens  
 Spacing criterion:  
 (H) 1.2 x mounting  
 height, (L) 1.0 x  
 mounting height  
 Efficiency 89.1%  
 Test Report:  
 P31573C  
 LER =75  
 Yearly Cost of 1000  
 lumens, 3000 hrs at  
 .08 KWH = \$3.20

Candela			
Angle	Along H	45°	Across L
0	7155	7155	7155
5	7128	6916	6838
10	7045	6518	6292
15	6873	6069	5816
20	6632	5617	5407
25	6333	5173	5256
30	5971	4872	5036
35	5549	4636	4238
40	5081	4293	3396
45	4555	3472	2707
50	4013	2729	2160
55	3418	2090	1772
60	2819	1578	1558
65	2204	1227	1410
70	1600	1012	1271
75	1028	857	820
80	512	447	328
85	113	25	6
90	8	24	15



**I5-454T5-TBW-UPL**  
 (1) Electronic Ballast  
 (4) 54WT5 Lamps  
 4400 lumens  
 Spacing criterion:  
 (H) 1.1 x mounting  
 height, (L) 1.1 x  
 mounting height  
 Efficiency 83%  
 Test Report:  
 P31574C  
 LER =70  
 Yearly Cost of 1000  
 lumens, 3000 hrs at  
 .08 KWH = \$3.43

Candela			
Angle	Along H	45°	Across L
0	7127	7127	7127
5	7091	6915	6851
10	6887	6519	6451
15	6569	6118	6035
20	6172	5625	5618
25	5735	5095	5410
30	5232	4690	5213
35	4673	4378	4554
40	4093	3966	3564
45	3485	3293	2759
50	2873	2549	2177
55	2251	2000	1850
60	1664	1539	1696
65	1103	1190	1522
70	745	921	1258
75	506	686	810
80	303	420	297
85	131	217	48
90	9	130	42

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30
0	105	105	105	105	103	103	103	103	97	97	97	92	92	92	88	88	88	86
1	97	93	90	87	94	91	88	85	87	84	82	83	80	79	79	77	76	74
2	89	82	76	72	86	80	75	71	76	72	68	73	70	66	70	67	65	63
3	81	73	66	60	79	71	65	60	68	63	58	65	61	57	63	59	56	54
4	75	65	58	52	73	64	57	51	61	55	50	59	53	49	56	52	48	46
5	69	58	51	45	67	57	50	45	55	49	44	53	48	43	51	46	43	41
6	64	53	45	40	62	52	45	40	50	44	39	48	43	38	47	42	38	36
7	60	48	41	36	58	47	40	35	46	39	35	44	39	34	43	38	34	32
8	56	44	37	32	54	43	37	32	42	36	31	41	35	31	39	34	31	29
9	52	41	34	29	51	40	33	29	39	33	28	38	32	28	37	32	28	26
10	49	38	31	26	48	37	31	26	36	30	26	35	30	26	34	29	25	24

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30	70	50	30
0	98	98	98	98	95	95	95	95	90	90	90	86	86	86	81	81	81	79
1	90	87	83	81	88	84	82	79	80	78	76	76	75	73	73	71	70	68
2	83	77	71	67	80	75	70	66	71	67	64	68	65	62	65	62	60	58
3	76	68	62	57	74	67	61	56	64	59	55	61	57	53	58	55	52	50
4	70	61	54	49	68	60	53	49	57	52	48	55	50	47	53	49	46	44
5	65	55	48	43	63	54	47	43	52	46	42	50	45	41	48	44	40	39
6	60	50	43	38	59	49	43	38	47	41	37	46	40	37	44	40	36	34
7	56	46	39	34	55	45	38	34	43	38	33	42	37	33	40	36	32	31
8	52	42	35	31	51	41	35	30	40	34	30	39	33	30	37	33	29	28
9	49	39	32	28	48	38	32	28	37	31	27	36	31	27	35	30	27	25
10	46	36	30	25	45	35	29	25	34	29	25	33	28	25	32	28	25	23

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	4914	27.9	31.3
0-40	7830	44.5	49.9
0-60	12625	71.7	80.5
0-90	15131	86.0	96.5
0-180	15681	89.1	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	19726	11723	19808
55	18248	9460	18573
65	15969	10216	16361
75	12162	9702	12659
85	3970	211	5094

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	4825	27.4	33.0
0-40	7569	43.0	51.8
0-60	11781	66.9	80.7
0-90	13975	79.4	95.7
0-180	14605	83.0	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	15092	11948	14767
55	12017	9877	11814
65	7992	11028	7630
75	5987	9583	5809
85	4603	1686	4884

