

DOCUMENT 00 91 13.02 - ADDENDA

1.1 PROJECT INFORMATION

- A. Project Name: ABC Store 104, 7000 Wrightsville Avenue, Wilmington, NC 28403
- B. Owner: New Hanover County ABC Board, 6909 Market Street, Wilmington, NC 28405
- C. Architect: Smith 2 Architecture + Design, PO Box 717 Wrightsville Beach, NC 28480
- D. Date of Addendum: January 29, 2019

1.2 NOTICE TO BIDDERS

- A. This Addendum is issued to all registered plan holders pursuant to the Instructions to Bidders and Conditions of the Contract. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.
- B. The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form.

1.3 SPECIFICATIONS

- A. Section 00 41 13, Form of Bid Bond: see attached form. Shall be attached to Bid Form.
- B. Identification of HUB Certified/Minority Business Participation form: see attached form. Shall be attached to Bid Form.
- C. Section 07 42 13, Formed Metal Wall Panels, 2.2, B. 2, b. Finish: Factory finish with fluoropolymer, color to be selected by architect from full range.

1.4 REVISIONS TO DRAWING SHEETS

- A. Civil:
 - 1. Clarification: Limits of Construction: See attached bulletin drawing: SK2-A012819.
- B. Architectural:
 - 1. Sheet A1.1, Floor Plan. See bulletin drawing SK1-A012819 for enclosure of Utility 109.
 - 2. Sheet A6.0, Door & Window Schedule, Door schedule: Change door 109, Warehouse to Utility, to have HM (hollow metal) frame, detail 2/A6.1, door type 2, door material SC DR (solid core wood), finish stained. It is to remain a "PR 3'-0"x7'-0".
 - 3. Sheet A2.0 and A2.1, Exterior Elevations, Exterior Roofing Finish: Metal Roof, delete "COLOR TBD", finish shall be galvalume.
 - 4. Sheet A2.0 and A2.1, Exterior Elevations, Exterior Paint Schedule: delete EP2, metal panels shall be factory finished.

C. Mechanical:

1. Sheet M1.0, Mechanical Plan: Add Key Note 9 as follows: "F-9 to be mounted in ceiling above Utility 109. Exhaust fan shall be oriented to allow for uninhibited airflow into Warehouse Space. F-9 cooling thermostat to be mounted on wall inside Utility 109." Add Key Note 10 as follows: "Sidewall grille to be located low in center of wall with bottom of grille at 8" above finished floor." Transfer Grilles, Tag J and K, to be installed per Key Note 10 on Utility 109 sidewall.
2. Sheet M2.1, Mechanical Schedule: Power Ventilator Schedule: Add ceiling exhaust fan labeled F-9 and sized as follows: 250 cfm, 0.50" ESP, 1150 RPM, 2050 Tip Speed, 135 watts, 120V-1Ø, direct drive and controlled with a cooling thermostat.
3. Sheet M2.1, Mechanical Schedule: Grille and Diffuser Schedule: Add Sidewall Filter Grille labeled "J". Grille to be sized 18"x18" and include a standard 1" throwaway air filter. Add Sidewall Grille labeled "K". Grille to be sized 18"x18".

D. Electrical:

1. Sheet E1.1 Electrical Power Plan, 1/E1.1 Electrical Power Plan: New exhaust Fan F-9 in Utility 109 shall be fed from general receptacle circuit P-18 located in Warehouse 108.
2. Sheet 6.1 Electrical Luminaire Schedule, Luminaire Schedule: Revise light fixture manufacturer/model of light fixture types P2, P2N, P3, P3N to those as follows: P2 and P2N: HUBBELL #SAV-LX-40-WW16-N-U (Color selection by architect), see attached product specification. P3 and P3N: HUBBELL #UTB2-840-MM-ED-U-WW16-N (Color selection by architect), see attached product specification.

END OF DOCUMENT

FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS THAT _____
_____ as
principal, and _____, as surety, who is
duly licensed to act as surety in North Carolina, are held and firmly bound unto the New
Hanover County ABC Board as obligee, in the penal sum of
_____ DOLLARS, lawful money of the United States of
America, for the payment of which, well and truly to be made, we bind ourselves, our heirs,
executors, administrators, successors and assigns, jointly and severally, firmly by these
presents.

Signed, sealed and dated this ____ day of ____ 20__

WHEREAS, the said principal is herewith submitting proposal for
and the principal desires to file this bid bond in lieu of making the cash deposit.

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION is such, that
if the principal shall be awarded the contract for which the bid is submitted and shall
execute the contract and give bond for the faithful performance thereof within ten days after
the award of same to the principal, then this obligation shall be null and void; but if the
principal fails to so execute such contract and give performance bond as required by G.S.
143-129, the surety shall, upon demand, forthwith pay to the obligee the amount set forth in
the first paragraph hereof.

_____(SEAL)

_____(SEAL)

_____(SEAL)

_____(SEAL)

_____(SEAL)

State of North Carolina AFFIDAVIT A – Listing of Good Faith Efforts

County of _____

(Name of Bidder)

Affidavit of _____

I have made a good faith effort to comply under the following areas checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- ☐ **1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- ☐ **2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- ☐ **3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- ☐ **4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- ☐ **5 – (10 pts)** Attended prebid meetings scheduled by the public owner.
- ☐ **6 – (20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- ☐ **7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- ☐ **8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- ☐ **9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- ☐ **10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

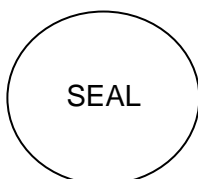
The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

State of North Carolina --AFFIDAVIT B-- Intent to Perform Contract with Own Workforce.

