



**Οδοφωτισμός οδού Φιλαδελφείας από τη διασταύρωση  
με την οδό Αθανασίου Μπόσδα (Δημαρχείο Αχαρνών) έως  
το νότιο όριο του Δήμου (Κοιμητήριο Κόκκινου Μύλου)**

## Content

Cover page	1
Content	2
Description	5
Luminaire list	6

## Product data sheets

AEC ILLUMINAZIONE SRL - ECO RAYS BR 0F2H1 S05 4.5-2M (1x L-ECR-0F2H1-4000-525-2M-70-25)	7
AEC ILLUMINAZIONE SRL - ECO RAYS BR 0F3 STW 4.7-2M (1x L-ECR-0F3-4000-700-2M-70-25)	8
AEC ILLUMINAZIONE SRL - ECO RAYS TP 0F2H1 STU-M 4.5-2M (1x L-ECR-0F2H1-4000-525-2M-70-25)	9

## Νησίδα · Εναλλακτικά 17

Description	10
Summary (according to EN 13201:2015)	11
Πεζοδρόμιο 1 (P3)	15
Οδόστρωμα 2 (M2)	19
Οδόστρωμα 1 (M2)	29
Πεζοδρόμιο 2 (P3)	39

## Αγ. Παρασκευής-Αθηνάς · Εναλλακτικά 14

Description	43
Summary (according to EN 13201:2015)	44
Πεζοδρόμιο 1 (P3)	49
Οδόστρωμα 1 (M2)	51
Πεζοδρόμιο 2 (P3)	64

## Βησσαράκη\_Βιάνου · Εναλλακτικά 16

Description	66
Summary (according to EN 13201:2015)	67
Πεζοδρόμιο 1 (P3)	71
Οδόστρωμα 1 (M2)	73
Πεζοδρόμιο 2 (P3)	84

## Βιάνου - Σαπφους · Εναλλακτικά 15

Description	87
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## Content

Summary (according to EN 13201:2015)	88
Πεζοδρόμιο 1 (P4)	91
Οδόστρωμα 1 (M2)	93
Πεζοδρόμιο 2 (P4)	104

### έως Κοκκινου Μύλου · Εναλλακτικά 1

Description	106
Images	107
Summary (according to EN 13201:2015)	108
Πεζοδρόμιο 1 (P3)	111
Οδόστρωμα 1 (M2)	113
Πεζοδρόμιο 2 (P3)	122

### Παπαναστασίου - Αραχώβης · Εναλλακτικά 2

Description	124
Images	125
Summary (according to EN 13201:2015)	126
Πεζοδρόμιο 1 (P3)	130
Οδόστρωμα 1 (M2)	132
Πεζοδρόμιο 2 (P3)	143

### Παράδρομος Αττικής-Πρεβελάκη · Εναλλακτικά 12

Description	145
Images	146
Summary (according to EN 13201:2015)	147
Πεζοδρόμιο 1 (P3)	151
Οδόστρωμα 1 (M2)	153
Πεζοδρόμιο 2 (P3)	160

### Παράδρομος Κόκκινου Μύλου · Εναλλακτικά 18

Description	162
Summary (according to EN 13201:2015)	163
Πεζοδρόμιο 1 (P4)	166
Οδόστρωμα 1 (M3)	168
Πεζοδρόμιο 2 (P4)	172

## Content

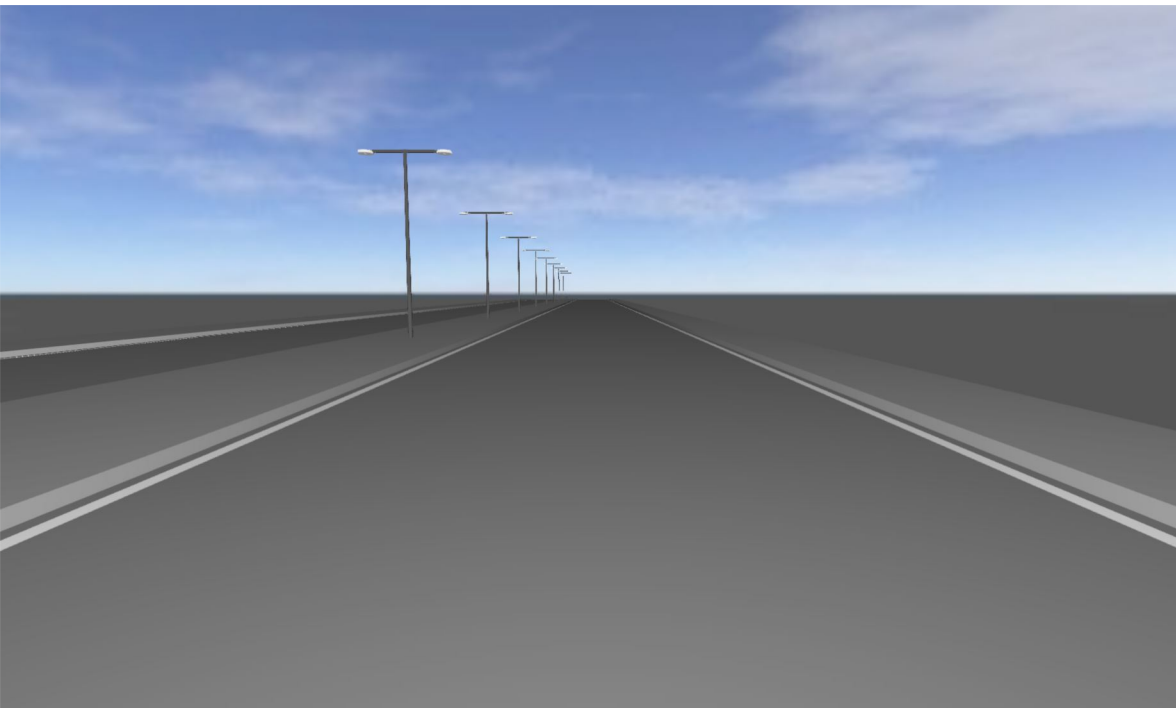
### Στρατοπεδο Παπαστάθη · Εναλλακτικά 13

Description .....	174
Images .....	175
Summary (according to EN 13201:2015) .....	176
Πεζοδρόμιο 2 (P3) .....	179
Οδόστρωμα 1 (M2) .....	181
Πεζοδρόμιο 1 (P3) .....	190
Glossary .....	192





