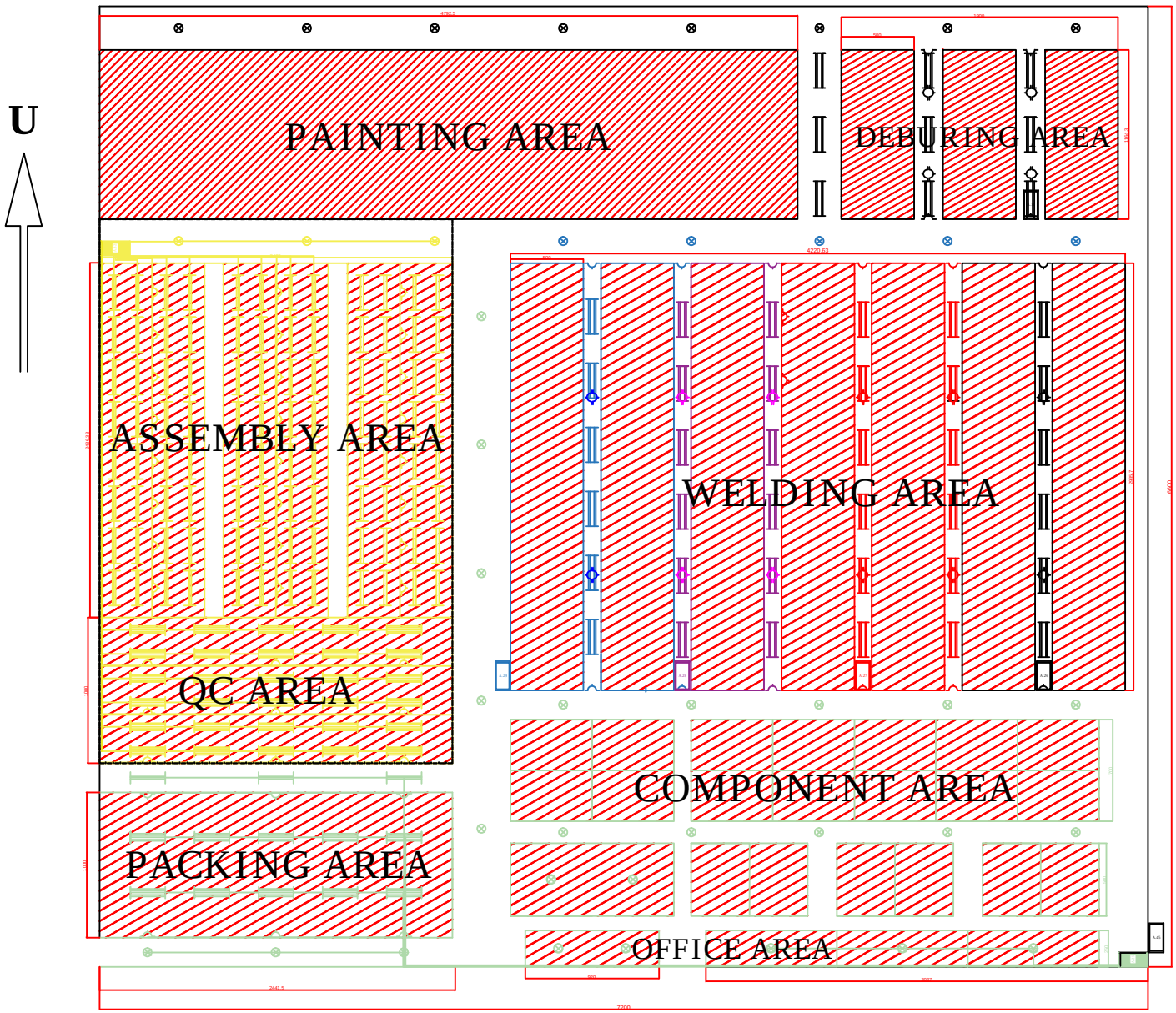
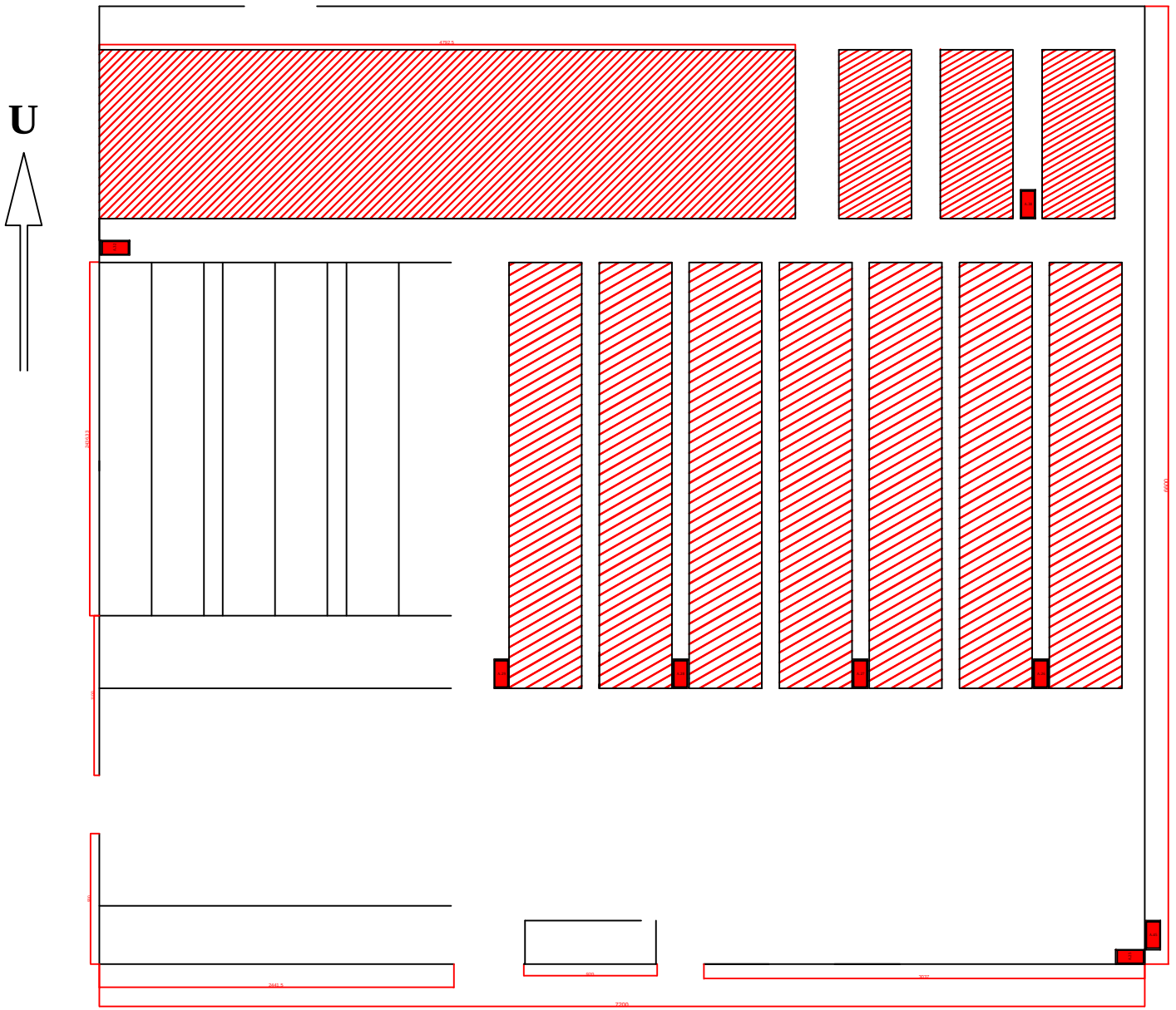