County of _____

Affidavit of _____
(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____
_____ contract.
(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

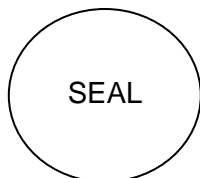
The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement. The Bidder agrees to make a Good Faith Effort to utilize minority suppliers where possible.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

State of North Carolina - AFFIDAVIT C - Portion of the Work to be Performed by HUB Certified/Minority Businesses

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by HUB certified/minority businesses as defined in GS143-128.2(g) and 128.4(a),(b),(e) is equal to or greater than 10% of the bidders total contract price, then the bidder must complete this affidavit.

This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of _____ I do hereby certify that on the _____
(Name of Bidder)

(Project Name)
Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. Attach additional sheets if required

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

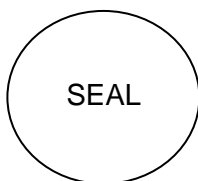
*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____



Signature: _____

Title: _____

State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

State of North Carolina AFFIDAVIT D – Good Faith Efforts

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by HUB Certified/ minority business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of _____ I do hereby certify that on the _____
(Name of Bidder)

Project ID# _____ (Project Name) Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with HUB certified/ minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Examples of documentation that may be required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

- Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- Copies of quotes or responses received from each firm responding to the solicitation.
- A telephone log of follow-up calls to each firm sent a solicitation.
- For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- Copy of pre-bid roster
- Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- Letter detailing reasons for rejection of minority business due to lack of qualification.
- Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

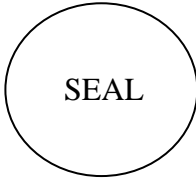
Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____

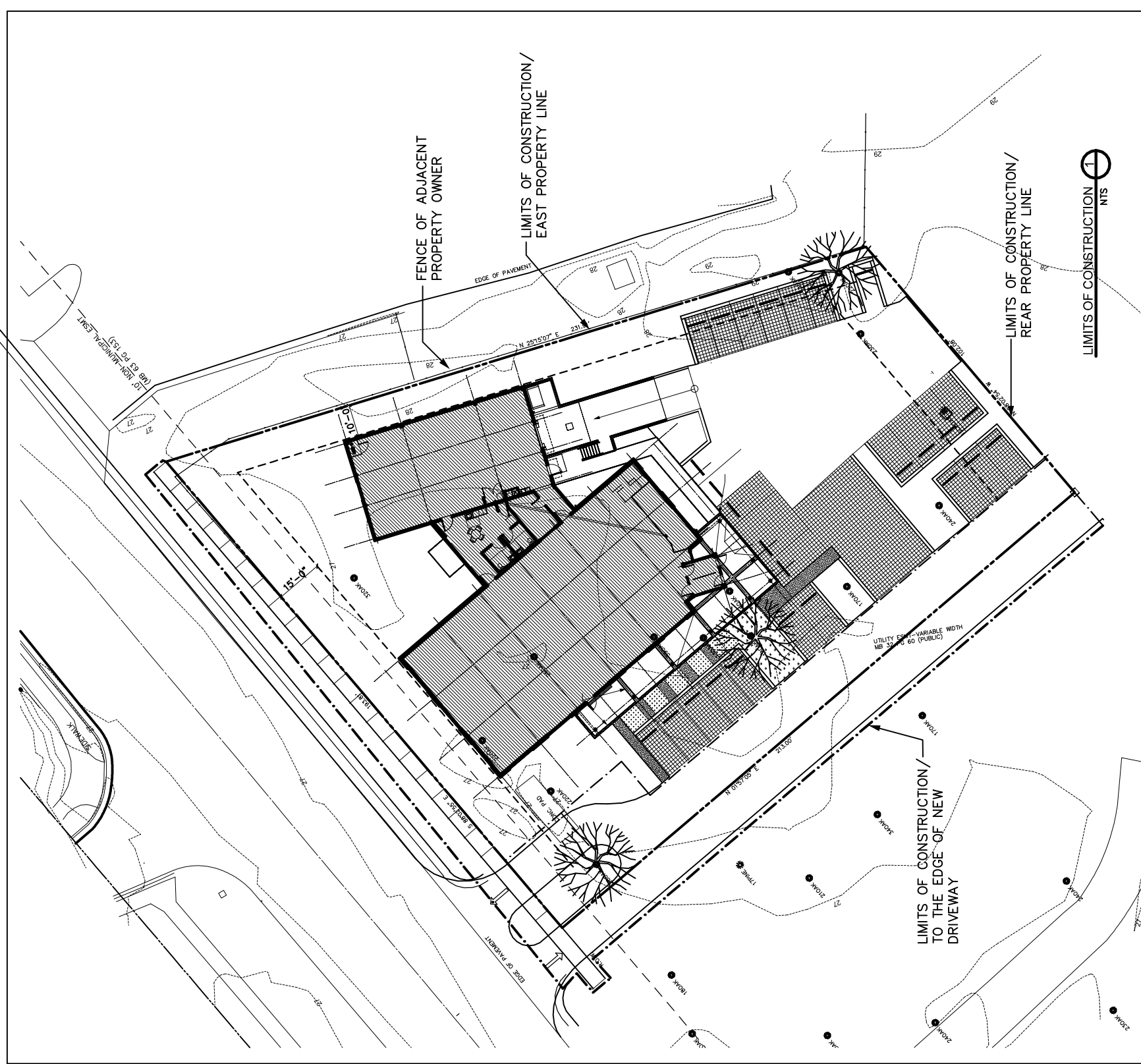


State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____



ARCHITECTURE + DESIGN
PO BOX 777 WRIGHTSVILLE BEACH
NORTH CAROLINA 28480 PHN 910.256.0065

REF: ABC STORE 104
PROJ NO: 17-107
DATE: 1-28-19

LIMITS OF CONSTRUCTION

ABC STORE 104
7000 WRIGHTSVILLE BEACH
WILMINGTON, NC 28403

BULLETIN DRAWING

SK2-A012819

HUBBELL
Industrial Lighting

Replace (y) with the length. $4=4\text{ft}$, $6=6\text{ft}$, $8=8\text{ft}$,
 $10=10\text{ft}$, $12=12\text{ft}$.

