



24050_PP_EL-1-02_Valgusarvutused

Contacts



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Luminaire list

Φ_{total} 31328 lm	P_{total} 220.0 W	Luminous efficacy 142.4 lm/W
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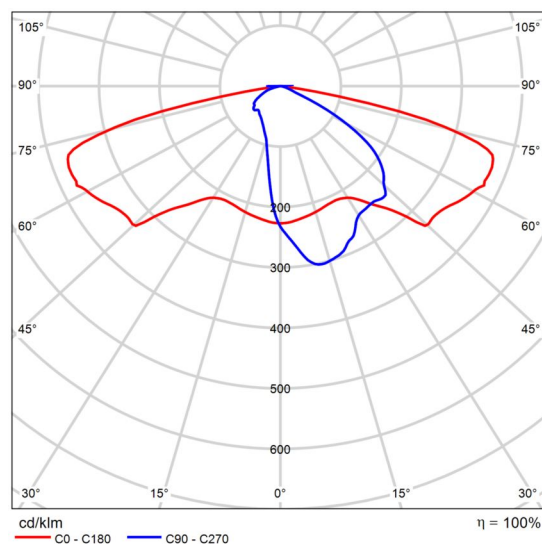
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
22	Vizulo	60000294 40 MRUE 010 730 L22 AA008	Micro Martin 10 W 8 LED	10.0 W	1424 lm	142.4 lm/W

Product data sheet

Vizulo - Micro Martin 10 W 8 LED



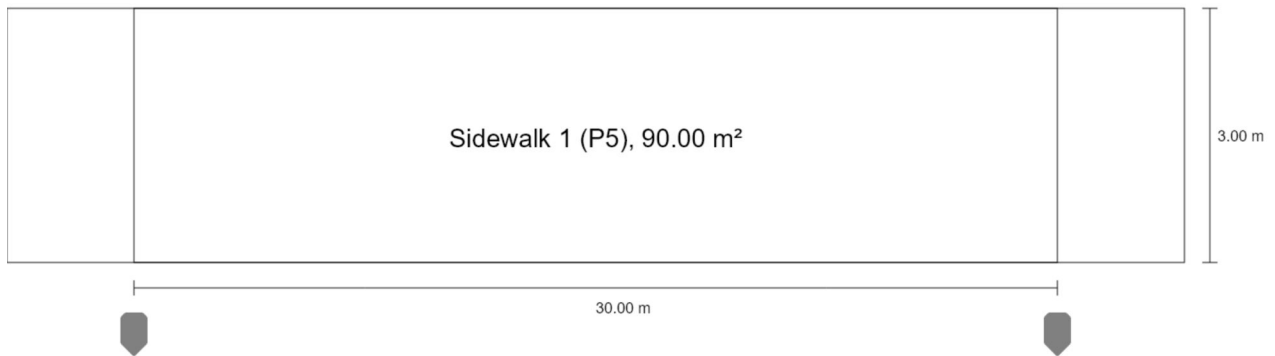
Article No.	6000029440 MRUE 010 730 L22 AA008
P	10.0 W
Φ_{Lamp}	1424 lm
$\Phi_{\text{Luminaire}}$	1424 lm
η	100.00 %
Luminous efficacy	142.4 lm/W
CCT	3000 K
CRI	70



Polar LDC

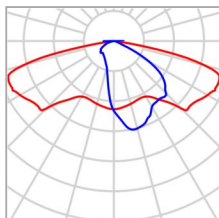
Kergtee (Mast 6m-K0, mastide vahekaugus 30m, masti kaugus kergtee kattest 0.85m)

Summary (according to EN 13201:2015)



Kergtee (Mast 6m-K0, mastide vahekaugus 30m, masti kaugus kergtee kattest 0.85m)

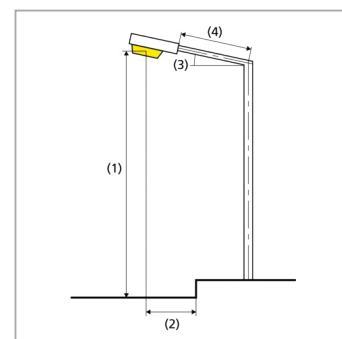
Summary (according to EN 13201:2015)



Manufacturer	Vizulo	P	10.0 W
Article No.	6000029440 MRUE 010 730 L22 AA008	Φ_{Lamp}	1424 lm
Article name	Micro Martin 10 W 8 LED	$\Phi_{\text{Luminaire}}$	1424 lm
Fitting	1x 8 LED MOD AA	η	100.00 %

Micro Martin 10 W 8 LED (single side bottom)