## Description

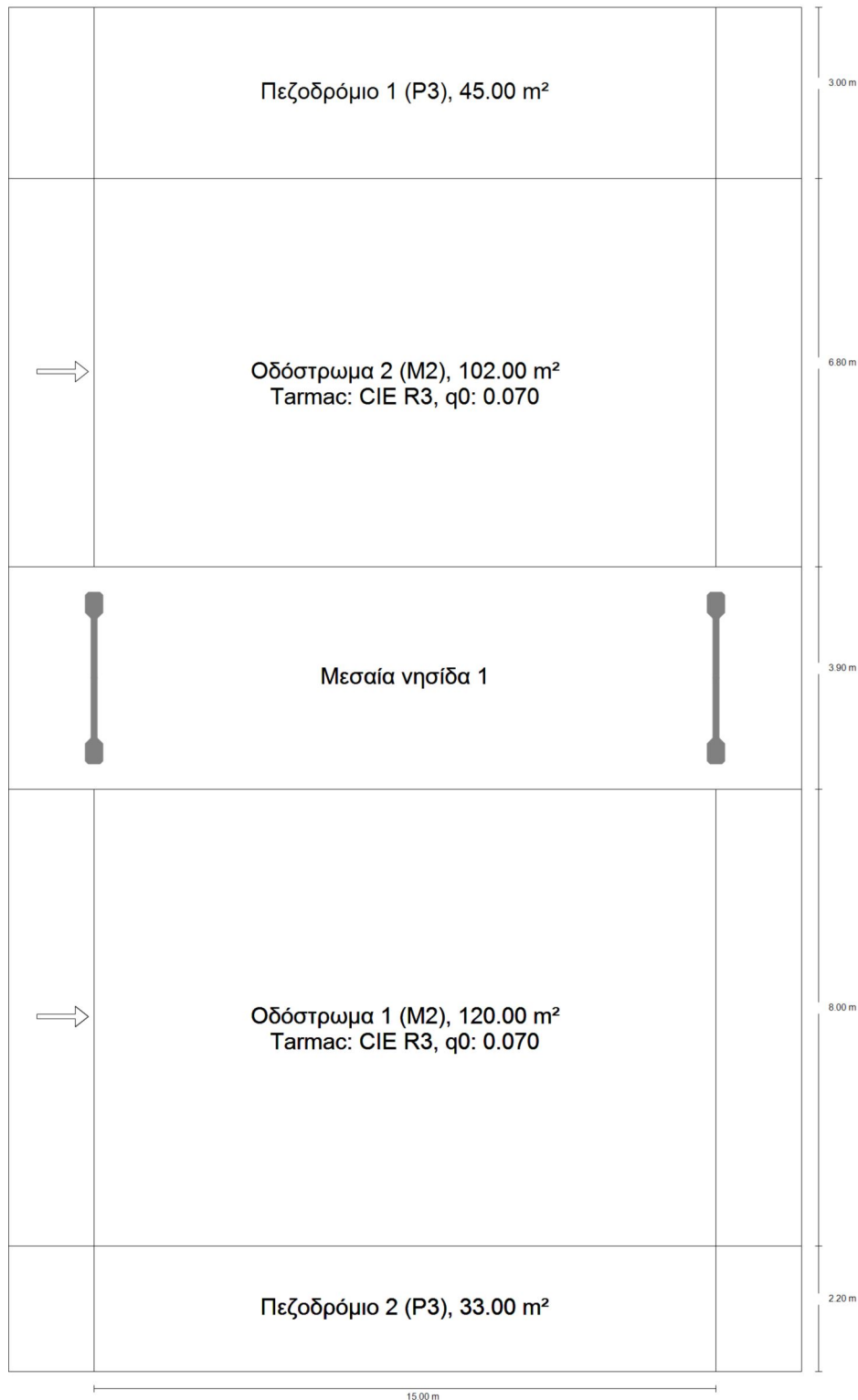


Νησίδα

## Description

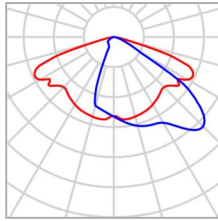
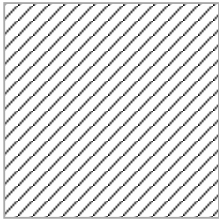
Νησίδα

## Summary (according to EN 13201:2015)



Νησίδα

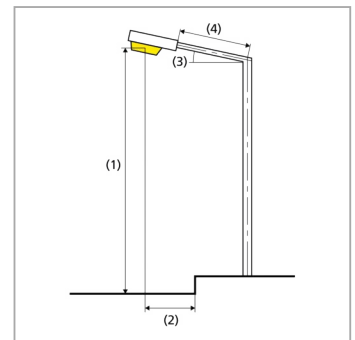
## Summary (according to EN 13201:2015)



Manufacturer	AEC ILLUMINAZIONE SRL	P	52.0 W
Article No.	ECO RAYS BR 0F3 STW 4.7-2M	$\Phi_{Lamp}$	6530 lm
Article name	ECO RAYS BR 0F3 STW 4.7-2M	$\Phi_{Luminaire}$	6530 lm
Fitting	1x L-ECR-0F3-4000-700-2M-70-25	$\eta$	100.00 %

### ECO RAYS BR 0F3 STW 4.7-2M (Median, 2 per pole)

Pole distance	15.000 m
(1) Light spot height	6.000 m
(2) Light point overhang	-0.700 m
(3) Boom inclination	0.0°
(4) Boom length	1.250 m
Annual operating hours	4000 h: 100.0 %, 104.0 W
Consumption	6968.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities	$\geq 70^\circ$ : 572 cd/klm Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. $\geq 80^\circ$ : 43.1 cd/klm $\geq 90^\circ$ : 0.00 cd/klm
Luminous intensity class	G*3 The luminous intensity values in [cd/klm] for calculation of the luminous intensity class refer to the luminaire luminous flux according to EN 13201:2015.
Glare index class	D.4



Νησίδα

## Summary (according to EN 13201:2015)

Results for valuation fields

	Symbol	Calculated	Target	Check
Πεζοδρόμιο 1 (P3)	E <sub>av</sub>	8.42 lx	[7.50 - 11.25] lx	✓
	E <sub>min</sub>	3.39 lx	≥ 1.50 lx	✓
Οδόστρωμα 2 (M2)	L <sub>av</sub>	1.94 cd/m <sup>2</sup>	≥ 1.50 cd/m <sup>2</sup>	✓
	U <sub>0</sub>	0.56	≥ 0.40	✓
	U <sub>I</sub>	0.76	≥ 0.70	✓
	TI	8 %	≤ 10 %	✓
	R <sub>El</sub>	0.07	≥ 0.35	✗
Οδόστρωμα 1 (M2)	L <sub>av</sub>	1.78 cd/m <sup>2</sup>	≥ 1.50 cd/m <sup>2</sup>	✓
	U <sub>0</sub>	0.46	≥ 0.40	✓
	U <sub>I</sub>	0.76	≥ 0.70	✓
	TI	7 %	≤ 10 %	✓
	R <sub>El</sub>	0.15	≥ 0.35	✗
Πεζοδρόμιο 2 (P3)	E <sub>av</sub>	4.93 lx	[7.50 - 11.25] lx	✗
	E <sub>min</sub>	2.70 lx	≥ 1.50 lx	✓

A maintenance factor of 0.80 was used for calculating for the installation.

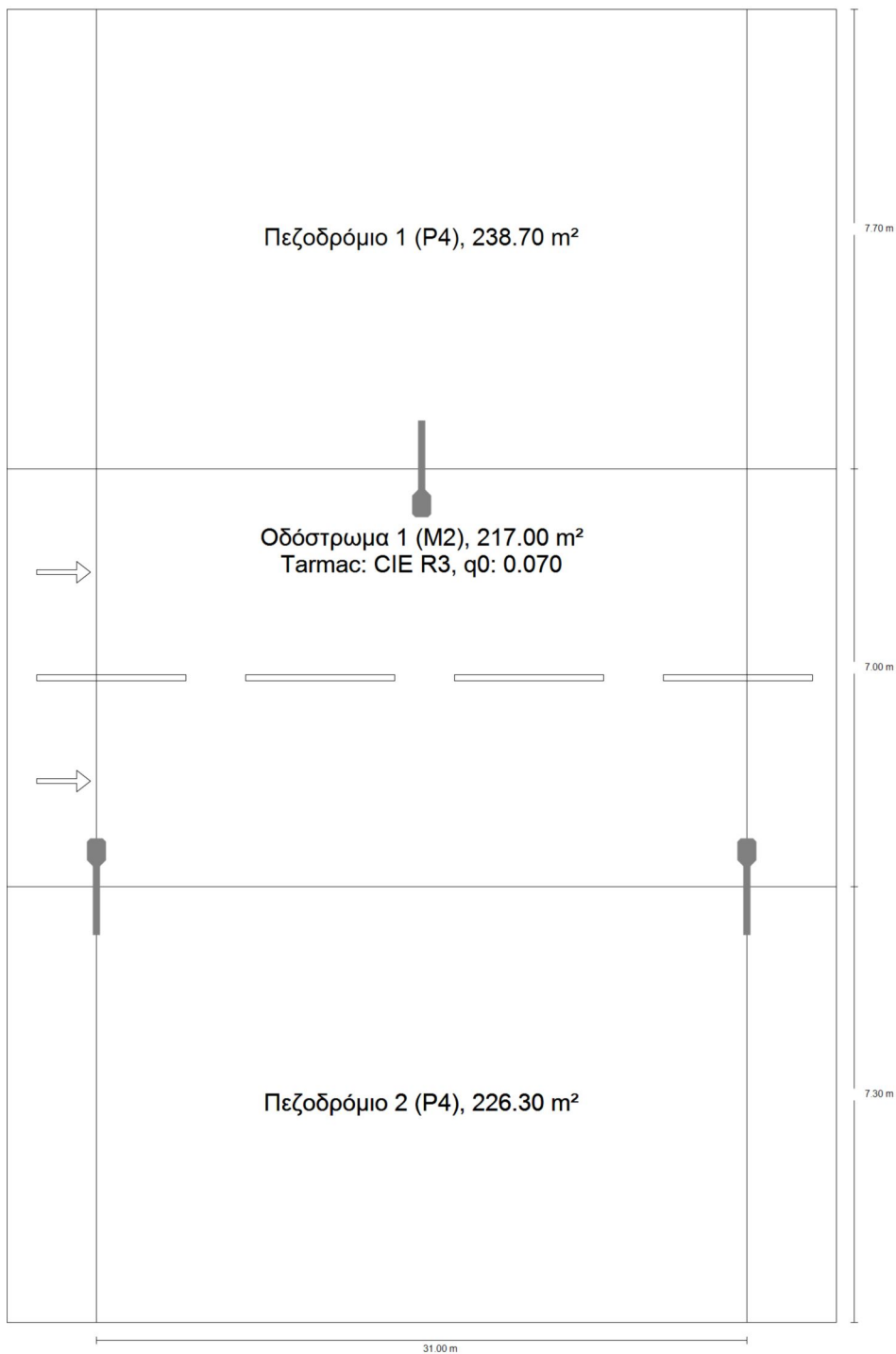


Βιάνου - Σαπφους

## Description

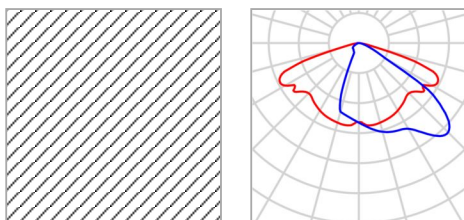
Βιάνου - Σαπφους

## Summary (according to EN 13201:2015)



Βιάνου - Σαπφους

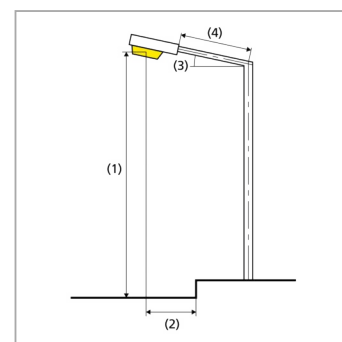
## Summary (according to EN 13201:2015)