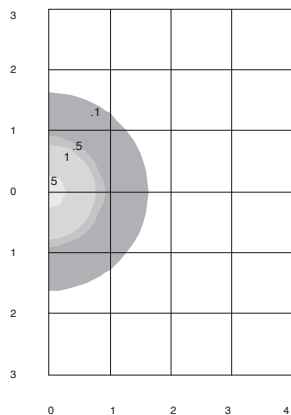
PHOTOMETRIC DATA: SAV-LH-35-8-SB16-N-U-GG**LUMINAIRE DATA****SAV-LH-35-8-SB16-N-U-GG**

Savvano™ decorative LED high bay 16" with suspended bead refractor

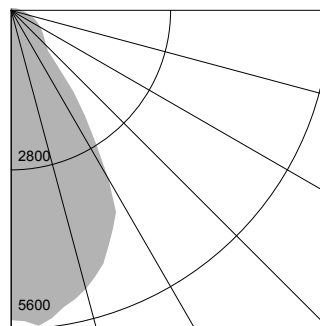
BALLAST HLG-40H-54B

Lamp	LED
Lumens	8,330
Watts	72.70
Efficacy	115
Mounting	Pendant
Spacing Criterion (0-90)	0.96

ZONE	LUMENS	% FIXT.
0-30	3869	46.5
0-40	5290	63.5
0-60	6598	79.2
0-90	7758	93.1
0-180	8330	100.0

ISOMETRIC FOOT CANDLES

Distance In Units Of Mounting Height
Values Based On 30 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

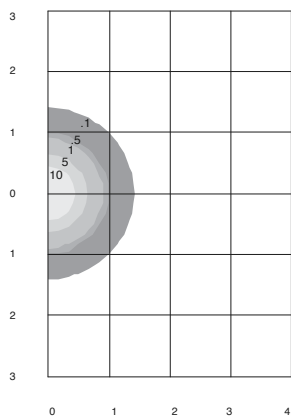
POLAR GRAPH**PHOTOMETRIC DATA: SAV-ML-35-8-WA22-N-U-GG****LUMINAIRE DATA****SAV-ML-35-8-WA22-N-U-GG**

Savvano™ decorative LED high bay 22" with clear acrylic refractor

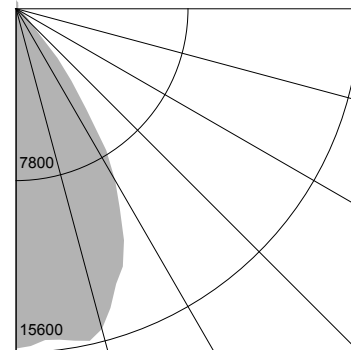
BALLAST HLG-120H-1400B

Lamp	LED
Lumens	17,040
Watts	154.0
Efficacy	111
Mounting	Pendant
Spacing Criterion (0-90)	0.94

ZONE	LUMENS	% FIXT.
0-30	10,824	63.5
0-40	14,408	84.6
0-60	15,809	92.8
0-90	16,198	95.1
0-180	17,040	100.0

ISOMETRIC FOOT CANDLES

Distance In Units Of Mounting Height
Values Based On 30 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

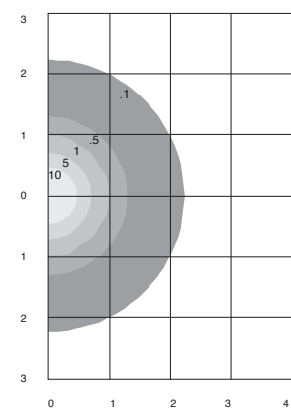
POLAR GRAPH**PHOTOMETRIC DATA: SAV-MH-50-8-WW22-N-U-GG****LUMINAIRE DATA****SAV-MH-50-8-WW22-N-U-GG**

Savvano™ decorative LED high bay 22" with translucent white acrylic reflector

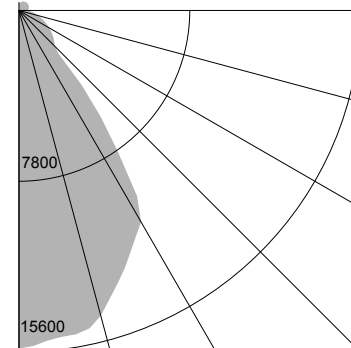
BALLAST HLG-240H-C1400B

Lamp	LED
Lumens	25,523
Watts	219.3
Efficacy	116
Mounting	Pendant
Spacing Criterion (0-90)	1.02

ZONE	LUMENS	% FIXT.
0-30	11,066	43.4
0-40	15,995	62.7
0-60	19,652	77.0
0-90	22,566	88.4
0-180	25,523	100.0

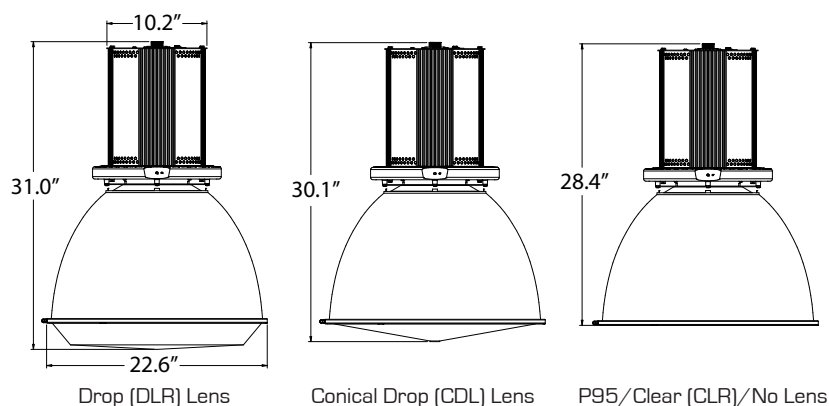
ISOMETRIC FOOT CANDLES

Distance In Units Of Mounting Height
Values Based On 30 Foot Mounting Height
1/2 Maximum Candela Trace Shown As Dashed Curve
(+) = Maximum Candela Point

