

Laser Blade InOut is a collection of recessed downlights for architectural applications. It is the continuity of the Laser Blade family designed for wet or damp applications. The luminaires are equipped with high performance Opti Beam optics system for low luminance downlights (UGR < 10). Laser Blade InOut is available in 4 aperture sizes, trim or flush mount, 3 distributions, generous outputs of up to 2400 lumens and excellent chromatic performance.

Luminaire characteristic:

MODEL	TOTAL INPUT	OPTIC	LUMEN (lm)*	EFFICACY (lm/W)*	MAX CANDELA (cd)*
ILBIO02-930	5.4W	FL	332	61	1 077
		WF	319	59	605
ILBIO05-930	12.5W	SP	786	63	7 006
		FL	839	67	2 724
		WF	808	65	1 532
ILBIO10-930	24W	SP	1 534	64	13 678
		FL	1 639	68	5 319
		WF	1 578	66	2 991
ILBIO15-930	35W	SP	2 320	66	20 683
		FL	2 478	71	8 044
		WF	2 386	68	4 523

*For 3000K, 90CRI

Source: White LED module
2700K: 90CRI,
3000K: 90CRI,
3500K: 90CRI,
4000K: 90CRI.

Lumen maintenance: 90% of initial lumens at 100 000 hours (L90 B10)
T77° (25°)
90% of initial lumens at 100 000 hours (L90 B10)
T104° (40°) (LM-80)

Optics: Low luminance: Spot, flood or wide flood optics with Opti Beam technology.

Material: Body and heat sink: Die-cast aluminum
Frame: Aluminum alloy
Glass: 3mm thick tempered soda-lime glass, transparent with black screen-printing on the edge.
Reflector and baffle: Thermoplastic
Housing: Galvanized steel

Mounting: Remodel suitable for insulated ceiling.
New construction plaster frame suitable for insulated ceiling. New construction housing or Chicago Plenum rated housing, both suitable for insulated ceiling.

Electrical: High efficiency remote LED driver, rated at 50 000 hours.
See remote LED driver options on page 3.

Dimming: Leading (Triac) and trailing edge(ELV), down to 15%(120V) and 0-10V down to 1% (120-277V).
See dimming options on page 3.

Finish: Trim: Black, gray (RAL9007), rust brown and white (RAL9016)
Baffle: black, glossy sand, glossy copper, glossy urban bronze and glossy lead.

Weight: ILBIO02: 0.33lb (0.15kg)
ILBIO05: 1.76lb (0.80kg)
ILBIO10: 2.43lb (1.1kg)
ILBIO15: 4.10lb (1.86kg)

Warranty: 5 year limited warranty.

Ratings: IK06, IP65

Certification:  cULus listed for wet location.

ORDERING INFO



PRODUCT CODE			INSTALLATION CODE			
MODEL	MOUNTING	INSTALLATION TYPE	LED	OPTIC	VOLTAGE	FINISH (TRIM / BAFFLE)
ILBIO02 Two cells	TR Trim	RF¹ Remodel	927 2700K, 90CRI	SP³ Spot 12°	REM Remote	01 White / black
ILBIO05 Five cells	FM Flush mounted	NC¹ New construction plaster frame	930 3000K, 90CRI	FL Flood 30°		T4 White / Glossy lead
ILBIO10 Ten cells		IC² New construction insulated ceiling	935 3500K, 90CRI	WF Wide flood 48°		T3 White / Glossy sand
ILBIO15 Fifteen cells		CP New construction Chicago Plenum	940 4000K, 90CRI			T2 White / Glossy copper
						T1 White / Glossy urban bronze
						02 Black / Black
						T0 Black / Glossy lead
						S9 Black / Glossy sand
						S8 Black / Glossy copper
						S7 Black / Glossy urban bronze
						15 Gray / Black
						T8 Gray / Glossy lead
						T7 Gray / Glossy sand
						T6 Gray / Glossy copper
						T5 Gray / Glossy urban bronze
						I5 Rust brown / Black
						U2 Rust brown / Glossy lead
						U1 Rust brown / Glossy sand
						U0 Rust brown / Glossy copper
						T9 Rust brown / Glossy urban bronze

1 Not available for the ten cells (**ILBIO10**) and fifteen cells (**ILBIO15**) models.
 2 Not available for the two cells (**ILBIO02**) and five cells (**ILBIO05**) models.
 3 Not available for two cells (**ILBIO02**) model.

