



Advanced industrial lighting hardware, developed for application in marine, municipal, transport, logistics zones, or largescale internal projects

460W-920W series range - Impact, ingress, optional marine-grade corrosion, & vibration resistance as standard - >120lm/W family efficacy, - 15+ general purpose & task-specific optics - Advanced colour rendering capabilities - Integrated, standalone, & wireless network intelligent control options

CE, RoHS, DLC, UL, CB, international product marks



Ayrton 3 Series

Mast, Tower, & High Bay Light

CDN:SPEC139REV9



EST. 1985

ENGINEERING



ELECTRICAL



LIGHTING



Technical Specifications Summary



Performance Summary:

Code (Series-Wattage/Size)	AYR3-460	AYR3-610	AYR3-770	AYR3-920
Nominal Power	450W	600W	750W	900W
Luminaire Efficacy @ CRI>70, 5000K CCT	127lm/W	127lm/W	121lm/W	121lm/W
Lumen Output @ CRI>70, 5000K CCT	58,420lm	77,470lm	97,790lm	116,840lm
Lumen Maintenance (TM21 Reported)	L90B10 ≥80,000 hours @ Tj 80°C, 25°C Ambient			
Lumen Maintenance (TM21 Calculated)	L80B10 ≥100,000 hours @ Tj 80°C, 25°C Ambient			
Certification	CE, RoHS, DLC, UL, CB			
Product Warranty	5 Years, 2 Years (Emergency)			

Light Source and Photometric Parameters:

Chip Brand, Model, & Size	Nichia 3535 NVSL219C
Chip Efficacy @ CRI>70, 5000K CCT	174lm/W @ 350mA @25°C
Light Emission	Direct
CCT	5000K, (3000K, 4000K, 5700K optional)
CRI	≥70, ≥80
SDCM	≤5
Diffusers	Clear, (Frosted optional)
Symmetric Light Distribution	10°, 25°, 40°, 60°, 90°, 120°, 150°
Asymmetric Light Distribution	IESNA Type 1M, 2M, 3M, 3L, 4S, 4M
Optical Accessories	Backspill Guard

Electrical Parameters¹:

System Operating Power	460W	610W	770W	920W
Driver Brand	Philips			
Driver Model	Xitanium 929001401680			
Typical Driver Lifetime	100,000 hours @TCase 70°C			
Input Voltage	220-240VAC, (120-277VAC (D3), 347-480VAC optional)			
Input Frequency	50-60Hz			
Qty of Drivers per Light	3	4	5	6
Inrush Current Per Driver @ 230VAC measured at 50% Ipeak (Peak/Duration)	46A/440μs			
Recommended Lights per Circuit (16A Type B MCB)	≤3pcs	≤2pcs		≤1pc
Power Factor	>0.95			
THD	<10%			
Insulation Class	Class I			
Surge Protection/Fusing	10kA, (20kA optional) TVS (Transient Voltage Suppressors on individual LED Modules)			

Environmental Parameters:

IP Rating	IP67
IK Rating	IK10
Ambient Usage Tolerance	-40°C to 50°C
Ambient Storage Tolerance	-40°C to 50°C
Driver automatic turn-off temperature	TCASE 85°C - Power to LEDs is reduced

Technical Specifications Summary

Code (Series-Wattage/Size)	AYR3-460	AYR3-610	AYR3-770	AYR3-920
Physical/Mechanical Parameters:				
Product Dimensions: LxWxH (mm)	765 x 635 x 83	885 x 635 x 83	1065 x 635 x 83	1185 x 635 x 83
Spigot Diameter (mm)	60			
Minimum Tenon Length (mm)	120			
Qty of LED Chips	216	288	360	432
Qty of Modules	6	8	10	12
Windage	0.072m²	0.079m²	0.089m²	0.096m²
Electrical Connection	Terminal Block or 800mm cable			
Fixture Weight²	19.63kg	23.21kg	27.45kg	30.72kg
Fixture Primary Material(s)	Aluminium Alloy and Stainless Steel Fasteners			
Fixture Finish	AzkoNobel Powder Coat (Marine-Grade 100 micron corrosion resistant polyester optional)			
Lens(es) Materials	UV Stabilised Polycarbonate			
Dimming/Controls Parameters:				
Dimming Options	1-10V, DALI			
Built-in Controls	Photocell, NEMA Socket and Cap			
Compatible intelligent lighting systems	Wireless Controls and Monitoring			
Options/Accessories:				
Mounting Styles	Universal Bracket, Slip Fit, Cable Suspension			
Available Product Colours	Grey (RAL 7004), Black (RAL 9011), White (RAL 9010)			

