

ADDENDUM #2

Project Name:

ABD ANK Warehouse Racking

DAS#9238.00

RFB923800-01

Dated: March 30, 2022

This Addendum forms a part of the bidding and contract documents. This Addendum supersedes and supplements all portions of the original bidding and contract documents dated **March 11, 2022** with which it conflicts.

ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPACE PROVIDED ON THE BID FORM. FAILURE TO DO SO MAY SUBJECT THE BIDDER TO DISQUALIFICATION.

1. GENERAL CLARIFICATIONS

A. N/A

2. SPECIFICATIONS

A. REVISE Specification 10-56-29.16 Paragraph 1.06.J.2, to read as follows:

2. Extra Stock Materials: Furnish system component items as follows:

a. Rack Beams:

- 1) Four feet-long structural channel beams: (12)
- 2) Twelve feet-long structural channel beams: (12)

b. Decking Units: (2) full pallets.

c. Rack Columns:

- 1) Selective Rack Columns: (6)
- 2) Pushback Columns: (6)

d. Flow Rack Components:

- 1) Track Wheels: (20)
- 2) Springs: (5)
- 3) Brakes: (3)

3. DRAWINGS

A. N/A

4. QUESTIONS

- A. What is the weight of the pallets? **A> 3,000 pounds, per Specification 10-56-29.16 Paragraph 2.05.B.2.a.**
- B. The wire decking onsite has inverted support channels; is that required? **A> The wire decking onsite is not inverted.**
- C. Does the wire decking need to be screwed own to the rack beam? **A> Please screw down decking to beams ONLY directly over tunnels. Do not screw down any decking in any other location.**
- D. Is the racking design required to be bolted structural rack? **A> Yes.**
- E. Do we assume any overhang on the 40x48 pallets to determine overall “load” size for the push back rack? **A> Maximum pallet position weight has already been published. 3,000 pounds, per Specification 10-56-29.16 Paragraph 2.05.B.2.a.**

5. SUBSTITUTION REQUESTS

- A. Approved:
 - 1. Lighting Solutions: Multiple Light Fixture Types
 - 2. NRG Sales Lighting & Controls LLC: Multiple Light Fixture Types
- B. Not Approved: N/A

6. ATTACHMENTS

- A. Substitution Requests

END OF ADDENDUM

SUBSTITUTION REQUEST FORM

Project: ABD ANK Warehouse Racking Substitution Request Number: _____
From: Pete Veren
To: Jerry Dehnke Date: 3 / 2 4 / 2 2
A/E Project Number: 08421.001
Re: _____

Specification Title: Lighting Description: equals for prior approval
Section: 01 2500 - 2 Page: _____ Article/Paragraph: _____

Proposed Substitution: Please see attached Submittal
Manufacturer: ILP and Dualite Address: _____ Phone: 5 1 5 - 2 5 0 - 3 4 4 0
Trade Name: _____ Model No.: _____

History: ☐ New product ☐ 2-5 years old ☐ 5-10 yrs old ☐ More than 10 years old

Differences between proposed substitution and specified product: E q u a l

☐ Point-by-point comparative data prepared by contractor and attached - REQUIRED BY A/E

Reason for not providing specified item: _____

Similar Installation:

Project: _____ Architect: _____
Address: _____ Owner: _____
Date Installed: _____

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

Supporting Data Attached: ☐ Drawings ☒ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

SUBSTITUTION REQUEST FORM

(Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: Peter Veren
Signed by: Peter Veren
Firm: Lighting Solutions of Iowa
Address: 1250 SW State Suite D Ankeny Iowa 50023
Telephone: 515-965-8759
Attachments: Yes

A/E's REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Specification Section 01 3300.
☒ Substitution approved as noted - Make submittals in accordance with Specification Section 01 3300.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by:  Date: 3/30/2022

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E ☐ _____

Manufacturer and types appear to be generally acceptable. Vendor will have to submit footcandle plots to verify full equivalence to specified luminaires. Provide all accessories as specified.

Date: Mar 24, 2022

Lighting Solutions of Iowa
1250 SW State St Ste D
Ankeny IA 50023
Phone: (515) 965-8773
Fax: (515) 965-8759

Job Name
Alcoholic Beverages Division (ABD) Ankeny (ANK) - Warehouse Racking
LSI22-52646
Ankeny IA

Bid Date
Apr 6, 2022

Submittal Date
Mar 24, 2022

Transmittal

Lighting Solutions of Iowa
1250 SW State St Ste D
Ankeny IA 50023
Phone: (515) 965-8773
From: Pete Veren

Project Alcoholic Beverages Division (ABD)
Ankeny (ANK) - Warehouse Racking
Quote# LSI22-52646
Location Ankeny IA
Contact:

ATTACHED WE ARE SENDING YOU 1 COPY OF THE FOLLOWING ITEM:

- | | | |
|-----------------------------------|--|--------|
| <input type="checkbox"/> Drawings | <input type="checkbox"/> Specifications | Other: |
| <input type="checkbox"/> Prints | <input type="checkbox"/> Information | |
| <input type="checkbox"/> Plans | <input checked="" type="checkbox"/> Submittals | |

THESE ARE TRANSMITTED FOR:

- | | | |
|--|---|---------------------------------|
| <input type="checkbox"/> Prior Approval | <input type="checkbox"/> Resubmittal for Approval | <input type="checkbox"/> Record |
| <input type="checkbox"/> Approval | <input type="checkbox"/> Corrections | Bids due on: |
| <input type="checkbox"/> Approval as Submitted | <input type="checkbox"/> Your Use | Other: |
| <input type="checkbox"/> Approval as Noted | <input type="checkbox"/> Review and Comment | |

Type	MFG	Part
H1	Industrial Lighting Products	HHB-24L-U-40-FRL-FIOSPC-HB-XX-18Y-PAD
H1E	Industrial Lighting Products	HHB-24L-U-40-FRL-FIOSPC-HB-XX-18Y-PAD-EM10/HE-SD
H2	Industrial Lighting Products	HHB-24L-U-40-FRL-FIOSPC-HB-XX-18Y-PAD
H2E	Industrial Lighting Products	HHB-24L-U-40-FRL-FIOS-HB-XX-18Y-PAD-EM10/HE-SD
X1	Dual Lite	EVEURWEI
X1C	Dual Lite	EVCURWD4I

Notes:

We are submitting for your approval and respectfully request consideration of the following lighting fixtures which we propose as equal to the specified fixtures for the above project. Enclosed you will find catalog sheets and specification data for the fixtures proposed. Thank you for your consideration.

Sincerely,
Pete Veren
Specification Sales

Job Name:

Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking

Catalog Number:

HHB-24L-U-40-FRL-FIOSPC-HB-XX-
18Y-PAD

Notes:

Type:

H1

LSI22-52646

Project Name:

Part Number:

Type:



HIMALAYAN HIGH BAY

LINEAR HIGH BAY

407-478-3759
www.ilp-inc.com

FEATURES

- Post painted white 22 Ga. steel body for maximum rigidity & durability
- 8,000 - 56,000 Lumen Package Range
- Compact housing delivering up to 24,000 lumens in 2ft body
- Impact resistant frosted acrylic lens (included)
- V-Clips for dual chain or cable hanging (included)
- 4000K & 5000K CCT
- >80 Color Rendering Index (CRI)
- Calculated L70 >100,000 Hours
- 0 - 10V Dimmable Driver (100% - 10%)
- 120-277V Universal Driver
- 5 Year Warranty (std); 10 Year Warranty Optional
- UL Listed for Damp Location
- DesignLights Consortium® Qualified Luminaire



8L, 12L, 18L & 24L

34L, 321W & 425W



SUITABLE APPLICATIONS

- Warehouses
- Distribution Centers
- Gymnasiums
- Manufacturing Plants

ORDERING GUIDE:

SERIES	LUMENS/WATTAGE	DRIVER	CCT	PRIMARY LENS	WARRANTY
HHB	8L	U 120-277V	50	FRL Frosted Lens (std.)	BLANK 5 Year
Himalayan High Bay	12L		40	PCL ¹ Clear Polycarbonate Lens	10YR ¹¹ 10 Year
	18L				
	24L				
	34L				
	321W				
	425W				

OPTIONS		CONTROLS OPTIONS	
Factory Installed		Basic	
CORDx	Cord (x = ft)	FIOS	On/Off Occupancy Sensor
QDCx	Quick Disconnect Cord (x = ft)	FIOSPC	On/Off Occupancy Sensor w/ Photocell
EM5 ³	5W LED Factory Installed Battery Backup	FIOSPC/DLH	On/Off Occupancy Sensor w/ Daylight Harvesting
EM5/HE ³	5W LED Factory Installed Battery Backup - CEC Title 20 Compliant	DHPC	Daylight Harvesting
EM7 ³	7W LED Factory Installed Battery Backup	USBD	User Bi-Level Dim Sensor w/ Occ. Sensor
EM7/HE ³	7W LED Factory Installed Battery Backup - CEC Title 20 Compliant	BDxx	Preset Bi-Level Dim Sensor (xx=%eg.20,30)
EM10 ³	10W LED Factory Installed Battery Backup	BDxxPC	Preset Bi-Level Dim Sensor w/ Photocell
EM10/HE ³	10W LED Factory Installed Battery Backup - CEC Title 20 Compliant		
EM10/HE-SD ¹⁰	10W Factory Installed Self-Diagnosing Battery Backup		
EM12 ³	12W LED Factory Installed Battery Backup		
EM20 ³	20W LED Factory Installed Battery Backup - CEC Title 20 Compliant		
EM25 ³	25W LED Factory Installed Battery Backup		
SD480 ²	480V Step Down Transformer		
SD347 ²	347V Step Down Transformer		
HT ⁴	High Temperature Option		
Ship With Accessories		Advanced	
WC ¹	11ga Wire Cage	ES/HB ⁶	EasySense High Bay Sensor
HUB3/4 ⁵	Conduit Hub 3/4" for pendant mount		
HOOK ⁶	Cast Iron Hook for single point mounting		
HB-XX-18Y-PAD	Y-Toggle Cable System (xx = in)		
SMBKIT	Surface Mount Bracket		
CPMB-WIDE	Center Point Mounting Box		
ES/PCD ⁷	EasySense Pre-Programmed Control Device		
ES/IR ⁸	EasySense Commissioning IR Blaster		
ES/WWS/DR	EasySense Dual Rocker Wireless Wall Switch		

¹ Does not qualify for DLC² Does not qualify for DLC on 321W & 425W³ Externally mounted. Cannot be used with CPMB-WIDE, HOOK, SMBKIT or HUB 3/4⁴ Adds 10°F to standard fixture max ambient. ONLY available for 321W & 425W.⁵ Must be used with CPMB-WIDE⁶ Must be used with CPMB-WIDE & Y-Toggle Cable System⁷ One needed per project⁸ Must be used with ES/PCD⁹ Must be used with ES/PCD & ES/IR options for commissioning¹⁰ Operating temp down to 32°F & CEC Title 20 Compliant¹¹ Contact Factory for more details

HHBSPEC0721

HIMALAYAN HIGH BAY

LINEAR HIGH BAY



QUICK SHIP ITEMS:

SERIES	LUMENS/WATTAGE	DRIVER	COLOR	PRIMARY LENS
HHB Himalayan High Bay	8L 12L 18L 24L 34L 321W 425W	U 120-277V	50 40	FRL Frosted Lens (std.)

LED SYSTEMS INFO

FROSTED LENS 40K	LUMENS	WATTS	EFFICACY	DLC	AMBIENT RANGE	REPLACES
HHB-8L-U-40-FRL	8,104 lm	62 W	130 lm/W	PRM	-4°F - 122°F	100W MH, 4T8
HHB-12L-U-40-FRL	11,548 lm	89 W	129 lm/W	STD	-4°F - 122°F	175W MH, 2T5HO
HHB-18L-U-40-FRL	17,200 lm	137 W	125 lm/W	STD	-4°F - 122°F	250W MH, 4T5HO
HHB-24L-U-40-FRL	22,989 lm	179 W	129 lm/W	STD	-4°F - 122°F	400W MH, 6T5HO
HHB-34L-U-40-FRL	34,560 lm	267 W	130 lm/W	STD	-4°F - 122°F	750W MH, 8T5HO
HHB-321WLED-UNIV-40-FRL	41,405 lm	313 W	132 lm/W	PRM	-4°F - 115°F	1000W MH, 10T5HO
HHB-425WLED-UNIV-40-FRL	55,646 lm	418 W	133 lm/W	PRM	-4°F - 105°F	1000W MH, 12T5HO

LED System data above based on HHB-8L-U-40-FRL, HHB-12L-U-40-FRL, HHB-18L-U-40-FRL, HHB-24L-U-40-FRL, HHB-34L-U-40-FRL, HHB-321WLED-UNIV-40-FRL & HHB-425WLED-UNIV-40-FRL.

FROSTED LENS 50K	LUMENS	WATTS	EFFICACY	DLC	AMBIENT RANGE	REPLACES
HHB-8L-U-50-FRL	8,295 lm	63 W	132 lm/W	PRM	-4°F - 122°F	100W MH, 4T8
HHB-12L-U-50-FRL	11,717 lm	89 W	131 lm/W	PRM	-4°F - 122°F	175W MH, 2T5HO
HHB-18L-U-50-FRL	17,583 lm	133 W	132 lm/W	PRM	-4°F - 122°F	250W MH, 4T5HO
HHB-24L-U-50-FRL	23,187 lm	178 W	130 lm/W	STD	-4°F - 122°F	400W MH, 6T5HO
HHB-34L-U-50-FRL	34,945 lm	267 W	131 lm/W	STD	-4°F - 122°F	750W MH, 8T5HO
HHB-321WLED-UNIV-50-FRL	42,512 lm	318 W	134 lm/W	PRM	-4°F - 115°F	1000W MH, 10T5HO
HHB-425WLED-UNIV-50-FRL	56,660 lm	421 W	135 lm/W	PRM	-4°F - 105°F	1000W MH, 12T5HO

LED System data above based on HHB-8L-U-50-FRL, HHB-12L-U-50-FRL, HHB-18L-U-50-FRL, HHB-24L-U-50-FRL, HHB-34L-U-50-FRL, HHB-321WLED-UNIV-50-FRL & HHB-425WLED-UNIV-50-FRL.

SPECIFICATIONS

CONSTRUCTION

Post painted white 22ga. steel body for maximum rigidity and durability. Knockouts positioned on top and side of driver channel for convenient wiring accessibility.

ELECTRICAL

Class 2 LED light engine for high efficacy & long life. Calculated L70 > 100K hours. LED Lumen Maintenance Estimates based on TM-21 projections for the light source at 25°C ambient. Power Factor > 0.90. Standard 120-277 Vac 0-10V dimmable (10%-100%) w/ optional 347-480 Vac step down transformer. Optional emergency battery backups available to meet critical life safety lighting requirements. Fixture reduced max ambient for emergency battery backup & step down options.

MOUNTING

Options include suspension chain, aircraft cables, hook, single pendant (HUB), surface mount (SMBKIT). Reduced maximum ambient range for surface mount.

WARRANTY

5 Year Warranty Standard; 10 Year Warranty Optional ([Terms and Conditions apply](#)).

OPTICS

Standard with impact resistant frosted acrylic lens (FRL) for added LED glare reduction. Optional clear polycarbonate lens (PCL) available.

THERMAL

Ambient temperature range -4°F to 122°F for 8L to 34L configurations. -4°F to 115°F for 321W configuration. -4°F to 105°F for 425W configuration. High Temperature (HT) option available for 321W & 425W to increase maximum ambient temperature by 10°F.

CONTROLS

Factory installed Advanced & Basic integral occupancy sensor options available. All sensors are end fixture mounted through knockout. Inquire with manufacturer for additional controls options, including customer supplied items.

CERTIFICATIONS

UL Listed to US and Canadian safety standards. Suitable for damp locations. Please refer to the DLC (DesignLights Consortium) Qualified Products List at www.designlights.org/QPL to confirm specific product qualifications.

Job Name:Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking**Catalog Number:**HHB-24L-U-40-FRL-FIOSPC-HB-XX-
18Y-PAD

Notes:

Type:**H1**

LSI22-52646

HIMALAYAN HIGH BAY

LINEAR HIGH BAY

CONTROLS OPTIONS

BASIC

FIOS

Standard on/off motion sensor. Comes with 360 degree high bay lens, 360 degree low bay lens & aisle lens. 360 degree high bay lens factory installed, unless notified otherwise.

FIOSPC

Motion sensor w/ the addition of photocell control. When installed, fixture will not activate unless 1. motion is detected and 2. light levels are below the preset level. When activated, fixture will turn on to 100% light output & will only shut off when one of the two levels mentioned above are met. If no motion is detected & light levels fall below preset level the fixture remains off.

FIOSPC/DLH

Factory installed motion sensor with the addition of photocell control that will allow for daylight harvesting. When installed, fixture will not activate unless 1. motion is detected & 2. light levels are below the preset level. When activated, fixture will turn on only enough to meet the preset light levels and will adjust as the amount of light in the space adjusts between 100%-10%. If light levels are adequate the fixture will remain off.

DHPC

Daylight Harvesting off photocell. Fixtures will continually dim up/down throughout the day based on light level readings taken from the photocell control.

USBD

User Selectable Bi-Level Dimming. Allows the end user to manually select the unoccupied dimming level. Once motion is detected, the fixture will return to 100% light output.

BDxx

Factory set Bi-Level Dimming. Sensor is set to dim level, as indicated in the "xx" portion of the part number, when the area is unoccupied. Example: BD20 sets the fixture to dim down to 20% lumen output when the area is unoccupied. Once motion is detected, the fixture will return to 100% light output.

BDxxPC

Factory set Bi-Level Dimming with motion and photocell. Sensor is set to dim level, as indicated in the "xx" portion of the part number, when the area is unoccupied and will not return to 100% light output unless 1. motion is detected and 2. the light level is below the preset level. Example: BD20PC sets the fixture to dim down to 20% lumen output when the area is unoccupied and will not return to 100% light output unless the above conditions are met for both motion and light level readings.

ADVANCED

Philips ES/HB

EasySense sensor combines occupancy sensing, daylight harvesting and institutional tuning in one compact solution. This is an ideal control for any high bay application. Each device allows you to turn on/off occupancy and/or daylight harvesting functions as well as set the full light output, background light level, occupancy prolong time, occupancy grace fading time & occupancy time out/hold time. Requires use of EasySense Pre-Programmed Control Device (ES/PCD) & Commissioning IR Blaster (ES/IR); one of each needed per project. (Sold separately)

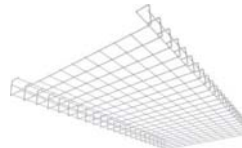
OPTIONS

**CORDx**

Cords available in 6ft, 10ft, 12ft & 20ft
(Inquire for additional options)

**QDCx**

Quick Disconnect Cords available
in 6ft, 10ft, 12ft & 20ft (Inquire for
additional options)

**WC**

11 GA Wire Cage

**HUB 3/4**

Conduit Hub 3/4" for Pendant Mounting

**HOOK**

Cast Iron Hook for Single
Point Mounting

**HB-XX-18Y-PAD**

Includes 2 adjustable cable hangers.
Available in 60", 120", 180" & 240"

**SMBKIT**

Surface Mount Bracket Kit provides
a 2" space above the fixture

**CPMB-WIDE**

Center Point Mounting Box for Single Point
Mounting (must be used with HUB or HOOK)

HHBSPEC0721

Job Name:Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking**Catalog Number:**HHB-24L-U-40-FRL-FIOSPC-HB-XX-
18Y-PAD

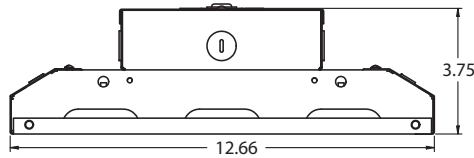
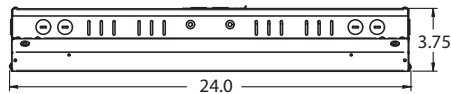
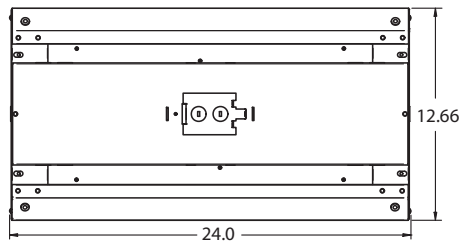
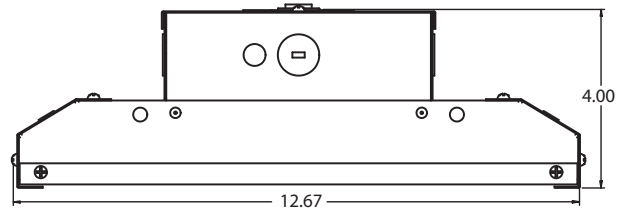
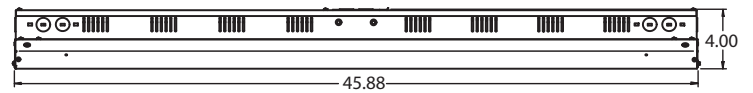
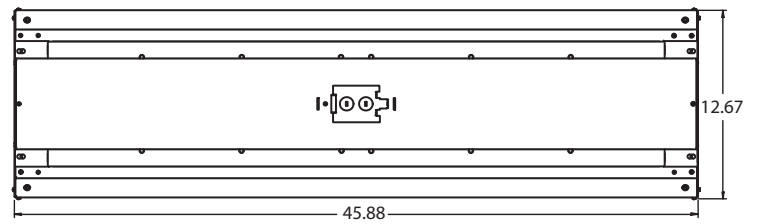
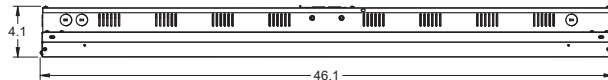
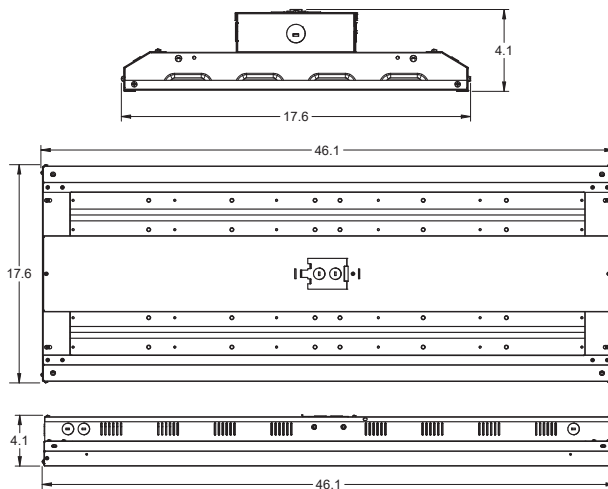
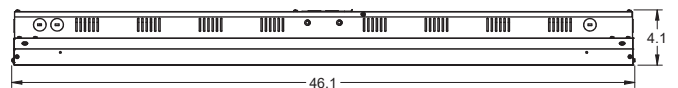
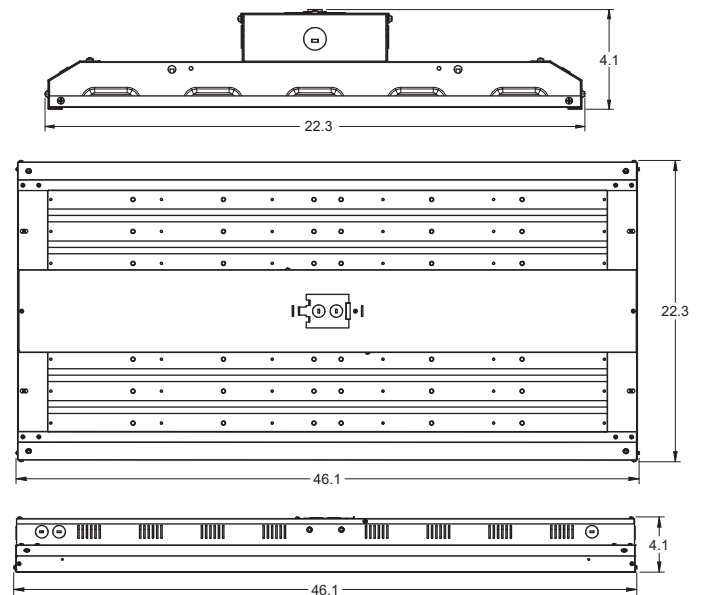
Notes:

