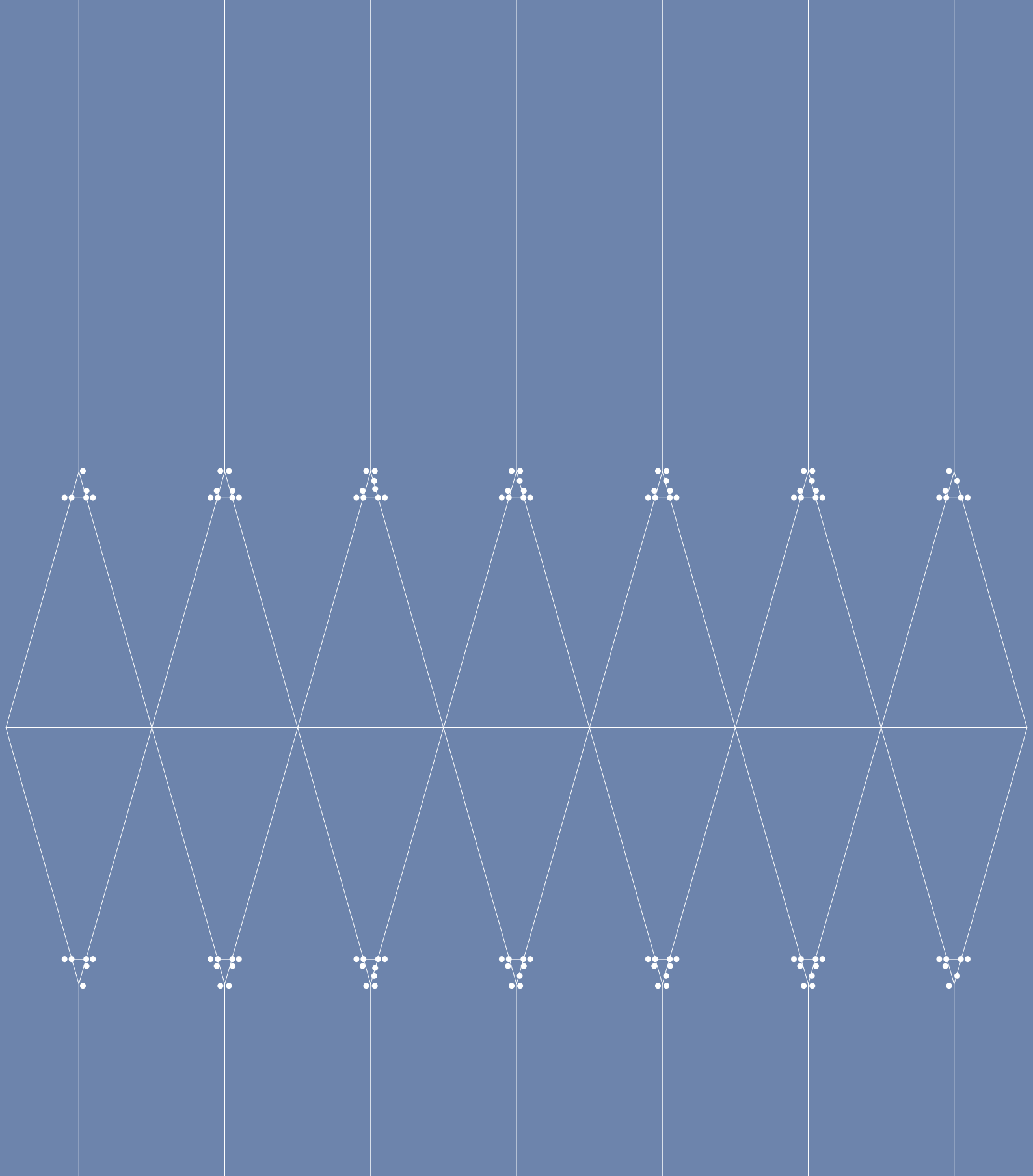


ewo

Best Practice

MAC Forum



PROJECT OVERVIEW

MAC Forum at Munich Airport

Type	Architecture and the Arts
Location	Munich, Germany
Client	Airport Munich
Lighting System	P-Series
Lighting Design	ewo
Year of Installation	2017
Quantity	98 pieces



How did ewo illuminate
such an enormous curved
surface evenly?


ILLUMINATING THE IMPOSSIBLE

A 90 m curved surface

With a total floor space of around 10,000 square meters, the MAC Forum is a huge multipurpose venue that has an open 41 metre high hall roof, with a space suitable for usage at numerous large-scale events.

Designed by star architect Helmut Jahn, the MAC Forum's ceiling comprises a delicate construction of glass, with accompanying fiberglass sheets at an enormous span of 90 meters across.