REMOTE LED DRIVER OPTIONS (TO BE ORDERED SEPARATELY)

PRODUCT CODE (COMPLETE ON THE PREVIOUS PAGE)

Indoor rated drivers

Driver box model	Min-max units			
	ILBIO02 4W*	ILBIO05 10W*	ILBIO10 20W*	ILBIO15 29W*
4444-0700-011-UNV-ND	2			
4444-0700-022-120-LTE	2-4	1-2	1	
4445-0700-040-120-LTE	7-8	3		1
4443-0700-014-UNV-D2	3	1		
4443-0700-025-UNV-D2	4-5	2	1	
4443-0700-035-UNV-D2	6-7	3		1
4444-0700-007-UNV-D10	1			
4450-0700-030-UNV-ED10	1-6	1-2	1	
4450-0700-038-UNV-ED10	1-8	1-3	1	1
4450-0700-030-UNV-SD10	1-6	1-2	1	
4448-0700-100-UNV-SD10 (4 led output)	1-20 5 max per led output	1-8 2 max per led output	1-4 1 max per led output	1-3 1 max per led output

Outdoor rated drivers

Driver box model	Min-max units			
	ILBIO02 4W*	ILBIO05 10W*	ILBIO10 20W*	ILBIO15 29W*
4548-0700-011-UNV-ND	2			
4548-0700-022-120-LTE	2-4	1-2	1	
4548-0700-040-120-LTE	7-8	3		1
4548-0700-014-UNV-D2	3	1		
4548-0700-025-UNV-D2	4-5	2	1	
4548-0700-035-UNV-D2	6-7	3		1
4548-0700-007-UNV-D10	1			
4549-0700-030-UNV-ED10	1-6	1-2	1	
4549-0700-038-UNV-ED10	1-8	1-3	1	1
4549-0700-030-UNV-SD10	1-6	1-2	1	
4549-0700-100-UNV-SD10 (4 led output)	1-20 5 max per led output	1-8 2 max per led output	1-4 1 max per led output	1-3 1 max per led output

* Wattage requirement for one (1) fixture (remote fixture only).

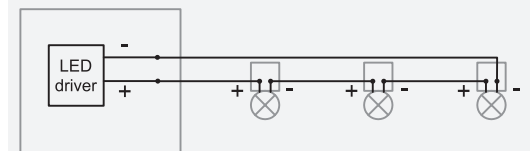
DRIVER BOX MODEL DESCRIPTION

MODEL	CONSTANT CURRENT	WATTAGE	VOLTAGE	DIMMING PROTOCOL
4443 5" x 4" x 3" (127 x 102 x 76mm)	0700 700mA	007 to 100 7W to 100W	120 120V	ND No dimming Max distance: 9m (30ft) ¹
4444 6" x 4" x 3" (152 x 102 x 76mm)			UNV 120-277V	D10 0-10V Max distance: 9m (30ft) ¹ (down to 10%)
4445 6" x 6" x 3" (152 x 152 x 76mm)				D2 Lutron Hi Lume® 1% EcoSystem™ (Soft-on, Fade to Black) Max distance: 9m (30ft) ¹ (down to 1%)
4448 10" x 8" x 4" (254 x 203 x 102mm)				ED10 0-10V ELDOLED ECOdrive Max distance: 36m (118ft) ¹ (down to 1%)
4450 8" x 8" x 4" (203 x 203 x 102mm)				SD10 ² 0-10V ELDOLED SOLOdrive Max distance: 36m (118ft) ¹ (down to 0.1%)
4548 6" x 4.5" x 3" (152 x 114 x 76mm)				LTE Leading edge and trailing edge (ELV and TRIAC) Max distance: 9m (30ft) ¹ (down to 15%)
4549 14.5" x 5" x 3.5" (368 x 127 x 89mm)				

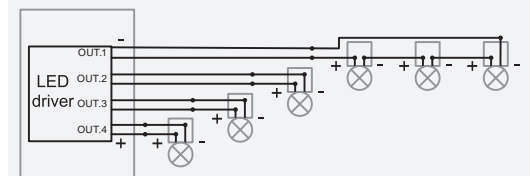
¹ Max distance cable calculated for 16AWG cable. Contact customer service for longer remote distance

WIRING DIAGRAMS

Multiple luminaires must be connected in series (home run or fixture chain)



² Luminaires must be connected on separate led output (1-4). Multiple luminaires can be connected in series on a led output (home run or fixture chain). Do not exceed the wattage and voltage range on each led output.