¹ Electrical Parameter data is for D1 drivers, unless otherwise stated

² Excludes bracketry. Refer to the Packaging Weights & Dimensions data sheet for bracketry and accessory weights

All stated values should be considered indicative only. Technical data is provided from sample luminaires and construction components as assessed by OEM(s) under industry-standard, laboratory conditions. In practice, stated values can vary. Kellwood Lighting operates a policy of continual product improvement. Our luminaires' capabilities are regularly enhanced to outperform in-class market alternatives. Please contact our technical team directly for clarifications prior to purchase. All images depicted should be considered indicative only. Stated product warranty periods do not include associated labour costs. Stated product warranty periods are for UK projects only. For international projects, please contact our offices directly. Optional upgrades can often affect or supersede unit technical parameters, capabilities, and warranties. It is the responsibility of the purchasing authority to ensure selected hardware is suitable for application. For further documentation, including Returns Policy and Conditions of Unit Failure, please contact our offices. Hazardous area documentation (eg. ATEX) are issued to OEM codes. WEEE compliance reference code: WEE/MP3838PR/SCH. Please do not look directly at LED lighting products during operation.

This datasheet & corresponding certification should be reviewed by a competent person to ensure project suitability.

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Features Summary



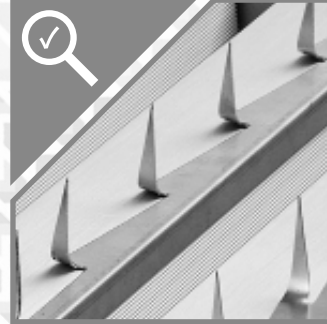
Mounting Options

Universal bracket, slip fit, cable suspension



Optional Fitting Colours

Grey RAL:7004, black RAL:9001, white RAL:9010, bronze RAL:8014, custom (subject to MOQ)



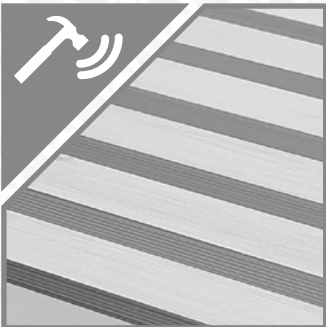
Special Features

Integrated spirit level, Wago internal quick-connectors, safety wire & carabiner secondary securing system, 3G vibration tolerance as per ANSI C136.31-2010, bird spikes



Environmental Protection

IP67, copper-free aluminium chassis & modules c/w corrosion-resistant powder coat & anodisation finishes - Salt spray testing reports available - 304 stainless steel exposed fixtures



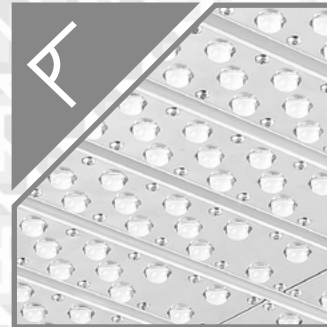
Impact Protection

IK09 rated



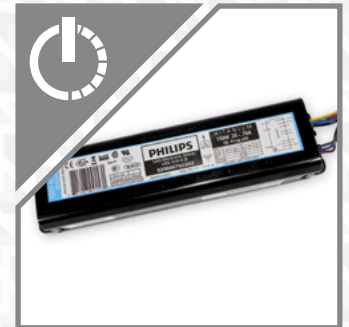
Windage

460W model 0.072m²
610W model 0.079m²
770W model 0.089m²
920W model 0.096m²



Distribution

>15no. optic variants are available for general & task-specific applications - Optional back-spill guards available



Driver Protocols

Non-dimming, 0-10V, DALI



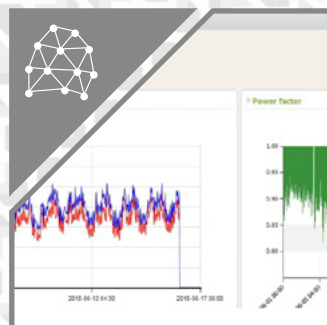
Sensor(s)

Integrated, standalone (single or multiple luminaires per sensor options)