Illumination of the ceiling was made possible by ewo's modular system and optical expertise, utilising different combinations of lenses within each luminaire for smooth, even distribution of this challenging surface.



How did we illuminate
above and below, from
predetermined positions?

RESOLVING COMPLEXITY

ewo's time to shine

The required dual functionality specified by the client made modularity all the more crucial - the ceiling and hall area both had to be illuminated from fixed predetermined lighting positions.

Luminaires shone upwards for the scenic illumination, and downwards (pictured) for functional illumination of the hallway, which included safety and emergency lighting.

Although the luminaire model itself was the same regardless of its position, combinations of wide, narrow and medium spot lenses with differing tilt, allowed for smooth illumination tailored to each area.



How does the client benefit
from scene control?

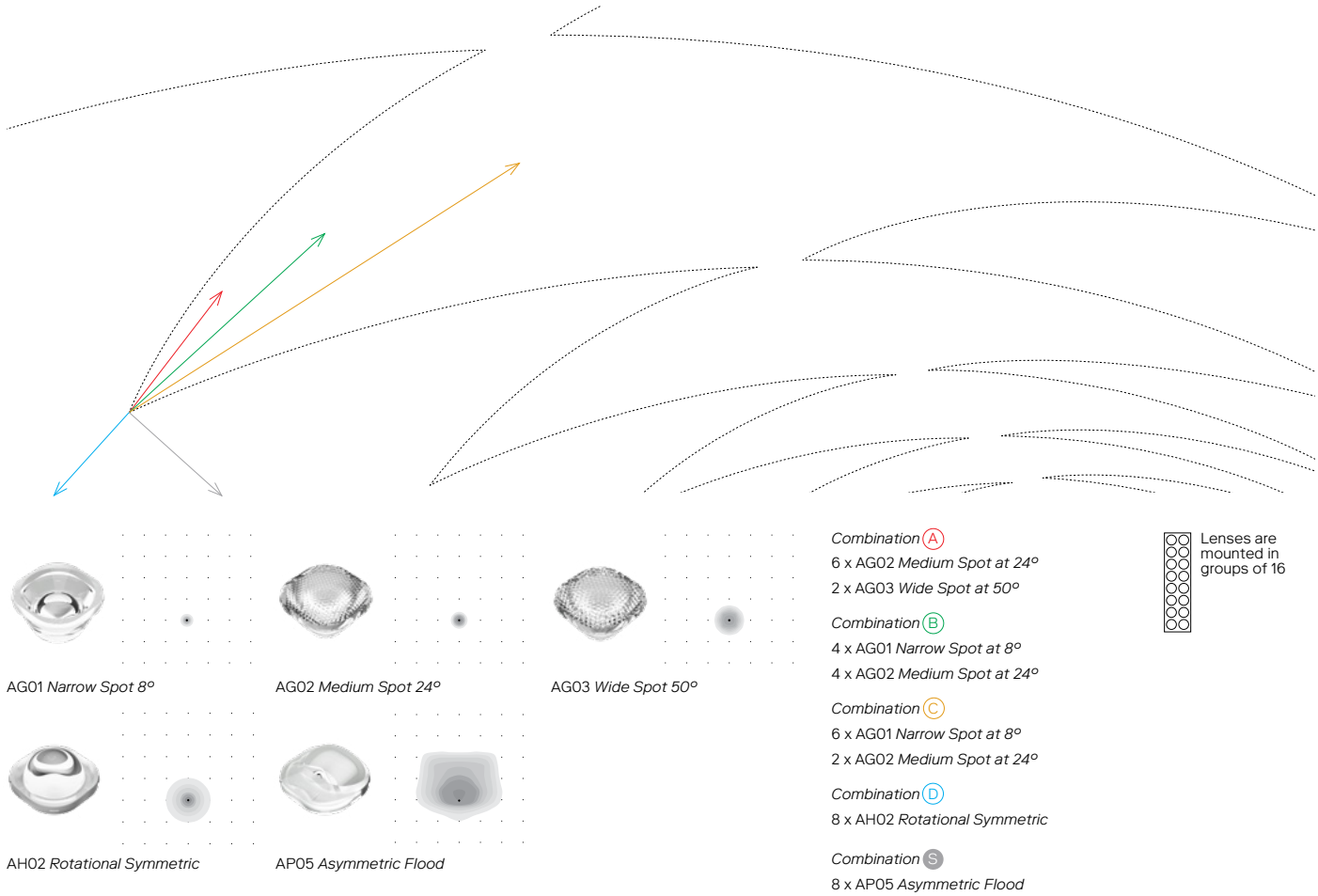
LIGHTING MANAGEMENT

Dynamic, accessible control

The lighting distribution was not only modifiable, it had the additional benefit of pre-programmed scenes manageable by the customer, allowing tremendous ease of use by means of dynamic lighting control, for specific events.

