



Control options available

Day-Brite / CFI FBY LED high bay provides versatility in form and function. With a wide range of lumen packages and accessories available, this luminaire can be used in many different applications ranging from warehouses and manufacturing facilities to retail outlets and school gymnasiums.

Project: \_\_\_\_\_

Location: \_\_\_\_\_

Cat.No: \_\_\_\_\_

Type: \_\_\_\_\_

Lumens: \_\_\_\_\_ Qty: \_\_\_\_\_

Notes: \_\_\_\_\_

### Ordering guide

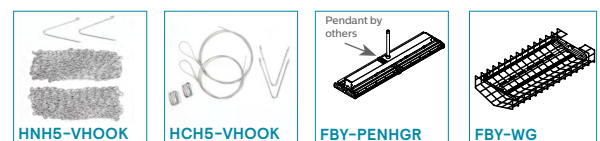
Example: FBY24L840-UNV-LCA

Family	Lumens (nominal) <sup>1</sup>	Color Temperature	Voltage	Options
<b>FBY</b>		—	—	
FBY	12L 12,000 18L 18,000 24L 24,000 30L 30,000 36L 36,000 48L 48,000 60L 60,000  Other lumen packages may be ordered in increments of 1000lm	835 3500K (CRI 80) 840 4000K (CRI 80) 850 5000K (CRI 80)	UNV Universal voltage 120-277V 120 120V 208 208V 240 240V 277 277V 347 347V 480 480V	WP6 <sup>2,4</sup> Wired 6' 16/3 cord & NEMA twist lock plug WP6/4 <sup>4</sup> Wired 6' 16/4 cord and NEMA twist lock plug for line voltage plus unswitched hot for BSL10LST WC6 <sup>4</sup> Wired 6' 16/3 cord WP6D <sup>2,4</sup> Wired 6' 16/3 cord & NEMA twist lock plug for line voltage and wired 6' 16/3 cord and plug for dimming control WC6/4 <sup>3,4</sup> Wired 6' 16/4 cord for line voltage plus unswitched hot for BSL10LST WC6/5 <sup>3,4</sup> Wired 6' 18/5 cord for line voltage plus 0-10V dimming WC6/6 <sup>3,4</sup> Wired 6' 18/6 cord for line voltage plus unswitched hot for BSL10LST plus 0-10V dimming LCA Clear acrylic lens LFA Frosted acrylic lens SWZCSH <sup>6,8</sup> Interact Pro scalable high bay sensor w/integral daylight & occupancy sensing, advanced grouping w/dwell time SNH200 <sup>6</sup> Integral EasySense occupancy & daylight sensor, with advanced SpaceWise type wireless grouping MD360 <sup>5</sup> 360° Motion detector (ON/OFF) MD360D <sup>5</sup> 360° Motion detector (ON/DIM to 10%) BSL10LST <sup>3</sup> Factory wired Philips Bodine integral emergency pack, nominal 1100 to 1400 lumens ER100 <sup>9,10,11</sup> UL924 listed sensor bypass relay, factory installed between driver & sensor (Interact Pro compatible) ER100/HVPS <sup>9,10,11</sup> UL924 listed sensor bypass relay, factory installed between driver & sensor for 347V Power Sense (Interact Pro compatible) ER100/HVPI <sup>9,10,11</sup> UL924 listed sensor bypass relay, factory installed between driver & sensor for 347V Power Interrupt (Interact Pro compatible) GTD/E <sup>9</sup> UL924 listed Bodine GTD factory installed on driver input BAC <sup>12</sup> Meets the requirements of the Buy American Act of 1933 (BAA)

- Nominal delivered lumens at 25°C ambient
- Must specify line voltage
- Order proper cord option for dimming or emergency
- 6' is standard cord length. For optional 10', 15', or 20' cord length, replace the "6" in the option code with the desired length.
- Not for use with SNH200 or Interact options.
- High bay motion detector. Motion sensing zone is extremely limited if used below 15' mounting height. Consider adding LCN3120/05 battery powered sensor to the install for better coverage at lower heights.
- For areas where luminaires are subject to high impact (gymnasiums, etc), rigid pendant hanging is not suggested. Use hook or cable/chain assembly for mounting in these areas.
- Must order IRT9015 Interact commissioning remote with each system order.
- Must be installed in conjunction with a UL1008 device.
- Must be ordered with an integral sensing option.
- 30,000 lumens maximum
- Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.
- Consult Signify to confirm whether specific accessories are BAA-compliant.