Type:**H1**

LSI22-52646

HIMALAYAN HIGH BAY LINEAR HIGH BAY

LINE DRAWINGS

8L, 12L, 18L, & 24L**34L****321W****425W**

Job Name:

Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking

Catalog Number:

HHB-24L-U-40-FRL-FIOSPC-HB-XX-
18Y-PAD

Notes:

Type:

H1

LSI22-52646

HIMALAYAN HIGH BAY

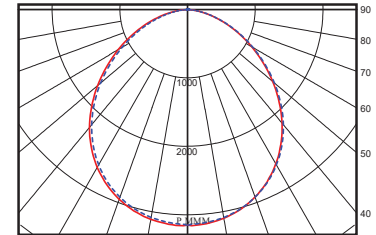
LINEAR HIGH BAY

PHOTOMETRIC DATA

LUMINAIRE DATA	
Part Number	HHB-8L-U-50-FRL
Description	Himalayan High Bay, 8000lm, with frosted acrylic lens
Fixture Lumens (lm)	8,201 lm
Wattage (W)	63 W
Efficacy (lm/W)	131 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.24, 90° = 1.24

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	3,966	48%
0° - 60°	6,739	82%
0° - 90°	8,162	100%
90° - 180°	39	1%
0° - 180°	8,201	100%

CANDELA PLOT

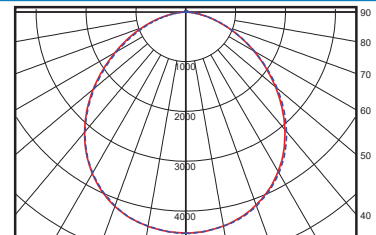


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-12L-U-50-FRL
Description	Himalayan High Bay, 12000lm, with frosted acrylic lens
Fixture Lumens (lm)	11,601 lm
Wattage (W)	89 W
Efficacy (lm/W)	130 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.24, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	5,615	48%
0° - 60°	9,545	82%
0° - 90°	11,557	100%
90° - 180°	45	0%
0° - 180°	11,602	100%

CANDELA PLOT

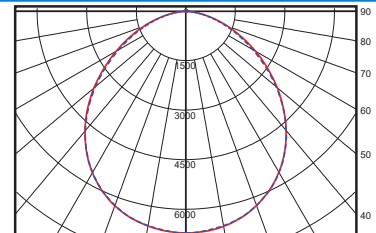


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-18L-U-50-FRL
Description	Himalayan High Bay, 18000lm, with frosted acrylic lens
Fixture Lumens (lm)	17,460 lm
Wattage (W)	134 W
Efficacy (lm/W)	131 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.26, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	8,494	49%
0° - 60°	14,419	83%
0° - 90°	17,393	100%
90° - 180°	69	0%
0° - 180°	17,462	100%

CANDELA PLOT

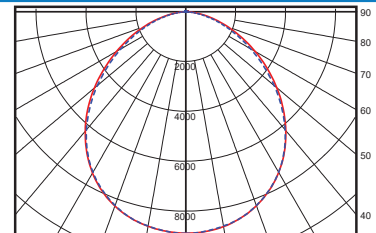


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-24L-U-50-FRL
Description	Himalayan High Bay, 24000lm, with frosted acrylic lens
Fixture Lumens (lm)	22,909 lm
Wattage (W)	179 W
Efficacy (lm/W)	128 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.26, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	11,213	49%
0° - 60°	18,970	83%
0° - 90°	22,821	100%
90° - 180°	62	0%
0° - 180°	22,913	100%

CANDELA PLOT

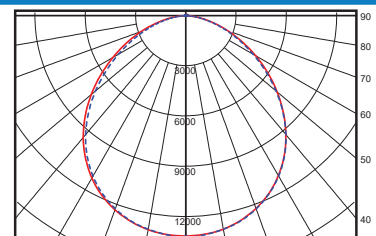


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-34L-U-50-FRL
Description	Himalayan High Bay, 34000lm, with frosted acrylic lens
Fixture Lumens (lm)	34,560 lm
Wattage (W)	268 W
Efficacy (lm/W)	129 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.26, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	16,689	48%
0° - 60°	28,445	82%
0° - 90°	34,425	100%
90° - 180°	139	0%
0° - 180°	34,564	100%

CANDELA PLOT



Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

HHBSPEC0721

Job Name:

Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking

Catalog Number:

HHB-24L-U-40-FRL-FIOSPC-HB-XX-
18Y-PAD-EM10/HE-SD

Notes:

Type:

H1E

LSI22-52646

Project Name:

Part Number:

Type:

HIMALAYAN HIGH BAY
LINEAR HIGH BAY407-478-3759
www.ilp-inc.com

FEATURES

- Post painted white 22 Ga. steel body for maximum rigidity & durability
- 8,000 - 56,000 Lumen Package Range
- Compact housing delivering up to 24,000 lumens in 2ft body
- Impact resistant frosted acrylic lens (included)
- V-Clips for dual chain or cable hanging (included)
- 4000K & 5000K CCT
- >80 Color Rendering Index (CRI)
- Calculated L70 >100,000 Hours
- 0 - 10V Dimmable Driver (100% - 10%)
- 120-277V Universal Driver
- 5 Year Warranty (std); 10 Year Warranty Optional
- UL Listed for Damp Location
- DesignLights Consortium® Qualified Luminaire



8L, 12L, 18L & 24L

34L, 321W & 425W



SUITABLE APPLICATIONS

- Warehouses
- Distribution Centers
- Gymnasiums
- Manufacturing Plants

ORDERING GUIDE:

SERIES	LUMENS/WATTAGE	DRIVER	CCT	PRIMARY LENS	WARRANTY
HHB	8L	U 120-277V	50	FRL Frosted Lens (std.)	BLANK 5 Year
Himalayan High Bay	12L		40	PCL ¹ Clear Polycarbonate Lens	10YR ¹¹ 10 Year
	18L				
	24L				
	34L				
	321W				
	425W				

OPTIONS		CONTROLS OPTIONS	
Factory Installed		Basic	
CORDx	Cord (x = ft)	FIOS	On/Off Occupancy Sensor
QDCx	Quick Disconnect Cord (x = ft)	FIOSPC	On/Off Occupancy Sensor w/ Photocell
EM5 ³	5W LED Factory Installed Battery Backup	FIOSPC/DLH	On/Off Occupancy Sensor w/ Daylight Harvesting
EM5/HE ³	5W LED Factory Installed Battery Backup - CEC Title 20 Compliant	DHPC	Daylight Harvesting
EM7 ³	7W LED Factory Installed Battery Backup	USBD	User Bi-Level Dim Sensor w/ Occ. Sensor
EM7/HE ³	7W LED Factory Installed Battery Backup - CEC Title 20 Compliant	BDxx	Preset Bi-Level Dim Sensor (xx=%eg.20,30)
EM10 ³	10W LED Factory Installed Battery Backup	BDxxPC	Preset Bi-Level Dim Sensor w/ Photocell
EM10/HE ³	10W LED Factory Installed Battery Backup - CEC Title 20 Compliant		
EM10/HE-SD ¹⁰	10W Factory Installed Self-Diagnosing Battery Backup		
EM12 ³	12W LED Factory Installed Battery Backup		
EM20 ³	20W LED Factory Installed Battery Backup - CEC Title 20 Compliant		
EM25 ³	25W LED Factory Installed Battery Backup		
SD480 ²	480V Step Down Transformer		
SD347 ²	347V Step Down Transformer		
HT ⁴	High Temperature Option		
Ship With Accessories		Advanced	
WC ¹	11ga Wire Cage	ES/HB ⁶	EasySense High Bay Sensor
HUB3/4 ⁵	Conduit Hub 3/4" for pendant mount		
HOOK ⁶	Cast Iron Hook for single point mounting		
HB-XX-18Y-PAD	Y-Toggle Cable System (xx = in)		
SMBKIT	Surface Mount Bracket		
CPMB-WIDE	Center Point Mounting Box		
ES/PCD ⁷	EasySense Pre-Programmed Control Device		
ES/IR ⁸	EasySense Commissioning IR Blaster		
ES/WWS/DR	EasySense Dual Rocker Wireless Wall Switch		

¹ Does not qualify for DLC² Does not qualify for DLC on 321W & 425W³ Externally mounted. Cannot be used with CPMB-WIDE, HOOK, SMBKIT or HUB 3/4⁴ Adds 10°F to standard fixture max ambient. ONLY available for 321W & 425W.⁵ Must be used with CPMB-WIDE⁶ Must be used with CPMB-WIDE & Y-Toggle Cable System⁷ One needed per project⁸ Must be used with ES/PCD⁹ Must be used with ES/PCD & ES/IR options for commissioning¹⁰ Operating temp down to 32°F & CEC Title 20 Compliant¹¹ Contact Factory for more details

HHBSPEC0721

Submitted by Lighting Solutions of Iowa		Catalog Number: HHB-24L-U-40-FRL-FIOSPC-HB-XX-18Y-PAD-EM10/HE-SD Notes:	Type: H1E LSI22-52646
lighting solutions	Job Name: Alcoholic Beveragtes Division (ABD) Ankeny (ANK) - Warehouse Racking		

HIMALAYAN HIGH BAY

LINEAR HIGH BAY



QUICK SHIP ITEMS:

SERIES	LUMENS/WATTAGE	DRIVER	COLOR	PRIMARY LENS
HHB Himalayan High Bay	8L	U 120-277V	50	FRL Frosted Lens (std.)
	12L		40	
	18L			
	24L			
	34L			
	321W			
	425W			

LED SYSTEMS INFO

FROSTED LENS 40K	LUMENS	WATTS	EFFICACY	DLC	AMBIENT RANGE	REPLACES
HHB-8L-U-40-FRL	8,104 lm	62 W	130 lm/W	PRM	-4°F - 122°F	100W MH, 4T8
HHB-12L-U-40-FRL	11,548 lm	89 W	129 lm/W	STD	-4°F - 122°F	175W MH, 2T5HO
HHB-18L-U-40-FRL	17,200 lm	137 W	125 lm/W	STD	-4°F - 122°F	250W MH, 4T5HO
HHB-24L-U-40-FRL	22,989 lm	179 W	129 lm/W	STD	-4°F - 122°F	400W MH, 6T5HO
HHB-34L-U-40-FRL	34,560 lm	267 W	130 lm/W	STD	-4°F - 122°F	750W MH, 8T5HO
HHB-321WLED-UNIV-40-FRL	41,405 lm	313 W	132 lm/W	PRM	-4°F - 115°F	1000W MH, 10T5HO
HHB-425WLED-UNIV-40-FRL	55,646 lm	418 W	133 lm/W	PRM	-4°F - 105°F	1000W MH, 12T5HO

LED System data above based on HHB-8L-U-40-FRL, HHB-12L-U-40-FRL, HHB-18L-U-40-FRL,HHB-24L-U-40-FRL, HHB-34L-U-40-FRL, HHB-321WLED-UNIV-40-FRL & HHB-425WLED-UNIV-40-FRL.

FROSTED LENS 50K	LUMENS	WATTS	EFFICACY	DLC	AMBIENT RANGE	REPLACES
HHB-8L-U-50-FRL	8,295 lm	63 W	132 lm/W	PRM	-4°F - 122°F	100W MH, 4T8
HHB-12L-U-50-FRL	11,717 lm	89 W	131 lm/W	PRM	-4°F - 122°F	175W MH, 2T5HO
HHB-18L-U-50-FRL	17,583 lm	133 W	132 lm/W	PRM	-4°F - 122°F	250W MH, 4T5HO
HHB-24L-U-50-FRL	23,187 lm	178 W	130 lm/W	STD	-4°F - 122°F	400W MH, 6T5HO
HHB-34L-U-50-FRL	34,945 lm	267 W	131 lm/W	STD	-4°F - 122°F	750W MH, 8T5HO
HHB-321WLED-UNIV-50-FRL	42,512 lm	318 W	134 lm/W	PRM	-4°F - 115°F	1000W MH, 10T5HO
HHB-425WLED-UNIV-50-FRL	56,660 lm	421 W	135 lm/W	PRM	-4°F - 105°F	1000W MH, 12T5HO

LED System data above based on HHB-8L-U-50-FRL, HHB-12L-U-50-FRL, HHB-18L-U-50-FRL,HHB-24L-U-50-FRL, HHB-34L-U-50-FRL, HHB-321WLED-UNIV-50-FRL & HHB-425WLED-UNIV-50-FRL.

SPECIFICATIONS

CONSTRUCTION

Post painted white 22ga. steel body for maximum rigidity and durability. Knockouts positioned on top and side of driver channel for convenient wiring accessibility.

ELECTRICAL

Class 2 LED light engine for high efficacy & long life. Calculated L70 > 100K hours. LED Lumen Maintenance Estimates based on TM-21 projections for the light source at 25°C ambient. Power Factor > 0.90. Standard 120-277 Vac 0-10V dimmable (10%-100%) w/ optional 347-480 Vac step down transformer. Optional emergency battery backups available to meet critical life safety lighting requirements. Fixture reduced max ambient for emergency battery backup & step down options.

MOUNTING

Options include suspension chain, aircraft cables, hook, single pendant (HUB), surface mount (SMBKIT). Reduced maximum ambient range for surface mount.

WARRANTY

5 Year Warranty Standard; 10 Year Warranty Optional ([Terms and Conditions apply](#)).

OPTICS

Standard with impact resistant frosted acrylic lens (FRL) for added LED glare reduction. Optional clear polycarbonate lens (PCL) available.

THERMAL

Ambient temperature range -4°F to 122°F for 8L to 34L configurations. -4°F to 115°F for 321W configuration. -4°F to 105°F for 425W configuration. High Temperature (HT) option available for 321W & 425W to increase maximum ambient temperature by 10°F.

CONTROLS

Factory installed Advanced & Basic integral occupancy sensor options available. All sensors are end fixture mounted through knockout. Inquire with manufacturer for additional controls options, including customer supplied items.

CERTIFICATIONS

UL Listed to US and Canadian safety standards. Suitable for damp locations. Please refer to the DLC (DesignLights Consortium) Qualified Products List at www.designlights.org/QPL to confirm specific product qualifications.

Job Name:Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking**Catalog Number:**HHB-24L-U-40-FRL-FIOSPC-HB-XX-
18Y-PAD-EM10/HE-SD

Notes:

Type:**H1E**

LSI22-52646

HIMALAYAN HIGH BAY

LINEAR HIGH BAY

CONTROLS OPTIONS

BASIC

FIOS

Standard on/off motion sensor. Comes with 360 degree high bay lens, 360 degree low bay lens & aisle lens. 360 degree high bay lens factory installed, unless notified otherwise.

FIOSPC

Motion sensor w/ the addition of photocell control. When installed, fixture will not activate unless 1. motion is detected and 2. light levels are below the preset level. When activated, fixture will turn on to 100% light output & will only shut off when one of the two levels mentioned above are met. If no motion is detected & light levels fall below preset level the fixture remains off.

FIOSPC/DLH

Factory installed motion sensor with the addition of photocell control that will allow for daylight harvesting. When installed, fixture will not activate unless 1. motion is detected & 2. light levels are below the preset level. When activated, fixture will turn on only enough to meet the preset light levels and will adjust as the amount of light in the space adjusts between 100%-10%. If light levels are adequate the fixture will remain off.

DHPC

Daylight Harvesting off photocell. Fixtures will continually dim up/down throughout the day based on light level readings taken from the photocell control.

USBD

User Selectable Bi-Level Dimming. Allows the end user to manually select the unoccupied dimming level. Once motion is detected, the fixture will return to 100% light output.

BDxx

Factory set Bi-Level Dimming. Sensor is set to dim level, as indicated in the "xx" portion of the part number, when the area is unoccupied. Example: BD20 sets the fixture to dim down to 20% lumen output when the area is unoccupied. Once motion is detected, the fixture will return to 100% light output.

BDxxPC

Factory set Bi-Level Dimming with motion and photocell. Sensor is set to dim level, as indicated in the "xx" portion of the part number, when the area is unoccupied and will not return to 100% light output unless 1. motion is detected and 2. the light level is below the preset level. Example: BD20PC sets the fixture to dim down to 20% lumen output when the area is unoccupied and will not return to 100% light output unless the above conditions are met for both motion and light level readings.

ADVANCED

Philips ES/HB

EasySense sensor combines occupancy sensing, daylight harvesting and institutional tuning in one compact solution. This is an ideal control for any high bay application. Each device allows you to turn on/off occupancy and/or daylight harvesting functions as well as set the full light output, background light level, occupancy prolong time, occupancy grace fading time & occupancy time out/hold time. Requires use of EasySense Pre-Programmed Control Device (ES/PCD) & Commissioning IR Blaster (ES/IR); one of each needed per project. (Sold separately)

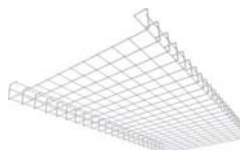
OPTIONS

**CORDx**

Cords available in 6ft, 10ft, 12ft & 20ft
(Inquire for additional options)

**QDCx**

Quick Disconnect Cords available
in 6ft, 10ft, 12ft & 20ft (Inquire for
additional options)

**WC**

11 GA Wire Cage

**HUB 3/4**

Conduit Hub 3/4" for Pendant Mounting

**HOOK**

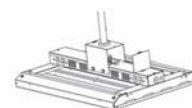
Cast Iron Hook for Single
Point Mounting

**HB-XX-18Y-PAD**

Includes 2 adjustable cable hangers.
Available in 60", 120", 180" & 240"

**SMBKIT**

Surface Mount Bracket Kit provides
a 2" space above the fixture

**CPMB-WIDE**

Center Point Mounting Box for Single Point
Mounting (must be used with HUB or HOOK)

HHBSPEC0721

Job Name:Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking**Catalog Number:**HHB-24L-U-40-FRL-FIOSPC-HB-XX-
18Y-PAD-EM10/HE-SD

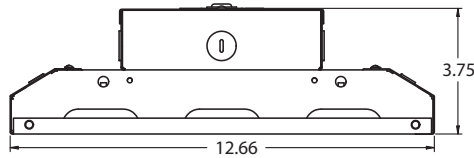
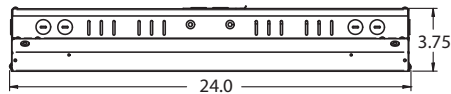
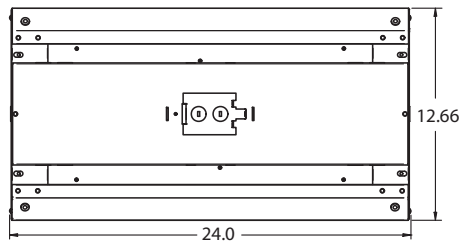
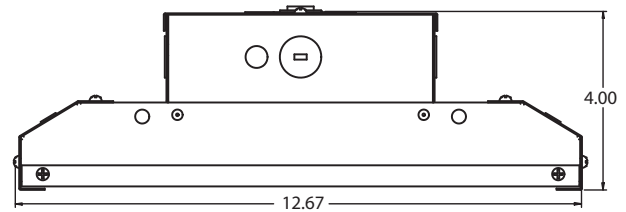
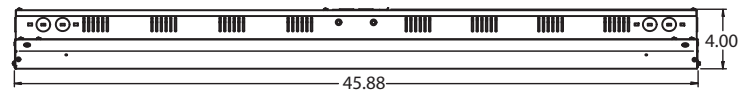
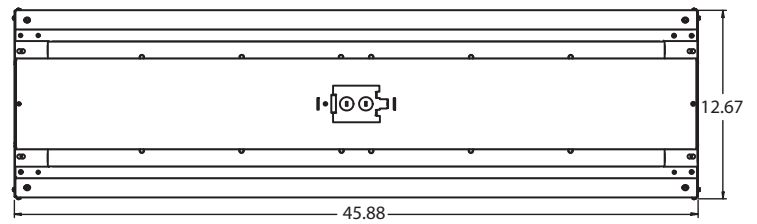
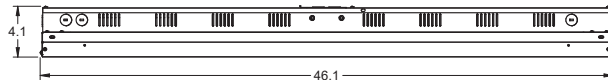
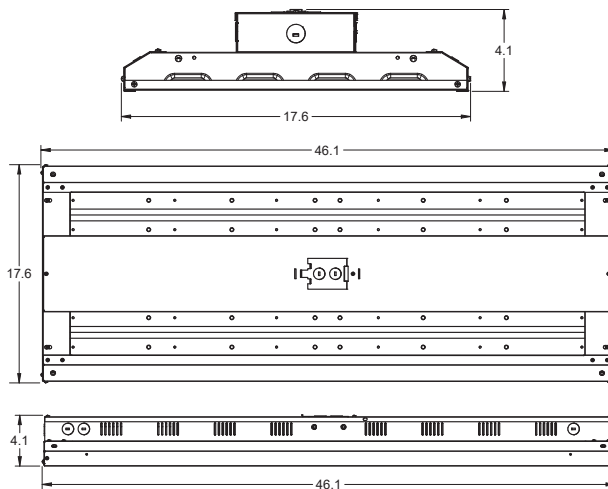
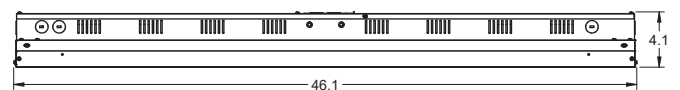
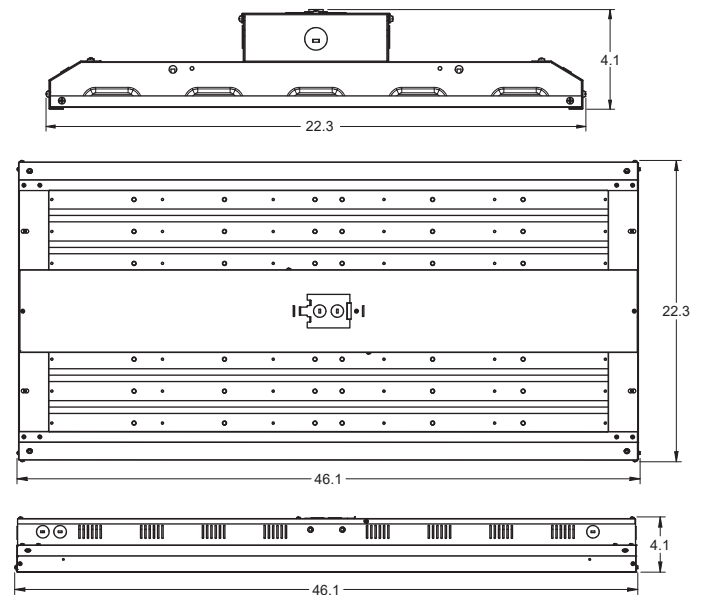
Notes:

Type:**H1E**

LSI22-52646

HIMALAYAN HIGH BAY LINEAR HIGH BAY

LINE DRAWINGS

8L, 12L, 18L, & 24L**34L****321W****425W**

Job Name:

Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking

Catalog Number:

HHB-24L-U-40-FRL-FIOSPC-HB-XX-
18Y-PAD-EM10/HE-SD

Notes:

Type:

H1E

LSI22-52646

HIMALAYAN HIGH BAY

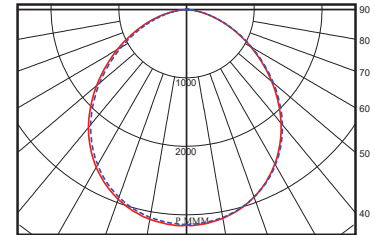
LINEAR HIGH BAY

PHOTOMETRIC DATA

LUMINAIRE DATA	
Part Number	HHB-8L-U-50-FRL
Description	Himalayan High Bay, 8000lm, with frosted acrylic lens
Fixture Lumens (lm)	8,201 lm
Wattage (W)	63 W
Efficacy (lm/W)	131 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.24, 90° = 1.24

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	3,966	48%
0° - 60°	6,739	82%
0° - 90°	8,162	100%
90° - 180°	39	1%
0° - 180°	8,201	100%

CANDELA PLOT

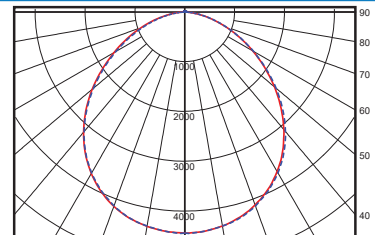


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-12L-U-50-FRL
Description	Himalayan High Bay, 12000lm, with frosted acrylic lens
Fixture Lumens (lm)	11,601 lm
Wattage (W)	89 W
Efficacy (lm/W)	130 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.24, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	5,615	48%
0° - 60°	9,545	82%
0° - 90°	11,557	100%
90° - 180°	45	0%
0° - 180°	11,602	100%

CANDELA PLOT

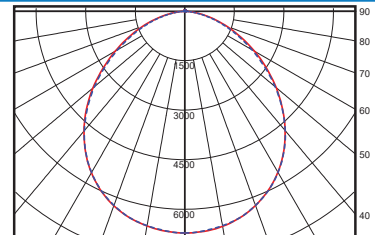


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-18L-U-50-FRL
Description	Himalayan High Bay, 18000lm, with frosted acrylic lens
Fixture Lumens (lm)	17,460 lm
Wattage (W)	134 W
Efficacy (lm/W)	131 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.26, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	8,494	49%
0° - 60°	14,419	83%
0° - 90°	17,393	100%
90° - 180°	69	0%
0° - 180°	17,462	100%

CANDELA PLOT

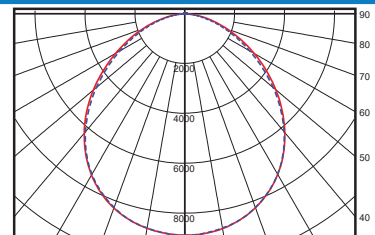


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-24L-U-50-FRL
Description	Himalayan High Bay, 24000lm, with frosted acrylic lens
Fixture Lumens (lm)	22,909 lm
Wattage (W)	179 W
Efficacy (lm/W)	128 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.26, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	11,213	49%
0° - 60°	18,970	83%
0° - 90°	22,821	100%
90° - 180°	62	0%
0° - 180°	22,913	100%

CANDELA PLOT

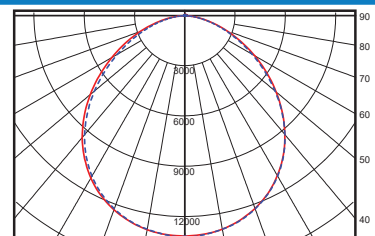


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-34L-U-50-FRL
Description	Himalayan High Bay, 34000lm, with frosted acrylic lens
Fixture Lumens (lm)	34,560 lm
Wattage (W)	268 W
Efficacy (lm/W)	129 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.26, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	16,689	48%
0° - 60°	28,445	82%
0° - 90°	34,425	100%
90° - 180°	139	0%
0° - 180°	34,564	100%

CANDELA PLOT



Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

HHBSPEC0721

Submitted by Lighting Solutions of Iowa		Catalog Number: HHB-24L-U-40-FRL-FIOSPC-HB-XX-18Y-PAD	Type: H2
lighting solutions	Job Name: Alcoholic Beverages Division (ABD) Ankeny (ANK) - Warehouse Racking	Notes:	LSI22-52646

Project Name:	Part Number:	Type:
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HIMALAYAN HIGH BAY

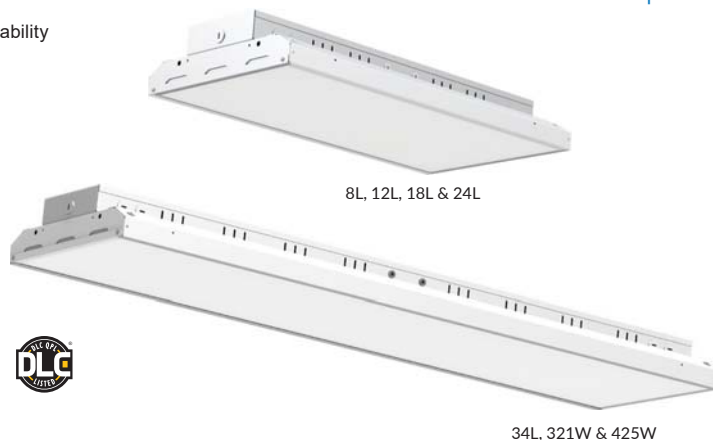
LINEAR HIGH BAY



407-478-3759
www.ilp-inc.com

FEATURES

- Post painted white 22 Ga. steel body for maximum rigidity & durability
- 8,000 - 56,000 Lumen Package Range
- Compact housing delivering up to 24,000 lumens in 2ft body
- Impact resistant frosted acrylic lens (included)
- V-Clips for dual chain or cable hanging (included)
- 4000K & 5000K CCT
- >80 Color Rendering Index (CRI)
- Calculated L70 >100,000 Hours
- 0 - 10V Dimmable Driver (100% - 10%)
- 120-277V Universal Driver
- 5 Year Warranty (std); 10 Year Warranty Optional
- UL Listed for Damp Location
- DesignLights Consortium® Qualified Luminaire



SUITABLE APPLICATIONS

- Warehouses
- Distribution Centers
- Gymnasiums
- Manufacturing Plants

ORDERING GUIDE:

SERIES	LUMENS/WATTAGE	DRIVER	CCT	PRIMARY LENS	WARRANTY
HHB	8L	U 120-277V	50	FRL Frosted Lens (std.)	BLANK 5 Year
Himalayan High Bay	12L		40	PCL¹ Clear Polycarbonate Lens	10YR¹¹ 10 Year
	18L				
	24L				
	34L				
	321W				
	425W				

OPTIONS		CONTROLS OPTIONS	
Factory Installed		Basic	
CORDx	Cord (x = ft)	FIOS	On/Off Occupancy Sensor
QDCx	Quick Disconnect Cord (x = ft)	FIOSPC	On/Off Occupancy Sensor w/ Photocell
EM5³	5W LED Factory Installed Battery Backup	FIOSPC/DLH	On/Off Occupancy Sensor w/ Daylight Harvesting
EM5/HE³	5W LED Factory Installed Battery Backup - CEC Title 20 Compliant	DHPC	Daylight Harvesting
EM7³	7W LED Factory Installed Battery Backup	USBD	User Bi-Level Dim Sensor w/ Occ. Sensor
EM7/HE³	7W LED Factory Installed Battery Backup - CEC Title 20 Compliant	BDxx	Preset Bi-Level Dim Sensor (xx=%eg.20,30)
EM10³	10W LED Factory Installed Battery Backup	BDxxPC	Preset Bi-Level Dim Sensor w/ Photocell
EM10/HE³	10W LED Factory Installed Battery Backup - CEC Title 20 Compliant		
EM10/HE-SD¹⁰	10W Factory Installed Self-Diagnosing Battery Backup		
EM12³	12W LED Factory Installed Battery Backup		
EM20³	20W LED Factory Installed Battery Backup - CEC Title 20 Compliant		
EM25³	25W LED Factory Installed Battery Backup		
SD480²	480V Step Down Transformer		
SD347²	347V Step Down Transformer		
HT⁴	High Temperature Option		
Ship With Accessories		Advanced	
WC¹	11ga Wire Cage	ES/HB⁶	EasySense High Bay Sensor
HUB3/4⁵	Conduit Hub 3/4" for pendant mount		
HOOK⁶	Cast Iron Hook for single point mounting		
HB-XX-18Y-PAD	Y-Toggle Cable System (xx = in)		
SMBKIT	Surface Mount Bracket		
CPMB-WIDE	Center Point Mounting Box		
ES/PCD⁷	EasySense Pre-Programmed Control Device		
ES/IR⁸	EasySense Commissioning IR Blaster		
ES/WWS/DR	EasySense Dual Rocker Wireless Wall Switch		

¹ Does not qualify for DLC

² Does not qualify for DLC on 321W & 425W

³ Externally mounted. Cannot be used with CPMB-WIDE, HOOK, SMBKIT or HUB 3/4

⁴ Adds 10°F to standard fixture max ambient. ONLY available for 321W & 425W.

⁵ Must be used with CPMB-WIDE

⁶ Must be used with CPMB-WIDE & Y-Toggle Cable System

⁷ One needed per project

⁸ Must be used with ES/PCD

⁹ Must be used with ES/PCD & ES/IR options for commissioning

¹⁰ Operating temp down to 32°F & CEC Title 20 Compliant

¹¹ Contact Factory for more details

HHBSPEC0721

Submitted by Lighting Solutions of Iowa		Catalog Number: HHB-24L-U-40-FRL-FIOSPC-HB-XX-18Y-PAD	Type: H2
lighting solutions	Job Name: Alcoholic Beveragtes Division (ABD) Ankeny (ANK) - Warehouse Racking	Notes:	LSI22-52646

HIMALAYAN HIGH BAY

LINEAR HIGH BAY



QUICK SHIP ITEMS:

SERIES	LUMENS/WATTAGE	DRIVER	COLOR	PRIMARY LENS
HHB Himalayan High Bay	8L 12L 18L 24L 34L 321W 425W	U 120-277V	50 40	FRL Frosted Lens (std.)

LED SYSTEMS INFO

FROSTED LENS 40K	LUMENS	WATTS	EFFICACY	DLC	AMBIENT RANGE	REPLACES
HHB-8L-U-40-FRL	8,104 lm	62 W	130 lm/W	PRM	-4°F - 122°F	100W MH, 4T8
HHB-12L-U-40-FRL	11,548 lm	89 W	129 lm/W	STD	-4°F - 122°F	175W MH, 2T5HO
HHB-18L-U-40-FRL	17,200 lm	137 W	125 lm/W	STD	-4°F - 122°F	250W MH, 4T5HO
HHB-24L-U-40-FRL	22,989 lm	179 W	129 lm/W	STD	-4°F - 122°F	400W MH, 6T5HO
HHB-34L-U-40-FRL	34,560 lm	267 W	130 lm/W	STD	-4°F - 122°F	750W MH, 8T5HO
HHB-321WLED-UNIV-40-FRL	41,405 lm	313 W	132 lm/W	PRM	-4°F - 115°F	1000W MH, 10T5HO
HHB-425WLED-UNIV-40-FRL	55,646 lm	418 W	133 lm/W	PRM	-4°F - 105°F	1000W MH, 12T5HO

LED System data above based on HHB-8L-U-40-FRL, HHB-12L-U-40-FRL, HHB-18L-U-40-FRL, HHB-24L-U-40-FRL, HHB-34L-U-40-FRL, HHB-321WLED-UNIV-40-FRL & HHB-425WLED-UNIV-40-FRL.

FROSTED LENS 50K	LUMENS	WATTS	EFFICACY	DLC	AMBIENT RANGE	REPLACES
HHB-8L-U-50-FRL	8,295 lm	63 W	132 lm/W	PRM	-4°F - 122°F	100W MH, 4T8
HHB-12L-U-50-FRL	11,717 lm	89 W	131 lm/W	PRM	-4°F - 122°F	175W MH, 2T5HO
HHB-18L-U-50-FRL	17,583 lm	133 W	132 lm/W	PRM	-4°F - 122°F	250W MH, 4T5HO
HHB-24L-U-50-FRL	23,187 lm	178 W	130 lm/W	STD	-4°F - 122°F	400W MH, 6T5HO
HHB-34L-U-50-FRL	34,945 lm	267 W	131 lm/W	STD	-4°F - 122°F	750W MH, 8T5HO
HHB-321WLED-UNIV-50-FRL	42,512 lm	318 W	134 lm/W	PRM	-4°F - 115°F	1000W MH, 10T5HO
HHB-425WLED-UNIV-50-FRL	56,660 lm	421 W	135 lm/W	PRM	-4°F - 105°F	1000W MH, 12T5HO

LED System data above based on HHB-8L-U-50-FRL, HHB-12L-U-50-FRL, HHB-18L-U-50-FRL, HHB-24L-U-50-FRL, HHB-34L-U-50-FRL, HHB-321WLED-UNIV-50-FRL & HHB-425WLED-UNIV-50-FRL.

SPECIFICATIONS

CONSTRUCTION

Post painted white 22ga. steel body for maximum rigidity and durability. Knockouts positioned on top and side of driver channel for convenient wiring accessibility.

ELECTRICAL

Class 2 LED light engine for high efficacy & long life. Calculated L70 > 100K hours. LED Lumen Maintenance Estimates based on TM-21 projections for the light source at 25°C ambient. Power Factor > 0.90. Standard 120-277 Vac 0-10V dimmable (10%-100%) w/ optional 347-480 Vac step down transformer. Optional emergency battery backups available to meet critical life safety lighting requirements. Fixture reduced max ambient for emergency battery backup & step down options.

MOUNTING

Options include suspension chain, aircraft cables, hook, single pendant (HUB), surface mount (SMBKIT). Reduced maximum ambient range for surface mount.

WARRANTY

5 Year Warranty Standard; 10 Year Warranty Optional ([Terms and Conditions apply](#)).

OPTICS

Standard with impact resistant frosted acrylic lens (FRL) for added LED glare reduction. Optional clear polycarbonate lens (PCL) available.

THERMAL

Ambient temperature range -4°F to 122°F for 8L to 34L configurations. -4°F to 115°F for 321W configuration. -4°F to 105°F for 425W configuration. High Temperature (HT) option available for 321W & 425W to increase maximum ambient temperature by 10°F.

CONTROLS

Factory installed Advanced & Basic integral occupancy sensor options available. All sensors are end fixture mounted through knockout. Inquire with manufacturer for additional controls options, including customer supplied items.

CERTIFICATIONS

UL Listed to US and Canadian safety standards. Suitable for damp locations. Please refer to the DLC (DesignLights Consortium) Qualified Products List at www.designlights.org/QPL to confirm specific product qualifications.

Job Name:Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking**Catalog Number:**HHB-24L-U-40-FRL-FIOSPC-HB-XX-
18Y-PAD

Notes:

Type:**H2**

LSI22-52646

HIMALAYAN HIGH BAY

LINEAR HIGH BAY

CONTROLS OPTIONS

BASIC

FIOS

Standard on/off motion sensor. Comes with 360 degree high bay lens, 360 degree low bay lens & aisle lens. 360 degree high bay lens factory installed, unless notified otherwise.

FIOSPC

Motion sensor w/ the addition of photocell control. When installed, fixture will not activate unless 1. motion is detected and 2. light levels are below the preset level. When activated, fixture will turn on to 100% light output & will only shut off when one of the two levels mentioned above are met. If no motion is detected & light levels fall below preset level the fixture remains off.

FIOSPC/DLH

Factory installed motion sensor with the addition of photocell control that will allow for daylight harvesting. When installed, fixture will not activate unless 1. motion is detected & 2. light levels are below the preset level. When activated, fixture will turn on only enough to meet the preset light levels and will adjust as the amount of light in the space adjusts between 100%-10%. If light levels are adequate the fixture will remain off.

DHPC

Daylight Harvesting off photocell. Fixtures will continually dim up/down throughout the day based on light level readings taken from the photocell control.

USBD

User Selectable Bi-Level Dimming. Allows the end user to manually select the unoccupied dimming level. Once motion is detected, the fixture will return to 100% light output.

BDxx

Factory set Bi-Level Dimming. Sensor is set to dim level, as indicated in the "xx" portion of the part number, when the area is unoccupied. Example: BD20 sets the fixture to dim down to 20% lumen output when the area is unoccupied. Once motion is detected, the fixture will return to 100% light output.

BDxxPC

Factory set Bi-Level Dimming with motion and photocell. Sensor is set to dim level, as indicated in the "xx" portion of the part number, when the area is unoccupied and will not return to 100% light output unless 1. motion is detected and 2. the light level is below the preset level. Example: BD20PC sets the fixture to dim down to 20% lumen output when the area is unoccupied and will not return to 100% light output unless the above conditions are met for both motion and light level readings.

ADVANCED

Philips ES/HB

EasySense sensor combines occupancy sensing, daylight harvesting and institutional tuning in one compact solution. This is an ideal control for any high bay application. Each device allows you to turn on/off occupancy and/or daylight harvesting functions as well as set the full light output, background light level, occupancy prolong time, occupancy grace fading time & occupancy time out/hold time. Requires use of EasySense Pre-Programmed Control Device (ES/PCD) & Commissioning IR Blaster (ES/IR); one of each needed per project. (Sold separately)

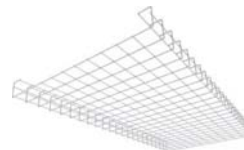
OPTIONS

**CORDx**

Cords available in 6ft, 10ft, 12ft & 20ft
(Inquire for additional options)

**QDCx**

Quick Disconnect Cords available
in 6ft, 10ft, 12ft & 20ft (Inquire for
additional options)

**WC**

11 GA Wire Cage

**HUB 3/4**

Conduit Hub 3/4" for Pendant Mounting

**HOOK**

Cast Iron Hook for Single
Point Mounting

**HB-XX-18Y-PAD**

Includes 2 adjustable cable hangers.
Available in 60", 120", 180" & 240"

**SMBKIT**

Surface Mount Bracket Kit provides
a 2" space above the fixture

**CPMB-WIDE**

Center Point Mounting Box for Single Point
Mounting (must be used with HUB or HOOK)

HHBSPEC0721

Job Name:Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking**Catalog Number:**HHB-24L-U-40-FRL-FIOSPC-HB-XX-
18Y-PAD

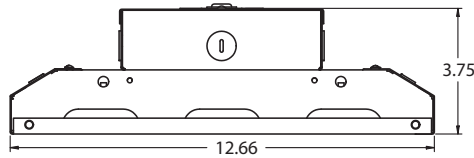
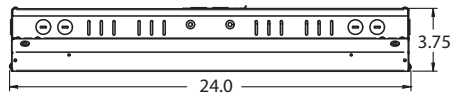
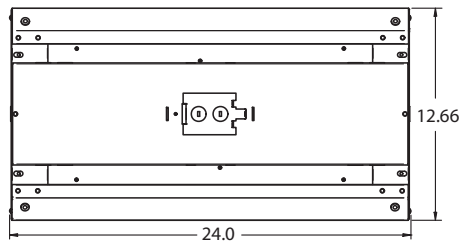
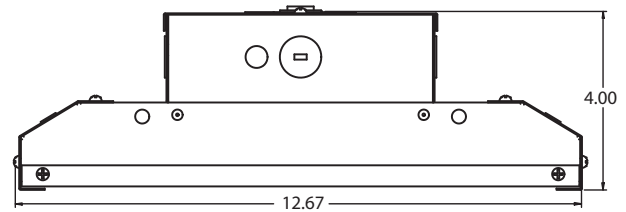
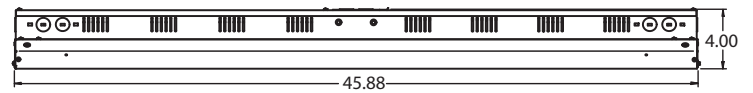
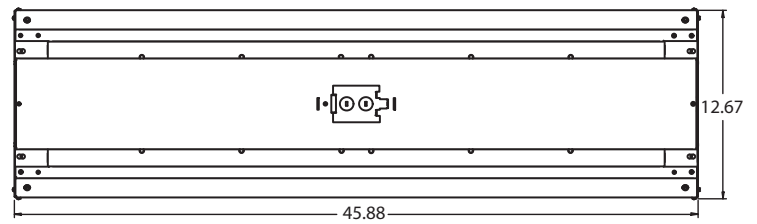
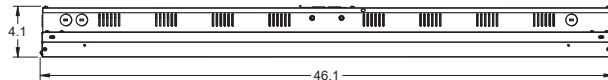
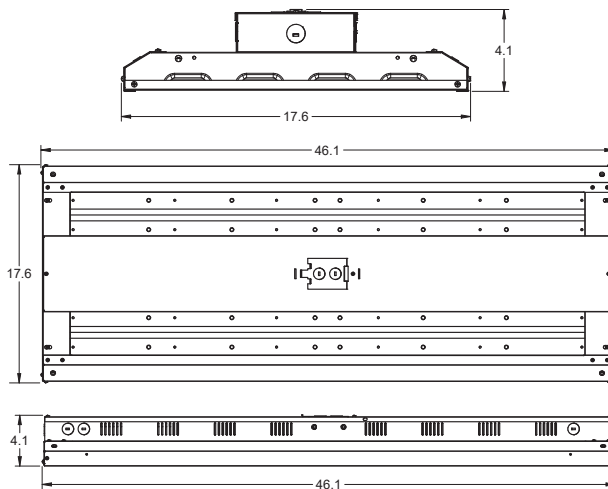
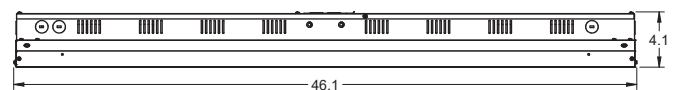
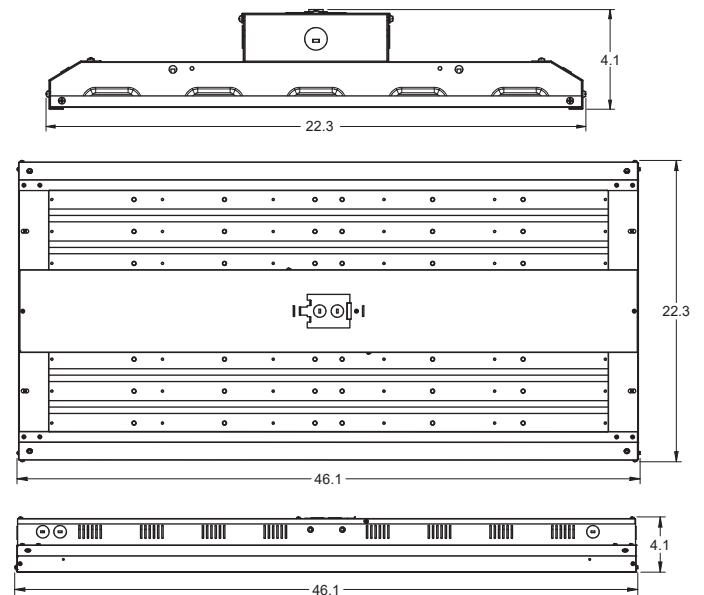
Notes:

Type:**H2**

LSI22-52646

HIMALAYAN HIGH BAY LINEAR HIGH BAY

LINE DRAWINGS

8L, 12L, 18L, & 24L**34L****321W****425W**

Job Name:

Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking

Catalog Number:

HHB-24L-U-40-FRL-FIOSPC-HB-XX-
18Y-PAD

Notes:

Type:

H2

LSI22-52646

HIMALAYAN HIGH BAY

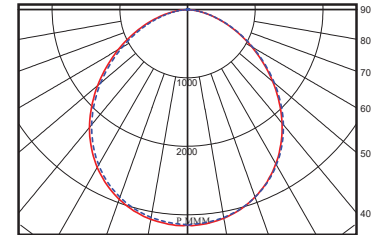
LINEAR HIGH BAY

PHOTOMETRIC DATA

LUMINAIRE DATA	
Part Number	HHB-8L-U-50-FRL
Description	Himalayan High Bay, 8000lm, with frosted acrylic lens
Fixture Lumens (lm)	8,201 lm
Wattage (W)	63 W
Efficacy (lm/W)	131 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.24, 90° = 1.24