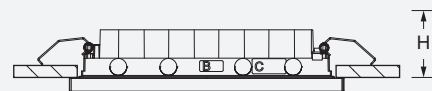
INSTALLATION

Remodel (RF)

Versatile fixture for new or existing ceiling structure. Suitable for insulated or non-insulated ceiling assemblies, like sheetrock, or paneling. Fixture is ready for remodeling installation. Flush mount frame and fixture can be shipped separately.

Ceiling thickness:

Trim: 1/8" - 3/4" (3 - 20mm)
Flush mounted: 1/2" - 5/8" (12.7 - 15mm)



Model		Flush mount frame*	Cut-out dimensions	Clearance (H)
ILBIO02	TR		1 3/8" x 2 1/2" (35 x 64mm)	3 1/4" (83mm)
	FM	TK-LBIO02-FM-RF	2 3/8" x 3 1/2" (55 x 88mm)	
ILBIO05	TR		1 1/2" x 5 5/8" (37 x 141mm)	
	FM	TK-LBIO05-FM-RF	2 3/8" x 6 1/2" (55 x 165mm)	

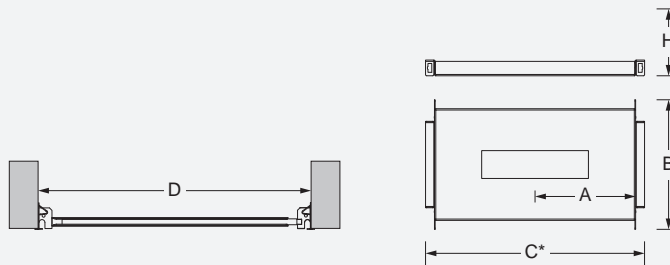
*Can be installed from below the ceiling.

New construction with plaster frame (NC)

Plaster frame with hanger bars system to be installed during rough-in phase. Suitable for insulated or non-insulated ceiling assemblies, like sheetrock, or paneling. Plaster frame can be shipped separately.

Ceiling thickness:

Trim: 1/8" - 3/4" (3 - 20mm)
Flush mounted: 1/2" - 5/8" (12.7 - 15mm)



*Provide a minimum of 1 1/8" (46mm) on each side for the hanger bar fixations

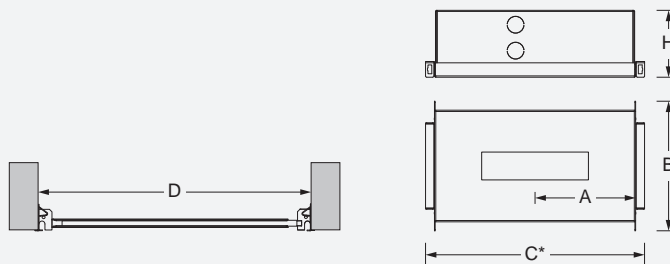
Model	Plaster frame	Cut-out dimensions	Cut-out positions (A)	Overall dimensions (BxC)	Hanger bars range (D)	Clearance (H)
ILBIO02	BN-LBIO02-TR-NC	1 3/8" x 2 1/2" (35 x 64mm)	3" (76mm)	5 15/16" x 6 15/16" (150 x 176mm)	9" to 15 1/2" (229 to 387mm)	3 1/4" (83mm)
	BN-LBIO02-FM-NC	2 3/8" x 3 1/2" (55 x 88mm)				
ILBIO05	BN-LBIO05-TR-NC	1 1/2" x 5 5/8" (37 x 141mm)	5 1/4" (133mm)	6 3/4" x 11 7/16" (172 x 290mm)		
	BN-LBIO05-FM-NC	2 3/8" x 6 1/2" (55 x 165mm)				

New construction with housing suitable for insulated ceiling (IC) or chicago plenum (CP)

Housing with hanger bars system for new construction installations. Suitable for insulated ceiling or chicago plenum applications. Housing can be shipped separately.