### General Notes

- All options factory installed.
- All accessories are field installed.
- Many luminaire components, such as reflectors, refractors, lenses, sockets, lampholders, and LEDs are made from various types of plastics which can be adversely affected by airborne contaminants. If sulfur based chemicals, petroleum based products, cleaning solutions, or other contaminants are expected in the intended area of use, consult factory for compatibility



### Accessories<sup>13</sup> (order separately)

- HNH5-VHOOK 54" chains & V hooks
- HCH5-VHOOK 5' cables & V hooks
- HCH10-VHOOK 10' cables & V hooks
- HCH15-VHOOK 15' cables & V hooks
- HCH20-VHOOK 20' cables & V hooks
- FBY-PENHGR<sup>7</sup> Pendant hanger (adds 3" to height)
- FBY-WG Wire guard (order 2 for FBY36, FBY48, & FBY60)
- FBX-SLCA-2N Clear acrylic snap lens
- FBX-SLFA-2N Frosted acrylic snap lens
- FBX-SLCA-2W Clear acrylic snap lens for FBY36, FBY48, & FBY60
- FBX-SLFA-2W Frosted acrylic snap lens for FBY36, FBY48, & FBY60

# FBY LED high bay

12,000, 18,000, 24,000, 30,000 36,000, 48,000, & 60,000 lumens

## Application

- This luminaire can be used to illuminate retail, cold storage, manufacturing, warehousing and many other large indoor spaces with control and precision.

## Construction/Finish

- Metal housing and reflectors provide excellent thermal transfer to extend component life.
- End holes to attach V hooks for chain or cable hanging.
- Cable/chain mounting capability is standard (ordered separately or furnished by others). Accessories are available for other mounting methods.
- 7/8" K.O. at each end of luminaire for wiring or motion detector.
- Polyester powder finish for excellent impact and corrosion resistance.
- LED light engines and drivers are field replaceable.

- 5 Year Limited Warranty, [www.signify.com/warranties](http://www.signify.com/warranties)
- Components are RoHS compliant.
- L70 LED predicted lumen maintenance >100,000 hours.
- cETLus listed to UL 1598 standards. Suitable for use in damp locations and -40° to 45°C ambient. (0° to 45°C for BSL10LST option)
- Dimming drivers are standard. Control is 0-10V DC.
- Optional motion detector.
- DLC Listed. Please check the DLC Qualified Products List to confirm ([www.designlights.org/QPL](http://www.designlights.org/QPL)).
- 6KV surge protection standard.

## Wireless Controls Options

### Interact Pro scalable sensor for Foundation, Advanced & Enterprise tiers (SWZCSH and an evolution of SpaceWise)

- SWZCSH is a connected sensor with integral occupancy and daylight sensing and supports wireless mesh connectivity.
- The sensor works in the Foundation mode (similar to SpaceWise) when configured without a gateway or in an Interact Pro Advanced or Enterprise mode if a compatible gateway is used.
- Interact Pro includes an App, a portal and a broad portfolio of wireless luminaires, lamps and retrofit kits all working on the same system.
- Startup is implemented via Interact Pro App (Android or iPhone) & Bluetooth connectivity. The App provides flexibility to choose between a gateway or non gateway mode for setup.
- Setup with the gateway requires wired internet access to the gateway. It is possible to add a gateway at a later point.
- Prepare project configuration steps remotely and use IRT9015 remote onsite to identify and group devices together.
  - Compatible with:
    - UID8451/10 wireless dimmer switch
    - SWS200 wireless scene switch
    - Battery powered IP42 presence sensor OCC sensor IA CM WH 10/1
    - Battery powered IP42 presence & daylight sensor OCC-DL sensor IA CM IP42 WH
    - LCN3110/05 battery powered IP65 presence sensor OCC sensor IA CM IP65 WH
    - LCN3120/05 battery powered IP65 presence & daylight sensor OCC-DL sensor IA CM IP65 WH
- For more information on Interact Pro visit:  
[www.interact-lighting.com/interactproscalablesystem](http://www.interact-lighting.com/interactproscalablesystem)

