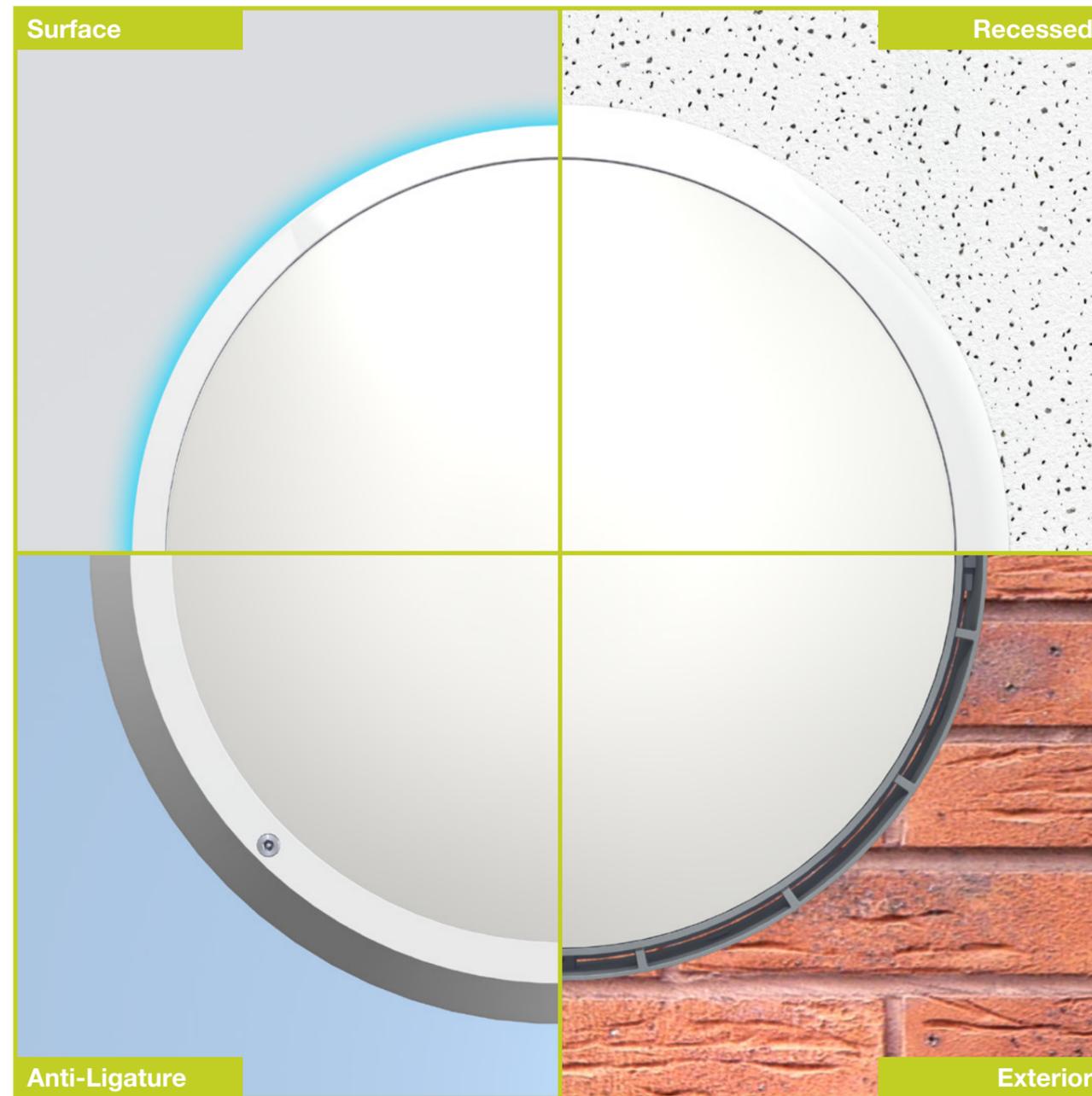# Kolo
One Solution, Multiple Applications

kolo

Introducing Kolo, the most flexible circular lighting solution available today. Surface mounted, recessed or suspended, Kolo brings style and efficiency to any application. With a host of optional attachments to add visual interest, Kolo is the optimum lighting solution.

