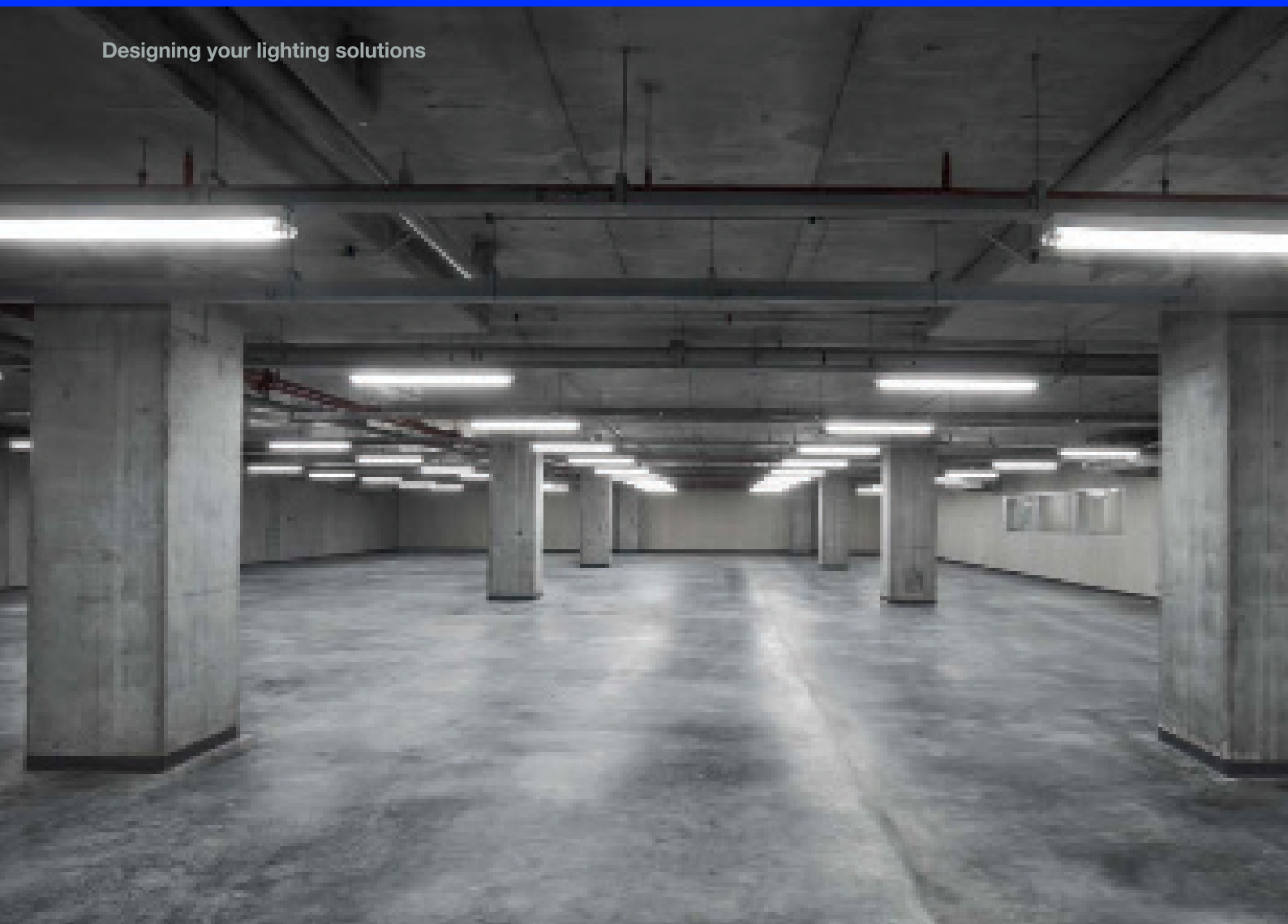
iinno lighting

Linear lighting

Designing your lighting solutions



IINNO Intelligent Innovations, Ltd.
"Commercial Linear Trunk Lighting Catalogue"
August 2019

Linear Lights

Energy efficiency through innovative design.

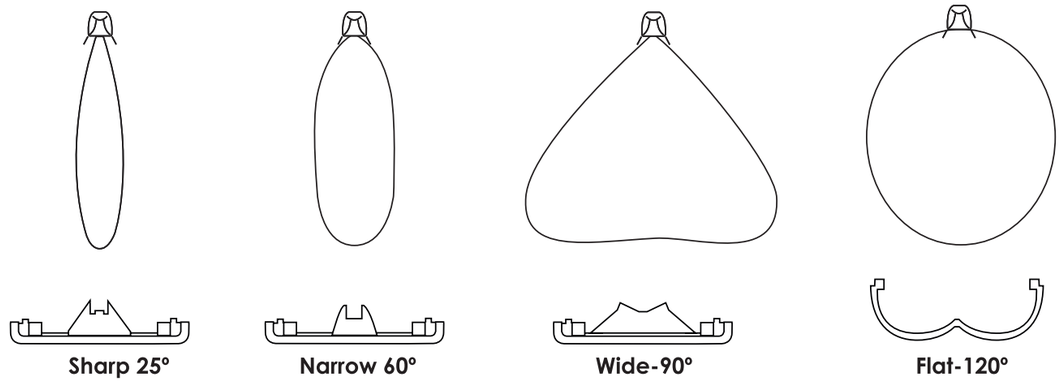
Optics

- Unique Design
- High Efficiency

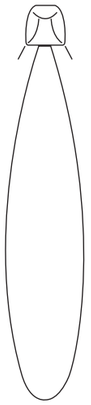
With seven optical lenses to choose from, this LED linear trunking system is equipped with all the necessary features to satisfy various projects in the industrial and commercial sectors.
It helps people work with precision and increase operation efficiency while saving considerable amounts of energy. The LED linear trunking system is also beneficial to commercial areas for presentation and retailing without the need to use extra reflectors.

IK08

Choose Your Lens



LED Sharp Angle



This sharp angle is ideal for applications in the industrial sector, where work precision is of paramount importance.

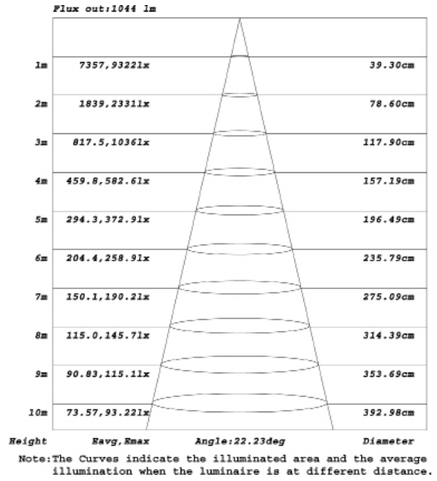
The high-uniformity illumination helps in error-reduction of precise and detailed work procedures, thus resulting in increased production efficiency.

This type of lens is also ideal for applications in warehouse shelving, since it provides plenty of luminosity to highlight the goods, so they can be seen clearly and with ease, while the non-important areas are more dimly lit.

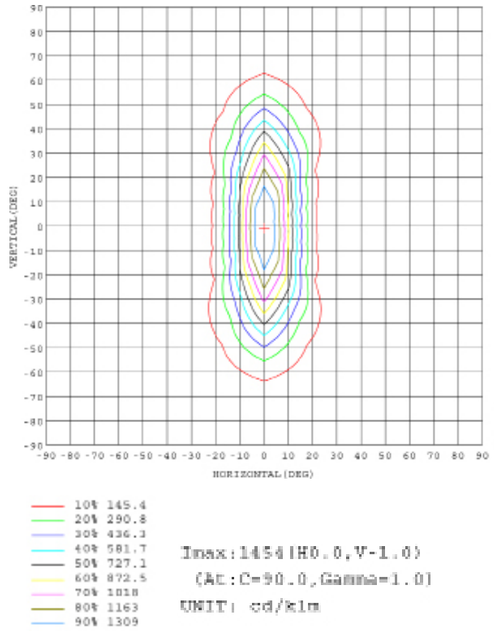
Application

- Emphasis will be on the desk of production line for precision work.
- The main light will be directed to the working desks, but not unimportant areas. This helps employees work with increased efficiency and precision, while it can also help avoid unnecessary mistakes and reduce injuries.