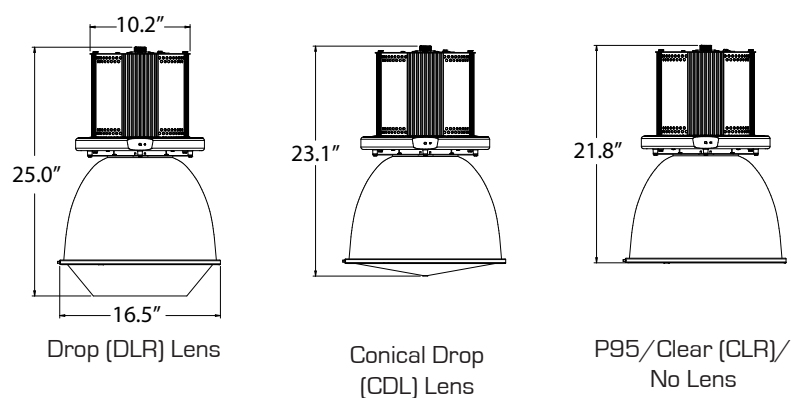
POLAR GRAPH

DIMENSIONS

22" Option



16" Option



REPLACEMENT PARTS

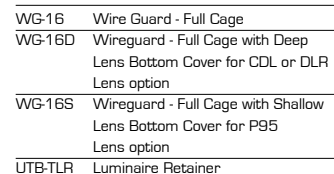
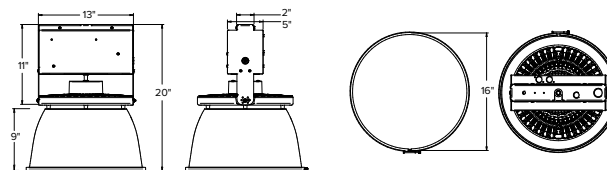
	PART NAME	DESCRIPTION	P/N	QTY
LED BOARDS	LED PCBA	LED Board - MH Output, 3500K CCT, 80 CRI	93076455-2005	1
		LED Board - MM Output, 3500K CCT, 80 CRI	93077856-2005	1
		LED Board - ML Output, 3500K CCT, 80 CRI	93077667-2005	1
		LED Board - LX Output, 3500K CCT, 80 CRI	93076354-2005	1
		LED Board - LH Output, 3500K CCT, 80 CRI	93078098-2005	1
DRIVERS	LED DRIVER	MH Output - 120V-277V	93080133	1
		MH Output - 347V-480V	93081746	1
		MM Output - 120V-277V	93080969	1
		MM Output - 347V-480V	93081746	1
		ML Output - 120V-277V	93080970	1
		ML Output - 347V-480V	93081769	1
		LX Output - 120V-277V	93076331-800	2
		LX Output - 347V-480V	93077419-800	2
		LH Output - 120V-277V	93077416-600	2
		LH Output - 347V-480V	93077419-600	2

