

Άλσος Δήμου Νέας Φιλαδέλφειας

Installation : C. Παιδότοπος Βόρειου Τμήματος

Project number : Issue A

Customer : Δήμος Νέας Φιλαδέλφειας

Processed by :

Date : 19.06.2017

Project description:

Φωτοτεχνική μελέτη Άλσος Νέας Φιλαδέλφειας
Τμήμα C Παιδότοπος Βόρειου Τμήματος

Τα φωτιστικά τοποθετήθηκαν σε 4 ιστούς.
Ύψος ιστού 4μ.
Τοποθέτηση επί κορυφής ιστού.

Φωτιστικά που χρησιμοποιούνται:

LED φωτιστικό ισχύος 30W με σύστημα ελέγχου μέσω powerline για απομακρισμένο έλεγχο της φωτεινής ροής (dimming) και αναφορά βλαβών και σφαλμάτων.

Σύμφωνα με το ευρωπαϊκό πρότυπο DIN EN 13201-1 για δρόμους εξωτερικών χώρων ο χώρος του πάρκου ανοίκει στην κλάση S1.

Σύμφωνα με αυτό απαιτείται μέση ένταση φωτισμού 15 lux και ελάχιστη τιμή 5 lux.

Τα φωτιστικά που χρησιμοποιούνται έχουν μηδενική εκπομπή φωτός προς το άνω ημισφαίριο, μειώνοντας έτσι την φωτορύπανση και την όχληση στην πανίδα του άλσους.

The following values are based on exact calculations on calibrated lamps, luminaires and their arrangement. In practice, gradual divergences can occur.

Guarantee claims for luminaire data are excluded.

Relux and the luminaire manufacturers accept no liability for consequential damage and damage which is occasioned to the user or to third parties.

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1 Luminaire data

1.1

1.1.1 Data sheet

DL® 50 mini, mast luminaire, primary light control with 3 zone faceted reflector, of plastic, silver coated, highly specular, primary optical cover: cover, of toughened safety glass, partly screenprinted, transparent, light distribution: ST1.2a, light emission: direct distribution, primary light characteristic: asymmetric, installation type: post-top, side-entry, LED, LED High Power, luminous flux: 2.880 lm, luminous efficacy: 97lm/W, light colour: 830, colour temperature: 3000K, control gear: ECG Premium, control: flexible luminous flux parameterisation, time-dependent luminous flux control, power reduction, Street Light Control, overheat protection, optimised constant luminous flux control (CLO 2.0), electronic power reduction, mains connection: 220..240V, AC, 50/60Hz, connection cable pre-assembled, cable length: 6,5 m, start of lifetime: 30 W, end of lifetime: 33 W, reduction: 17 W, luminaire housing, of diecast aluminium, powder-coated, Siteco® metallic grey (DB 702S), diameter: 500 mm, height: 115mm, post-top: for spigot size d x l = 76 x 100mm; with reducer (accessory) 60 x 100mm | side-entry: for spigot size d x l = 60 x 100mm; with reducer (accessory) 42 x 100mm, luminaire controller, protection rating (complete): IP66, insulation class (complete): insulation class II (safety insulation), certification: CE, ENEC, VDE, impact resistance: IK08, standard-compliant lighting for roads and squares, packaging unit: 1 piece

Light Distribution: ST1.2a

Test report number: 57235

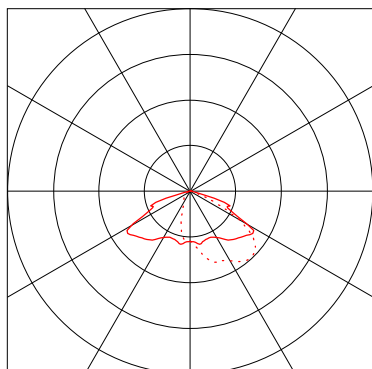
Luminaire data

Absolute Photometry
Luminaire efficacy : 97.3 lm/W
Classification : A30 □ 100.0% ↑ 0.0%
CIE Flux Codes : 34 72 98 100 100
UGR 4H 8H : 28.4 / 11.2
Power : 29.6 W
Luminous flux : 2880 lm

Equipped with

Quantity : 1
Designation : LED 3000K /
CRI >= 80
Colour : 3000 K
Colour reproduction : 80

