



Type(s)

Project

Date

Notes

## GENERAL INFORMATION

The compact Navis 100 Adjustable luminaire is ideally suited for recessed installations in areas that require short- to medium-throw illumination.

**The Navis 100 accepts a low voltage DC connection and is designed for a direct connection to an external F-Drive LED driver;** see separate datasheet for more details. In conjunction with the driver unit, the luminaire can be dimmed using a DMX/RDM input.

Navis has been specifically developed for architectural lighting applications where high-quality optics and extremely accurate and smooth dimming are required.

Installation couldn't be easier. With simple, wind-down clamps, Navis 100 can be installed in ceiling thicknesses of 0.5–20 mm (0.02–0.78 in).

The use of external driver technology removes critical components from recessed ceiling spaces and places them in accessible electrical rooms/cabinets.

## GENERAL INFORMATION

### APPLICATIONS

- Auditoriums
- Cruise Ships
- Houses of worship
- Restaurants
- Retail
- Museums
- Hospitality

### PRODUCT FEATURES

- High-grade, field-changeable TIR optics and accessories
- Stepless smooth dimming
- Convection cooled
- Fan-free, silent operation
- Multiple color-temperatures
- RGBW color-mixing option
- Remote power-supply for improved accessibility
- Variable ceiling-thickness mounting mechanism
- Locking 360° rotation and 30° tilt

## ORDERING INFORMATION

### NAVIS 100

MODEL	LED	COLOR TEMP	BEAM ANGLE	TRIM PLATE	TRIM COLOR	MOUNTING
<b>ARCN100</b>	<b>W</b> - Fixed White <b>F</b> - Fade to Warm* <b>RGBW</b> - Color Mixing	<b>0</b> - Color Mixing <b>2</b> - 2700 K <b>3</b> - 3000 K* <b>35</b> - 3500 K <b>4</b> - 4000 K <b>5</b> - 5000 K  *FTW option only available at 3000 K	<b>15</b> - 15° <b>25</b> - 25° <b>40</b> - 40° <b>60</b> - 60°	<b>S</b> - Standard <b>C</b> - Curve* <b>P</b> - Pinhole <b>O</b> - Off-set Slot <b>WW</b> - Wall Wash**	<b>B</b> - Black <b>W</b> - White <b>P</b> - Primed <b>C</b> - Custom	<b>A</b> - Adjustable Recessed
ARCN-100				*Curve limits tilt angle to 15° max. **Wall Wash option requires 40° beam angle selection		

To complete the form, simply select an option at the bottom of each column to populate the last row with your desired model number. Color options: Fixtures ship standard in black, white, or primed (for painting by others). For additional colors please contact ETC.



## PRODUCT SPECIFICATIONS

## Source

	<b>FIXED WHITE</b>	<b>FADE TO WARM</b>	<b>RGBW</b>
LED details	Lumileds LUXEON® CoB	Lumileds LUXEON® CoB	Lumileds LUXEON® C colorline (RGBW)
Max field lumens at 60°	3000 K: 1,254	815	477
Max total lumens at 60°	3000 K: 1,410	919	529
Lumens per watt 60°	3000 K: 85	57	31
L70 rating (hours to 70% output)	55,000	60,000	54,000
Refresh Rate	1,200 Hz	1,200 Hz	1,200 Hz

## Color

Color temperature options	2700 K 3000 K 3500 K 4000 K 5000 K	3000 K dims to 1800 K	Calibrated 3000 K
Color features		Redshift customization with patented Fade to Warm trim technology	ETC's color integrity technology, Redshift, Fade to Warm

## Optical

Beam angle range (deg)	15°, 25°, 40°, 60°
CRI	>90 (5000 K >80)
TM-30-18 data	Refer to charts below
Photometry data	Refer to charts below

