TUNGSRAM™

Innovation is our heritage
EST. 1896

LED Integrated Mariner - Start

IP65   IK08   (CLASS I) CE

Product information

This fixture has an attractive, neutral aesthetics that makes it suitable for applications in both commercial, residential and industrial environments. It is an energy-efficient, low maintenance alternative to traditional fluorescent waterproof fixtures.

Features

• High performance with 6 lumen packages – up to 100 lm/W
• 30 000 hours lifetime (L70B50)
• 2 colour temperatures: 4000 and 6500K with SDCM < 6
• Color rendering index > 80
• Linear luminaire with high protection rating (IP65) and high impact resistance (IK08) make integrated LED mariner the ideal solution in challenging ambient conditions
• Suitable for operation in ambient temperature of -20°C to +40°C
• Integrated through-wiring 3x1mm²
• Easy connection solution on both ends of the fixture to allow single fixture or continuous fixture installations for EU versions
• Samsung LED chip
• Static built-in driver
• Power factor: 0.5 on 2ft and 4ft low lumen package and 0.9 on 4ft high lumen and 5ft
• Supply Voltage: 220-240V 50/60Hz
• High (850°C) Glow wire temperature
• Certificates: CE & CB issued by TÜV
• Insulation Class I
• Cannot be used in corrosive environment

Benefits

• Energy class A+
• Energy savings of up to 50% (compared to luminaires that use fluorescent lamps)
• Uniform light
• Convenient, continuous connection for both sizes of 600mm, 1200mm and 1500mm, simple and easy installation options
• High resistance against ambient air with humidity and high particle loads
• Simple refurbishment solution thanks to use of existing installation points
• Fast and simple installation due to easy connection design

Application areas
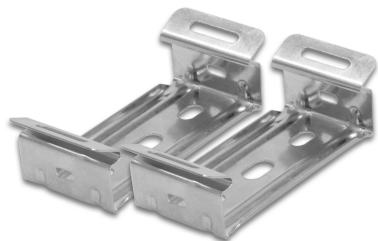
Industrial   Car park   Retail

Structures and materials

• Impact-resistant, polycarbonate housing and cover
• UV stabilized, flame retardant polycarbonate with improved light transmission and good color stability under heat exposure
• Colour: grey
• Convenient assembly bracket for ceiling mount, also opportunities for wall mounting with metal parts
• Small size profile and lightweight design
• All accessories for fixing are included in the package:

Wall mounting metal is 304 stainless steel
Kits are packed to ensure end users can fix the fixture
Fix to the ceiling: 2pcs wall mount clips plus 4pcs of screws
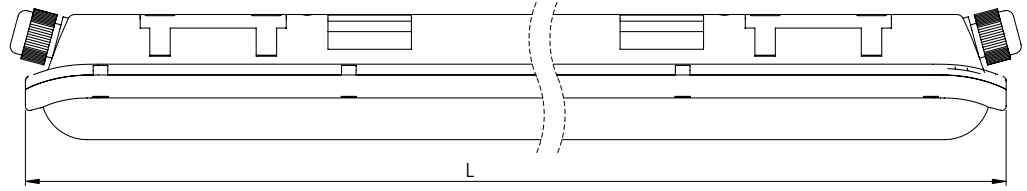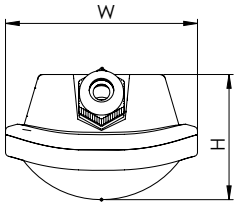
Electrical connection

• Cable entry for cables D=6-9mm
• Option for continuous connection up to 10pcs, depends on short circuit breaker

Specification summary

Product code	Product code (Direct Shipment)*	Description	Wattage (W)	Lumen (lm)	Efficiency (lm/W)	CCT (K)	Current (mA)	Power Factor	Weight (kg)	Length (mm)	Replacement for LFL
93096947	93096946	LED MARINER ST G1 TU 2' 12W 840 S EU	12	1200	100	4000	90	0.5	0.7	600	1x18W
93096949	93096948	LED MARINER ST G1 TU 2' 12W 865 S EU	12	1200	100	6500	90	0.5	0.7	600	
93096950	93096951	LED MARINER ST G1 TU 2' 24W 840 S EU	24	2400	100	4000	166	0.5	0.8	600	2x18W
93096952	93096953	LED MARINER ST G1 TU 2' 24W 865 S EU	24	2400	100	6500	166	0.5	0.8	600	
93096955	93096954	LED MARINER ST G1 TU 4' 24W 840 S EU	24	2400	100	4000	164	0.5	1.3	1200	1x36W
93096957	93096956	LED MARINER ST G1 TU 4' 24W 865 S EU	24	2400	100	6500	164	0.5	1.3	1200	
93096962	93096963	LED MARINER ST G1 TU 4' 48W 840 S EU	48	4800	100	4000	216	0.9	1.7	1200	2x36W
93096965	93096966	LED MARINER ST G1 TU 4' 48W 865 S EU	48	4800	100	6500	216	0.9	1.7	1200	
93096959	93096958	LED MARINER ST G1 TU 5' 28W 840 S EU	28	2800	100	4000	134	0.9	1.7	1500	1x58W
93096961	93096960	LED MARINER ST G1 TU 5' 28W 865 S EU	28	2800	100	6500	134	0.9	1.7	1500	
93096968	93096969	LED MARINER ST G1 TU 5' 56W 840 S EU	56	5600	100	4000	254	0.9	2.0	1500	2x58W
93096971	93096972	LED MARINER ST G1 TU 5' 56W 865 S EU	56	5600	100	6500	254	0.9	2.0	1500	

