

X-RANGE

EN 12464-1:2011
5.34 Public car parks
 $E_{m} \geq 75 \text{ lx} / 300 \text{ lx}$
 $U_{o} \geq 0.4$
 $UGR \leq 25$

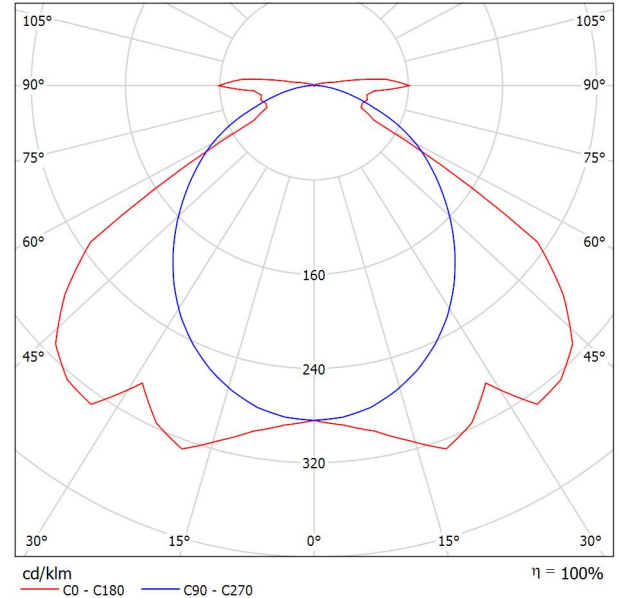
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TRILUX Nextrema G3 B 6000-840 ETDD / Luminaire Data Sheet



Luminous emittance 1:



Luminaire classification according to CIE: 96
 CIE flux code: 46 82 95 96 100

LED weather-proof luminaire. For ceiling, wall and suspended mounting. PMMA diffuser with inner prism structure. With symmetric wide light intensity distribution. Luminaire luminous flux 6200 lm, connected load 43 W, luminous efficiency of luminaire 144 lm/W. Light colour neutral white, colour temperature 4000 K, colour rendering index Ra > 80. Service life L85(tq 35 °C) = 50,000 h, service life L80(tq 35 °C) = 85,000 h. Luminaire body of die-cast aluminium. Robust concept with vibration-resistant components. Permissible ambient temperature (ta) -30 °C - +35 °C. Safety class I, protection rating IP66, impact resistance IK04/0,5 J, heat resistance 650 °C. With WIELAND connection plug at face end. Suitable connection socket included in scope of supply. With electronic transformer, digitally dimmable (DALI).

Luminous emittance 1:

Glare Evaluation According to UGR											
	70	70	50	50	30	70	70	50	50	30	
ρ Ceiling											
ρ Walls	50	30	50	30	30	50	30	50	30	30	
ρ Floor	20	20	20	20	20	20	20	20	20	20	
Room Size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	22.0	23.3	22.4	23.6	23.9	21.5	22.8	21.8	23.1	23.4
	3H	22.1	23.2	22.4	23.6	23.9	22.5	23.6	22.8	23.9	24.3
	4H	22.2	23.3	22.6	23.7	24.0	22.8	23.9	23.2	24.2	24.6
	6H	22.5	23.5	22.9	23.9	24.3	23.0	24.0	23.5	24.4	24.8
	8H	22.7	23.7	23.2	24.1	24.5	23.1	24.1	23.5	24.5	24.9
12H	23.0	24.0	23.5	24.4	24.8	23.2	24.1	23.6	24.5	24.9	
4H	2H	22.7	23.7	23.1	24.1	24.5	22.6	23.7	23.0	24.0	24.4
	3H	22.8	23.7	23.2	24.1	24.5	23.8	24.7	24.2	25.1	25.5
	4H	23.0	23.8	23.4	24.2	24.7	24.2	25.1	24.7	25.5	25.9
	6H	23.4	24.1	23.9	24.5	25.0	24.6	25.3	25.1	25.7	26.2
	8H	23.7	24.3	24.2	24.8	25.3	24.7	25.4	25.2	25.8	26.3
12H	24.1	24.7	24.6	25.2	25.7	24.8	25.4	25.3	25.9	26.4	
8H	4H	23.1	23.8	23.6	24.2	24.7	24.3	24.9	24.8	25.4	25.9
	6H	23.6	24.2	24.1	24.7	25.2	24.7	25.3	25.2	25.8	26.3
	8H	24.0	24.5	24.6	25.0	25.6	24.9	25.4	25.5	25.9	26.5
	12H	24.6	25.0	25.2	25.6	26.1	25.1	25.6	25.7	26.1	26.7
12H	4H	23.1	23.7	23.6	24.2	24.7	24.3	24.9	24.8	25.3	25.9
	6H	23.6	24.1	24.2	24.6	25.2	24.7	25.2	25.3	25.7	26.3
	8H	24.1	24.5	24.6	25.0	25.6	25.0	25.4	25.5	25.9	26.5
Variation of the observer position for the luminaire distances S											
S = 1.0H	+0.4 / -0.5					+0.3 / -0.3					
S = 1.5H	+1.4 / -2.1					+0.5 / -0.7					
S = 2.0H	+2.3 / -2.8					+1.6 / -2.0					
Standard table	BK03					BK04					
Correction Summand	6.5					7.4					
Corrected Glare Indices referring to 6200lm Total Luminous Flux											

