

## Frame Lighting

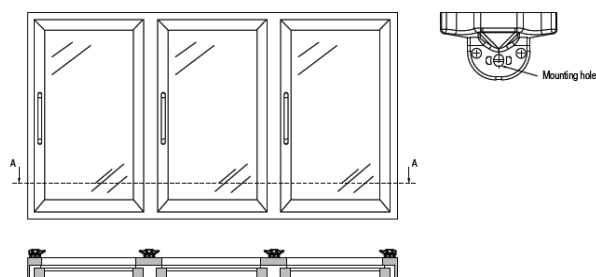
### REFRIGERATORS & FREEZERS LUMINAIRES

#### FEATURES & BENEFITS

- High performance lighting for doors of refrigerated cabinets
- Available in a variety of light colours and can be matched to specific food types.
- High operational performance due to directional lighting, integrated heat removal and highly efficient LEDs.
- Excellent product illumination thanks to the combination of SMD LEDs and optional optics.
- Safe-use operation due safety extra-low voltage (SELV).
- Heat sink profile made of anodised, extruded aluminium.
- End caps made of PBT
- Linear lenses made of PMMA
- Length of connecting cable 1.5m
- Dimming capability
- With side-emitting lens (SEC)

#### APPLICATION

Grocery & Supermarkets freezers and refrigerators  
Other specialized uses for narrow enclosures



## SPECIFICATIONS

Supply voltage	24V DC
Ambient temperature ta	-30 ... +30 °C
Max. surface temperature on profile tc	60 °C
Type of protection	IP 20
Protection class	III
Risk group (EN 62471:2008)	1
CRI	90, 95

## SKU SPECIFICATIONS

Article Number	Description	Description	Length (mm)	Nr. of modules	Luminous flux light engine (lm)	Power (W)	CCT
90100871	LED LE1500 PC 11L10-1 24V/100mA SEC-CY 1500	Center	1500	11	1310	26.4	PC
90100872	LED LE1500 PC 9L10-1 24V/100mA SEC-LY 1500	Left	1500	9	1070	21.6	PC
90100873	LED LE1500 PC 9L10-1 24V/100mA SEC-RY 1500	Right	1500	9	1070	21.6	PC
90100877	LED LE1500 CW 11L10-1 24V/100mA SEC-CY 1500	Center	1500	11	1605	26.4	CW
90100878	LED LE1500 CW 9L10-1 24V/100mA SEC-LY 1500	Left	1500	9	1315	21.6	CW
90100879	LED LE1500 CW 9L10-1 24V/100mA SEC-RY 1500	Right	1500	9	1315	21.6	CW
90100887	LED LE1500 PM 11L10-1 24V/100mA SEC-CY 1500	Center	1500	11	1340	26.4	PM
90100888	LED LE1500 PM 9L10-1 24V/100mA SEC-LY 1500	Left	1500	9	1095	21.6	PM
90100889	LED LE1500 PM 9L10-1 24V/100mA SEC-RY 1500	Right	1500	9	1095	21.6	PM
90100899	LED LE1500 NW 11L10-1 24V/100mA SEC-CY 1500	Center	1500	11	1760	26.4	NW
90100900	LED LE1500 NW 9L10-1 24V/100mA SEC-LY 1500	Left	1500	9	1440	21.6	NW
90100901	LED LE1500 NW 9L10-1 24V/100mA SEC-RY 1500	Right	1500	9	1440	21.6	NW
90100918	LED LE1500 WW 11L10-1 24V/100mA SEC-CY 1500	Center	1500	11	1340	26.4	WW
90100919	LED LE1500 WW 9L10-1 24V/100mA SEC-LY 1500	Left	1500	9	1095	21.6	WW
90100920	LED LE1500 WW 9L10-1 24V/100mA SEC-RY 1500	Right	1500	9	1095	21.6	WW
90100874	LED LE1700 PC 12L10-1 24V/100mA SEC-CY 1500	Center	1700	12	1430	28.8	PC
90100875	LED LE1700 PC 10L10-1 24V/100mA SEC-LY 1500	Left	1700	10	1190	24.0	PC
90100876	LED LE1700 PC 10L10-1 24V/100mA SEC-RY 1500	Right	1700	10	1190	24.0	PC
90100880	LED LE1700 CW 12L10-1 24V/100mA SEC-CY 1500	Center	1700	12	1750	28.8	CW
90100881	LED LE1700 CW 10L10-1 24V/100mA SEC-LY 1500	Left	1700	10	1460	24.0	CW
90100882	LED LE1700 CW 10L10-1 24V/100mA SEC-RY 1500	Right	1700	10	1460	24.0	CW
90100890	LED LE1700 PM 12L10-1 24V/100mA SEC-CY 1500	Center	1700	12	1460	28.8	PM
90100891	LED LE1700 PM 10L10-1 24V/100mA SEC-LY 1500	Left	1700	10	1220	24.0	PM
90100892	LED LE1700 PM 10L10-1 24V/100mA SEC-RY 1500	Right	1700	10	1220	24.0	PM
90100902	LED LE1700 NW 12L10-1 24V/100mA SEC-CY 1500	Center	1700	12	1920	28.8	NW
90100903	LED LE1700 NW 10L10-1 24V/100mA SEC-LY 1500	Left	1700	10	1600	24.0	NW
90100904	LED LE1700 NW 10L10-1 24V/100mA SEC-RY 1500	Right	1700	10	1600	24.0	NW
90100921	LED LE1700 WW 12L10-1 24V/100mA SEC-CY 1500	Center	1700	12	1460	28.8	WW
90100922	LED LE1700 WW 10L10-1 24V/100mA SEC-LY 1500	Left	1700	10	1220	24.0	WW
90100923	LED LE1700 WW 10L10-1 24V/100mA SEC-RY 1500	Right	1700	10	1220	24.0	WW