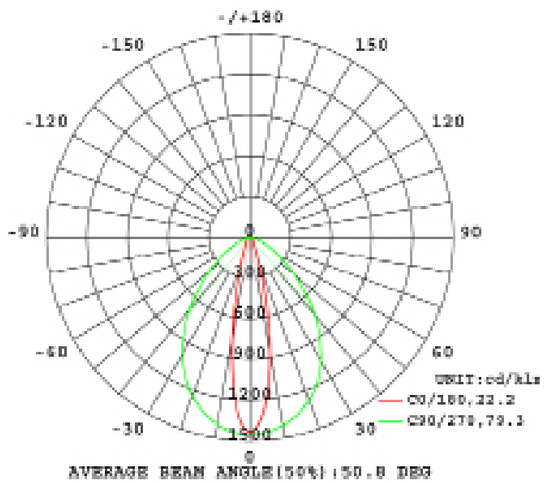
QUANTITY ESTIMATION DIAGRAM



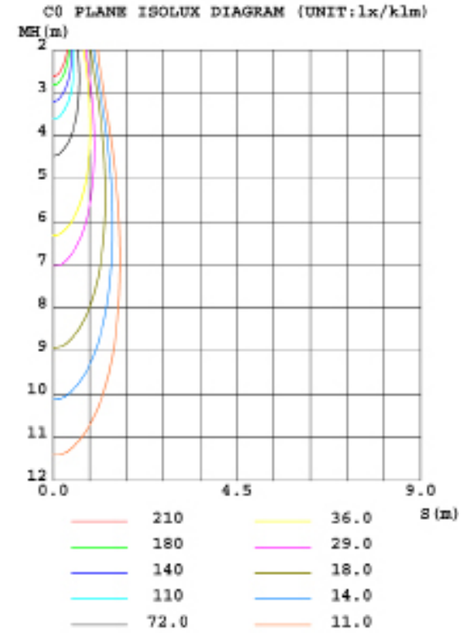
ISOCANDELA DIAGRAM



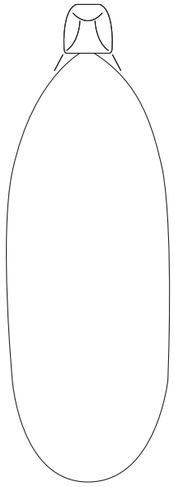
LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx/klm)



LED Narrow Angle

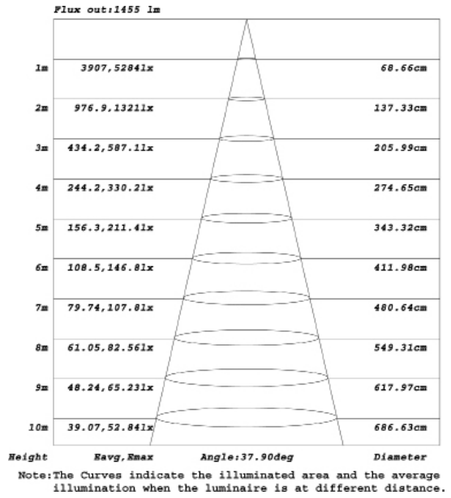


This narrow angle is ideal for corridors, aisles and passages of hospitals, schools, office buildings etc.
It provides well-distributed illumination, neither too bright nor too dark, ideal for general lighting. Additionally the option of blank covers provides the opportunity to save even more energy, while also reducing the installation and maintenance work needed.

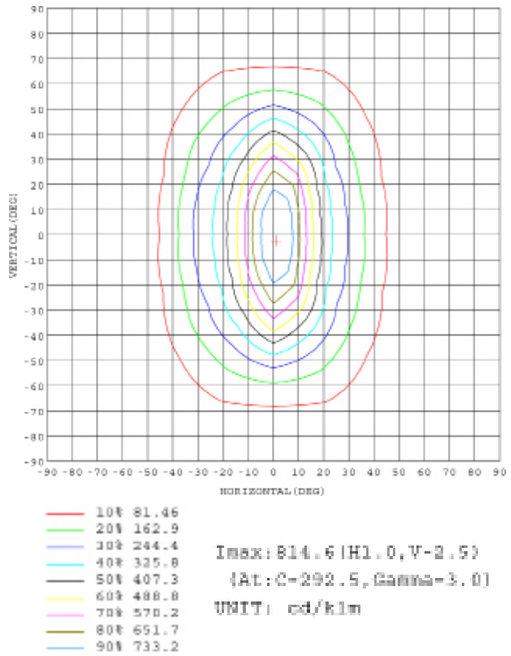
Application

- Narrow angle is especially designed for applications in corridors,passages and aisles.
- It gives the most suitable illumination, not too bright or too dark, so that the light is comfortable even for hospital patients.
- The available blank covers decorate the empty spaces of the linear trunking rail.

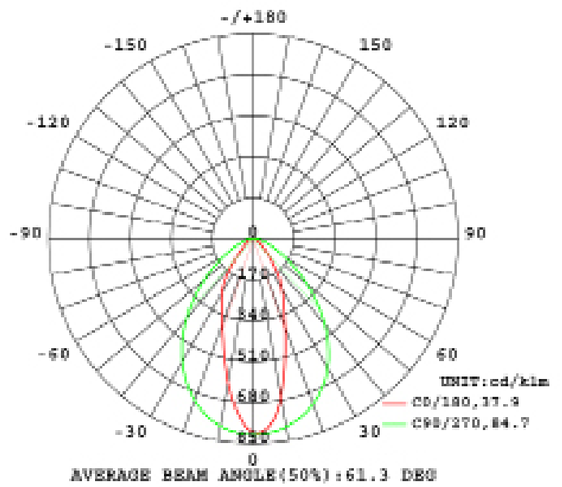
QUANTITY ESTIMATION DIAGRAM



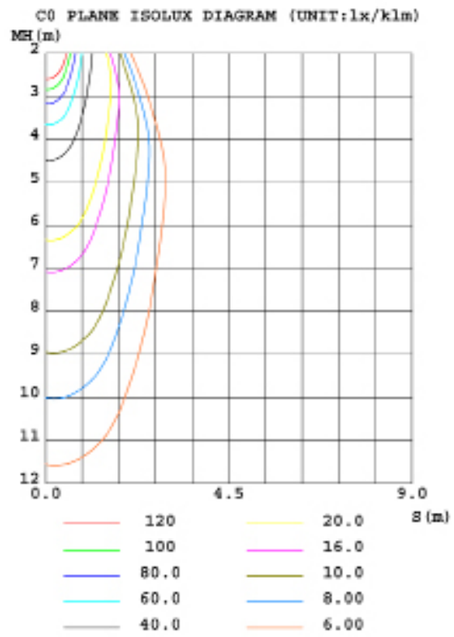
ISOCANDELA DIAGRAM



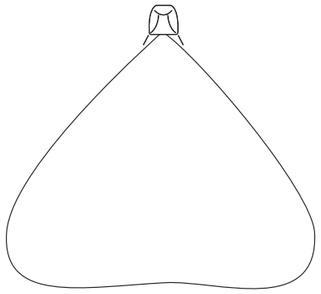
LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx/klm)



LED Wide Angle



The wide angle is ideal for applications where the aim is to illuminate large areas.

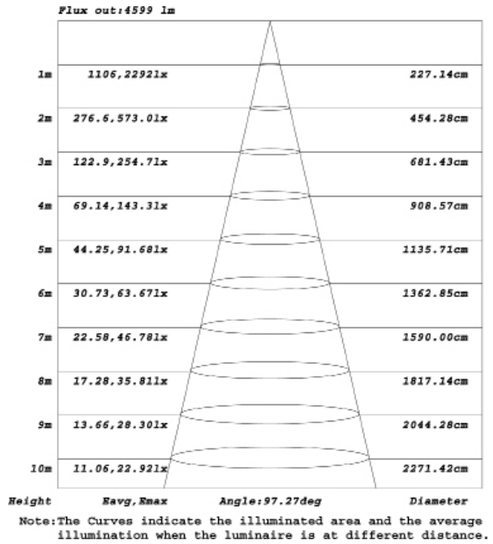
A single light with wide beam angle can satisfy the lighting needs of bigger spaces.