Modular F-Bay Power Supply Option

Cooper Lighting's F-Bay Modular Power Supply option is available for use with all F-Bay products. The modular power supply allows external fixture access for safe and easy servicing. There is no need to remove lamps or reflectors to disconnect fixture power with F-Bay Modular Power Supply. Access to the individual fixture's power supply allows servicing without turning off all the fixtures, disrupting occupants. F-Bay Modular Power Supply is a time saver in installation – **simply plug & power.**



1. Modular Power Supply Receptacle supplied mounted into fixture Access Plate
2. Modular Power Cord & Plugs in 120, 277, 347, & 480V configurations for easy plug & power into existing supply

No internal fixture access required for installation or disconnecting power

Modular Motion Sensor Option supplied with Mounting Box and Modular Power Supply Receptacle

Code Compliance

- UL/cUL Certified for Make/Break under load (UL2549)
- Meets NEC requirements for ballast disconnect (NEC 410.73G)
- Allows for addition of Occupancy Sensor without hard connections
- Receptacles complete with insulating/dust cap

**ORDERING INFORMATION**

SAMPLE NUMBER: 8T15-454T5-TBW-UNV-EBT2-UPL-U

<p><b>Length</b> Blank=4' Length 8T=8' Length</p> <p><b>Series</b> I5=T5 Industrial</p> <p><b>Mounting Arrangement</b> Blank=Stand Alone R=Continuous Row Mount</p> <p><b>No. of Lamps</b> 4=4 Lamps</p> <p><b>Lamp Type</b> 28T5=28W T5 Std (4') Lamps 49T5=49W T5HO (4') Lamps 51T5=51W T5HO (4') Lamps 54T5=54W T5HO (4') Lamps</p> <p><b>Distribution Optic</b> Blank=Medium (Specular Aluminum) G=Wide (High Reflectance White)</p> <p><b>Shielding Options</b> Blank=Open TBW=Thin White Baffle FL=Frosted Acrylic Lens &amp; Frame<sup>(2)</sup> CL=Clear Acrylic Lens &amp; Door Frame ASY= Asymmetric Directional Louver<sup>(2)</sup> WG=Heavy Duty Wireguard</p>	<p><b>Voltage<sup>(3)</sup></b> UNV=Universal 120/277 Voltage UNC=Universal 347/480 Voltage<sup>(6)</sup> 120V=120 Volt 277V=277 Volt 347V=347 Volt 480V=480 Volt</p> <p><b>Options</b> I5 Lamps Installed L5830=T5 Lamp, 85CRI 3000K L5835=T5 Lamp, 85CRI 3500K L5841=T5 Lamp, 85CRI 4100K L5850=T5 Lamp, 85CRI 5000K GL=Single Element Fuse GM=Double Element Fuse EL=Emergency Installed<sup>(3)</sup></p>	<p><b>Ballast Type</b> <b>T5 Systems</b> EBT =T5 or T5HO Linear Electronic Program Rapid Start. Total Harmonic Distortion &lt; 10%<sup>(4)</sup> No. of Ballast 1, 2 or 3 EHT =T5HO Linear Electronic Start High Ambient. Total Harmonic Distortion &lt; 10%<sup>(6)(7)</sup> No. of Ballast 1, 2 or 3</p> <p>DIM=Dimming (ballast must be specified)</p>	<p><b>Options</b> NUA=No Uplight Apertures In Housing (Cannot be combined w/UPL) UPL=Uplight Apertures PI/CPI=Plug-In (1, 2 or 3) TILW=Tandem Inline Wiring MWS=Modular Wiring System<sup>(10)</sup> MS=360° or 180° Motion Sensor, 120 through 347, or 480V<sup>(9)</sup> MP=Modular Power Receptacle (Used for all Cord or Cord and Plug options)<sup>(1), (11)</sup></p> <p><b>Accessories</b> (order separately) I5/I8-SPM=Single Monopoint Hanger w/Hub RH-1=Retrofit Hanger FH-1=Fixture Hook FL-1=Fixture Loop SHK=Hook w/ Safety Screw AYC-CHAIN/SET/U=(2) Hooks, 36" Chain Sets w/S-Hooks<sup>(8)</sup> TOGGLE=Single Toggle, #2 Cable (Specify 10' or 30') LOOP=Loop Hanger, #2 Cable (Specify 10' or 30') MC6=6' Modular Power Cord MPC6=6' Modular Power Cord &amp; Plug (Specify Voltage) MMS=360° or 180° Aisle Motion Sensor with Modular Power Receptacle (120-277V)<sup>(1)</sup> MDS6=6' Modular Power Cord with MWS 27DS18/2G06MP Connector<sup>(11)</sup></p> <p><b>Door Frames</b> (for Field Installation) I5-FRM/LENS=Frosted Acrylic Lens &amp; Frame (I5) I5-FRM/CL PK=Clear Acrylic Lens &amp; Frame (I5) WG/I5-4FT-B=Heavy Duty Wireguard (I5) 90800PPK=Thin White Blade Baffle (I5) 90801PPK=Asymmetrical Directional Louver (I5)</p>	<p><b>Packaging</b> U=Unit Pack PAL=Palletized Out of Carton PALC=Palletized In Carton</p>
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**NOTES:** <sup>(1)</sup>Requires use of MC\_ or MPC\_cord accessories, specify voltage for plugs. <sup>(2)</sup>Use with wide distribution optic only. <sup>(3)</sup>Voltage must be specified when ordered with plugs, motion sensor or emergency ballasts. <sup>(4)</sup>EBT ballast systems suitable for operation in ambient environments up to 104°F (40°C). <sup>(5)</sup>ER8 and EB8 ballast systems suitable for operation in ambient environments up to 122°F (50°C) in open upright configurations. <sup>(6)</sup>2 lamp ballast configurations only in T5 UNC versions. 2/3 lamp ballast configurations in EB/PLUS only for T8 UNC. <sup>(7)</sup>EHT ballast systems suitable for ambient environments not to exceed 149°F (65°C) in open upright configurations and less lens option. <sup>(8)</sup>Not for use in gymnasiums or similar recreational facilities. <sup>(9)</sup>When ordering MS option, specify UNV (for 120 or 277V), 347 or 480V. <sup>(10)</sup>Cannot be combined with Modular Power Receptacle (MP). <sup>(11)</sup>For MWS with MP, choose MP in fixture logic and then choose MWS accessory such as MDS6.