Sensor Functions

Occupancy, multi-step dimming, photocell, daylight harvesting



Advanced Controls

System energy reporting, data monitoring, IoT (wireless/wired) networks

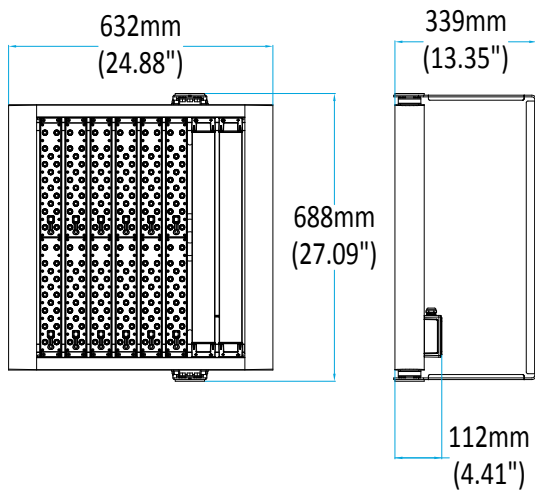


Electrical Protection

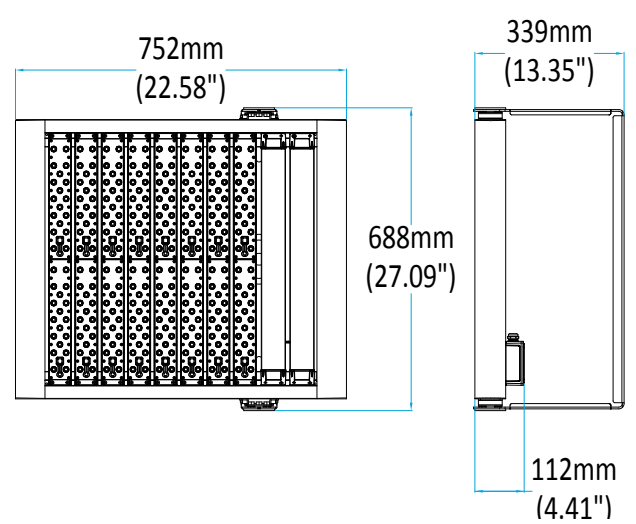
10KA, 20KA, integrated surge protection device

