

# LED parking lot illumination

Illumination of new parking lot with LED street light HawkEye (3.0)



**Company:** CONTINENTAL AG

**Client:** W. Nusser GmbH Systembau, Winnenden

**Light design:** EPS soltec, Hörbranz

**Company executing the work:** EPS soltec, Hörbranz



Image: HawkEye (3.0), 2 modules

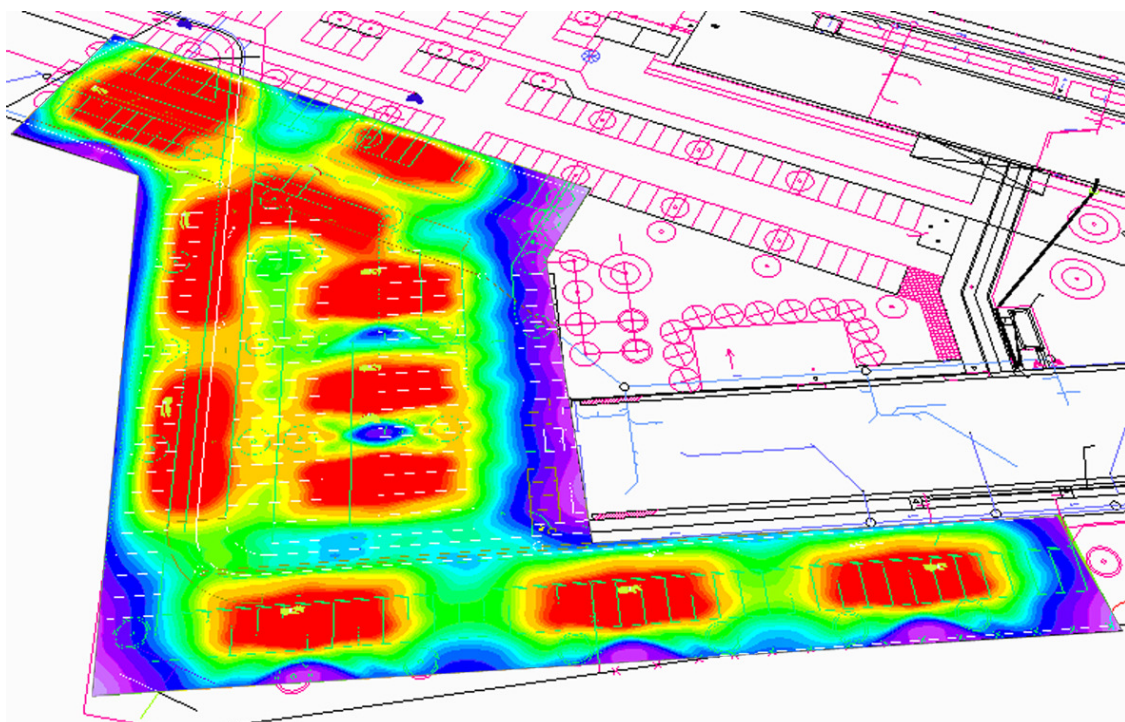


Image: Lighting calculation with DIALUX Source EPS soltec

### The project:

During the construction of the administrative building, an additional parking lot (for cars, motobikes and bicycles) was installed that was to be illuminated with lighting that conformed with EN 13202.

Continental opted for a sustainable LED solution, thereby ensuring long-term saving on the basis of low electricity consumption and minimum maintenance costs.

Another requirement was to keep the light cores of the new lamps at the level of the existing parking lot lamps for a uniform look.

### The solution:

The light core was at a height of 9m therefore the LED street light HawkEye (3.0) with a strong intensity of light was used. An optimum illumination can be ensured with a light flux of 4466lm and special optic system (see DIALUX).

### The client's opinion:

"We found the optic system of the lights and the expected low energy consumption quite impressive. Another important reason to decide in favour of the LED lights was that the normal lights installed in the existing parking lot during the first construction phase kept falling off and had to be replaced completely. The new LED lights have a longer life. After the completion of the second phase of construction, we are very satisfied with the light effects at night. We are happy that we opted for LED lights by EPS soltec. The work with EPS was very proactive and problem-free without any exceptions."