## Electrical

Voltage range	Max 48 VDC constant current supply for connection to remote F-Drive system (see separate datasheet)
Input method	RJ45 in and thru connector for connection to remote F-Drive system (see separate datasheet) <b>NOTE</b> - Minimum required conductor gauge 0.25 mm² (23 AWG)
Maximum fixtures per circuit	Four per Cat6 cable run
Wattage (typical)	White: 22 W   FTW: 16 W   RGBW: 22 W
Current draw	White: 600 mA   FTW: 450 mA   RGBW: 460 mA
Electrical characteristics	White: Constant Current (use F-Drive CC-150 card) FTW: Constant Current (Use F-Drive FTW-150 card) RGBW: 48 VDC/Data (use F-Drive Chroma 150 card)
Refresh rate	1.2 kHz

## Control (via separate driver)

Protocols	DMX-512
Modes (footprint)	See table on page 5
RDM configuration	Yes
UI type	No local UI. Configure system via Concert/RDM Controller
Local control	No
Notes	DMX control (RDM configuration via external DMX/RDM controller)

## Thermal

Ambient operating temp	0°C to 40°C (32°F to 104°F)
Fan (controllable)	N/A (convection cooled luminaire)
Droop compensation	Patented on all RGBW fixtures
BTUs/hour	White: 75.07   FTW: 54.59   RGBW: 75.07

## Physical

Materials	Die-cast aluminum and cold-rolled steel
Color options	Luminaire available in Black only. Trim plates available in white, black, and primed.
Mounting options	Three wind-down clamps via 2 mm hex bolts
IP rating	IP-20, suitable for damp locations
Vibration testing	MIL-STD-167-1A compliant
Salt fog testing	MIL-STD-810-G compliant
Weight	Product weight: 0.63 kg (1.38 lb) Shipping weight: 1.07 kg (2.35 lb)
Included accessories	Trim plate (when selected)
Maximum fixture rotation	360°
Maximum fixture tilt	30° (15° max with curve trim plate)
Lockable tilt/rotate	Yes - via T10 Torx screw on room side of luminaire

## Warranty

Full fixture	5 years
LED array	10 years

## Regulatory and Compliance

Approved regulatory standards	<p>All Variants:</p> <ul style="list-style-type: none"> <li>UL 8750, Light Emitting Diode (Led) Equipment For Use In Lighting Products</li> <li>UL C22.2 No. 250.13, Light Emitting Diode (Led) Equipment For Lighting Applications</li> <li>UL 1598/CSA C22.2 No. 250.0, Luminaires</li> <li>UL 2108, Low Voltage Lighting Systems</li> <li>Plenum Rated to UL 2043</li> <li>UL 1598A, Luminaires for Installation on Marine Vessels</li> <li>CE Compliant</li> </ul> <p>Additional compliance for Navis White and FTW luminaires only:</p> <ul style="list-style-type: none"> <li>UL 924, Emergency Lighting and Power Equipment</li> <li>CSA C22.2 No. 141-15, Emergency Lighting Equipment</li> <li>Certified by Lloyd's Registry</li> </ul>
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## OPTICAL ACCESSORIES



CLEAR



FROSTED



HEX LOUVER



LINEAR



SOLITE

MODEL	OPTICAL ACCESSORIES
ARCNA100SOCL1	Clear Lens
ARCNA100SOFL1	Frosted Lens
ARCNA100SOLS1	Linear Spread
ARCNA100SOSG1	Solite Glass
ARCNA100OAH1B	Hex Louver Black
ARCNA100OAFRB	Finishing Ring Black
ARCNA100OAFRW	Finishing Ring White

**Note:** Up to two optical accessories can be used simultaneously on all trim rings except for Curve (1) and Wall Wash (0).

## TRIM PLATE ADDITIONAL ACCESSORIES



STANDARD

WALL WASH

CURVE

PINHOLE

OFF-SET SLOT

MODEL	TRIM PLATE	COLOR
ARCNA100OA	<b>S</b> - Standard <b>WW</b> - Wall Wash <b>C</b> - Curve <b>P</b> - Pinhole <b>O</b> - Off-set Slot	<b>B</b> - Black <b>W</b> - White <b>P</b> - Primed
ARCNA100OA		

## OPTIONAL INSTALLATION ACCESSORIES

**PENDANT ACCESSORY**

Quickly transform the Navis 100 recessed luminaire into a pendant fixture by adding a pendant accessory kit. Standard stem lengths are 1 m, 1.25 m, 1.5 m, 2 m.