Manufacturer	AEC ILLUMINAZIONE SRL	P	52.0 W
Article No.	ECO RAYS BR 0F3 STW 4.7-2M	$\Phi_{Lamp}$	6530 lm
Article name	ECO RAYS BR 0F3 STW 4.7-2M	$\Phi_{Luminaire}$	6530 lm
Fitting	1x L-ECR-0F3-4000-700-2M-70-25	$\eta$	100.00 %

### ECO RAYS BR 0F3 STW 4.7-2M (both sides offset)

Pole distance	31.000 m
(1) Light spot height	6.000 m
(2) Light point overhang	0.550 m
(3) Boom inclination	0.0°
(4) Boom length	1.350 m
Annual operating hours	4000 h: 100.0 %, 52.0 W
Consumption	3328.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities	$\geq 70^\circ$ : 572 cd/klm Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. $\geq 80^\circ$ : 43.1 cd/klm $\geq 90^\circ$ : 0.00 cd/klm
Luminous intensity class	G*3 The luminous intensity values in [cd/klm] for calculation of the luminous intensity class refer to the luminaire luminous flux according to EN 13201:2015.
Glare index class	D.4





Βιάνου - Σαπφους

## Summary (according to EN 13201:2015)

Results for valuation fields

	Symbol	Calculated	Target	Check
Πεζοδρόμιο 1 (P4)	E <sub>av</sub>	6.62 lx	[5.00 - 7.50] lx	✓
	E <sub>min</sub>	0.96 lx	≥ 1.00 lx	✗
Οδόστρωμα 1 (M2)	L <sub>av</sub>	1.88 cd/m <sup>2</sup>	≥ 1.50 cd/m <sup>2</sup>	✓
	U <sub>o</sub>	0.60	≥ 0.40	✓
	U <sub>l</sub>	0.71	≥ 0.70	✓
	TI	8 %	≤ 10 %	✓
	R <sub>gl</sub> <sup>(1)</sup>	0.42	-	-
Πεζοδρόμιο 2 (P4)	E <sub>av</sub>	6.93 lx	[5.00 - 7.50] lx	✓
	E <sub>min</sub>	1.05 lx	≥ 1.00 lx	✓

(1) Informative, not part of the valuation

A maintenance factor of 0.80 was used for calculating for the installation.

Results for energy efficiency indicators

	Symbol	Calculated	Consumption
Βιάνου - Σαπφους	D <sub>p</sub>	0.010 W/lx*m <sup>2</sup>	-
ECO RAYS BR 0F3 STW 4.7-2M (both sides offset)	D <sub>e</sub>	0.6 kWh/m <sup>2</sup> yr,	416.0 kWh/yr

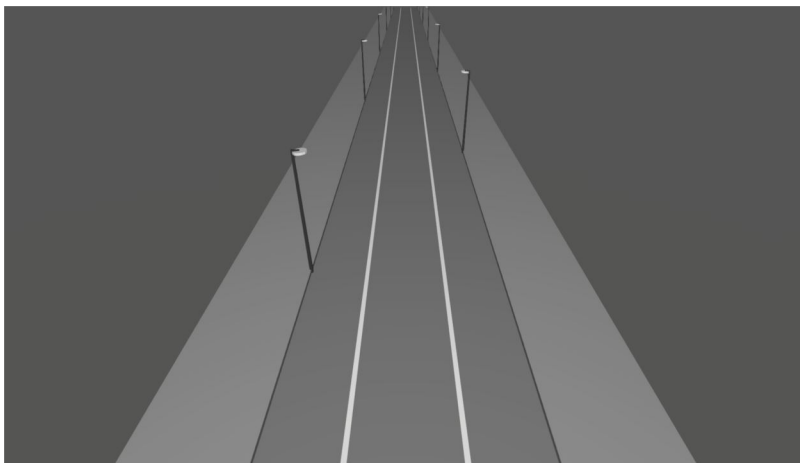


έως Κοκκινου Μύλου

## Description

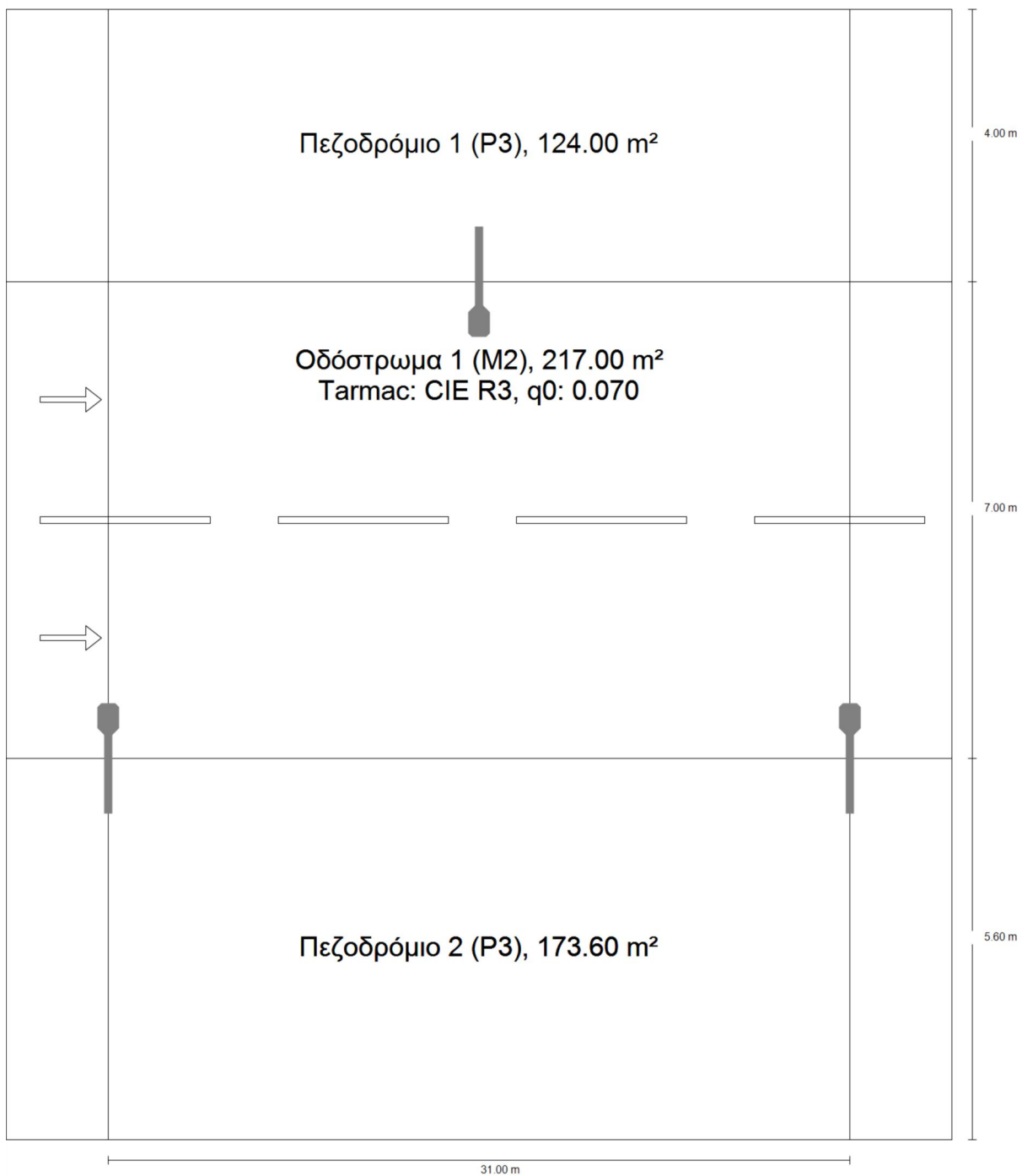
## Images

Εναλλακτικά 1



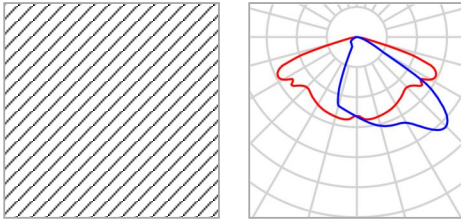
έως Κокκινου Μύλου

## Summary (according to EN 13201:2015)



έως Κοκκινού Μύλου

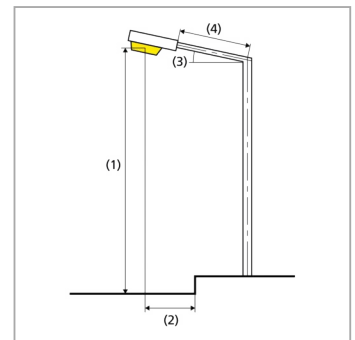
## Summary (according to EN 13201:2015)