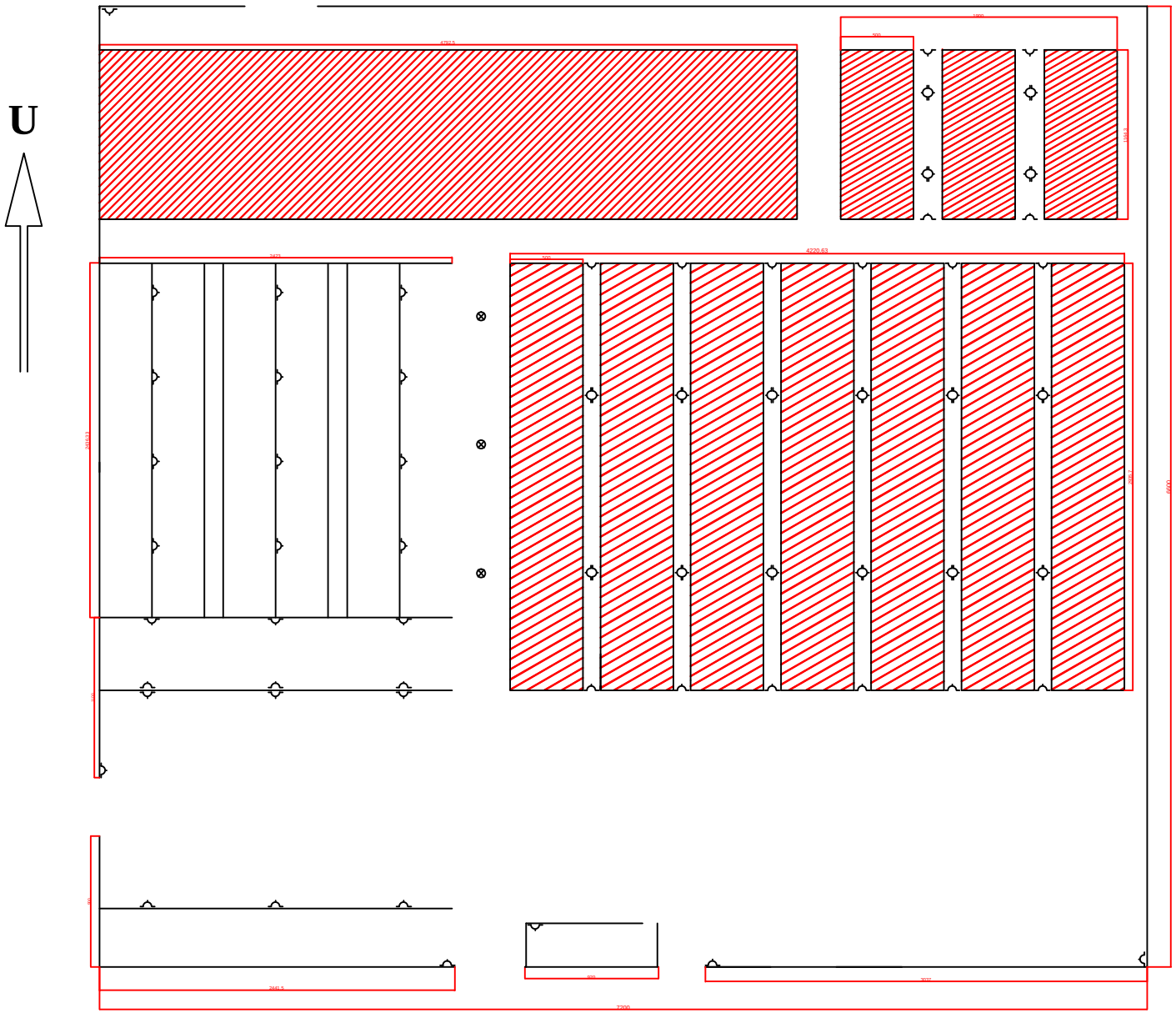
DENAH

INSTALASI GEDUNG EOP PT. MAK			KETERANGAN:
			A3 NO : 01
UNIVERSITAS NEGERI YOGYAKARTA	SKALA: 1 : 100	DGBR: ARDI.H	
	DPRKS:	DSTJ :	BAGIAN : MAINTENANCE



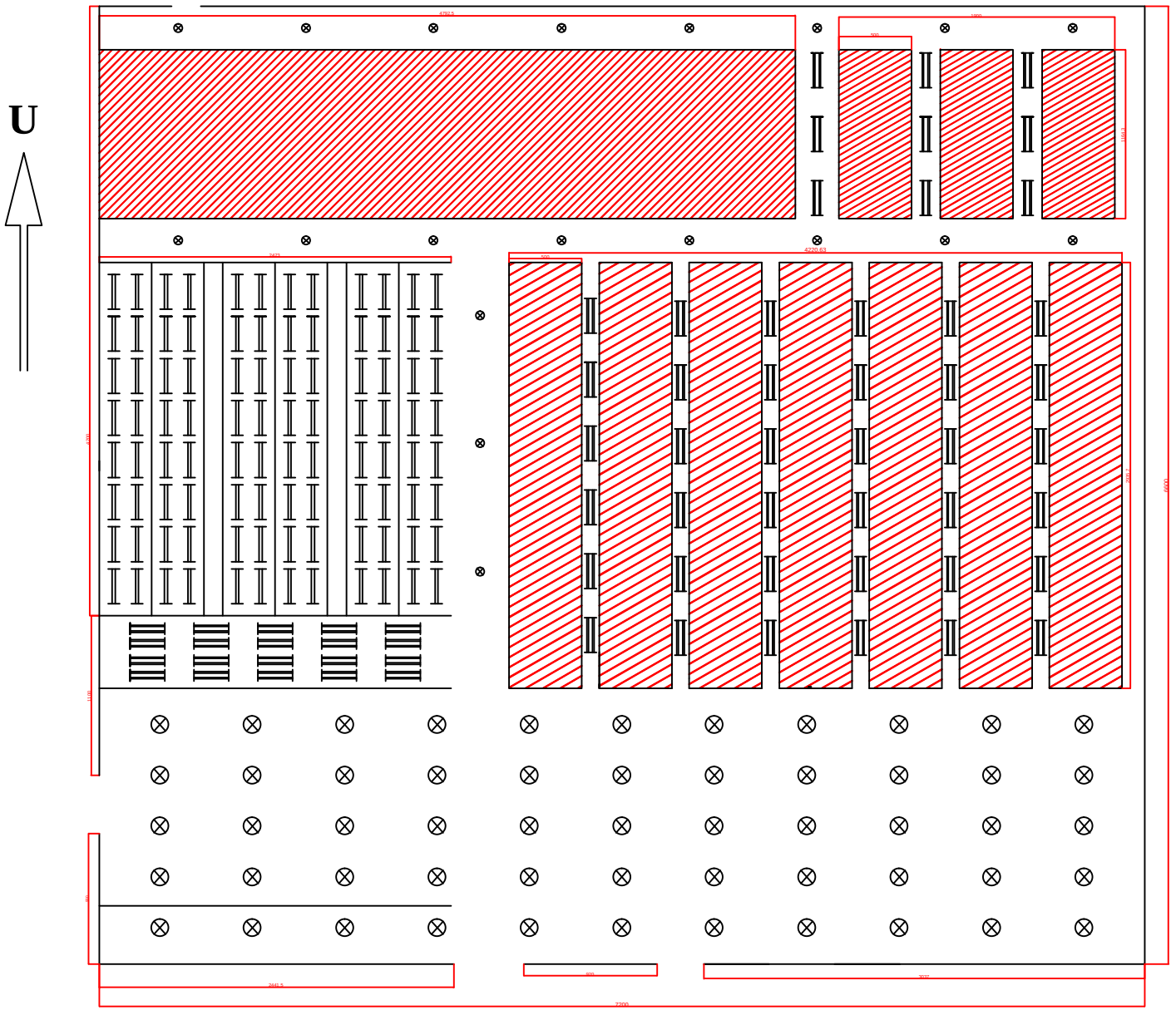
DENAH PENEMPATAN PANEL

TATA LETAK BOX PANEL GEDUNG EOP			KETERANGAN:
			A3 NO : 07
PT. MEGA ANDALAN KALASAN	SKALA: 1 : 100	DGBR: ARDI.H	
	DPRKS:	DSTJ :	BAGIAN : MAINTENANCE