\*All typical values for Ta=25°C +/- 2°C, setting time =200ms

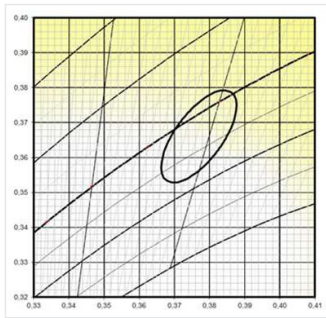
\*Luminous flux min. value = typ. value - 20%

\*Tolerance mechanical dimensions +/- 1mm

\*Tolerance electrical data +/- 15%

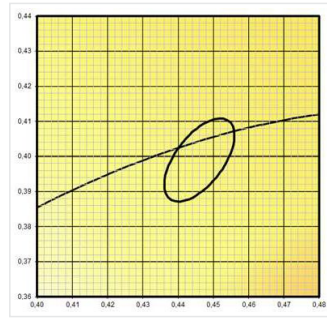
\*Tolerance optical data +/-10%

COORDINATES AND TOLERANCES ACCORDING TO CIE 1964



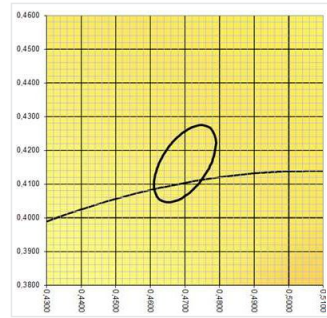
**CIE - Coordinates**  
Neutral white 4200K

	x0	y0
Center point	0.3770	0.3660
MacAdam ellipse	5SDCM	



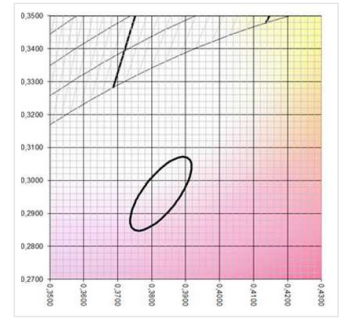
**CIE - Coordinates**  
Warm white 3000K

	x0	y0
Center point	0.4460	0.3990
MacAdam ellipse	5SDCM	



**CIE - Coordinates**  
Pasta & Cheese 2700K

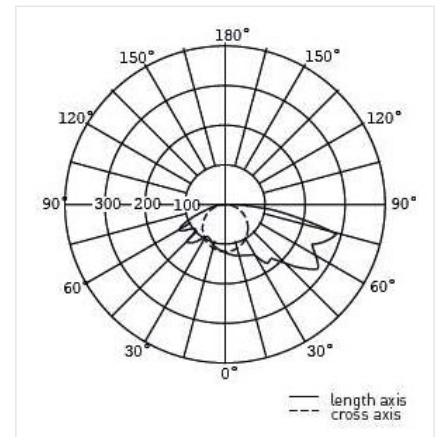
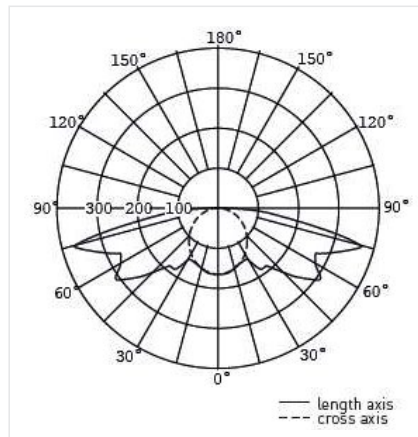
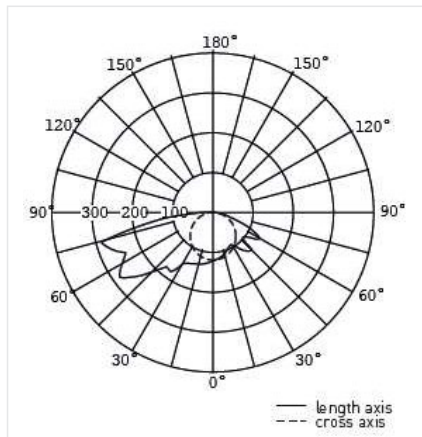
	x0	y0
Center point	0.4700	0.4160
MacAdam ellipse	5SDCM	



**CIE - Coordinates**  
Packed Meat

	x0	y0
Center point	0.3827	0.2960
MacAdam ellipse	5SDCM	

OPTICAL PROPERTIES



Lifetime	$t_{c,LED}$ temperature in °C	Luminous flux in %	Lifetime in h
0		70	50000
		80	30000
25		70	47000
		80	29000
45		70	45000
		80	28000

Standards

- \* EN 60598-1
- \* EN 60598-2-1
- \* EN 62031
- \* EN 62471

Operating temperature (operation, no defects)	$t_a$	-30 ... +30 °C
Storage temperature	$t_s$	-30 ... +60 °C
Temperature cooling profile*	$t_c$	-30 ... +60 °C

\* Values apply to operation at 100% output, natural convection.

\* If the maximum temperature limits are exceeded, the lifetime of the module will be greatly reduced or the module may be destroyed. The  $t_c$  point temperature at the profile of the light should be measured in the thermally stable state and under operating conditions by means of a temperature sensor or temperature sensitive sticker in accordance with EN60598 - 1. The entire profile can be used as the  $t_c$  point.