Ceiling thickness:

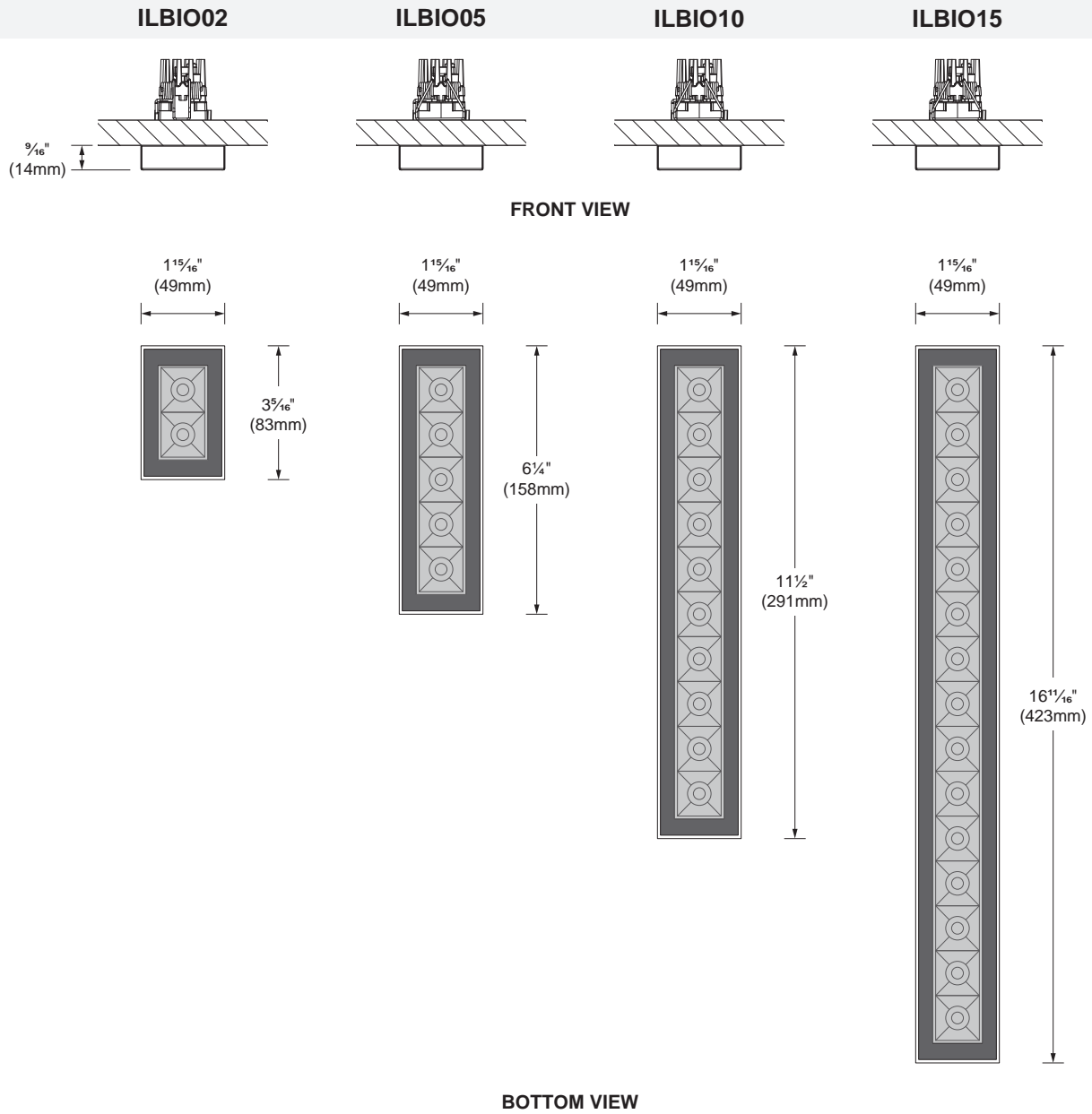
Trim: 1/8" - 3/4" (3 - 20mm)
Flush mounted: 1/2" - 5/8" (12.7 - 15mm)