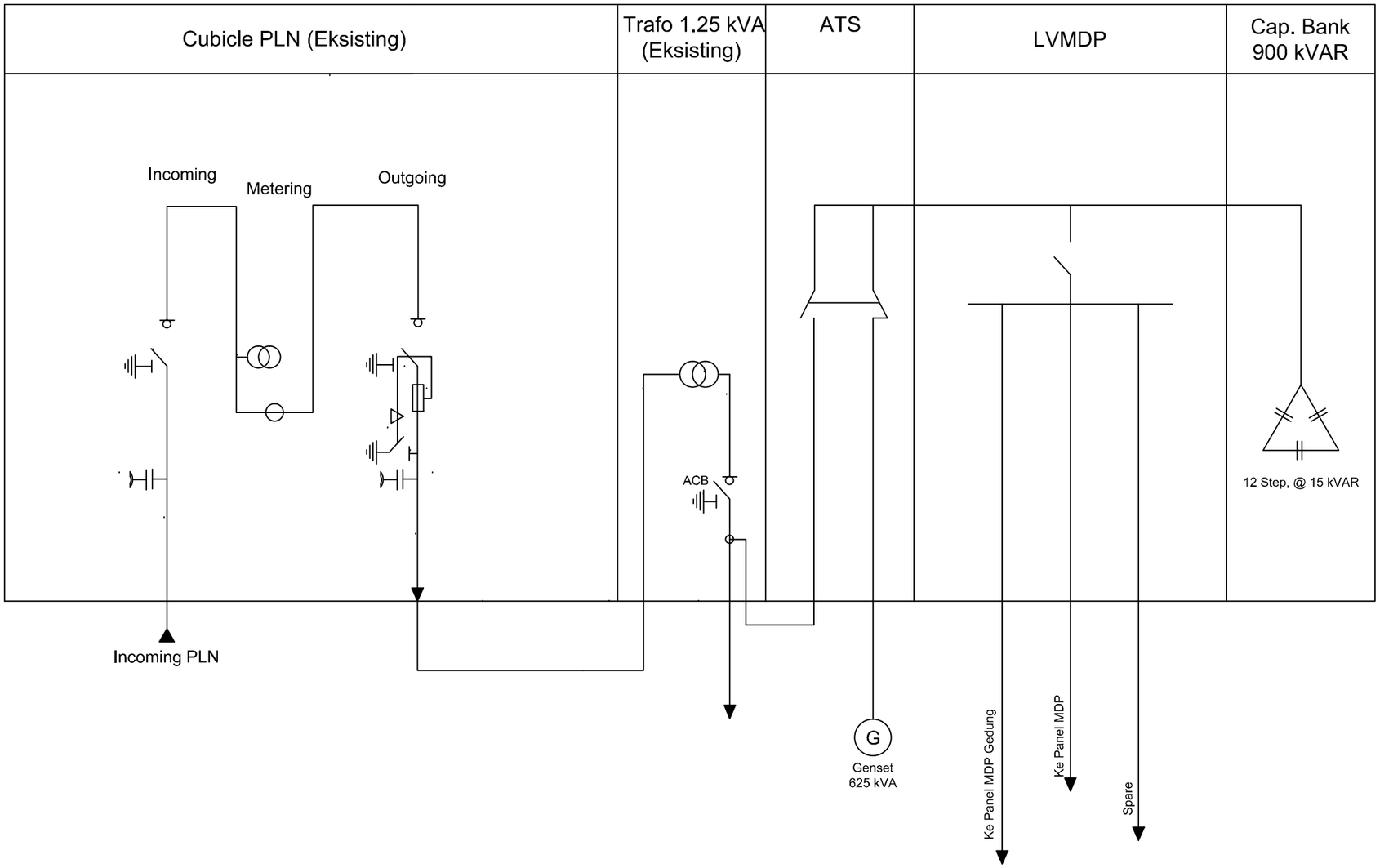
DENAH PENEMPATAN STOPKONTAK

TATA LETAK STOP KONTAK GEDUNG EOP			KETERANGAN:
			A3 NO : 05
PT. MEGA ANDALAN KALASAN	SKALA: 1 : 100	DGBR: ARDI H	
	DPRKS:	DSTJ :	BAGIAN : MAINTENANCE

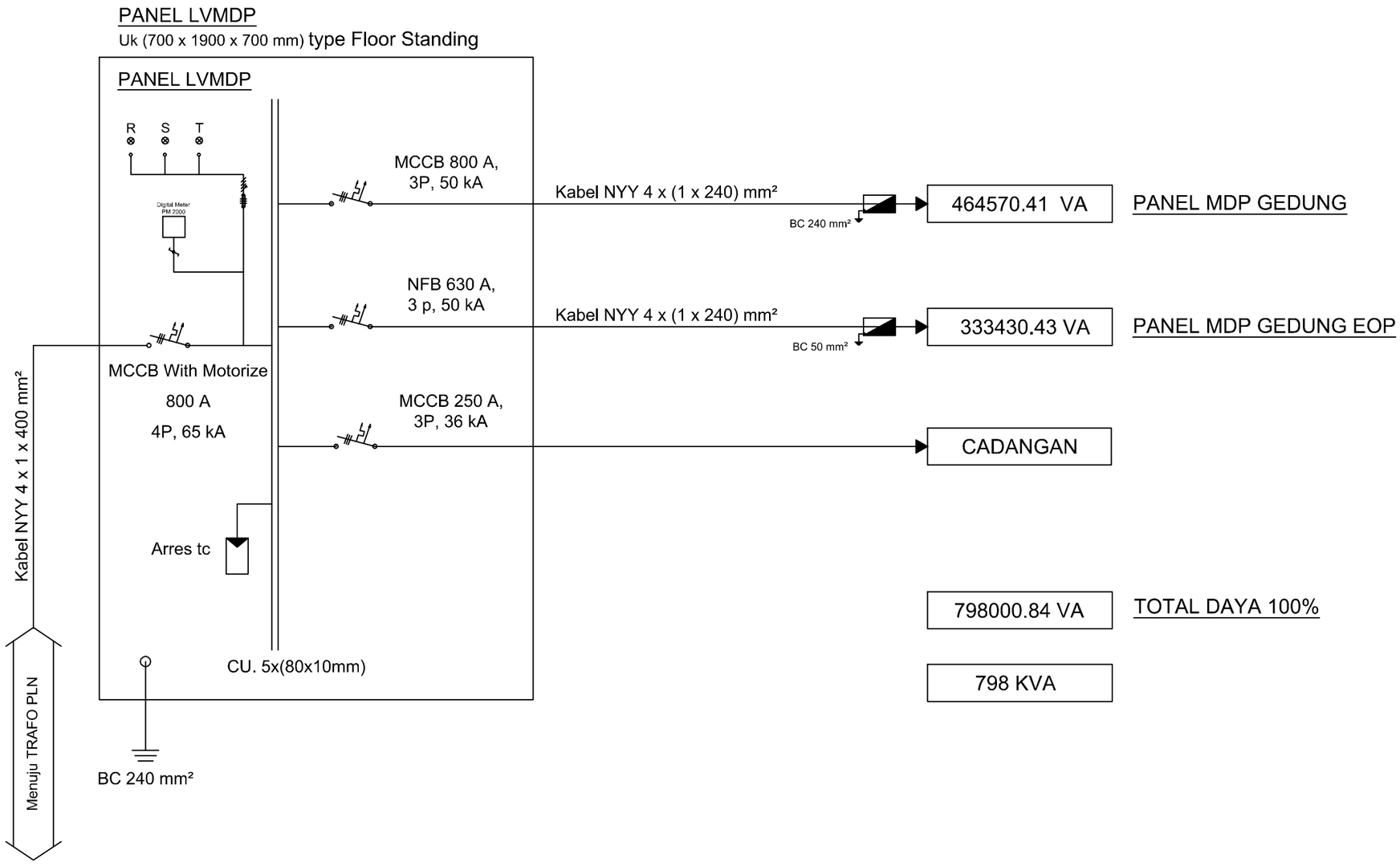


DENAH PENEMPATAN TITIK LAMPU

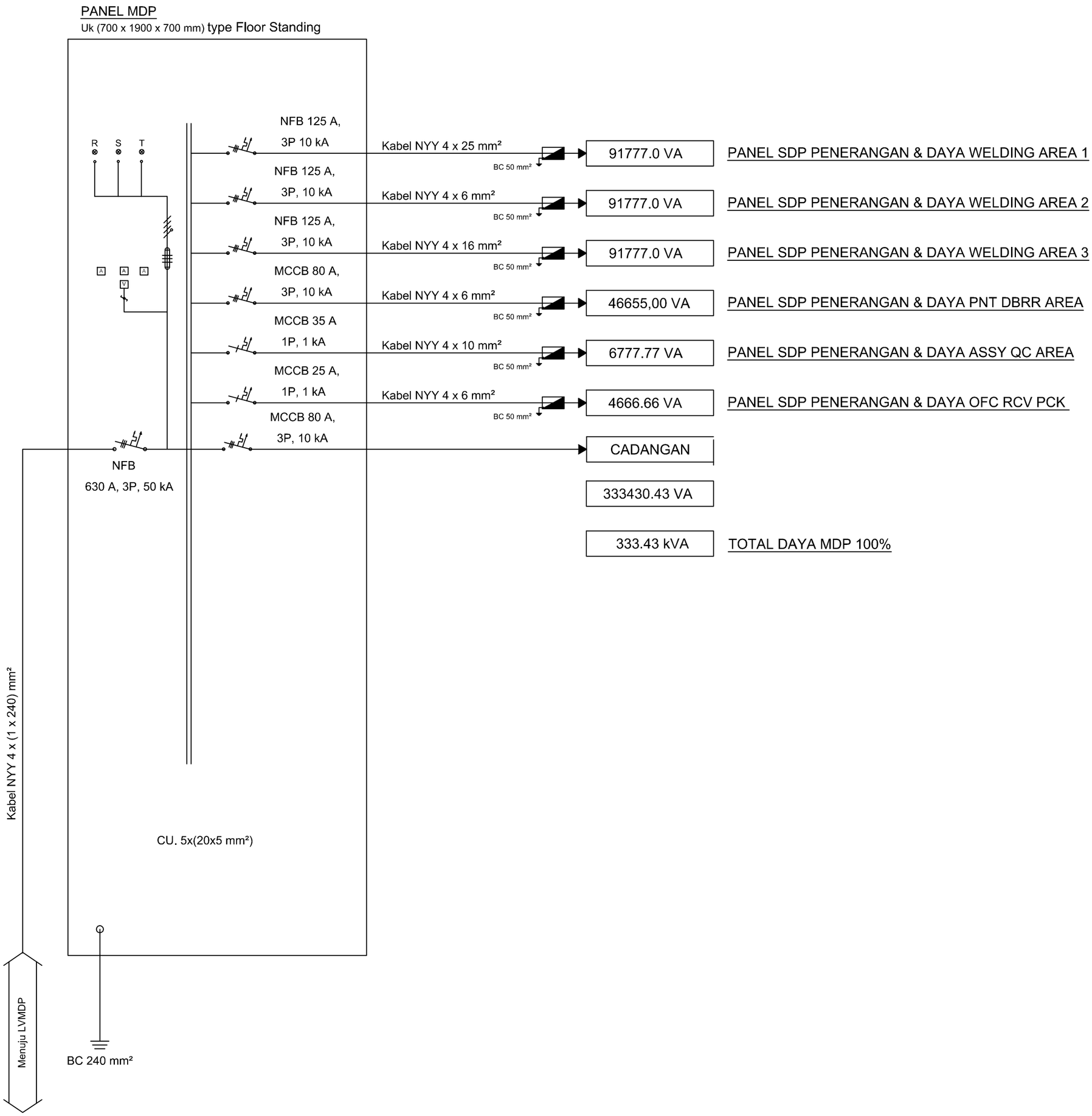
TATA LETAK LAMPU GEDUNG EOP			KETERANGAN:
			A3 NO : 06
PT. MEGA ANDALAN KALASAN	SKALA: 1 : 100	DGBR: ARDI.H	
	DPRKS:	DSTJ :	BAGIAN : MAINTENANCE