MODEL	PENDANT KIT
ARCNA100PK1	Pendant Kit.
ARCNA100-ST100	1 m (39 in) Stem
ARCNA100-ST125	1.25 m (49 in) Stem
ARCNA100-ST150	1.5 m (59 in) Stem
ARCNA100-ST200	2.0 m (79 in) Stem
Note: -B for Black, -W for White, -P for Primed required on both Pendant Kit and Stem	

**SURFACE CYLINDER ACCESSORY**

Similar to the Pendant accessory, the surface cylinder allows a Navis 100 luminaire to be directly installed to a junction box or other surface mounting hardware.

MODEL	SURFACE CYLINDER
ARCNA100SC1	Surface Cylinder
Note: -B for Black, -W for White, -P for Primed required on Surface Cylinder	

**WALL WASH ACCESSORY**

Add the magnetically held wall wash accessory to any Navis 100 recessed luminaire and transform the standard 40° optic into a smooth wall wash fixture.

MODEL	WALL WASH
ARCNA100OAWW	Wall Wash
Note: -B for Black, -W for White, -P for Primed required on Wall Wash accessories.	

**RECESSED CEILING BRACKET**

The ArcSystem Recessed Ceiling Bracket allows an ArcSystem Navis 100 recessed luminaire to be securely installed into an open format or suspended/drop ceiling grid. It is intended for use in ceiling voids from 0.3–1.22 m (1–4 ft). The bracket is easily installed on user-provided horizontal supports using standard attachment methods or ETC supplied brackets.

MODEL	PENDANT KIT
ARCNCB-N100	Recessed Ceiling Bracket, Navis 100
ARC-CBM	Universal Mounting Kit for ArcSystem Recessed Ceiling Bracket, includes two brackets
Note: ARC-CBM is an optional attachment method for horizontal EMT conduit supports.	
Please review the ArcSystem Recessed Ceiling Bracket datasheet for more information.	

**ARC SYSTEM GOOF RING**

The ArcSystem Goof Ring allows any ArcSystem recessed luminaire to be securely installed in a location where the installation hole is larger than the standard prescribed hole size. This easy-to-install device improves usability of ArcSystem Navis luminaires fitting into a range of different hole sizes for each luminaire type.

MODEL	DESCRIPTION
ARCNGR-N100-6	Goof Ring, Navis 100, 6 Inch (15 cm)
ARCNGR-N100-6.5	Goof Ring, Navis 100, 6.5 Inch (16.5 cm)
ARCNGR-N100-8	Goof Ring, Navis 100, 7-8 Inch (18-20 cm)
ARCNGR-N100-10	Goof Ring, Navis 100, 8-10 Inch (20-25 cm)
Note: -B for Black, -W for White, or -P for Primed Grey required on ArcSystem Goof Rings	
Please review the ArcSystem Goof Ring datasheet for more information	

**DRIVER COMPATIBILITY**

FIXTURE TYPE	COMPATIBLE DRIVERS	MODEL NUMBER
Navis 100 Fixed White	F-Drive CC Output Card F-Drive W1 CC Driver F-Drive W1 Emergency CC Driver Navis 100 Sidekick LED Driver	FDROCCC150 FDW1CCD FDW1ECCD ARCNSK100WC
Navis 100 Fade to Warm	F-Drive FTW Output Card F-Drive W1 FTW Driver F-Drive W1 Emergency FTW Driver Navis 100 Sidekick LED Driver	FDROCFTW150 FDW1FTWD FDW1EFTWD ARCNSK100FTWC
Navis 100 RGBW	F-Drive Chroma Output Card F-Drive W1 Chroma Driver	FDROCCHC150 FDW1CHD