LUMENS	CCT	CRI	REFLECTOR	LENS	CAT STRING	LUMEN OUTPUT	WATTS	LUMINAIRE EFFICACY	AMBIENT TEMP RATING	SPACING RATIO	AMPS					
											120V	208V	240V	277V	347V	480V
LH	2700	80	SB16	N	SAV-LH-27-8-SB16-N-X-XX	7880	73	108.4	50°C	0.97	0.61	0.35	0.31	0.27	0.21	0.15
LH	2700	80	WA16	N	SAV-LH-27-8-WA16-N-X-XX	7702		105.9	50°C	0.9						
LH	2700	80	WW16	N	SAV-LH-27-8-WW16-N-X-XX	7554		103.9	50°C	0.98						
LH	3000	80	SB16	N	SAV-LH-30-8-SB16-N-X-XX	8055		110.8	50°C	0.97						
LH	3000	80	WA16	N	SAV-LH-30-8-WA16-N-X-XX	7873		108.3	50°C	0.9						
LH	3000	80	WW16	N	SAV-LH-30-8-WW16-N-X-XX	7722		106.2	50°C	0.98						
LH	3500	80	SB16	N	SAV-LH-35-8-SB16-N-X-XX	8329		114.6	50°C	0.97						
LH	3500	80	WA16	N	SAV-LH-35-8-WA16-N-X-XX	8142		112	50°C	0.9						
LH	3500	80	WW16	N	SAV-LH-35-8-WW16-N-X-XX	7986		109.8	50°C	0.98						
LH	4000	80	SB16	N	SAV-LH-40-8-SB16-N-X-XX	8454		116.3	50°C	0.97						
LH	4000	80	WA16	N	SAV-LH-40-8-WA16-N-X-XX	8264		113.7	50°C	0.9						
LH	4000	80	WW16	N	SAV-LH-40-8-WW16-N-X-XX	8105		111.5	50°C	0.98						
LH	5000	80	SB16	N	SAV-LH-50-8-SB16-N-X-XX	8679		119.4	50°C	0.97						
LH	5000	80	WA16	N	SAV-LH-50-8-WA16-N-X-XX	8484		116.7	50°C	0.9						
LH	5000	80	WW16	N	SAV-LH-50-8-WW16-N-X-XX	8321		114	50°C	0.98						
LX	2700	80	SB16	N	SAV-LX-27-8-SB16-N-X-XX	10666		95	111.6	50°C						
LX	2700	80	WA16	N	SAV-LX-27-8-WA16-N-X-XX	10352	107.8		50°C	0.89						
LX	2700	80	WW16	N	SAV-LX-27-8-WW16-N-X-XX	10201	106.7		50°C	0.97						
LX	3000	80	SB16	N	SAV-LX-30-8-SB16-N-X-XX	10903	114		50°C	0.96						
LX	3000	80	WA16	N	SAV-LX-30-8-WA16-N-X-XX	10581	110.2		50°C	0.89						
LX	3000	80	WW16	N	SAV-LX-30-8-WW16-N-X-XX	10427	109.1		50°C	0.97						
LX	3500	80	SB16	N	SAV-LX-35-8-SB16-N-X-XX	11275	117.9		50°C	0.96						
LX	3500	80	WA16	N	SAV-LX-35-8-WA16-N-X-XX	10942	114		50°C	0.89						
LX	3500	80	WW16	N	SAV-LX-35-8-WW16-N-X-XX	10783	112.8		50°C	0.97						
LX	4000	80	SB16	N	SAV-LX-40-8-SB16-N-X-XX	11444	119.7		50°C	0.96						
LX	4000	80	WA16	N	SAV-LX-40-8-WA16-N-X-XX	11107	115.7		50°C	0.89						
LX	4000	80	WW16	N	SAV-LX-40-8-WW16-N-X-XX	10945	117.5		50°C	0.97						
LX	5000	80	SB16	N	SAV-LX-50-8-SB16-N-X-XX	11749	122.9		50°C	0.96						
LX	5000	80	WA16	N	SAV-LX-50-8-WA16-N-X-XX	11380	118.5		50°C	0.89						
LX	5000	80	WW16	N	SAV-LX-50-8-WW16-N-X-XX	11236	117.5		50°C	0.97						
ML	2700	80	SB22	N	SAV-ML-27-8-SB22-N-X-XX	17150	153		111.7	40°C	0.99	1.25	0.73	0.64	0.57	0.45
ML	2700	80	WA22	N	SAV-ML-27-8-WA22-N-X-XX	16120		104.7	40°C	0.94						
ML	2700	80	WW22	N	SAV-ML-27-8-WW22-N-X-XX	16913		110.4	40°C	1.02						
ML	3000	80	SB22	N	SAV-ML-30-8-SB22-N-X-XX	17530		114.1	40°C	0.99						
ML	3000	80	WA22	N	SAV-ML-30-8-WA22-N-X-XX	16477		107	40°C	0.94						
ML	3000	80	WW22	N	SAV-ML-30-8-WW22-N-X-XX	17288		112.8	40°C	1.02						
ML	3500	80	SB22	N	SAV-ML-35-8-SB22-N-X-XX	18129		118	40°C	0.99						
ML	3500	80	WA22	N</												

LUMENS	CCT	CRI	REFLECTOR	LENS	CAT STRING	LUMEN OUTPUT	WATTS	LUMINAIRE EFFICACY	AMBIENT TEMP RATING	SPACING RATIO	AMPS					
											120V	208V	240V	277V	347V	480V
MM	2700	80	SB22	N	SAV-MM-27-8-SB22-N-X-XX	19200	177	108.1	40°C	0.99	1.48	0.86	0.77	0.68	0.52	0.38
MM	2700	80	WA22	N	SAV-MM-27-8-WA22-N-X-XX	18280		102.9	40°C	0.93						
MM	2700	80	WW22	N	SAV-MM-27-8-WW22-N-X-XX	19197		108.3	40°C	1.02						
MM	3000	80	SB22	N	SAV-MM-30-8-SB22-N-X-XX	19626		110.5	40°C	0.99						
MM	3000	80	WA22	N	SAV-MM-30-8-WA22-N-X-XX	18686		105.2	40°C	0.93						
MM	3000	80	WW22	N	SAV-MM-30-8-WW22-N-X-XX	19624		110.7	40°C	1.02						
MM	3500	80	SB22	N	SAV-MM-35-8-SB22-N-X-XX	20296		114.3	40°C	0.99						
MM	3500	80	WA22	N	SAV-MM-35-8-WA22-N-X-XX	19324		108.7	40°C	0.93						
MM	3500	80	WW22	N	SAV-MM-35-8-WW22-N-X-XX	20293		114.5	40°C	1.02						
MM	4000	80	SB22	N	SAV-MM-40-8-SB22-N-X-XX	20600		116	40°C	0.99						
MM	4000	80	WA22	N	SAV-MM-40-8-WA22-N-X-XX	19614		110.4	40°C	0.93						
MM	4000	80	WW22	N	SAV-MM-40-8-WW22-N-X-XX	20598		116.2	40°C	1.02						
MM	5000	80	SB22	N	SAV-MM-50-8-SB22-N-X-XX	21148		119.1	40°C	0.99						
MM	5000	80	WA22	N	SAV-MM-50-8-WA22-N-X-XX	20136		113.3	40°C	0.93						
MM	5000	80	WW22	N	SAV-MM-50-8-WW22-N-X-XX	21146		119.3	40°C	1.02						
MH	2700	80	SB22	N	SAV-MH-27-8-SB22-N-X-XX	23041	219	103.6	40°C	1	1.83	1.04	0.92	0.81	0.64	0.47
MH	2700	80	WA22	N	SAV-MH-27-8-WA22-N-X-XX	22107		99.4	40°C	0.93						
MH	2700	80	WW22	N	SAV-MH-27-8-WW22-N-X-XX	23172		105.7	40°C	1.02						
MH	3000	80	SB22	N	SAV-MH-30-8-SB22-N-X-XX	23553		114.2	40°C	1						
MH	3000	80	WA22	N	SAV-MH-30-8-WA22-N-X-XX	22598		101.7	40°C	0.93						
MH	3000	80	WW22	N	SAV-MH-30-8-WW22-N-X-XX	23686		108	40°C	1.02						
MH	3500	80	SB22	N	SAV-MH-35-8-SB22-N-X-XX	24356		109.6	40°C	1						
MH	3500	80	WA22	N	SAV-MH-35-8-WA22-N-X-XX	23369		105.1	40°C	0.93						
MH	3500	80	WW22	N	SAV-MH-35-8-WW22-N-X-XX	24495		111.7	40°C	1.02						
MH	4000	80	SB22	N	SAV-MH-40-8-SB22-N-X-XX	24722		114.2	40°C	1						
MH	4000	80	WA22	N	SAV-MH-40-8-WA22-N-X-XX	23720		106.7	40°C	0.93						
MH	4000	80	WW22	N	SAV-MH-40-8-WW22-N-X-XX	24862		113.4	40°C	1.02						
MH	5000	80	SB22	N	SAV-MH-50-8-SB22-N-X-XX	25379		114.2	40°C	1						
MH	5000	80	WA22	N	SAV-MH-50-8-WA22-N-X-XX	24351		109.5	40°C	0.93						
MH	5000	80	WW22	N	SAV-MH-50-8-WW22-N-X-XX	25523		116.3	40°C	1.02						