SINGLE LINE DIAGRAM SISTEM LVMDP



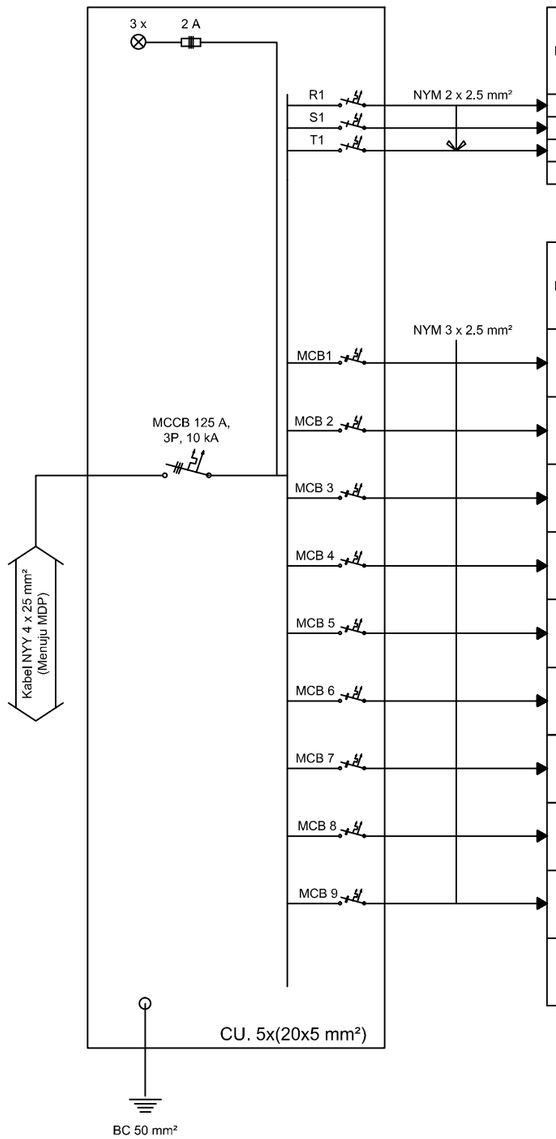
WIRING DIAGRAM SISTEM LVMDP



WIRING DIAGRAM MDP GEDUNG EOP

Panel SDP Penerangan & Daya Area Welding 1

Uk (700 x 500 x 250) type steel pole mounted



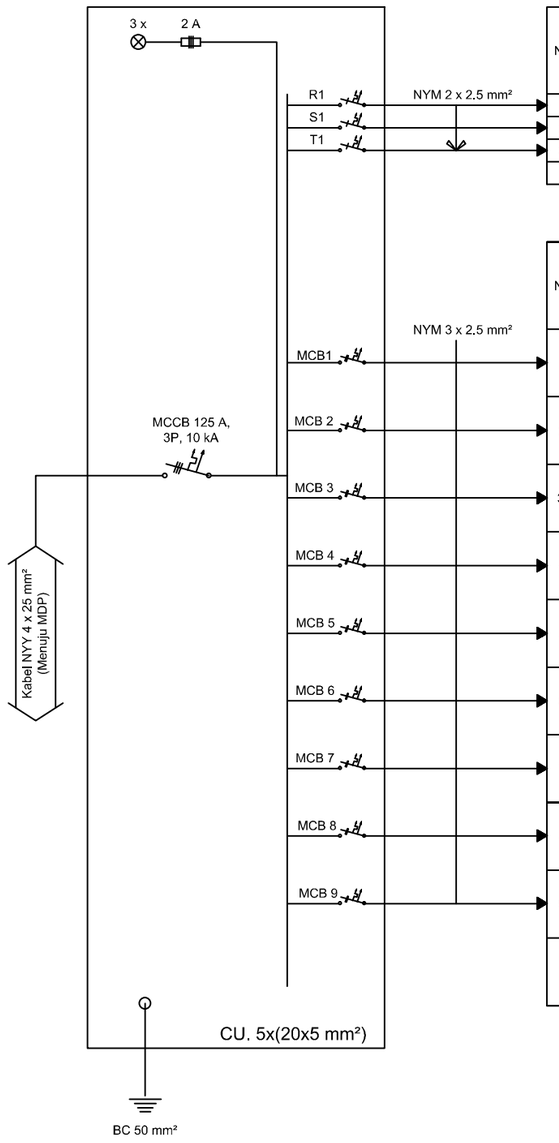
NO	FUNGSI	MCB			DAYA (W)			PERLENGKAPAN					
		A	P	KA	R	S	T	RMO TL LED 2 x 16 W		SPOTLIGHT 60 W		Exhaust Fan Wall 40 W	
1	Penerangan	10	1	6	356			16	256	1	60	1	40
2						296		16	256			1	40
3							316	16	256	1	60		
								48		2		2	

NO	FUNGSI	MCB			DAYA (W)	PERLENGKAPAN			
		A	P	KA		Kotak Kontak 200 W		Kotak Kontak 5000 W	
1	TENAGA	25	3	4	10400	2	400	2	10000
2					10000			2	10000
3					10400	2	400	2	10000
4					10000			2	10000
5					10400	2	400	2	10000
6					10000			2	10000
7					10400	2	400	2	10000
8					10000			2	10000
9	CADANGAN				1000				
					82600.00 W				
					91777.00 VA				

WIRING INSTALASI PANEL PENERANGAN DAN DAYA WELDING LINE 1

Panel SDP Penerangan & Daya Area Welding 2

Uk (700 x 500 x 250) type steel pole mounted



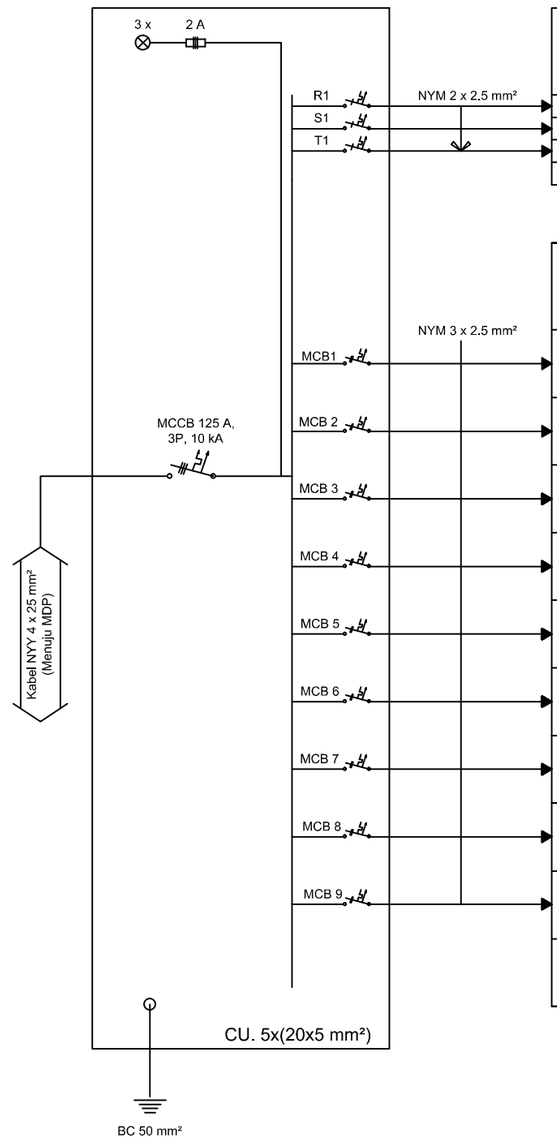
NO	FUNGSI	MCB A	MCB P	MCB KA	DAYA (W) R	DAYA (W) S	DAYA (W) T	PERLENGKAPAN RMO TL LED 2 x 16 W		PERLENGKAPAN SPOTLIGHT 60 W		PERLENGKAPAN Exhaust Fan Wall 40 W	
1	Penerangan	10	1	6	356			16	256	1	60	1	40
2						296		16	256			1	40
3							316	16	256	1	60		
								48		2		2	

NO	FUNGSI	MCB A	MCB P	MCB KA	DAYA (W)	PERLENGKAPAN Kotak Kontak 200 W		PERLENGKAPAN Kotak Kontak 5000 W	
1	TENAGA	25	3	4	10400	2	400	2	10000
2					10000			2	10000
3					10400	2	400	2	10000
4					10000			2	10000
5					10400	2	400	2	10000
6					10000			2	10000
7					10400	2	400	2	10000
8					10000			2	10000
9	CADANGAN				1000				
					82600.00 W				
					91777.00 VA				