**STOCK CATALOG ITEMS**

I5455=4 lamp, 54W T5HO, Program Rapid Start Ballast, Top Connector Plate, Uplight, 850 Lamps Installed<sup>(6)</sup>

**SHIPPING INFORMATION**

Catalog No.	Wt.
I5-454T5-TBW-UPL	15 lbs.
8T15-454T5-TBW-UPL	30 lbs.

**PI OPTION ORDERING INFORMATION**

Catalog Number Suffix	Number of Circuits	Circuit Wired To Ballast
PI 1 BLK	1	Black
PI 2 BLU	2	Blue
PI 2 BLK	2	Black
PI 3 RED	3	Red
PI 3 BLU	3	Blue
PI 3 BLK	3	Black

**Catalog Numbering System**

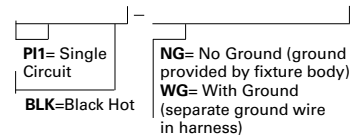
The PI System is available in sections up to 8' in length for continuous row wiring by simply plugging the sections together. Each PI section is factory wired to the ballast leads. Color coding of wires is as follows:

- PI-1 = One Circuit - 2 Wires: one black, one white
- PI-2 = Two Circuits - 3 Wires: one black, one blue, one white
- PI-3 = Three Circuits - 4 wires: one black, one blue, one red, one white

When ordering the PI2/PI3 System it is necessary to specify the number of fixtures required for each circuit. Each circuit in fixture must be ordered as a separate line item, with a different hot wire color specified. All wiring to external feeds, using cord or cord & plug, are responsibility of installing licensed contractor. Cord and cord & plug sets must be ordered separately if PI option is chosen.

**PI1 - Single Circuit Plug-In**

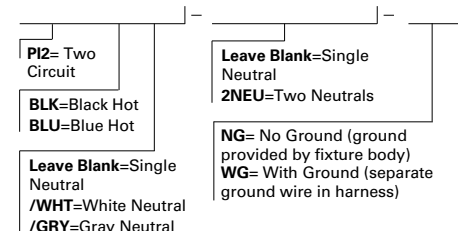
SAMPLE NUMBER: PI1BLK-WG



For complete product data, reference the Fluorescent Specification binder. Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Representative for availability and ordering information.

**PI2 - Two Circuit Plug-In**

SAMPLE NUMBER: PI2BLK-WG



**PI3 - Three Circuit Plug-In**

SAMPLE NUMBER: PI3BLK-WG