Pole distance	30.000 m
(1) Light spot height	6.000 m
(2) Light point overhang	-0.850 m
(3) Boom inclination	0.0°
(4) Boom length	0.000 m
Annual operating hours	4000 h: 100.0 %, 10.0 W
Wattage / route	330.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities	≥ 70°: 605 cd/klm
Any direction forming the specified angle from the downward vertical, with the luminaire installed for use.	≥ 80°: 210 cd/klm ≥ 90°: 0.00 cd/klm
Luminous intensity class	–
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.6
MF	0.81



Kergtee (Mast 6m-K0, mastide vahekaugus 30m, masti kaugus kergtee kattest 0.85m)

Summary (according to EN 13201:2015)

Results for valuation fields

A maintenance factor of 0.81 was used for calculating for the installation.

	Symbol	Calculated	Target	Check
Sidewalk 1 (P5)	E_{av}	4.15 lx	[3.00 - 4.50] lx	✓
	E_{min}	1.59 lx	≥ 0.60 lx	✓

Results for energy efficiency indicators

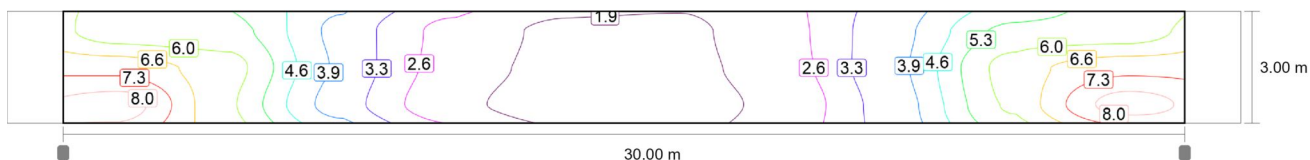
	Symbol	Calculated	Energy Consumption
Kergtee (Mast 6m-K0, mastide vahekaugus 30m, masti kaugus kergtee kattest 0.85m)	D_p	0.027 W/lx*m ²	–
Micro Martin 10 W 8 LED (single side bottom)	D_e	0.4 kWh/m ² yr	40.0 kWh/yr

Kergtee (Mast 6m-K0, mastide vahekaugus 30m, masti kaugus kergtee kattest 0.85m)

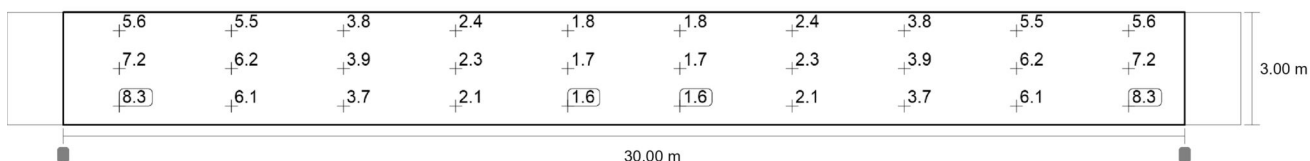
Sidewalk 1 (P5)

Results for valuation field

	Symbol	Calculated	Target	Check
Sidewalk 1 (P5)	E_{av}	4.15 lx	[3.00 - 4.50] lx	✓
	E_{min}	1.59 lx	≥ 0.60 lx	✓



Maintenance value, horizontal illuminance [lx] (Iso-illuminance curves)



Maintenance value, horizontal illuminance [lx] (Value grid)

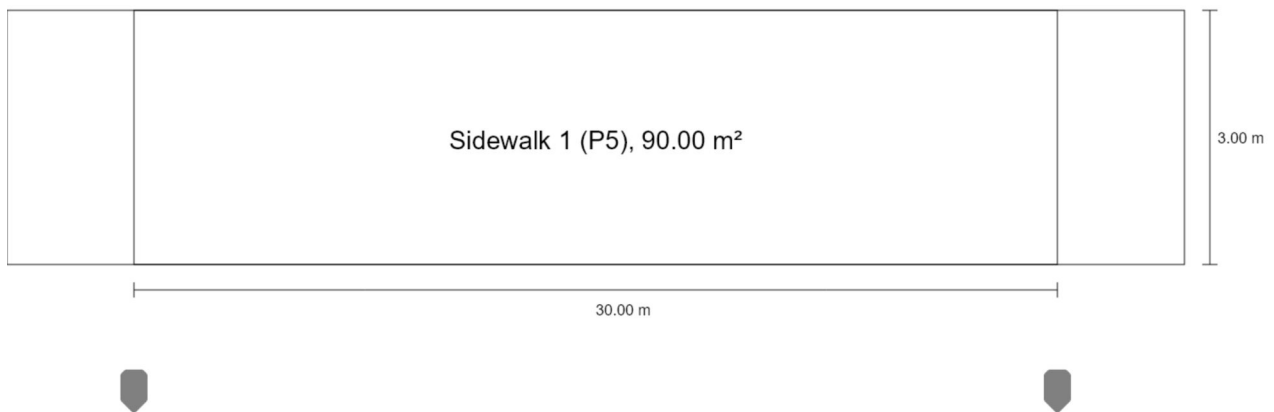
m	1.500	4.500	7.500	10.500	13.500	16.500	19.500	22.500	25.500	28.500
2.500	5.60	5.49	3.78	2.41	1.79	1.79	2.41	3.78	5.49	5.60
1.500	7.16	6.25	3.86	2.34	1.72	1.72	2.34	3.86	6.25	7.16
0.500	8.33	6.08	3.66	2.15	1.59	1.59	2.15	3.66	6.08	8.33