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	3,966	48%
0° - 60°	6,739	82%
0° - 90°	8,162	100%
90° - 180°	39	1%
0° - 180°	8,201	100%

CANDELA PLOT

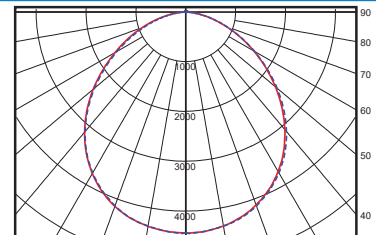


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-12L-U-50-FRL
Description	Himalayan High Bay, 12000lm, with frosted acrylic lens
Fixture Lumens (lm)	11,601 lm
Wattage (W)	89 W
Efficacy (lm/W)	130 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.24, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	5,615	48%
0° - 60°	9,545	82%
0° - 90°	11,557	100%
90° - 180°	45	0%
0° - 180°	11,602	100%

CANDELA PLOT

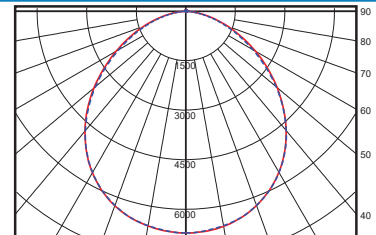


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-18L-U-50-FRL
Description	Himalayan High Bay, 18000lm, with frosted acrylic lens
Fixture Lumens (lm)	17,460 lm
Wattage (W)	134 W
Efficacy (lm/W)	131 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.26, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	8,494	49%
0° - 60°	14,419	83%
0° - 90°	17,393	100%
90° - 180°	69	0%
0° - 180°	17,462	100%

CANDELA PLOT

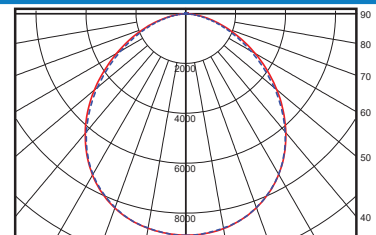


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-24L-U-50-FRL
Description	Himalayan High Bay, 24000lm, with frosted acrylic lens
Fixture Lumens (lm)	22,909 lm
Wattage (W)	179 W
Efficacy (lm/W)	128 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.26, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	11,213	49%
0° - 60°	18,970	83%
0° - 90°	22,821	100%
90° - 180°	62	0%
0° - 180°	22,913	100%

CANDELA PLOT

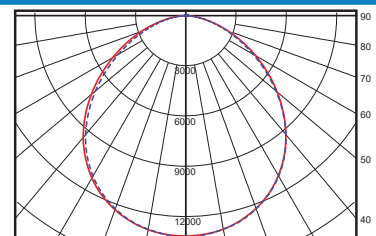


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-34L-U-50-FRL
Description	Himalayan High Bay, 34000lm, with frosted acrylic lens
Fixture Lumens (lm)	34,560 lm
Wattage (W)	268 W
Efficacy (lm/W)	129 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.26, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	16,689	48%
0° - 60°	28,445	82%
0° - 90°	34,425	100%
90° - 180°	139	0%
0° - 180°	34,564	100%

CANDELA PLOT



Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

HHBSPEC0721

Submitted by Lighting Solutions of Iowa		Catalog Number: HHB-24L-U-40-FRL-FIOS-HB-XX-18Y-PAD	Type: H2E
lighting solutions	Job Name: Alcoholic Beverages Division (ABD) Ankeny (ANK) - Warehouse Racking	Notes:	LSI22-52646

Project Name:	Part Number:	Type:
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HIMALAYAN HIGH BAY

LINEAR HIGH BAY



407-478-3759
www.ilp-inc.com

FEATURES

- Post painted white 22 Ga. steel body for maximum rigidity & durability
- 8,000 - 56,000 Lumen Package Range
- Compact housing delivering up to 24,000 lumens in 2ft body
- Impact resistant frosted acrylic lens (included)
- V-Clips for dual chain or cable hanging (included)
- 4000K & 5000K CCT
- >80 Color Rendering Index (CRI)
- Calculated L70 >100,000 Hours
- 0 - 10V Dimmable Driver (100% - 10%)
- 120-277V Universal Driver
- 5 Year Warranty (std); 10 Year Warranty Optional
- UL Listed for Damp Location
- DesignLights Consortium® Qualified Luminaire



SUITABLE APPLICATIONS

- Warehouses
- Distribution Centers
- Gymnasiums
- Manufacturing Plants

ORDERING GUIDE:

SERIES	LUMENS/WATTAGE	DRIVER	CCT	PRIMARY LENS	WARRANTY
HHB	8L	U 120-277V	50	FRL Frosted Lens (std.)	BLANK 5 Year
Himalayan High Bay	12L		40	PCL ¹ Clear Polycarbonate Lens	10YR ¹¹ 10 Year
	18L				
	24L				
	34L				
	321W				
	425W				

OPTIONS		CONTROLS OPTIONS	
Factory Installed		Basic	
CORDx	Cord (x = ft)	FIOS	On/Off Occupancy Sensor
QDCx	Quick Disconnect Cord (x = ft)	FIOSPC	On/Off Occupancy Sensor w/ Photocell
EM5 ³	5W LED Factory Installed Battery Backup	FIOSPC/DLH	On/Off Occupancy Sensor w/ Daylight Harvesting
EM5/HE ³	5W LED Factory Installed Battery Backup - CEC Title 20 Compliant	DHPC	Daylight Harvesting
EM7 ³	7W LED Factory Installed Battery Backup	USBD	User Bi-Level Dim Sensor w/ Occ. Sensor
EM7/HE ³	7W LED Factory Installed Battery Backup - CEC Title 20 Compliant	BDxx	Preset Bi-Level Dim Sensor (xx=%eg.20,30)
EM10 ³	10W LED Factory Installed Battery Backup	BDxxPC	Preset Bi-Level Dim Sensor w/ Photocell
EM10/HE ³	10W LED Factory Installed Battery Backup - CEC Title 20 Compliant		
EM10/HE-SD ¹⁰	10W Factory Installed Self-Diagnosing Battery Backup		
EM12 ³	12W LED Factory Installed Battery Backup		
EM20 ³	20W LED Factory Installed Battery Backup - CEC Title 20 Compliant		
EM25 ³	25W LED Factory Installed Battery Backup		
SD480 ²	480V Step Down Transformer		
SD347 ²	347V Step Down Transformer		
HT ⁴	High Temperature Option		
Ship With Accessories		Advanced	
WC ¹	11ga Wire Cage	ES/HB ⁶	EasySense High Bay Sensor
HUB3/4 ⁵	Conduit Hub 3/4" for pendant mount		
HOOK ⁶	Cast Iron Hook for single point mounting		
HB-XX-18Y-PAD	Y-Toggle Cable System (xx = in)		
SMBKIT	Surface Mount Bracket		
CPMB-WIDE	Center Point Mounting Box		
ES/PCD ⁷	EasySense Pre-Programmed Control Device		
ES/IR ⁸	EasySense Commissioning IR Blaster		
ES/WWS/DR	EasySense Dual Rocker Wireless Wall Switch		

¹ Does not qualify for DLC

² Does not qualify for DLC on 321W & 425W

³ Externally mounted. Cannot be used with CPMB-WIDE, HOOK, SMBKIT or HUB 3/4

⁴ Adds 10°F to standard fixture max ambient. ONLY available for 321W & 425W.

⁵ Must be used with CPMB-WIDE

⁶ Must be used with CPMB-WIDE & Y-Toggle Cable System

⁷ One needed per project

⁸ Must be used with ES/PCD

⁹ Must be used with ES/PCD & ES/IR options for commissioning

¹⁰ Operating temp down to 32°F & CEC Title 20 Compliant

¹¹ Contact Factory for more details

HHBSPEC0721

Submitted by Lighting Solutions of Iowa		Catalog Number: HHB-24L-U-40-FRL-FIOS-HB-XX-18Y-PAD Notes:	Type: H2E LSI22-52646
lighting solutions	Job Name: Alcoholic Beveragtes Division (ABD) Ankeny (ANK) - Warehouse Racking		

HIMALAYAN HIGH BAY

LINEAR HIGH BAY



QUICK SHIP ITEMS:

SERIES	LUMENS/WATTAGE	DRIVER	COLOR	PRIMARY LENS
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HHB-18L-U-40-FRL	17,200 lm	137 W	125 lm/W	STD	-4°F - 122°F	250W MH, 4T5HO
HHB-24L-U-40-FRL	22,989 lm	179 W	129 lm/W	STD	-4°F - 122°F	400W MH, 6T5HO
HHB-34L-U-40-FRL	34,560 lm	267 W	130 lm/W	STD	-4°F - 122°F	750W MH, 8T5HO
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HHB-425WLED-UNIV-40-FRL	55,646 lm	418 W	133 lm/W	PRM	-4°F - 105°F	1000W MH, 12T5HO

LED System data above based on HHB-8L-U-40-FRL, HHB-12L-U-40-FRL, HHB-18L-U-40-FRL, HHB-24L-U-40-FRL, HHB-34L-U-40-FRL, HHB-321WLED-UNIV-40-FRL & HHB-425WLED-UNIV-40-FRL.

FROSTED LENS 50K	LUMENS	WATTS	EFFICACY	DLC	AMBIENT RANGE	REPLACES
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HHB-12L-U-50-FRL	11,717 lm	89 W	131 lm/W	PRM	-4°F - 122°F	175W MH, 2T5HO
HHB-18L-U-50-FRL	17,583 lm	133 W	132 lm/W	PRM	-4°F - 122°F	250W MH, 4T5HO
HHB-24L-U-50-FRL	23,187 lm	178 W	130 lm/W	STD	-4°F - 122°F	400W MH, 6T5HO
HHB-34L-U-50-FRL	34,945 lm	267 W	131 lm/W	STD	-4°F - 122°F	750W MH, 8T5HO
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HHB-425WLED-UNIV-50-FRL	56,660 lm	421 W	135 lm/W	PRM	-4°F - 105°F	1000W MH, 12T5HO

LED System data above based on HHB-8L-U-50-FRL, HHB-12L-U-50-FRL, HHB-18L-U-50-FRL, HHB-24L-U-50-FRL, HHB-34L-U-50-FRL, HHB-321WLED-UNIV-50-FRL & HHB-425WLED-UNIV-50-FRL.

SPECIFICATIONS

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ELECTRICAL

Class 2 LED light engine for high efficacy & long life. Calculated L70 > 100K hours. LED Lumen Maintenance Estimates based on TM-21 projections for the light source at 25°C ambient. Power Factor > 0.90. Standard 120-277 Vac 0-10V dimmable (10%-100%) w/ optional 347-480 Vac step down transformer. Optional emergency battery backups available to meet critical life safety lighting requirements. Fixture reduced max ambient for emergency battery backup & step down options.

MOUNTING

Options include suspension chain, aircraft cables, hook, single pendant (HUB), surface mount (SMBKIT). Reduced maximum ambient range for surface mount.

WARRANTY

5 Year Warranty Standard; 10 Year Warranty Optional ([Terms and Conditions apply](#)).

OPTICS

Standard with impact resistant frosted acrylic lens (FRL) for added LED glare reduction. Optional clear polycarbonate lens (PCL) available.

THERMAL

Ambient temperature range -4°F to 122°F for 8L to 34L configurations. -4°F to 115°F for 321W configuration. -4°F to 105°F for 425W configuration. High Temperature (HT) option available for 321W & 425W to increase maximum ambient temperature by 10°F.

CONTROLS

Factory installed Advanced & Basic integral occupancy sensor options available. All sensors are end fixture mounted through knockout. Inquire with manufacturer for additional controls options, including customer supplied items.

CERTIFICATIONS

UL Listed to US and Canadian safety standards. Suitable for damp locations. Please refer to the DLC (DesignLights Consortium) Qualified Products List at www.designlights.org/QPL to confirm specific product qualifications.

Job Name:Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking**Catalog Number:**HHB-24L-U-40-FRL-FIOS-HB-XX-
18Y-PAD

Notes:

Type:**H2E**

LSI22-52646

HIMALAYAN HIGH BAY

LINEAR HIGH BAY

CONTROLS OPTIONS

BASIC

FIOS

Standard on/off motion sensor. Comes with 360 degree high bay lens, 360 degree low bay lens & aisle lens. 360 degree high bay lens factory installed, unless notified otherwise.

FIOSPC

Motion sensor w/ the addition of photocell control. When installed, fixture will not activate unless 1. motion is detected and 2. light levels are below the preset level. When activated, fixture will turn on to 100% light output & will only shut off when one of the two levels mentioned above are met. If no motion is detected & light levels fall below preset level the fixture remains off.

FIOSPC/DLH

Factory installed motion sensor with the addition of photocell control that will allow for daylight harvesting. When installed, fixture will not activate unless 1. motion is detected & 2. light levels are below the preset level. When activated, fixture will turn on only enough to meet the preset light levels and will adjust as the amount of light in the space adjusts between 100%-10%. If light levels are adequate the fixture will remain off.

DHPC

Daylight Harvesting off photocell. Fixtures will continually dim up/down throughout the day based on light level readings taken from the photocell control.

USBD

User Selectable Bi-Level Dimming. Allows the end user to manually select the unoccupied dimming level. Once motion is detected, the fixture will return to 100% light output.

BDxx

Factory set Bi-Level Dimming. Sensor is set to dim level, as indicated in the "xx" portion of the part number, when the area is unoccupied. Example: BD20 sets the fixture to dim down to 20% lumen output when the area is unoccupied. Once motion is detected, the fixture will return to 100% light output.

BDxxPC

Factory set Bi-Level Dimming with motion and photocell. Sensor is set to dim level, as indicated in the "xx" portion of the part number, when the area is unoccupied and will not return to 100% light output unless 1. motion is detected and 2. the light level is below the preset level. Example: BD20PC sets the fixture to dim down to 20% lumen output when the area is unoccupied and will not return to 100% light output unless the above conditions are met for both motion and light level readings.

ADVANCED

Philips ES/HB

EasySense sensor combines occupancy sensing, daylight harvesting and institutional tuning in one compact solution. This is an ideal control for any high bay application. Each device allows you to turn on/off occupancy and/or daylight harvesting functions as well as set the full light output, background light level, occupancy prolong time, occupancy grace fading time & occupancy time out/hold time. Requires use of EasySense Pre-Programmed Control Device (ES/PCD) & Commissioning IR Blaster (ES/IR); one of each needed per project. (Sold separately)

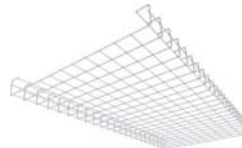
OPTIONS

**CORDx**

Cords available in 6ft, 10ft, 12ft & 20ft
(Inquire for additional options)

**QDCx**

Quick Disconnect Cords available
in 6ft, 10ft, 12ft & 20ft (Inquire for
additional options)

**WC**

11 GA Wire Cage

**HUB 3/4**

Conduit Hub 3/4" for Pendant Mounting

**HOOK**

Cast Iron Hook for Single
Point Mounting

**HB-XX-18Y-PAD**

Includes 2 adjustable cable hangers.
Available in 60", 120", 180" & 240"

**SMBKIT**

Surface Mount Bracket Kit provides
a 2" space above the fixture

**CPMB-WIDE**

Center Point Mounting Box for Single Point
Mounting (must be used with HUB or HOOK)

HHBSPEC0721

Job Name:Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking**Catalog Number:**HHB-24L-U-40-FRL-FIOS-HB-XX-
18Y-PAD

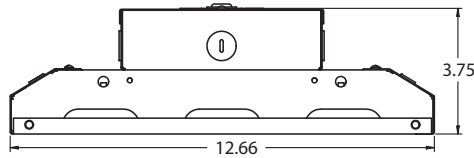
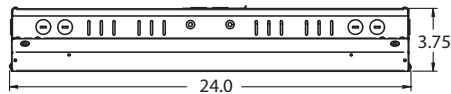
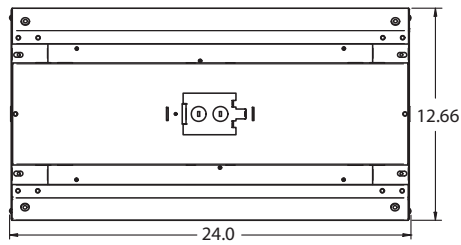
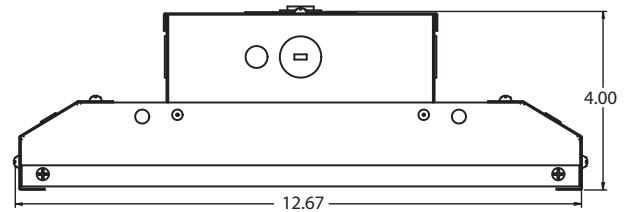
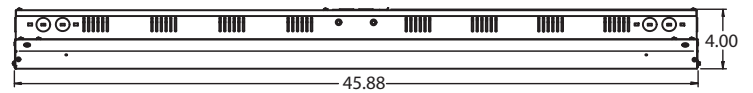
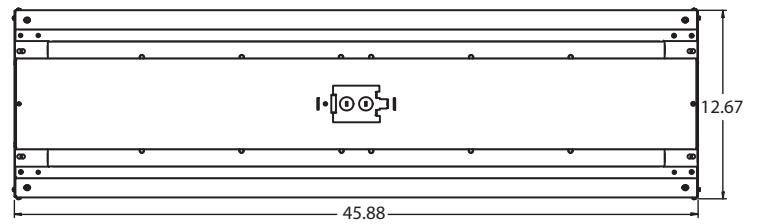
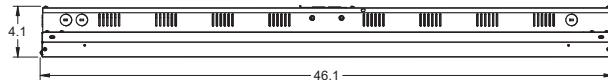
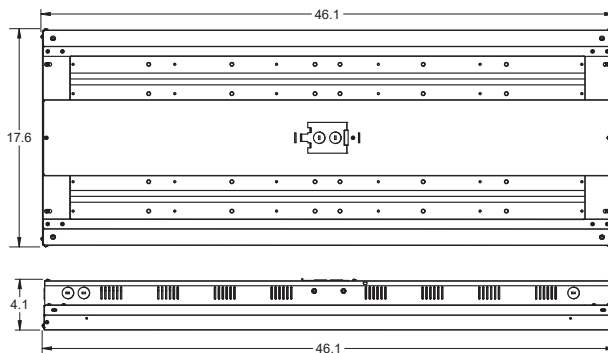
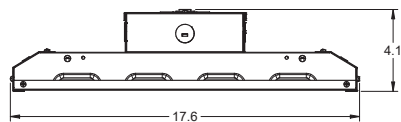
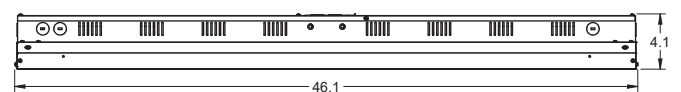
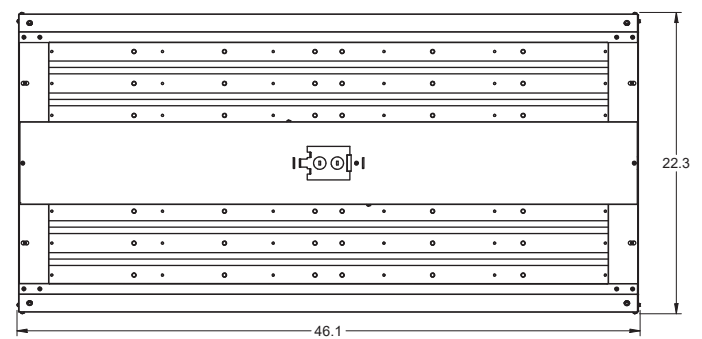
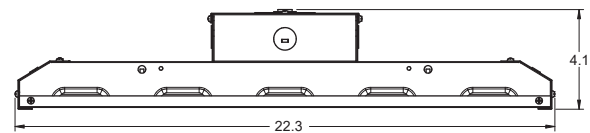
Notes:

Type:**H2E**

LSI22-52646

HIMALAYAN HIGH BAY LINEAR HIGH BAY

LINE DRAWINGS

8L, 12L, 18L, & 24L**34L****321W****425W**

Job Name:

Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking

Catalog Number:

HHB-24L-U-40-FRL-FIOS-HB-XX-
18Y-PAD

Notes:

Type:

H2E

LSI22-52646

HIMALAYAN HIGH BAY

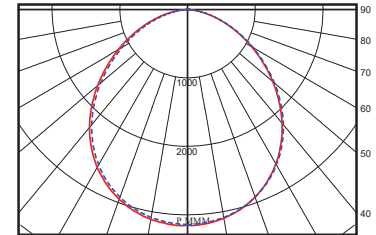
LINEAR HIGH BAY

PHOTOMETRIC DATA

LUMINAIRE DATA	
Part Number	HHB-8L-U-50-FRL
Description	Himalayan High Bay, 8000lm, with frosted acrylic lens
Fixture Lumens (lm)	8,201 lm
Wattage (W)	63 W
Efficacy (lm/W)	131 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.24, 90° = 1.24

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	3,966	48%
0° - 60°	6,739	82%
0° - 90°	8,162	100%
90° - 180°	39	1%
0° - 180°	8,201	100%

CANDELA PLOT

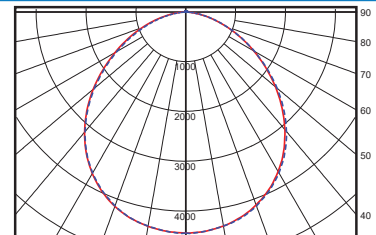


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-12L-U-50-FRL
Description	Himalayan High Bay, 12000lm, with frosted acrylic lens
Fixture Lumens (lm)	11,601 lm
Wattage (W)	89 W
Efficacy (lm/W)	130 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.24, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	5,615	48%
0° - 60°	9,545	82%
0° - 90°	11,557	100%
90° - 180°	45	0%
0° - 180°	11,602	100%

CANDELA PLOT

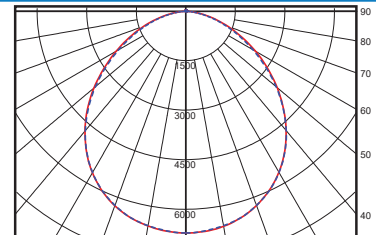


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-18L-U-50-FRL
Description	Himalayan High Bay, 18000lm, with frosted acrylic lens
Fixture Lumens (lm)	17,460 lm
Wattage (W)	134 W
Efficacy (lm/W)	131 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.26, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	8,494	49%
0° - 60°	14,419	83%
0° - 90°	17,393	100%
90° - 180°	69	0%
0° - 180°	17,462	100%

CANDELA PLOT

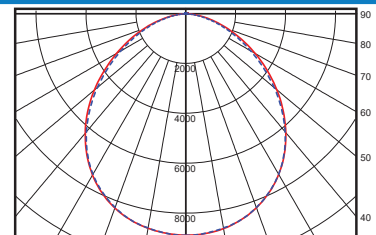


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-24L-U-50-FRL
Description	Himalayan High Bay, 24000lm, with frosted acrylic lens
Fixture Lumens (lm)	22,909 lm
Wattage (W)	179 W
Efficacy (lm/W)	128 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.26, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	11,213	49%
0° - 60°	18,970	83%
0° - 90°	22,821	100%
90° - 180°	62	0%
0° - 180°	22,913	100%

