Day-Brite

CFI

by signify

Industrial

FBY LED High bay

12,000 to 60,000 lumens

LFA lens option shown

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)[1]	Color Temperature	Voltage	Options
FBY		–	–	

FBY	**12L**	12,000	**835** 3500K (CRI 80)	**UNV**	Universal voltage 120–277V
	18L	18,000	**840** 4000K (CRI 80)	**120**	120V
	24L	24,000	**850** 5000K (CRI 80)	**208**	208V
	30L	30,000		**240**	240V
	36L	36,000		**277**	277V
	48L	48,000		**347**	347V
	60L	60,000		**480**	480V
	Other lumen packages may be ordered in increments of 1000lm				

WP6[2,4]	Wired 6' 16/3 cord & NEMA twist lock plug
WP6/4[4]	Wired 6' 16/4 cord and NEMA twist lock plug for line voltage plus unswitched hot for BSL10LST
WC6[4]	Wired 6' 16/3 cord
WP6D[2,4]	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[3,4]	Wired 6' 16/4 cord for line voltage plus unswitched hot for BSL10LST
WC6/5[3,4]	Wired 6' 18/5 cord for line voltage plus 0–10V dimming
WC6/6[3,4]	Wired 6' 18/6 cord for line voltage plus unswitched hot for BSL10LST plus 0–10V dimming
LCA	Clear acrylic lens
LCR	Clear ribbed lens
LFA	Frosted acrylic lens
SWZCSH[6,8]	Interact Pro scalable high bay sensor w/integral daylight & occupancy sensing, advanced grouping w/dwell time
SNH200[6]	Integral EasySense occupancy & daylight sensor, with advanced SpaceWise type wireless grouping
MD360[5]	360° Motion detector (ON/OFF)
MD360D[5]	360° Motion detector (ON/DIM to 10%)
BSL20B2[3]	Factory wired Bodine integral emergency pack, nominal 2300 to 3000 lumens (0°C - 45°C)
BSL10LST[3]	Factory wired Philips Bodine integral emergency pack, nominal 1100 to 1400 lumens (0°C - 45°C)
ER100[9,10,11]	UL924 listed sensor bypass relay, factory installed between driver & sensor (Interact Pro compatible) (0°C - 45°C)
ER100/HVPS[9,10,11]	UL924 listed sensor bypass relay, factory installed between driver & sensor for 347V Power Sense (Interact Pro compatible) (0°C - 45°C)
ER100/HVPI[9,10,11]	UL924 listed sensor bypass relay, factory installed between driver & sensor for 347V Power Interrupt (Interact Pro compatible) (0°C - 45°C)
GTD/E[2,9,11]	UL924 listed Bodine GTD factory installed on driver input (120V or 277V only)(0°C - 45°C)
SP1	Optional 10kV surge protector
55	High ambient (55°C) for 24klm and 30klm (see dimensional details for luminaire sizes)
BAC[12]	Meets the requirements of the Buy American Act of 1933 (BAA)

1 Nominal delivered lumens at 25°C ambient

2 Must specify line voltage

3 Order proper cord option for dimming or emergency if using optional cords

4 6' is standard cord length. For optional 10', 15', or 20' cord length, replace the "6" in the option code with the desired length.

5 Not for use with SNH200 or Interact options.

6 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.

7 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.

8 Must order IRT9015 Interact commissioning remote with each system order.

9 Must be installed in conjunction with a UL1008 device.

10 Must be ordered with an integral sensing option.

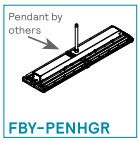
11 30,000 lumens maximum

12 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.

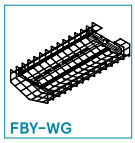
13 Consult Signify to confirm whether specific accessories are BAA-compliant.

HNH5-VHOOK

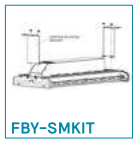
HCH5-VHOOK



FBY-PENHGR



FBY-WG



FBY-SMKIT

Accessories[13] (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**[7] Pendant hanger (adds 3" to height)
- **FBY/FBZ-SMKIT** Surface mount bracket kit (drops fixture 6" from surface)
- **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

Not all product variations listed on this page are DLC qualified. To ensure that a specific model is qualified, visit www.designlights.org/search

interact ready.

FBY LED high bay

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

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

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
- Components are RoHS compliant.
- L70 LED predicted lumen maintenance >100,000 hours.
- cETLus listed to UL 1598 standards. Suitable for use in damp locations. See ambient temperature data table for standard ambient information. Ambient other than listed is ordered as an 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).
- 6KV surge protection standard.