Maintenance value, horizontal illuminance [lx] (Value chart)

	E_{av}	E_{min}	E_{max}	$U_o (g_1)$	g_2
Maintenance value, horizontal illuminance	4.15 lx	1.59 lx	8.33 lx	0.38	0.19

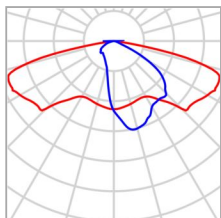
Kergtee (Mast 6m-K0, mastide vahekaugus 30m, masti kaugus kergtee kattest 1.5m)

Summary (according to EN 13201:2015)



Kergtee (Mast 6m-K0, mastide vahekaugus 30m, masti kaugus kergtee kattest 1.5m)

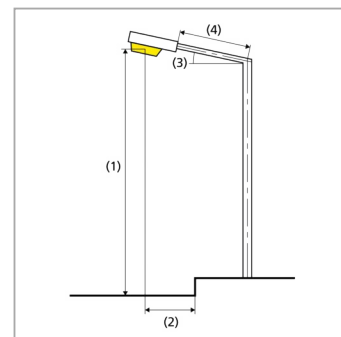
Summary (according to EN 13201:2015)



Manufacturer	Vizulo	P	10.0 W
Article No.	6000029440 MRUE 010 730 L22 AA008	Φ_{Lamp}	1424 lm
Article name	Micro Martin 10 W 8 LED	$\Phi_{\text{Luminaire}}$	1424 lm
Fitting	1x 8 LED MOD AA	η	100.00 %

Micro Martin 10 W 8 LED (single side bottom)

Pole distance	30.000 m
(1) Light spot height	6.000 m
(2) Light point overhang	-1.500 m
(3) Boom inclination	0.0°
(4) Boom length	0.000 m
Annual operating hours	4000 h: 100.0 %, 10.0 W
Wattage / route	330.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities	≥ 70°: 605 cd/klm
Any direction forming the specified angle from the downward vertical, with the luminaire installed for use.	≥ 80°: 210 cd/klm ≥ 90°: 0.00 cd/klm
Luminous intensity class	–
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.6
MF	0.81



Kergtee (Mast 6m-K0, mastide vahekaugus 30m, masti kaugus kergtee kattest 1.5m)

Summary (according to EN 13201:2015)

Results for valuation fields

A maintenance factor of 0.81 was used for calculating for the installation.

	Symbol	Calculated	Target	Check
Sidewalk 1 (P5)	E_{av}	3.93 lx	[3.00 - 4.50] lx	✓
	E_{min}	1.68 lx	≥ 0.60 lx	✓

Results for energy efficiency indicators

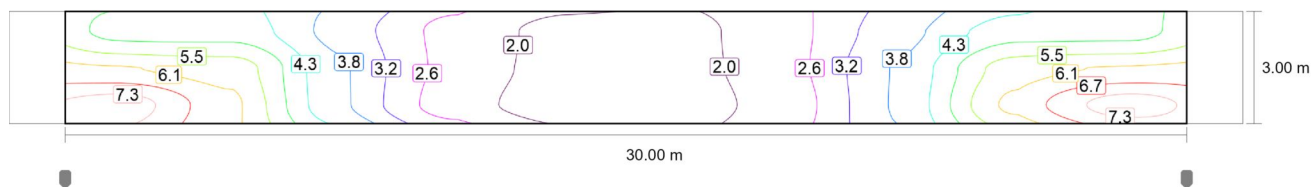
	Symbol	Calculated	Energy Consumption
Kergtee (Mast 6m-K0, mastide vahekaugus 30m, masti kaugus kergtee kattest 1.5m)	D_p	0.028 W/lx*m ²	–
Micro Martin 10 W 8 LED (single side bottom)	D_e	0.4 kWh/m ² yr	40.0 kWh/yr