WIRING INSTALASI PANEL PENERANGAN DAN DAYA WELDING LINE 2

Panel SDP Penerangan & Daya Area Welding 3

Uk (700 x 500 x 250) type steel pole mounted



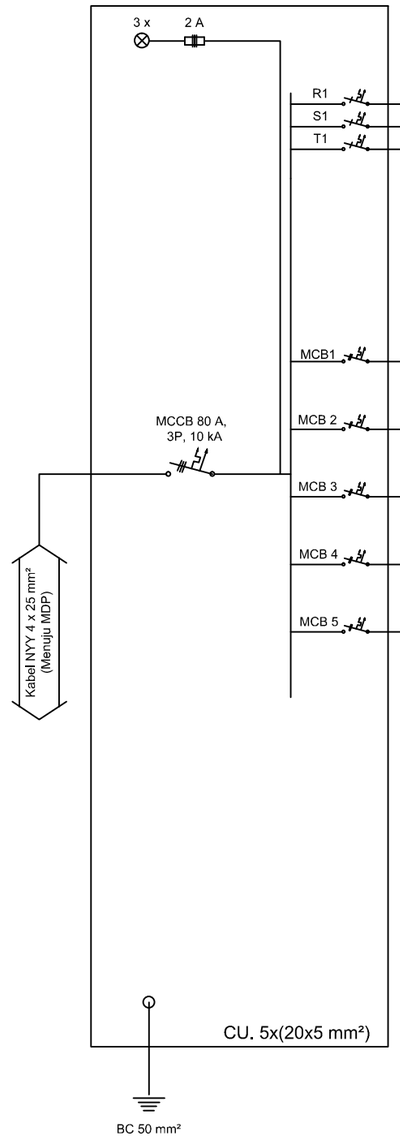
NO	FUNGSI	MCB			DAYA (W)			PERLENGKAPAN					
		A	P	KA	R	S	T	RMO TL LED 2 x 16 W		SPOTLIGHT 60 W		Exhaust Fan Wall 40 W	
1	Penerangan	10	1	6	356			16	256	1	60	1	40
2						296		16	256			1	40
3							316	16	256	1	60		
								48		2		2	

NO	FUNGSI	MCB			DAYA (W)	PERLENGKAPAN			
		A	P	KA		Kotak Kontak 200 W		Kotak Kontak 5000 W	
1	TENAGA	25	3	4	10400	2	400	2	10000
2					10000			2	10000
3					10400	2	400	2	10000
4					10000			2	10000
5					10400	2	400	2	10000
6					10000			2	10000
7					10400	2	400	2	10000
8					10000			2	10000
9	CADANGAN				1000				
					82600.00 W				
					91777.00 VA				

WIRING INSTALASI PANEL PENERANGAN DAN DAYA WELDING LINE 3

Panel SDP Penerangan & Daya Deburring & Painting Area

Uk (700 x 500 x 250) type steel pole mounted



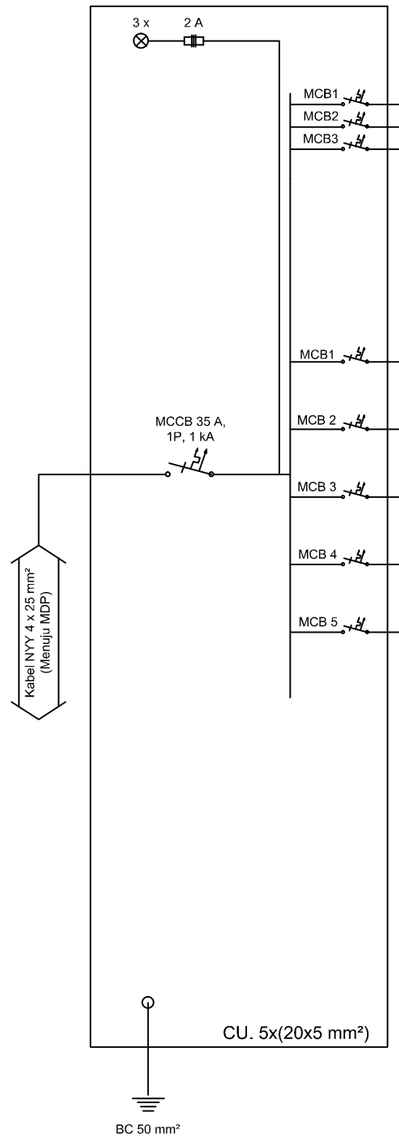
NO	FUNGSI	MCB			DAYA (W)			PERLENGKAPAN					
		A	P	KA	R	S	T	RMO TL LED 1 x 16 W		DOWNLIGHT 36 W		Exhaust Fan Wall 40 W	
1	Penerangan	4	1	6	588			32	512	1	36	1	40
2						588		32	512	1	36	1	40
3							588	32	512	1	36	1	40
								96		3		3	120

NO	FUNGSI	MCB			DAYA (W)	PERLENGKAPAN			
		A	P	KA		Kotak Kontak 200 W		Kotak Kontak 5000 W	
1	TENAGA	20	3	4	10400	2	400	2	10000
2					10000			2	10000
3					10400	2	400	2	10000
4					10000			2	10000
5	CADANGAN	6			1000				
					41900.00 W				
					46555.00 VA				

WIRING INSTALASI PANEL PENERANGAN DAN DAYA DEBURRING & PAINTING AREA

Panel SDP Penerangan & Daya Assembly & QC Area

Uk (700 x 500 x 250) type steel pole mounted



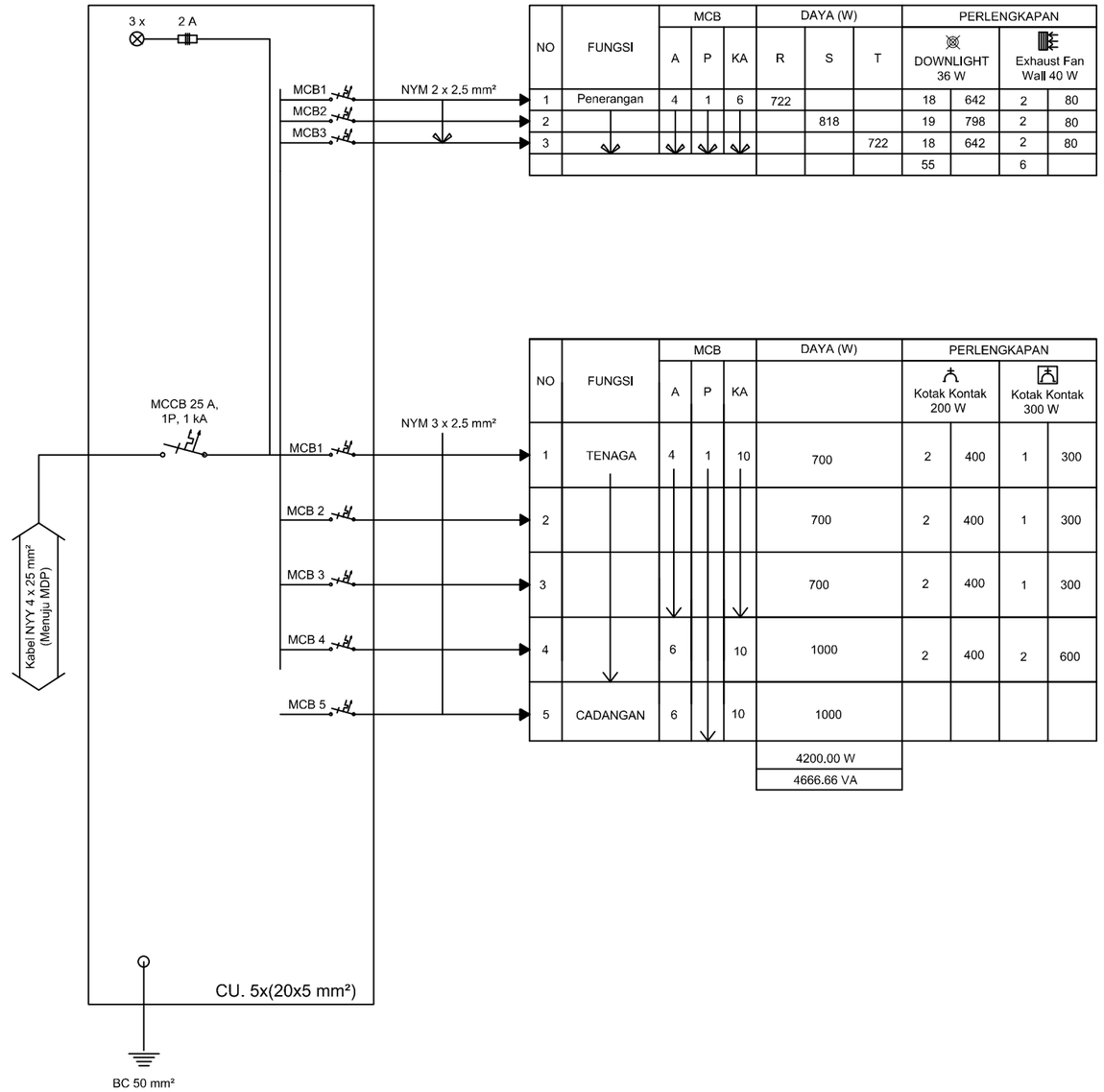
NO	FUNGSI	MCB			DAYA (W)			PERLENGKAPAN					
		A	P	KA	R	S	T	RMO TL LED 2 x 16 W		DOWNLIGHT 36 W		Exhaust Fan Wall 40 W	
1	Penerangan	2	1	6	572			22	352	5	180	1	40
2						480		14	224	6	216	1	40
3							572	22	352	5	180	1	40
								58		16		3	120

