

> CASE STUDY

# SALVATION ARMY WAREHOUSE



## Quick Facts

- Optimax™ optical system provides exceptional lighting performance and low glare.
- Integrated PIR controls help to increase energy savings further
- Emergency requirements catered for with class-leading 1,200lm integrated emergency.

**MANDEK** LTD.

## BACKGROUND

The Salvation Army has recently moved its Clothing Collection Division into new custom-built premises in Kettering. This Division raises millions of pounds a year to support the Salvation Army's charitable work.

The new 56,500 sq ft/5,250 sqm factory brings together 120 existing personnel from both the existing Pytchley Lodge Road centre and the Wellingborough Support Centre.

The new warehouse facility includes a number of environmentally-friendly features such as solar panels on the roof, electric car charging facilities and "green" cycle shelters.

## CHALLENGE

The Salvation Army processes up to 45,000 tonnes of donated clothing per year, 99 per cent of which is reused or recycled. In keeping with the need for efficiency and improving their green credentials with their trusted partners such as large corporations, supermarkets and local authorities, the Salvation Army sought a lighting scheme that would meet these goals.



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## THE SOLUTION

**It was decided that the main warehouse should be illuminated using the new Holophane Prismpack™.**

The recently launched Prismpack™ is available in a range of sizes that can deliver from 10,000 lumens up to a massive 120,000 lm. This is achieved by combining a single LED module (up to 20,000 lm each) in groups of one to six.

For the Salvation Army warehouse, the three-module, 414W, version was used. This delivers over 58,000 lumens with a colour rendering of CRI >80 and has a Neutral 4000K appearance.

One of the key benefits of the new Prismpack™ is the Optimax™ optical system. Which has miniature, faceted, specular aluminium reflectors within a low-iron (for maximum light transmittance) glass

lens. The LEDs themselves are set deep in the Optimax™ reflector thus avoiding any chance of a direct view of the source, this works to effectively mitigate against glare. Prismatic lenses are also available as an option where illumination high above the work area is required for a 'volumetric' lighting effect.

This new Optimax™ system produces a wide beam with a cut-off at approximately 50 degrees. The result is an almost glare free installation with excellent uniformity. This makes conditions ideal for examining and sorting clothing.

For extra energy savings, the Prismpacks™ are fitted with PIR presence detectors. Thus, only the areas in use are illuminated. Furthermore, the warehouse has a great deal of roof glazing and additional energy savings are obtained by switching the luminaires by photocells.

For extra security, the Prismpacks™ have a 3-hour, self-contained (self-test) emergency lighting system which delivers 1,200 lumens – a class leader for highbays.

One extra benefit of the Prismpack™ that may not be immediately obvious is that it is designed so that essential components are easily replaceable. For example, the drivers can be replaced in situ. This feature prolongs the usable life of the installation and is in keeping with the green credentials of the Salvation Army.

The rated life of the LED module used in the Prismpack™ is over 100,000 hours at L70B50 @tq 40°C, meaning that it lasts six times longer than a typical discharge lamp type highbay. Therefore, there are additional savings in lamp replacement and maintenance costs.

A total of 38 Prismpacks™ were used in the installation.





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[www.holophane.co.uk](http://www.holophane.co.uk)



**T** +44 (0) 1908 649292

**F** +44 (0) 1908 367618

**F Intl** +44 (0) 1908 363789

**E** [info@holophane.co.uk](mailto:info@holophane.co.uk)

Holophane Europe Limited  
Bond Avenue, Milton Keynes,  
Buckinghamshire MK1 1JG  
United Kingdom