CANDELA PLOT

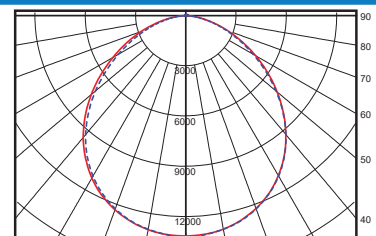


Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

LUMINAIRE DATA	
Part Number	HHB-34L-U-50-FRL
Description	Himalayan High Bay, 34000lm, with frosted acrylic lens
Fixture Lumens (lm)	34,560 lm
Wattage (W)	268 W
Efficacy (lm/W)	129 lm/W
Mounting	Suspended or Surface
Spacing Criteria	0° = 1.26, 90° = 1.26

ZONAL LUMEN SUMMARY		
Zone	Lumens (lm)	% Fixture
0° - 40°	16,689	48%
0° - 60°	28,445	82%
0° - 90°	34,425	100%
90° - 180°	139	0%
0° - 180°	34,564	100%

CANDELA PLOT



Totally Asymmetric Solid: 180-0 Degrees Dashed: 270-90 Degrees

HHBSPEC0721

Job Name:

Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse RackingCatalog Number:
EVEURWEI

Notes:

Type:

X1

LSI22-52646



EVE Series

LED EXIT SIGN

FEATURES

- Architectural LED based exit and emergency light for wall, ceiling or end mounting commercial applications
- High impact, flame rated and UV stable white thermoplastic housing
- SW- Available with Special Wording
- 2C- 2 circuit operation
- FAP- Fire Alarm Panel
- FM- Flasher Module
- AF- Audible Flasher
- DC- Remote DC Operation
- 24K- 220-240VAC Input
- EV Unit Indoor Emergency Light



SPECIFICATIONS

APPLICATION

- The EVE series is a compact architectural LED exit sign designed for fast installation and reliable service

CONSTRUCTION

- The EVE Series has a flame-rated, UV stable thermoplastic housing with a lightly textured white or black finish
- The EVE series housing and canopy are made from durable injection molded ABS thermoplastic
- Available with special worded options
- Weight: 2.5 lbs

ELECTRICAL

- Available in AC only or emergency operation which includes a nickel metal hydride (NiMH) battery and provides a full 90 minutes of emergency exit illumination in the event of power failure
- Includes a constant current charger
- The EVE accepts 120/277VAC input at 60Hz and optional 220-240VAC input at 50 or 60 Hz with self-diagnostics option

INSTALLATION

- EVE can be wall mounted by use of back-plate with molded-in template, ceiling or end mounted with the use of supplied canopy to standard 3-1/2" or 4" square or octagonal electrical boxes
- Pre-stripped AC input leads provided

ILLUMINATION

- The EVE series provides bright and uniform exit panel illumination by using energy saving, long-life red or green LEDs with a 10 year lifecycle
- The panel face exceeds UL924 requirements for brightness and uniformity

EVLED
FAMILY

RELATED PRODUCTS

- [EVC Series Combination Emergency/Exit Sign](#)
- [Ev Series Emergency Light](#)
- [EV4R Recessed Emergency Light](#)
- [EVHC High Capacity Emergency Light](#)
- [EV4D-02WAL Emergency Light](#)
- [EVO Remote Head](#)

COMPLIANCES

- Listed to UL924 Standard
- NFPA 101
- NFPA 70
- UL Damp Location Listed
- CEC T20 Compliant

WARRANTY

- EVE: 5 year warranty
- Battery: 3 years full, 7 years pro-rata
- See [HLI Standard Warranty](#) for additional information

Job Name:

Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse RackingCatalog Number:
EVEURWEI

Notes:

Type:

X1

LSI22-52646

**EVE Series**

LED EXIT SIGN

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

ORDERING GUIDE

Example: EVEURW-2C

CATALOG # _____

EVE						
Model	Faces	Letter Color	Finish	Operation	Self-Diagnostic	Options
EVE LED Exit Sign	U Universal Face	R Red G Green	W White B Black	Blank AC Only E Emergency	Blank None I Spectron® self-testing/self-diagnostic electronics ¹	2C 2 Circuit Operation ^{2,5} FAP Fire Alarm Panel ^{3,5,6,7} FM Flasher Module ^{1,6,7} AF Audible Flasher ^{1,6,7} DC Remote DC Operation ^{2,4,5} 24K 220 - 240 VAC 50, 60 Hz with Spectron® ^{1,7} SW Special Wordings ^{8,9}

Accessories

- ☐ **EV Unit** 2 LED Indoor Emergency Light
- ☐ **EVC** Exit Sign/ LED Emergency Light
- ☐ **VRS3** Vandal Resistant Shield
- ☐ **WGLX** Wire Guard (Wall Mount)
- ☐ **WGLXC** Wire Guard (Ceiling Mount)
- ☐ **PMLXW** 12 1/2" Pendant Mounting Kit (white)

Notes:

- For use with emergency models only
- For use with AC models only
- Operates with 24 volt AC or DC fire alarm panels
- For emergency illumination of sign from remote 6-24 VDC power source
- DC option may not be specified with 2C or FAP options
- AF, FM and FAP options may not be specified together
- For use with Spectron® equipped models only
- SW option limited to selections on pg.3
- Special worded sign ships as a universal single or double face



EVC Combo Exit/ Light

ELECTRONICS

Upon failure of the normal utility power, a solid-state transfer switch automatically activates the exit LEDs. Upon resumption of the normal utility power, the battery is disconnected from the load and recharged through a constant current charger. The battery is a maintenance-free Nickel Metal Hydride(NiMH) type. The EVE series accepts 120/ 277VAC at 60 Hz, or an optional 220-240VAC input (-24K option)at 50 or 60 Hz. A low voltage battery disconnect(LVD) feature protects the battery from damage during prolonged power failures. Manual testing is available at any time using the push-to-test button. Rated LED lifecycle-greater than 100,000hrs. or 10 years.

STANDARD FEATURES INCLUDE

- External push-to-test switch and AC-on indicator
- Battery re-charge within 24 hours
- AC Lock-out circuit
- Low voltage battery disconnect

OPTIONAL SPECTRON FEATURE

- Self-diagnostics monitors LED status, LED load transfer circuit, battery capacity and charger function and displays any fault detection by means of a flashing code
- Self-Test feature automatically runs a 1 minute test once a month and an alternating 30 or 60 minute test once every 6 months. Multi-color LED indicator provides visible fault detection and charging status
User initiated 1 or 90-minute system test feature
- 15 minute re-transfer delay
- Automatic unit transfer in brown-out conditions(below 80% of nominal AC input voltage)

OPERATING TEMPERATURE RANGE

0° to 40°C

WEIGHT

2.5 lbs

Job Name:Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking**Catalog Number:**
EVEURWEI

Notes:

Type:**X1**

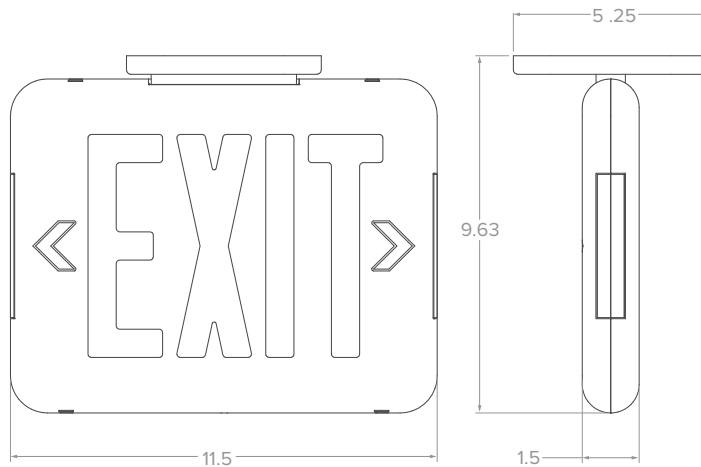
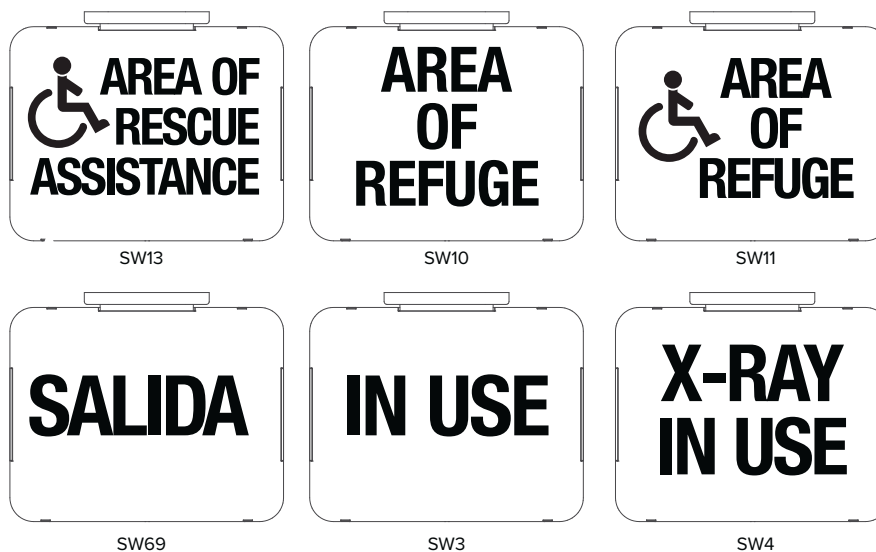
LSI22-52646

**EVE Series**

LED EXIT SIGN

POWER CONSUMPTION (120/277VAC)

Model	120VAC, 60Hz			277VAC, 60Hz		
	A	W	PF	A	W	PF
Red AC Only	0.02	1.42	0.59	0.009	1.36	0.54
Green AC Only	0.02	1.36	0.57	0.009	1.30	0.57
Red Emergency	0.027	2.01	0.62	0.0127	1.94	0.55
Green Emergency	0.027	2.01	0.62	0.0127	1.94	0.55

DIMENSIONS**SPECIAL WORDING OPTIONS**

* All special worded selections ship as a universal sign for single or double-face application.

Job Name:

Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking

Catalog Number:

EVCURWD4I

Notes:

Type:

X1C

LSI22-52646

EVC Series

LED EMERGENCY LIGHT/EXIT SIGN

FEATURES

- Architectural LED based exit and emergency light for wall, ceiling or end mounting commercial applications
- High impact, flame rated and UV stable white thermoplastic housing
- SW- Available with Special Wording
- 2C- 2 circuit operation
- FAP- Fire Alarm Panel
- FM- Flasher Module
- AF- Audible Flasher
- 24K- 220-240VAC Input
- EV Unit Indoor Emergency Light



SPECIFICATIONS

APPLICATION

- The EVC Series is a compact architectural LED combination exit and emergency light designed for fast installation and reliable service.

CONSTRUCTION

- The EVC Series housing and canopy are made from durable injection molded ABS thermoplastic. Lamp-head front halves are made of die-cast aluminum for thermal dissipation
- The back half of the lamp-heads are made of ABS thermo-plastic.
- LED lens are made of acrylic
- The EVC Series has a flame-rated, UV stable thermoplastic housing with a lightly textured white or black finish. Integral LED based lamp-heads are fully adjustable

ELECTRICAL

- Unit provides a full 90 minutes of exit and emergency lighting
- Includes micro-controller based 3 stage constant current/constant voltage charger, and a long-life lithium iron phosphate (LiFePO₄) battery
- The EVC accepts 120/277VAC input at 50 or 60Hz and optional 220-240VAC input at 50 or 60 Hz with self-diagnostics option

INSTALLATION

- EVC Series can be wall mounted by use of back-plate with molded-in template, or ceiling and end mounted with the use of supplied canopy to standard 3-1/2" or 4" square or octagonal electrical boxes
- Conduit entry through a molded-in entry point at the top center
- Pre-stripped AC input leads provided.

ILLUMINATION

- The EVC Series provides bright and uniform illumination and increased coverage by using 2 high power LED's which are mounted in a specially designed heat dissipating lamp-head
- Exit cavity illumination by red or green LED's with 10 year lifecycle. Each lamp-head is fully adjustable to the front or rear and side to side by use of a dual axis ratcheting design. Photometrics are available for download at www.dual-lite.com.

EV^{LED}
FAMILY

RELATED PRODUCTS

[EVE Series Combination Emergency/Exit Sign](#)
[Ev Series Emergency Light](#)
[EV4R Recessed Emergency Light](#)
[EVHC High Capacity Emergency Light](#)
[EV4D-02WAL Emergency Light](#)
[EVO Remote Head](#)

COMPLIANCES

- Listed to UL924 Standard, NFPA 101, NFPA 70
- Damp Location Listed Optional
- CEC T20 Compliant

WARRANTY

- Fixture: 3 years full, 5 years Full with Spectron®
- Battery: 3 years full, 7 years pro-rata
- LED Lifetime Warranty on Emergency Unit
- See [HLI Standard Warranty](#) for additional information

KEY DATA

Lamp Color	Cool White
Total Lamp Output	88 Lumens per LED
System Efficacy	80lm/W
Rated Lifecycle	> 100,000hrs or 10 years
Input Current Range	
Standard:	120/277VAC, 50 or 60 Hz
Self Diagnostics Option:	220-240VAC, 50 or 60 Hz

Job Name:

Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse Racking

Catalog Number:

EVCURWD4I

Notes:

Type:

X1C

LSI22-52646

DATE:

LOCATION:

TYPE:

PROJECT:

CATALOG #:

EVC Series

LED EMERGENCY LIGHT/EXIT SIGN

ORDERING GUIDE

Example: EVCURWD4-0

CATALOG #

EVC	U				
Model	Faces	Letter Color	Finish	Application	Self-Diagnostic
EVC Combination LED Emergency Light/ Exit Sign	U Universal Face	R Red G Green	W White B Black ⁷	Blank Standard Mode D4 2 LED Remote Capacity D Damp Listed ²	Blank None I Self-Diagnostics Spectron® Self Diagnostics ⁶

Accessories

- ☐ EV Unit 2 LED Indoor Emergency Light
- ☐ EVR2 Indoor Remote
- ☐ EVO Outdoor Remote
- ☐ EVR2B 2 LED Remote with Black Finish
- ☐ VRS3 Vandal Resistant Shield

Reference "Remote Heads and Fixtures" specification sheet for information on matching LED remote heads



EVO Outdoor Remote



EVR2 Indoor Remote

Notes:

- Can only be specified with Spectron® Self-Diagnostics and remote capacity
- Damp Location not available with EVCURW and EVCUGW base models, standard with all other models
- No-head option only available on the EVC with remote capacity
- 24K option only available with Spectron® Self-Diagnostic and remote capacity
- AF, FM and FAP options may not be specified together
- Spectron® Self-Diagnostics only available with damp option
- Black finish only available with damp option

NOTE: Remote Capacity Option will only power the EVR2 and EVO remotes

Note: Remote Capacity models have a minimum run-time of 120 minutes when no remotes are installed

ELECTRONICS

Upon failure of normal utility power, a solid-state transfer switch automatically activates the emergency LED lamp-heads and exit LED's. Upon resumption of normal utility power, the battery is disconnected from the load and recharged through a micro-controller based 3 stage constant current/constant voltage charger. The battery is a maintenance-free Lithium Iron Phosphate (LiFePO4) type which operates at 6.4 VDC. The EVC series accepts dual-voltage input of 120 or 277VAC at 50 or 60 Hz, or an optional 220-240VAC input at 50 or 60 Hz. A low voltage battery disconnect (LVD) feature protects the battery from severe damage during prolonged power failures. Manual testing is available at any time using the push-to-test button.

Number of Lamps- 2 High Power LEDs at 1 watt each configured so that if 1 lamp malfunctions, the remaining lamp will continue to provide illumination.

STANDARD FEATURES INCLUDE

- External push-to-test switch and AC-on indicator
- Battery re-charge within 24 hours
- AC Lock-out circuit
- Low voltage battery disconnect
- Conduit entry located at the top center
- Microprocessor controlled pulse charger

OPTIONAL SPECTRON FEATURE

- Self-diagnostics monitors LED status, LED load transfer circuit, battery capacity and charger function and displays any fault detection by means of a flashing code
- Self-Test feature automatically runs a 1 minute test once a month and an alternating 30 or 60 minute test once every 6 months. Multi-color LED indicator provides visible fault detection and charging status.
- User initiated 1 or 90-minute system test feature
- 15 minute re-transfer delay
- Automatic unit transfer in brown-out conditions (below 80% of nominal AC input voltage)

OPERATING TEMPERATURE RANGE

- Standard: 68°F to 86°F (20° to 30°C)
- Damp Listed: 50°F to 104°F (10° to 40°C)

WEIGHT

2.0 lbs

Job Name:

Alcoholic Beverages Division (ABD) Ankeny
(ANK) - Warehouse RackingCatalog Number:
EVCURWD4I

Notes:

Type:

X1C

LSI22-52646

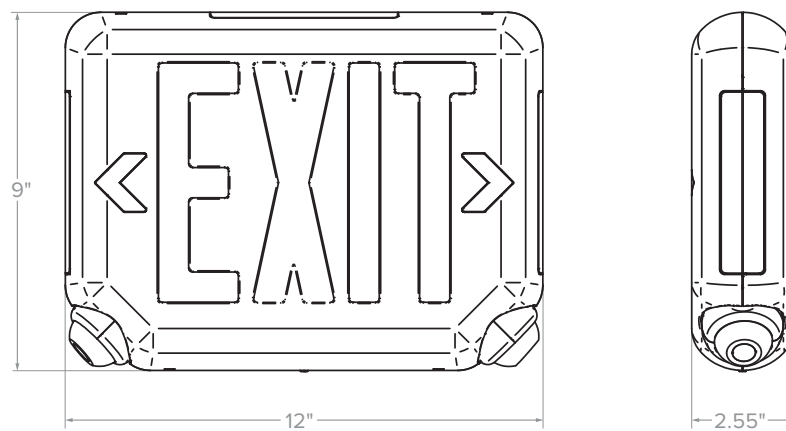
EVC Series

LED EMERGENCY LIGHT/EXIT SIGN

MAXIMUM POWER CONSUMPTION

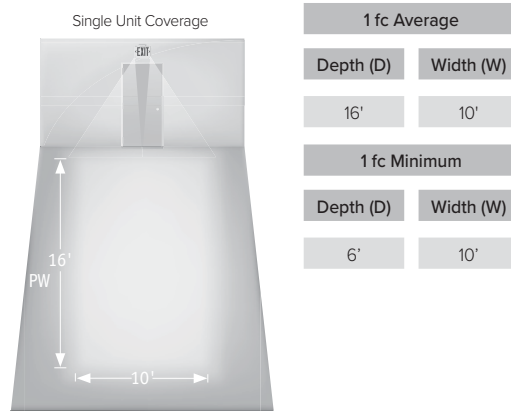
	AC Voltage	Hz.	Amps.	Watts	Power Factor
EVC	120	60	0.021	1.65	0.65
	277	60	0.017	2.42	0.52

DIMENSIONS



Overall height with Canopy is 9.8"

APPLICATION INFORMATION



Meets Life Safety Code minimum illuminance of 0.1 fc and average illuminance of 1.0 fc. Assumes open space with no obstructions, mounting height of 7.5', ceiling height of 9' and reflectances of 80/50/20. Photometry files available on the Dual-Lite web site (www.dual-lite.com).



5485 NE 17th St. Ste A
Des Moines, IA 50313
PH:515-528-8201
Fax:515-528-8198

IADAS ABD ANK WAREHOUSE IMPROVEMENTS

To: JONOTHAN FANT
SCHEMMER ASSOCIATES
3100 SE GATEWAY DR SUITE 200
GRIMES, IA 50111
PH: (515) 957-7600

Submittal Date: 3/28/2022

Type	Mfg	Description
H1*	DAYBRITE LIGHTING	FBY22-22L-840-UNV-LFA-MD360DP
H1*	DAYBRITE LIGHTING	HCH10-VHOOK
H1E*	DAYBRITE LIGHTING	FBY22-22L-840-UNV-LFA-BLS10LST-MD360DP
H1E*	DAYBRITE LIGHTING	HCH10-VHOOK
H2*	DAYBRITE LIGHTING	FBY22-22L-840-UNV-LFA
H2*	DAYBRITE LIGHTING	HCH10-VHOOK
H2E*	DAYBRITE LIGHTING	FBY22-22L-840-UNV-LFA-BLS10LST
H2E*	DAYBRITE LIGHTING	HCH10-VHOOK
X1*	MULE LIGHTING INC	RMX-U-R-W-EM-SD
X1C*	MULE LIGHTING INC	SQC-LED-U-R-WW-SD-HL



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: _____

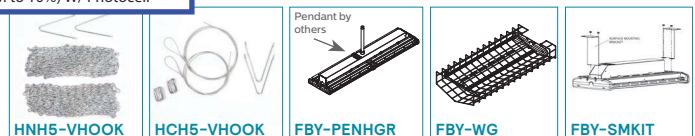
Ordering guide

Example: FBY24L840-UNV-LCA

Family	Lumens (nominal) ¹	Color Temperature	Voltage	Options
FBY		–	–	
FBY	12L 12,000 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 ^{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)

- Nominal delivered lumens at 25°C ambient
- Must specify line voltage
- Order proper cord option for dimming or emergency if using optional cords
- 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.

MD360DP 360° Motion detector (ON/DIM to 10%) W/ Photocell



Accessories¹³ (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-PENHGR⁷ Pendant hanger (adds 3" to height)
- FBY-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



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.

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:
***.interact-lighting.com/interactproscalablesystem

- 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.

