

**GLENBROOK HIGH SCHOOLS
Board Meeting February 9, 2015**

TO: Dr. Mike Riggle
FROM: Kimberly L. Ptak
DATE: FEBRUARY 9, 2015
RE: Award of Contract: LED Lighting GBN and GBS

Recommendation

It is recommended that the Board of Education approve a contract with Ensol Energy Management Solutions in the amount of \$38,248. After grant funds, the district’s net cost of the project will be \$11,458 and project has a 1.21 year payback.

Background

The district received grant money from the Department of Commerce and Economic Opportunity (DCEO) and the Illinois Clean Energy Foundation (ICE) to use toward lighting efficiency projects. We are recommending the money be used on the following three projects. In order to receive the grant money, all work must be completed by May 8, 2015.

	Q	Current Fixture	Proposed Fixture	Current Wattage	Proposed Wattage	Estimated Annual Energy Savings	Cost Pre-Grant	Cost Post Grant	Payback
GBN Fitness Center	48*	Fluorescent Tube	Luminaire Spec Grade	186-279	100	\$5,348	\$20,118	\$5,573	1.04 years
GBS Fitness Center	18	Fluorescent Tube	Lithonia	312	100	\$1,838	\$7,030	\$2,033	1.11 years
GBS Wrestling & Dance	30	Metal Halide	Lithonia	400	100	\$2,286	\$11,100	\$3,852	1.69 years
Total						\$9,472	\$38,248	\$11,458	1.21 years

*** GBN Fitness Center**

In the GBN Fitness Center we are recommending decreasing the quantity of fixtures from 48 to 30. Although the number of fixtures is decreasing, the average number of foot candles increases from 21 fc to 31 fc and the overall uniformity of light is improved.

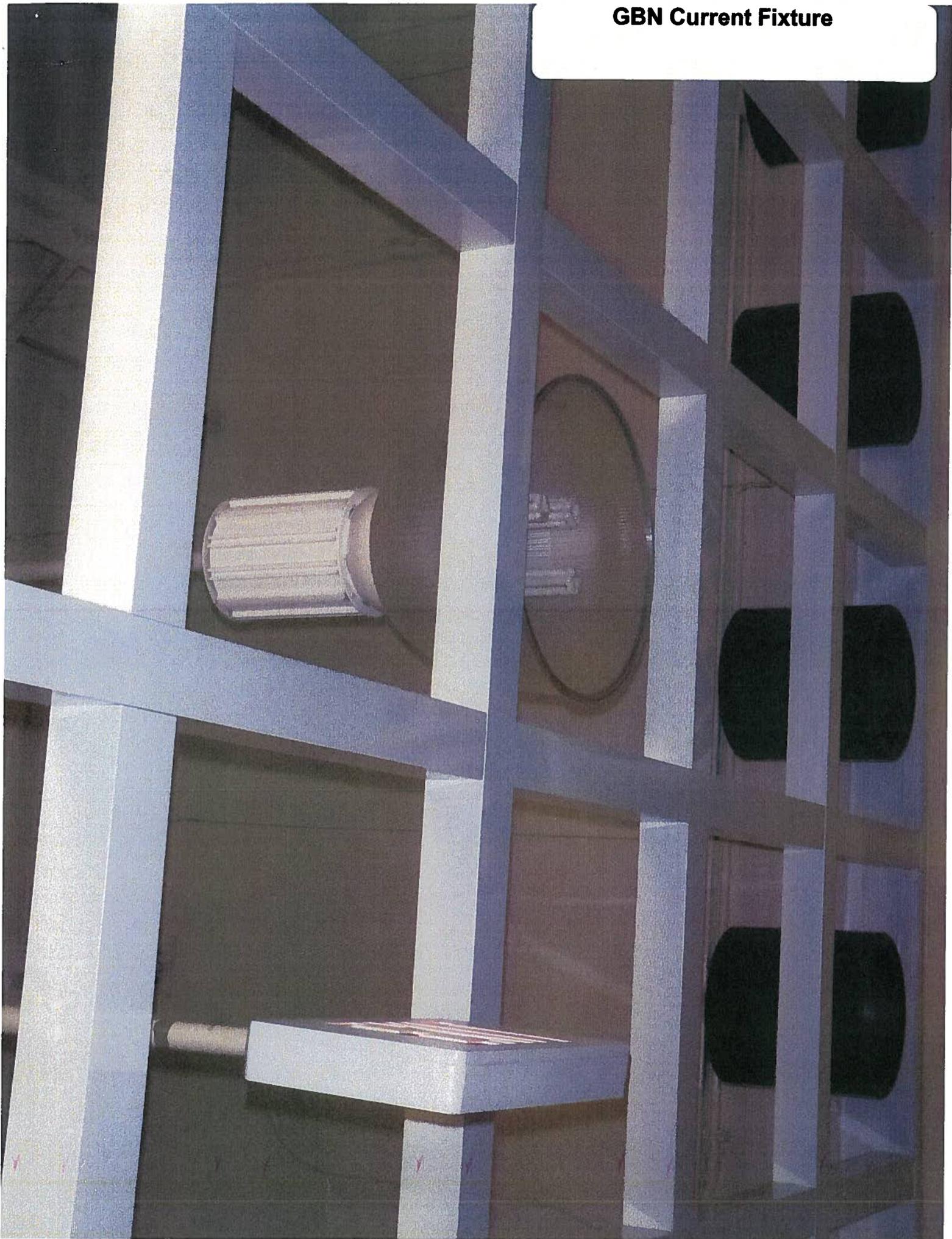
Additional savings in the GBN fitness center that is not included because it is difficult to quantify will result from reconfiguring the switching to allow all the lights by the glass to be switched independently of the main room to daylight harvest. GBS is already configured this way.