Kergtee (Mast 6m-K0, mastide vahekaugus 30m, masti kaugus kergtee kattest 1.5m)

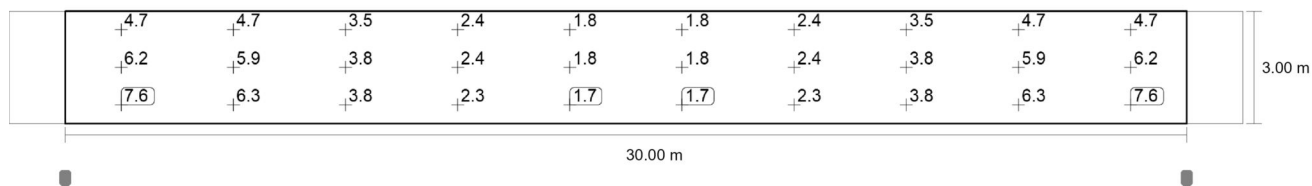
Sidewalk 1 (P5)

Results for valuation field

	Symbol	Calculated	Target	Check
Sidewalk 1 (P5)	E_{av}	3.93 lx	[3.00 - 4.50] lx	✓
	E_{min}	1.68 lx	≥ 0.60 lx	✓



Maintenance value, horizontal illuminance [lx] (Iso-illuminance curves)



Maintenance value, horizontal illuminance [lx] (Value grid)

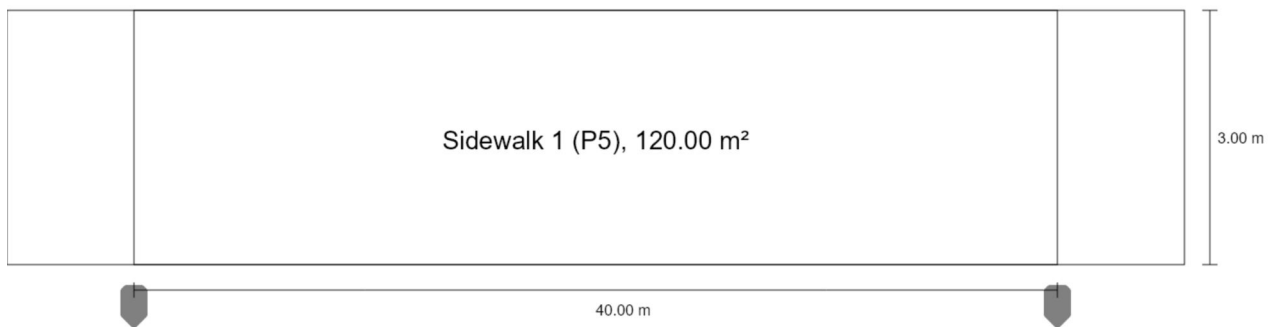
m	1.500	4.500	7.500	10.500	13.500	16.500	19.500	22.500	25.500	28.500
2.500	4.73	4.70	3.52	2.39	1.81	1.81	2.39	3.52	4.70	4.73
1.500	6.18	5.85	3.82	2.40	1.77	1.77	2.40	3.82	5.85	6.18
0.500	7.61	6.28	3.85	2.29	1.68	1.68	2.29	3.85	6.28	7.61

Maintenance value, horizontal illuminance [lx] (Value chart)

	E_{av}	E_{min}	E_{max}	$U_o (g_1)$	g_2
Maintenance value, horizontal illuminance	3.93 lx	1.68 lx	7.61 lx	0.43	0.22

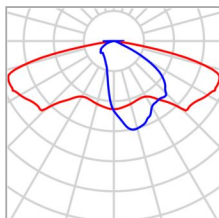
Kergtee (Mast 6m-K0, mastide vahekaugus 40m, masti kaugus kergtee kattest 0.5m)

Summary (according to EN 13201:2015)



Kergtee (Mast 6m-K0, mastide vahekaugus 40m, masti kaugus kergtee kattest 0.5m)

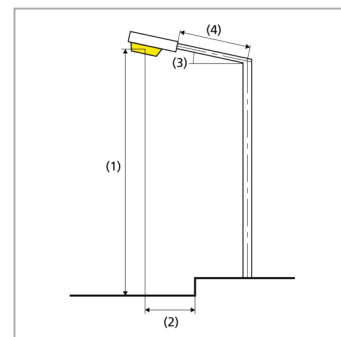
Summary (according to EN 13201:2015)



Manufacturer	Vizulo	P	10.0 W
Article No.	6000029440 MRUE 010 730 L22 AA008	Φ_{Lamp}	1424 lm
Article name	Micro Martin 10 W 8 LED	$\Phi_{\text{Luminaire}}$	1424 lm
Fitting	1x 8 LED MOD AA	η	100.00 %