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 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

FBY LED high bay

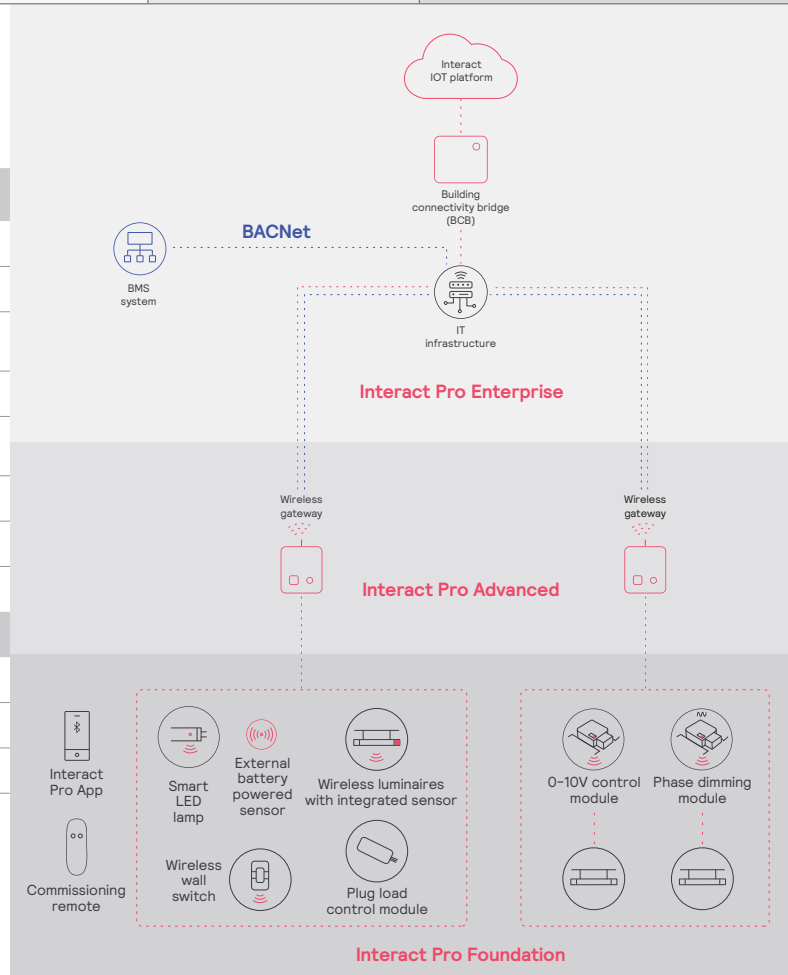
12,000, 18,000, 24,000, 30,000 36,000, 48,000, & 60,000 lumens

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

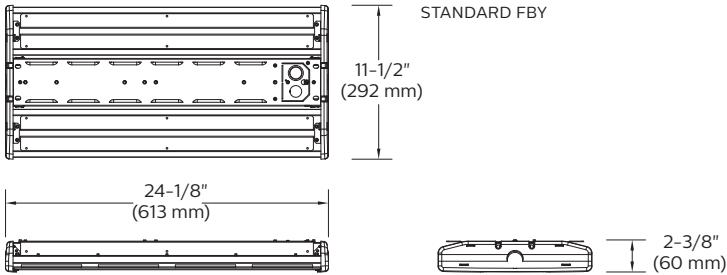


FBY LED high bay

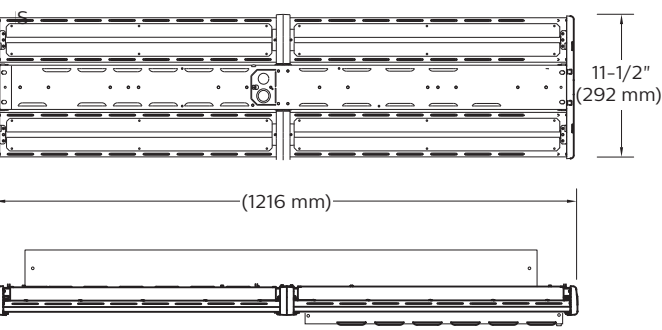
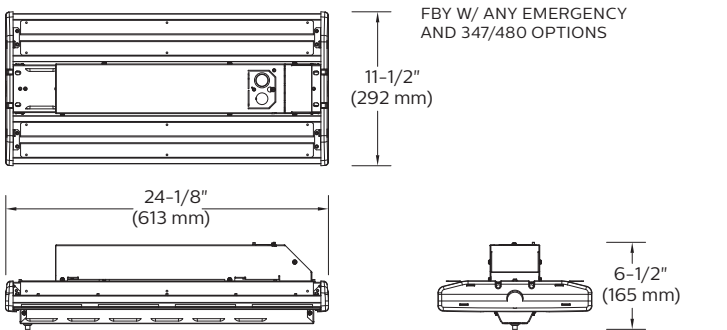
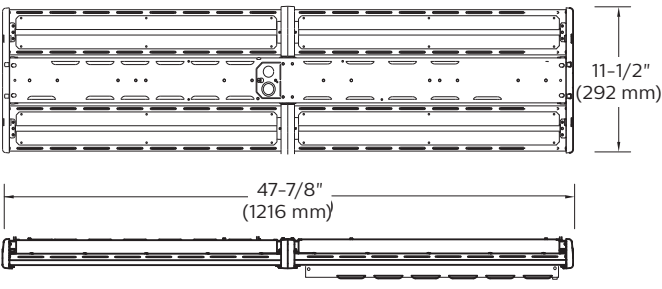
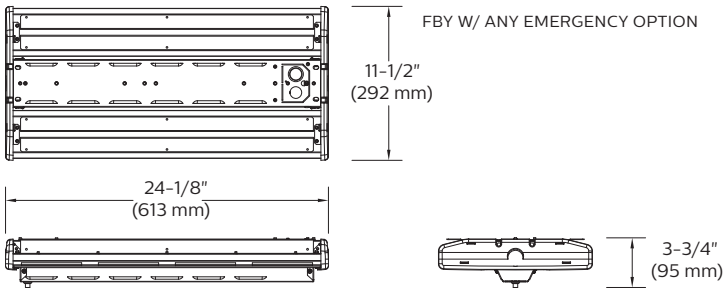
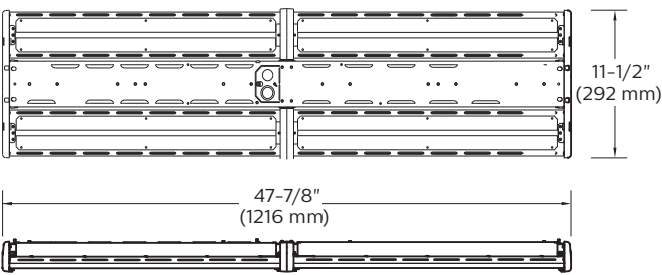
12,000, 18,000, 24,000, 30,000 36,000, 48,000, & 60,000 lumens

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	Candela distribution				Light Distribution			Average Luminance										
Test No.	39981		Vertical Angle	Horizontal Angle				Degrees	Lumens	% Luminaire	Angle	End	45°	Cross					
S/MH	1.0		0°	45°	90°	-45°	0-30	7094	28.7	45	61608	56669	57032						
Lamp Type	LED		5	9226	9324	9359	9324	0-40	11466	46.3	55	57290	48239	36303					
Lumens/Lamp	24748		15	8987	9023	9017	9023	0-60	19649	79.4	65	54261	39759	35384					
Input Watts	177		25	8467	8303	6893	8303	0-90	23883	96.5	75	46401	21588	24030					
Efficacy	140		35	7724	6077	7031	6077	90-180	865	3.5	85	26466	18436	18481					
<p>Comparative yearly lighting energy cost per 1000 lumens – \$1.70 based on 3000 hrs. and \$.08 pwr KWH.</p> <p>The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.</p> <p>Photometric values based on test performed in compliance with LM-79.</p>			45	6672	6137	6177	6137	0-180	24748	100.0									
			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															

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	Candela distribution					Light Distribution			Average Luminance			
Test No.	39993	Vertical Angle	Horizontal Angle				Degrees	Lumens	% Luminaire	Angle	End	45°	Cross
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.													

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

		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
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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Signify North America Corporation
200 Franklin Square Drive,
Somerset, NJ 08873
Telephone 855-486-2216

Signify Canada Ltd.
281 Hillmount Road,
Markham, ON, Canada L6C 2S3
Telephone 800-668-9008

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SUBSTITUTION REQUEST FORM

Project: Alcoholic Beverages Division (ABD) Ankeny (ANK) Warehouse Racking Substitution Request Number: _____
From: 3/23/2022
To: Jonathan Fant Date: _____
A/E Project Number: 08421.001
Re: _____

Specification Title: LED Interior Lighting Description: Luminaire Schedule
Section: 26 5119 Page: E02 Article/Paragraph: Type H1, H1E, H2, & H2E

Proposed Substitution: DayBrite FBY LED High Bay
Manufacturer: DayBrite Address: _____ Phone: _____
Trade Name: _____ Model No.: FBY22-22L

History: ☐ New product ☒ 2-5 years old ☐ 5-10 yrs old ☐ More than 10 years old

Differences between proposed substitution and specified product: Slightly different physical profile; Frosted acrylic lens
instead of textured semi-diffuse lens.

☐ Point-by-point comparative data prepared by contractor and attached - REQUIRED BY A/E

Reason for not providing specified item: Want to see if our mfg would be considered as an equal to the BOD.

Similar Installation:

Project: _____ Architect: _____
Address: _____ Owner: _____
Date Installed: _____

Proposed substitution affects other parts of Work: ☒ No ☐ Yes; explain _____

Supporting Data Attached: ☐ Drawings ☒ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

SUBSTITUTION REQUEST FORM

(Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: Richard Rossley

Signed by: *Richard Rossley*

Firm: NRG Sales Lighting & Controls LLC

Address: 5485 NE. 17th St. Suite A, Des Moines IA 50313

Telephone: 515-528-8201

Attachments: HX-FBY_LED_High_Bay.pdf

A/E's REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Specification Section 01 3300.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 3300.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by:

Date:

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E ☐ _____



RMX - Compact Thermoplastic Exit Sign



PROJECT:

FIXTURE TYPE:

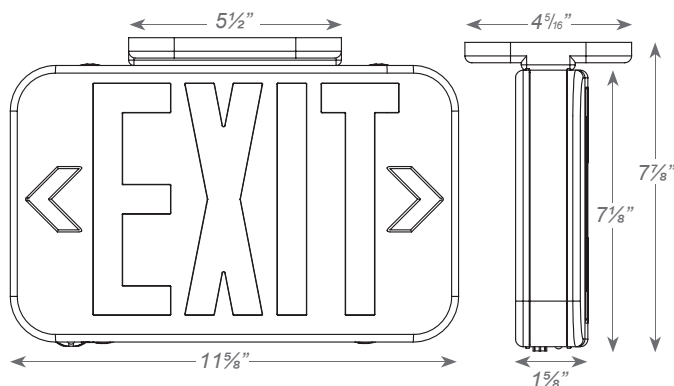
LOCATION:

CONTACT/PHONE:

Type X1*



DIMENSIONS



ILLUMINATION

- Ultra bright, energy efficient, long life Red or Green LEDs.

MOUNTING

- EZ-snap mounting canopy included for top or end mount.
- Universal knockout pattern on back plate for wall mount.

ELECTRICAL

- Dual 120/277 voltage.
- Charge rate/power "ON" LED indicator light and push-to-test switch for mandated code compliance testing.
- 1.2V Long life, maintenance-free, rechargeable NiCd battery (EM models only).
- Internal solid-state transfer switch automatically connects the internal battery to LED board for minimum 90-minute emergency illumination.
- Fully automatic solid-state, two rate charger initiates battery charging to recharge a discharged battery in 24 hours.

HOUSING

- Injection-molded, engineering grade, 5VA flame retardant, high-impact resistant, thermoplastic in white or black finish.
- Aesthetically pleasing, curved face, rounded corner design.
- EZ snap-out Chevron directional indicators.

WARRANTY/LISTING

- Five year warranty on all electronics and housing. Battery prorated for five years.
- Meets UL924, NFPA 101 Life Safety Code, NEC, OSHA, Local and State Codes.
- UL Listed for damp locations (0°C – 50°C).
- Certified to CEC under Title 20 Regulations.



ORDERING INFORMATION

Model	No. of Faces	Letter Color	Housing Color	Battery	Options	Accessories
RMX	U = Universal Single/	R = Red	W = White	(blank) = AC-Only	SD = Self-Diagnostics	WG1 = Wire Guard (wall mount, brushed silver)
	Double Face	G = Green	B = Black	EM = Battery Backup		BPG2 = Wire Guard (wall mount, powdercoat white)
						BPG3 = Wire Guard (ceiling mount, powdercoat white)
						PCS-1 = Polycarbonate Cover*
						BG-1 = Vandal Resistant Bubble Shield

NOTE: SALIDA face plate option available. Check with your Mule Lighting Representative.

*Not for units with REM

EXAMPLE: RMX-U-R-W-EM

SUBSTITUTION REQUEST FORM

Project: Alcoholic Beverages Division (ABD) Ankeny (ANK) Warehouse Racking Substitution Request Number: _____
From: 3/23/2022
To: Jonathan Fant Date: _____
A/E Project Number: 08421.001
Re: _____

Specification Title: LED Interior Lighting Description: Luminaire Schedule
Section: 26 5119 Page: E02 Article/Paragraph: Type X1

Proposed Substitution: Mule RMX Compact Thermoplastic Exit Sign
Manufacturer: Mule Lighting Address: _____ Phone: _____
Trade Name: _____ Model No.: RMX-U-R-W-EM-SD

History: ☐ New product ☒ 2-5 years old ☐ 5-10 yrs old ☐ More than 10 years old

Differences between proposed substitution and specified product: None

☐ Point-by-point comparative data prepared by contractor and attached - REQUIRED BY A/E

Reason for not providing specified item: Want to see if our mfg would be considered as an equal to the BOD.

Similar Installation:

Project: _____ Architect: _____
Address: _____ Owner: _____
Date Installed: _____

Proposed substitution affects other parts of Work: ☒ No ☐ Yes; explain _____

Supporting Data Attached: ☐ Drawings ☒ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

SUBSTITUTION REQUEST FORM

(Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
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- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: Richard Rossley

Signed by: Richard Rossley

Firm: NRG Sales Lighting & Controls LLC

Address: 5485 NE. 17th St. Suite A, Des Moines IA 50313

Telephone: 515-528-8201

Attachments: X1-RMX.pdf

A/E's REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Specification Section 01 3300.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 3300.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by:

Date:

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E ☐ _____



SQC-LED Series

ALL LED THERMOPLASTIC EXIT/EMERGENCY COMBO



PI **Type X1C***

FIXTURE TYPE:

LOCATION:

CONTACT/PHONE:

PRODUCT DESCRIPTION

SQC-LED Series Thermoplastic LED Exit Sign and LED Emergency Light Combos offer long lamp life, energy efficiency and uniform illumination in an economical package. Possessing premium installation features such as a snap-fit canopy & housing, along with push-out chevron directional indicators, the SQC-LED Series offers unsurpassed value in an aesthetically pleasing design. All SQC-LED Series signs include a second faceplate and a snap-fit canopy for universal installation. The SQC-LED Series is provided with two factory installed lighting heads with white LED lamps, combining exit signage with the emergency lighting Function for a convenient, comprehensive solution.

PRODUCT SPECIFICATIONS

CONSTRUCTION

Injection molded, engineering-grade, UV-stable thermoplastic • UL94V-0 flame rating • Impact, scratch, fade and corrosion-resistant • Durable unibody housing frame with reinforcing ribs and integral wiring channel • Snap-fit faceplate and backplate • Second faceplate included for double face applications • 6" letters with 3/4" stroke width • Chevron directional indicators can be easily removed or reinserted as necessary • Red or green letters • White or black textured finish.

ELECTRICAL

Dual voltage 120/277VAC • Rated for use in damp locations • Solid state charging and switching • Brownout protection • Battery low voltage disconnect • Overload and short circuit protection • AC power indicator and test switch.

LAMPS

Long life, energy saving LED lamps • LEDs are connected in a series/parallel configuration such that the unlikely failure of one LED will affect no more than one other LED • Red or green LED/letters, white LED heads.

HEADS

Includes two 1W white LED lighting heads • Contemporary square head design • Heads rotate a full 270° in all directions for comprehensive lighting coverage.

BATTERY

Sealed, 9.6V maintenance-free NiCad • Standard battery will operate sign and two heads for a minimum of 90 minutes in the event of a power outage • High Output (REM option) version will operate the sign and two heads plus an additional two remote heads for a minimum of 90 minutes.

CODE COMPLIANCE

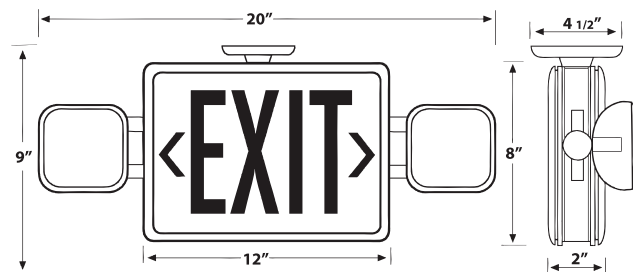
UL924 • UL Listed for damp locations (0°C – 40°C) • NFPA 101 Life Safety Code compliant • NEC and OSHA compliant • Meets the State of Minnesota energy efficiency requirements • CEC Title 20 Compliant

WARRANTY

5-year warranty. Product specifications subject to change without notice.



DIMENSIONS



INSTALLATION

MOUNTING

May be top or back mounted • All signs include quick install snap-fit canopy and mounting hardware for easy top mount installation • Backplate includes universal mounting pattern knock-outs for simple back mounting.



ORDERING INFORMATION

model	# of faces	letter color	housing color	options
SQC-LED	U ¹ = Universal	R = Red	WW = White	SD = Self Diagnostic
		G = Green	BB = Black	REM ² = Remote Capable
Notes				WG-SQC = Wire Guard
				HL = High Lumen Heads (1.5W)
				NH = No Lamp Heads
				BG-1 = Vandal Resistant Bubble Shield

¹ Universal includes 2nd exit face, backplate and canopy

² Standard - Additional capacity to run up to (2) RLED remote heads (see below)

Ordering Example SQC-LED-U-R-WW-REM



SQC-LED Series

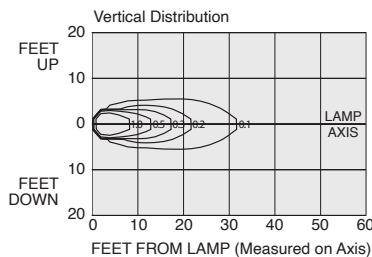
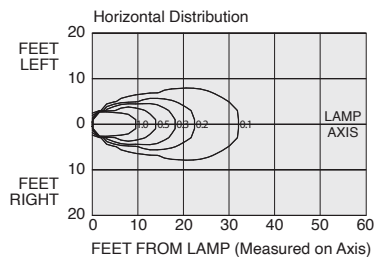
ALL LED THERMOPLASTIC EXIT/EMERGENCY COMBO



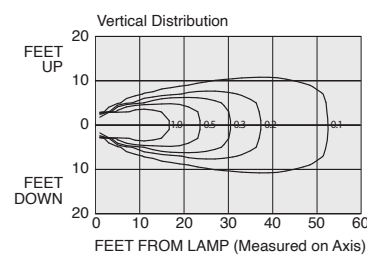
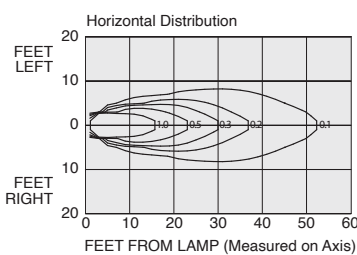
PROJECT: _____
FIXTURE TYPE: _____
LOCATION: _____
CONTACT/PHONE: _____

PHOTOMETRICS

Luminaire SQC-LED (Single Head LED)



Luminaire SQC-LED-HL (Single Head Photometry)



ENGINEERING DATA

	Input Voltage	Max. Amps	Max. Watts	Standby Watts*
Red LED	120	0.04	3.7	2.7
Red LED	277	0.02	4.0	2.7
Green LED	120	0.03	2.8	2.4
Green LED	277	0.02	2.8	2.4
Red LED - REM Option	120	0.04	4.0	3.0
Red LED - REM Option	277	0.02	4.5	3.1
Green LED - REM Option	120	0.04	4.0	3.5
Green LED - REM Option	277	0.03	4.5	3.5

* Fully charged battery

BATTERY DATA

- NiCad battery warranted for five full years with additional 5 years pro-rated warranty

Type	Battery Voltage	Shelf Life ¹	Expected Life ¹	Temperature Range ²
NiCad (Std.)	9.6V, 700mA	3 years	8-10 years	32°F-100°F
NiCad (REM)	9.6V, 900mA	3 years	8-10 years	32°F-100°F

¹ At 77°F ² To obtain rated life and capacity.

LED REMOTE HEADS (ORDER SEPERATELY)

- Each lamp contains 12 long-life, efficient ultra-bright white LED's
- Available in Single or Double head configurations
- Indoor or Outdoor ratings available

MODEL	DESCRIPTION
ASRLED-1	Single LED Remote Indoor
ASRLED-2	Double LED Remote Indoor
ASRLED-1-WP	Single LED Remote Outdoor
ASRLED-2-WP	Double LED Remote Outdoor

OUTDOOR REMOTE HEADS



INDOOR REMOTE HEADS





SQC-LED Series

ALL LED THERMOPLASTIC EXIT/EMERGENCY COMBO

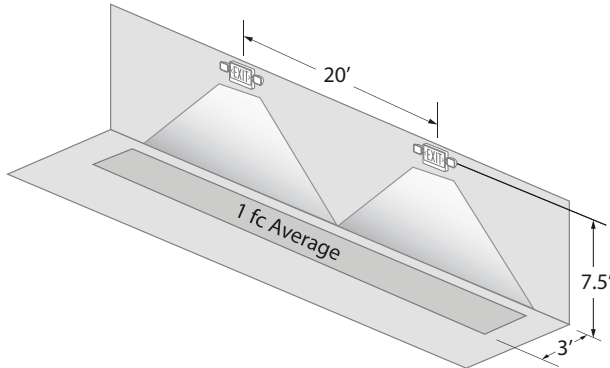


PROJECT: _____
FIXTURE TYPE: _____
LOCATION: _____
CONTACT/PHONE: _____

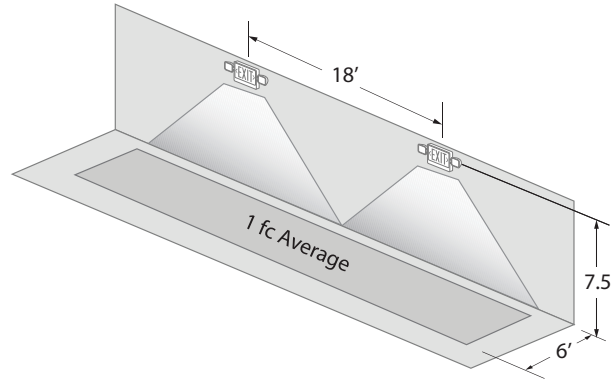
SPACING GUIDES

SQC-LED

3FT PATH SPACING

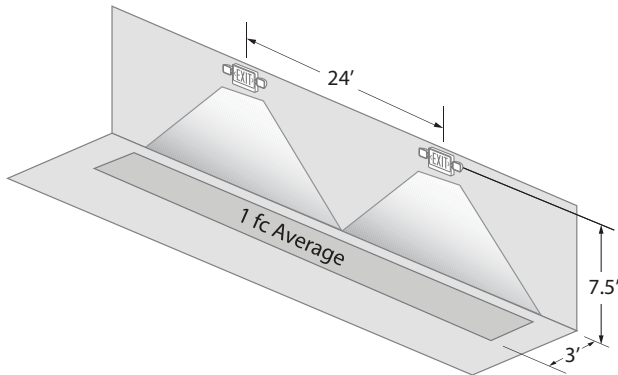


6FT PATH SPACING

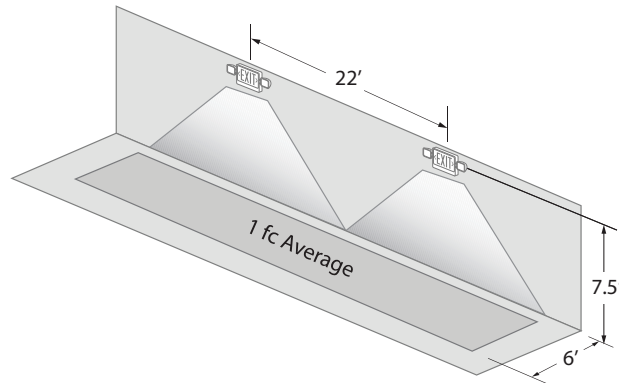


SQC-LED-HL

3FT PATH SPACING



6FT PATH SPACING



SUBSTITUTION REQUEST FORM

Project: Alcoholic Beverages Division (ABD) Ankeny (ANK) Warehouse Racking Substitution Request Number: _____
From: 3/23/2022
To: Jonathan Fant Date: _____
A/E Project Number: 08421.001
Re: _____

Specification Title: LED Interior Lighting Description: Luminaire Schedule
Section: 26 5119 Page: E02 Article/Paragraph: Type X1C

Proposed Substitution: Mule SQC-LED Series Exit/Emergency Combo
Manufacturer: Mule Address: _____ Phone: _____
Trade Name: _____ Model No.: SQC-LED-U-R-WW-SD-HL

History: ☐ New product ☒ 2-5 years old ☐ 5-10 yrs old ☐ More than 10 years old

Differences between proposed substitution and specified product: Square LED lamp heads instead of circular lamp heads.

☐ Point-by-point comparative data prepared by contractor and attached - REQUIRED BY A/E

Reason for not providing specified item: Want to see if our mfg would be considered as an equal to the BOD.