Surface

Recessed

Anti-Ligature

Exterior

One Solution, Multiple Applications

With a choice of two body sizes, Kolo has an unrivalled range of outputs. This enables Kolo to be used as a direct replacement for any circular fluorescent luminaire ranging from 18 to 55W.

kolo - energy saving LEDs

Ensuring Efficiency

Kolo employs the latest high efficiency LED light engine delivering over 80 Luminaire Lumens per Circuit Watt, more than double most compact fluorescent counterparts.This step change in efficiency allows compliance with not only todays UK Building Regulations, but future proofs your project against tomorrow's demands. Kolo has four output options, each of which exceed the lumen output of thier conventional source equivalent whilst using less than half the power.

85
9.5LLm/W
Kolo
1700 lumens
20W LED

39
Horizon
1561 lumens
38W 2D

73
9.5LLm/W
Kolo
800 lumens
11W LED

30
Horizon
600 lumens
18W 2D

In a typical corridor application, Kolo uses only half the power of the equivalent fluorescent luminaire. As a direct replacement, this will yield an energy saving of over 50%. As an alternative, the higher power Kolo can be used to reduce the installed points and associated installation costs, whilst still delivering a similar energy reduction.
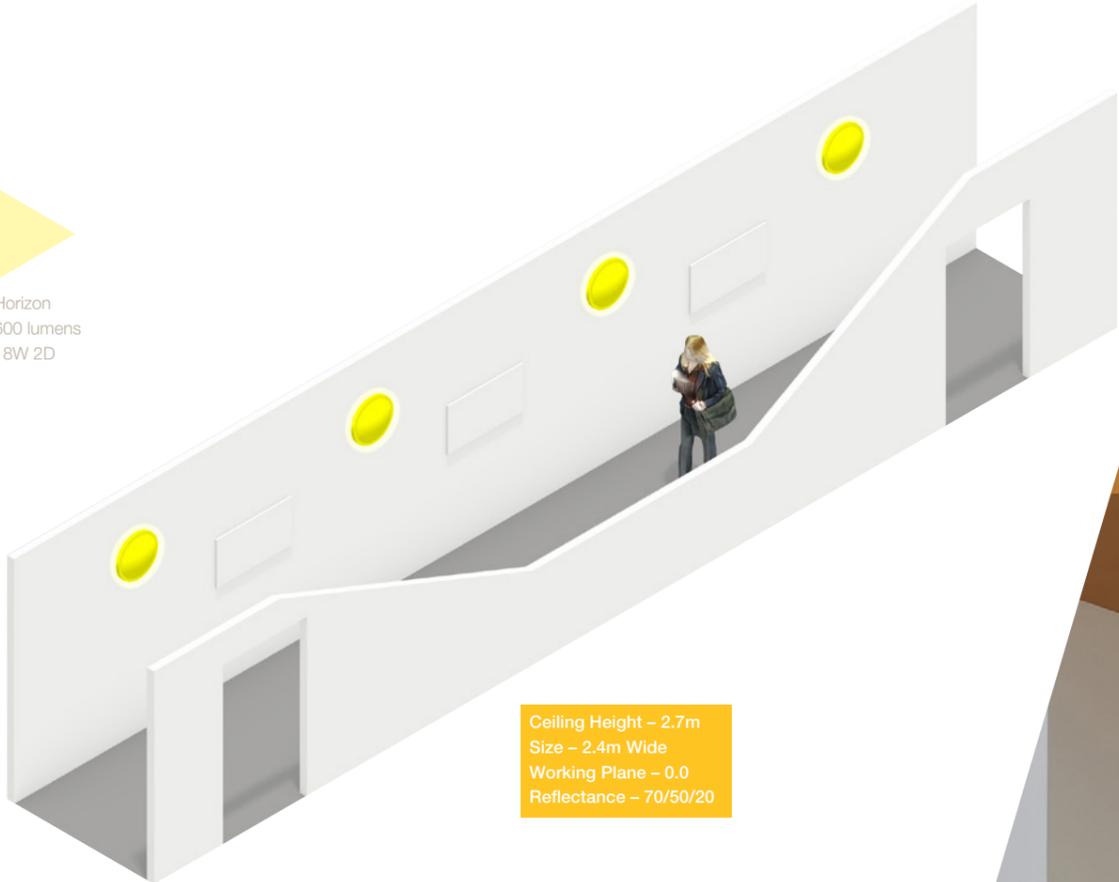
Ceiling Height – 2.7m
Size – 2.4m Wide
Working Plane – 0.0
Reflectance – 70/50/20