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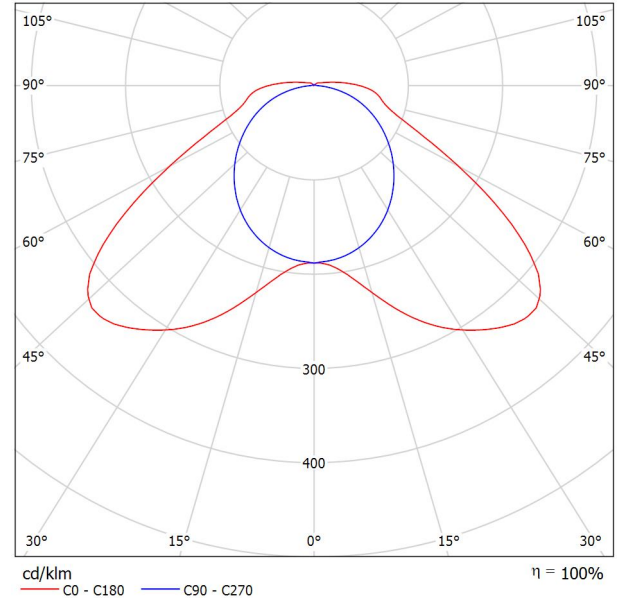
TRILUX Nextrema G3 XB 4000-840 ETDD / Luminaire Data Sheet



Luminaire classification according to CIE: 96
 CIE flux code: 37 73 91 96 100

LED weather-proof luminaire. For ceiling, wall and suspended mounting. Optical system consisting of primary optics with PMMA diffuser. With symmetric extremely wide light distribution. Luminaire luminous flux 4200 lm, connected load 30 W, luminous efficiency of luminaire 140 lm/W. Light colour neutral white, colour temperature 4000 K, colour rendering index Ra > 80. Service life L85(tq 35 °C) = 50,000 h, service life L80(tq 35 °C) = 85,000 h. Luminaire body of die-cast aluminium. Robust concept with vibration-resistant components. Permissible ambient temperature (ta) -30 °C - +35 °C. Safety class I, protection rating IP66, impact resistance IK04/0,5 J, heat resistance 650 °C. With WIELAND connection plug at face end. Suitable connection socket included in scope of supply. With electronic transformer, digitally dimmable (DALI).

Luminous emittance 1:



