Administration

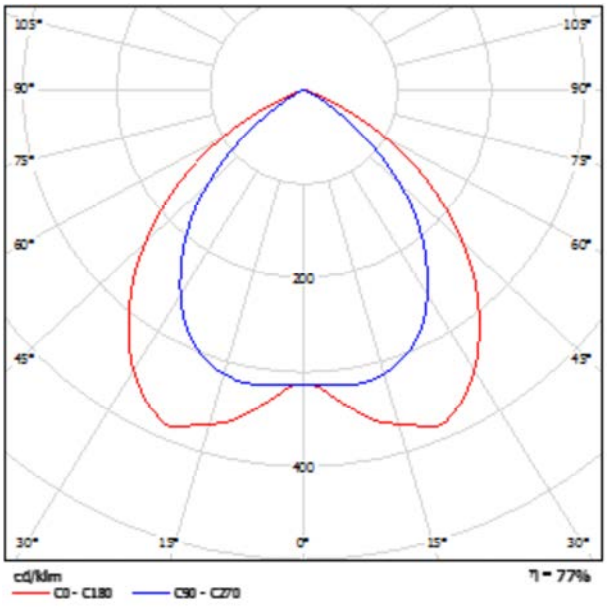
Partner for Contact:
Order No.:
Company:
Customer No.:

Date: 16.07.2013
Operator:

Operator
Telephone
Fax
e-Mail

ESSYSTEM 6730001 TR135.RPA / Luminaire Data Sheet

Luminous emittance 1:



Luminaire classification according to CIE: 100
CIE flux code: 65 96 100 100 78

Ceiling mounted luminaire. Fluorescent tubes. Electronic or inductive ballasts with power compensation. Housing of steel sheet powder coated white. Opal or prismatic diffuser; lamella or aluminium parabolic louvre. Enclosed emergency packs installed on request. Direct/indirect architectural lighting for offices, passages in commercial venues, etc.

Luminous emittance 1:

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	Room Size Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	18.4	19.5	18.7	19.7	19.9	12.5	13.5	12.7	13.7	14.0
	3H	18.4	19.4	18.7	19.6	19.9	12.4	13.5	12.7	13.5	13.8
	4H	18.4	19.2	18.7	19.5	19.8	12.3	13.2	12.6	13.4	13.7
	6H	18.3	19.1	18.6	19.4	19.7	12.2	13.0	12.6	13.3	13.6
	8H	18.3	19.0	18.6	19.3	19.7	12.2	13.0	12.5	13.3	13.6
	12H	18.2	19.0	18.6	19.3	19.6	12.2	12.9	12.5	13.2	13.5
4H	2H	18.3	19.1	18.6	19.4	19.7	12.6	13.5	13.0	13.8	14.1
	3H	18.3	19.0	18.7	19.3	19.7	12.6	13.3	12.9	13.6	13.9
	4H	18.2	18.9	18.6	19.2	19.6	12.5	13.1	12.9	13.5	13.8
	6H	18.2	18.7	18.6	19.1	19.5	12.4	13.0	12.9	13.4	13.8
	8H	18.1	18.6	18.6	19.0	19.4	12.4	12.9	12.8	13.3	13.7
	12H	18.1	18.5	18.6	19.0	19.4	12.4	12.8	12.8	13.2	13.7
8H	4H	18.1	18.6	18.6	19.0	19.4	12.4	12.9	12.8	13.3	13.7
	6H	18.1	18.5	18.5	18.9	19.3	12.3	12.7	12.8	13.2	13.6
	8H	18.0	18.4	18.5	18.8	19.3	12.3	12.7	12.8	13.1	13.6
	12H	18.0	18.3	18.5	18.7	19.3	12.3	12.6	12.8	13.0	13.5
12H	4H	18.1	18.5	18.5	18.9	19.4	12.4	12.8	12.8	13.2	13.7
	6H	18.0	18.4	18.5	18.8	19.3	12.3	12.7	12.8	13.1	13.6
	8H	18.0	18.3	18.5	18.7	19.3	12.3	12.6	12.8	13.0	13.5

Variation of the observer position for the luminaire distances S		
S = 1.0H	+0.5 / -0.9	+1.4 / -2.6
S = 1.5H	+1.2 / -2.5	+2.6 / -5.7
S = 2.0H	+3.0 / -5.4	+4.0 / -14.2
Standard table	9K00	9K01
Correction Summand	+4.0	+5.4

Corrected Glare Indices referring to 2000lm Total Luminous Flux

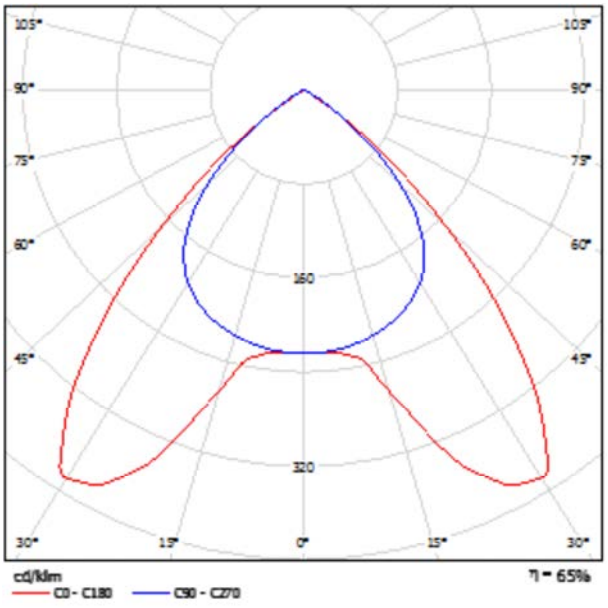
Operator
Telephone
Fax
e-Mail

ESSYSTEM 6050001 KT 214.P-AM / Luminaire Data Sheet

Luminaire classification according to CIE: 100
CIE flux code: 67 99 100 100 65

Luminaire for recessed installation in modular or plasterboard false ceilings. Fluorescent tubes. Electronic ballast. Housing of steel sheet powder coated white. Parabolic aluminium louvre. Enclosed emergency pack installed on request. General architectural lighting for offices, passages in commercial venues, etc.