Manufacturer	AEC ILLUMINAZIONE SRL	P	52.0 W
Article No.	ECO RAYS BR 0F3 STW 4.7-2M	$\Phi_{Lamp}$	6530 lm
Article name	ECO RAYS BR 0F3 STW 4.7-2M	$\Phi_{Luminaire}$	6530 lm
Fitting	1x L-ECR-0F3-4000-700-2M-70-25	$\eta$	100.00 %

### ECO RAYS BR 0F3 STW 4.7-2M (both sides offset)

Pole distance	31.000 m
(1) Light spot height	6.000 m
(2) Light point overhang	0.550 m
(3) Boom inclination	0.0°
(4) Boom length	1.350 m
Annual operating hours	4000 h: 100.0 %, 52.0 W
Consumption	3328.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities	$\geq 70^\circ$ : 572 cd/klm Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. $\geq 80^\circ$ : 43.1 cd/klm $\geq 90^\circ$ : 0.00 cd/klm
Luminous intensity class	G*3 The luminous intensity values in [cd/klm] for calculation of the luminous intensity class refer to the luminaire luminous flux according to EN 13201:2015.
Glare index class	D.4



έως Κοκκινού Μύλου

## Summary (according to EN 13201:2015)

### Results for valuation fields

	Symbol	Calculated	Target	Check
Πεζοδρόμιο 1 (P3)	E <sub>av</sub>	11.15 lx	[7.50 - 11.25] lx	✓
	E <sub>min</sub>	2.98 lx	≥ 1.50 lx	✓
Οδόστρωμα 1 (M2)	L <sub>av</sub>	1.88 cd/m <sup>2</sup>	≥ 1.50 cd/m <sup>2</sup>	✓
	U <sub>o</sub>	0.60	≥ 0.40	✓
	U <sub>l</sub>	0.71	≥ 0.70	✓
	TI	8 %	≤ 10 %	✓
	R <sub>gl</sub> <sup>(1)</sup>	0.42	-	-
Πεζοδρόμιο 2 (P3)	E <sub>av</sub>	8.67 lx	[7.50 - 11.25] lx	✓
	E <sub>min</sub>	1.60 lx	≥ 1.50 lx	✓

(1) Informative, not part of the valuation

A maintenance factor of 0.80 was used for calculating for the installation.

### Results for energy efficiency indicators

	Symbol	Calculated	Consumption
έως Κοκκινού Μύλου	D <sub>p</sub>	0.011 W/lx*m <sup>2</sup>	-
ECO RAYS BR 0F3 STW 4.7-2M (both sides offset)	D <sub>e</sub>	0.8 kWh/m <sup>2</sup> yr,	416.0 kWh/yr

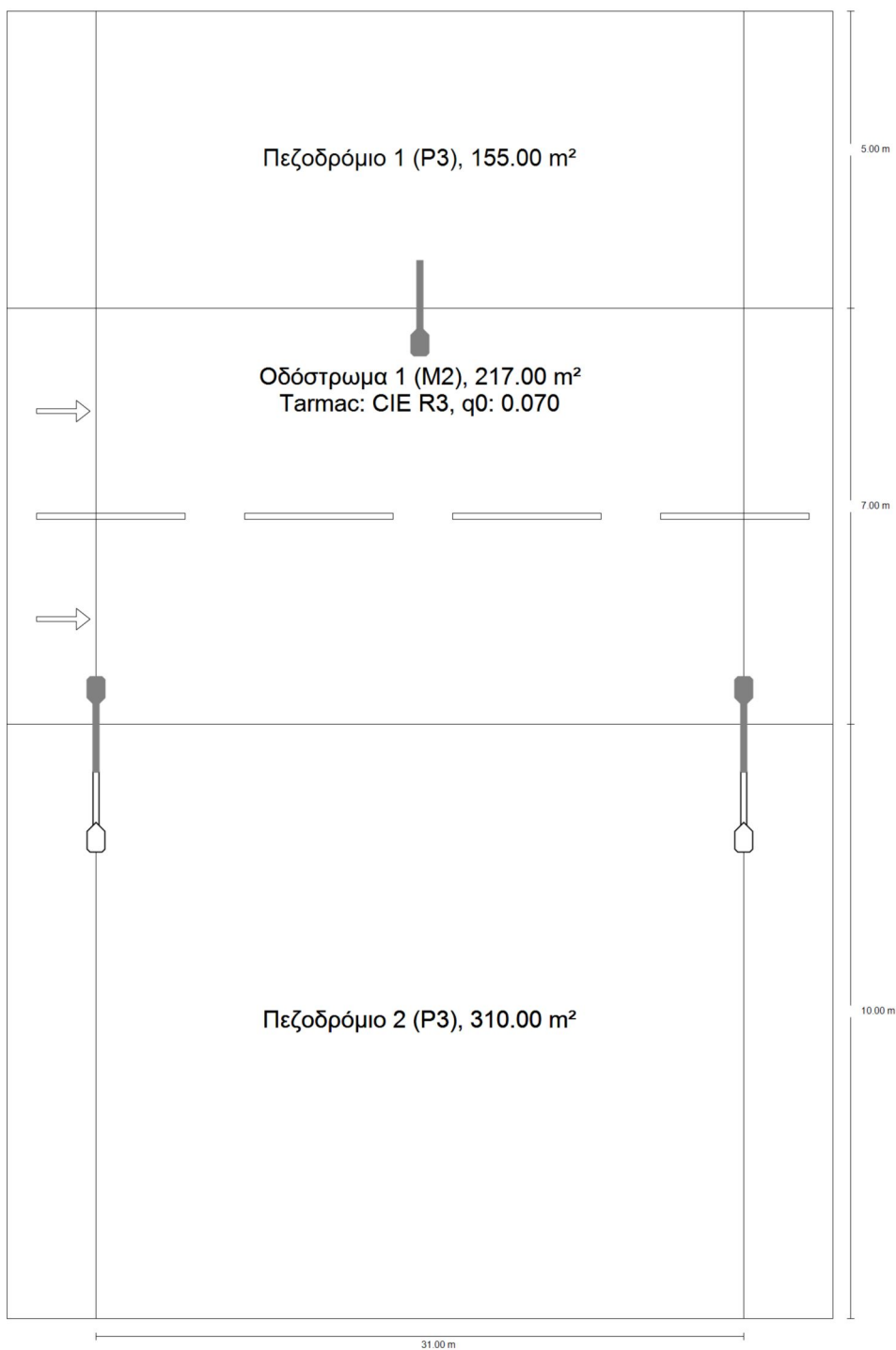


Παπαναστασίου - Αραχώβης

## Description

Παπαναστασίου - Αραχώβης

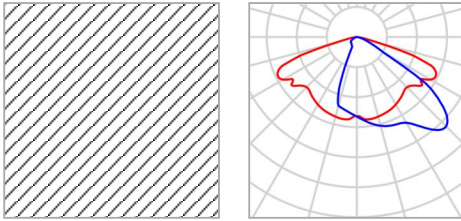
## Summary (according to EN 13201:2015)





Παπαναστασίου - Αραχώβης

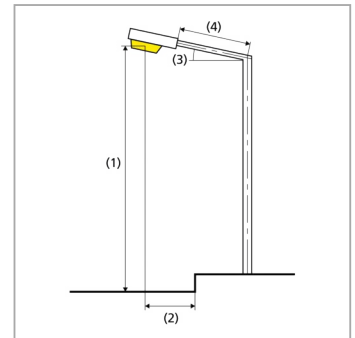
## Summary (according to EN 13201:2015)



Manufacturer	AEC ILLUMINAZIONE SRL	P	52.0 W
Article No.	ECO RAYS BR 0F3 STW 4.7-2M	$\Phi_{Lamp}$	6530 lm
Article name	ECO RAYS BR 0F3 STW 4.7-2M	$\Phi_{Luminaire}$	6530 lm
Fitting	1x L-ECR-0F3-4000-700-2M-70-25	$\eta$	100.00 %

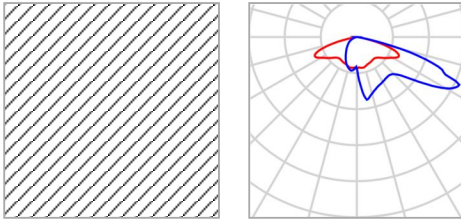
ECO RAYS BR 0F3 STW 4.7-2M (both sides offset)

Pole distance	31.000 m
(1) Light spot height	6.000 m
(2) Light point overhang	0.550 m
(3) Boom inclination	0.0°
(4) Boom length	1.350 m
Annual operating hours	4000 h: 100.0 %, 52.0 W
Consumption	3328.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities	$\geq 70^\circ$ : 572 cd/klm Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. $\geq 80^\circ$ : 43.1 cd/klm $\geq 90^\circ$ : 0.00 cd/klm
Luminous intensity class	G*3 The luminous intensity values in [cd/klm] for calculation of the luminous intensity class refer to the luminaire luminous flux according to EN 13201:2015.
Glare index class	D.4