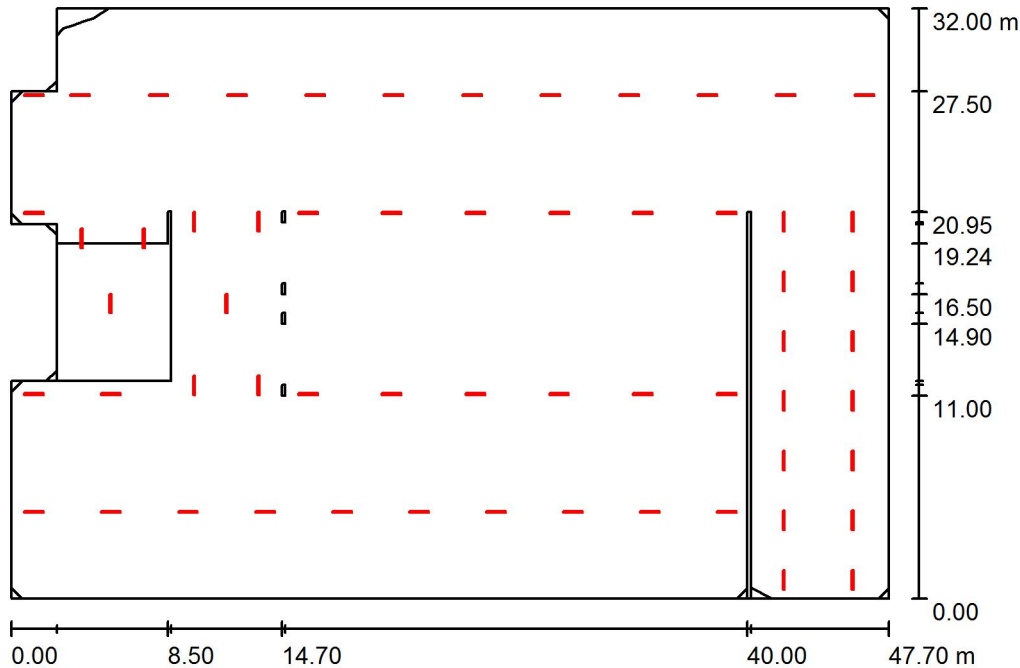
Luminous emittance 1:

Glare Evaluation According to UGR											
	70	70	50	50	30	70	70	50	50	30	
ρ Ceiling	50	30	50	30	30	50	30	50	30	30	
ρ Walls	20	20	20	20	20	20	20	20	20	20	
ρ Floor	20	20	20	20	20	20	20	20	20	20	
Room Size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	22.0	23.4	22.4	23.7	24.1	18.9	20.3	19.3	20.7	21.0
	3H	22.8	24.0	23.2	24.4	24.8	20.2	21.5	20.6	21.8	22.2
	4H	23.1	24.3	23.5	24.7	25.1	20.7	21.9	21.1	22.2	22.6
	6H	23.5	24.6	24.0	25.0	25.4	21.0	22.1	21.5	22.5	22.9
	8H	23.8	24.8	24.2	25.2	25.7	21.1	22.2	21.6	22.6	23.0
	12H	24.0	25.0	24.5	25.5	25.9	21.2	22.2	21.6	22.6	23.1
4H	2H	22.6	23.8	23.0	24.1	24.5	20.5	21.7	21.0	22.1	22.5
	3H	23.5	24.6	24.0	25.0	25.4	22.1	23.1	22.5	23.5	23.9
	4H	24.0	24.9	24.5	25.4	25.8	22.7	23.6	23.2	24.1	24.5
	6H	24.6	25.4	25.1	25.8	26.3	23.2	24.0	23.7	24.5	25.0
	8H	24.9	25.6	25.4	26.1	26.6	23.3	24.1	23.8	24.6	25.1
	12H	25.2	25.9	25.7	26.4	26.9	23.4	24.1	23.9	24.6	25.1
8H	4H	24.3	25.1	24.8	25.5	26.1	23.2	24.0	23.7	24.4	24.9
	6H	25.0	25.7	25.6	26.2	26.7	23.9	24.6	24.5	25.1	25.6
	8H	25.5	26.0	26.0	26.5	27.1	24.3	24.8	24.8	25.3	25.9
	12H	25.9	26.4	26.5	27.0	27.6	24.5	25.0	25.0	25.5	26.1
12H	4H	24.3	25.0	24.9	25.5	26.1	23.2	23.9	23.8	24.4	25.0
	6H	25.1	25.7	25.7	26.2	26.8	24.1	24.6	24.6	25.2	25.7
	8H	25.6	26.1	26.2	26.6	27.2	24.5	25.0	25.0	25.5	26.1
Variation of the observer position for the luminaire distances S											
S = 1.0H	+0.1 / -0.1					+0.1 / -0.1					
S = 1.5H	+0.5 / -0.5					+0.4 / -0.4					
S = 2.0H	+0.9 / -1.2					+1.0 / -1.0					
Standard table	BK05					BK14					
Correction Summand	8.2					7.9					
Corrected Glare Indices referring to 4200lm Total Luminous Flux											

