

## **17.046 JLR, Aston Martin, Maclaren; Hatfiled; External Lighting \_Car Parks**

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Order No.:

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Customer No.:

Date: 08.11.2017

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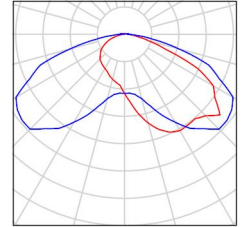
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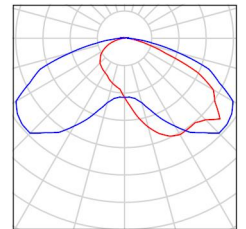
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## 17.046 JLR, Aston Martin, Maclaren; Hatfiled; External Lighting \_Car Parks / Luminaire parts list

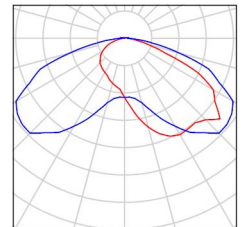
8 Pieces THORLUX SB16131 Starbeam SMART - Area  
Distribution - 62W  
Article No.: SB16131  
Luminous flux (Luminaire): 6708 lm  
Luminous flux (Lamps): 6700 lm  
Luminaire Wattage: 69.0 W  
Luminaire classification according to CIE: 98  
CIE flux code: 25 59 90 98 100  
Fitting: 1 x Starbeam - Area - 62W (Correction  
Factor 1.000).



6 Pieces THORLUX SB16133 Starbeam SMART - Area  
Distribution - 88W  
Article No.: SB16133  
Luminous flux (Luminaire): 9812 lm  
Luminous flux (Lamps): 9800 lm  
Luminaire Wattage: 97.0 W  
Luminaire classification according to CIE: 98  
CIE flux code: 25 59 90 98 100  
Fitting: 1 x Starbeam - Area - 88W (Correction  
Factor 1.000).



47 Pieces THORLUX SB16135 Starbeam SMART - Area  
Distribution - 123W  
Article No.: SB16135  
Luminous flux (Luminaire): 13416 lm  
Luminous flux (Lamps): 13400 lm  
Luminaire Wattage: 138.0 W  
Luminaire classification according to CIE: 98  
CIE flux code: 25 59 90 98 100  
Fitting: 1 x Starbeam - Area - 123W (Correction  
Factor 1.000).



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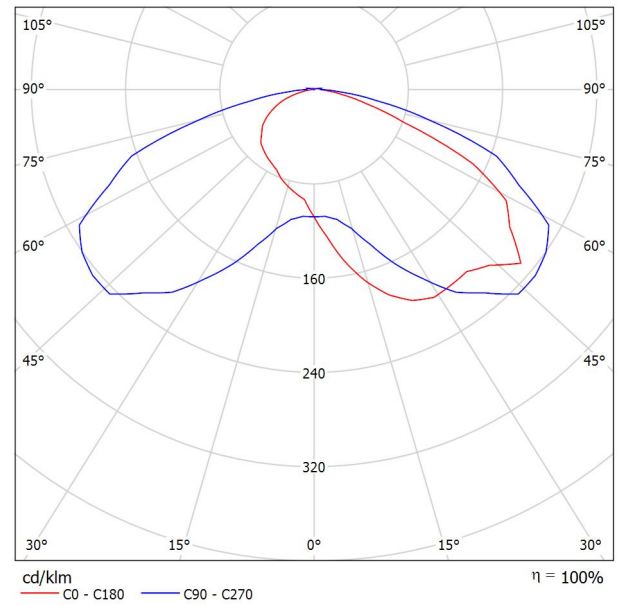
## THORLUX SB16135 Starbeam SMART - Area Distribution - 123W / Luminaire Data Sheet



Luminaire classification according to CIE: 98  
 CIE flux code: 25 59 90 98 100

Supremely efficient long life IP66 pole top and wall mounted LED luminaires with aluminium cast body and wiring box and polycarbonate cover.

Luminous emittance 1:



Due to missing symmetry properties, no UGR table can be displayed for this luminaire.