This lens of the linear trunking light is an ideal solution for parking lots, dinning halls, wide shelf corridors etc.

Application

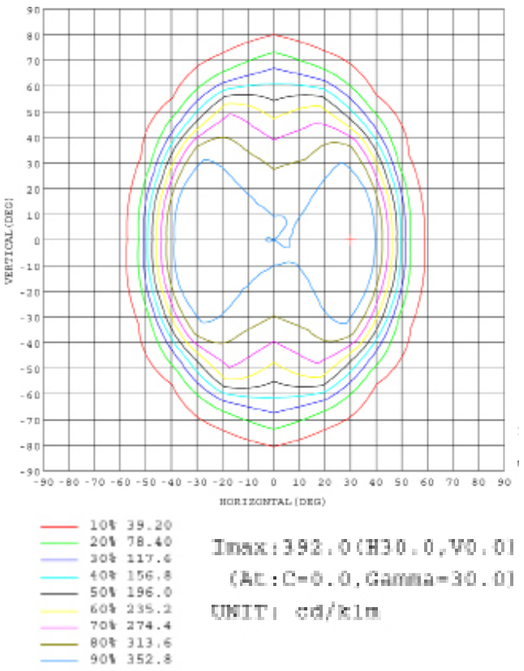
By using the wide angle lens you have the opportunity to illuminate large areas, such as an indoor basketball courts, with a well-distributed and homogeneous light. This translates to reduced accidents and increased safety in the court.

QUANTITY ESTIMATION DIAGRAM

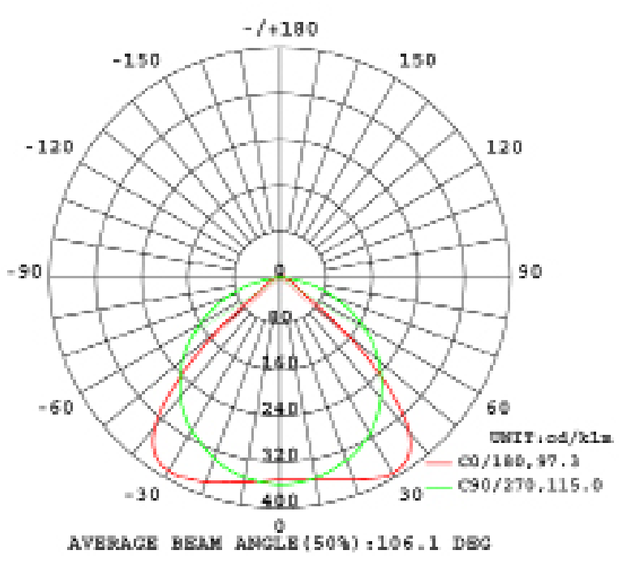


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

ISOCANDELA DIAGRAM

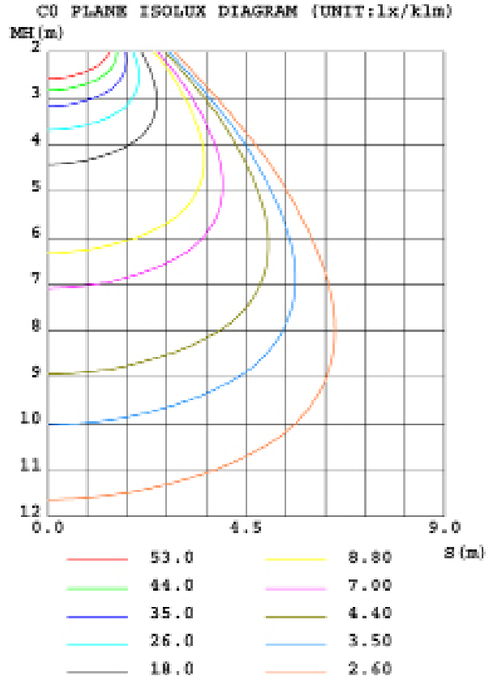


LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

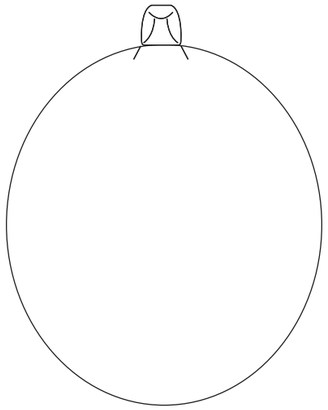


AVERAGE BEAM ANGLE(50%):106.1 DEG

C0 PLANE ISOLUX DIAGRAM (UNIT:lx/klm)

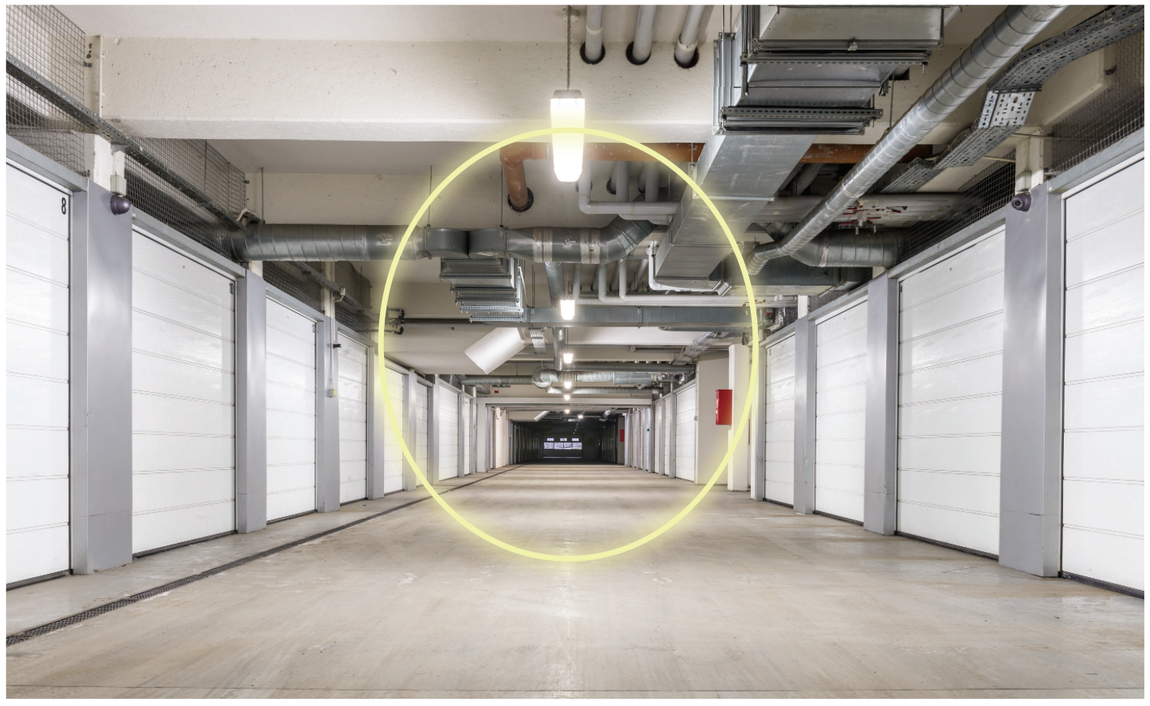


LED Flat Angle



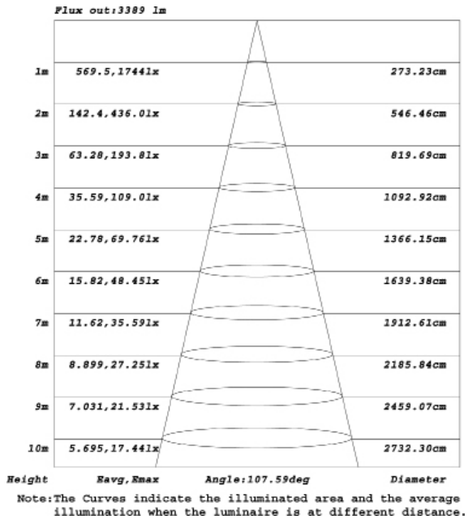
This type of lens is mainly applied for general lighting in office buildings, schools, airports, train station, meeting halls, etc. It provides well-distributed light with low glare, but bright enough for work or study since it's very comfortable for the human eyes.