Dimensions : Ø500 mm x 115 mm

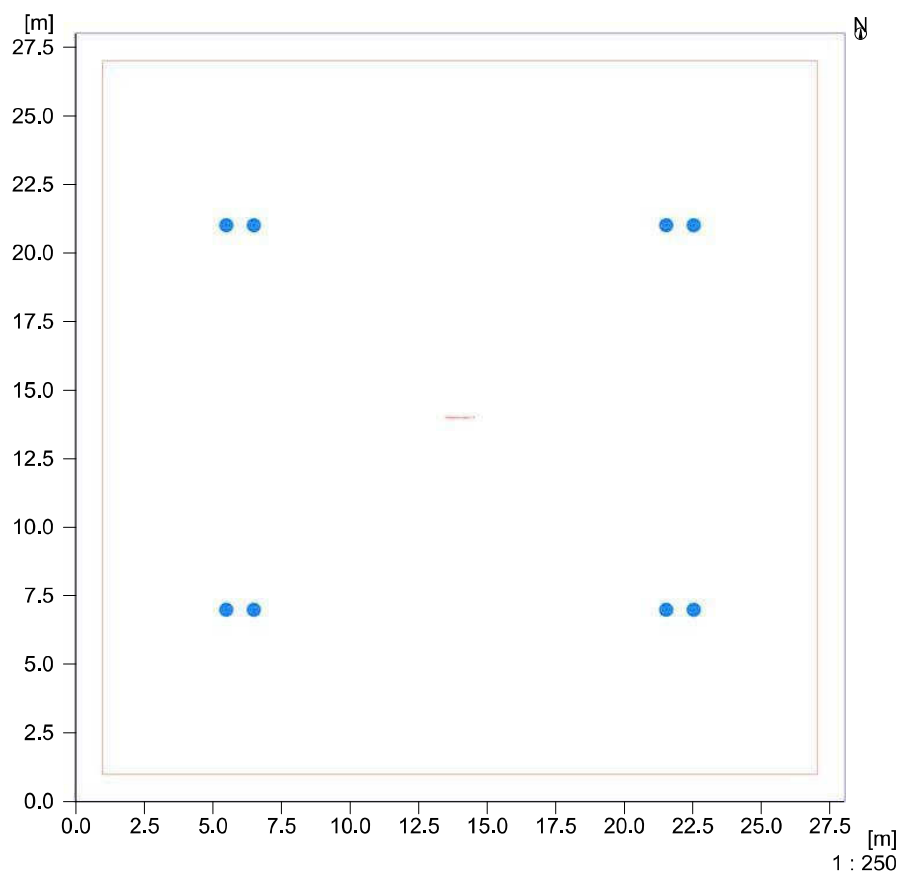


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2 Παιδική Χαρά

2.1 Description, Παιδική Χαρά

2.1.1 Floor plan

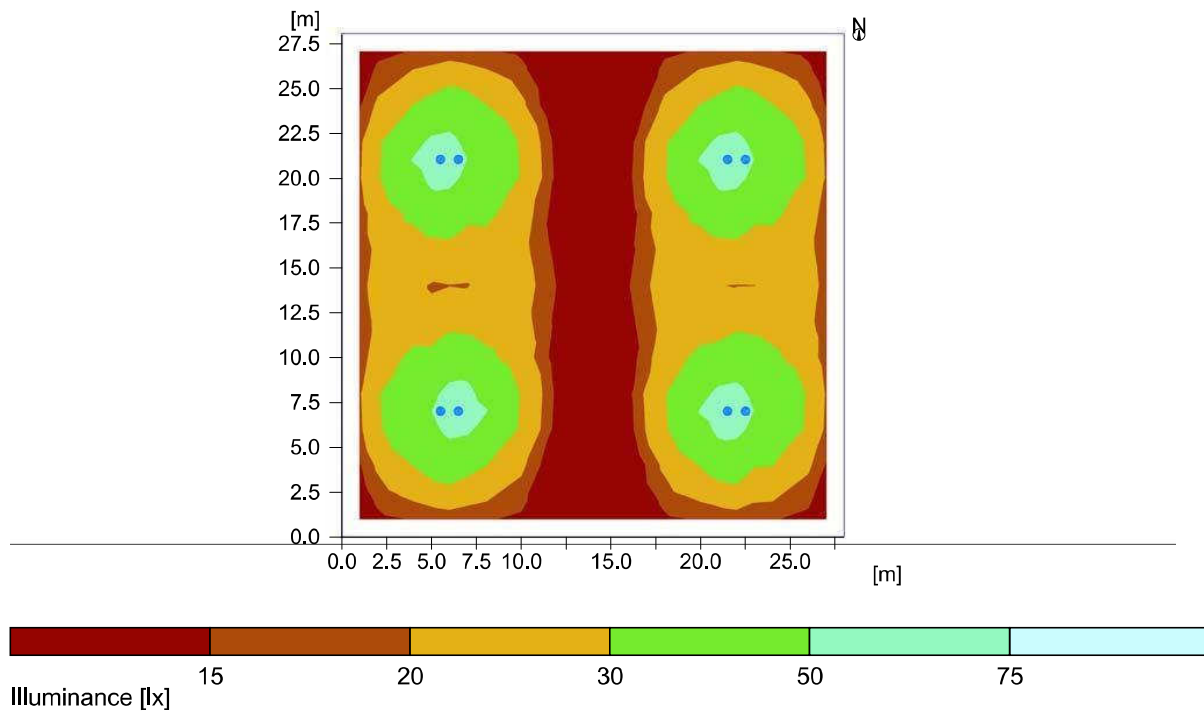


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2 Παιδική Χαρά

2.2 Summary, Παιδική Χαρά

2.2.1 Result overview, Evaluation area 1



General

Calculation algorithm used
 photometric centre height.
 Maintenance factor

Average indirect fraction
 4.00 m
 0.93

Total luminous flux of all lamps
 Total power
 Total power per area (784.00 m²)

23040 lm
 236.8 W
 0.30 W/m² (1.20 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

Horizontal
 Em
 Emin
 Emin/Eav (U₀)
 Emin/Emax (U_d)
 Position

25.3 lx
 5.3 lx
 0.21
 0.09
 0.00 m

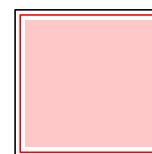
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2 Παιδική Χαρά

2.3 Calculation results, Παιδική Χαρά

2.3.1 Table, Reference plane 1.1 (E)

| | | | | | | | | | | | | | |
|-----|------------------|------|---------------|------|------|------|--------------|------|------|------|---------------|------|------|
| [m] | 16.0 | 20.1 | 22.9 | 20.2 | 16.3 | 8.3 | 5.8 | 8.3 | 16.3 | 20.2 | 22.9 | 20.1 | 16.0 |
| 24 | 21.3 | 30.4 | 37.7 | 30.6 | 21.7 | 9.4 | (5.3) | 9.4 | 21.7 | 30.6 | 37.7 | 30.4 | 21.3 |
| 22 | 28.3 | 42.5 | 56.5 | 42.6 | 28.7 | 12.8 | 7.5 | 12.8 | 28.7 | 42.6 | 56.5 | 42.5 | 28.3 |