Παπαναστασίου - Αραχώβης

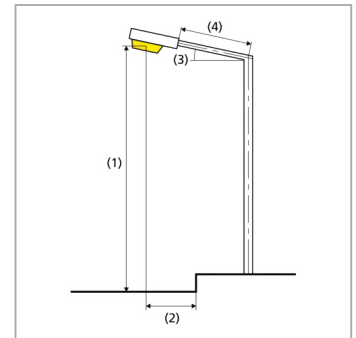
## Summary (according to EN 13201:2015)



Manufacturer	AEC ILLUMINAZIONE SRL	P	30.5 W
Article No.	ECO RAYS BR 0F2H1 S05 4.5-2M	$\Phi_{Lamp}$	3690 lm
Article name	ECO RAYS BR 0F2H1 S05 4.5-2M	$\Phi_{Luminaire}$	3690 lm
Fitting	1x L-ECR-0F2H1-4000-525-2M-70-25	$\eta$	100.00 %

### ECO RAYS BR 0F2H1 S05 4.5-2M (single side bottom)

Pole distance	31.000 m
(1) Light spot height	4.500 m
(2) Light point overhang	0.300 m
(3) Boom inclination	0.0°
(4) Boom length	1.100 m
Annual operating hours	4000 h: 100.0 %, 30.5 W
Consumption	976.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities	$\geq 70^\circ$ : 458 cd/klm Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. $\geq 80^\circ$ : 135 cd/klm $\geq 90^\circ$ : 0.00 cd/klm
Luminous intensity class	G*2 The luminous intensity values in [cd/klm] for calculation of the luminous intensity class refer to the luminaire luminous flux according to EN 13201:2015.
Glare index class	D.4



Παπαναστασίου - Αραχώβης

## Summary (according to EN 13201:2015)

### Results for valuation fields

	Symbol	Calculated	Target	Check
Πεζοδρόμιο 1 (P3)	E <sub>av</sub>	9.55 lx	[7.50 - 11.25] lx	✓
	E <sub>min</sub>	1.96 lx	≥ 1.50 lx	✓
Οδόστρωμα 1 (M2)	L <sub>av</sub>	1.94 cd/m <sup>2</sup>	≥ 1.50 cd/m <sup>2</sup>	✓
	U <sub>0</sub>	0.62	≥ 0.40	✓
	U <sub>I</sub>	0.71	≥ 0.70	✓
	TI	0 %	≤ 10 %	✓
	R <sub>gl</sub> <sup>(1)</sup>	0.41	-	-
Πεζοδρόμιο 2 (P3)	E <sub>av</sub>	12.45 lx	[7.50 - 11.25] lx	✗
	E <sub>min</sub>	1.72 lx	≥ 1.50 lx	✓

(1) Informative, not part of the valuation

A maintenance factor of 0.80 was used for calculating for the installation.

### Results for energy efficiency indicators

	Symbol	Calculated	Consumption
Παπαναστασίου - Αραχώβης	D <sub>p</sub>	0.002 W/lx*m <sup>2</sup>	-
ECO RAYS BR 0F3 STW 4.7- 2M (both sides offset)	D <sub>e</sub>	0.6 kWh/m <sup>2</sup> yr,	416.0 kWh/yr
ECO RAYS BR 0F2H1 S05 4.5-2M (single side bottom)	D <sub>e</sub>	0.2 kWh/m <sup>2</sup> yr,	122.0 kWh/yr

EN 13201:2015-5 does not include the case for planning with multiple luminaire arrangements. The calculation of the output values is done therefore only for the luminaire arrangement whose pole distance determines the length of the valuation fields.

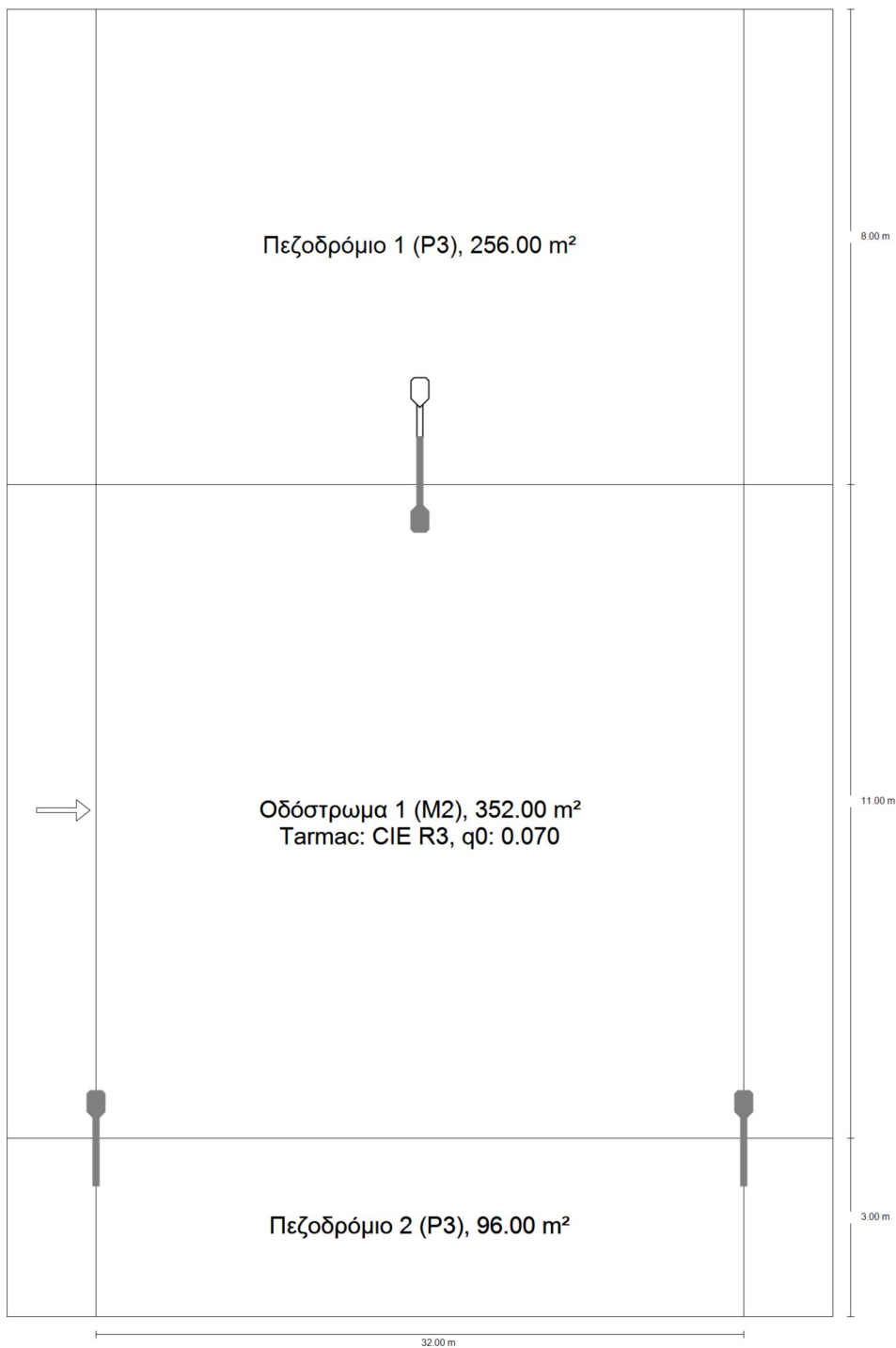


Παράδρομος Αττικής-Πρεβελάκη

## Description

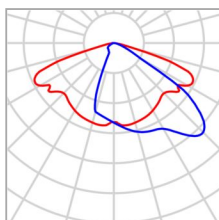
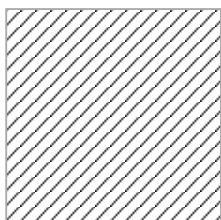
Παράδρομος Αττικής-Πρεβελάκη

## Summary (according to EN 13201:2015)



Παράδρομος Αττικής-Πρεβελάκη

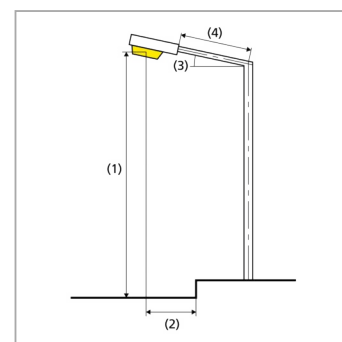
## Summary (according to EN 13201:2015)



Manufacturer	AEC ILLUMINAZIONE SRL	P	52.0 W
Article No.	ECO RAYS BR 0F3 STW 4.7-2M	$\Phi_{Lamp}$	6530 lm
Article name	ECO RAYS BR 0F3 STW 4.7-2M	$\Phi_{Luminaire}$	6530 lm
Fitting	1x L-ECR-0F3-4000-700-2M-70-25	$\eta$	100.00 %

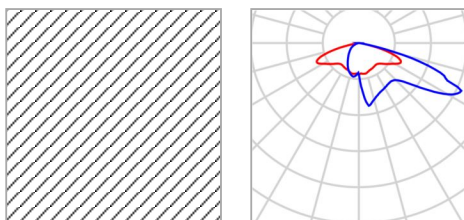
ECO RAYS BR 0F3 STW 4.7-2M (both sides offset)