Dimensional Drawings

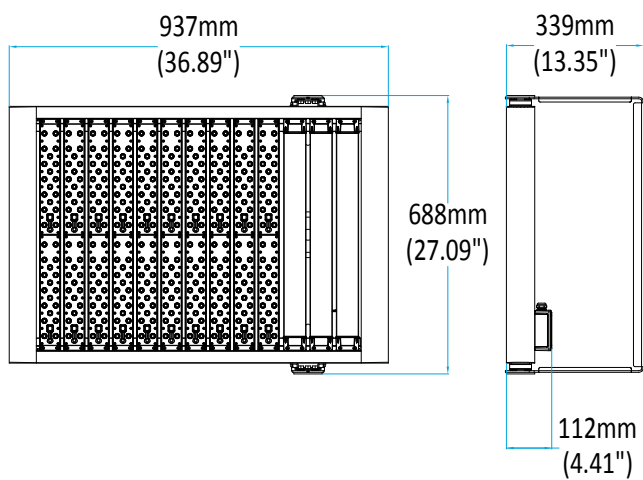
Universal Bracket - 460W



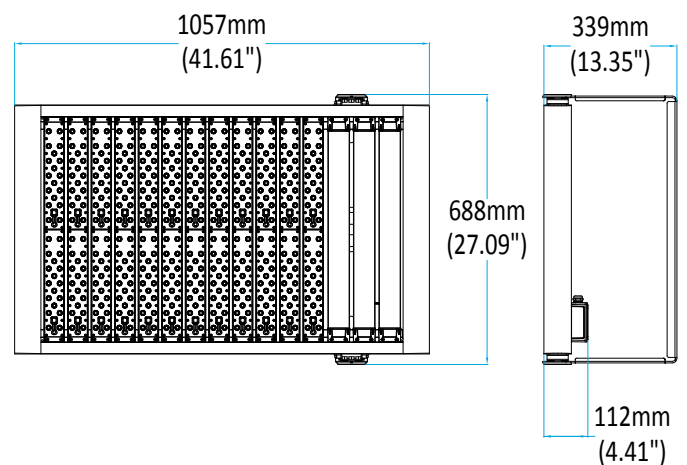
Universal Bracket - 610W



Universal Bracket - 770W

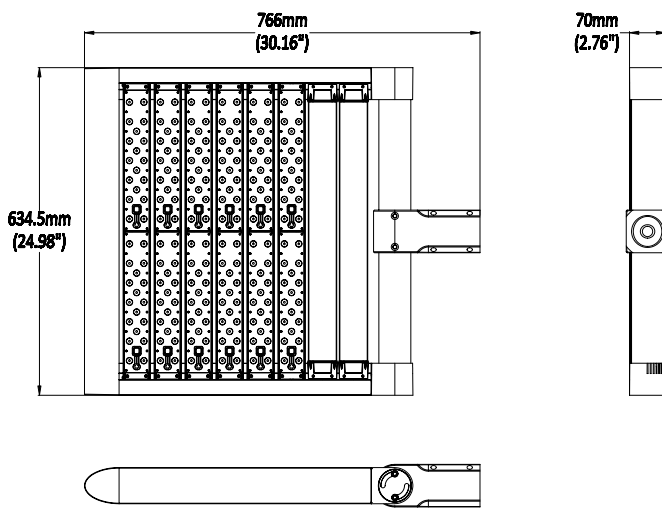


Universal Bracket - 920W

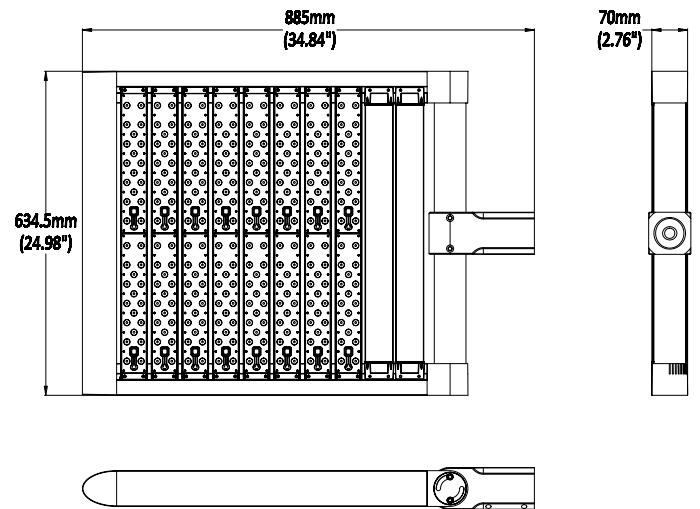


Dimensional Drawings

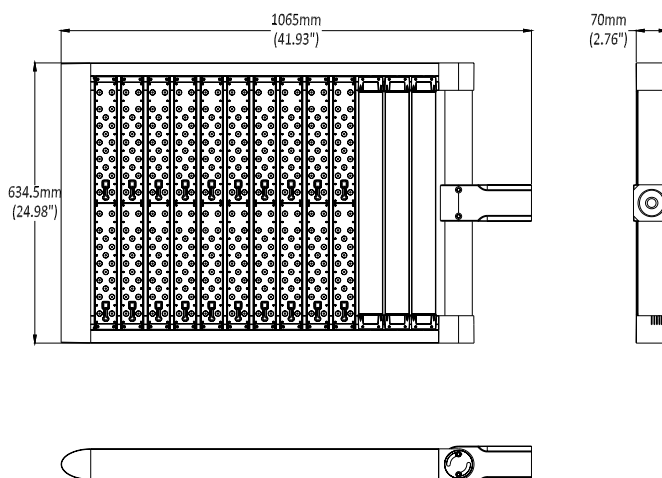