## PHOTOMETRY

## Lumen Table

COLOR TEMP	BEAM ANGLE	FIELD ANGLE	FIELD LUMENS	BEAM LUMENS	DELIVERED LUMENS	MAX CANDELA
2700 K	33°	65°	1,087	551	1,359	3,116
3000 K	33°	65°	1,158	587	1,448	3,320
3500 K	33°	65°	1,207	612	1,509	3,461
4000 K	33°	65°	1,255	636	1,569	3,597
5000 K	33°	65°	1,455	738	1,819	4,171
3000 K FTW	32°	65°	744	366	934	2,162
3000 K RGBW	38°	80°	470	234	563	958

**Note:** The above table is reported using the 40° lens, standard trim plate, and no secondary optics.

IES light files are available for all beam angles of ArcSystem Navis at [etcconnect.com](http://etcconnect.com).

Full photometry and color information for the ArcSystem Navis family is available in the [ArcSystem Navis Photometry and Color Info Guide](#).

## DMX CONTROL

DMX is an accurate and robust control protocol that provides simple control over luminaires. As experts in DMX for decades, systems developed by ETC integrate DMX natively and give designer, integrator, installer, and user an easy, flexible, and robust control system.

## F-DRIVE OUTPUT CARD - DMX Personality

DMX Channel	F-Drive Chroma Output Card with Navis RGBW Luminaires		F-Drive FTW Output Card with Navis FTW Luminaires		F-Drive CC with Navis White Luminaires
	Direct (Default)	IRGB	Default	Warm Trim	Default
1	Intensity	Intensity	Intensity	Intensity	Intensity
2	Red	Red		Fade to warm scaling	
3	Green	Green			
4	Blue	Blue			
5	White				

## CHROMA CONTROL FEATURES

- Default (IRGB) mode automatically integrates the luminaires White LED into all color points where it is applicable. In this mode the luminaire will always mix the brightest version of any given color point.
- In Default (IRGB) mode the native white point of an RGBW luminaire can be set to any of the following calibrated white points: 2700 K, 3000 K, 3500 K, 4000 K, 5000 K.
- Red Shift can be enabled or disabled on any RGBW luminaire using Default (IRGB) mode.
- These features are easily accessed through ETC Concert.