Pole distance	32.000 m
(1) Light spot height	6.000 m
(2) Light point overhang	0.550 m
(3) Boom inclination	0.0°
(4) Boom length	1.350 m
Annual operating hours	4000 h: 100.0 %, 52.0 W
Consumption	3224.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities	$\geq 70^\circ$ : 572 cd/klm Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. $\geq 80^\circ$ : 43.1 cd/klm $\geq 90^\circ$ : 0.00 cd/klm
Luminous intensity class	G*3 The luminous intensity values in [cd/klm] for calculation of the luminous intensity class refer to the luminaire luminous flux according to EN 13201:2015.
Glare index class	D.4



Παράδρομος Αττικής-Πρεβελάκη

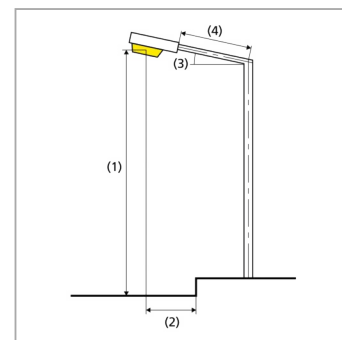
## Summary (according to EN 13201:2015)



Manufacturer	AEC ILLUMINAZIONE SRL	P	30.5 W
Article No.	ECO RAYS BR 0F2H1 S05 4.5-2M	$\Phi_{Lamp}$	3690 lm
Article name	ECO RAYS BR 0F2H1 S05 4.5-2M	$\Phi_{Luminaire}$	3690 lm
Fitting	1x L-ECR-0F2H1-4000-525-2M-70-25	$\eta$	100.00 %

ECO RAYS BR 0F2H1 S05 4.5-2M (single side top)

Pole distance	32.000 m
(1) Light spot height	4.500 m
(2) Light point overhang	-0.050 m
(3) Boom inclination	0.0°
(4) Boom length	0.750 m
Annual operating hours	4000 h: 100.0 %, 30.5 W
Consumption	945.5 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities	$\geq 70^\circ$ : 458 cd/klm Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. $\geq 80^\circ$ : 135 cd/klm $\geq 90^\circ$ : 0.00 cd/klm
Luminous intensity class	G*2 The luminous intensity values in [cd/klm] for calculation of the luminous intensity class refer to the luminaire luminous flux according to EN 13201:2015.
Glare index class	D.4



## Παράδρομος Αττικής-Πρεβελάκη

### Summary (according to EN 13201:2015)

#### Results for valuation fields

	Symbol	Calculated	Target	Check
Πεζοδρόμιο 1 (P3)	E <sub>av</sub>	11.33 lx	[7.50 - 11.25] lx	✗
	E <sub>min</sub>	1.67 lx	≥ 1.50 lx	✓
Οδόστρωμα 1 (M2)	L <sub>av</sub>	1.53 cd/m <sup>2</sup>	≥ 1.50 cd/m <sup>2</sup>	✓
	U <sub>0</sub>	0.52	≥ 0.40	✓
	U <sub>I</sub>	0.74	≥ 0.70	✓
	TI	0 %	≤ 10 %	✓
	R <sub>gl</sub> <sup>(1)</sup>	0.11	-	-
Πεζοδρόμιο 2 (P3)	E <sub>av</sub>	8.35 lx	[7.50 - 11.25] lx	✓
	E <sub>min</sub>	1.15 lx	≥ 1.50 lx	✗

(1) Informative, not part of the valuation

A maintenance factor of 0.80 was used for calculating for the installation.

#### Results for energy efficiency indicators

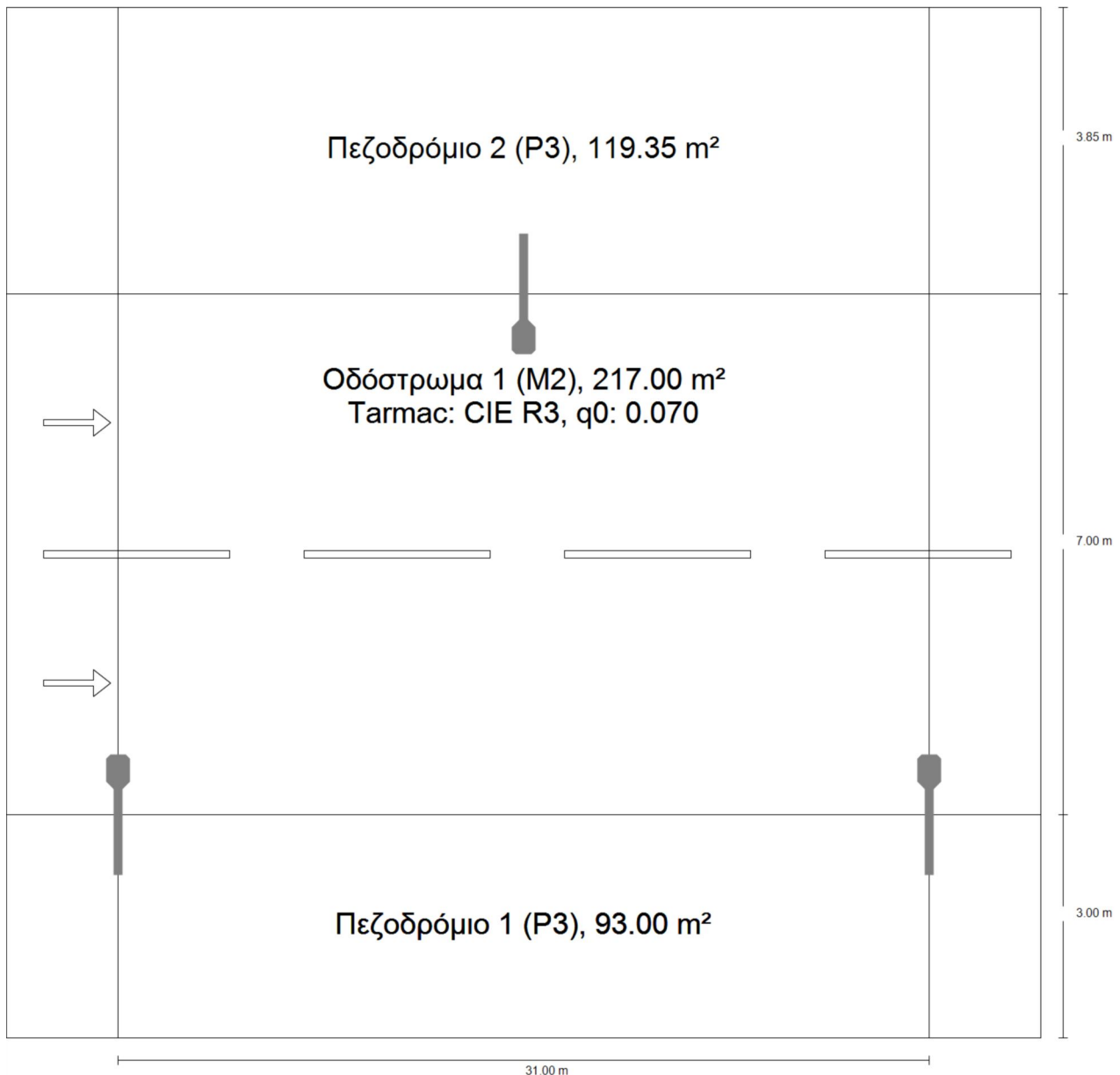
	Symbol	Calculated	Consumption
Παράδρομος Αττικής-Πρεβελάκη	D <sub>p</sub>	0.002 W/lx*m <sup>2</sup>	-
ECO RAYS BR 0F3 STW 4.7-2M (both sides offset)	D <sub>e</sub>	0.6 kWh/m <sup>2</sup> yr,	416.0 kWh/yr
ECO RAYS BR 0F2H1 S05 4.5-2M (single side top)	D <sub>e</sub>	0.2 kWh/m <sup>2</sup> yr,	122.0 kWh/yr

EN 13201:2015-5 does not include the case for planning with multiple luminaire arrangements. The calculation of the output values is done therefore only for the luminaire arrangement whose pole distance determines the length of the valuation fields.