Slip Fit - 460W



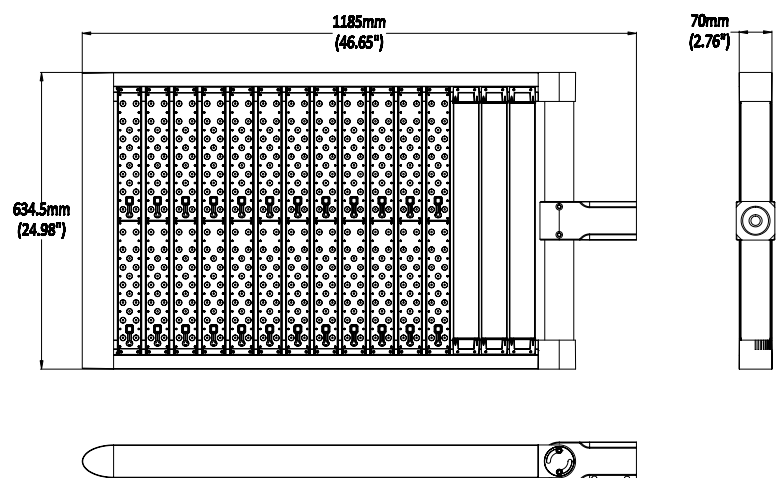
Slip Fit - 610W



Slip Fit - 770W

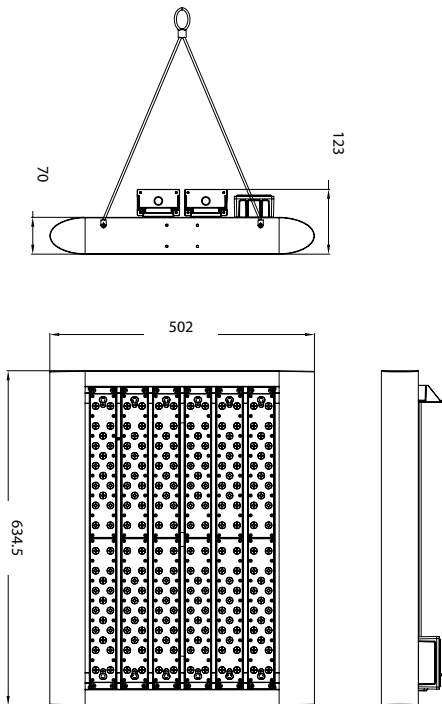


Slip Fit - 920W

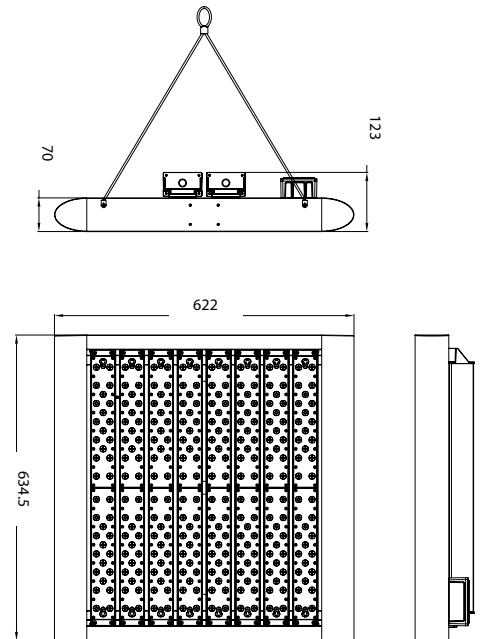


Dimensional Drawings

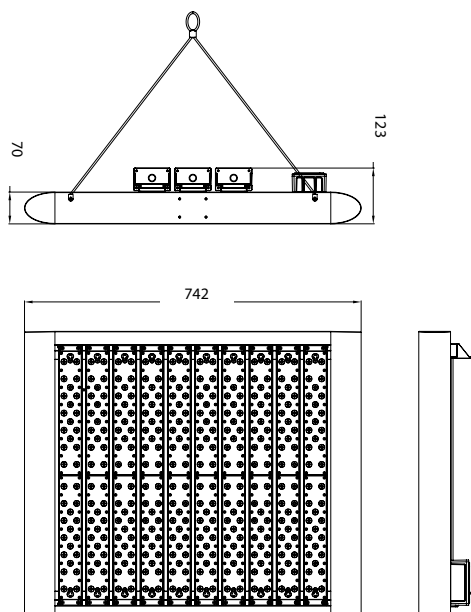
Cable Suspension - 460W



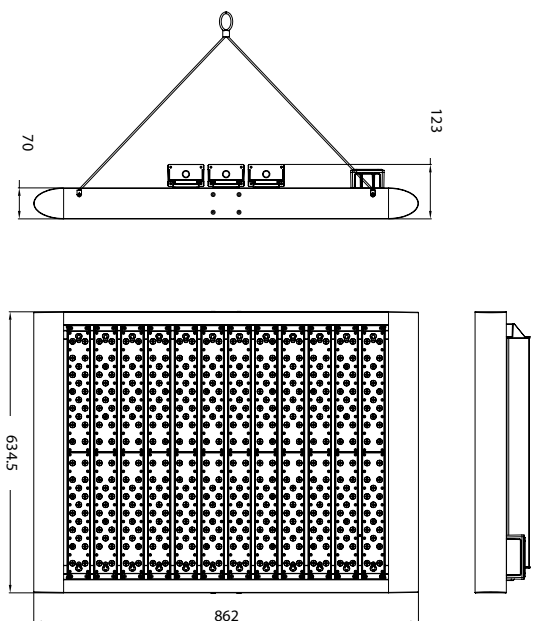