The LED fixtures in all areas will have dimming capability.

QUOTES RECEIVED

Ensol Energy Management Solutions	\$38,248
Carey Electric	\$43,800
Austin Electric	\$87,150
Estimate	\$40,000

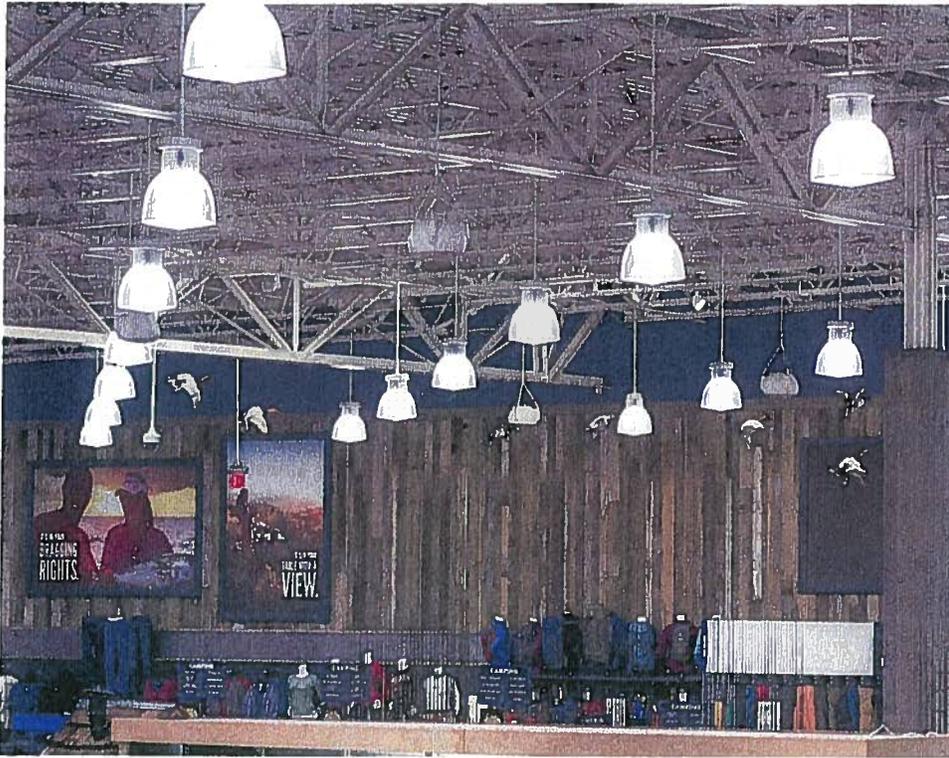
GBN Current Fixture



HBXA-S-100-4100K-120-120-277V
 GLENBROOK NORTH & GLENBROOK SOUTH FITNESS CENTERS
 GLENBROOK NORTH OPTION 1 & 1a, GLENBROOK SOUTH OPTION 1

