

Application

The NFDR1 luminaire design for explosion-protected with ignition protection status nR (restricted breathing), an nR solution that greatly simplifies the on-site installation work for the operator.

Specification

- Body material : Marine grade copper-free aluminium alloy with polyester powder coated, RAL 7032 (grey)
- Lens : Heat and impact resistant clear glass
- Bolts : Stainless steel, SUS 304
- Sealing gasket : Silicone
- Bracket : Hot-dip gavanized steel
- Guard : Stainless steel

LED System

- Luminous efficient : 100 lm/W
- Colour temperature : 5700 K (cool white)
- Color Rendering Index (Ra) : >70
- Chip : CREE or Lumileds
- Beam angle : 80°, 100°

Option (specify)

- Body : Offshore painting (Acrylic polyurethane coating)
- Bolts : Stainless steel, SUS 316
- Bracket : Stainless steel, SUS 316
- Colour temperature : 3500K (warm white)
- Color Rendering Index (Ra) : >80
- Others beam angle of lens

Ceiling Mounting

Steel Bracket Mounting



Pendant Mounting



Stanchion Mounting ; 30 degree angle

Stanchion Mounting ; 90 degree angle



Wall Mounting



Technical Data

Hazardous Area	Gas	Dust
Zones	2	21 & 22
Equipment Group/Category	II 3G	II 2D
Symbol of Protection	Ex nR IIC T4-T6 Gc	Ex tb IIIC T85°C-T130°C Db IP66
Conformity to standards	EN IEC 60079-0:2018, EN IEC 60079-15:2019, EN 60079-31:2014, EN 60598-1:2015	
Ambient Temperature	-40°C to +60°C (30W. to 300W.) -40°C to +55°C (310W. to 350W.)	
Index of Protection	IP66	
Entries	Ceiling, Bracket ; 2-M20x1.5, 2- M25x1.5 or 2- Ø3/4" NPT Wall ; 4-M20x1.5, 4- M25x1.5 or 4- Ø3/4" NPT Pendant ; 1- Ø3/4" NPT, Stanchion ; Ø1-1/4" NPT	
Mounting	Ceiling, Wall, Pendant, Steel bracket or Stanchion mounting	
Connection	L, N and E ; for 1-4mm. ² cable (Through wiring system with an extra terminal block for cable connection at both ends.)	
Rated Voltage	110-240V.ac 50/60Hz., THDi < 20%, P.F. ≥ 0.95	

Catalogue Number Logic

NFDR1 - ■■■■ □ - □ □ □ □ □

Series	LED Power	Mounting	Entries	Accessories																						
	(see ordering requirement table below)	<table border="1"> <tr><td>C</td><td>Ceiling</td></tr> <tr><td>C1</td><td>Steel Bracket</td></tr> <tr><td>P</td><td>Pendant</td></tr> <tr><td>W</td><td>Wall</td></tr> <tr><td>S30</td><td>Stanchion, 30 degree Angle</td></tr> <tr><td>S90</td><td>Stanchion, 90 degree Angle</td></tr> </table>	C	Ceiling	C1	Steel Bracket	P	Pendant	W	Wall	S30	Stanchion, 30 degree Angle	S90	Stanchion, 90 degree Angle	<table border="1"> <tr><td>M1</td><td>M20x1.5</td></tr> <tr><td>M2</td><td>M25x1.5</td></tr> <tr><td>N2</td><td>Ø3/4" NPT</td></tr> </table>	M1	M20x1.5	M2	M25x1.5	N2	Ø3/4" NPT	<table border="1"> <tr><td>G</td><td>Guard</td></tr> <tr><td>AN</td><td>Antenna (ANTE series)</td></tr> </table>	G	Guard	AN	Antenna (ANTE series)
C	Ceiling																									
C1	Steel Bracket																									
P	Pendant																									
W	Wall																									
S30	Stanchion, 30 degree Angle																									
S90	Stanchion, 90 degree Angle																									
M1	M20x1.5																									
M2	M25x1.5																									
N2	Ø3/4" NPT																									
G	Guard																									
AN	Antenna (ANTE series)																									

Ordering Requirements; 30W. to 220W.