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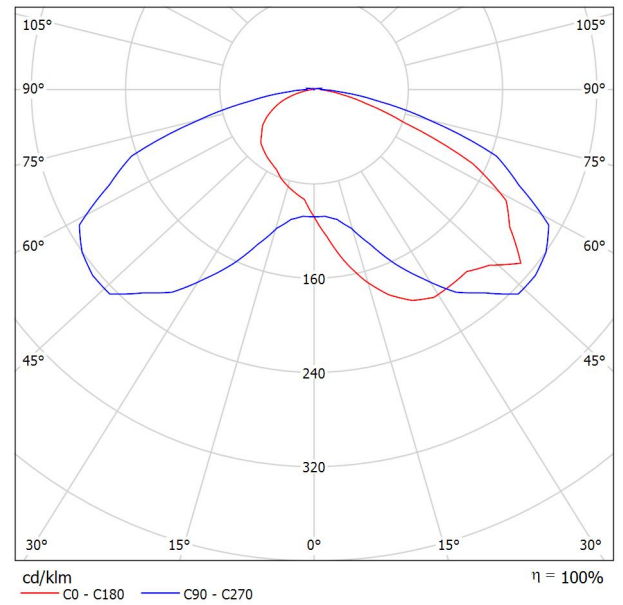
## THORLUX SB16133 Starbeam SMART - Area Distribution - 88W / Luminaire Data Sheet



Luminaire classification according to CIE: 98  
 CIE flux code: 25 59 90 98 100

Supremely efficient long life IP66 pole top and wall mounted LED luminaires with aluminium cast body and wiring box and polycarbonate cover.

Luminous emittance 1:



Due to missing symmetry properties, no UGR table can be displayed for this luminaire.

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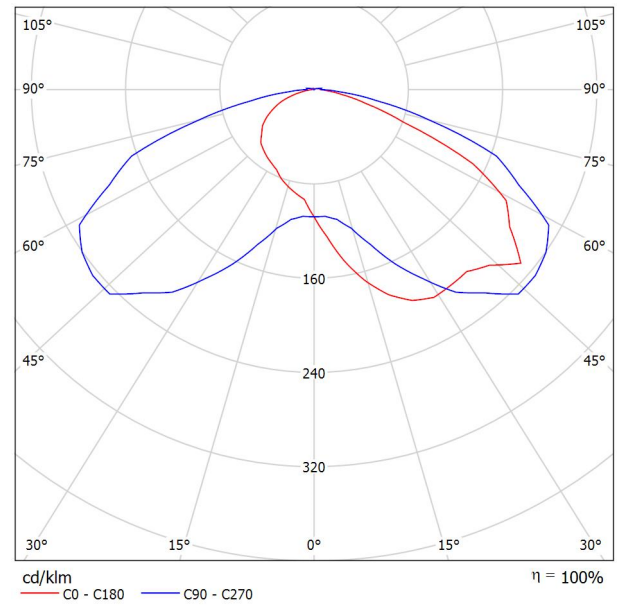
## THORLUX SB16131 Starbeam SMART - Area Distribution - 62W / Luminaire Data Sheet



Luminaire classification according to CIE: 98  
 CIE flux code: 25 59 90 98 100

Supremely efficient long life IP66 pole top and wall mounted LED luminaires with aluminium cast body and wiring box and polycarbonate cover.

Luminous emittance 1:



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### Exterior Scene 1 / Planning data



Maintenance factor: 0.80, ULR (Upward Light Ratio): 2.0%

Scale 1:9627

#### Luminaire Parts List

No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	8	THORLUX SB16131 Starbeam SMART - Area Distribution - 62W (1.000)	6708	6700	69.0
2	6	THORLUX SB16133 Starbeam SMART - Area Distribution - 88W (1.000)	9812	9800	97.0
3	47	THORLUX SB16135 Starbeam SMART - Area Distribution - 123W (1.000)	13416	13400	138.0
Total:			743095	Total: 742200	7620.0

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**Exterior Scene 1 / Luminaires (layout plan)**



Scale 1 : 9627

**Luminaire Parts List**

No.	Pieces	Designation
1	8	THORLUX SB16131 Starbeam SMART - Area Distribution - 62W
2	6	THORLUX SB16133 Starbeam SMART - Area Distribution - 88W
3	47	THORLUX SB16135 Starbeam SMART - Area Distribution - 123W