NO	FUNGSI	MCB			DAYA (W)	PERLENGKAPAN			
		A	P	KA		Kotak Kontak 200 W		Kotak Kontak 300 W	
1	TENAGA	6	1	10	1000	2	400	2	600
2					1000	2	400	2	600
3					1000	2	400	2	600
4		10		16	2100	3	1200	3	900
5	CADANGAN	6			1000				
					6100,00 W				
					6777,77 VA				

WIRING INSTALASI PANEL PENERANGAN DAN DAYA ASSEMBLY & QC AREA

Panel SDP Penerangan & Daya Office, Receiving, Packing Area

Uk (700 x 500 x 250) type steel pole mounted

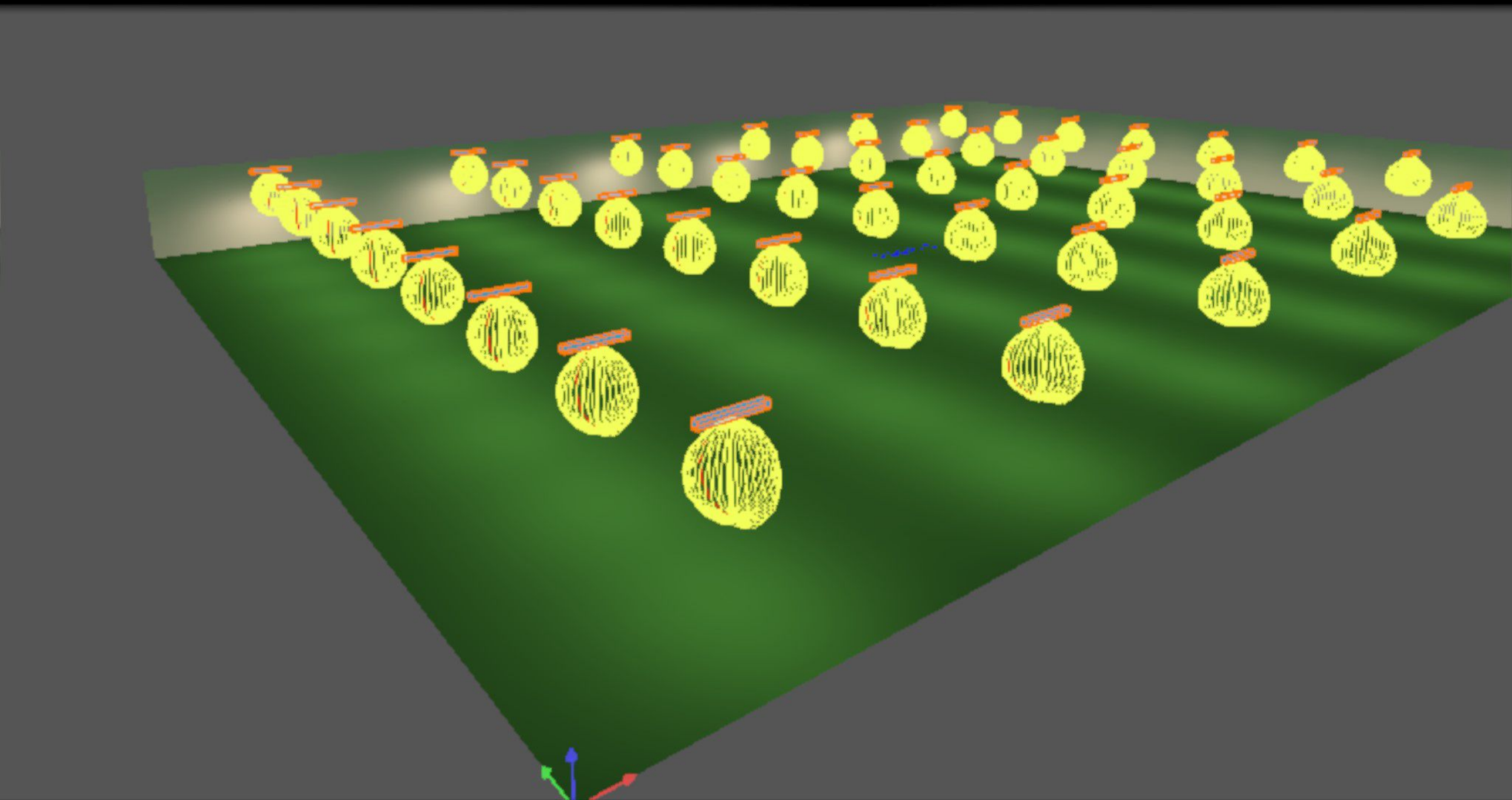


NO	FUNGSI	MCB A	MCB P	MCB KA	DAYA (W) R	DAYA (W) S	DAYA (W) T	PERLENGKAPAN DOWNLIGHT 36 W		PERLENGKAPAN Exhaust Fan Wall 40 W	
1	Penerangan	4	1	6	722			18	642	2	80
2						818		19	798	2	80
3							722	18	642	2	80
								55		6	

NO	FUNGSI	MCB A	MCB P	MCB KA	DAYA (W)	PERLENGKAPAN Kotak Kontak 200 W		PERLENGKAPAN Kotak Kontak 300 W	
1	TENAGA	4	1	10	700	2	400	1	300
2					700	2	400	1	300
3					700	2	400	1	300
4		6		10	1000	2	400	2	600
5	CADANGAN	6		10	1000				
					4200.00 W				
					4666.66 VA				

WIRING INSTALASI PANEL PENERANGAN DAN DAYA OFFICE, RECEIVING, PACKING AREA

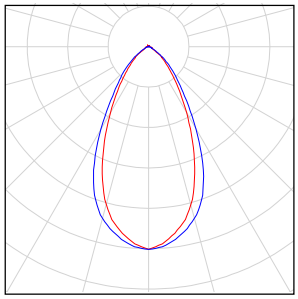
NTSC



Date:
08-Aug-19

Table of contents

Project 0

Quantity	Luminaire (Luminous emittance)		
48	Philips - WT470C L1300 1 xLED23S/840 NB Luminous emittance 1 Fitting: 1xLED23S/840/- Light output ratio: 99.72% Lamp luminous flux: 2300 lm Luminaire luminous flux: 2294 lm Power: 16.4 W Luminous efficacy: 139.9 lm/W Colorimetric data 1xLED23S/840/-: CCT 3000 K, CRI 100		

Total lamp luminous flux: 110400 lm, Total luminaire luminous flux: 110112 lm, Total Load: 787.2 W, Luminous efficacy: 139.9 lm/W

Project 0

No.	Control group	Luminaire
1	Control group 11	48 x Philips - WT470C L1300 1 xLED23S/840 NB

Light scene 1

Control group	Dimming values
Control group 11	100%

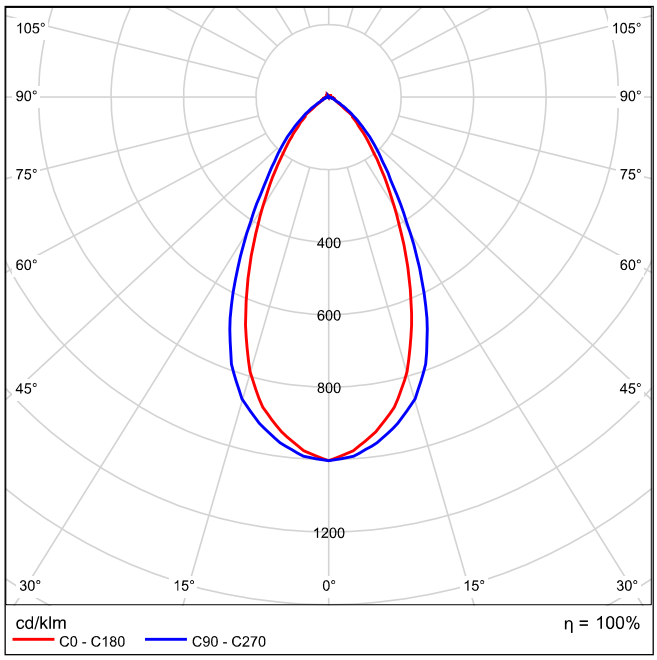
Philips WT470C L1300 1 xLED23S/840 NB 1xLED23S/840/-

Excellent quality of light with high efficiency PacificLED gen4 is a highly efficient and reliable LED waterproof luminaire that offers an excellent quality of light, with a uniform light distribution without visible striping or color artefacts. The range offers modular construction to enable ease of upgrade and maintenance.
The new optical system provides distortion-free lighting with improved visual guidance, which makes it ideally suited to general industry, warehouses and parking areas. The range also offers the option of multiple optics to ensure an optimized lighting scheme for a wide range of applications.
For industrial applications, PacificLED gen4 offers an open product architecture with toolless access to the gear tray and an innovative end-cap design with built-in connector for fast and easy installation. The single-piece mounting clamp ensures no small, loose components which could affect the primary production process.