Cable Suspension - 610W



Cable Suspension - 770W



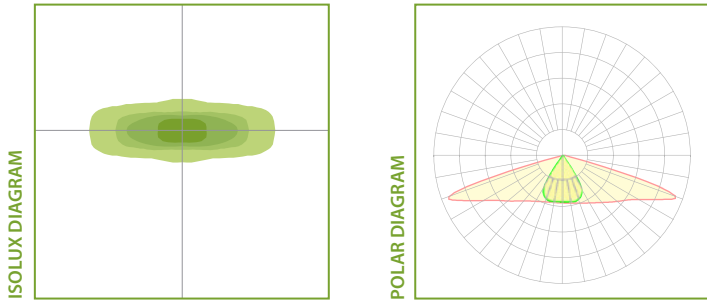
Cable Suspension - 920W



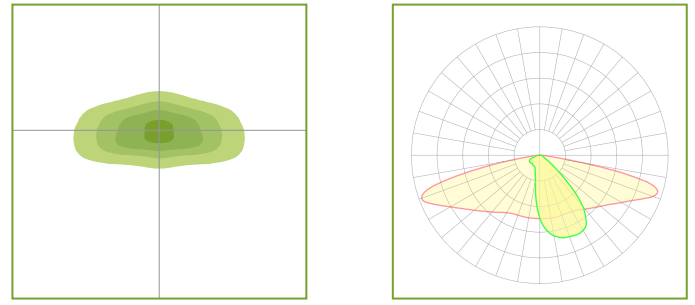
Please note - images shown are intended to be illustrative only. For exact data, please refer to specific product photometry, available for download from our website.