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### Exterior Scene 1 / Calculation surfaces (results overview)



Scale 1 : 9627

#### Calculation Surface List

No.	Designation	Type	Grid	$E_{av}$ [lx]	$E_{min}$ [lx]	$E_{max}$ [lx]	u0	$E_{min} / E_{max}$
1	JLR Car Park	perpendicular	128 x 128	48	13	102	0.280	0.130
2	Austin Martin & Maclaren Car Park	perpendicular	128 x 128	35	9.62	64	0.277	0.150

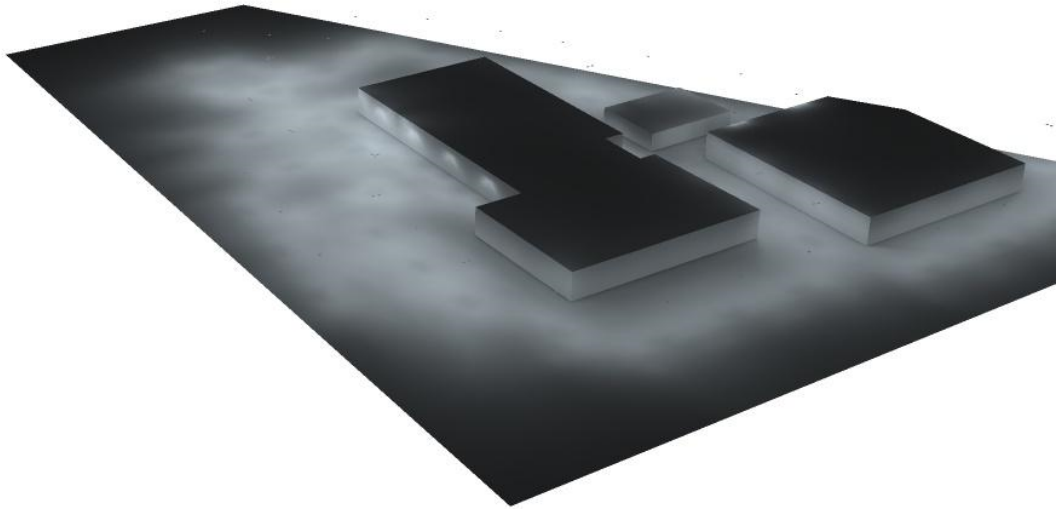
#### Summary of Results

Type	Quantity	Average [lx]	Min [lx]	Max [lx]	u0	$E_{min} / E_{max}$
perpendicular	2	45	9.62	102	0.21	0.09

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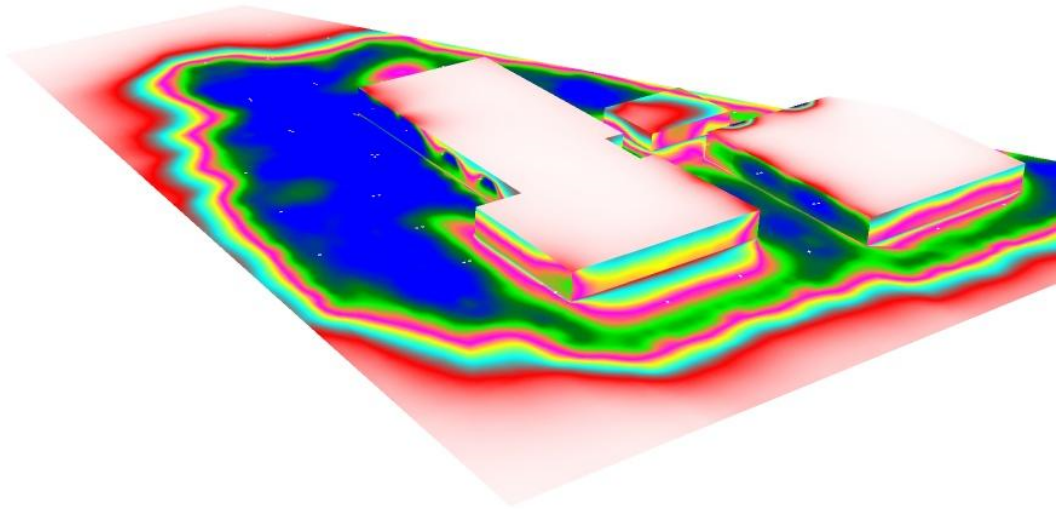
## Exterior Scene 1 / 3D Rendering