Similar Installation:

Project: _____ Architect: _____
Address: _____ Owner: _____
Date Installed: _____

Proposed substitution affects other parts of Work: ☒ No ☐ Yes; explain _____

Supporting Data Attached: ☐ Drawings ☒ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

SUBSTITUTION REQUEST FORM

(Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
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- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: Richard Rossley

Signed by: Richard Rossley

Firm: NRG Sales Lighting & Controls LLC

Address: 5485 NE. 17th St. Suite A, Des Moines IA 50313

Telephone: 515-528-8201

Attachments: X1C-SQC-LED-3.pdf

A/E's REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Specification Section 01 3300.
☒ Substitution approved as noted - Make submittals in accordance with Specification Section 01 3300.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: Jason Hart

Date: 3-22-2022

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E ☐ _____

Manufacturer and types appear to be generally acceptable. Vendor will have to submit footcandle plots to verify full equivalence to specified luminaires. Provide all accessories as specified.



5485 NE 17th St. Ste A
Des Moines, IA 50313
PH:515-528-8201
Fax:515-528-8198

IADAS ABD ANK WAREHOUSE IMPROVEMENTS

To: JONOTHAN FANT SCHEMMER ASSOCIATES 3100 SE GATEWAY DR SUITE 200 GRIMES, IA 50111 PH: (515) 957-7600		Submittal Date: 3/28/2022
Type	Mfg	Description
H1*	LOS ANGELES LIGHTING MFG. CO.	EBY350-22-2L-FPA2-MSPCDR-DRDM-UNV-2/840HT
H1*	LOS ANGELES LIGHTING MFG. CO.	YTCS10
H1E*	LOS ANGELES LIGHTING MFG. CO.	EBY350-22-2L-FPA2-BPL1.5-MSPCDR-DRDM-UNV-2/840HT
H1E*	LOS ANGELES LIGHTING MFG. CO.	YTCS10
H2*	LOS ANGELES LIGHTING MFG. CO.	EBY350-22-2L-FPA2-MSPCDR-DRDM-UNV-2/840HT
H2*	LOS ANGELES LIGHTING MFG. CO.	YTCS10
H2E*	LOS ANGELES LIGHTING MFG. CO.	EBY350-22-2L-FPA2-BPL1.5-MSPCDR-DRDM-UNV-2/840HT
H2E*	LOS ANGELES LIGHTING MFG. CO.	YTCS10
H*	LOS ANGELES LIGHTING MFG. CO.	REMOTE FOR MSPCDR
X1*	MULE LIGHTING INC	RMX-U-R-W-EM-SD
X1C*	MULE LIGHTING INC	SQC-LED-U-R-WW-SD-HL



BAYLIGHTER™

EBY350

SERIES 2FT, 4FT
ENCLOSED HIGH BAY LUMINAIRE

LED

Type H1*, H1E*, H2*, & H2E*

ORDERING INFO

SYSTEM DATA

DRIVER OPTIONS

SENSOR OPTIONS

PHOTOMETRIC DATA

INTERACTIVE BUTTONS

JOB

TYPE

DATE

LALIGHTING.COM

626-454-8300

SURFACE / SUSPENSION / PENDANT MOUNTED
HIGH BAY LED LUMINAIRE



APPLICATIONS

- Commercial, Industrial, Warehouse

FEATURES

- **High (HT)** Ambient temperature version available for extreme temperature ranges
- 0-10V dimming driver standard
- Supports California Title 24 compliance
- Safety cables attached to door frame and LED gear tray

OPTIONS

- Customization available upon request
- (Wireless) Controls and sensors
- Emergency battery pack
- 11 ga. wire guard available
- Cable suspension systems and pendant mounting adapter available
- Hub and fixture stabilizer

SPECIFICATIONS

CONSTRUCTION

- 22 ga. cold rolled steel housing with louvered vents for heat removal
- 20 ga. cold rolled steel door frame secured by T-hinges and positive spring loaded latches
- One-way polyurethane gasket standard

FINISH

- Baked white polyester finish (powder coated finish available) / minimum reflectance 86%

OPTICAL

- Clear prismatic acrylic lens standard

ELECTRICAL

- High efficiency drivers coupled with long-life LEDs
- Service life tested at 50,000 hours (L70)
- Universal voltage 120V through 277V (347V / 480V available)
- Power Factor (PF) ≥ 0.9
- Total Harmonic Distortion (THD) $\leq 20\%$

LISTING

- UL USA and Canada listed / suitable for damp locations

WARRANTY

- 5-year limited warranty, 10-year limited warranty available



Los Angeles Lighting Mfg. Co.

Headquarters
10141 Olney Street
El Monte, CA 91731
Made in the USA

Contact Us
T: 626-454-8300
F: 626-454-8399
www.lalighting.com



BAA Compliant

Due to continued product improvements and enhancements, Los Angeles Lighting Manufacturing Company reserves the right to alter specifications, dimensions, data, and/or materials without notice. Please visit our website to view the most current information.



MADE IN THE U.S.A.

Revised 11/24/20

WARNING

ORDERING INFORMATION

EXAMPLE: EBY350-8-2L-PA2-BPL1.5-DRDM-UNV-2/850HT

BACK TO TOP

SERIES	LED LUMEN PACKAGE	EFFICACY	NOMINAL LENGTH	OPTICAL / DOOR FRAME	MECHANICAL	ELECTRICAL	DRIVER	VOLTAGE	# OF LED ROW	CRI / CCT	AMBIENT TEMP.
EBY350							DRDM	UNV			
EBY350 • Enclosed High Bay LED Luminaire	2-foot lengths 8 Nom. 8000lm • Avail. in (HT) 12 Nom. 12000lm • Avail. in (HT) 16 Nom. 16000lm • Avail. in (HT) 4-foot lengths 24 Nom. 24000lm • Avail. in (HT) 32 Nom. 32000lm • Avail. only in (HT) 36 Nom. 32000lm • Avail. only in (HT) *Additional Lumen Packages Available	HE • High Efficacy 2-foot only • 12000lm 4-foot only • 24000lm *HE cannot be combine with HT systems	2L • 2-foot 4L • 4-foot	PA • Clear Prismatic Acrylic PA2 • Clear Prismatic Acrylic Nom. 0.125 FPA2 • Frosted Prismatic Acrylic Nom. 0.125 XX • No Door & Lens Assembly	HUB • Aluminum Die Cast Hub (Safety Cable Set Included) SMA • Pendant Mounting Adapter (Safety Cable Set Included) STA • Fixture Stabilizer *Leave Blank if Not Specified	BPL1.5 • Emergency Battery Pack, Constant Nom. 15000 lm MSxx • Motion Sensor *Leave Blank if Not Specified	DRDM • 0-10V Dimming Driver	UNV • 120V-277V	2 • 2 LED Rows • 8000lm 2' • 8000lm 2' HT • 12000lm 2' HT • 16000lm 2' HT • 24000lm 4' HT • 32000lm 4' HT 4 • 4 LED Rows • 12000lm 2' • 12000lm 2' HE • 24000lm 4' • 24000lm 4' HE • 24000lm 4' HT • 32000lm 4' HT • 36000lm 4' HT	830 • 80+CRI / 3000K Color Temp. 835 • 80+CRI / 4000K Color Temp. 840 • 80+CRI / 4000K Color Temp. 850 • 80+CRI / 4000K Color Temp. *Additional Color Temp. Available	HT • High Ambient Temp. *HT cannot be combine with HE systems

MECHANICAL OPTIONS

ELECTRICAL OPTIONS

DRIVERS OPTIONS

SENSOR OPTIONS

INTERACTIVE BUTTONS

CUSTOM COLORS

BLK - Matte Black

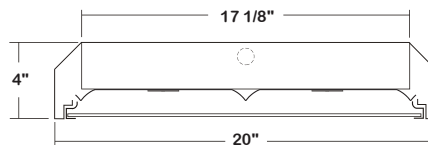
CS - Camaro Silver

BZ - Statuary Bronze

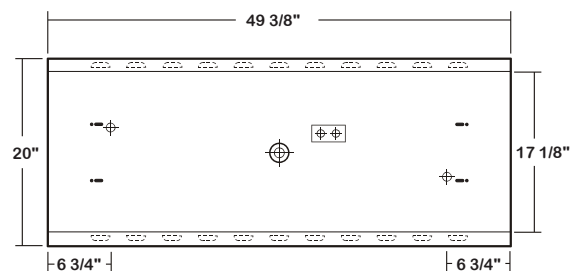
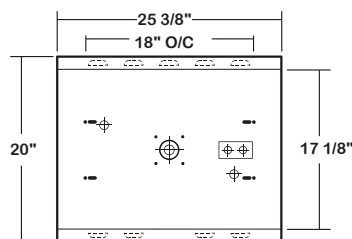
Variety of RAL colors available upon request.



DIMENSIONS



ACCESS PLATE
 2" K.O.
 7/8" OFFSET K.O.
 11/16" STEM MTG. K.O.
 V-HOOK
• 3/16" K.O.



NOTE:

Actual performance may differ as a result of end-user environment and application.

HT: High Ambient Operating Maximum 55°C (48000 lumens, No Lens)

Normal: This fixture has been tested and listed in accordance with UL Standards. L.A. Lighting certifies that it will operate safely when installed properly, and within an ambient temperature range from -20°C to 35°C.

Additional lumen packages and color temperatures available.



Los Angeles Lighting Mfg. Co.

Headquarters
10141 Olney Street
El Monte, CA 91731
Made in the USA

Contact Us

T: 626-454-8300
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www.lalighting.com


BAA Compliant



Due to continued product improvements and enhancements, Los Angeles Lighting Manufacturing Company reserves the right to alter specifications, dimensions, data, and/or materials without notice. Please visit our website to view the most current information.



MADE IN THE U.S.A.

Revised 11/24/20

WARNING

SYSTEM DATA THESE ARE THE MOST POPULAR LUMEN PACKAGES. PLEASE CONSULT FACTORY FOR ADDITIONAL SYSTEM DATA.

[BACK TO TOP](#)

2' - LED LUMEN PACKAGE	NORMAL AMBIENT TEMPERATURE PRODUCT CODE	DELIVERED LUMENS	SYSTEM WATTS	LUMINAIRE EFFICACY	AMBIENT TEMP.	FLUORESCENT EQUIVALENT	IES FILES
8000 Lumens (Nominal)	EBY350-8-2L-PA-DRDM-UNV-2/850	6888	53.8	128.1 lm/W	-20°C / 35°C (-4°F / 95°F)	4-F32T8, 2-F54T5HO 175W MH	*
8000 Lumens (Nominal)	EBY350-8-2L-XX-DRDM-UNV-2/850	8101	53.8	150.6 lm/W	-20°C / 35°C (-4°F / 95°F)	4-F32T8, 2-F54T5HO 175W MH	*
12000 Lumens (Nominal)	EBY350-12-2L-PA-DRDM-UNV-2/850	9921	104.6	94.8 lm/W	-20°C / 35°C (-4°F / 95°F)	6-F32T8, 3-F54T5HO 250W MH	*
12000 Lumens (Nominal)	EBY350-12-2L-XX-DRDM-UNV-2/850	11636	104.6	111.2 lm/W	-20°C / 35°C (-4°F / 95°F)	6-F32T8, 3-F54T5HO 250W MH	*
2' - LED LUMEN PACKAGE	NORMAL AMBIENT TEMPERATURE (HIGH EFFICACY) PRODUCT CODE	DELIVERED LUMENS	SYSTEM WATTS	LUMINAIRE EFFICACY	AMBIENT TEMP.	FLUORESCENT EQUIVALENT	IES FILES
8000 Lumens (Nominal)	EBY350-8HE-2L-PA-DRDM-UNV-2/850	7089	51.8	136.7 lm/W	-20°C / 35°C (-4°F / 95°F)	4-F32T8, 2-F54T5HO 175W MH	*
8000 Lumens (Nominal)	EBY350-8HE-2L-XX-DRDM-UNV-2/850	8314	51.8	160.4 lm/W	-20°C / 35°C (-4°F / 95°F)	4-F32T8, 2-F54T5HO 175W MH	*
12000 Lumens (Nominal)	EBY350-12HE-2L-PA-DRDM-UNV-2/850	9921	104.6	94.8 lm/W	-20°C / 35°C (-4°F / 95°F)	6-F32T8, 3-F54T5HO 250W MH	*
12000 Lumens (Nominal)	EBY350-12HE-2L-XX-DRDM-UNV-2/850	11636	104.6	111.2 lm/W	-20°C / 35°C (-4°F / 95°F)	6-F32T8, 3-F54T5HO 250W MH	*
2' - LED LUMEN PACKAGE	HIGH AMBIENT TEMPERATURE PRODUCT CODE	DELIVERED LUMENS	SYSTEM WATTS	LUMINAIRE EFFICACY	AMBIENT TEMP.	FLUORESCENT EQUIVALENT	IES FILES
16000 Lumens (Nominal)	EBY350-16-2L-PA-DRDM-UNV-2/850HT	13774	107.6	128.0 lm/W	-30°C / 50°C (-22°F / 122°F)	8-F32T8, 4-F54T5HO 400W MH	*
16000 Lumens (Nominal)	EBY350-16-2L-XX-DRDM-UNV-2/850HT	16203	107.6	100.6 lm/W	-30°C / 50°C (-22°F / 122°F)	8-F32T8, 4-F54T5HO 400W MH	*
4' - LED LUMEN PACKAGE	NORMAL AMBIENT TEMPERATURE PRODUCT CODE	DELIVERED LUMENS	SYSTEM WATTS	LUMINAIRE EFFICACY	AMBIENT TEMP.	FLUORESCENT EQUIVALENT	IES FILES
24000 Lumens (Nominal)	EBY350-24-4L-FPA2-DRDM-UNV-4/850	19641	160.90	122.07 lm/W	-20°C / 35°C (-4°F / 95°F)	6-F54T5HO 400W MH	*
24000 Lumens (Nominal)	EBY350-24-4L-PA-DRDM-UNV-4/850	19907	160.90	123.72 lm/W	-20°C / 35°C (-4°F / 95°F)	6-F54T5HO 400W MH	*
24000 Lumens (Nominal)	EBY350-24-4L-XX-DRDM-UNV-4/850	24045	160.90	194.44 lm/W	-20°C / 35°C (-4°F / 95°F)	6-F54T5HO 400W MH	*
4' - LED LUMEN PACKAGE	NORMAL AMBIENT TEMPERATURE (HIGH EFFICACY) PRODUCT CODE	DELIVERED LUMENS	SYSTEM WATTS	LUMINAIRE EFFICACY	AMBIENT TEMP.	FLUORESCENT EQUIVALENT	IES FILES
24000 Lumens (Nominal)	EBY350-24HE-4L-FPA2-DRDM-UNV-4/850	19501	141.47	137.85 lm/W	-20°C / 35°C (-4°F / 95°F)	6-F54T5HO, 400W MH	*
24000 Lumens (Nominal)	EBY350-24HE-4L-PA-DRDM-UNV-4/850	19764	141.47	139.71 lm/W	-20°C / 35°C (-4°F / 95°F)	6-F54T5HO, 400W MH	*
24000 Lumens (Nominal)	EBY350-24HE-4L-XX-DRDM-UNV-4/850	23873	141.47	168.76 lm/W	-20°C / 35°C (-4°F / 95°F)	4-F54T5HO 400W MH	*
4' - LED LUMEN PACKAGE	HIGH AMBIENT TEMPERATURE PRODUCT CODE	DELIVERED LUMENS	SYSTEM WATTS	LUMINAIRE EFFICACY	AMBIENT TEMP.	FLUORESCENT EQUIVALENT	IES FILES
24000 Lumens (Nominal)	EBY350-24-4L-FPA2-DRDM-UNV-2/850HT	19900	149.60	133.04 lm/W	-30°C / 50°C (-22°F / 122°F)	6-F54T5HO, 400W MH	*
24000 Lumens (Nominal)	EBY350-24-4L-PA-DRDM-UNV-2/850HT	20244	149.60	135.32 lm/W	-30°C / 50°C (-22°F / 122°F)	6-F54T5HO, 400W MH	LA-T3584
24000 Lumens (Nominal)	EBY350-24-4L-XX-DRDM-UNV-2/850HT	23654	149.60	158.11 lm/W	-30°C / 50°C (-22°F / 122°F)	4-F54T5HO 400W MH	*
32000 Lumens (Nominal)	EBY350-32-4L-FPA2-DRDM-UNV-2/850HT	26554	197.30	134.59 lm/W	-30°C / 50°C (-22°F / 122°F)	8-F54T5HO	*
32000 Lumens (Nominal)	EBY350-32-4L-PA-DRDM-UNV-2/850HT	27016	197.30	136.93 lm/W	-30°C / 50°C (-22°F / 122°F)	8-F54T5HO	
32000 Lumens (Nominal)	EBY350-32-4L-XX-DRDM-UNV-2/850HT	31563	197.30	159.97 lm/W	-30°C / 50°C (-22°F / 122°F)	8-F54T5HO	*
36000 Lumens (Nominal)	EBY350-36-4L-FPA2-DRDM-UNV-4/850HT	29226	216.14	135.22 lm/W	-30°C / 50°C (-22°F / 122°F)	6-F54T5HO, 400W MH	LA-T3585
36000 Lumens (Nominal)	EBY350-36-4L-PA-DRDM-UNV-4/850HT	29620	216.14	137.04 lm/W	-30°C / 50°C (-22°F / 122°F)	6-F54T5HO, 400W MH	LA-T3256
36000 Lumens (Nominal)	EBY350-36-4L-XX-DRDM-UNV-4/850HT	35778	216.14	165.54 lm/W	-30°C / 50°C (-22°F / 122°F)	4-F54T5HO 400W MH	*



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WARNING

DRIVER OPTIONS

PLEASE CONSULT FACTORY TO SEE IF YOUR SELECTED DRIVER OPTION WORKS WITH THIS FIXTURE.

DRDM () UNV

VOLTAGE

120V	120 Volt
277V	277 Volt
UNV	Universal 120-277 Volt *
347V	347 Volt
480V	480 Volt

TY

TY 10-Years Limited Warranty

DRIVER TYPE

DRDM	0-10V Dimming Driver *
DRDM1	0-10V Dimming Driver, 1% Dimming
DRDM2C	2-Channel 0-10V Dimming Driver (for Color Tunable White)
DR2W	2-Wire Phase Dimming Driver
DRDA	Digital Addressable DALI Dimming Driver
DRDA2C	Digit Digital Addressable DALI Type8 2-Channel Driver (for Color Tunable White)
DRDA2.0	Digital Addressable DALI 2.0 Dimming Driver
DRDA2.02C	Digital Addressable DALI 2.0 Type8 2-Channel Driver (for Color Tunable White)
DRSD	Step Dimming Driver
DR(LTEA2W)	Lutron® 2-Wire 1% Dimming Driver (120V Forward Phase only)
DR(LDE1)	Lutron® EcoSystem 1% Soft-On, Fade-to-Black™ Dimming Driver
DR(LDE5)	Lutron® EcoSystem 5% Dimming Driver
DR(PEQ0E)	Lutron® EcoSystem 0.1% Soft-On, Fade-to-Black Dimming Driver
DR(PSQ020)	Lutron® T-Series Digital 1% Dimming 2-Channel Driver (for Color Tunable White)
DRCR	Control Ready Driver
DRCR(DXL)	Osram Dexal Driver
DRCR(SR)	Philips Sensor Ready Driver

BATTERY PACK OPTIONS

BACK TO TOP

PLEASE CONSULT FACTORY TO SEE IF YOUR SELECTED BATTERY PACK OPTION WORKS WITH THIS FIXTURE.

LED EMERGENCY BATTERY PACKS
(Operate for 90 minutes unless otherwise specified)

BPL 1.5 (2H)

NOTE

2H 2 hours

LUMEN PACKAGE

0.7	Nominal 750 Lumens
1.5	Nominal 1500 Lumens *
3.0	Nominal 3000 Lumens

*Additional lumen packages available

TYPE

(Blank) Normal Ambient Temp. / Standard Operation

C Cold Environment (-20°C)

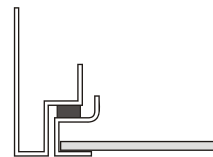
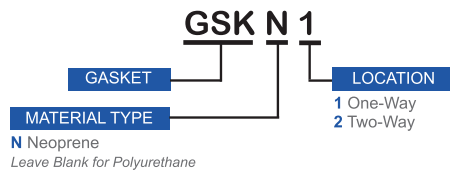
F With Flex for Remote Mounting

SL Slim Casing

ST Self Test / Diagnostic

* Normal Stock Item

GASKET



GSKN1 One-Way Neoprene Gasket



GSKN2 Two-Way Neoprene Gasket



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SENSOR OPTIONS

BACK TO TOP

DRY AND DAMP LOCATIONS - HIGH / LOW AISLE MOUNTING APPLICATIONS - END MOUNT

MS - Motion Sensor

- Turns light ON/OFF based on motion detection
- Fixture mounting height 8-45'
- Universal Voltage (120V-277V)
- 480V available

MSSD - Motion Sensor - Step Dimming

- Step-dims light to desired preset level (based on motion detection)
- Used in conjunction with 0-10V Ballast/Driver
- Fixture mounting height 8-45'
- Universal Voltage (120V-277V)

MSPC - Motion Sensor & Photocell

- Holds lights OFF when sufficient daylight is present regardless of motion detection
- Fixture mounting height 8-45'
- Universal Voltage (120V-277V)

MSPCD(ADC) - Motion Sensor & PhotoCell Dimming (Auto Dim Control)

- Variably dims output to desired preset footcandle level through photocell ON/OFF with motion detection
- Used in conjunction with 0-10V Ballast/Driver
- Fixture mounting height 8-45'
- Universal Voltage (120V-277V)

MSPCD(ANL) - Motion Sensor & Photocell Dimming (Auto Night Light)

- Variably dims output to desired footcandles through photocell
- Low setting when unoccupied (full on with motion)
- For 24 hour use
- Used in conjunction with 0-10V Ballast/Driver
- Fixture mounting height 8-45'
- Universal Voltage (120V-277V)

MSPCDR - Motion Sensor & Photocell Dimming (Setup with Remote Control)

- Field adjustable dimming sensor capabilities:
 - Step Dim (HIGH/LOW output)
 - Auto Night Control (dim to desired footcandles, ON/OFF with motion)
 - Auto Night Light (dim to desired footcandles, LOW without motion)
- Used in conjunction with 0-10V dimming Ballast / Driver
- Holds lights OFF when sufficient daylight is present regardless of motion detection
- Adjustable ramp up and fade down time
- Fixture mounting height 8-40'
- Universal Voltage (120V-277V)
- Remote setup and adjustment with handheld wireless tool (sold separately)

PCS - Photocell Sensor

- Turns light ON/OFF based on light levels
- Fixture mounting height 8-45'
- Universal Voltage (120V-277V)

PCD - Photocell Dimming

- Dims output to desired footcandles through photocell
- Used in conjunction with 0-10V Ballast/Driver
- Fixture mounting height 8-45'
- Universal Voltage (120V-277V)

ACCESSORIES

BACK TO TOP

V6

- 6" Leg Height V-Hook
- Two (2) per fixture



WG11-EBY350

- 11 ga. Wire Guard
- Chrome epoxy powder coated finish

SMA

- Pendant Mounting Adapter
- 20 ga. die formed galvanized steel construction
- Die cast aluminum hub for 3/4" pipe pre-installed
- Designed for single point pendant mount applications

Note: Must request pre-punched holes from factory.