*Provide a minimum of 1 1/8" (46mm) on each side for the hanger bar fixations

Model	Housing	Cut-out dimensions	Cut-out positions (A)	Overall dimensions (BxC)	Hanger bars range (D)	Clearance (H)
ILBIO02	BI-LBIO02-TR-CP	1 3/8" x 2 1/2" (35 x 64mm)	5 1/4" (133mm)	6 3/4" x 11 7/16" (172 x 290mm)	9" to 15 1/2" (229 to 387mm)	3 1/2" (89mm)
	BI-LBIO02-FM-CP	2 3/8" x 3 1/2" (55 x 88mm)				
ILBIO05	BI-LBIO05-TR-CP	1 1/2" x 5 5/8" (37 x 141mm)				
	BI-LBIO05-FM-CP	2 3/8" x 6 1/2" (55 x 165mm)				
ILBIO10	BI-LBIO10-TR-IC/CP	1 1/2" x 10 13/16" (37 x 274mm)	8 9/16" (217mm)	6 3/4" x 18" (172 x 458mm)	14 1/4" to 26" (362 to 660mm)	
	BI-LBIO10-FM-IC/CP	2 3/8" x 11 3/4" (55 x 297mm)				
ILBIO15	BI-LBIO15-TR-IC/CP	1 1/2" x 16" (37 x 406mm)	11 15/16" (303mm)	9 7/16" x 24 15/16" (240 x 633mm)		
	BI-LBIO15-FM-IC/CP	2 3/8" x 16 5/8" (55 x 429mm)				

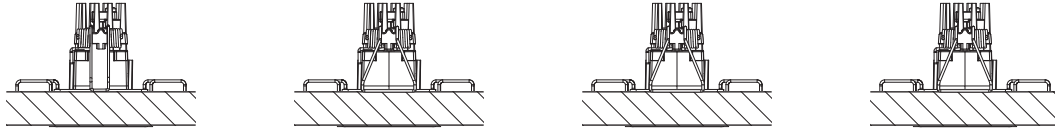
TRIM MODELS DIMENSIONS



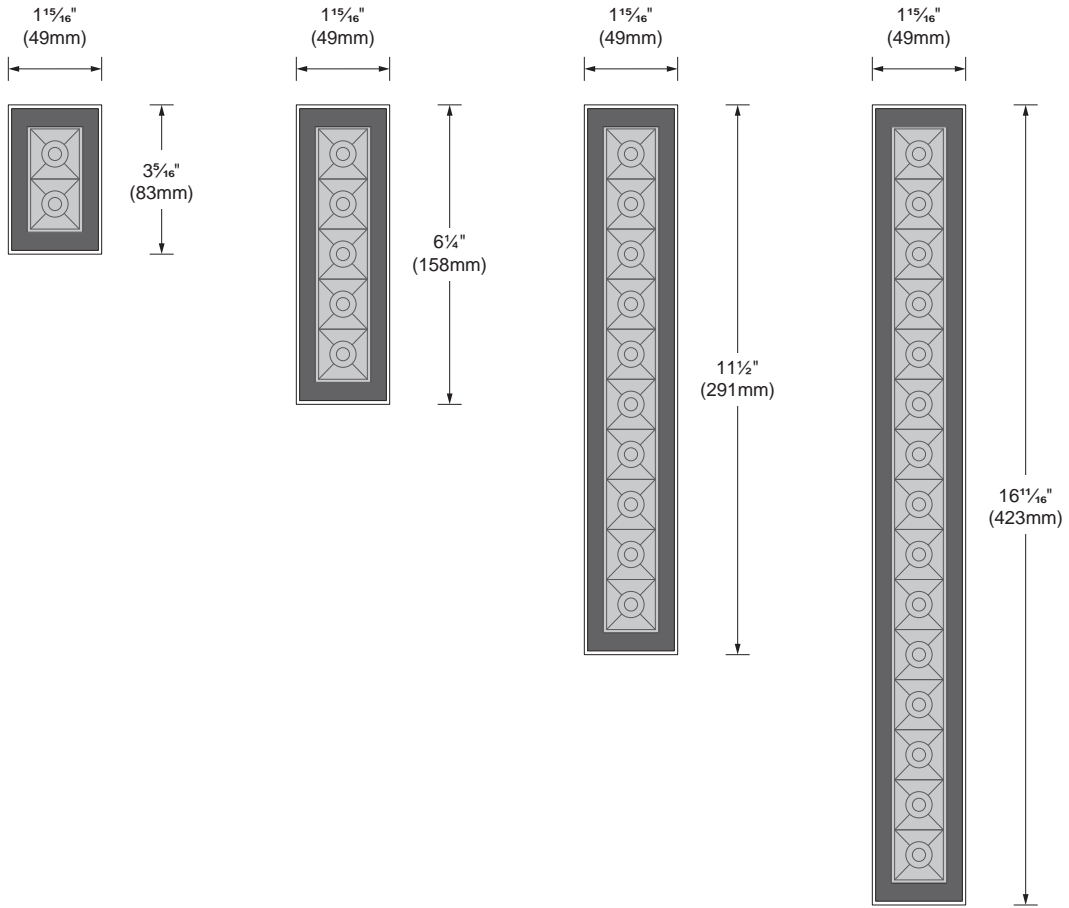
* See page 4 for installation option details