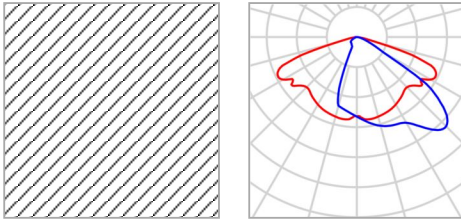
Στρατοπέδο Παπαστάθη

## Summary (according to EN 13201:2015)



Στρατοπεδο Παπαστάθη

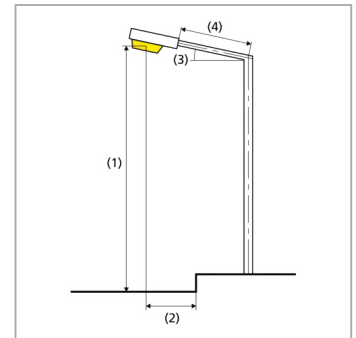
## Summary (according to EN 13201:2015)



Manufacturer	AEC ILLUMINAZIONE SRL	P	52.0 W
Article No.	ECO RAYS BR 0F3 STW 4.7-2M	$\Phi_{Lamp}$	6530 lm
Article name	ECO RAYS BR 0F3 STW 4.7-2M	$\Phi_{Luminaire}$	6530 lm
Fitting	1x L-ECR-0F3-4000-700-2M-70-25	$\eta$	100.00 %

ECO RAYS BR 0F3 STW 4.7-2M (both sides offset)

Pole distance	31.000 m
(1) Light spot height	6.000 m
(2) Light point overhang	0.550 m
(3) Boom inclination	0.0°
(4) Boom length	1.350 m
Annual operating hours	4000 h: 100.0 %, 52.0 W
Consumption	3328.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities	$\geq 70^\circ$ : 572 cd/klm Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. $\geq 80^\circ$ : 43.1 cd/klm $\geq 90^\circ$ : 0.00 cd/klm
Luminous intensity class	G*3 The luminous intensity values in [cd/klm] for calculation of the luminous intensity class refer to the luminaire luminous flux according to EN 13201:2015.
Glare index class	D.4



Στρατοπεδο Παπαστάθη

## Summary (according to EN 13201:2015)

Results for valuation fields

	Symbol	Calculated	Target	Check
Πεζοδρόμιο 2 (P3)	E <sub>av</sub>	11.53 lx	[7.50 - 11.25] lx	✗
	E <sub>min</sub>	3.18 lx	≥ 1.50 lx	✓
Οδόστρωμα 1 (M2)	L <sub>av</sub>	1.88 cd/m <sup>2</sup>	≥ 1.50 cd/m <sup>2</sup>	✓
	U <sub>o</sub>	0.60	≥ 0.40	✓
	U <sub>l</sub>	0.71	≥ 0.70	✓
	TI	8 %	≤ 10 %	✓
	R <sub>gl</sub> <sup>(1)</sup>	0.42	-	-
Πεζοδρόμιο 1 (P3)	E <sub>av</sub>	14.47 lx	[7.50 - 11.25] lx	✗
	E <sub>min</sub>	5.03 lx	≥ 1.50 lx	✓

(1) Informative, not part of the valuation

A maintenance factor of 0.80 was used for calculating for the installation.

Results for energy efficiency indicators

	Symbol	Calculated	Consumption
Στρατοπεδο Παπαστάθη	D <sub>p</sub>	0.011 W/lx*m <sup>2</sup>	-
ECO RAYS BR 0F3 STW 4.7-2M (both sides offset)	D <sub>e</sub>	1.0 kWh/m <sup>2</sup> yr,	416.0 kWh/yr

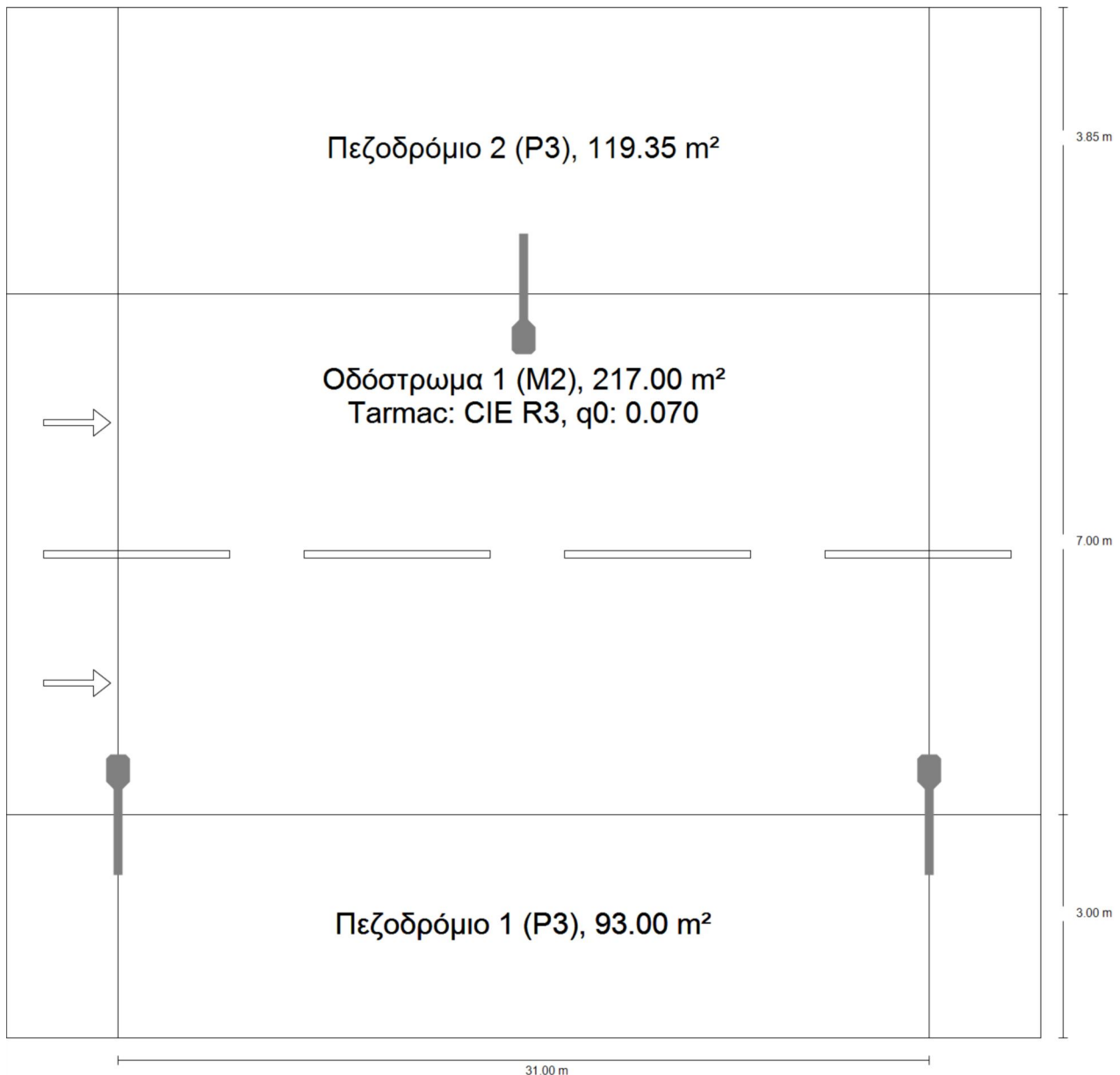


Στρατοπέδο Παπαστάθη

## Description

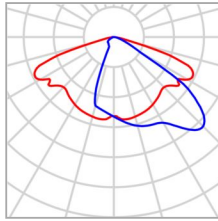
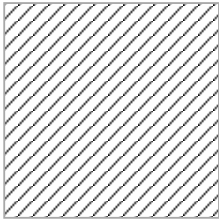
Στρατοπέδο Παπαστάθη

## Summary (according to EN 13201:2015)



Στρατοπεδο Παπαστάθη

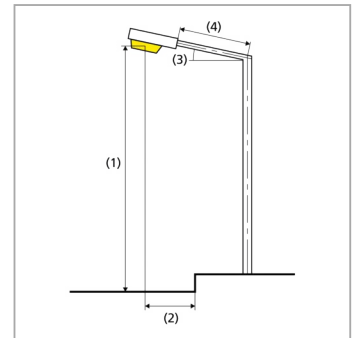
## Summary (according to EN 13201:2015)



Manufacturer	AEC ILLUMINAZIONE SRL	P	52.0 W
Article No.	ECO RAYS BR 0F3 STW 4.7-2M	$\Phi_{Lamp}$	6530 lm
Article name	ECO RAYS BR 0F3 STW 4.7-2M	$\Phi_{Luminaire}$	6530 lm
Fitting	1x L-ECR-0F3-4000-700-2M-70-25	$\eta$	100.00 %

ECO RAYS BR 0F3 STW 4.7-2M (both sides offset)

Pole distance	31.000 m
(1) Light spot height	6.000 m
(2) Light point overhang	0.550 m
(3) Boom inclination	0.0°
(4) Boom length	1.350 m
Annual operating hours	4000 h: 100.0 %, 52.0 W
Consumption	3328.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities	$\geq 70^\circ$ : 572 cd/klm Any direction forming the specified angle from the downward vertical, with the luminaire installed for use. $\geq 80^\circ$ : 43.1 cd/klm $\geq 90^\circ$ : 0.00 cd/klm
Luminous intensity class	G*3 The luminous intensity values in [cd/klm] for calculation of the luminous intensity class refer to the luminaire luminous flux according to EN 13201:2015.
Glare index class	D.4



Στρατοπεδο Παπαστάθη

## Summary (according to EN 13201:2015)

Results for valuation fields

	Symbol	Calculated	Target	Check
Πεζοδρόμιο 2 (P3)	E <sub>av</sub>	11.53 lx	[7.50 - 11.25] lx	✗
	E <sub>min</sub>	3.18 lx	≥ 1.50 lx	✓
Οδόστρωμα 1 (M2)	L <sub>av</sub>	1.88 cd/m <sup>2</sup>	≥ 1.50 cd/m <sup>2</sup>	✓
	U <sub>o</sub>	0.60	≥ 0.40	✓
	U <sub>l</sub>	0.71	≥ 0.70	✓
	TI	8 %	≤ 10 %	✓
	R <sub>gl</sub> <sup>(1)</sup>	0.42	-	-
Πεζοδρόμιο 1 (P3)	E <sub>av</sub>	14.47 lx	[7.50 - 11.25] lx	✗
	E <sub>min</sub>	5.03 lx	≥ 1.50 lx	✓

(1) Informative, not part of the valuation

A maintenance factor of 0.80 was used for calculating for the installation.