Micro Martin 10 W 8 LED (single side bottom)

Pole distance	40.000 m
(1) Light spot height	6.000 m
(2) Light point overhang	-0.500 m
(3) Boom inclination	0.0°
(4) Boom length	0.000 m
Annual operating hours	4000 h: 100.0 %, 10.0 W
Wattage / route	250.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities	≥ 70°: 605 cd/klm
Any direction forming the specified angle from the downward vertical, with the luminaire installed for use.	≥ 80°: 210 cd/klm ≥ 90°: 0.00 cd/klm
Luminous intensity class	–
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.6
MF	0.81



Kergtee (Mast 6m-K0, mastide vahekaugus 40m, masti kaugus kergtee kattest 0.5m)

Summary (according to EN 13201:2015)

Results for valuation fields

A maintenance factor of 0.81 was used for calculating for the installation.

	Symbol	Calculated	Target	Check
Sidewalk 1 (P5)	E_{av}	3.15 lx	[3.00 - 4.50] lx	✓
	E_{min}	0.62 lx	≥ 0.60 lx	✓

Results for energy efficiency indicators

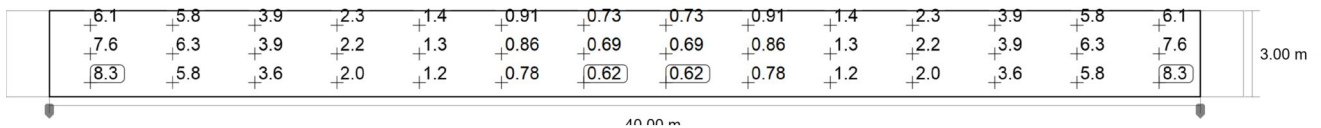
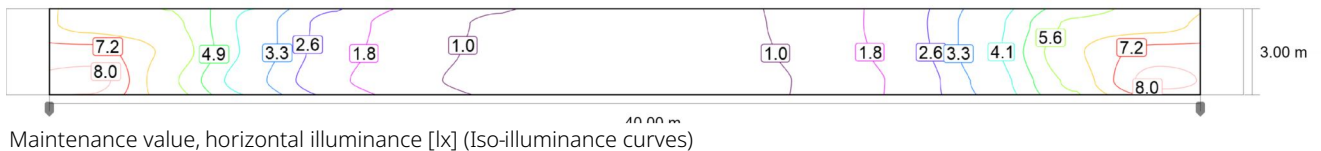
	Symbol	Calculated	Energy Consumption
Kergtee (Mast 6m-K0, mastide vahekaugus 40m, masti kaugus kergtee kattest 0.5m)	D_p	0.026 W/lx*m ²	–
Micro Martin 10 W 8 LED (single side bottom)	D_e	0.3 kWh/m ² yr	40.0 kWh/yr

Kergtee (Mast 6m-K0, mastide vahekaugus 40m, masti kaugus kergtee kattest 0.5m)

Sidewalk 1 (P5)

Results for valuation field

	Symbol	Calculated	Target	Check
Sidewalk 1 (P5)	E_{av}	3.15 lx	[3.00 - 4.50] lx	✓
	E_{min}	0.62 lx	≥ 0.60 lx	✓



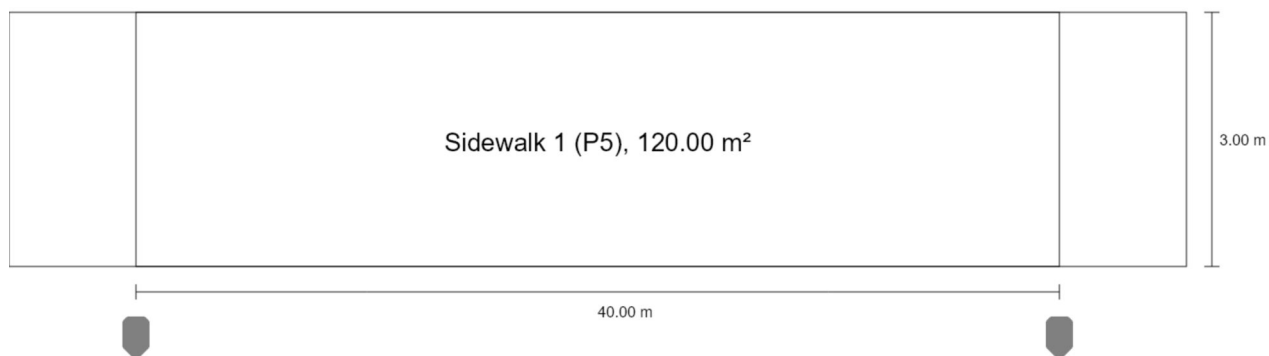
m	1.429	4.286	7.143	10.000	12.857	15.714	18.571	21.429	24.286	27.143	30.000	32.857	35.714	38.571
2.500	6.08	5.80	3.86	2.28	1.37	0.91	0.73	0.73	0.91	1.37	2.28	3.86	5.80	6.08
1.500	7.56	6.27	3.93	2.17	1.29	0.86	0.69	0.69	0.86	1.29	2.17	3.93	6.27	7.56
0.500	8.35	5.82	3.62	1.95	1.16	0.78	0.62	0.62	0.78	1.16	1.95	3.62	5.82	8.35