Energy Comparison - LED v 2D

| Luminaire	Power (Watts)	Initial Lumens	Light Output Ratio (LOR)	Luminaire Lumens	Watts / M²	Average Illuminance	Spacing
Horizon 1 x 38W 2D	40	2850	55%	1561	8.33	105	2.0m
Kolo 400mm Medium Output	20	1700	100%	1700	4.06	114	2.0m
Kolo 400mm High Output	28	2300	100%	2300	3.89	104	3.0m

kolo - energy saving controls

Delivering savings 24 hours a day

Transit spaces such as stairwells and corridors are typically lit for the whole period of building occupancy, but in use for only a fraction of this time. This is for safety and security purposes, as utilising presence detection in these areas can result in users having to enter unlit spaces, which can be unnerving in corridors and extremely dangerous in stairwells.

The optional Command 5 presence detector within Kolo has a unique set-back facility, which can be programmed to dim the luminaire to a pre-determined percentage of its full output when no users are present in the space. This brings the energy saving benefits of lighting controls to transit areas both indoors and out, without compromising user comfort and safety.
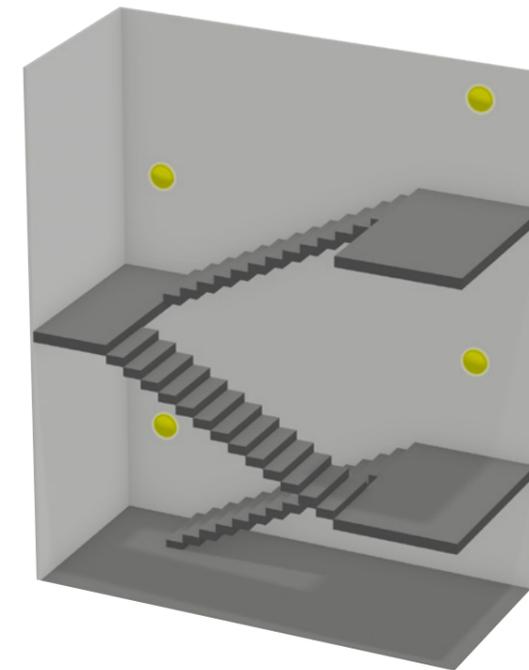
When the stairwell is unoccupied, Kolo will dim to 20% output, saving energy without compromising safety.
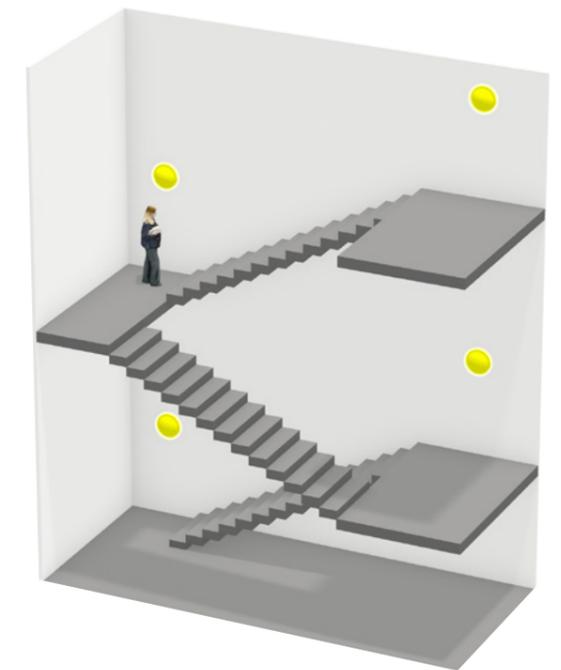
As soon as movement is detected, Kolo will instantly illuminate the stairwell and stay illuminated for a pre-determined period of time.

Benefits of microwave detection

- Detector concealed behind diffuser for enhanced aesthetic appeal.

- Ensures safety with faster reaction times over PIR detectors - detects door movement before people arrive in the space.

Annual energy usage (KW/H)

38W 2D	3504
20W Kolo	1752
20W Kolo + Command 5	701

kolo - flexibility
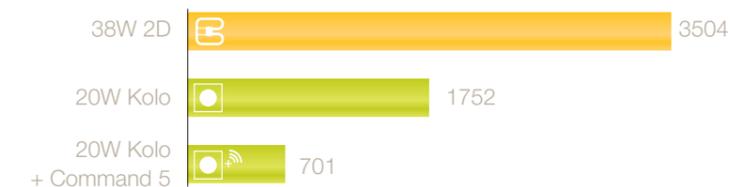
Body

Injection Moulded Body

Kolo's injection moulded body is almost invisible from the front and has many technical features to aid installation. These include wire ways for back or side access, as well as through wiring. This ensures speedy first-fix installation and simplifies maintenance. The body comes in two diameters and colourways for complete design flexibility.