REPLACES UP TO A
250-WATT METAL HALIDE

30W, 50W, 100W
 HBXA-S: HIGH BAY

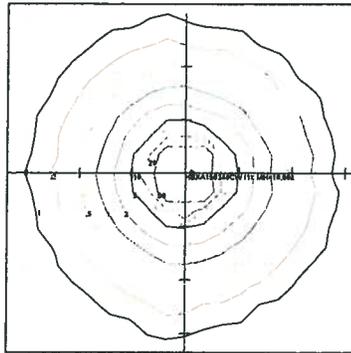


ACTUAL FIXTURE MAY VARY

SPECIFICATIONS

- Rated life: 50,000 hrs.
- Rating: IP 65
- Color Rendering Index (CRI): >80
- Operating temp: -22°F-122°F
- Power factor: >0.95%
- Input line voltage: 120-277 VAC
- Input line frequency: 50/60 Hz

- LED efficiency:
 - warm white, 90 lm/w
 - natural white, 95 lm/w
 - cool white, 100 lm/w

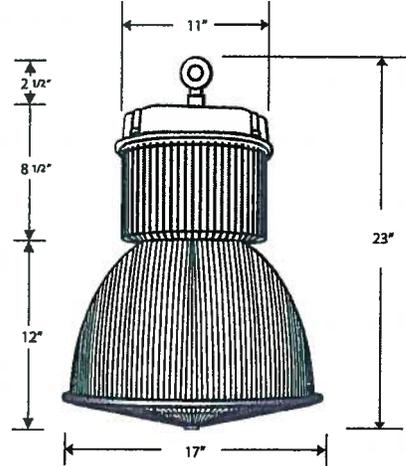


MATERIALS

- Heat sink housing: anodized aluminum
- Reflector: acrylic
- LED shield: Lexan

MISC SPECS

- LED chips: Cree
- Driver: UL approved Meanwell
- Dimmable: with 10V wire & optional driver
- Occupancy sensor: optional
- Hanging weight: 20 lbs.



ORDERING INFORMATION

SERIES	WATTAGE	COLOR TEMPERATURE			BEAM	INPUT VOLTAGE	FINISH	OPTIONS ACCESSORIES
HBXA-S						120-277V	AL	
		3500K WARM WHITE	415000K NATURAL WHITE	5000K COOL WHITE	60° 120°	120-277V	AL- Aluminum	DIM (dimmmable) OS (occupancy sensor) PCF (powder coated finish)
	30	2700 lm	2850 lm	3000 lm				
	50	4500 lm	4750 lm	5000 lm				
	100	9000 lm	9500 lm	10000 lm				