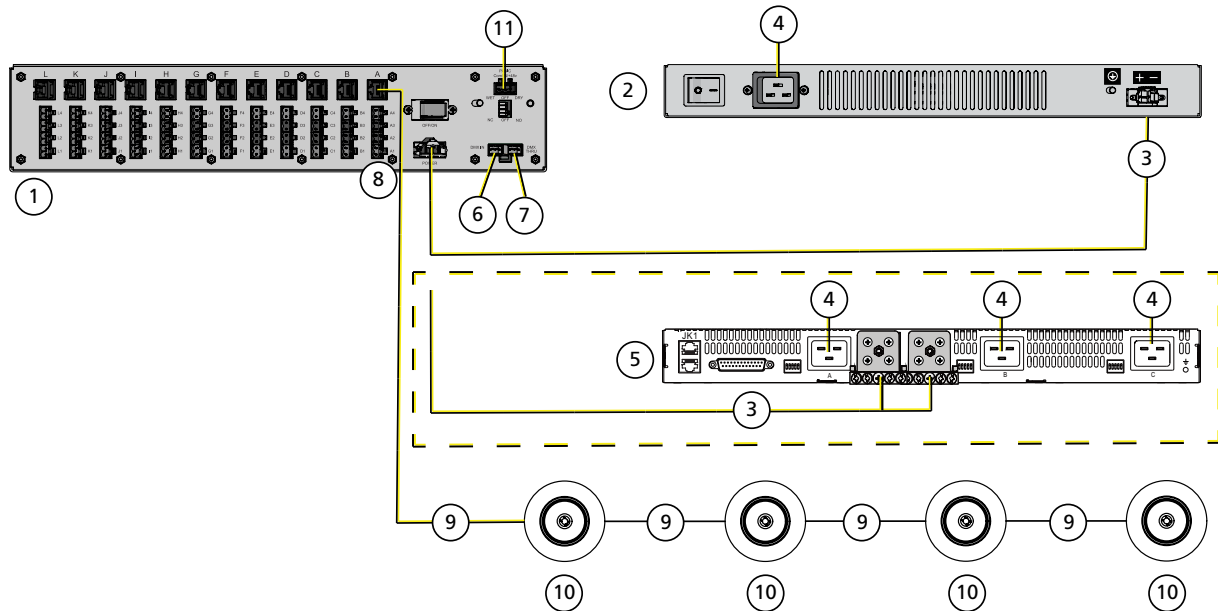
## FTW CONTROL FEATURES

- “Warm Trim” mode enables the user to scale the intensity level at which the Red Shift color temperature changes begin to occur.

## CC CONTROL FEATURES

- Intensity on CC luminaires is controlled via 8-bit DMX which gives 255 controllable levels. Internal smoothing, variable fade times, and curve controls provide even and consistent dimming for standard and customized dimming requirement

## F-DRIVE R12 DRIVER WIRING DIAGRAM

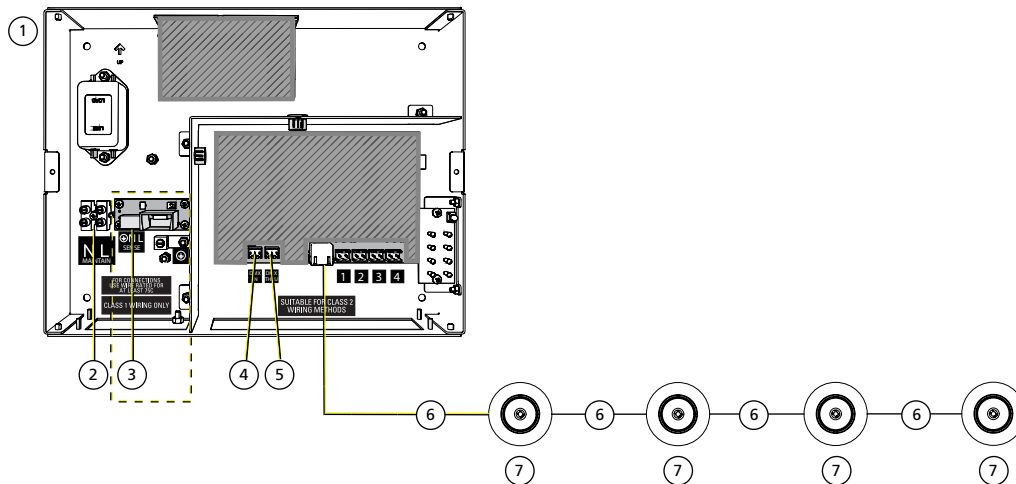


DESCRIPTION		NOTES
1	F-Drive FDR12FD	Back view, rack ears are attached to the front side but not shown.
2	F-Drive Power Supply	Back view, rack ears are attached to the front side but not shown.
3	48 VDC from power supply to F-Drive R12	Use the DC wiring harness supplied with the F-Drive R12 and the two-pin power plug supplied with the F-Drive Power Supply.
4	Input power to power supply	See the power supply datasheet for available power cord options.
5	Optional: alternative 48 VDC power supply	MEAN WELL RCP-2000 module in RKP-1U rack-mount frame, back view, shown with ETC bussing kit. Rack ears are attached to the front side but not shown.
6	DMX input to F-Drive R12 from external DMX source	Belden 9729 or Cat 5e (or equivalent) with 0.2 mm <sup>2</sup> (24 AWG) or larger conductors terminated to T568B standard
7	DMX thru from F-Drive R12 to another F-Drive R12 or other device	Belden 9729 or Cat 5e (or equivalent) with 0.2 mm <sup>2</sup> (24 AWG) or larger conductors terminated to T568B standard
8	F-Drive R12 output card terminations	Use CC-150 Card, FTW-150 Card, or Chroma Card for Navis 100 luminaires. There are 12 output card slots available on an F-Drive R12.
9	Category-type cable with 0.25 mm <sup>2</sup> (23 AWG) or larger conductors (Belden 2412 or 2148 Cat6e)	<48 VDC for Navis 100 White or Navis 100 Fade to Warm, 48 VDC for Navis 100 RGBW.
10	Navis luminaire*	Navis 100 White, Navis 100 Fade to Warm, or Navis 100 RGBW. Connect up to four of the same luminaire per output card, compatible with the output card type.
11	F-Drive R12 optional panic output	48 VDC wet or dry contact suitable for connection to external emergency systems For example: the F-Drive R12 panic output can be used as the Sense input to an F-Drive W1 Emergency Driver.