Maintenance value, horizontal illuminance [lx] (Value chart)

	E_{av}	E_{min}	E_{max}	$U_o (g_1)$	g_2
Maintenance value, horizontal illuminance	3.15 lx	0.62 lx	8.35 lx	0.20	0.07

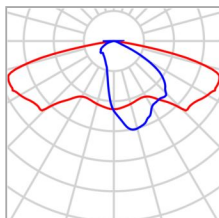
Kergtee (Mast 6m-K0, mastide vahekaugus 40m, masti kaugus kergtee kattest 0.85m)

Summary (according to EN 13201:2015)



Kergtee (Mast 6m-K0, mastide vahekaugus 40m, masti kaugus kergtee kattest 0.85m)

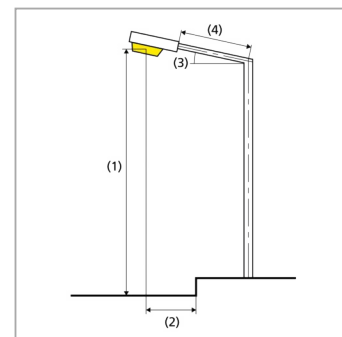
Summary (according to EN 13201:2015)



Manufacturer	Vizulo	P	10.0 W
Article No.	6000029440 MRUE 010 730 L22 AA008	Φ_{Lamp}	1424 lm
Article name	Micro Martin 10 W 8 LED	$\Phi_{\text{Luminaire}}$	1424 lm
Fitting	1x 8 LED MOD AA	η	100.00 %

Micro Martin 10 W 8 LED (single side bottom)

Pole distance	40.000 m
(1) Light spot height	6.000 m
(2) Light point overhang	-0.850 m
(3) Boom inclination	0.0°
(4) Boom length	0.000 m
Annual operating hours	4000 h: 100.0 %, 10.0 W
Wattage / route	250.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities Any direction forming the specified angle from the downward vertical, with the luminaire installed for use.	$\geq 70^\circ$: 605 cd/klm $\geq 80^\circ$: 210 cd/klm $\geq 90^\circ$: 0.00 cd/klm
Luminous intensity class 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.6
MF	0.81



Kergtee (Mast 6m-K0, mastide vahekaugus 40m, masti kaugus kergtee kattest 0.85m)

Summary (according to EN 13201:2015)

Results for valuation fields

A maintenance factor of 0.81 was used for calculating for the installation.

	Symbol	Calculated	Target	Check
Sidewalk 1 (P5)	E_{av}	3.11 lx	[3.00 - 4.50] lx	✓
	E_{min}	0.65 lx	≥ 0.60 lx	✓

Results for energy efficiency indicators

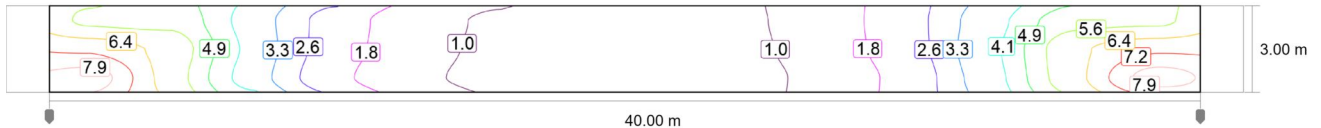
	Symbol	Calculated	Energy Consumption
Kergtee (Mast 6m-K0, mastide vahekaugus 40m, masti kaugus kergtee kattest 0.85m)	D_p	0.027 W/lx*m ²	–
Micro Martin 10 W 8 LED (single side bottom)	D_e	0.3 kWh/m ² yr	40.0 kWh/yr

Kergtee (Mast 6m-K0, mastide vahekaugus 40m, masti kaugus kergtee kattest 0.85m)