Ambient Temperature Data

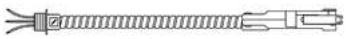
Configuration	Standard Ambient
FBY12L, FBY18L, FBY36L	-40°C to 55°C
FBY48L	-40°C to 50°C
FBY24L, FBY30L, FBY60L	-40°C to 45°C
Any battery, ER100, or GTD	0°C to 45°C

Electro-Connect Modular Wiring System

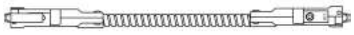
Electro-Connect is a pre-assembled modular wiring system designed to simplify the process of wiring and installing fixtures ultimately providing time and cost savings. With only three basic components, EC can be used to supply power in both high bay and low bay applicaions. For more information, visit us online at https://www.signify.com/en-us/products/indoor-luminaires/modular-wiring/wiring-devices/electro-connect-ec-three and https://www.signify.com/en-us/products/indoor-luminaires/modular-wiring/wiring-devices/electro-connect-ec-three-plus

EC3 Modular Wiring System

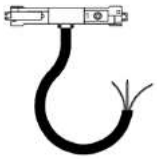
Distribution Cable



Extender Cable

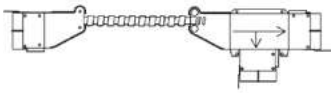


Lighting 'T'

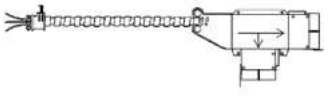


EC3+ Modular Wiring System

Double Headed Extender Cable



Double Headed Distribution Cable



Whip End Fixture Drop

FBY LED high bay

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

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:
    - 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: Battery powered IP65 presence sensor, OCC sensor IA CM IP65WH
    - LCN3120: 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

SNH200 EasySense

- Philips field apps allow programming of occupany & 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 will require step-down transformer and must be ordered indicating Power Sensing or Power Interruption Detection

Ambient Temperature Data

Configuration	Standard Ambient
FBY12L, FBY18L, FBY36L	-40°C to 55°C
FBY48L	-40°C to 50°C
FBY24L, FBY30L, FBY60L	-40°C to 45°C
Any battery, ER100, or GTD	0°C to 45°C

Electro-Connect Modular Wiring System

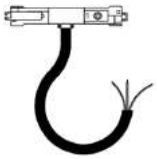
Electro-Connect is a pre-assembled modular wiring system designed to simplify the process of wiring and installing fixtures ultimately providing time and cost savings. With only three basic components, EC can be used to supply power in both high bay and low bay applicaions. For more information, visit us online at https://www.signify.com/en-us/products/indoor-luminaires/modular-wiring/wiring-devices/electro-connect-ec-three and https://www.signify.com/en-us/products/indoor-luminaires/modular-wiring/wiring-devices/electro-connect-ec-three-plus

EC3 Modular Wiring System

Distribution Cable

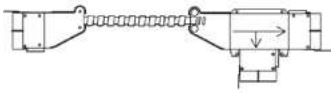
Extender Cable

Lighting 'T'