Cat. No.	LED Power	Voltage	Temp. Class (for zone 2)		Max. Surface Temp.* (for zone 21 & 22)	
			Ta 40 °C	Ta 60 °C	Ta 40 °C	Ta 60 °C
NFDR1-30 □ - □ - □	30W.	110-240V.ac	T6	T5	T85°C	T100°C
NFDR1-40 □ - □ - □	40W.	50/60Hz.				
NFDR1-50 □ - □ - □	50W.					
NFDR1-60 □ - □ - □	60W.					
NFDR1-70 □ - □ - □	70W.					
NFDR1-80 □ - □ - □	80W.					
NFDR1-90 □ - □ - □	90W.					
NFDR1-100 □ - □ - □	100W.					
NFDR1-110 □ - □ - □	110W.					
NFDR1-120 □ - □ - □	120W.					
NFDR1-130 □ - □ - □	130W.					
NFDR1-140 □ - □ - □	140W.					
NFDR1-150 □ - □ - □	150W.					
NFDR1-160 □ - □ - □	160W.					
NFDR1-170 □ - □ - □	170W.					
NFDR1-180 □ - □ - □	180W.					
NFDR1-190 □ - □ - □	190W.					
NFDR1-200 □ - □ - □	200W.					
NFDR1-210 □ - □ - □	210W.					
NFDR1-220 □ - □ - □	220W.					

Remark * : The maximum surface temperatures are specified for dust free condition. The dust layer which may cover around the lighting fixture will cause to higher surface temperature.

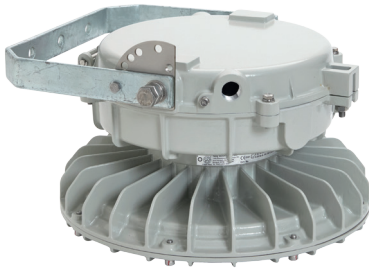
Lighting: LED Lighting Fixture, NFDR1 Series

Restricted Breathing and Dust protection by enclosure

Zone 2 – 21 & 22



Ordering Requirements; 230W. to 350W. (Pendant or steel bracket mounting)



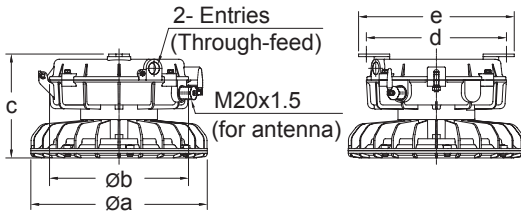
Cat. No.	LED Power	Voltage	Temp. Class (for zone 2)		Max. Surface Temp.* (for zone 21 & 22)	
			Ta 40 °C	Ta 60 °C	Ta 40 °C	Ta 60 °C
NFDR1-230 □ - □ - □	230W.	110-240V.ac	T5	T4	T95°C	T130°C
NFDR1-240 □ - □ - □	240W.	50/60Hz.				
NFDR1-250 □ - □ - □	250W.					
NFDR1-260 □ - □ - □	260W.					
NFDR1-270 □ - □ - □	270W.					
NFDR1-280 □ - □ - □	280W.					
NFDR1-300 □ - □ - □	300W.					

Cat. No.	LED Power	Voltage	Temp. Class (for zone 2)		Max. Surface Temp.* (for zone 21 & 22)	
			Ta 40 °C	Ta 55 °C	Ta 40 °C	Ta 55 °C
NFDR1-310 □ - □ - □	310W.	110-240V.ac	T5	T4	T95°C	T130°C
NFDR1-320 □ - □ - □	320W.	50/60Hz.				
NFDR1-330 □ - □ - □	330W.					
NFDR1-340 □ - □ - □	340W.					
NFDR1-350 □ - □ - □	350W.					

Remark * : The maximum surface temperatures are specified for dust free condition. The dust layer which may cover around the lighting fixture will cause to higher surface temperature.

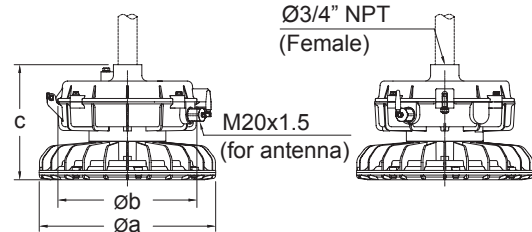
Dimension ; 30W. to 220W.

Ceiling Mounting



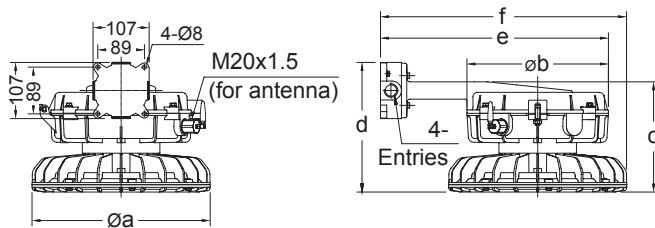
Cat. No.	Dimension in mm.					Approx. Weight (kgs.)
	øa	øb	c	d	e	
NFDR1-30C to 100C	235	270	190	270	300	7.0
NFDR1-110C to 220C	340	270	20	270	300	9.8