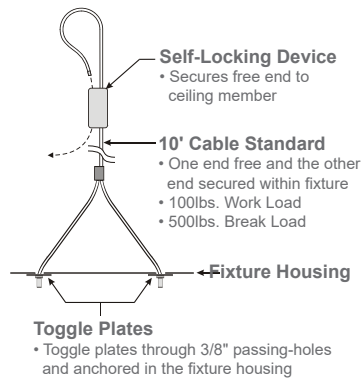


Cable Suspension System

- See [Mechanical Options](#) for additional Cable Suspension Systems

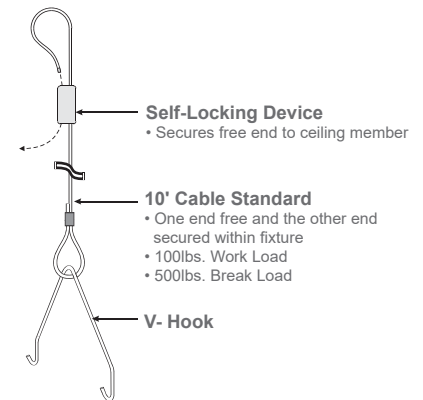
YTCS10

- Y-Toggle-End / Cable Suspension System



V6CS10

- V-Hook / Cable Suspension System
- Cable set with V6 hooks



Ceiling Spacers

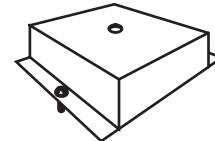
- Minimum one (1) of each per fixture
- Must drill own holes

Note: Ceiling spacers only required when 32000 / 36000 lumen system is specified.



FIS-7

- Feed-In spacer mounts to junction box, spaces fixture 1 1/2" from ceiling



CS-3

- Closed spacer, spaces fixture 1 1/2" from ceiling



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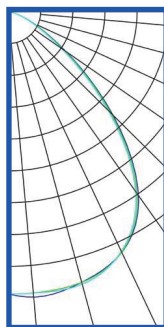
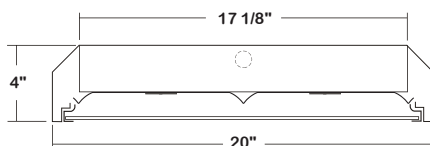
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WARNING

PHOTOMETRIC DATA - EBY350 SERIES

EBY350-24-4L-PA-DRDM-UNV-2/850HT

TEST NO. = LA-T3584
LED TYPE = 144 LED MODULE
NO. OF MODULE = 4
SYSTEM WATT (W) = 149.6
CRI ≥ 80
L70(Hrs.) ≥ 50,000
PHOTOMETRY TYPE = C



CANDLEPOWER

ANGLE	END	45	CROSS
0	9967	9967	9967
5	10111	9962	9968
15	9886	9888	9957
25	9372	9368	9338
35	7920	7835	7754
45	5168	5071	4949
55	2450	2367	2269
65	926	556	868
75	257	257	254
85	38	28	33
90	2	2	1
95	0	0	0
105	0	0	0
115	0	0	0
125	0	0	0
135	0	0	0
145	0	0	0
155	0	0	0
165	0	0	0
175	0	0	0
180	0	0	0

ZONAL LUMEN SUMMARY

DEGREES	LUMENS	% LAMP	% FIXTURE
0-30	8095	33.6	40.0
0-40	13018	54.1	64.3
0-60	19061	83.2	94.1
0-90	20247	84	100.0
90-120	0.0	0.0	0.0
90-150	0.0	0.0	0.0
90-180	0.0	0.0	0.0
0-180	20247	84.1	100.0

Luminaire Output = 20247.49 lumens

Luminaire Efficacy = 135.34 lm/W

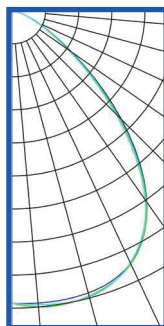
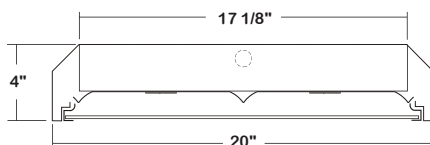
Luminaire Efficiency = 84.14%

SPACING CRITERION

ALONG	ACROSS
1.2	1.25

EBY350-32-4L-PA-DRDM-UNV-2/850HT

TEST NO. = LA-T3585
LED TYPE = 144 LED MODULE
NO. OF MODULE = 4
SYSTEM WATT (W) = 197.3
CRI ≥ 80
L70(Hrs.) ≥ 50,000
PHOTOMETRY TYPE = C



CANDLEPOWER

ANGLE	END	45	CROSS
0	13145	13145	13145
5	13175	13351	13239
15	13116	13265	13302
25	12513	12544	12496
35	10502	10477	10370
45	6913	6749	6574
55	3252	6151	6052
65	1220	1192	1141
75	347	342	332
85	54	52	51
90	1	2	2
95	0	0	0
105	0	0	0
115	0	0	0
125	0	0	0
135	0	0	0
145	0	0	0
155	0	0	0
165	0	0	0
175	0	0	0
180	0	0	0

ZONAL LUMEN SUMMARY

DEGREES	LUMENS	% LAMP	% FIXTURE
0-30	10816	33.6	40.0
0-40	17385	54.1	64.3
0-60	25437	79.2	94.2
0-90	27018	84.1	100.0
90-120	0.5	0.0	0.0
90-150	0.5	0.0	0.0
90-180	0.5	0.0	0.0
0-180	27018	84.2	100.0

Luminaire Output = 21844 lumens

Luminaire Efficacy = 143.5 lm/W

Luminaire Efficiency = 84.1%

SPACING CRITERION

ALONG	ACROSS
1.25	1.25

[BACK TO TOP](#)


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WARNING

SUBSTITUTION REQUEST FORM

Project: Alcoholic Beverages Division (ABD) Ankeny (ANK) Warehouse Racking Substitution Request Number: _____
From: 3/23/2022
To: Jonathan Fant Date: _____
A/E Project Number: 08421.001
Re: _____

Specification Title: LED Interior Lighting Description: Luminaire Schedule
Section: 26 5119 Page: E02 Article/Paragraph: Type H1, H1E, H2, & H2E

Proposed Substitution: LA Lighting Bay Lighter
Manufacturer: LA Lighting Address: _____ Phone: _____
Trade Name: _____ Model No.: EBY350-22-2L

History: ☐ New product ☒ 2-5 years old ☐ 5-10 yrs old ☐ More than 10 years old

Differences between proposed substitution and specified product: Slightly different physical profile; Frosted prismatic acrylic lens instead of textured semi-diffuse lens.

☐ Point-by-point comparative data prepared by contractor and attached - REQUIRED BY A/E

Reason for not providing specified item: Want to see if our mfg would be considered as an equal to the BOD.

Similar Installation:

Project: _____ Architect: _____
Address: _____ Owner: _____
Date Installed: _____

Proposed substitution affects other parts of Work: ☒ No ☐ Yes; explain _____

Supporting Data Attached: ☐ Drawings ☒ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

SUBSTITUTION REQUEST FORM

(Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: Richard Rossley

Signed by: Richard Rossley

Firm: NRG Sales Lighting & Controls LLC

Address: 5485 NE 17th St a, Des Moines, IA 50313

Telephone: 515-528-8201

Attachments: HX-ibe.pdf

A/E's REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Specification Section 01 3300.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 3300.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by:

Date:

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E ☐ _____



RMX - Compact Thermoplastic Exit Sign



PROJECT:

FIXTURE TYPE:

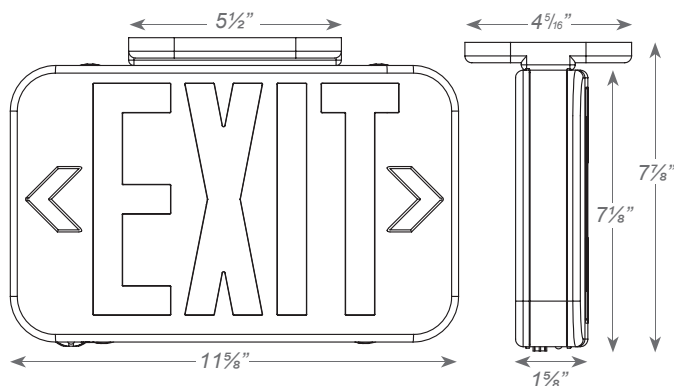
LOCATION:

CONTACT/PHONE:

Type X1*



DIMENSIONS



ILLUMINATION

- Ultra bright, energy efficient, long life Red or Green LEDs.

MOUNTING

- EZ-snap mounting canopy included for top or end mount.
- Universal knockout pattern on back plate for wall mount.

ELECTRICAL

- Dual 120/277 voltage.
- Charge rate/power "ON" LED indicator light and push-to-test switch for mandated code compliance testing.
- 1.2V Long life, maintenance-free, rechargeable NiCd battery (EM models only).
- Internal solid-state transfer switch automatically connects the internal battery to LED board for minimum 90-minute emergency illumination.
- Fully automatic solid-state, two rate charger initiates battery charging to recharge a discharged battery in 24 hours.

HOUSING

- Injection-molded, engineering grade, 5VA flame retardant, high-impact resistant, thermoplastic in white or black finish.
- Aesthetically pleasing, curved face, rounded corner design.
- EZ snap-out Chevron directional indicators.

WARRANTY/LISTING

- Five year warranty on all electronics and housing. Battery prorated for five years.
- Meets UL924, NFPA 101 Life Safety Code, NEC, OSHA, Local and State Codes.
- UL Listed for damp locations (0°C – 50°C).
- Certified to CEC under Title 20 Regulations.



ORDERING INFORMATION

Model	No. of Faces	Letter Color	Housing Color	Battery	Options	Accessories
RMX	U = Universal Single/	R = Red	W = White	(blank) = AC-Only	SD = Self-Diagnostics	WG1 = Wire Guard (wall mount, brushed silver)
	Double Face	G = Green	B = Black	EM = Battery Backup		BPG2 = Wire Guard (wall mount, powdercoat white)
						BPG3 = Wire Guard (ceiling mount, powdercoat white)
						PCS-1 = Polycarbonate Cover*
						BG-1 = Vandal Resistant Bubble Shield

NOTE: SALIDA face plate option available. Check with your Mule Lighting Representative.

*Not for units with REM

EXAMPLE: RMX-U-R-W-EM

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Project: Alcoholic Beverages Division (ABD) Ankeny (ANK) Warehouse Racking Substitution Request Number: _____
From: 3/23/2022
To: Jonathan Fant Date: _____
A/E Project Number: 08421.001
Re: _____

Specification Title: LED Interior Lighting Description: Luminaire Schedule
Section: 26 5119 Page: E02 Article/Paragraph: Type X1

Proposed Substitution: Mule RMX Compact Thermoplastic Exit Sign
Manufacturer: Mule Lighting Address: _____ Phone: _____
Trade Name: _____ Model No.: RMX-U-R-W-EM-SD

History: ☐ New product ☒ 2-5 years old ☐ 5-10 yrs old ☐ More than 10 years old

Differences between proposed substitution and specified product: None

☐ Point-by-point comparative data prepared by contractor and attached - REQUIRED BY A/E

Reason for not providing specified item: Want to see if our mfg would be considered as an equal to the BOD.

Similar Installation:

Project: _____ Architect: _____
Address: _____ Owner: _____
Date Installed: _____

Proposed substitution affects other parts of Work: ☒ No ☐ Yes; explain _____

Supporting Data Attached: ☐ Drawings ☒ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

SUBSTITUTION REQUEST FORM

(Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: Richard Rossley

Signed by: Richard Rossley

Firm: NRG Sales Lighting & Controls LLC

Address: 5485 NE. 17th St. Suite A, Des Moines IA 50313

Telephone: 515-528-8201

Attachments: X1-RMX.pdf

A/E's REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Specification Section 01 3300.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 3300.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by:

Date:

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E ☐ _____



SQC-LED Series

ALL LED THERMOPLASTIC EXIT/EMERGENCY COMBO



PI **Type X1C***

FIXTURE TYPE:

LOCATION:

CONTACT/PHONE:

PRODUCT DESCRIPTION

SQC-LED Series Thermoplastic LED Exit Sign and LED Emergency Light Combos offer long lamp life, energy efficiency and uniform illumination in an economical package. Possessing premium installation features such as a snap-fit canopy & housing, along with push-out chevron directional indicators, the SQC-LED Series offers unsurpassed value in an aesthetically pleasing design. All SQC-LED Series signs include a second faceplate and a snap-fit canopy for universal installation. The SQC-LED Series is provided with two factory installed lighting heads with white LED lamps, combining exit signage with the emergency lighting Function for a convenient, comprehensive solution.

PRODUCT SPECIFICATIONS

CONSTRUCTION

Injection molded, engineering-grade, UV-stable thermoplastic • UL94V-0 flame rating • Impact, scratch, fade and corrosion-resistant • Durable unibody housing frame with reinforcing ribs and integral wiring channel • Snap-fit faceplate and backplate • Second faceplate included for double face applications • 6" letters with 3/4" stroke width • Chevron directional indicators can be easily removed or reinserted as necessary • Red or green letters • White or black textured finish.

ELECTRICAL

Dual voltage 120/277VAC • Rated for use in damp locations • Solid state charging and switching • Brownout protection • Battery low voltage disconnect • Overload and short circuit protection • AC power indicator and test switch.

LAMPS

Long life, energy saving LED lamps • LEDs are connected in a series/parallel configuration such that the unlikely failure of one LED will affect no more than one other LED • Red or green LED/letters, white LED heads.

HEADS

Includes two 1W white LED lighting heads • Contemporary square head design • Heads rotate a full 270° in all directions for comprehensive lighting coverage.

BATTERY

Sealed, 9.6V maintenance-free NiCad • Standard battery will operate sign and two heads for a minimum of 90 minutes in the event of a power outage • High Output (REM option) version will operate the sign and two heads plus an additional two remote heads for a minimum of 90 minutes.

CODE COMPLIANCE

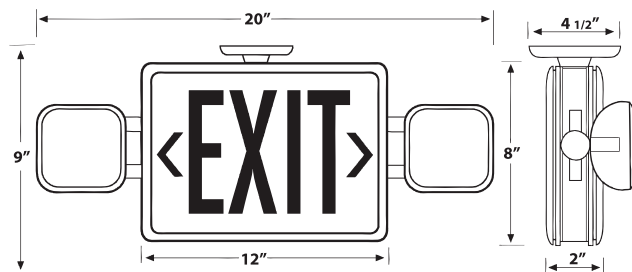
UL924 • UL Listed for damp locations (0°C – 40°C) • NFPA 101 Life Safety Code compliant • NEC and OSHA compliant • Meets the State of Minnesota energy efficiency requirements • CEC Title 20 Compliant

WARRANTY

5-year warranty. Product specifications subject to change without notice.



DIMENSIONS



INSTALLATION

MOUNTING

May be top or back mounted • All signs include quick install snap-fit canopy and mounting hardware for easy top mount installation • Backplate includes universal mounting pattern knock-outs for simple back mounting.



ORDERING INFORMATION

model	# of faces	letter color	housing color	options
SQC-LED	U ¹ = Universal	R = Red	WW = White	SD = Self Diagnostic
		G = Green	BB = Black	REM ² = Remote Capable
Notes				WG-SQC = Wire Guard
				HL = High Lumen Heads (1.5W)
				NH = No Lamp Heads
				BG-1 = Vandal Resistant Bubble Shield

¹ Universal includes 2nd exit face, backplate and canopy

² Standard - Additional capacity to run up to (2) RLED remote heads (see below)

Ordering Example SQC-LED-U-R-WW-REM



SQC-LED Series

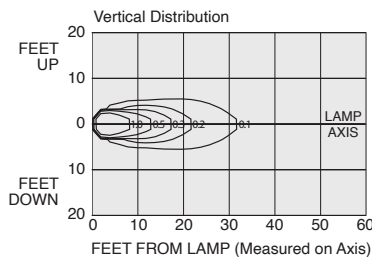
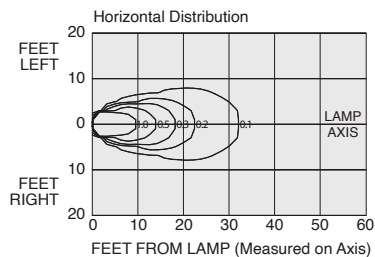
ALL LED THERMOPLASTIC EXIT/EMERGENCY COMBO



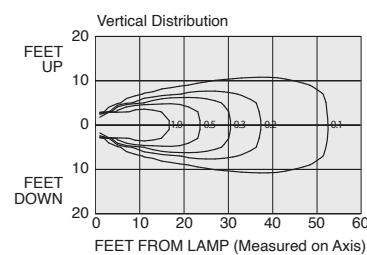
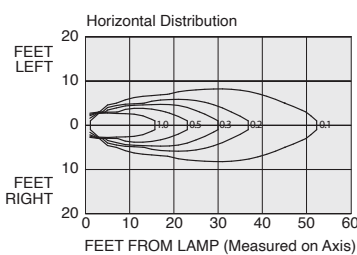
PROJECT: _____
FIXTURE TYPE: _____
LOCATION: _____
CONTACT/PHONE: _____

PHOTOMETRICS

Luminaire SQC-LED (Single Head LED)



Luminaire SQC-LED-HL (Single Head Photometry)



ENGINEERING DATA

	Input Voltage	Max. Amps	Max. Watts	Standby Watts*
Red LED	120	0.04	3.7	2.7
Red LED	277	0.02	4.0	2.7
Green LED	120	0.03	2.8	2.4
Green LED	277	0.02	2.8	2.4
Red LED - REM Option	120	0.04	4.0	3.0
Red LED - REM Option	277	0.02	4.5	3.1
Green LED - REM Option	120	0.04	4.0	3.5
Green LED - REM Option	277	0.03	4.5	3.5

* Fully charged battery

BATTERY DATA

- NiCad battery warranted for five full years with additional 5 years pro-rated warranty

Type	Battery Voltage	Shelf Life ¹	Expected Life ¹	Temperature Range ²
NiCad (Std.)	9.6V, 700mA	3 years	8-10 years	32°F-100°F
NiCad (REM)	9.6V, 900mA	3 years	8-10 years	32°F-100°F

¹ At 77°F ² To obtain rated life and capacity.

LED REMOTE HEADS (ORDER SEPERATELY)

- Each lamp contains 12 long-life, efficient ultra-bright white LED's
- Available in Single or Double head configurations
- Indoor or Outdoor ratings available

MODEL	DESCRIPTION
ASRLED-1	Single LED Remote Indoor
ASRLED-2	Double LED Remote Indoor
ASRLED-1-WP	Single LED Remote Outdoor
ASRLED-2-WP	Double LED Remote Outdoor

OUTDOOR REMOTE HEADS



INDOOR REMOTE HEADS





SQC-LED Series

ALL LED THERMOPLASTIC EXIT/EMERGENCY COMBO

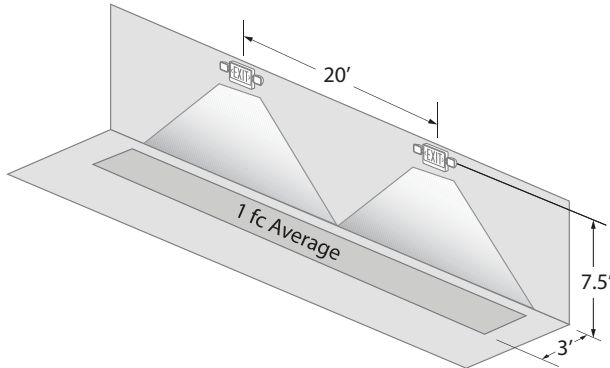


PROJECT: _____
FIXTURE TYPE: _____
LOCATION: _____
CONTACT/PHONE: _____

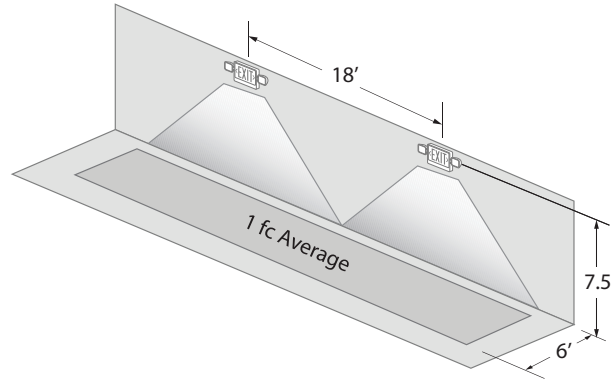
SPACING GUIDES

SQC-LED

3FT PATH SPACING

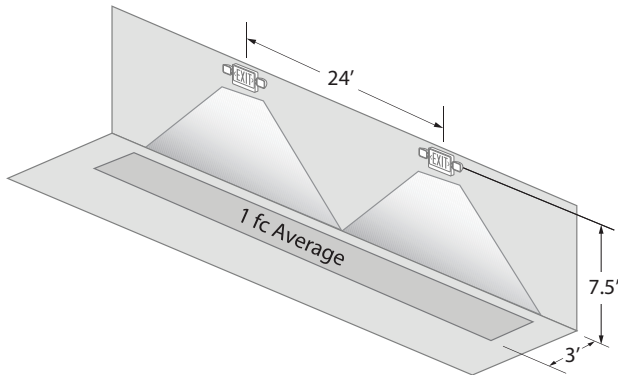


6FT PATH SPACING

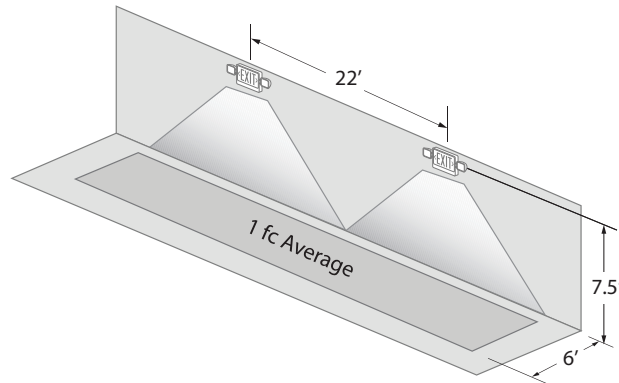


SQC-LED-HL

3FT PATH SPACING



6FT PATH SPACING



SUBSTITUTION REQUEST FORM

Project: Alcoholic Beverages Division (ABD) Ankeny (ANK) Warehouse Racking Substitution Request Number: _____
From: 3/23/2022
To: Jonathan Fant Date: _____
A/E Project Number: 08421.001
Re: _____

Specification Title: LED Interior Lighting Description: Luminaire Schedule
Section: 26 5119 Page: E02 Article/Paragraph: Type X1C

Proposed Substitution: Mule SQC-LED Series Exit/Emergency Combo
Manufacturer: Mule Address: _____ Phone: _____
Trade Name: _____ Model No.: SQC-LED-U-R-WW-SD-HL

History: ☐ New product ☒ 2-5 years old ☐ 5-10 yrs old ☐ More than 10 years old

Differences between proposed substitution and specified product: Square LED lamp heads instead of circular lamp heads.

☐ Point-by-point comparative data prepared by contractor and attached - REQUIRED BY A/E

Reason for not providing specified item: Want to see if our mfg would be considered as an equal to the BOD.

Similar Installation:

Project: _____ Architect: _____
Address: _____ Owner: _____
Date Installed: _____

Proposed substitution affects other parts of Work: ☒ No ☐ Yes; explain _____

Supporting Data Attached: ☐ Drawings ☒ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

SUBSTITUTION REQUEST FORM

(Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: Richard Rossley

Signed by: Richard Rossley

Firm: NRG Sales Lighting & Controls LLC

Address: 5485 NE. 17th St. Suite A, Des Moines IA 50313

Telephone: 515-528-8201

Attachments: X1C-SQC-LED-3.pdf

A/E's REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Specification Section 01 3300.
☒ Substitution approved as noted - Make submittals in accordance with Specification Section 01 3300.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: Jack Hart

Date: 3/30/2022

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E ☐ _____

Manufacturer and types appear to be generally acceptable. Vendor will have to submit footcandle plots to verify full equivalence to specified luminaires. Provide all accessories as specified.