Application



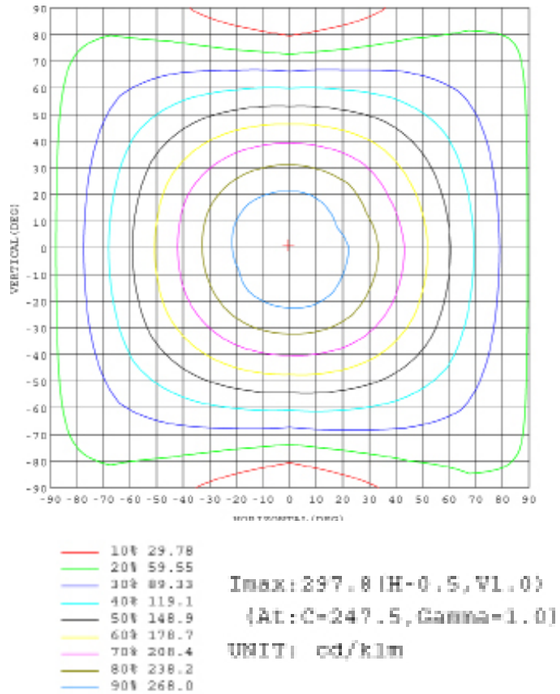
- The flat beam angle makes the linear trunking lights perfect for general lighting. The light is emitted homogeneously without glare, making it suitable for work or study.
- Flat angle helps in creating a comfortable environment which is healthy for the human eye.

QUANTITY ESTIMATION DIAGRAM

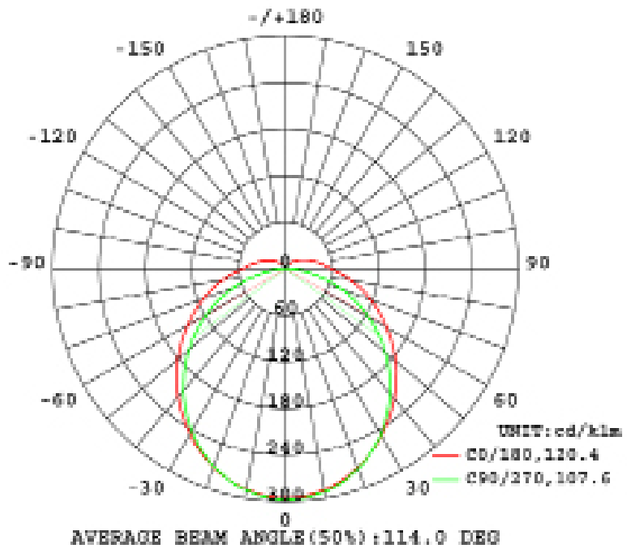


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

ISOCANDELA DIAGRAM

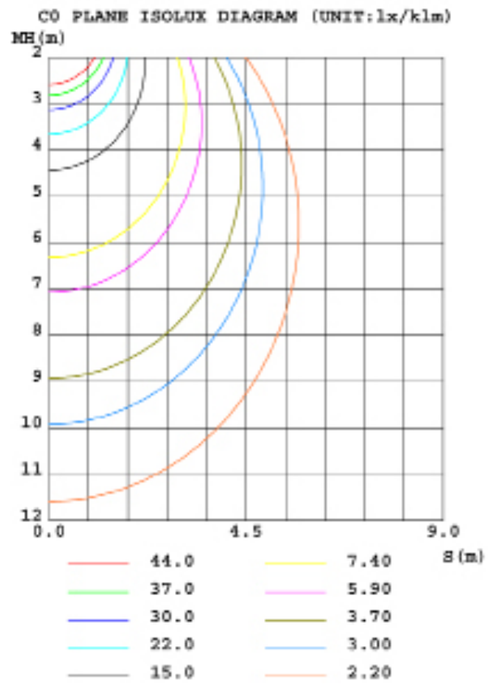


LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

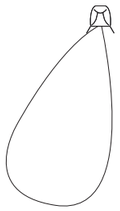


AVERAGE BEAM ANGLE(50%):114.0 DEG

C0 PLANE ISOLUX DIAGRAM (UNIT:lx/klm)



LED Asymmetric Angle



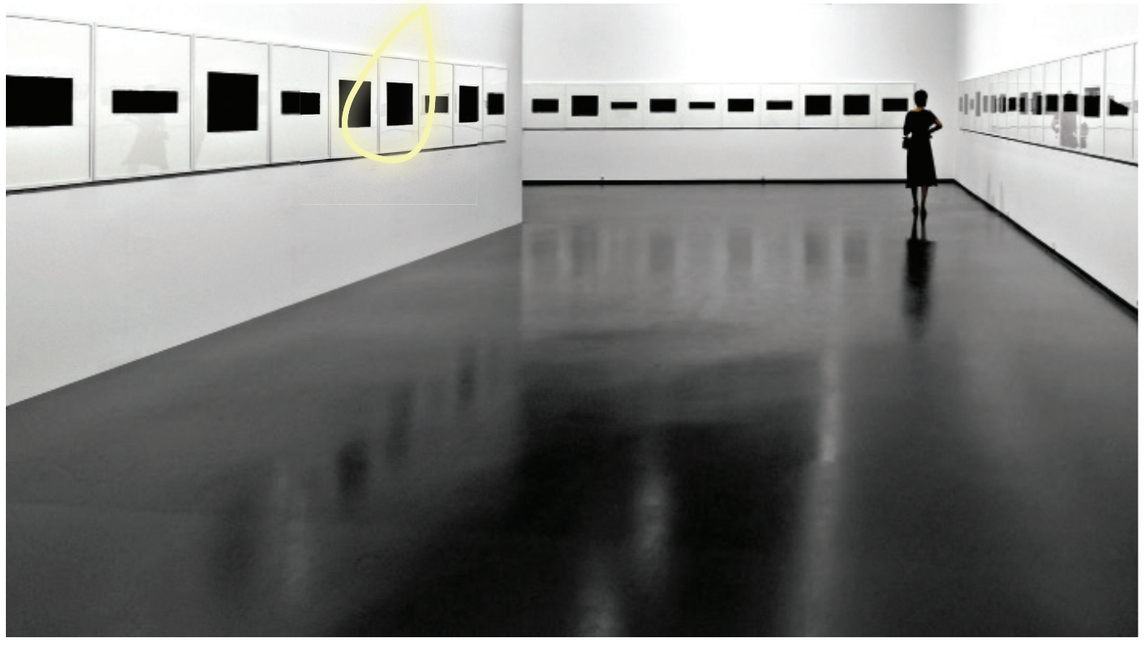
Asymmetric Left

The asymmetric beam angle works like a wall washer and can emit all light directly on one side of the shelf surface or the walls.
It's designed for presentation and display of retail or exhibition areas, where only one side needs to be highlighted.

Asymmetric Right

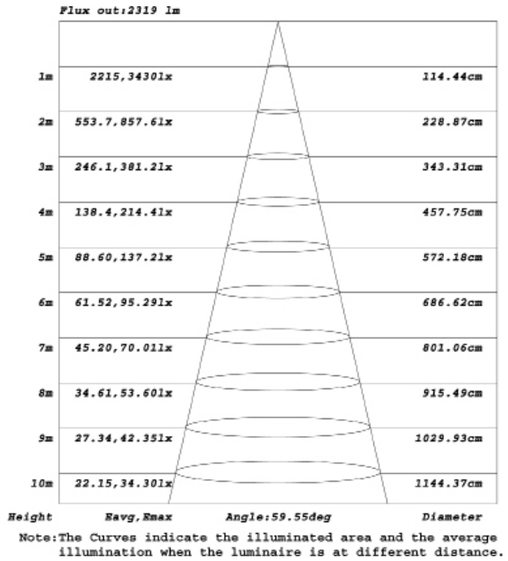
The left asymmetric beam angle directs the light towards the left side of the feed-in line, while the right asymmetric directs the lights towards the right side of the feed-in line.