Command 5 Detector

The optional Command 5 microwave detector can be integrated into Kolo's body, providing a wide range of lighting control options. Presence detection can be configured for either on\off or dim down to one of 4 pre-determined levels.

Sealed Optical Unit

Light Mixing Chamber

The die-cast aluminium mixing chamber forms part of a maintenance free factory sealed optical system. This tray houses the LED light engine and connects to the back using a toggle clip system for simple installation. The built-in heat sink keeps the LEDs operating at maximum efficiency.

LED Light Engine

Kolo employs the latest high efficiency LED light engine, delivering over 80 Luminaire Lumens per Circuit Watt. With output options ranging from 11 to 28W, the cool white 4000K LEDs will bring efficiency to any application. The LEDs are positioned to optimise diffusion within the light mixing chamber.

High Uniformity Diffuser

The LED grade polycarbonate diffuser completes the sealed optical assembly. This has advanced diffusing properties which reduces the distance required between LED and diffuser, completely stopping any glare from the LED light engine whilst delivering maximum light transmission.

Mounting & Accessories

Recessing Ring

When using Kolo in a recessed application, this ring provides a flush finish to meet the wall or ceiling.

Recessing Ring

Anti-Ligature Attachment

For specialist applications such as mental health or high security uses, Kolo is available with an anti-ligature attachment. This renders Kolo completely tamper-proof from the front with no protrusions or visible screw heads.

Anti-Ligature

Trim Ring

For an alternative aesthetic appeal, a trim ring is available which provides a clean line around the luminaire.

Surface

Suspension Kit

To complete the flexible Kolo solution a 3 wire suspension kit is available for high ceiling applications. This allows the same solution to be used in a variety of ways throughout a building, creating a coherent lighting design.

Suspended

Halo Ring

When Kolo is applied in a surface application, a blue or white LED halo option is available to add visual interest.

Halo

high efficiency circular lighting solution

LED | EM | IP 40 | | | 60+

kolo

Optics

- Light output options:
  – 4000 Kelvin 'cool white' colour temperature
  – Lumen packages from 800 to 2300
- High quality, single bin LEDs with a 4 MacAdam ellipse tolerance
- White or blue LED feature halo ring options (400mm diameter product only)
- Polycarbonate opal diffuser
- 50,000 hours life expectancy
- Up to 87 luminaire lumens per circuit watt

Body

- Surface or suspended mounting
- Recessing kit to be ordered separately
- 300mm or 400mm diameter bodies in cast aluminium with injection moulded base
- Finished in silver or white
- IP40 or IP65
- Choice of integrated emergency options:
  – 3 hour emergency
  – EasyTest
  – COMEPS
- Optional Command 5 microwave detector mounted behind the diffuser can be set to one of two configurations;
  – Microwave presence detection with ON/OFF operation
  – Microwave presence detection with High/Low/Off set-back functionality. Can be set to switch from 100% down to set-back position of 50%, 30%, 20%, 10% or OFF
- Command 5 sensor can only be used in conjunction with fixed output products
- Optional trim ring available for an alternative aesthetic finish
- Luminaire and anti-ligature kit supplied separately

Without Trim Ring

Recess Ring

Suspended

Anti-ligature

Order Codes

300mm 4K Silver	Fixed Output	3 hr Emergency
800 lumens (11W)	K4H364KS	K4H364KSEM
1100 lumens (15W)	K4H3124KS	K4H3124KSEM

400mm 4K Silver	Fixed Output	3 hr Emergency
1700 lumens (20W)	K4H4154KS	K4H4154KSEM
2300 lumens (28W)	K4H4204KS	K4H4204KSEM

Accessories - IP40 Version Only

Recessing kit 300mm silver	KLREC300S
Recessing kit 400mm silver	KLREC400S
Trim ring 300mm silver	KLTR300S
Trim ring 400mm silver	KLTR400S
Suspension kit	KLSUSKIT