The corporate colours of Munich Airport, special additional colours, and scenic illumination of events held in the MAC Forum, such as Christmas markets or public viewings, can have their own saved, pre-programmed distributions.

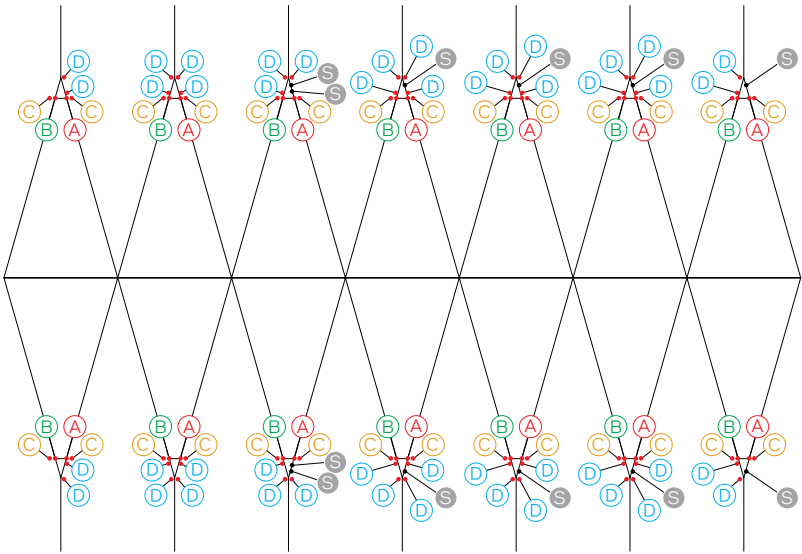
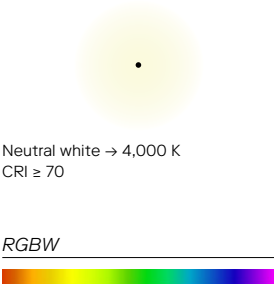
LENSES



LUMINAIRE POSITIONING

Light Source	Quantity	Output	Light Colour
A	24	173 W	RGBW
B	24	173 W	RGBW
C	28	173 W	RGBW
D	20	173 W	RGBW
S (Safety Lighting)	10	276 W	4,000 K