FOR PHOTOMETRICS, IES & PDF FILES - PLEASE VISIT OUR WEBSITE AT: WWW.SPECGRADELED.COM

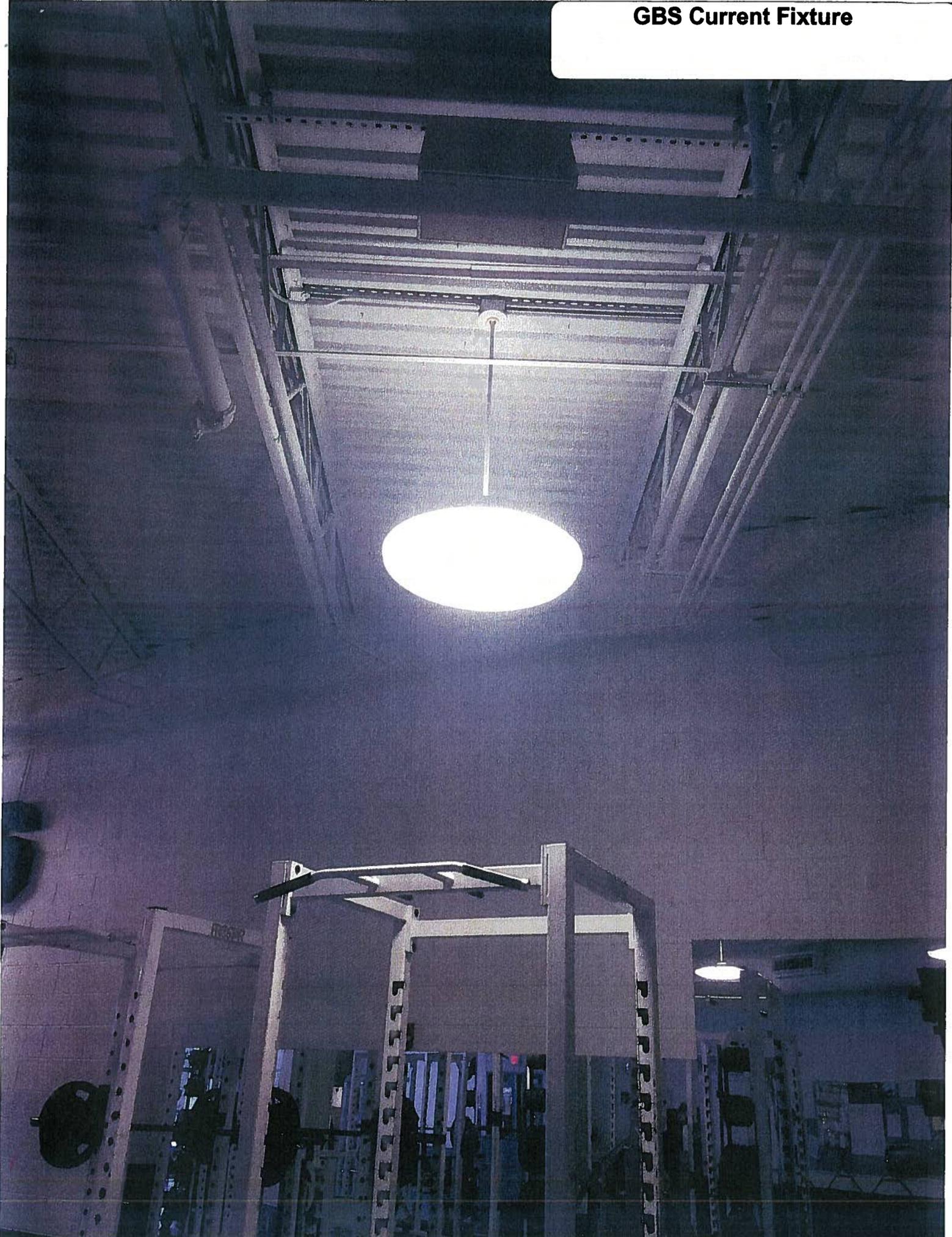


A.M. BEST
 STANDARD & POORS
 STRENGTH RATING:
 A+ SUPERIOR



10 YEAR WARRANTY

GBS Current Fixture





Catal. Number	IBH-9000LM-SD080-MD-MVOLT-GZ10-40K-80CRI
Notes	GLENBROOK SOUTH FITNESS CENTER
Type	GLENBROOK SOUTH OPTION 3

FEATURES & SPECIFICATIONS

INTENDED USE — Ideal one-for-one replacement of conventional lighting systems such as HID and fluorescent. Applications include manufacturing, warehousing and other large indoor spaces with mounting heights ranging from 10' – 40'. Luminaire shall be suspended a minimum 24" from ceiling. Surface mounting is not permitted. **Certain airborne contaminants can diminish integrity of acrylic.** [Click here for Acrylic Environmental Compatibility table for suitable uses.](#)

CONSTRUCTION — Lightweight aluminum heat sink designed to perform at warm ambient temperatures. Due to precision thermal engineering for maximum naturally convective cooling this fixture provides lumen droop that is less than fluorescent. Fabricated steel channel provides maximum rigidity.

OPTICS — Medium distribution to meet both horizontal and vertical light level requirements. Reflectors are precision formed and painted high reflectance white. Semi-diffuse lens is standard to provide glare control and LED protection.