Application



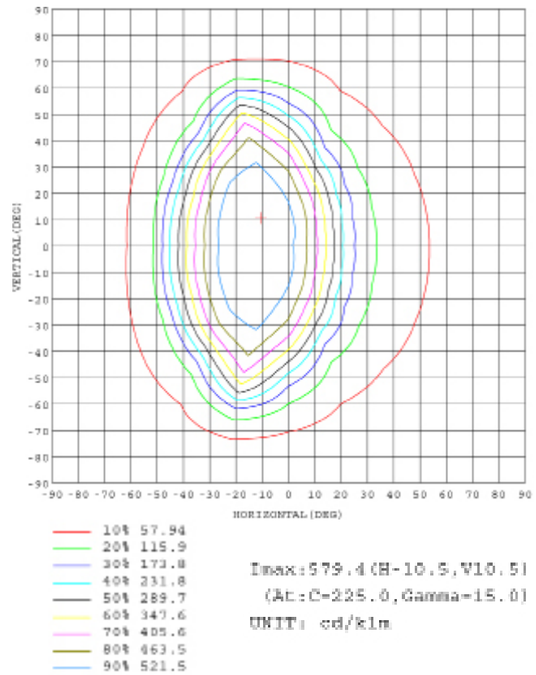
- The asymmetric beam angle focuses the light on a wall or sided work plane.
- Ideal lighting solution for displays on the wall or side shelf surfaces.
- The asymmetric beam angle lens, will emphasize the light mainly on the art pieces displayed on a wall and not on unimportant areas.

QUANTITY ESTIMATION DIAGRAM

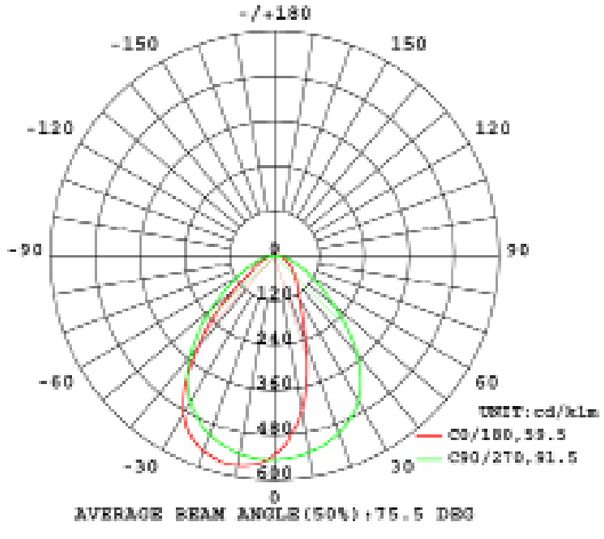


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

ISOCANDELA DIAGRAM

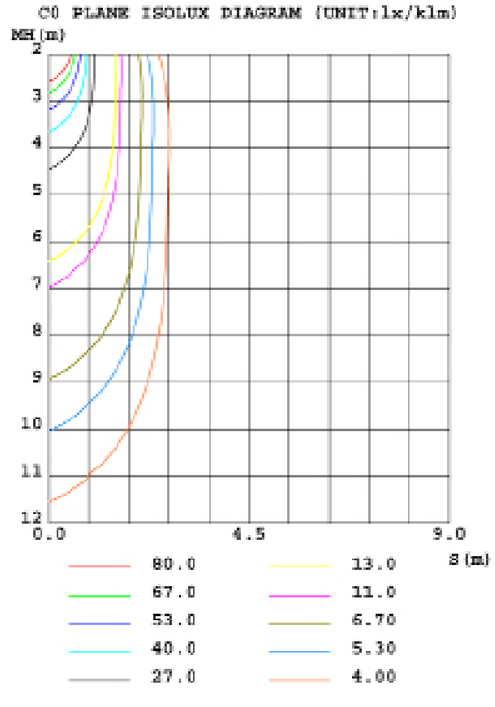


LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

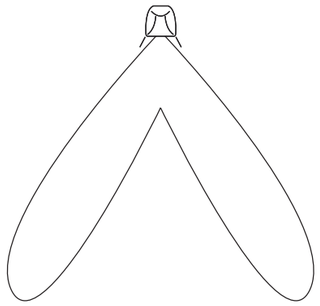


AVERAGE BEAM ANGLE(50%):75.5 DEG

C0 PLANE ISOLUX DIAGRAM (UNIT:lx/klm)



LED Double Asymmetric Angle



This beam is especially designed for shelf presentation in retailing areas such as supermarket and grocery stores.

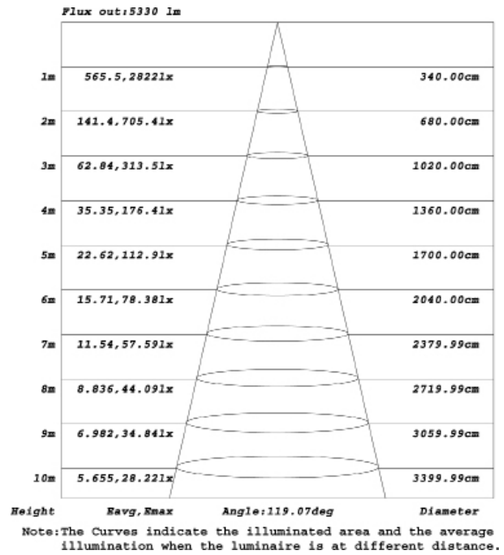
It's double asymmetrical light distribution, emphasizes on the shelf surfaces of both sides and ignores the less important area of the passageways.

With the shelf surfaces, where the goods are located, being more bright than the neutral areas, the customer's attention will be instinctively directed towards the goods at first glance.

Application

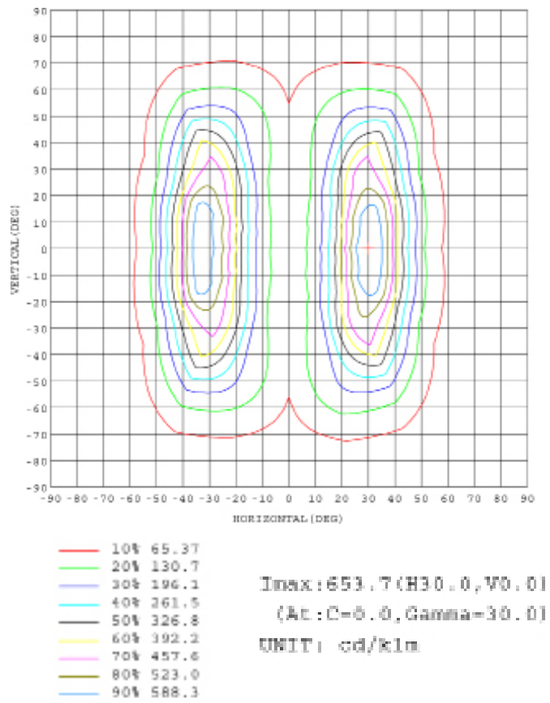
- Emphasis on shelf s urface of both sides.
- It gives more lights on shelving surface, which needs more illumination on goods displayed to catch consumers'attention, but gives less illumination to unimportant areas.
- This double asymm etric angle is perfect for this shelving in supermarkets or retailing stores for goods on display. It helps attract consumers' attention and increases sales.