Jörg W. Nusser, CEO of W. Nusser GmbH  
Systembau [www.nusser.de](http://www.nusser.de)



**Number/Model/Light distribution:**  
 10 HawkEye (3.0), 2 modules, asymmetric  
 2 HawkEye (3.0), 2 modules, symmetric



**EN 13201**  
 13201-1: Light situation selection  
 13201-1: Light class selection  
 13201-2: Quality criteria

**D4**  
**S2**  
**E<sub>m</sub>, E<sub>min</sub>**

Light situation	Light classes	Quality criterion
A1, A2, A3	ME1 – ME5	L <sub>m</sub> , U <sub>o</sub> , U <sub>i</sub> , T <sub>l</sub> , SR
B1, B2	ME1 – ME6	L <sub>m</sub> , U <sub>o</sub> , U <sub>i</sub> , T <sub>l</sub> , SR
C1	S1 – S6	E <sub>m</sub> , E <sub>min</sub>
D1, D2	CE2 – CE5	E <sub>m</sub> , E <sub>0</sub>
D3, D4	S1 – S6	E <sub>m</sub> , E <sub>min</sub>
E1	S1 – S6, CE2	E <sub>m</sub> , E <sub>min</sub>
E2	S1 – S5, CE2	E <sub>m</sub> , E <sub>min</sub>