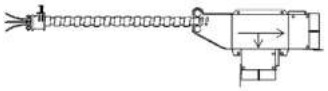


EC3+ Modular Wiring System

Double Headed Extender Cable



Double Headed Distribution Cable



Whip End Fixture Drop

FBY LED high bay

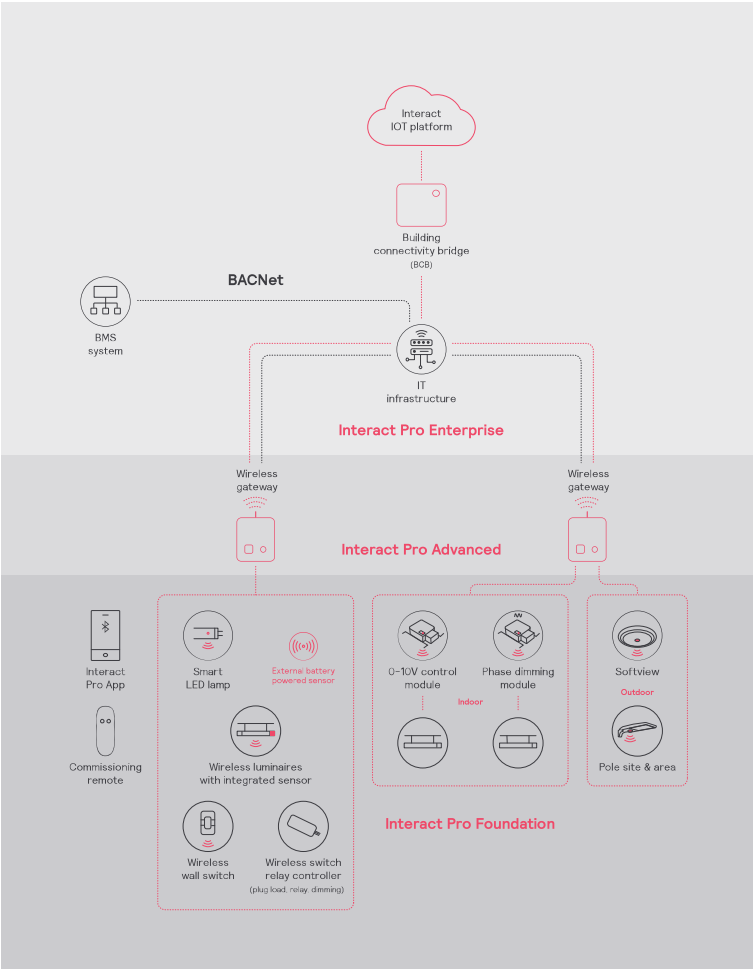
12,000, 18,000, 24,000, 30,000 36,000, 48,000, & 60,000 lumens

	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

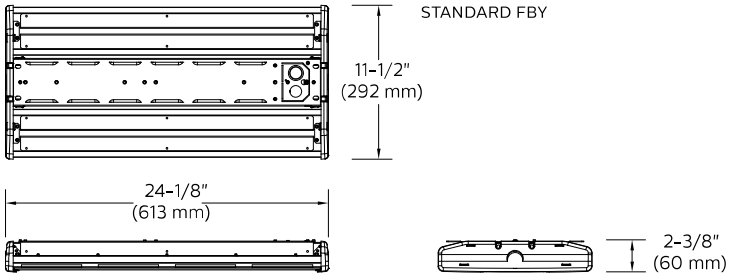


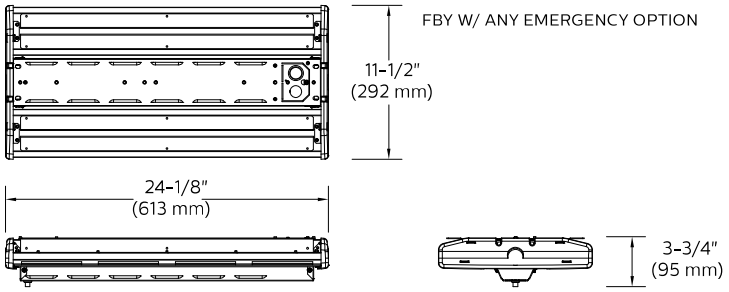
FBY LED high bay

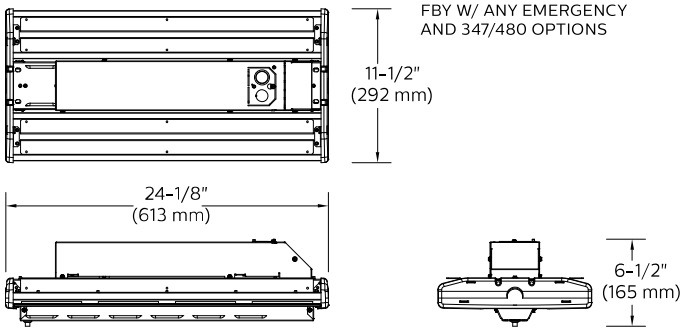
12,000, 18,000, 24,000, 30,000 36,000, 48,000, & 60,000 lumens