\* Multiple Navis 100 luminaires directly connected to one F-Drive R12 output card must be run in a daisy-chain configuration with a maximum of four Navis 100 luminaires per cable run.

**Note:** The illustration is not drawn to scale.

## W1 AND W1E CC/FTW/CHROMA DRIVER WIRING DIAGRAMS



	DESCRIPTION	NOTES
1	F-Drive W1 Driver (CC, FTW, or Chroma)	FDW1CCD, FDW1FTWD, or FDW1CHD FDW1ECCD or FDW1EFTWD (Emergency)
2	Input power	up to 6 mm <sup>2</sup> (up to 10 AWG) line/neutral, Class 1, rated for at least 75C 2.5–10 mm <sup>2</sup> (14–6 AWG) ground 100–277 VAC, 50/60 Hz FDW1CCD, FDW1FTWD, or FDW1CHD: normal branch circuit FDW1ECCD or FDW1EFTWD: normal/emergency branch circuit from UL1008 automatic transfer switch (ATS) by others
3	Sense input power (emergency models only)	0.2–2.5 mm <sup>2</sup> (24–14 AWG) line/neutral/ground 40–300 VAC or VDC normal branch circuit (FDW1ECCD or FDW1EFTWD only)
4	DMX input from external DMX source	Belden 9729 or Cat 5e (or equivalent) with 0.2 mm <sup>2</sup> (24 AWG) or larger conductors terminated to T568B standard
5	DMX thru to another F-Drive W1 or other device	Belden 9729 or Cat 5e (or equivalent) with 0.2 mm <sup>2</sup> (24 AWG) or larger conductors terminated to T568B standard
6	Category-type cable with 0.25 mm <sup>2</sup> (23 AWG) or larger conductors (Belden 2412 or 2148 Cat6e)	<48 VDC for Navis 100 White or Navis 100 Fade to Warm, 48 VDC for Navis 100 RGBW. Terminals are not present on F-Drive W1 Chroma models. Terminals on F-Drive W1 CC and W1 FTW models accept 0.2–2.5 mm <sup>2</sup> (24–14 AWG) Class 2 wiring.
7	Navis luminaire*	W1CCD: Navis 100 White W1FTWD: Navis 100 Fade to Warm W1CHD: Navis 100 RGBW
* Multiple Navis 100 luminaires directly connected to one W1 driver must be run in a daisy-chain configuration with a maximum of four Navis 100 luminaires per cable run.		
<b>Note: The illustration is not drawn to scale.</b>		

## PHYSICAL

## Navis 100 Dimensions

MODEL	HEIGHT		WIDTH		DEPTH	
	mm	in	mm	in	mm	in
Navis 100 Fixed White	98	3.86	127	5	127	5
Navis 100 FTW	98	3.86	127	5	127	5
Navis 100 RGBW	98	3.86	127	5	127	5

Recommended hole cut-out: 120 mm / (4.75 in)

All versions of Navis 100 not IC rated and require 75 mm (3 in) clearance between luminaire and insulation.