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Public car parks 2,50m - 75lx / Summary



Height of Room: 2.500 m, Mounting Height: 2.500 m, Maintenance factor: 0.67

Values in Lux, Scale 1:411

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u_0
Workplane	/	113	30	353	0.266
Floors (3)	10	112	8.60	692	/
Ceiling	60	21	3.69	498	0.177
Walls (14)	58	80	16	3533	/

Workplane:

Height: 0.100 m
 Grid: 17 x 11 Points
 Boundary Zone: 0.000 m

Luminaire Parts List

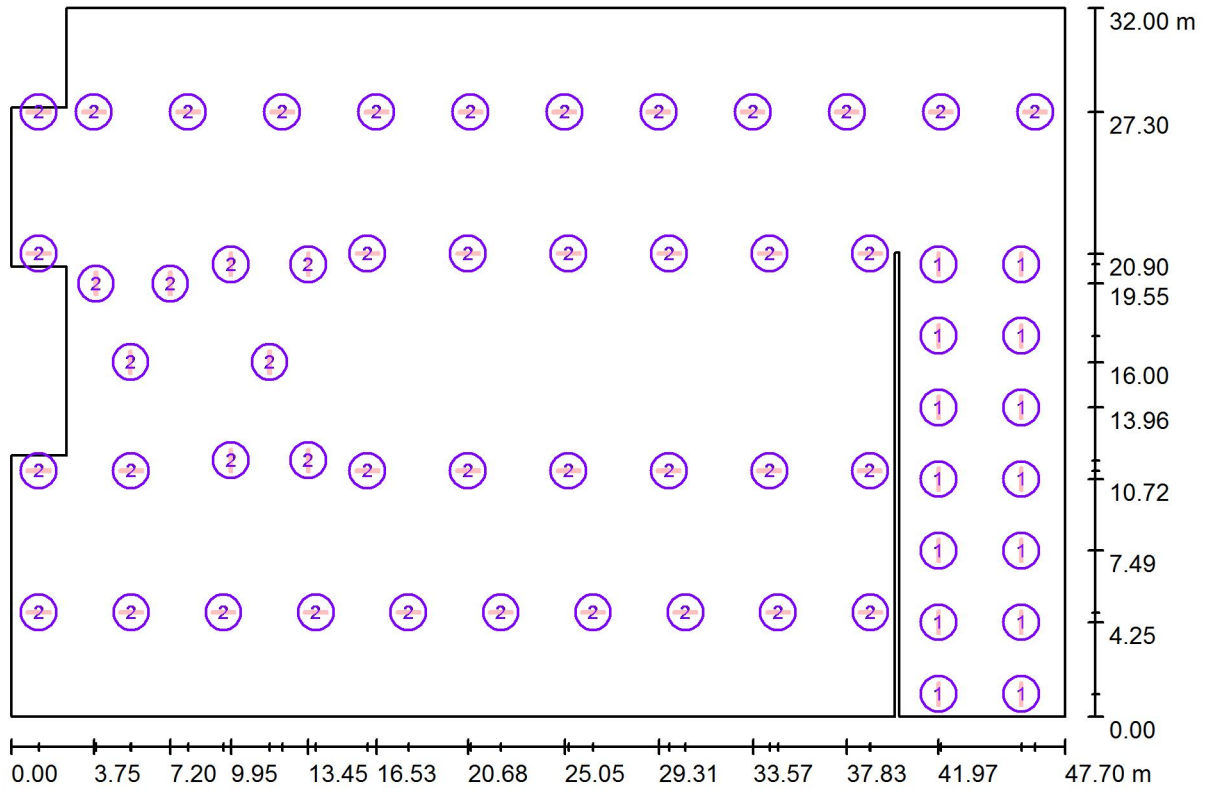
No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	14	TRILUX Nextrema G3 B 6000-840 ETDD (1.000)	6198	6200	43.0
2	45	TRILUX Nextrema G3 XB 4000-840 ETDD (1.000)	4200	4200	30.0
Total:			275758	275800	1952.0

Specific connected load: $1.31 \text{ W/m}^2 = 1.16 \text{ W/m}^2/100 \text{ lx}$ (Ground area: 1489.71 m^2)

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Public car parks 2,50m - 75lx / Luminaires (layout plan)