Indicative Product Photometry

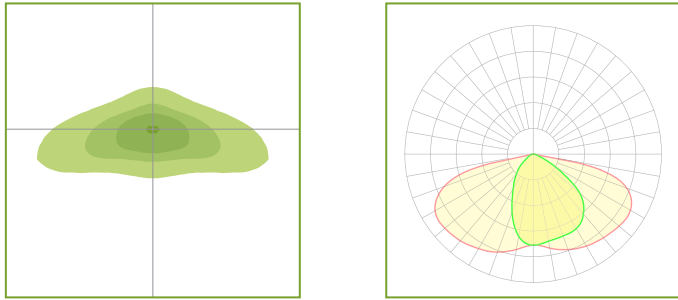
IESNA Type 1 Medium ▶



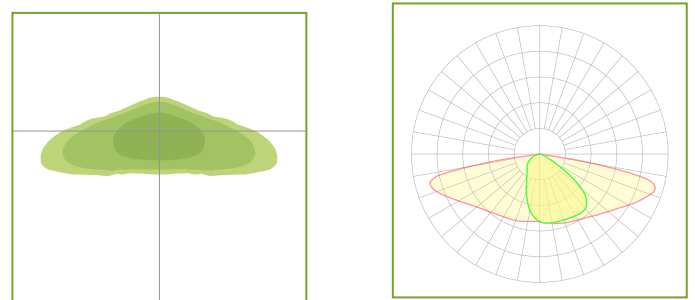
◀ IESNA Type 2 Medium



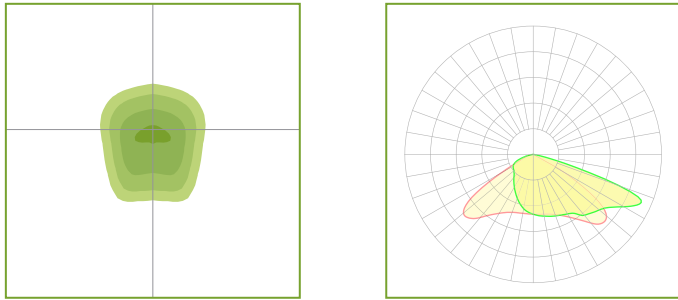
IESNA Type 3 Medium ▶



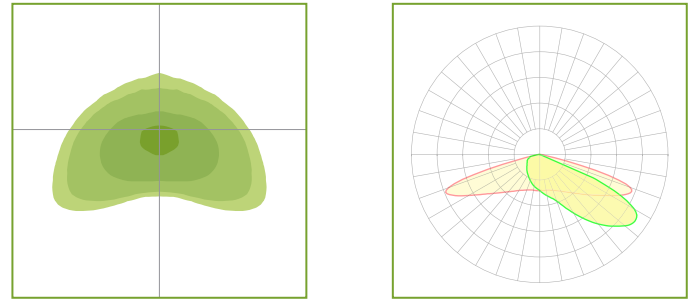
◀ IESNA Type 3 Long



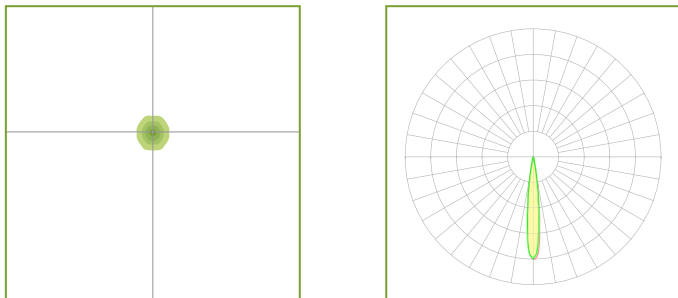
IESNA Type 4 Short ▶



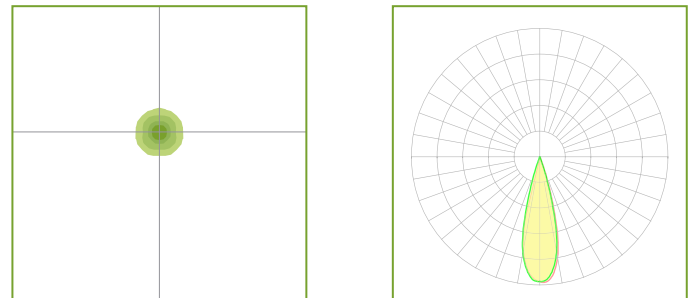
◀ IESNA Type 4 Medium



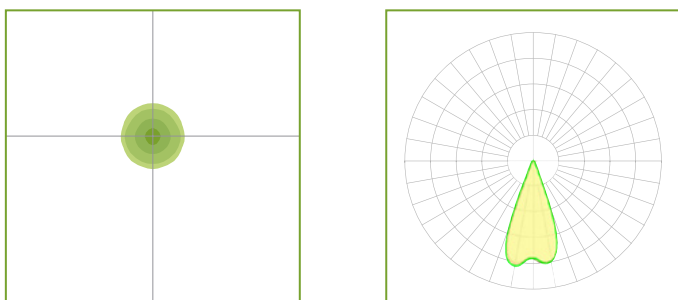
10° Optic ▶



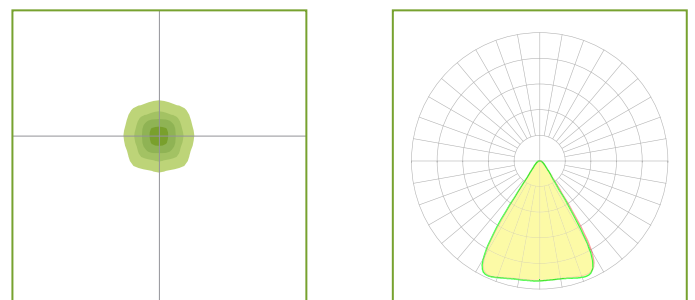
◀ 25° Optic



40° Optic ▶



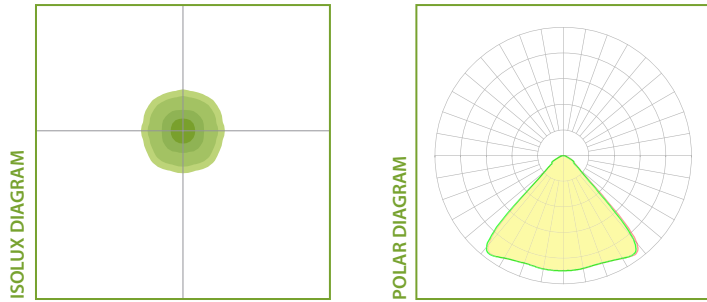
◀ 60° Optic



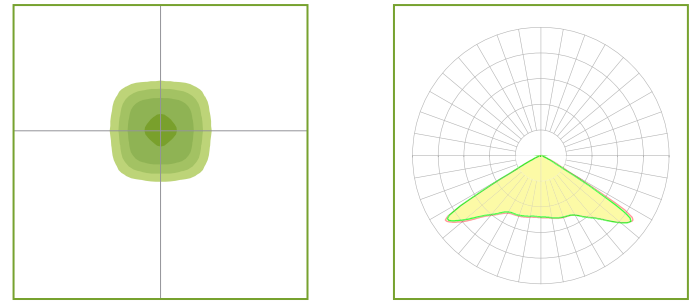
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Indicative Product Photometry