ELECTRICAL — 70% lumen maintenance at 97,000 hours; predicted life of more than 100,000 hours. Thermally protected driver standard with 0-10V dimming.

LISTINGS — CSA certified to US and Canadian safety standards. Damp location listed. Ambient operating temperatures vary please refer to chart on page 3.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

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

Actual wattage may differ by +/-1% when operating between 120-277V +/-10%.

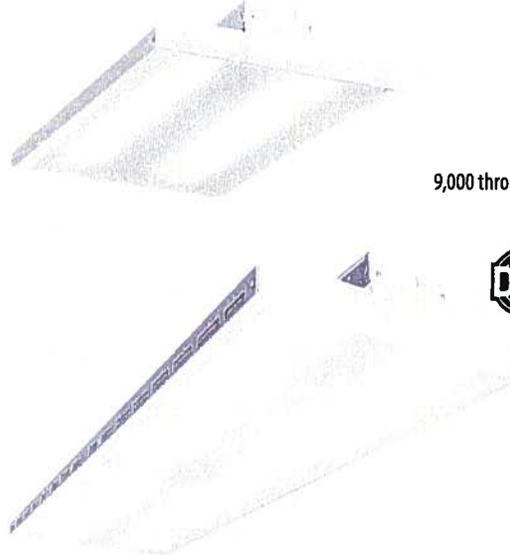
Note: Specifications subject to change without notice.

LED High Bay

IBH

9,000 through 30,000 Lumens

Patent Pending



ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: IBH 18000LM SD080 MD MVOLT GZ10 40K 70CRI WH

IBH Series	Lumens	SD080 Lens	MD Distribution	Voltage	GZ10 Driver	Color temperature	Color rendering index
IBH	9000LM 9,000 lumens 12000LM 12,000 lumens 18000LM 18,000 lumens 24000LM 24,000 lumens 30000LM 30,000 lumens	SD080 Semi-diffuse acrylic	MD Medium	MVOLT MVOLT, 120-277V HVOLT 347V-480V 120 120V 277 277V	GZ10 0-10V dimming	40K 4000 K 50K 5000 K	70CRI 70 CRI 80CRI 80 CRI ¹

Options	Finish
GLR Internal fast-blow fuse ^{2,3}	WH Gloss white MB Matte black
OUTCTR Wiring leads pulled through back center of fixture	
OCS RELOC® OnePass® 5' installed ²	
RRL RELOC®-ready luminaire. See page 5 for ordering information	
WGX Standard wire guard, installed	
<u>Cord sets:</u> ⁴	
CS1W Straight plug, 120V ^{2,5}	
CS3W Twist-lock, 120V ^{2,5}	
CS7W Straight plug, 277V ^{2,5}	
CS11W Twist-lock, 277V ^{2,5}	
CS25W Twist-lock, 347V ^{2,5}	
CS97W Twist-lock, 480V ^{2,5}	
CS93W 600V SEOOW white cord, no plug (no voltage required)	
<u>Motion sensors:</u>	
LCOZU Aisle motion sensor, pre-wired ^{2,6}	
LCHOSZU Aisle motion sensor, pre-wired; programmable dimming ^{2,6}	
LCPZU Aisle motion sensor with photocell; pre-wired ^{2,6}	
LAOZU 360° motion sensor, pre-wired ^{2,6}	
LAHOSZU 360° motion sensor, pre-wired; programmable dimming ^{2,6}	
LAPZU 360° motion sensor with photocell, pre-wired ^{2,6}	
nPP16D nLight® switching/dimming module ^{2,7}	
nMSI nLight, aisle motion sensor, pre-wired ^{2,8}	
nMSI360 nLight, 360° motion sensor, pre-wired ^{2,9}	
nMSID nLight, aisle motion sensor, pre-wired, dimming ^{2,10}	
nMSI360D nLight, 360° motion sensor, pre-wired, dimming ^{2,11}	
XAD Factory installed XPoint™ wireless 0-10V dimming relay ^{2,12}	
MSI6XADL DSCXADL 360° Xpoint wireless motion sensor with photocell ^{2,12}	

See footnotes on page 2.