HUBBELL
Industrial Lighting

- Replacement for 400W/250W HID high bay
- Universal voltage of 120VAC - 277VAC
- 480VAC/347VAC



PERFORMANCE TABLE

5000 CCT, 80 CRI																				
	Reflector	Bottom Lens	LX			LXHE			MM			MMHE			MH			MHHE		
			Lumen Output	Watts	Lm/w	Lumen Output	Watts	Lm/w	Lumen Output	Watts	Lm/w	Lumen Output	Watts	Lm/w	Lumen Output	Watts	Lm/w	Lumen Output	Watts	Lm/w
NO GLASS LENS	N	N	13126	84	156	13144	76	172	19390	128	151	19663	119	165	25700	168	153	25993	160	162
	WA16	N	12751	84	151	12764	76	167	18846	128	148	19100	119	161	24966	168	149	25259	160	158
		CDL	11940	84	142	11950	76	157	17823	128	140	17885	119	150	23377	168	140	23652	160	148
		DLR	11415	84	135	11427	76	150	16872	128	132	17101	119	144	22352	168	133	22615	160	141
		P95	11997	84	142	12008	76	157	17730	128	139	17971	119	151	23488	168	140	23765	160	148
	WW16	N	11822	84	140	11834	76	155	17472	128	137	17709	119	149	23146	168	138	23417	160	146
		CDL	10814	84	128	10825	76	142	15982	128	125	16199	119	136	21172	168	126	21422	160	134
		DLR	10215	84	121	10225	76	134	15097	128	118	15302	119	129	20000	168	119	20235	160	126
		P95	10934	84	130	10943	76	143	16158	128	127	16376	119	138	21405	168	128	21657	160	135
	OP16	N	12729	84	151	12741	76	167	18813	128	148	19068	119	160	24922	168	149	25215	160	157
		CDL	12028	84	143	12039	76	158	17776	128	139	18017	119	151	23550	168	141	23826	160	149
		DLR	11588	84	138	11599	76	152	17127	128	134	17358	119	146	22690	168	135	22955	160	143
		P95	12074	84	143	12086	76	158	17846	128	140	18087	119	152	23641	168	141	23918	160	149
	SB16	N	12820	84	152	12833	76	168	18948	128	149	19089	119	160	25103	168	150	25397	160	159
		CDL	12113	84	144	12125	76	159	17903	128	140	18144	119	152	23716	168	142	23995	160	150
		DLR	11602	84	137	11613	76	152	17147	128	134	17380	119	146	22715	168	136	22982	160	144
		P95	12148	84	144	12159	76	159	17955	128	141	18198	116	157	23785	168	142	24064	160	150
	AL16	N	10874	84	129	10885	76	143	16074	128	126	16291	119	137	21292	168	127	21542	160	135
		CDL	9759	84	116	9769	76	128	14426	128	113	14621	119	123	19110	168	114	19333	160	121
		DLR	8924	84	106	8933	76	117	13191	128	103	13370	119	112	17473	168	104	17679	160	110
		P95	9623	84	114	9633	76	126	14224	128	112	14416	119	121	18842	168	112	19062	160	119
GLASS LENS CGS	N	N	11975	84	142	11987	76	157	17699	128	139	17938	119	151	23446	168	140	23722	160	148
	WA16	N	11629	84	138	11641	76	153	17188	128	135	17418	119	146	22769	168	136	23036	160	144
		CDL	10889	84	129	10998	76	144	16093	128	126	16311	119	137	21320	168	127	21570	160	135
		DLR	10411	84	124	10422	76	137	15388	128	121	15595	119	131	20385	168	122	20625	160	129
		P95	10940	84	130	10952	76	144	16170	128	127	16389	119	138	21422	168	128	21675	160	135
	WW16	N	10781	84	128	10792	76	141	15935	128	125	16150	119	136	21110	168	126	21357	160	133
		CDL	9861	84	117	9872	76	129	14576	128	114	14773	119	124	19310	168	115	19536	160	122
		DLR	9316	84	111	9325	76	122	13769	128	108	13955	119	117	18240	168	109	18455	160	115
		P95	9970	84	118	9980	76	131	14736	128	116	14935	119	126	19521	168	117	19751	160	123
	OP16	N	11609	84	138	11620	76	152	17158	128	135	17389	119	146	22730	168	136	22996	160	144
		CDL	10968	84	130	10980	76	144	16211	128	127	16432	119	138	21478	168	128	21730	160	136
		DLR	10568	84	125	10579	76	139	15620	128	123	15831	119	133	20693	168	124	20936	160	131
		P95	11011	84	131	11022	76	144	16275	128	128	16494	119	139	21560	168	129	21814	160	136
	SB16	N	11692	84	139	11704	76	153	17281	128	136	17514	119	147	22893	168	137	23162	160	145
		CDL	11046	84	131	11059	76	145	16328	128	128	16548	119	139	21629	168	129	21883	160	137
		DLR	10580	84	125	10590	76	139	15638	128	123	15850	119	133	20717	168	124	20960	160	131
		P95	11078	84	131	11089	76	145	16375	128	128	16596	119	139	21692	168	130	21947	160	137
	AL16	N	9918	84	117	9928	76	130	14658	128	115	14856	119	125	19418	168	116	19647	160	123
		CDL	8901	84	106	8910	76	117	13156	128	103	13333	119	112	17428	168	104	17633	160	110
		DLR	8139	84	96	8147	76	107	12029	128	94	12192	119	102	15937	168	95	16124	160	101
		P95	8777	84	104	8785	76	115	12971	128	102	13147	119	110	17184	168	103	17386	160	109