Table: Relation between light situation - class - quality criteria

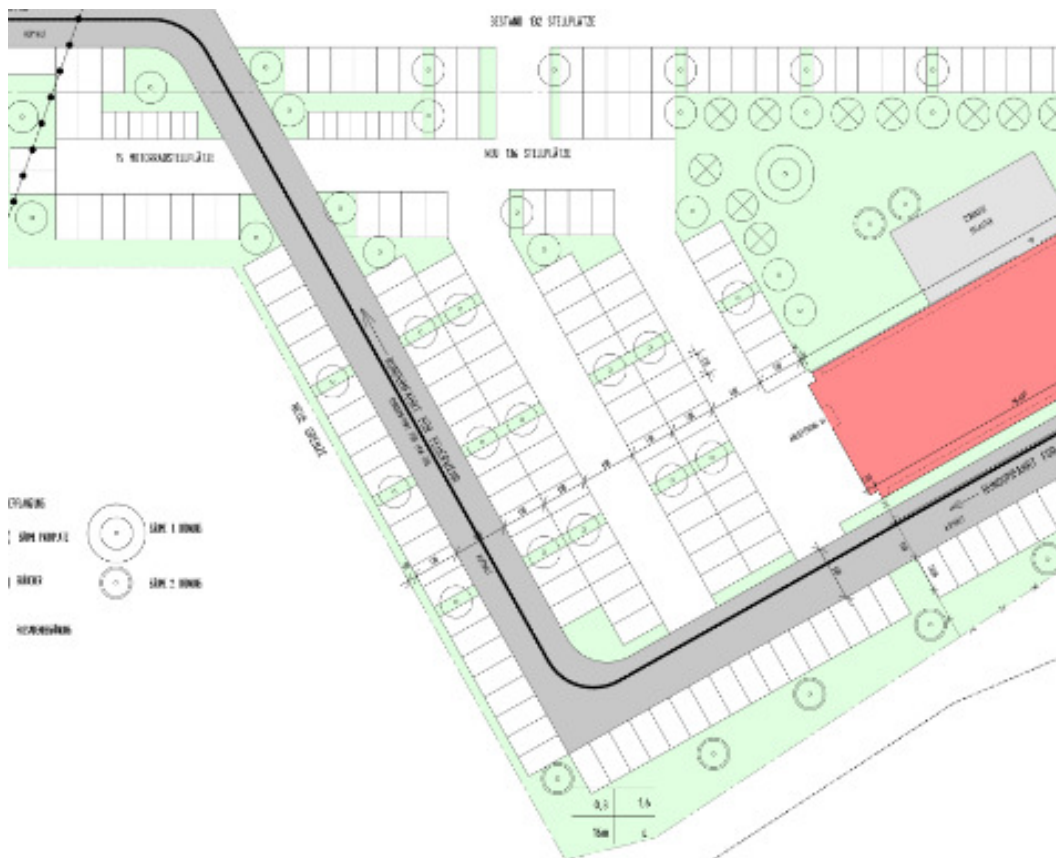


Image: Plan of the parking lot to be illuminated

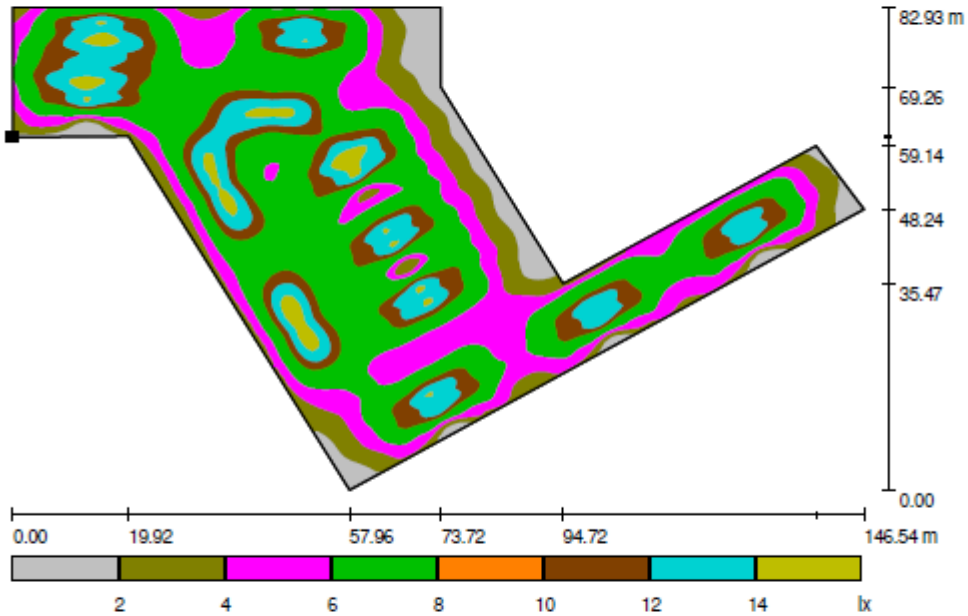
Parkplatz Continental



EPS soltec  
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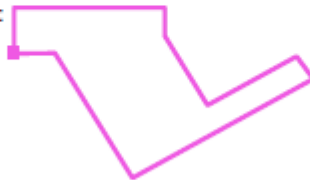
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Außenszene 1 / Bodenelement 1 / Fläche 1 / Greyscale (E)



Scale 1 : 1048

Position of surface in external scene:  
Marked point:  
(53.060 m, 62.418 m, 0.000 m)



Grid: 128 x 128 Points

$E_{av}$ [lx]	$E_{min}$ [lx]	$E_{max}$ [lx]	u0	$E_{min} / E_{max}$
7.48	0.42	16	0.056	0.025

Image: "Infrared rendering" for analysing the achievable intensities of light in LUX

**HawKEYE (3.0)**

Hawk Eye 3.0	1 Module	2 Modules	3 Modules	4 Modules	5 Modules
Voltage range	90 – 260 VAC				
System power in W	30	60	90	120	150
Working temperature	-40°C - +45°C				
Illuminant type	LED				
CRI (Ra)	75				
Light flux in lm	2.317	4.466	6.699	8.932	11.165
Colour temperature	> 5000K				
Life	> 50,000h				
Material	Aluminium / PC				
Installation	Mast lamp / suspended fixture				
Dimensions in mm	385x300x134	465x300x134	545x300x134	625x300x134	705x300x134
Mast attachment	up to Ø64mm				
Insertion depth	100mm (mast lamps)				
Weight in kg	6,2	8,2	10,2	12,2	14,2
Protection class	II				
Protection type	IP66				
Test marks	CE				
Dimming	via voltage reduction or phase switch-off				

Table: Technical data HawkEye (3.0)

**Ansatzleuchte**

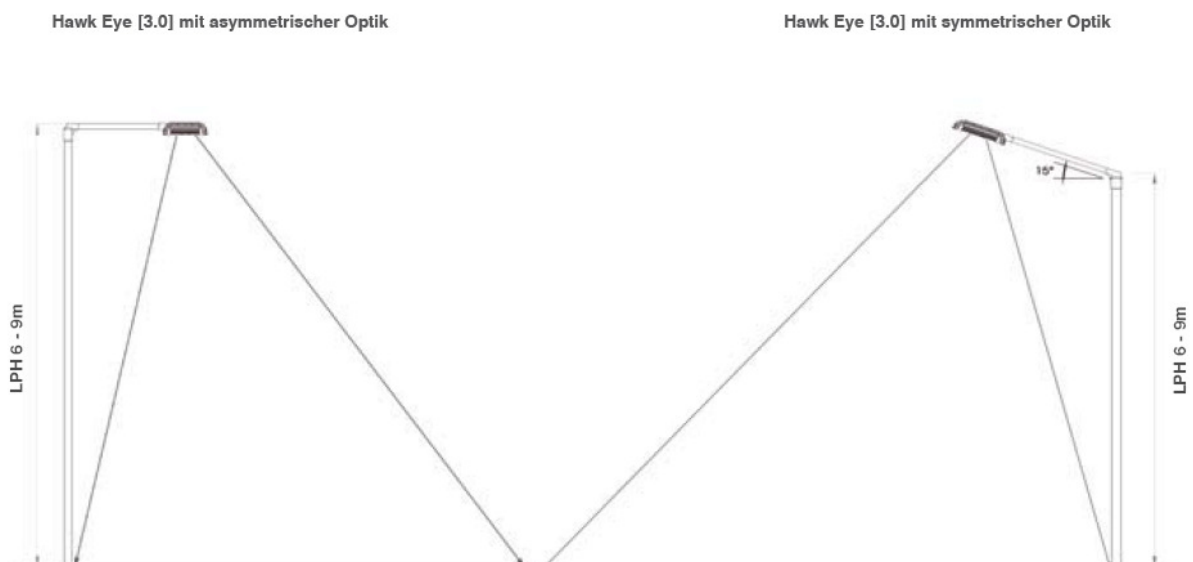


Image: Illumination types