QUANTITY ESTIMATION DIAGRAM

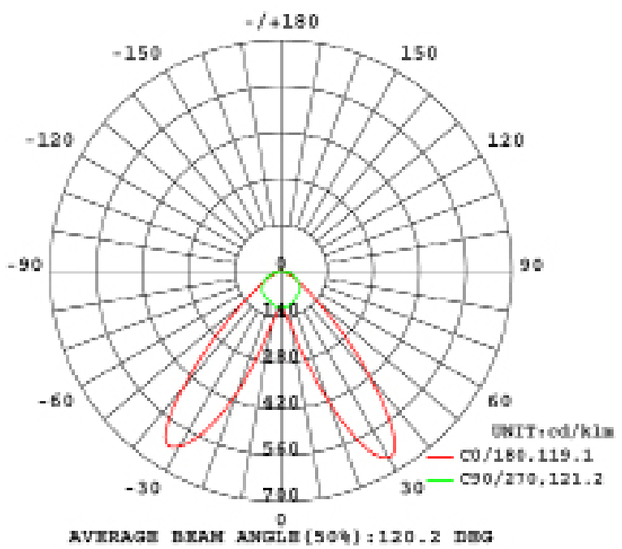


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

ISOCANDELA DIAGRAM

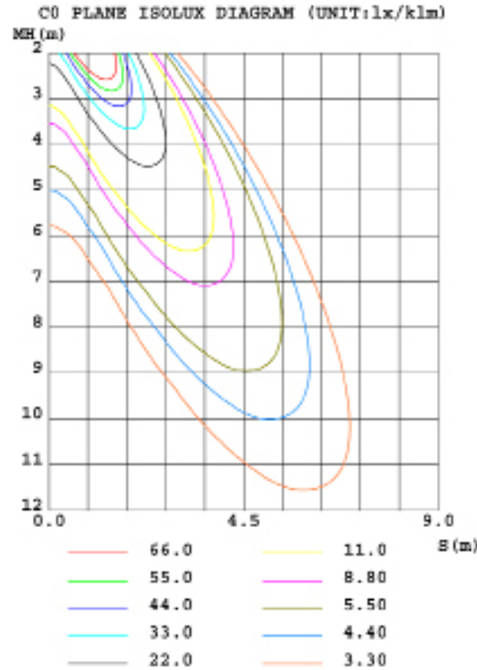


LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



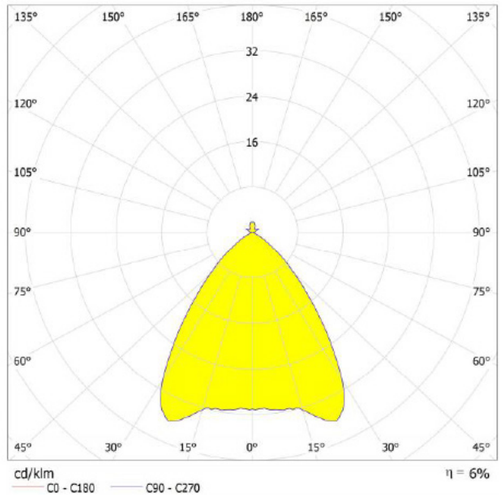
AVERAGE BEAM ANGLE(50%):120.2 DEG

C0 PLANE ISOLUX DIAGRAM (UNIT:lx/klm)



LED Linear Trunking System

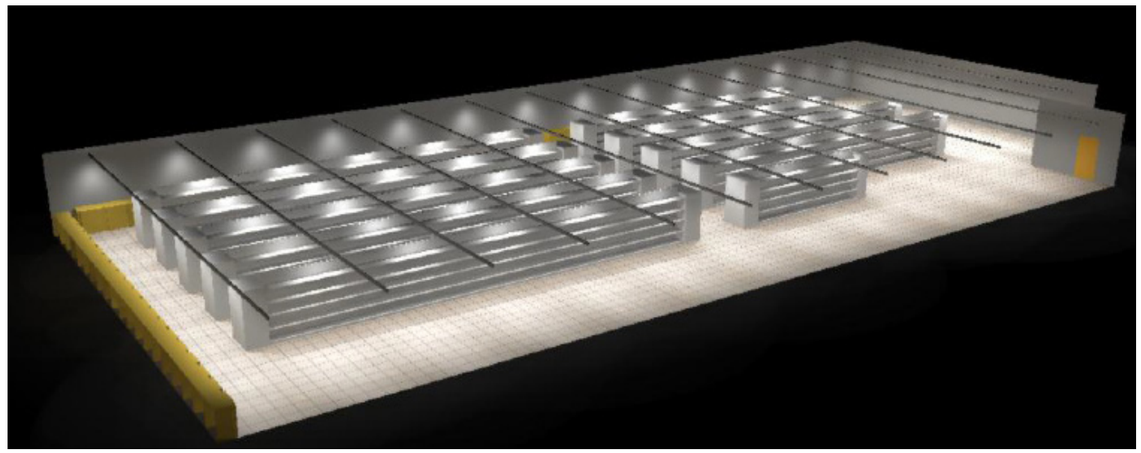
Basic condition for supermarket



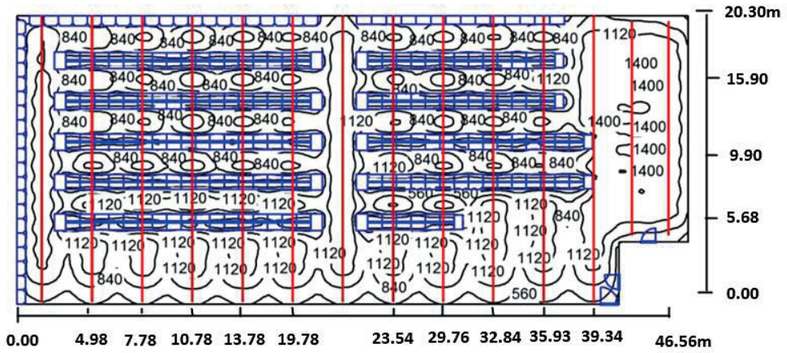
Ground Area:	924.25 m^2
Room Height:	3.4m
Mounting Height:	31.15m
Floor Eav:	757lx
Work plane:	859lx

Luminaire type: LED linear trunking system

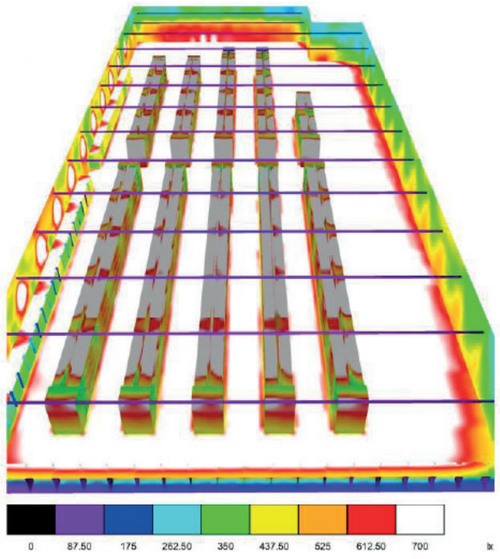
Power:	65W 1.5m
Power:	32W 0.6m
Beam angle:	Narrow
Quantity:	176 pcs 65W
Quantity:	12 pcs 32W
Total load:	11824W
Total luminous flux:	1056882 lm
UGR:	16
Maintenance factory:	0.8



Luminous Flux distribution



Height of Room: 3.400m, Mounting Height: 3.150m, Maintenance factor: 0.80 Values in Lux, Scale 1:333



Surface	Emax[lx]	Eav[lx]	Emin[lx]
Work plane	859	108	1463
Floor	757	75	1452
Ceiling Walls(6)	547	189	2386
	50	389	1097