FLUSH MOUNTED MODELS DIMENSIONS

ILBIO02 ILBIO05 ILBIO10 ILBIO15



FRONT VIEW



BOTTOM VIEW

* See page 4 for installation option details

PHOTOMETRIC DATA

Visit iguzzini.com/us/ for complete photometric data.

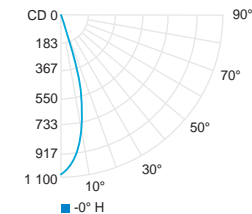
ILBIO02



CCT (K)	CRI	LOAD (W)	OPTIC	LUMENS (lm)	EFFICACY (lm / W)	MAX CANDELA (cd)	B.U.G	MODEL
3000K	90	5.4W	flood 32°	332	61	1 077	B1-U0-G0	ILBIO02-930-FL
			Wide flood 47°	319	59	605	B1-U0-G0	ILBIO02-930-WF

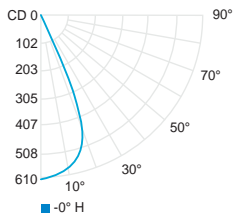
Power can vary with selected drivers. Use multiplier table for other CCT and CRI output data. Efficacy based on IESNA LM-79 test reports.

Flood 32° (3000K, 90CRI)



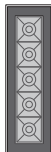
Center beam fc	Beam width ft
2ft	269
4ft	67.3
6ft	29.9
8ft	16.8
10ft	10.8
12ft	7.48

Wide flood 47° (3000K, 90CRI)



Center beam fc	Beam width ft
2ft	151
4ft	37.8
6ft	16.8
8ft	9.46
10ft	6.05
12ft	4.20

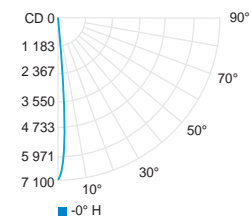
ILBIO05



CCT (K)	CRI	LOAD (W)	OPTIC	LUMENS (lm)	EFFICACY (lm / W)	MAX CANDELA (cd)	B.U.G	MODEL
3000K	90	12.5W	Spot 14°	786	63	7 006	B1-U1-G0	ILBIO05-930-SP
			Flood 32°	839	67	2 724	B1-U0-G0	ILBIO05-930-FL
			Wide flood 47°	808	65	1 532	B1-U0-G0	ILBIO05-930-WF

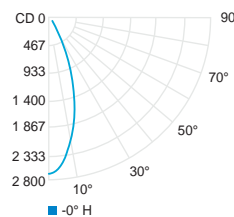
Power can vary with selected drivers. Use multiplier table for other CCT and CRI output data. Efficacy based on IESNA LM-79 test reports.

Spot 14° (3000K, 90CRI)



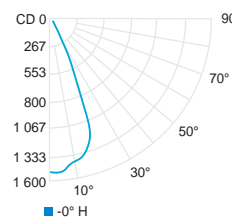
Center beam fc	Beam width ft
2ft	1 752
4ft	438
6ft	195
8ft	109
10ft	70.1
12ft	48.7

Flood 32° (3000K, 90CRI)



Center beam fc	Beam width ft
2ft	681
4ft	170
6ft	75.7
8ft	42.6
10ft	27.2
12ft	18.9

Wide flood 47° (3000K, 90CRI)



Center beam fc	Beam width ft
2ft	383
4ft	95.8
6ft	42.6
8ft	23.9
10ft	15.3
12ft	10.6

CCT options	2700K	3000K	3500K	4000K
CRI options	90CRI	90CRI	90CRI	90CRI
Multiplier	1	1	1.1	1.14

PHOTOMETRIC DATA

Visit iguzzini.com/us/ for complete photometric data.