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## Exterior Scene 1 / False Colour Rendering

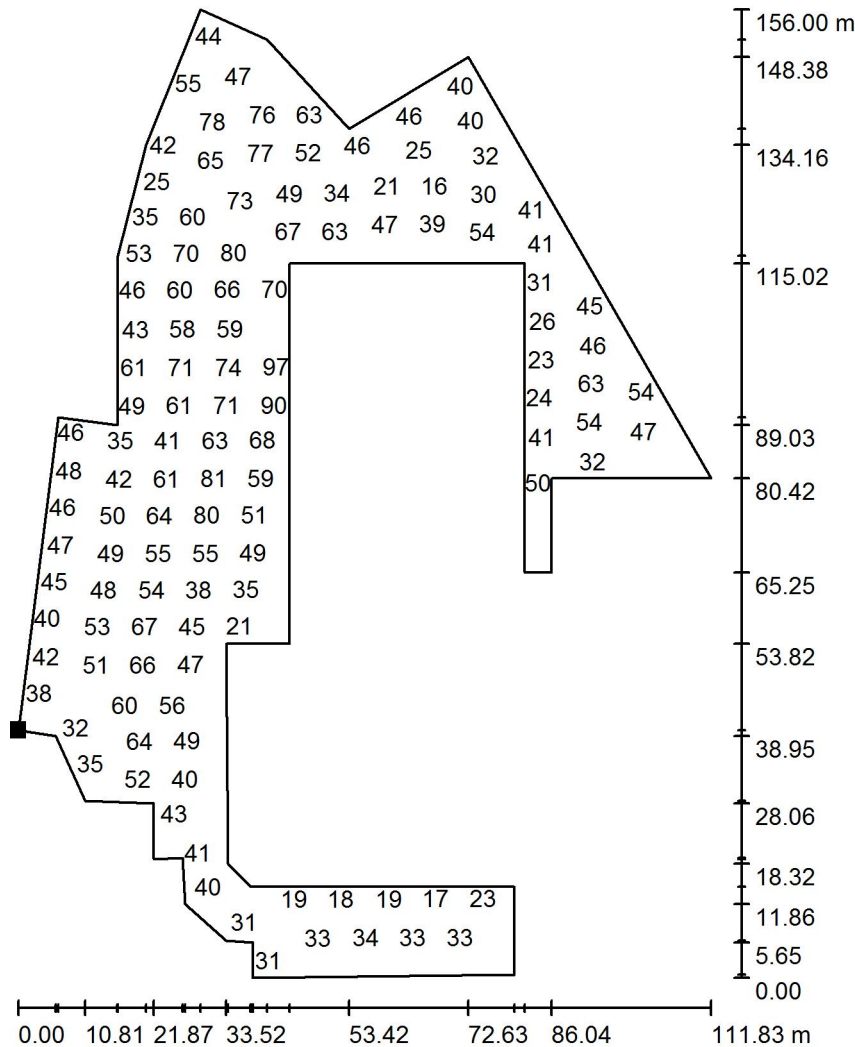


0 5 10 15 20 25 30 35 50 lx

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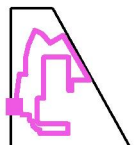
**Exterior Scene 1 / JLR Car Park / Value Chart (E, Perpendicular)**



Values in Lux, Scale 1 : 1220

Not all calculated values could be displayed.