### SNH200 EasySense

- Philips field apps allow programming of occupancy & daylight sensing parameters and fine-tuning of light levels during installation. It can also be used for grouping of fixtures.
- Download "Philips field apps" from the Google Play Store.
- Register for the commissioning app at <http://registration.componentcloud.philips.com/appregistration/>.
- The app works on certain Android phones with NFC or IR. See Recommended Phones and the EasySense App User Manual in the download section at <http://www.usa.lighting.philips.com/products/lighting-components/easysense> and follow the "View Downloads" link to register for access to the download area. Navigate to Connected-Lighting-Components and then Philips-EasySense-Sensors to find downloads.

### Emergency Options (ER100)

- Power Sensing (Factory default) – Recommended UL924 option requires unswitched power sense line, absence of voltage on the normal circuit triggers luminaire to 100% output
- Power Interruption Detection (Field option) – Detects AC power interruption >30ms triggers 90 minute emergency mode with luminaire at 100% output
- 347V may require step-down transformer and must be ordered indicating Power Sensing or Power Interruption Detection

# FBY LED high bay

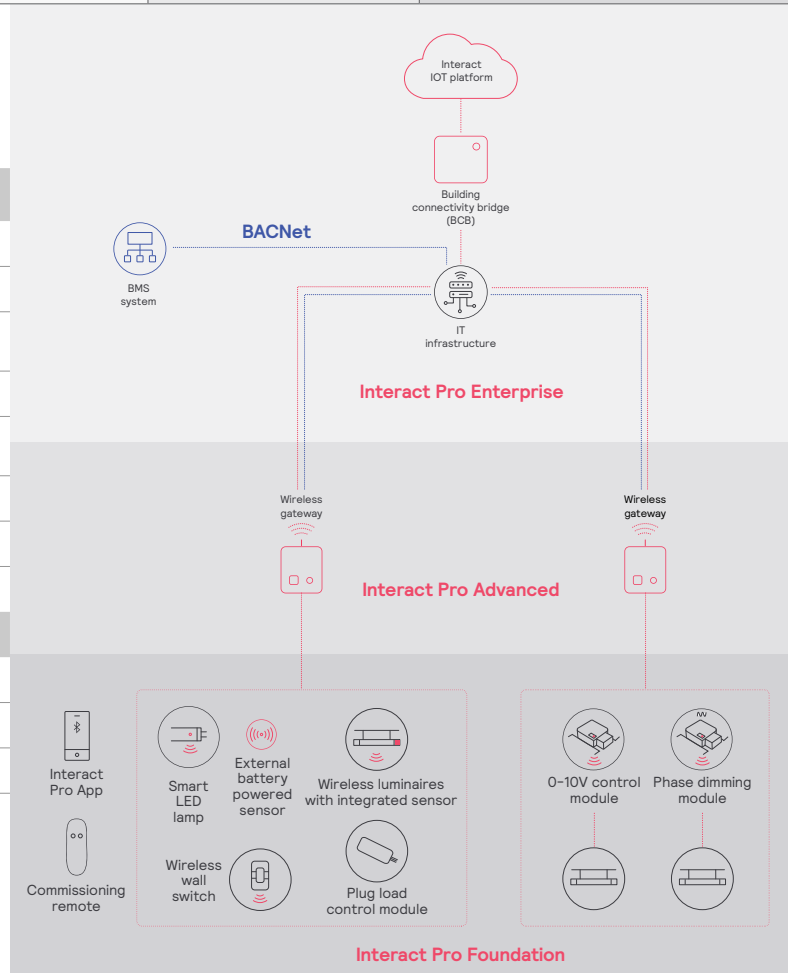
12,000, 18,000, 24,000, 30,000 36,000, 48,000, & 60,000 lumens