CONVERSION DATA

LUMEN CONVERSION FACTOR (CGS OPTION)	
0.91	

LUMEN CONVERSION TABLE		
CCT	to 70 CRI	to 90 CRI
3000K	1.09	0.82
3500K	1.09	0.86
4000K	1.08	0.86
5000K	1.04	0.86

ELECTRICAL DATA

LUMEN PACKAGE	NOMINAL LUMENS	AMBIENT TEMPERATURE		NOMINAL INPUT WATTS	AMPERAGE						POWER FACTOR		THD	
		120-277V	347/480V		120V	208V	240V	277V	347V	480V	120-277V	347/480	120-277V	347/480
LX	12,000	-35°C to 65°C	-40°C to 65°C	84	0.72 A	0.40 A	0.36 A	0.31 A	0.24 A	0.18 A	0.99	0.96	9.5	9.3
LXHE	12,000			79	0.66 A	0.39 A	0.34 A	0.29 A	0.23 A	0.17 A	0.99	0.96	9.7	9.5
MM	18,000			128	1.09 A	0.62 A	0.55 A	0.48 A	0.36 A	0.27 A	0.99	0.96	11.8	11.5
MMHE	18,000			119	1.02 A	0.59 A	0.52 A	0.46 A	0.35 A	0.26 A	0.99	0.96	9.7	9.5
MH	24,000	-35°C to 55°C	-40°C to 55°C	168	1.43 A	0.82 A	0.71 A	0.62 A	0.48 A	0.35 A	0.99	0.96	10.0	9.8
MHHE	24,000			160	1.36 A	0.79 A	0.69 A	0.60 A	0.46 A	0.33 A	0.99	0.96	9.7	9.5

LIFE DATA

	LUMEN PACKAGE	NOMINAL LUMENS	AMBIENT OPERATING TEMPERATURE	L ₇₀	L ₈₀	L ₉₀
Calculated Hours	LX	12,000	25°C	193,000	120,000	56,000
			65°C	127,000	80,000	38,000
	LXHE	12,000	25°C	193,000	120,000	56,000
			65°C	127,000	80,000	38,000
	MM	18,000	25°C	193,000	120,000	56,000
			65°C	127,000	80,000	38,000
	MMHE	18,000	25°C	193,000	120,000	56,000
			65°C	127,000	80,000	38,000
	MH	24,000	25°C	184,000	115,000	53,000
			55°C	148,000	93,000	44,000
	MHHE	24,000	25°C	184,000	115,000	53,000
			55°C	148,000	93,000	44,000

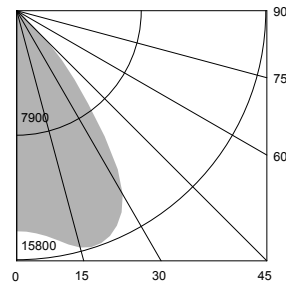
PHOTOMETRIC DATA: UTB2-8-50-MHHE-WW-X-AL16-N-YY-ZZZZ TEST NO. 20867**LUMINAIRE DATA****UTB2-8-50-MHHE-WW-X-AL16-N-YY-ZZZZ**

UTB2 High Bay with Open-Bottom AL16 Reflector

BALLAST XI095C275V054BSF1

Lamp	LED
Lumens	21,542
Watts	160.10
Efficacy	135
Mounting	Pendant
Spacing Criterion (0-90)	1.10
Luminous Opening (ft)	1.33

ZONE	LUMENS	% FIXT.
0-30	12,609	58.5
0-40	18,602	86.4
0-60	21,185	98.3
0-90	21,492	99.8
0-180	21,542	100.0

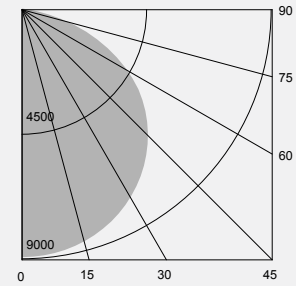
POLAR GRAPH**PHOTOMETRIC DATA: UTB2-8-50-MHHE-WW-X-N-N-YY-ZZZZ TEST NO. 20849****LUMINAIRE DATA****UTB2-8-50-MHHE-WW-X-N-N-YY-ZZZZ**

UTB2 High Bay with No Enclosure or Reflector

BALLAST XI095C275V054BSF1

Lamp	LED
Lumens	25,993
Watts	160.08
Efficacy	162
Mounting	Pendant
Spacing Criterion (0-90)	1.29
Luminous Opening (ft)	0.53

ZONE	LUMENS	% FIXT.
0-30	7028	27.0
0-40	11,620	44.7
0-60	20,974	80.7
0-90	25,993	100.0
0-180	25,993	100.0

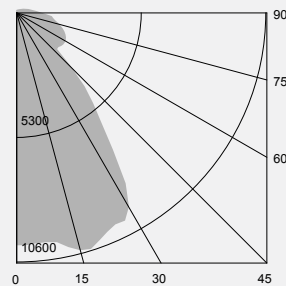
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UTB2 High Bay with Open-Bottom OP16 Reflector