Scale 1 : 342

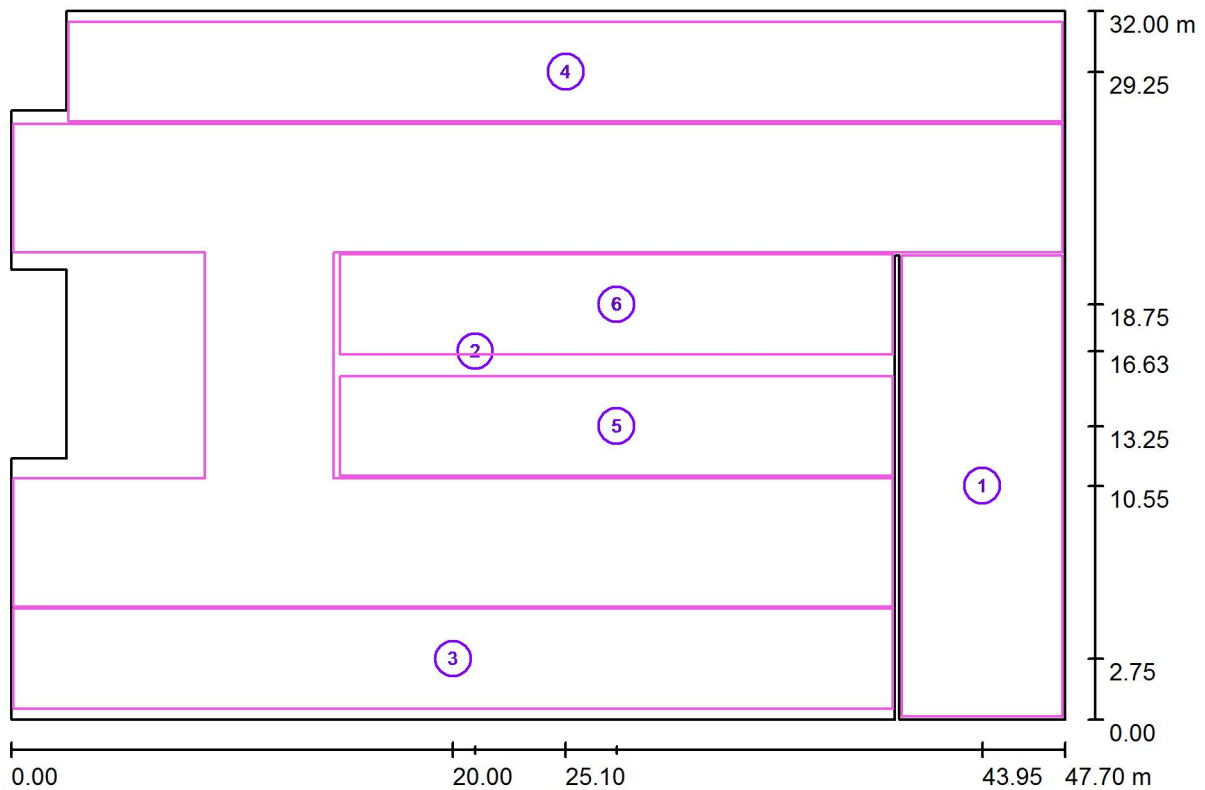
Luminaire Parts List

No.	Pieces	Designation
1	14	TRILUX Nextrema G3 B 6000-840 ETDD
2	45	TRILUX Nextrema G3 XB 4000-840 ETDD

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Public car parks 2,50m - 75lx / Calculation surfaces (coordinates list)



Scale 1 : 342

Calculation Surface List

No.	Designation	Position [m]			Size [m]		Rotation [°]		
		X	Y	Z	L	W	X	Y	Z
1	In/out ramps - ref.value 300lx/0.4	43.950	10.550	0.100	7.300	20.800	0.000	0.000	0.000
2	Traffic lanes - ref.value 75lx/0.4	21.003	16.633	0.100	47.500	21.802	0.000	0.000	0.000
3	Parking areas - ref.value 75lx/0.4	20.000	2.750	0.100	39.800	4.500	0.000	0.000	0.000
4	Parking areas - ref.value 75lx/0.4	25.100	29.250	0.100	45.000	4.500	0.000	0.000	0.000

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Public car parks 2,50m - 75lx / Calculation surfaces (coordinates list)