TEMPERATURE



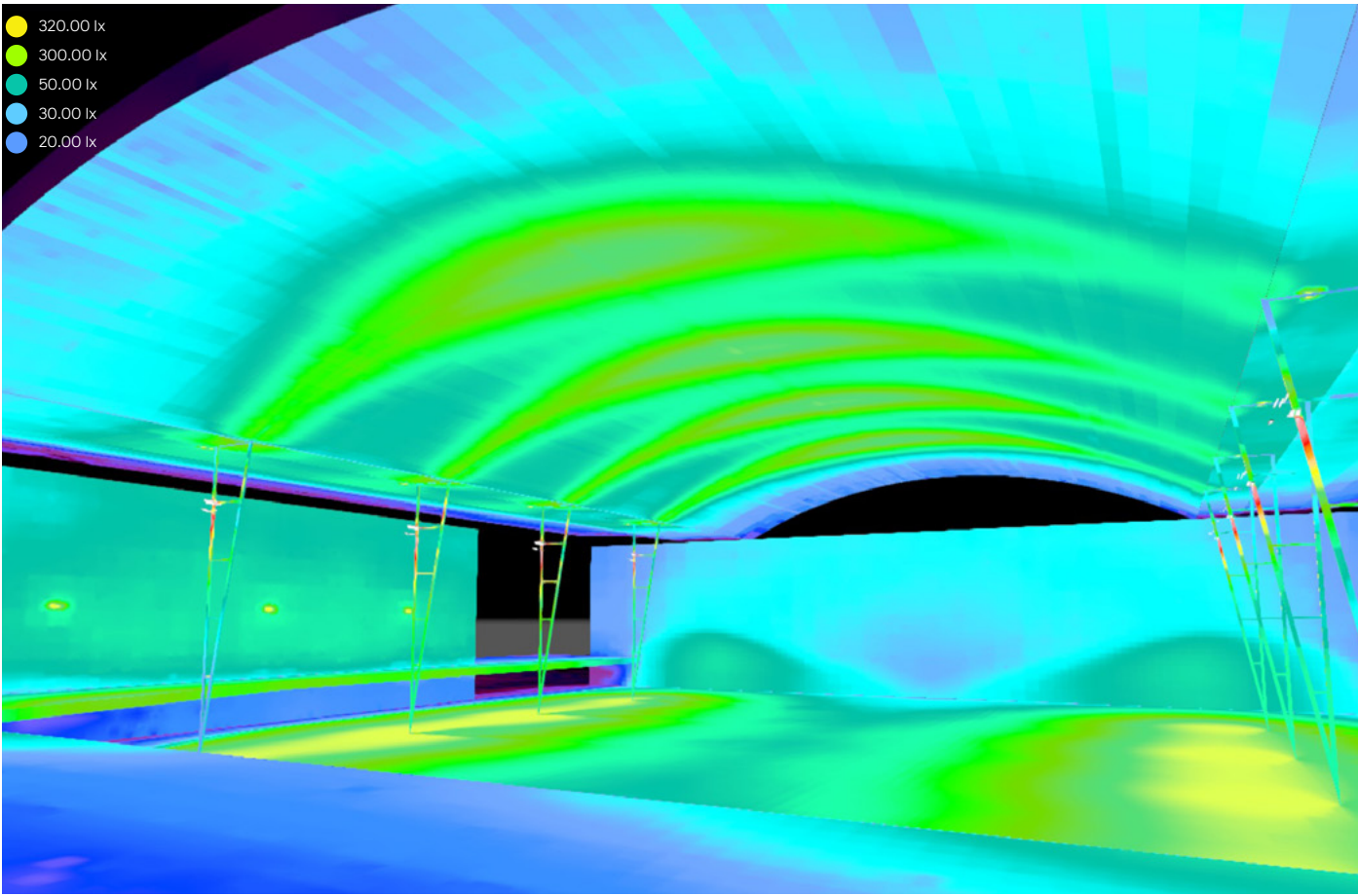
TECHNICAL
INFORMATION

ewo's modular concept

ewo's A-Series lenses were used to their full potential here, with numerous distributions used to accentuate the fibreglass sheets' illuminations, whilst fulfilling emergency and safety lighting requirements.

The combinations of distributions each contributed to the even RGBW illumination of the venue, with 98 total mounts, controlled by DMX.

FALSE COLOUR RENDERING OF LIGHT DISTRIBUTIONS



MOUNTING

Support	Special custom bracket
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MATERIALS

Bracket	Inox
Housing	Aluminium
Lens	PMMA
Finish	Anodized

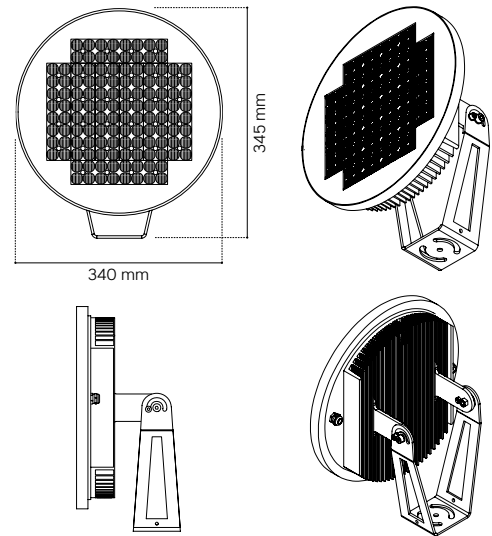
LENS SPECS

Type	AG01 / AG02 / AG03 / AH02 / AP05
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PRODUCT SPECS

Model	An adaptation of the technologies in our P-Series	
Output	RGBW → 173 W	WWWW (Safety Lighting) → 276 W
Controlled by	DMX driver / DALI driver	
LED Quantity	128 per luminaire	

TECHNICAL DRAWING



A FUSION OF SYSTEMS

Modularity at our core

The luminaire was an adaptation of the technologies in our P-Series architectural projectors and highpower floodlights, and was slightly larger than our standard projector sizes.

Each RGBW luminaire was fitted with two DMX Drivers, creating luminaires with 173 W power each. The WWWW luminaire was fitted with one DALI driver at 276 W for safety lighting.



ewo creates high-quality lighting systems for public spaces. At the main facility of this family-run business, headquartered in South Tyrol, ewo develops products which illuminate streets, squares, buildings and walking trails, urban gathering points and airports. A modular LED unit forms the basis of the company's sustainable and efficient lighting projects, irrespective of scale.

The company's progressive technology, know-how and open creativity made it a trendsetter for the sector. Even in the most challenging scenarios, ewo provides custom-tailored products and lighting designs for distributing and controlling light, features that are a notable standard of quality in the design of public spaces.

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Photography: Oskar DaRiz

Version 1
We reserve the right to make technical changes.

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