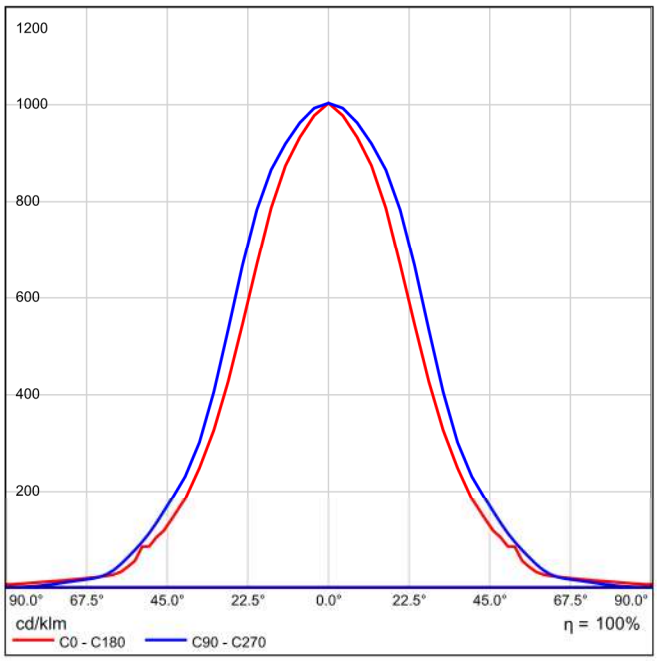
Light output ratio: 99.72%
Lamp luminous flux: 2300 lm
Luminaire luminous flux: 2294 lm
Power: 16.4 W
Luminous efficacy: 139.9 lm/W

Colorimetric data
1xLED23S/840/-: CCT 3000 K, CRI 100

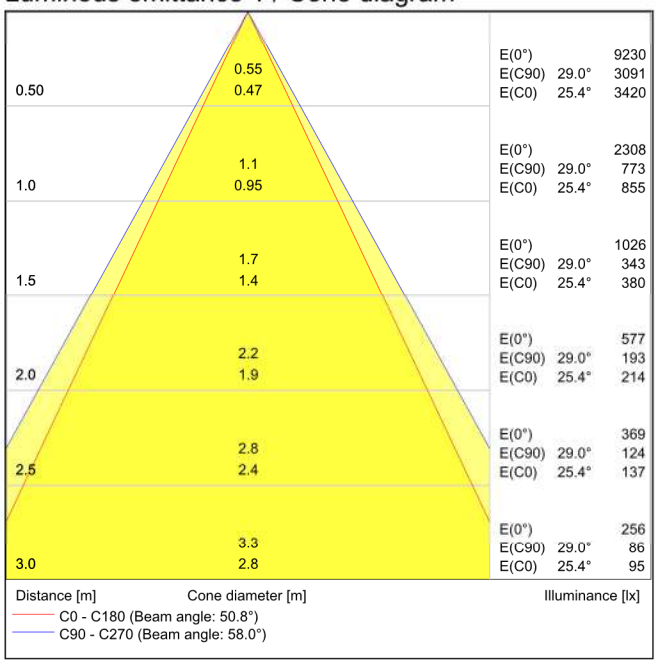
Luminous emittance 1 / Polar LDC



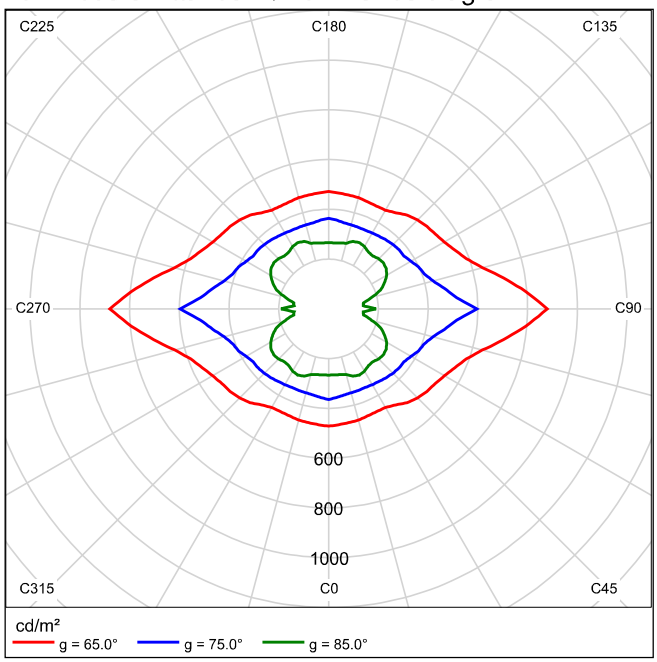
Luminous emittance 1 / Linear LDC



Luminous emittance 1 / Cone diagram



Luminous emittance 1 / Luminance diagram

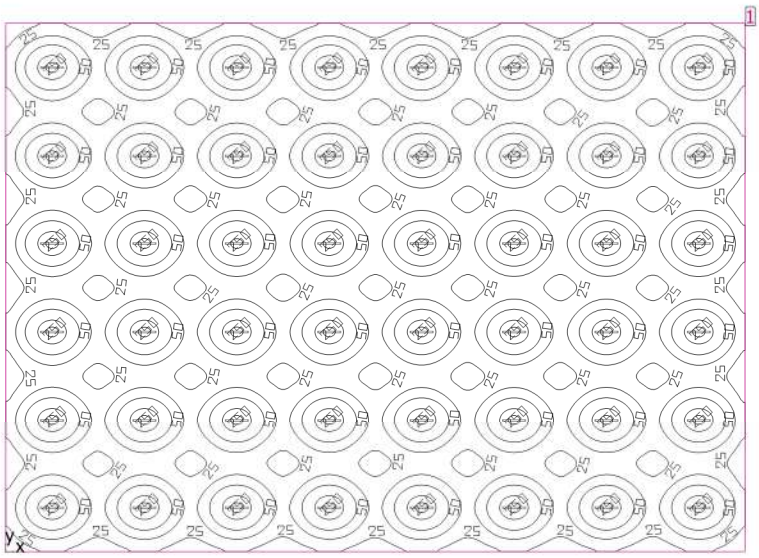


Luminous emittance 1 / UGR diagram

Glare evaluation according to UGR											
ρ Ceiling		70	70	50	50	30	70	70	50	50	30
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	11.2	12.0	11.5	12.3	12.5	13.1	13.9	13.4	14.2	14.4
	3H	11.3	12.1	11.6	12.4	12.6	13.1	13.9	13.5	14.2	14.5
	4H	11.4	12.1	11.7	12.4	12.7	13.1	13.9	13.5	14.2	14.5
	6H	11.5	12.1	11.8	12.5	12.8	13.1	13.8	13.5	14.1	14.4
	8H	11.5	12.2	11.9	12.5	12.8	13.1	13.7	13.5	14.1	14.4
	12H	11.6	12.2	11.9	12.5	12.9	13.1	13.7	13.5	14.0	14.4
4H	2H	11.2	11.9	11.5	12.2	12.5	13.0	13.7	13.3	14.0	14.3
	3H	11.4	12.0	11.8	12.4	12.7	13.1	13.7	13.5	14.0	14.4
	4H	11.6	12.1	12.0	12.5	12.9	13.1	13.7	13.6	14.0	14.4
	6H	11.7	12.2	12.2	12.6	13.0	13.2	13.6	13.6	14.0	14.4
	8H	11.8	12.2	12.3	12.7	13.1	13.1	13.5	13.6	14.0	14.4
	12H	11.9	12.3	12.4	12.7	13.2	13.1	13.5	13.6	13.9	14.4
8H	4H	11.6	12.0	12.0	12.4	12.8	13.1	13.5	13.6	13.9	14.4
	6H	11.8	12.1	12.3	12.6	13.1	13.1	13.5	13.6	13.9	14.4
	8H	12.0	12.2	12.5	12.7	13.2	13.1	13.4	13.6	13.9	14.4
	12H	12.1	12.3	12.6	12.8	13.4	13.1	13.3	13.6	13.8	14.4
12H	4H	11.5	11.9	12.0	12.3	12.8	13.1	13.4	13.5	13.9	14.3
	6H	11.8	12.1	12.3	12.6	13.1	13.1	13.4	13.6	13.9	14.4
	8H	12.0	12.2	12.5	12.7	13.3	13.1	13.4	13.7	13.9	14.4
Variation of the observer position for the luminaire distances S											
S = 1.0H S = 1.5H S = 2.0H		+1.3 / -1.9 +3.0 / -3.1 +4.7 / -3.4					+1.6 / -2.0 +3.6 / -4.6 +5.5 / -5.3				
Standard table		BK02					BK01				
Correction Summand		-5.9					-4.8				
Corrected glare indices referring to 2300lm Total luminous flux											

The UGR values are calculated in acc. with CIE Publ. 117. Spacing-to-height ratio = 0.25