* Screw type connector

Dimensions (mm)

Length	Lumen package	Width (mm)	Length (mm)	Height (mm)
2ft = 600mm	low - 1200lm	72	600	58
2ft = 600mm	high - 2400lm	92	600	60
4ft = 1200mm	low - 2400lm	72	1200	58
4ft = 1200mm	high - 4800lm	92	1200	60
5ft =1500mm	low - 2800lm	72	1500	58
5ft =1500mm	high - 5600lm	92	1500	60

Regulatory and standards

Regulatory mark: CE
Regulations: 2014/35/EU, 2014/30/EU, 2011/65/EU, (framework 2009/125/EC) EU/1194/2012 and EU/2015/1428, (framework 2010/30/EU) EU/874/2012 and EU/518/2014*, 2012/19/EU*
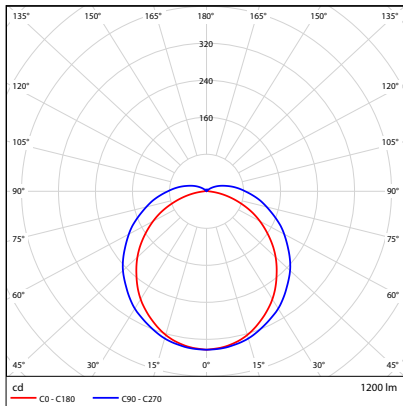3rd party performance test report supports compliance to EU/1194/2012
Harmonized standards: EN 60598, EN 62493, EN 61547, EN55015, EN 61000,
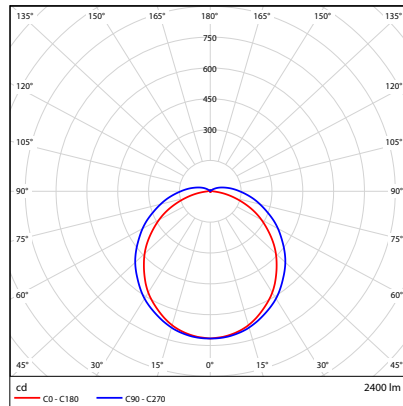look for CE Declaration of Conformity and Technical File for details
Photobiological risk assesment group 0 (exempt). The product is considered safe, does not pose any photobiological hazard.
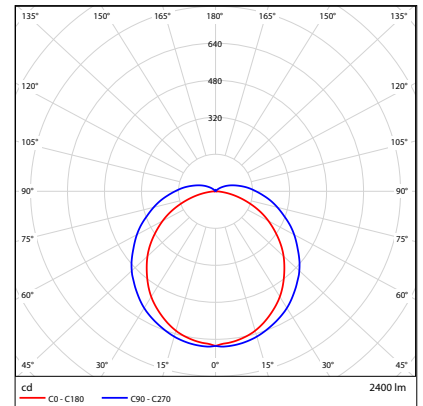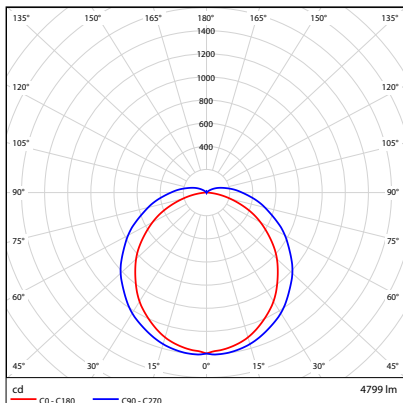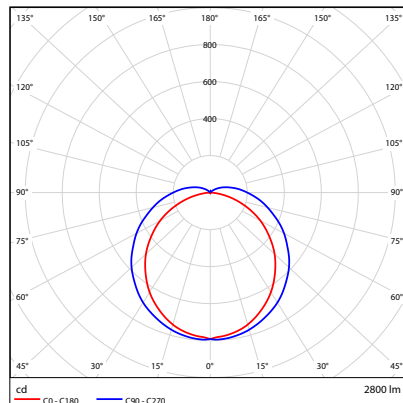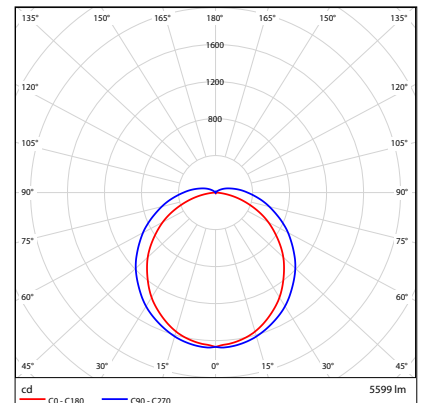*not on DOC

Photometric data

2' 12W

2' 24W

4' 24W

4' 48W

5' 28W

5' 56W

Photometry is based on LM79
NVLAP LAB CODES: 200651-0, 200660-0

Order logic

Internal Code	Range	Generation	Brand	Length	Wattage	CRI	CCT	Controller	Shipment
LED Mariner	**ST =** START	**G1 -** Generation 1	**TU -** TUNGSRAM	**2' -** 2ft **4' -** 4ft **5' -** 5ft	**12W** **24W** **28W** **48W** **56W**	**8 -** 80 CRI	**40 -** 4000K **65 -** 6500K	**S -** Static	**DS -** Direct Shipment **EU -=** EU connector

Example: LED Mariner ST G1 TU 2' 12W 840 S TRDS

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