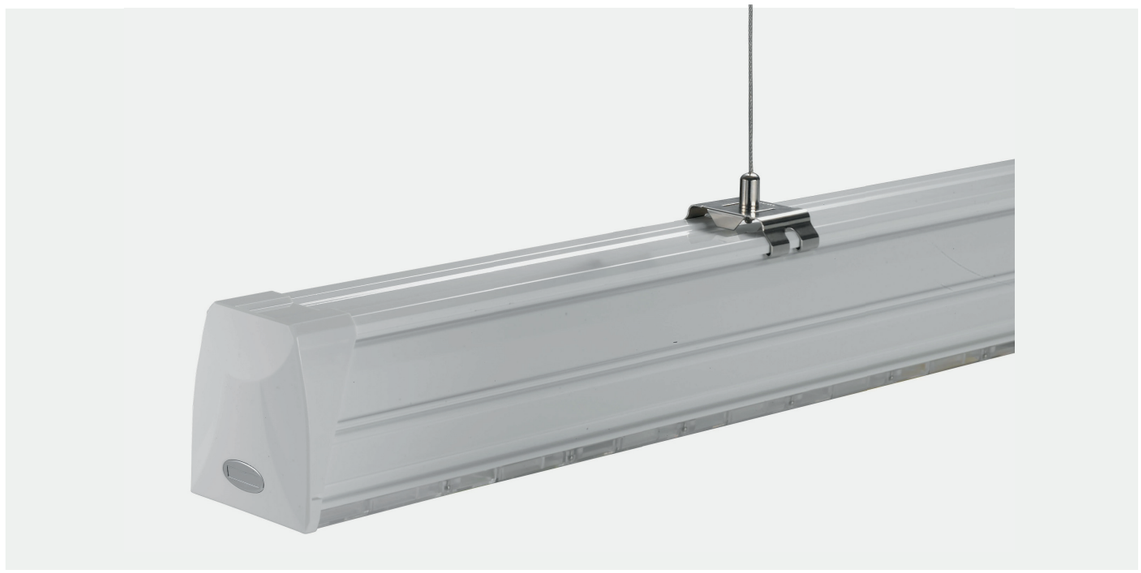
Work plane:

Height:	0.85m
Grid:	128 x 128 points
Boundary Zone:	0.000m

Luminaire Parts List

No.	Power	Pieces	Luminaire[lm]
1	65W	176	8450lm
2	32W	12	4160lm

Linear shop Lights



Unique ARC shaped design with milky-white PC cover which works as a diffuser and contributes in a better light distribution within the area installed.
Meanwhile, these linear trunking lights paired with the milky-white diffuser can pose as a more aesthetically agreeable version of the lights traditionally used in such areas.

LED Linear Trunking System

This LED Linear Trunking System is an energy-efficient, low maintenance alternative to traditional linear fluorescent lights in a variety of industrial and commercial applications.

It offers the optimal solution for conventional lighting systems and for new projects due to its low installation cost - everything you need for it comes prepackaged in a single box and the installation is tool-less.

Benefits

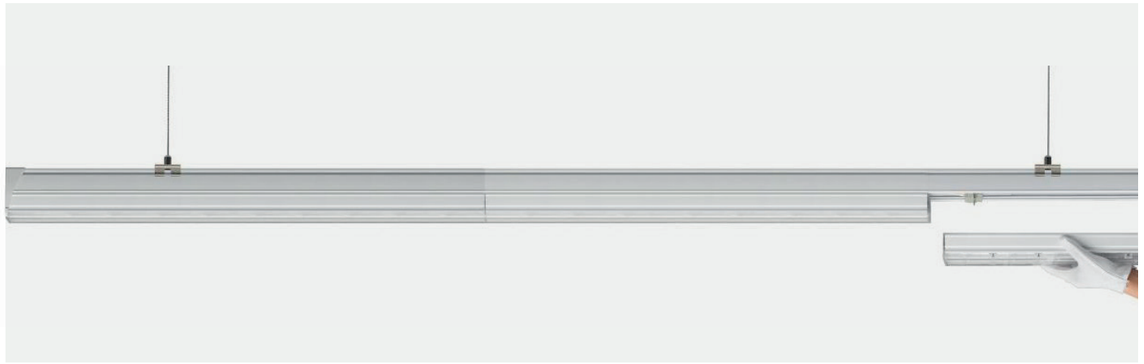
- Cost-effective light-line solution for industrial and commercial applications
- High quality product with high luminous efficiency to satisfy various requirements
- Time-efficient and simple installation
- Flexible solution

Application

- Commercial
- Industrial
- Warehouse
- Other indoor lighting

Trunking Rail

- 3-phase pre-selection via moving of contact pin prior to installation in rail
- Trunking rail as standard with 5, 7 or 11-core through-wiring with 2.5mm2 cable cross-section
- Maximum current of 16A, allowing 44 tubes of 150cm 80W in serial connection
- Separate power supplies, for dimming or emergency functions can be integrated
- Electrical feed possible in central or end area of a trunking rail arrangement via special trunking rail element.
- Trunking rail modules with pre-assembled connectors
- Wide distance between suspension points, up to 3mm, with self-supporting connector elements
- Simple mounting of trunking rail elements with pre-assembled connectors with integral plug-in system (electrical and mechanical connection)
- Flexible electrical feed-in and feed-out points
- Terminal feed-in connector for easily connecting with electricity



Optics

A wide range of optic lenses to choose from:

- sharp distribution, 25°
- narrow distribution, 60°
- wide distribution, 90°
- flat distribution, 120°
- asymmetric distribution
- double asymmetric distribution

Emergency Lighting Function

- Operating in normal mode, the linear trunking lights can automatically switch to emergency function in the event of a power failure, providing sufficient light and ensuring safe evacuation in emergency situations.
- Two independent emergency lighting circuits in the trunking rail are dedicated towards this function and there's also a wide variety of self contained batteries to choose from.

Dimming & Multi-Sensor System

- 3 different dimming systems to choose from, DALI, 1-10V and Switch dimming.
- Integrated with a microwave motion sensor and daylight sensor as well.

Installation Types

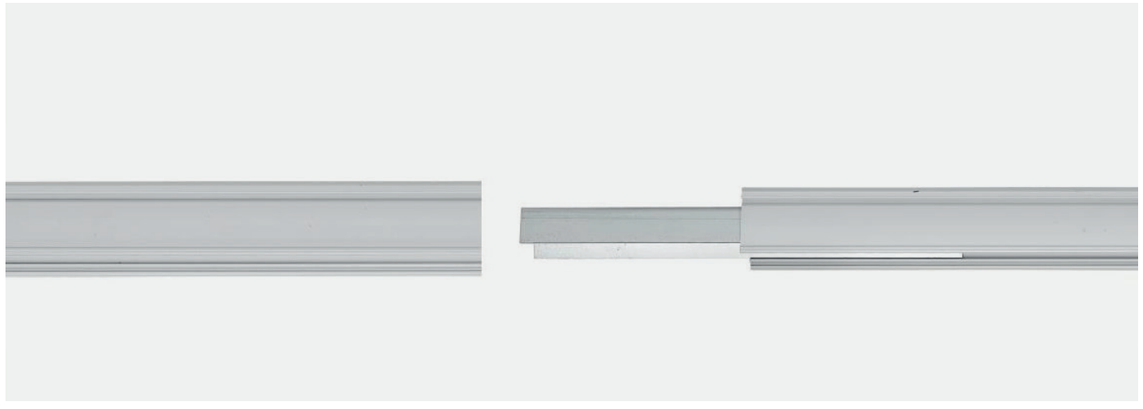
- Pendant Chain Installation
- Pendant Cord Installation
- Pendant Rod Installation
- Surface Mounted

Node Connector

- X, L and T Standard Module Node connectors
- Node connector could be electrical feed-in
- Each node connector has diverse of electrical feed-in and feed-out.

TRUNKING RAIL

A flexible trunking system built to meet challenging lighting demands in various applications. With its fully customizable modular kit, it adapts specifically to each lighting task required. The 11-wire current conducting system built into its trunking render it already equipped to meet tomorrow's needs.
All functions, such as power supply, lighting control and connection to emergency lighting are seamlessly integrated into this multi-functional trunking.
Luminaires can be positioned flexibly and the system can be adapted to suit structural alterations at any time. It's simply a matter of replacing or adding lighting modules, light sources or optics as required.