Pendant Mounting



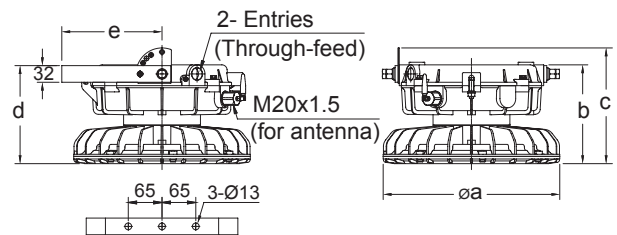
Cat. No.	Dimension in mm.			Approx. Weight (kgs.)
	øa	øb	c	
NFDR1-30P to 100P	235	270	203	7.0
NFDR1-110P to 220P	340	270	213	9.8

Wall Mounting



Cat. No.	Dimension in mm.						Approx. Weight (kgs.)
	øa	øb	c	d	e	f	
NFDR1-30W to 100W	235	270	200	237	435	418	7.0
NFDR1-110W to 220W	340	270	210	247	435	470	10.7

Steel Bracket Mounting



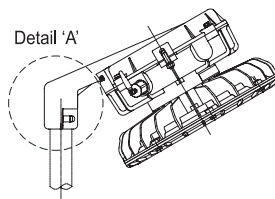
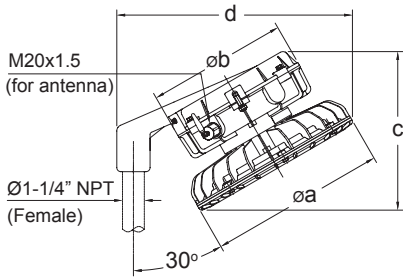
Cat. No.	Dimension in mm.					Approx. Weight (kgs.)
	øa	b	c	d	e	
NFDR1-30C1 to 100C1	235	180	213	179	193	10.0
NFDR1-110C1 to 220C1	340	190	223	188	193	11.8



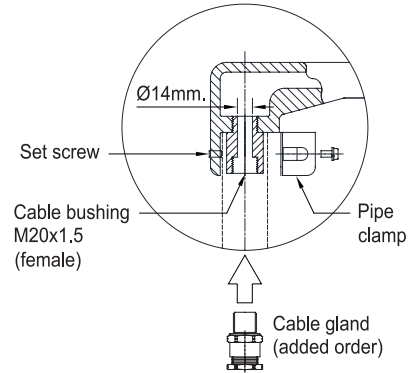
Dimension ; 30W. to 220W.

Stanchion Mounting ; 30 degree angle
Conduit type (standard)

Cable type (Pipe clamp)



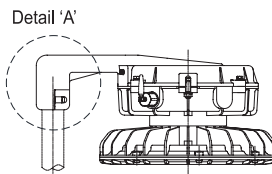
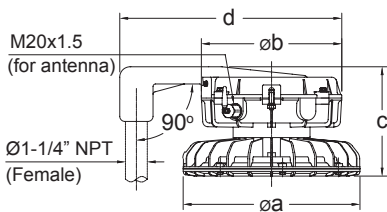
Detail 'A'



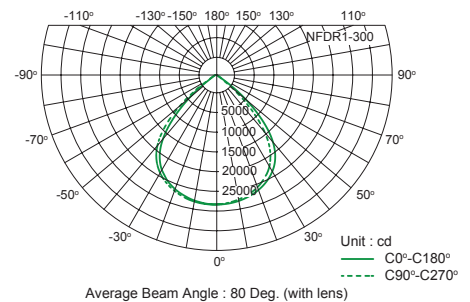
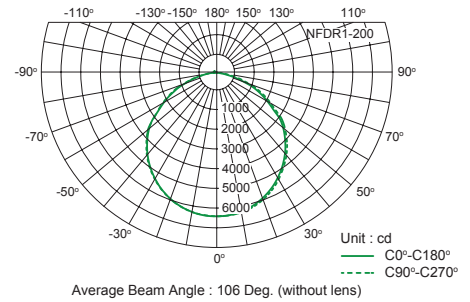
Cat. No.		Dimension in mm.			
Conduit type	Cable type	Øa	Øb	c	d
NFDR1-30S30 to 100S30	NFDR1-30S301 to 100S301	235	270	270	403
NFDR1-110S30 to 220S30	NFDR1-110S301 to 220S301	340	270	304	453

Stanchion Mounting ; 90 degree angle
Conduit type (standard)

Cable type (Pipe clamp)



Luminous Intensity Distribution Curve



Complete photometrics, please contact us.

Cat. No.		Dimension in mm.			
Conduit type	Cable type	Øa	Øb	c	d
NFDR1-30S90 to 100S90	NFDR1-30S901 to 100S901	235	270	200	427
NFDR1-100S90 to 220S90	NFDR1-100S901 to 220S901	340	270	210	427

Dimension ; 230W. to 350W.

Steel Bracket mounting

Pendant mounting