| 20 | 29.0 | 43.2 | [57.1] | 43.4 | 29.5 | 13.6 | 8.4 | 13.6 | 29.5 | 43.4 | [57.1] | 43.2 | 29.0 |
| 18 | 23.7 | 32.8 | 39.5 | 33.0 | 24.2 | 12.2 | 7.7 | 12.2 | 24.2 | 33.0 | 39.5 | 32.8 | 23.7 |
| 16 | 21.5 | 24.7 | 26.0 | 25.0 | 22.2 | 13.5 | 9.6 | 13.5 | 22.2 | 25.0 | 26.0 | 24.7 | 21.5 |
| 14 | 22.8 | 22.1 | 19.9 | 22.4 | 23.6 | 14.8 | 10.3 | 14.8 | 23.6 | 22.4 | 19.9 | 22.1 | 22.8 |
| 12 | 21.5 | 24.7 | 26.0 | 25.0 | 22.2 | 13.5 | 9.6 | 13.5 | 22.2 | 25.0 | 26.0 | 24.7 | 21.5 |
| 10 | 23.7 | 32.8 | 39.5 | 33.0 | 24.2 | 12.2 | 7.7 | 12.2 | 24.2 | 33.0 | 39.5 | 32.8 | 23.7 |
| 8 | 29.0 | 43.2 | [57.1] | 43.4 | 29.5 | 13.6 | 8.4 | 13.6 | 29.5 | 43.4 | [57.1] | 43.2 | 29.0 |
| 6 | 28.3 | 42.5 | 56.5 | 42.6 | 28.7 | 12.8 | 7.5 | 12.8 | 28.7 | 42.6 | 56.5 | 42.5 | 28.3 |
| 4 | 21.3 | 30.4 | 37.7 | 30.6 | 21.7 | 9.4 | (5.3) | 9.4 | 21.7 | 30.6 | 37.7 | 30.4 | 21.3 |
| 2 | 16.0 | 20.1 | 22.9 | 20.2 | 16.3 | 8.3 | 5.8 | 8.3 | 16.3 | 20.2 | 22.9 | 20.1 | 16.0 |
| 0 | | | | | | | | | | | | | |
| | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| | Illuminance [lx] | | | | | | | | | | | | |



Height of the reference plane

| | | |
|---------------------------|-----------|--------------------|
| Average illuminance | Eav | : 25.3 lx |
| Minimum illuminance | Emin | : 5.3 lx |
| Maximum illuminance | Emax | : 57.1 lx |
| Uniformity U ₀ | Emin/Eav | : 1 : 4.76 (0.21) |
| Diversity U _d | Emin/Emax | : 1 : 10.75 (0.09) |