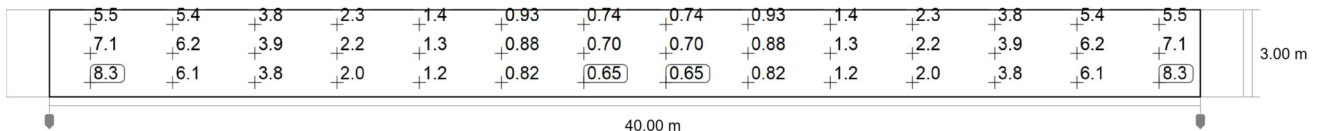
Sidewalk 1 (P5)

Results for valuation field

	Symbol	Calculated	Target	Check
Sidewalk 1 (P5)	E_{av}	3.11 lx	[3.00 - 4.50] lx	✓
	E_{min}	0.65 lx	≥ 0.60 lx	✓



Maintenance value, horizontal illuminance [lx] (Iso-illuminance curves)



Maintenance value, horizontal illuminance [lx] (Value grid)

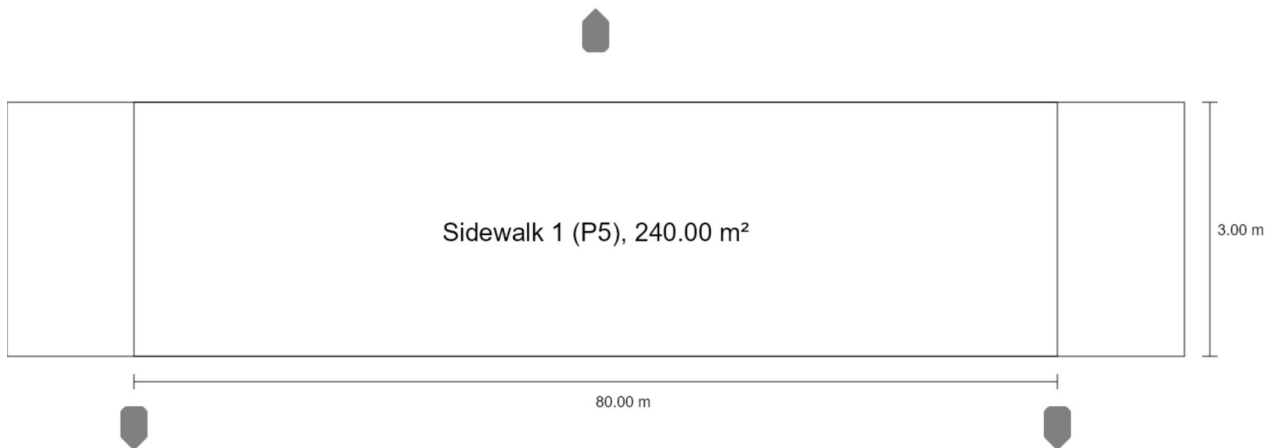
m	1.429	4.286	7.143	10.000	12.857	15.714	18.571	21.429	24.286	27.143	30.000	32.857	35.714	38.571
2.500	5.50	5.40	3.79	2.28	1.38	0.93	0.74	0.74	0.93	1.38	2.28	3.79	5.40	5.50
1.500	7.09	6.17	3.93	2.23	1.33	0.88	0.70	0.70	0.88	1.33	2.23	3.93	6.17	7.09
0.500	8.31	6.12	3.78	2.04	1.21	0.82	0.65	0.65	0.82	1.21	2.04	3.78	6.12	8.31

Maintenance value, horizontal illuminance [lx] (Value chart)

	E_{av}	E_{min}	E_{max}	$U_o (g_1)$	g_2
Maintenance value, horizontal illuminance	3.11 lx	0.65 lx	8.31 lx	0.21	0.08

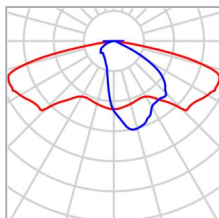
Kergtee (Mast 6m-K0, mastide vahekaugus 40m, masti kaugus kergtee kattest 0.85m)

Summary (according to EN 13201:2015)



Kergtee (Mast 6m-K0, mastide vahekaugus 40m, masti kaugus kergtee kattest 0.85m)

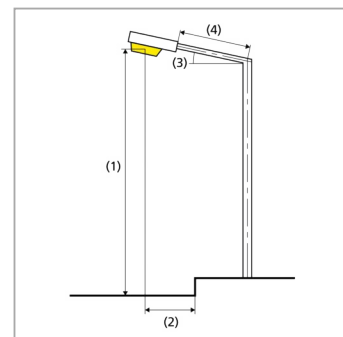
Summary (according to EN 13201:2015)



Manufacturer	Vizulo	P	10.0 W
Article No.	6000029440 MRUE 010 730 L22 AA008	Φ_{Lamp}	1424 lm
Article name	Micro Martin 10 W 8 LED	$\Phi_{\text{Luminaire}}$	1424 lm
Fitting	1x 8 LED MOD AA	η	100.00 %