BALLAST XI095C275V054BSF1

Lamp	LED
Lumens	25,215
Watts	160.10
Efficacy	157
Mounting	Pendant
Spacing Criterion (0-90)	1.15
Luminous Opening (ft)	1.35

ZONE	LUMENS	% FIXT.
0-30	8471	33.6
0-40	12966	51.4
0-60	17724	70.3
0-90	23308	92.4
0-180	25215	100.0

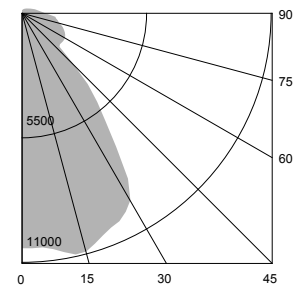
POLAR GRAPH**PHOTOMETRIC DATA: UTB2-8-50-MHHE-WW-X-SB16-N-YY-ZZZ TEST NO. 20863****LUMINAIRE DATA****UTB2-8-50-MHHE-WW-X-SB16-N-YY-ZZZ**

UTB2 High Bay with Open-Bottom SB16 Reflector

BALLAST XI095C275V054BSF1

Lamp	LED
Lumens	25,397
Watts	160.10
Efficacy	159
Mounting	Pendant
Spacing Criterion (0-90)	1.14
Luminous Opening (ft)	1.33

ZONE	LUMENS	% FIXT.
0-30	8663	34.1
0-40	13,195	52.0
0-60	17,692	69.7
0-90	22,874	90.1
0-180	25,397	100.0

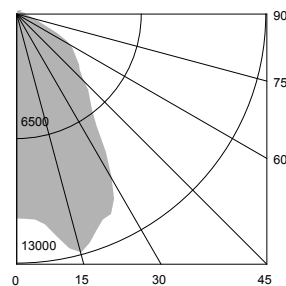
POLAR GRAPH**PHOTOMETRIC DATA: UTB2-8-50-MHHE-WW-X-WA16-N-YY-ZZZZ TEST NO. 20850****LUMINAIRE DATA****UTB2-8-50-MHHE-WW-X-WA16-N-YY-ZZZZ**

UTB2 High Bay with Open-Bottom WA16 Reflector

BALLAST XI095C275V054BSF1

Lamp	LED
Lumens	25,259
Watts	160.10
Efficacy	158
Mounting	Pendant
Spacing Criterion (0-90)	1.18
Luminous Opening (ft)	1.35

ZONE	LUMENS	% FIXT.
0-30	9762	38.6
0-40	14,425	57.1
0-60	21,455	84.9
0-90	24,176	95.7
0-180	25,259	100.0

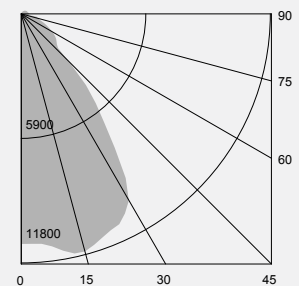
POLAR GRAPH**PHOTOMETRIC DATA: UTB2-8-50-MHHE-WW-X-WW16-N-YY-ZZZZ TEST NO. 20855****LUMINAIRE DATA****UTB2-8-50-MHHE-WW-X-WW16-N-YY-ZZZZ**

UTB2 High Bay with Open-Bottom WW16 Reflector

BALLAST XI095C275V054BSF1

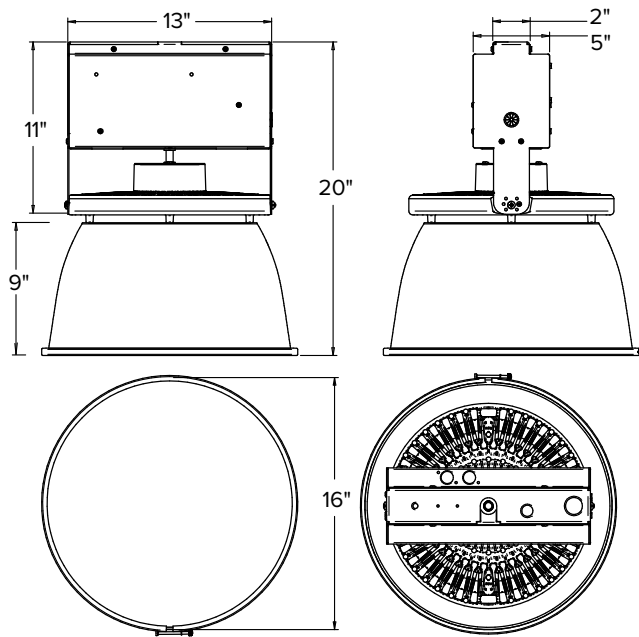
Lamp	LED
Lumens	23,417
Watts	160.10
Efficacy	146
Mounting	Pendant
Spacing Criterion (0-90)	1.15
Luminous Opening (ft)	1.35

ZONE	LUMENS	% FIXT.
0-30	9320	39.8
0-40	14,163	60.5
0-60	18,616	79.5
0-90	21,567	92.1
0-180	23,417	100.0

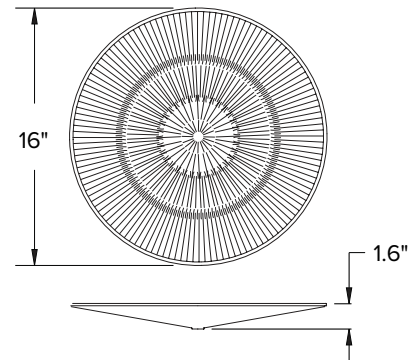
POLAR GRAPH

DIMENSIONS

No Lens



Conical Drop Lens (CDL)



Dropped Lens Refractor (DLR)