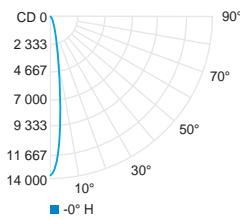
ILBIO10



CCT (K)	CRI	LOAD (W)	OPTIC	LUMENS (lm)	EFFICACY (lm / W)	MAX CANDELA (cd)	B.U.G	MODEL
3000K	90	24W	Spot 14°	1 534	64	13 678	B2-U1-G0	ILBIO10-930-SP
			Flood 32°	1 639	68	5 319	B2-U0-G0	ILBIO10-930-FL
			Wide flood 47°	1 578	66	2 991	B2-U0-G0	ILBIO10-930-WF

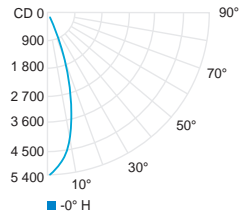
Power can vary with selected drivers. Use multiplier table for other CCT and CRI output data. Efficacy based on IESNA LM-79 test reports.

Spot 14° (3000K, 90CRI)



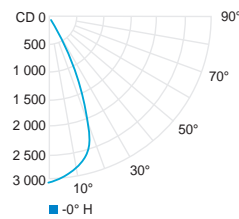
Center beam fc	Beam width ft
2ft	3 420
4ft	855
6ft	380
8ft	214
10ft	137
12ft	95.0

Flood 32° (3000K, 90CRI)



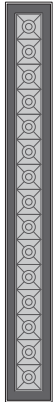
Center beam fc	Beam width ft
2ft	1 330
4ft	332
6ft	148
8ft	83.1
10ft	53.2
12ft	36.9

Wide flood 47° (3000K, 90CRI)



Center beam fc	Beam width ft
2ft	748
4ft	187
6ft	83.1
8ft	46.7
10ft	29.9
12ft	20.8

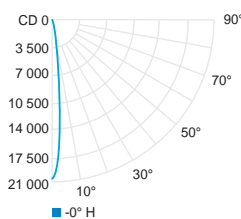
ILBIO15



CCT (K)	CRI	LOAD (W)	OPTIC	LUMENS (lm)	EFFICACY (lm / W)	MAX CANDELA (cd)	B.U.G	MODEL
3000K	90	35W	Spot 14°	2 320	66	20 683	B3-U1-G0	ILBIO15-930-SP
			Flood 32°	2 478	71	8 044	B3-U0-G0	ILBIO15-930-FL
			Wide flood 47°	2 386	68	4 523	B3-U0-G0	ILBIO15-930-WF

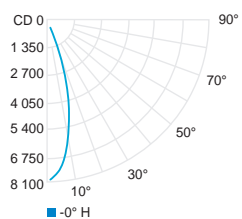
Power can vary with selected drivers. Use multiplier table for other CCT and CRI output data. Efficacy based on IESNA LM-79 test reports.

Spot 14° (3000K, 90CRI)



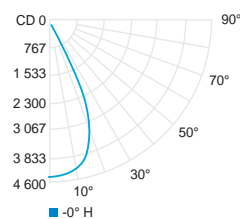
Center beam fc	Beam width ft
2ft	5 171
4ft	1 293
6ft	573
8ft	323
10ft	207
12ft	144

Flood 32° (3000K, 90CRI)



Center beam fc	Beam width ft
2ft	2 011
4ft	503
6ft	223
8ft	126
10ft	80.4
12ft	55.9

Wide flood 47° (3000K, 90CRI)



Center beam fc	Beam width ft
2ft	1 131
4ft	283
6ft	126
8ft	70.7
10ft	42.2
12ft	31.4

CCT options	2700K	3000K	3500K	4000K
CRI options	95CRI	90CRI	90CRI	90CRI
Multiplier	1	1	1.1	1.14