Micro Martin 10 W 8 LED (both sides offset)

Pole distance	80.000 m
(1) Light spot height	6.000 m
(2) Light point overhang	-0.850 m
(3) Boom inclination	0.0°
(4) Boom length	0.000 m
Annual operating hours	4000 h: 100.0 %, 10.0 W
Wattage / route	240.0 W/km
ULR / ULOR	0.00 / 0.00
Max. luminous intensities Any direction forming the specified angle from the downward vertical, with the luminaire installed for use.	$\geq 70^\circ$: 605 cd/klm $\geq 80^\circ$: 210 cd/klm $\geq 90^\circ$: 0.00 cd/klm
Luminous intensity class 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.6
MF	0.81



Kergtee (Mast 6m-K0, mastide vahekaugus 40m, masti kaugus kergtee kattest 0.85m)

Summary (according to EN 13201:2015)

Results for valuation fields

A maintenance factor of 0.81 was used for calculating for the installation.

	Symbol	Calculated	Target	Check
Sidewalk 1 (P5)	E_{av}	3.13 lx	[3.00 - 4.50] lx	✓
	E_{min}	0.68 lx	≥ 0.60 lx	✓

Results for energy efficiency indicators

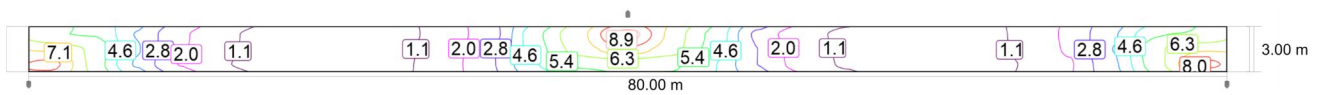
	Symbol	Calculated	Energy Consumption
Kergtee (Mast 6m-K0, mastide vahekaugus 40m, masti kaugus kergtee kattest 0.85m)	D_p	0.027 W/lx*m ²	–
Micro Martin 10 W 8 LED (both sides offset)	D_e	0.3 kWh/m ² yr	80.0 kWh/yr

Kergtee (Mast 6m-K0, mastide vahekaugus 40m, masti kaugus kergtee kattest 0.85m)

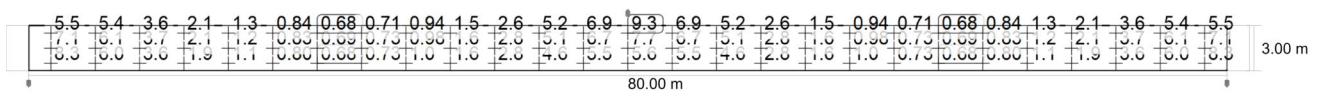
Sidewalk 1 (P5)

Results for valuation field

	Symbol	Calculated	Target	Check
Sidewalk 1 (P5)	E_{av}	3.13 lx	[3.00 - 4.50] lx	✓
	E_{min}	0.68 lx	≥ 0.60 lx	✓



Maintenance value, horizontal illuminance [lx] (Iso-illuminance curves)



Maintenance value, horizontal illuminance [lx] (Value grid)

m	1.481	4.444	7.407	10.370	13.333	16.296	19.259	22.222	25.185	28.148	31.111	34.074	37.037	40.000	42.963	45.926	48.889
2.500	5.50	5.36	3.61	2.12	1.26	0.84	0.68	0.71	0.94	1.46	2.57	5.22	6.93	9.29	6.93	5.22	2.57
1.500	7.07	6.13	3.73	2.07	1.23	0.83	0.69	0.73	0.98	1.58	2.79	5.06	6.67	7.69	6.67	5.06	2.79
0.500	8.27	6.01	3.56	1.91	1.14	0.80	0.68	0.73	1.01	1.62	2.79	4.56	5.53	5.57	5.53	4.56	2.79

m	51.852	54.815	57.778	60.741	63.704	66.667	69.630	72.593	75.556	78.519
2.500	1.46	0.94	0.71	0.68	0.84	1.26	2.12	3.61	5.36	5.50
1.500	1.58	0.98	0.73	0.69	0.83	1.23	2.07	3.73	6.13	7.07
0.500	1.62	1.01	0.73	0.68	0.80	1.14	1.91	3.56	6.01	8.27

Maintenance value, horizontal illuminance [lx] (Value chart)

	E_{av}	E_{min}	E_{max}	$U_o (g_1)$	g_2
Maintenance value, horizontal illuminance	3.13 lx	0.68 lx	9.29 lx	0.22	0.07