Interact Pro scalable system			
	Foundation	Advanced	Enterprise
Dimming, grouping, and zoning	✓	✓	✓
Bluetooth and ZigBee enabled	✓	✓	✓
Motion sensing and daylight harvesting	✓	✓	✓
Integration with 0-10V and phase dimming fixtures	✓	✓	✓
Code compliance	✓	✓	✓
Granular dimming and dwell time	✓	✓	✓
Energy reporting and monitoring		✓	✓
Scheduling		✓	✓
Demand response		✓	✓
BMS integration (BACnet)			✓
Floor plan visualization			✓
IoT sensors for wellness			✓
IoT Apps for productivity			✓

## Currently supported maximum system size

To be able to design the lighting system correctly for the customer, it is important to know the prime characteristics of the system, its possibilities and limitations.

System level	
Total number of gateways	Unlimited
Total number of devices	200 per network
• luminaires with integrated sensors	150
• smart TLEDs	150
Total number of ZGP devices (sensors and switches)	50
• sensors	30
• switches	50
• zones and groups	64
Group level	
Recommended number of lights	40 (recommended 25)
Number of ZGP devices	5
Number of scenes	16

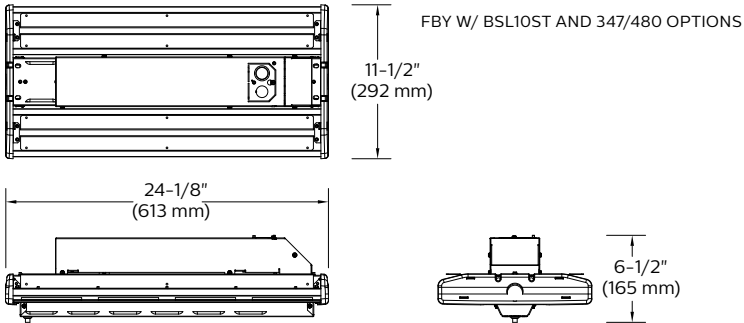
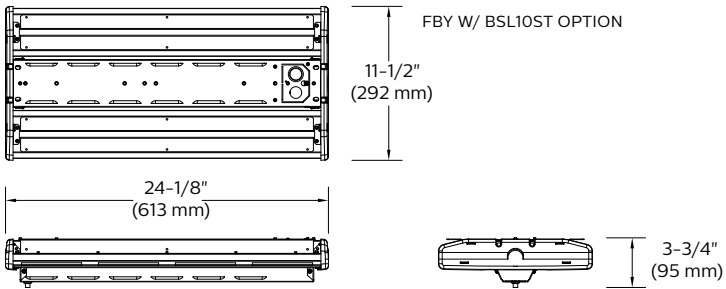
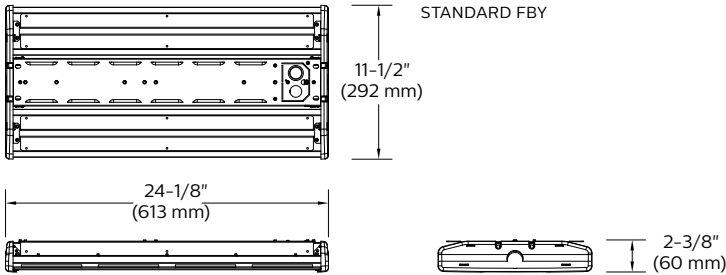