Room 1



Clearance height: 3.500 m, Reflection factors: Ceiling 70.0%, Walls 85.0%, Floor 11.0%, Light loss factor: 0.80

Workplane

	Surface	Result	Average (Target)	Min	Max	Min/average	Min/max
1	Workplane 1	Perpendicular illuminance (adaptive) [lx] Height: 0.800 m, Wall zone: 0.000 m	73.8 (≥ 200)	15.0	264	0.20	0.057

#	Luminaire	Φ(Luminaire) [lm]	Power [W]	Luminous efficacy [lm/W]
48	Philips - WT470C L1300 1 xLED23S/840 NB	2294	16.4	139.9
	Total via all luminaires	110112	787.2	139.9

Lighting power density: 0.62 W/m² = 0.85 W/m²/100 lx (Floor area of room 1260.00 m²)

The energy consumption quantities refer to the lights planned for the room without taking into account light scenes and their dimming levels.
Consumption: 1750 kWh/a of maximum 44150 kWh/a

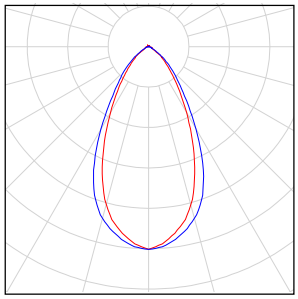
Room 1

Philips WT470C L1300 1 xLED23S/840 NB

No.	X [m]	Y [m]	Mounting height [m]	Light loss factor
1	2.625	2.500	3.500	0.80
2	7.875	2.500	3.500	0.80
3	13.125	2.500	3.500	0.80
4	18.375	2.500	3.500	0.80
5	23.625	2.500	3.500	0.80
6	28.875	2.500	3.500	0.80
7	34.125	2.500	3.500	0.80
8	39.375	2.500	3.500	0.80
9	2.625	7.500	3.500	0.80
10	7.875	7.500	3.500	0.80
11	13.125	7.500	3.500	0.80
12	18.375	7.500	3.500	0.80
13	23.625	7.500	3.500	0.80
14	28.875	7.500	3.500	0.80
15	34.125	7.500	3.500	0.80
16	39.375	7.500	3.500	0.80
17	2.625	12.500	3.500	0.80
18	7.875	12.500	3.500	0.80
19	13.125	12.500	3.500	0.80
20	18.375	12.500	3.500	0.80
21	23.625	12.500	3.500	0.80
22	28.875	12.500	3.500	0.80
23	34.125	12.500	3.500	0.80
24	39.375	12.500	3.500	0.80
25	2.625	17.500	3.500	0.80
26	7.875	17.500	3.500	0.80
27	13.125	17.500	3.500	0.80
28	18.375	17.500	3.500	0.80
29	23.625	17.500	3.500	0.80

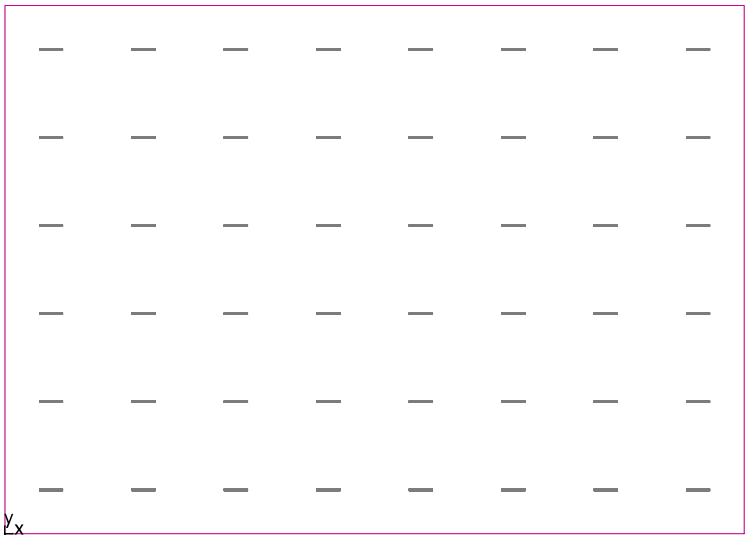
No.	X [m]	Y [m]	Mounting height [m]	Light loss factor
30	28.875	17.500	3.500	0.80
31	34.125	17.500	3.500	0.80
32	39.375	17.500	3.500	0.80
33	2.625	22.500	3.500	0.80
34	7.875	22.500	3.500	0.80
35	13.125	22.500	3.500	0.80
36	18.375	22.500	3.500	0.80
37	23.625	22.500	3.500	0.80
38	28.875	22.500	3.500	0.80
39	34.125	22.500	3.500	0.80
40	39.375	22.500	3.500	0.80
41	2.625	27.500	3.500	0.80
42	7.875	27.500	3.500	0.80
43	13.125	27.500	3.500	0.80
44	18.375	27.500	3.500	0.80
45	23.625	27.500	3.500	0.80
46	28.875	27.500	3.500	0.80
47	34.125	27.500	3.500	0.80
48	39.375	27.500	3.500	0.80

Room 1

Quantity	Luminaire (Luminous emittance)		
48	Philips - WT470C L1300 1 xLED23S/840 NB Luminous emittance 1 Fitting: 1xLED23S/840/- Light output ratio: 99.72% Lamp luminous flux: 2300 lm Luminaire luminous flux: 2294 lm Power: 16.4 W Luminous efficacy: 139.9 lm/W Colorimetric data 1xLED23S/840/-: CCT 3000 K, CRI 100		

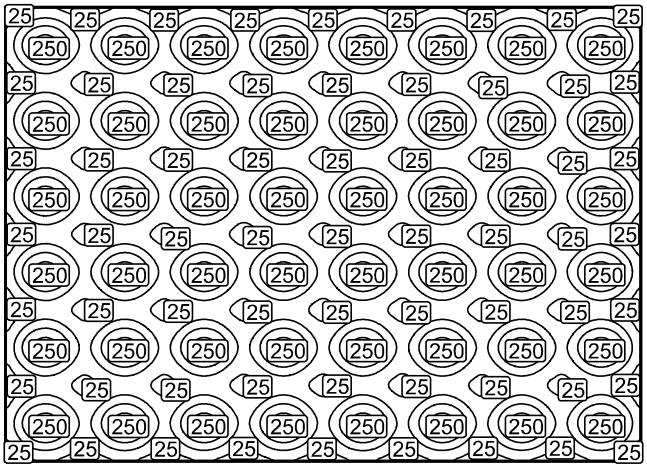
Total lamp luminous flux: 110400 lm, Total luminaire luminous flux: 110112 lm, Total Load: 787.2 W, Luminous efficacy: 139.9 lm/W

Workplane 1 / Perpendicular illuminance (adaptive)



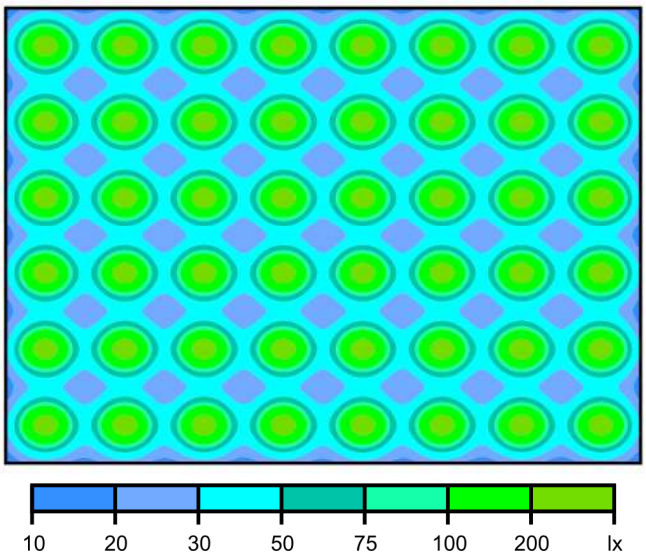
Workplane 1: Perpendicular illuminance (adaptive) (Surface)
Light scene: Light scene 1
Average: 73.8 lx (Target: ≥ 200 lx), Min: 15.0 lx, Max: 264 lx, Min/average: 0.20, Min/max: 0.057
Height: 0.800 m, Wall zone: 0.000 m

Isolines [lx]



Scale: 1 : 500

False colors [lx]



Scale: 1 : 500

Value grid [lx]

76	53	95	41	110	35	118	33	118	35	110	41	95	53	75
46	37	55	31	62	28	71	27	71	28	62	31	56	37	46
108	72	144	53	174	42	200	39	200	42	174	53	144	72	108
35	29	39	26	42	24	44	23	43	24	42	26	39	29	35
138	95	186	62	231	47	251	43	251	48	231	61	186	95	138
29	27	32	24	35	22	36	21	36	22	35	24	32	26	29
138	95	186	62	232	48	251	43	251	48	231	61	186	95	138
35	29	39	26	42	24	43	23	43	24	42	26	39	29	35
108	72	144	53	175	42	200	39	200	41	175	53	144	72	108
46	37	55	31	63	28	71	27	71	28	63	31	55	37	46
75	53	95	41	110	35	118	33	119	35	110	41	95	53	75

Scale: 1 : 500