Options

IP65 VERSION	Replace K4 with **K6**	i.e. **K6**H364KS
WHITE LED HALO RING*	Add **HA** after K4	i.e. K4**HA**H464KS
BLUE LED HALO RING*	Add **HB** after K4	i.e. K4**HB**H464KS
DALI DIMMING	Replace H with **Y**	i.e. K4**Y**364KS
EASYTEST	Add suffix **/ET**	i.e. K4H364KS**/ET**
COMEPS	Add suffix **/EP**	i.e. K4H364KS**/EP**
COMMAND 5**	Replace H with **Q5**	i.e. K4**Q5**364KS
WHITE FINISH	Replace S with **W**	i.e. K4H364K**W**

*Only available with 400mm IP40 product

**Command 5 set-back functionality not available in 300mm emergency or DALI products

Order Codes – Anti-Ligature

400mm 4K White	Fixed Output	3 hr Emergency
1700 lumen 20W	K6H4154KW	K6H4154KWEM
2300 lumen 28W	K6H4204KW	K6H4204KWEM

Accessories

Anti-ligature Kit	KLALKIT400W

Options

DALI DIMMING	Replace H with **Y**	i.e. K6**Y**364KW
EASYTEST	Add suffix **/ET**	i.e. K6H364KW**/ET**
COMEPS	Add suffix **/EP**	i.e. K6H364KW**/EP**
COMMAND 5	Replace H with **Q5**	i.e. K6**Q5**364KW

Photometric Performance
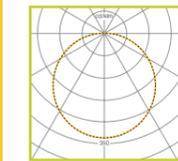
300mm Surface
11W 800 lumen
- LOR = 100%
- SHR MAX = 1.64
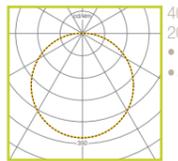
400mm Surface
20W 1700 lumen
- LOR = 100%
- SHR MAX = 1.64

Utilisation Factors UF(F)

Room Reflectance			Room Index		
C	W	F	1.00	3.00	5.00
0.70	0.50	0.20	0.67	0.95	1.03

Utilisation Factors UF(F)

Room Reflectance			Room Index		
C	W	F	1.00	3.00	5.00
0.70	0.50	0.20	0.67	0.95	1.02

Performance Guide

Lamps	Illuminance	Spacing
28W LED	200 lux	3.0m x 3.0m

Maintenance: 0.8
Reflectance: 70/50/20
Ceiling Height: 2.7m
Working Plane: 0.8m

Equivalent Lamp Types

TCD	18/26W
2D	28/38/55W

LED Performance

Colour Temp	Ra (CRI)	Life Expectancy	Colour Consistency
4K	≥ 80	L₇₀ (50,000hrs)	MacAdam 4 SDCM

L_{70} (50,000hrs)

Dimensions
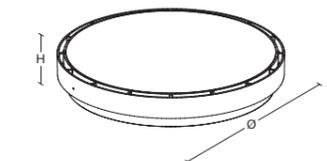
Version	Ø	H	CAØ	KG	KG
300mm recessed	320	95	310	2.0	2.5
300mm surface	300	95	-	2.0	2.5
300mm suspended	300	95	-	2.1	2.5
400mm recessed	420	95	410	3.4	3.8
400mm surface	400	95	-	3.4	3.8
400mm suspended	400	95	-	3.5	3.9
400mm Anti-ligature	46 7	95	-	3.8	4,3

To Specify

Surface mounted, recessed or suspended circular IP40 or IP65 LED bulkhead luminaire in 300 or 400mm diameter. Polycarbonate opal diffuser. Optional integrated microwave presence detector with ON/OFF or set-back functionality – as Whitecroft Lighting KOLO.

Lighting, design, controls:
Total Project Solutions

Rep. Ireland Office
Fagerhult Ltd
F1 Calmount Park
Ballymount, Dublin 12
Ireland

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T +353 (0)1 426 0200
F +353 (0)1 429 9606
info@fagerhult.ie
www.fagerhult.ie

UK Head Office
Whitecroft Lighting Ltd
Burlington Street
Ashton-Under-Lyne
Lancashire OL7 0AX

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T +44 (0)161 330 6811
F +44 (0)161 331 5855
email@whitecroftlight.com

Middle East Office
Fagerhult Middle East
P.O. Box 126287
Dubai
United Arab Emirates

—

T +971 (0)4 3297120
F +971 (0)4 3297130
info@fagerhult.ae
www.fagerhult.ae

London Customer Centre
Whitecroft Lighting Ltd
102-108 Clerkenwell Road
London
EC1M 5SA

—

T +44 (0)161 330 6811
F +44 (0)161 331 5855

Online
whitecroftlighting.com

Whitecroft
lighting