# FBY LED high bay

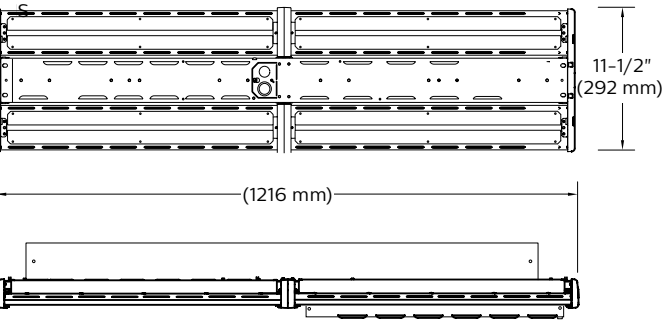
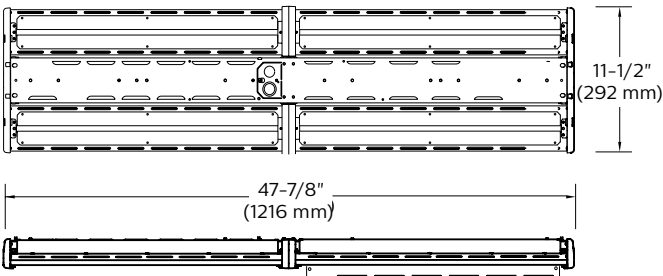
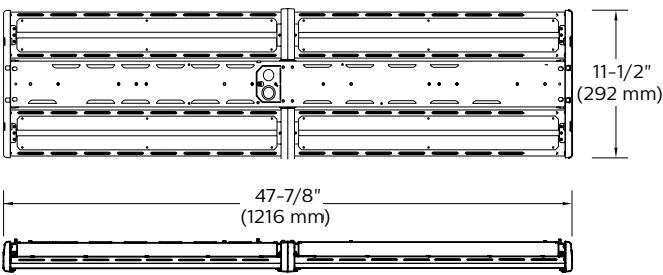
12,000, 18,000, 24,000, 30,000 36,000, 48,000, & 60,000 lumens

## Dimensions

### 12,000lm – 30,000lm



### 36,000lm – 60,000lm



# FBY LED high bay

12,000, 18,000, 24,000, 30,000 36,000, 48,000, & 60,000 lumens

## Photometry

### LED high bay FBY, general distribution, 24,000 nominal delivered lumens

Catalog No.	FBY24L840-UNV	<b>Candela distribution</b>					<b>Light Distribution</b>			<b>Average Luminance</b>				
Test No.	39981	<b>Vertical Angle</b>	<b>Horizontal Angle</b>				<b>Degrees</b>	<b>Lumens</b>	<b>% Luminaire</b>	<b>Angle</b>	<b>End</b>	<b>45°</b>	<b>Cross</b>	
S/MH	1.0		<b>0°</b>	<b>45°</b>	<b>90°</b>	<b>~45°</b>								
Lamp Type	LED		<b>0</b>	9264	9264	9264	9264	<b>0-30</b>	7094	28.7	<b>45</b>	61608	56669	57032
Lumens/Lamp	24748		<b>5</b>	9226	9324	9359	9324	<b>0-40</b>	11466	46.3	<b>55</b>	57290	48239	36303
Input Watts	177		<b>15</b>	8987	9023	9017	9023	<b>0-60</b>	19649	79.4	<b>65</b>	54261	39759	35384
Efficacy	140		<b>25</b>	8467	8303	6893	8303	<b>0-90</b>	23883	96.5	<b>75</b>	46401	21588	24030
			<b>35</b>	7724	6077	7031	6077	<b>90-180</b>	865	3.5	<b>85</b>	26466	18436	18481
			<b>45</b>	6672	6137	6177	6137	<b>0-180</b>	24748	100.0				
			<b>55</b>	5033	4238	3189	4238							
			<b>65</b>	3512	2574	2290	2574							
			<b>75</b>	1839	856	953	856							
			<b>85</b>	353	246	247	246							
			<b>95</b>	99	94	73	94							
			<b>105</b>	124	107	85	107							
			<b>115</b>	154	137	113	137							
			<b>125</b>	175	155	146	155							
			<b>135</b>	188	169	154	169							
		<b>145</b>	183	176	162	176								
		<b>155</b>	166	162	160	162								
		<b>165</b>	146	152	140	152								
		<b>175</b>	127	128	120	128								
Comparative yearly lighting energy cost per 1000 lumens – <b>\$1.70</b> based on 3000 hrs. and \$.08 pwr KWH.														
The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.														
Photometric values based on test performed in compliance with LM-79.														
<b>Coefficients of Utilization</b>														
<b>EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)</b>														
Ceiling (pcc)		80%			70%			50%						
Wall (pw)		70	50	30	70	50	30	50	30					
RCR		Zonal cavity method - Effective floor reflectance = 20%												
Room Cavity Ratio	0	118	118	118	115	115	115	109	109					
	1	109	104	100	106	102	98	97	94					
	2	99	91	85	96	89	83	85	80					
	3	91	81	73	88	79	72	75	69					
	4	83	72	63	81	70	62	67	60					
	5	77	64	56	74	63	55	60	53					
	6	71	58	49	69	57	49	55	47					
	7	66	53	44	64	52	44	50	43					
	8	61	48	40	60	47	39	46	39					
	9	57	44	36	56	43	36	42	35					
	10	54	41	33	52	40	33	39	32					