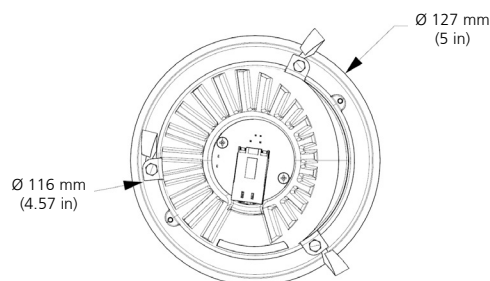
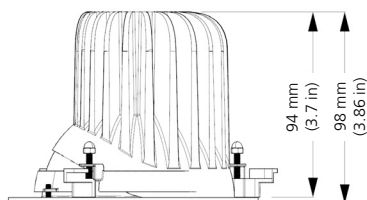
Navis 100 RGBW requires 305 mm (12 in) from luminaire center to next luminaire or building member.

## Navis 100 Weights

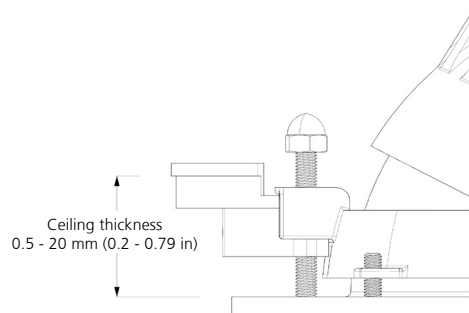
MODEL	WEIGHT*		SHIPPING WEIGHT	
	kg	lb	kg	lb
Navis 100 Fixed White	0.63	1.38	1.07	2.35
Navis 100 FTW	0.63	1.38	1.07	2.35
Navis 100 RGBW	0.63	1.38	1.07	2.35