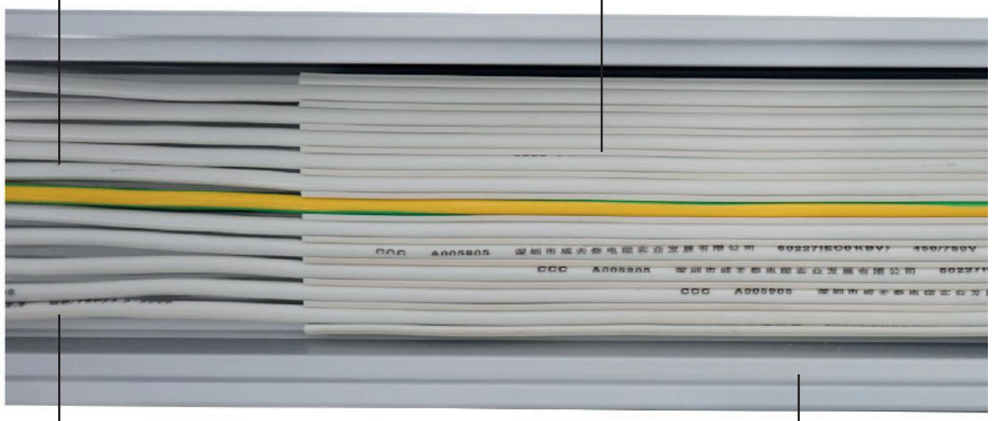


5/7/11-CORE WIRING CROSS-SECTION

The cable in the trunking with pre-assembled connector makes it possible to join trunking units without the use of any tools, which really helps save much labor cost. 5, 7 or 11-core trunking is available. Customized trunking mode is flexible, e.g. the function of 2 line in 7-core trunking could be DALI dimming or Emergency lighting.

2 control lines with DALI
control signal for brightness control
(2 x 2.5 mm²)

4 poles for two independent emergency lighting circuits
(4 x 2.5 mm²)



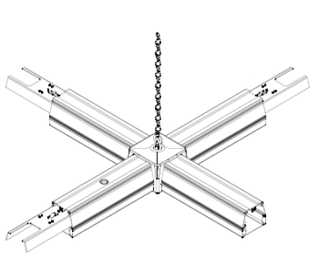
5 connections for power supply (5 x 2.5 mm²)

Surface in white , black or sliver finish

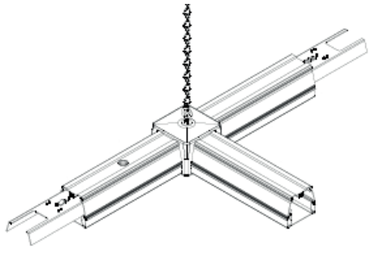
- Load sharing allows triple continuous- row length
- Separately switchable circuits for extremely easy light control in triple circuit

Node Connector

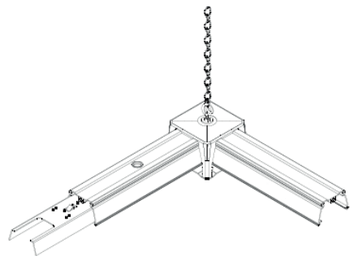
All system components can be assembled without tools. X, T and L connectors expand the system's application range.



X Node Connector

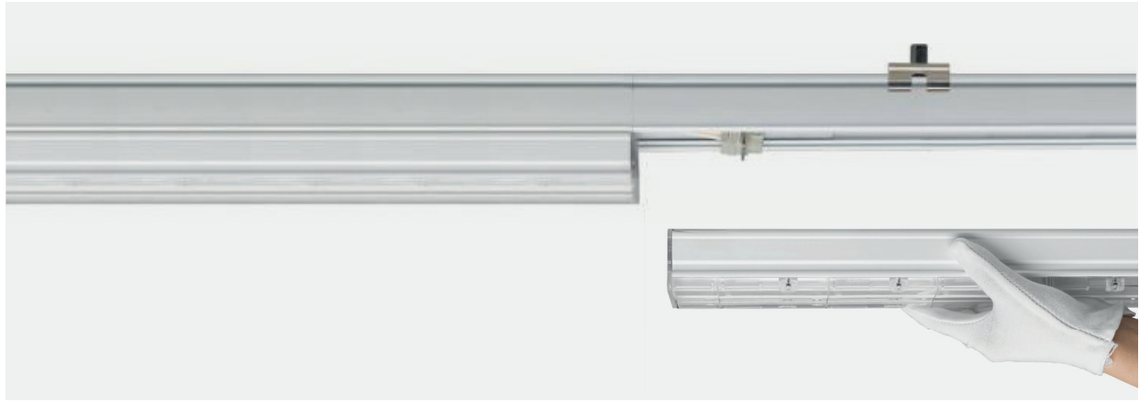


T Node Connector



L Node Connector

Each node connector has diverse of electrical feed-in and feed-out. The node connector is not only to connect the cross trunking, but also to connect the wire inside the trunking, and the node connector itself could even be the electricity feed-in point.



A continuous row of LED lighting system could be created only by the use of a trunking unit and a LED luminaire. It gives the impression of a continuous row system, without any visual interruptions or different reflectors. The Luminaire and trunking rail are perfectly matched to each other.

All possible light distribution patterns required can be created with various optical components.

The high luminous efficiency of 160 lm/W results in low energy consumption costs.

160 lm/W

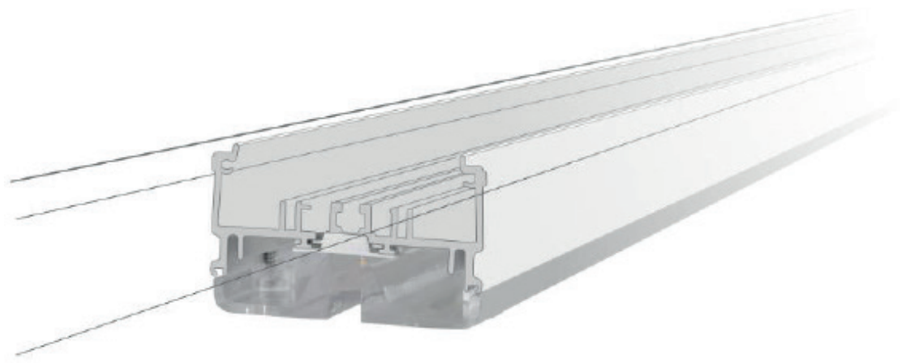
Length Options

Various length and power options are available.

35W/50W/75W

70W/100W/150W

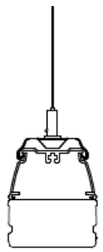
LEDs Feature



With a color rendering index of up to Ra>80, high luminous efficiency, color temperatures of 3000K, 4000K and 6000K, and low UGR, the linear trunking lights can meet environmental requirements and comply with funding guidelines for energy-efficient buildings and lighting solutions.

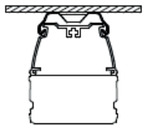
Installation

The wide suspension span, that can reach up to 3m, ensures quick and easy installation with fewer suspension points.



Cord

Rod



Surface Mounted

Emergency Lighting

Emergency lighting systems ensure optimum lighting for orientation, in the event of a power failure. General lighting and emergency lighting are integrated in a single, highly functional lighting solution.

- Central battery systems / Generator EL1 EN1 & EL2 EN2 renders this mode selected
- Self contained battery

Under this mode, the luminaires could be 3W or 12W, working for 6 hours or 1.5 hours respectively (depending on the demand).

A small spotlight is available on the 600mm module as an extra feature, with a rotating lighting head for emergency use of 5W.

A variety of emergency modes is available:

Dimming Systems

Efficient lighting tools are the basis of solutions with low operating overheads and high quality of light. Supplemented with suitable light control, the cost savings can potentially be further increased.
The right type of light management needed, depends on the specific architectural and usage conditions of the installation area.
A variety of dimming light control systems, with suitable sensor technologies, can be simply integrated into common building management systems, thanks to open and non-proprietary standards.
Dimming systems are suitable for complex applications, where daylight-dependent control and dynamic light control are required.

Three dimming types are available:

- DALI dimming
- 1-10V dimming
- Switch dimming

Multi Sensor System

Multi-sensor system combines convenience and energy saving. Higher amounts of energy can be saved by integrating microwave and daylight sensors into the trunking. They ensure a sufficient level of brightness in specific areas for a defined period of time.

Group control sensor **Broadcast control sensor**

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