Position of surface in external scene:  
 Marked point:  
 (1172.056 m, 117.332 m, 0.750 m)



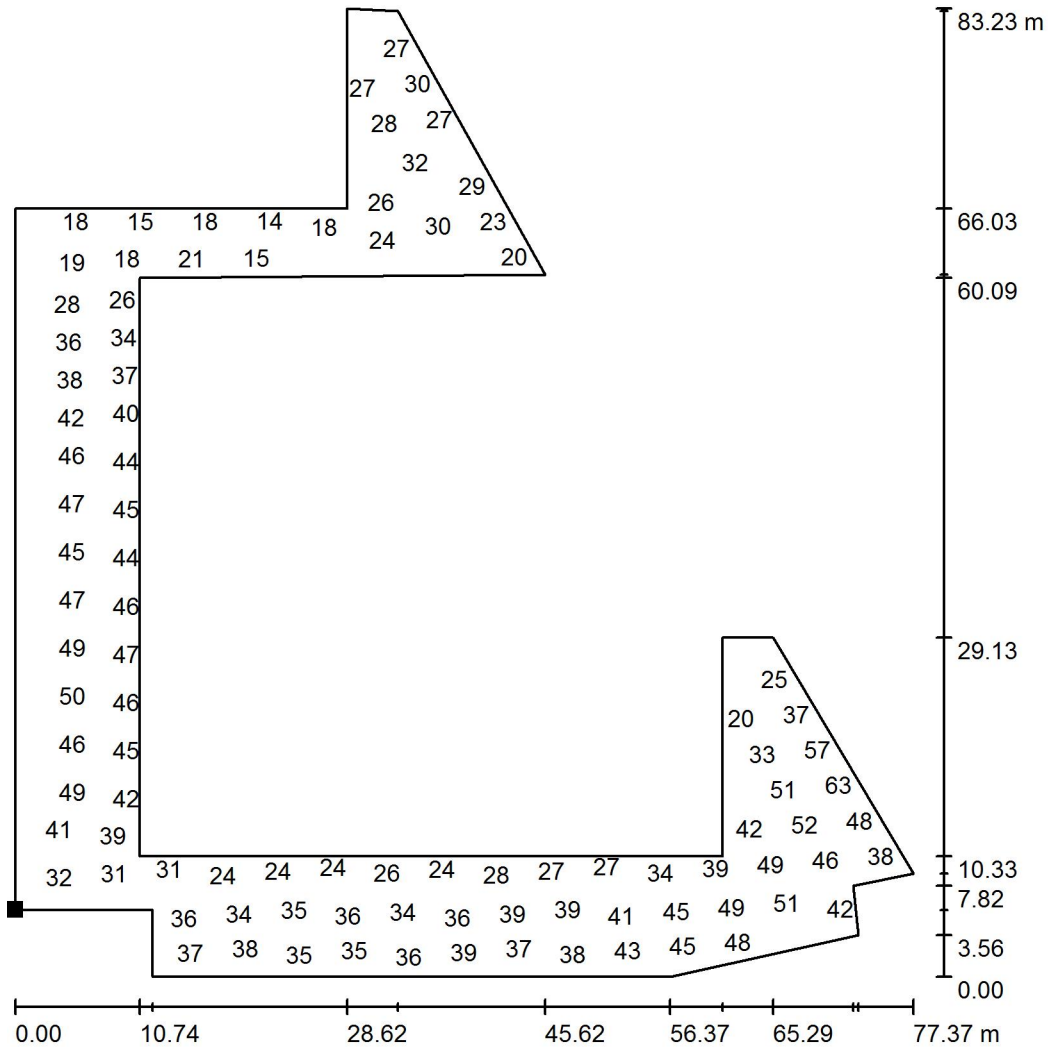
Grid: 128 x 128 Points

$E_{av}$ [lx]	$E_{min}$ [lx]	$E_{max}$ [lx]	$u_0$	$E_{min} / E_{max}$
48	13	102	0.280	0.130

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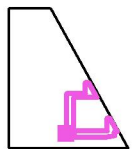
### Exterior Scene 1 / Austin Martin & Maclaren Car Park / Value Chart (E, Perpendicular)



Values in Lux, Scale 1 : 651

Not all calculated values could be displayed.

Position of surface in external scene:  
 Marked point:  
 (1252.900 m, 78.100 m, 0.750 m)



Grid: 128 x 128 Points

$E_{av}$ [lx]	$E_{min}$ [lx]	$E_{max}$ [lx]	$u_0$	$E_{min} / E_{max}$
35	9.62	64	0.277	0.150