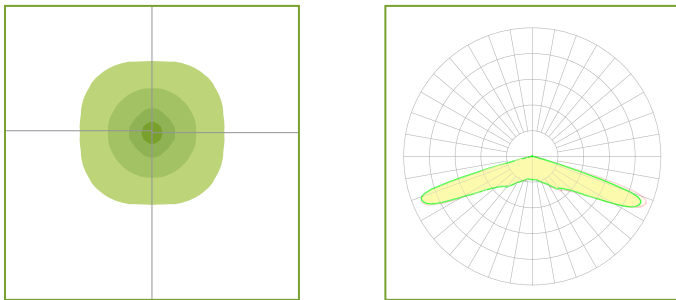
90° Optic



120° Optic



150° Optic



Diffusers

This series is available with the following diffusers. Each diffuser will have a varying effect on photometric distribution and intensity. Please refer to downloadable photometrics for exact data.



Clear Optic (Various Beam Angles)



Frosted Diffuser (117°)

Backspill Guards

Optional backspill guards are available for the above Type 3 and Type 4 optics. These modify the light distribution to reduce/eliminate backward light trespass. An illustrative example is shown below:





Standard product code fields are presented as:
Further customisation may be available - please contact us if required



Product Ordering Codes

PRODUCT	POWER	CRI & CCT	OPTIC	DRIVER	MOUNTING	COLOUR	MODIFICATIONS
AYR3	460 460W	730 CRI >70, 3000K	1M IESNA TYPE I MEDIUM	D1 NON-DIM	UB UNIVERSAL BRACKET	GR GREY	PH1 PHOTOCELL
	610 610W	740 CRI >70, 4000K	2M IESNA TYPE II MEDIUM	D2 1-10V	SF SLIP FIT	BL BLACK	BG BACKSPILL GUARD
	770 770W	750 CRI >70, 5000K	3M IESNA TYPE III MEDIUM	D3 DALI	CS CABLE SUSPENSION	WH WHITE	SP2 SURGE PROTECTION DEVICE (20KV)
	920 920W	757 CRI >70, 5700K	3L IESNA TYPE III LONG		US UNIVERSAL BRACKET - 304 STAINLESS STEEL	GR2¹ GREY - MARINE GRADE	
		830 CRI >80, 3000K	4S IESNA TYPE IV SHORT			BL2¹ BLACK - MARINE GRADE	
		840 CRI >80, 4000K	4M IESNA TYPE IV MEDIUM			WH2¹ WHITE - MARINE GRADE	
		850 CRI >80, 5000K	10 10° CIRCULAR				
		857 CRI >80, 5700K	25 25° CIRCULAR				
			40 40° CIRCULAR				
			60 60° CIRCULAR				
			90 90° CIRCULAR				
			120 120° CIRCULAR				
			150 150° CIRCULAR				
			FR FROSTED DIFFUSER				

¹ Upgraded AkzoNobel polyester powder coat for increased salt corrosion resistance.

GENERAL NOTES:

1. IF MORE THAN ONE MODIFICATION IS REQUIRED, SEPARATE EACH MODIFICATION WITH A HYPHEN AT THE END OF THE PRODUCT CODE
2. PLEASE ENSURE SELECTION OF COMPATIBLE DRIVER FOR OCCUPANCY SENSORS WITH DIMMING FUNCTIONALITY
3. PLEASE NOTE THAT MODIFICATIONS WHICH AFFECT LIGHT OUTPUT HAVE SEPARATE PHOTOMETRIC FILES IDENTIFIED WITH "...+(MODIFICATION)"
4. ALTERNATIVE DRIVERS MAY BE AVAILABLE - PLEASE CONTACT OUR OFFICE FOR FURTHER DETAILS
5. IF PRODUCT IS CUSTOMISED, CODES WILL BE ALTERED AS NECESSARY

Product Ordering Code Examples:

AYR3-460-757-1M-D1-GR

AYR3-920-850-1M-D2-BL-PH1-BG

DRIVER MANUFACTURER			
POWER	D1	D2	D3
460 460W	Philips	Philips	Philips
610 610W	Philips	Philips	Philips
770 770W	Philips	Philips	Philips
920 920W	Philips	Philips	Philips

CONTACT OUR OFFICE FOR FURTHER INFORMATION ON DRIVER PARAMETERS

ACCESSORIES
AYR3-BS BIRD SPIKES