### LED high bay FBY, general distribution, 24,000 nominal delivered lumens

Catalog No.	FBY24L840-UNV-LCA	<b>Candela distribution</b>					<b>Light Distribution</b>			<b>Average Luminance</b>			
Test No.	39993	<b>Vertical Angle</b>	<b>Horizontal Angle</b>				<b>Degrees</b>	<b>Lumens</b>	<b>% Luminaire</b>	<b>Angle</b>	<b>End</b>	<b>45°</b>	<b>Cross</b>
S/MH	1.1	0°	9110	9110	9110	9110	0- 30	6984	29.7	45°	59177	50287	54250
Lamp Type	LED	5°	9028	9092	9182	9092	0- 40	11233	47.7	55°	53347	47077	34772
Lumens/Lamp	23532	15°	8784	8837	8875	8837	0- 60	19040	80.9	65°	47445	32827	33525
Input Watts	176	25°	8252	8197	7032	8197	0- 90	22761	96.7	75°	34002	22618	18791
Efficacy	133	35°	7487	6221	6508	6221	90-180	771	3.3	85°	17589	18795	19185
		45°	6409	5446	5875	5446	0- 180	23532	100.0				
		55°	4687	4136	3055	4136							
		65°	3071	2125	2170	2125							
		75°	1348	897	745	897							
		85°	235	251	256	251							
		95°	114	72	47	72							
		105°	126	82	56	82							
		115°	136	107	81	107							
		125°	150	131	113	131							
		135°	160	149	127	149							
		145°	155	166	148	166							
		155°	135	191	159	191							
		165°	116	191	220	191							
		175°	98	102	96	102							

Comparative yearly lighting energy cost per 1000 lumens – **\$1.79** based on 3000 hrs. and \$.08 pwr KWH.

The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

Photometric values based on test performed in compliance with LM-79.

<b>Coefficients of Utilization</b>													
<b>EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)</b>													
Ceiling (pcc)		80%			70%			50%					
Wall (pw)		70	50	30	70	50	30	50	30				
RCR		Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	118	118	118	115	115	115	109	109				
	1	109	104	101	106	102	98	97	94				
	2	100	92	86	97	90	84	86	81				
	3	91	81	74	89	79	72	76	70				
	4	84	72	64	81	70	63	68	61				
	5	77	65	56	75	64	56	61	54				
	6	71	59	50	69	58	49	55	48				
	7	66	53	45	64	52	44	51	43				
	8	62	49	40	60	48	40	46	39				
	9	58	45	37	56	44	36	43	36				
	10	54	41	34	53	41	33	40	33				