DImensions

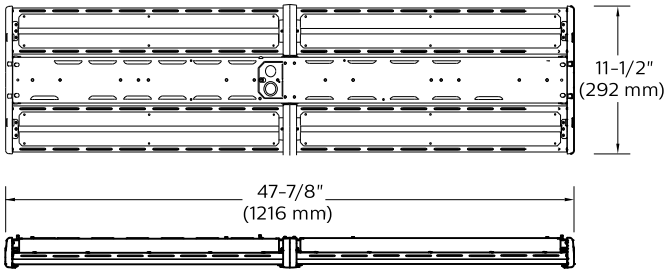
12,000lm – 30,000lm

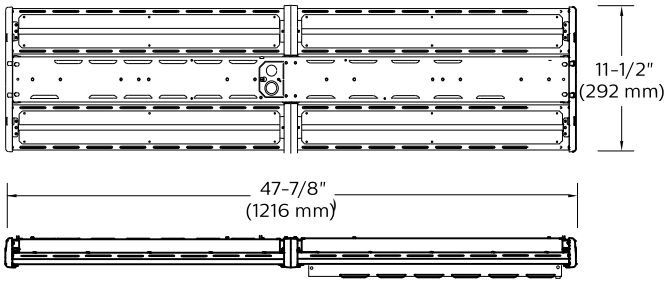


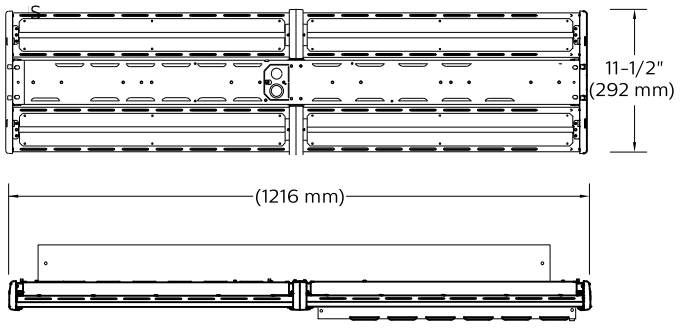




36,000lm – 60,000lm and 24,000lm – 30,000lm 55C ambient option







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
Test No.	39981
S/MH	1.0
Lamp Type	LED
Lumens/Lamp	24748
Input Watts	177
Efficacy	140

Comparative yearly lighting energy cost per 1000 lumens – **$1.70** 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.

Candela distribution

Vertical Angle	Horizontal Angle 0°	45°	90°	-45°
0	9264	9264	9264	9264
5	9226	9324	9359	9324
15	8987	9023	9017	9023
25	8467	8303	6893	8303
35	7724	6077	7031	6077
45	6672	6137	6177	6137
55	5033	4238	3189	4238
65	3512	2574	2290	2574
75	1839	856	953	856
85	353	246	247	246
95	99	94	73	94
105	124	107	85	107
115	154	137	113	137
125	175	155	146	155
135	188	169	154	169
145	183	176	162	176
155	166	162	160	162
165	146	152	140	152
175	127	128	120	128

Light Distribution

Degrees	Lumens	% Luminaire
0- 30	7094	28.7
0- 40	11466	46.3
0- 60	19649	79.4
0- 90	23883	96.5
90-180	865	3.5
0- 180	24748	100.0

Average Luminance

Angle	End	45°	Cross
45	61608	56669	57032
55	57290	48239	36303
65	54261	39759	35384
75	46401	21588	24030
85	26466	18436	18481

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	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
Test No.	39993
S/MH	1.1
Lamp Type	LED
Lumens/Lamp	23532
Input Watts	176
Efficacy	133

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.

Candela distribution

Vertical Angle	Horizontal Angle 0°	45°	90°	-45°
0	9110	9110	9110	9110
5	9028	9092	9182	9092
15	8784	8837	8875	8837
25	8252	8197	7032	8197
35	7487	6221	6508	6221
45	6409	5446	5875	5446
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

Light Distribution

Degrees	Lumens	% Luminaire
0- 30	6984	29.7
0- 40	11233	47.7
0- 60	19040	80.9
0- 90	22761	96.7
90-180	771	3.3
0- 180	23532	100.0

Average Luminance

Angle	End	45°	Cross
45	59177	50287	54250
55	53347	47077	34772
65	47445	32827	33525
75	34002	22618	18791
85	17589	18795	19185

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	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

Catalog No.	FBY24L840-UNV-LFA
Test No.	39991
S/MH	1.2
Lamp Type	LED
Lumens/Lamp	22055
Input Watts	176
Efficacy	125

Comparative yearly lighting energy cost per 1000 lumens **– $1.92** 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.

Candela distribution

Vertical Angle	Horizontal Angle 0°	45°	90°	-45°
0	8355	8355	8355	8355
5	8277	8334	8374	8334
15	7910	7855	7834	7855
25	7187	7053	6984	7053
35	6171	6008	6120	6008
45	4648	4755	4890	4755
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

Light Distribution

Degrees	Lumens	% Luminaire
0- 30	6258	28.4
0- 40	10031	45.5
0- 60	16828	76.3
0- 90	20948	95.0
90-180	1107	5.0
0- 180	22055	100.0

Average Luminance

Angle	End	45°	Cross
45	42919	43907	45150
55	39758	41537	38779
65	35977	36034	35599
75	31825	31863	31706
85	25635	28174	28384

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
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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