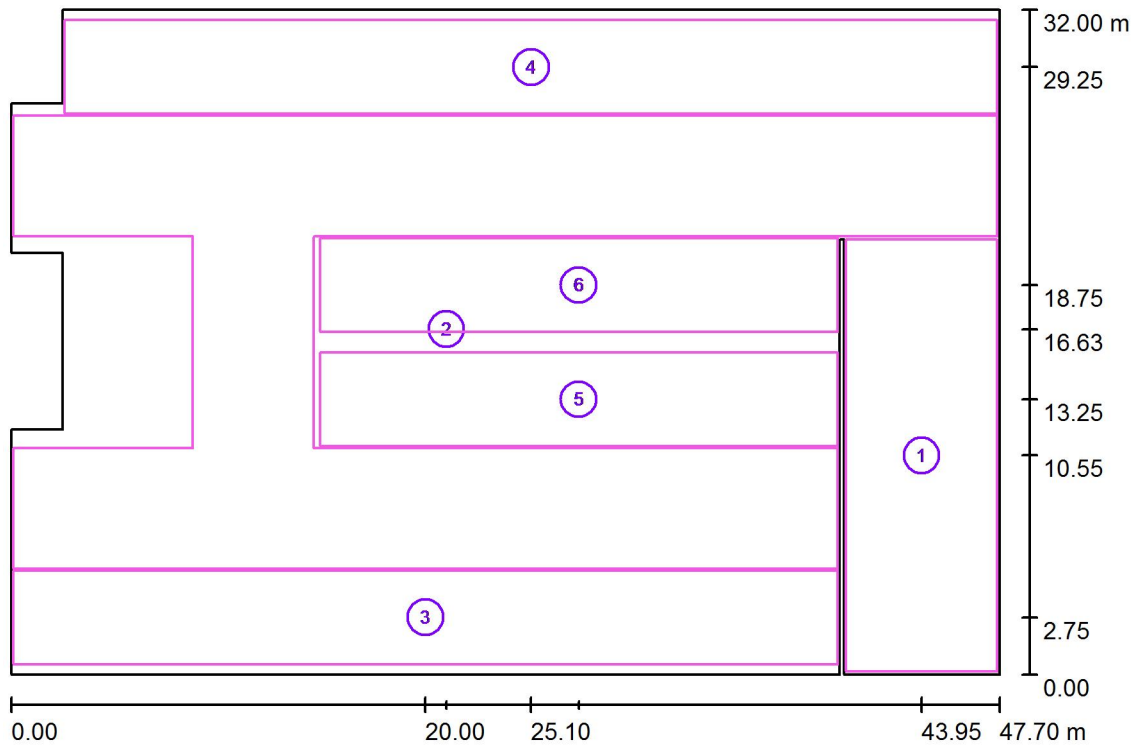
Calculation Surface List

No.	Designation	Position [m]			Size [m]		Rotation [°]		
		X	Y	Z	L	W	X	Y	Z
5	Parking areas - ref.value 75lx/0.4	27.400	13.250	0.100	25.000	4.500	0.000	0.000	0.000
6	Parking areas - ref.value 75lx/0.4	27.400	18.750	0.100	25.000	4.500	0.000	0.000	0.000

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Public car parks 2,50m - 75lx / Calculation surfaces (results overview)



Scale 1 : 365

Calculation Surface List

No.	Designation	Type	Grid	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0	E_{min} / E_{max}
1	In/out ramps - ref.value 300lx/0.4	perpendicular	5 x 13	300	239	361	0.798	0.663
2	Traffic lanes - ref.value 75lx/0.4	perpendicular	27 x 13	107	72	187	0.676	0.385
3	Parking areas - ref.value 75lx/0.4	perpendicular	65 x 9	81	35	135	0.429	0.256
4	Parking areas - ref.value 75lx/0.4	perpendicular	69 x 7	81	38	150	0.466	0.253
5	Parking areas - ref.value 75lx/0.4	perpendicular	35 x 7	78	36	188	0.465	0.192
6	Parking areas - ref.value 75lx/0.4	perpendicular	35 x 7	76	36	188	0.472	0.191

Summary of Results

Type	Quantity	Average [lx]	Min [lx]	Max [lx]	u0	E_{min} / E_{max}
perpendicular	6	116	35	361	0.30	0.10