# FBY LED high bay

12,000, 18,000, 24,000, 30,000 36,000, 48,000, & 60,000 lumens

## Photometry (continued)

### LED high bay FBY, general distribution, 24,000 nominal delivered lumens, frosted acrylic lens

		Candela distribution					Light Distribution			Average Luminance			
Catalog No.	FBY24L840-UNV-LFA	Vertical Angle	0°	45°	90°	-45°	Degrees	Lumens	% Luminaire	Angle	End	45°	Cross
Test No.	39991	0	8355	8355	8355	8355	0-30	6258	28.4	45	42919	43907	45150
S/MH	1.2	5	8277	8334	8374	8334	0-40	10031	45.5	55	39758	41537	38779
Lamp Type	LED	15	7910	7855	7834	7855	0-60	16828	76.3	65	35977	36034	35599
Lumens/Lamp	22055	25	7187	7053	6984	7053	0-90	20948	95.0	75	31825	31863	31706
Input Watts	176	35	6171	6008	6120	6008	90-180	1107	5.0	85	25635	28174	28384
Efficacy	125	45	4648	4755	4890	4755	0-180	22055	100.0				
		55	3493	3649	3407	3649							
		65	2329	2333	2304	2333							
		75	1262	1263	1257	1263							
		85	342	376	379	376							
		95	124	96	76	96							
		105	195	105	82	105							
		115	263	133	104	133							
		125	315	158	135	158							
		135	340	190	152	190							
		145	334	227	185	227							
		155	305	275	224	275							
		165	277	292	281	292							
		175	254	256	250	256							

Coefficients of Utilization												
EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)												
Ceiling (pcc)		80%			70%			50%				
Wall (pw)		70	50	30	70	50	30	50	30			
RCR		Zonal cavity method - Effective floor reflectance = 20%										
Room Cavity Ratio	0	118	118	118	115	115	115	108	108			
	1	108	103	99	105	100	97	95	92			
	2	98	90	84	95	88	82	84	79			
	3	90	80	72	87	78	70	74	68			
	4	82	71	62	80	69	61	66	59			
	5	76	63	55	74	62	54	59	52			
	6	70	57	49	68	56	48	54	46			
	7	65	52	43	63	51	43	49	42			
	8	61	48	39	59	47	39	45	38			
	9	57	44	36	55	43	35	41	34			
	10	53	40	33	52	40	32	38	32			

Catalog No.	Delivered Lumens	Input Watts *	Efficacy	Uplight%
FBY12L840-UNV	12139	88	138	2.7
FBY12L840-UNV-LCA	11689	88	133	3.5
FBY12L840-UNV-LFA	11085	88	126	5.6
FBY18L840-UNV	18797	133	142	2.4
FBY18L850-UNV	18797	133	142	2.4
FBY18L840-UNV-LCA	18037	133	136	3.4
FBY18L840-UNV-LFA	16889	133	127	5.1
FBY24L840-UNV	24748	177	140	3.5
FBY24L840-UNV-LCA	23532	176	133	3.3
FBY24L840-UNV-LFA	22055	176	125	5.0
FBY30L840-UNV	30435	208	146	2.3
FBY30L840-UNV-LCA	29316	209	140	4.0
FBY30L840-UNV-LFA	27578	208	132	4.6
FBY36L840-UNV	39683	268	148	2.6
FBY36L840-UNV-LCA	37844	267	142	3.5
FBY36L840-UNV-LFA	35176	269	131	5.1
FBY48L840-UNV	50849	356	143	2.7
FBY48L840-UNV-LCA	48521	355	137	3.5
FBY48L840-UNV-LFA	45050	355	127	5.1
FBY60L840-UNV	62499	423	148	2.7
FBY60L840-UNV-LCA	59257	420	141	3.5
FBY60L840-UNV-LFA	55837	421	133	3.9

\* 347V and 480V models have the same input watts.



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