Results for energy efficiency indicators

	Symbol	Calculated	Consumption
Στρατοπεδο Παπαστάθη	D <sub>p</sub>	0.011 W/lx*m <sup>2</sup>	-
ECO RAYS BR 0F3 STW 4.7-2M (both sides offset)	D <sub>e</sub>	1.0 kWh/m <sup>2</sup> yr,	416.0 kWh/yr

## Glossary

### A

A	Formula symbol for a surface in the geometry
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### B

Background area	The background area borders the direct ambient area according to DIN EN 12464-1 and reaches up to the borders of the room. In larger rooms, the background area is at least 3 m wide. It is located horizontally at floor level.
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### C

CCT	(Engl. correlated colour temperature) Body temperature of a thermal radiator which serves to describe its light colour. Unit: Kelvin [K]. The lesser the numerical value the redder; the greater the numerical value the bluer the light colour. The colour temperature of gas-discharge lamps and semi-conductors are termed "correlated colour temperature" in contrast to the colour temperature of thermal radiators. Allocation of the light colours to the colour temperature ranges acc. to EN 12464-1: Light colour - colour temperature [K] warm white (ww) 5.300 K
Clearance height	The designation for the distance between upper edge of the floor and bottom edge of the ceiling (in the completely furnished status of room).
CRI	(Engl. colour rendering index) Designation for the colour rendering index of a luminaire or a lamp acc. to DIN 6169: 1976 or CIE 13.3: 1995. The general colour rendering index Ra (or CRI) is a dimensionless figure that describes the quality of a white light source in regards to its similarity with the remission spectra of defined 8 test colours (see DIN 6169 or CIE 1974) to a reference light source.

### D

Daylight factor	Ratio of the illuminance achieved solely by daylight incidence at a point in the inside to the horizontal illuminance in the outer area under an unobstructed sky. Formula symbol: D (Engl. daylight factor) Unit: %
Daylight quotient effective area	A calculation surface within which the daylight quotient is calculated.



## Glossary

### E

Eta ( $\eta$ )	(light output ratio) The light output ratio describes what percentage of the luminous flux of a free radiating lamp (or LED module) is emitted by the luminaire when installed. Unit: %
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### G

$g_1$	Often also $U_o$ (Engl. overall uniformity) Designates the overall uniformity of the illuminance on a surface. It is the quotient from $E_{min}$ to $\bar{E}$ and is required, for instance, in standards for illumination of workstations.
$g_2$	Actually it designates the "non-uniformity" of the illuminance on a surface. It is the quotient of $E_{min}$ to $E_{max}$ and is generally only relevant for certifying the emergency lighting acc. to EN 1838.

### I

Illuminance	Describes the ratio of the luminous flux that strikes a certain surface to the size of this surface ( $lm/m^2 = lx$ ). The illuminance is not tied to an object surface. It can be determined anywhere in space (inside or outside). The illuminance is not a product feature because it is a recipient value. Luxometers are used for measuring. Unit: Lux Abbreviation: lx Formula symbol: E
Illuminance, adaptive	For the determining of the middle adaptive illuminance on a surface, this is rastered "adaptively". In the area of large illuminance differences within the surface, the raster is subdivided finer; within lesser differences, a rougher classification is made.
Illuminance, horizontal	Illuminance that is calculated or measured on a horizontal (level) surface (this can be for example a table top or the floor). The horizontal illuminance is usually identified by the formula letter $E_h$ .
Illuminance, perpendicular	Illuminance that is calculated or measured plumb-vertical to a surface. This needs to be taken into account for tilted surfaces. If the surface is horizontal or vertical, then there is no difference between the perpendicular and the horizontal or vertical illuminance.
Illuminance, vertical	Illuminance that is calculated or measured on a vertical surface (this can be for example the front of some shelves). The vertical illuminance is usually identified by the formula letter $E_v$ .

### L

LENI	(Engl. lighting energy numeric indicator) Lighting energy numeric indicator acc. to EN 15193 Unit: kWh/m <sup>2</sup> year
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## Glossary

LLMF	(Engl. lamp lumen maintenance factor)/acc. to CIE 97: 2005 Lamp flux maintenance factor that takes the luminous flux reduction into account of a luminaire or an LED module in the course of the operating time. The lamp flux maintenance factor is specified as a decimal digit and can have a maximum value of 1 (no luminous flux reduction existing).
LMF	(Engl. luminaire maintenance factor)/acc. to CIE 97: 2005 Luminaire maintenance factor that takes the soiling into account of the luminaire in the course of the operating time. The luminaire maintenance factor is specified as a decimal digit and can have a maximum value of 1 (no soiling existing).
LSF	(Engl. lamp survival factor)/acc. to CIE 97: 2005 Lamp survival factor that takes the total failure into account of a luminaire in the course of the operating time. The lamp survival factor is specified as a decimal digit and can have a maximum value of 1 (no failures existing within the time concerned or prompt replacement after the failure).
Luminance	Dimension for the "brightness impression" that the human eye has of a surface. The surface itself can emit light thereby or light striking it can be reflected (emitter value). It is the only photometric value that the human eye can perceive. Unit: Candela per square metre Abbreviation: cd/m <sup>2</sup> Formula symbol: L
Luminous efficacy	Ratio of the emitted luminous flux $\Phi$ [lm] to the absorbed electrical power P [W] Unit: lm/W. This ratio can be formed for the lamp or LED module (lamp or module light output), the lamp or module with control gear (system light output) and the complete luminaire (luminaire light output).
Luminous flux	Dimension for the total light output that is emitted from one light source in all directions. It is thus an "emitter value" that specifies the entire emitting output. The luminous flux of a light source can only be determined in a laboratory. A difference is made between the lamp or LED module luminous flux and the luminaire luminous flux. Unit: Lumen Abbreviation: lm Formula symbol: $\Phi$
Luminous intensity	Describes the intensity of the light in a certain direction (emitter value). The luminous intensity is a matter of the luminous flux $\Phi$ that is emitted in a certain spherical angle $\Omega$ . The radiation characteristics of a light source are presented graphically in a light distribution curve (LDC). The luminous intensity is an SI base unit. Unit: Candela Abbreviation: cd Formula symbol: I
M	
Maintenance factor	See MF

## Glossary

MF	(Engl. maintenance factor)/acc. to CIE 97: 2005 Maintenance factor as decimal number between 0 and 1 that describes the ratio of the new value of a photometric planning parameter (e.g. of the illuminance) to a maintenance value after a certain time. The maintenance factor takes into account the soiling of luminaires and rooms as well as the luminous flux reduction and the failure of light sources. The maintenance factor is taken into account either overall or determined in detail acc. to CIE 97: 2005 by the formula $RMF \times LMF \times LLMF \times LSF$ .
P	
P	(Engl. power) Electric power consumption Unit: watt Abbreviation: W
R	
Reflection factor	The reflection factor of a surface describes how much of the striking light is reflected back. The reflection factor is defined by the colour of the surface.
RMF	(Engl. room maintenance factor)/acc. to CIE 97: 2005 Room maintenance factor that takes the soiling into account of the space encompassing surfaces in the course of the operating time. The room maintenance factor is specified as a decimal digit and can have a maximum value of 1 (no soiling existing).
S	
Surrounding area	The ambient area directly borders the area of the visual task and should be planned with a width of at least 0.5 m according to DIN EN 12464-1. It is at the same height as the area of the visual task.
U	
UGR (max)	(unified glare rating) Measure for the psychological glare effect in interiors. In addition to luminaire luminance, the UGR value also depends on the position of the observer, the viewing direction and the ambient luminance. Among other things, EN 12464-1 specifies maximum permissible UGR values for various indoor workplaces.
UGR observer	Calculation point in the room, for the DIALux the UGR value is determined. The location and height of the calculation point should correspond to the typical observer position (position and eye level of the user).

## Glossary

### V

#### Visual task area

The area that is needed for carrying out the visual task in accordance with DIN EN 12464-1. The height corresponds with the height at which the visual task is executed.

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### W

#### Wall zone

Circumferential area between working plane and walls which is not taken into account for the calculation.

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#### Workplane

Virtual measuring or calculation surface at the height of the visual task that generally follows the room geometry. The working plane may also feature a wall zone.

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