\*When fitted with standard trim ring and primary optic only

## NAVIS 100 RECESSED LUMINAIRE



## CEILING THICKNESS RANGE

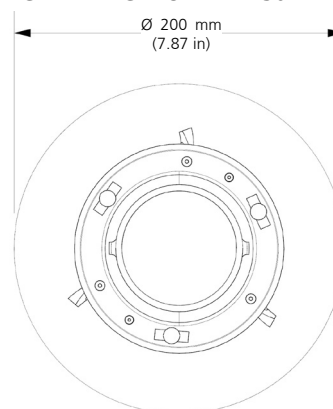


## DIMENSIONS WHILE AT MAXIMUM 30° TILT

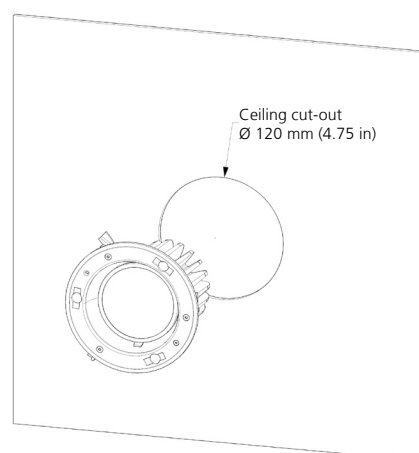
Maximum angle 15° with curve trim plate



## CLEARANCE FOR MAX 30° TILT



## HOLE CUT-OUT DETAIL





PHYSICAL

Navis 100 Surface Cylinder Dimensions

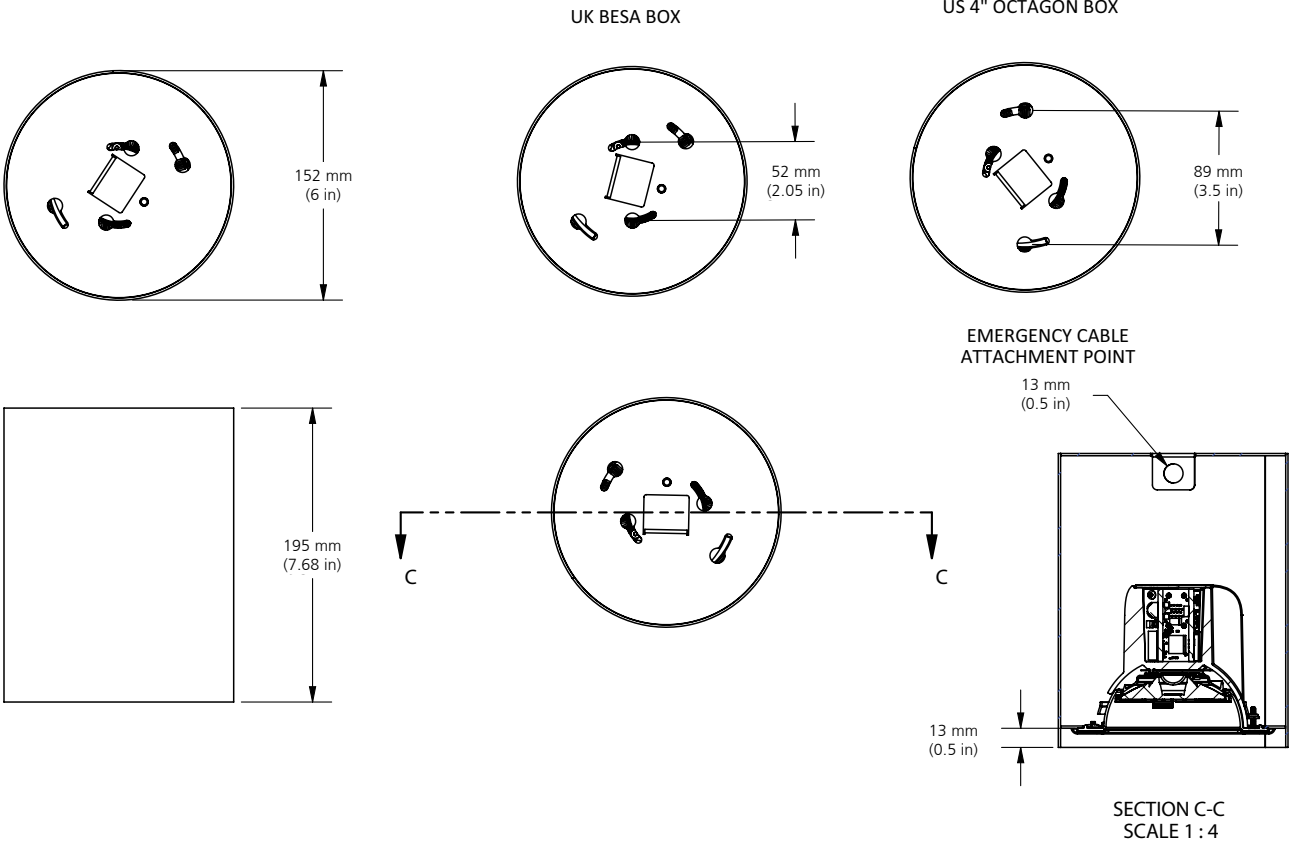
MODEL	HEIGHT		WIDTH		DEPTH	
	mm	in	mm	in	mm	in
Surface Cylinder	195	7.69	153	6	153	6

Navis 100 Surface Cylinder Weights

MODEL	WEIGHT*		SHIPPING WEIGHT	
	kg	lb	kg	lb
Surface Cylinder	1.55	3.4	2.00	4.4

\*Excludes weight of Navis luminaire and installation hardware

NAVIS 100 SURFACE CYLINDER ACCESSORY



PHYSICAL

Navis 100 Pendant/Surface Cylinder Dimensions

MODEL	HEIGHT		WIDTH		DEPTH	
	mm	in	mm	in	mm	in
Pendant kit inc stem	1302	51.25	153	6	153	6

Navis 100 Pendant/Surface Cylinder Dimensions

MODEL	WEIGHT†		SHIPPING WEIGHT	
	kg	lb	kg	lb
Pendant kit inc stem	3.05	6.7	5.27	11.6

†Excludes weight of Navis luminaire and installation hardware

NAVIS 100 PENDANT ACCESSORY