Luminous emittance 1:



Luminous emittance 1:

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	8.6	9.6	8.9	9.8	10.0	11.2	12.2	11.5	12.5	12.7
	3H	8.4	9.3	8.7	9.6	9.9	11.1	12.0	11.4	12.2	12.5
	4H	8.4	9.2	8.7	9.5	9.8	11.0	11.9	11.3	12.1	12.4
	6H	8.3	9.1	8.6	9.4	9.7	10.9	11.7	11.3	12.0	12.3
	8H	8.3	9.0	8.6	9.3	9.6	10.9	11.6	11.3	11.9	12.3
	12H	8.2	8.9	8.6	9.3	9.6	10.9	11.6	11.2	11.9	12.2
4H	2H	9.5	10.3	9.8	10.6	10.9	11.6	12.4	11.9	12.7	13.0
	3H	9.3	10.0	9.7	10.3	10.7	11.4	12.1	11.8	12.4	12.8
	4H	9.3	9.9	9.7	10.2	10.6	11.4	12.0	11.7	12.3	12.7
	6H	9.2	9.7	9.6	10.1	10.5	11.3	11.8	11.7	12.2	12.6
	8H	9.2	9.6	9.6	10.0	10.4	11.3	11.7	11.7	12.1	12.5
	12H	9.1	9.6	9.6	10.0	10.4	11.2	11.6	11.7	12.0	12.5
8H	4H	9.2	9.6	9.6	10.0	10.4	11.3	11.7	11.7	12.1	12.5
	6H	9.1	9.5	9.5	9.9	10.4	11.2	11.6	11.6	12.0	12.4
	8H	9.1	9.4	9.5	9.8	10.3	11.1	11.5	11.6	11.9	12.4
	12H	9.0	9.3	9.5	9.8	10.3	11.1	11.4	11.6	11.8	12.3
12H	4H	9.1	9.6	9.6	10.0	10.4	11.2	11.6	11.7	12.0	12.5
	6H	9.0	9.4	9.5	9.8	10.3	11.1	11.5	11.6	11.9	12.4
	8H	9.0	9.3	9.5	9.8	10.3	11.1	11.4	11.6	11.8	12.3
Variation of the observer position for the luminaire distances S											
S = 1.0H		+1.9 / -5.3					+2.2 / -5.6				
S = 1.5H		+3.2 / -17.4					+4.1 / -13.5				
S = 2.0H		+4.5 / -22.5					+4.7 / -22.1				
Standard table		6X00					6X00				
Correction Summand		-5.1					-5.6				
Corrected Glare Indices referring to 3400lm Total Luminous Flux											

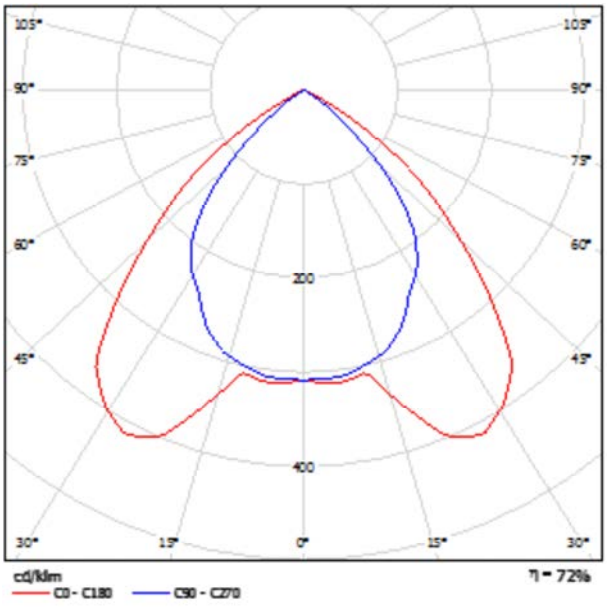
Operator
Telephone
Fax
e-Mail

ESSYSTEM 7135001 KT 414.1P-AM DIM / Luminaire Data Sheet

Luminaire classification according to CIE: 100
CIE flux code: 71 99 100 100 72

Luminaire for recessed installation in modular or plasterboard false ceilings. Fluorescent tubes. Electronic ballast. Housing of steel sheet powder coated white. Parabolic aluminium louvre. Enclosed emergency pack installed on request. General architectural lighting for offices, passages in commercial venues, etc.

Luminous emittance 1:



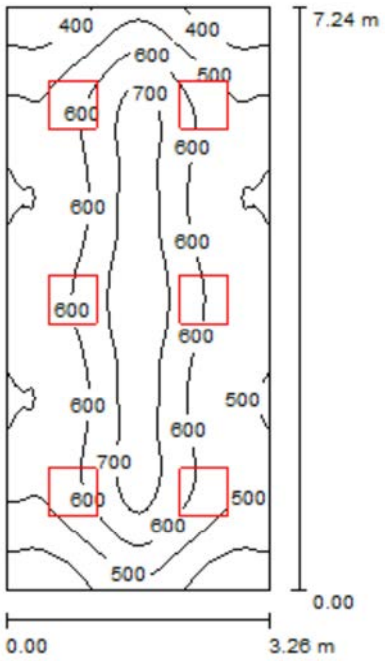
Luminous emittance 1:

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	12.3	13.3	12.6	13.5	13.7	9.8	10.8	10.1	11.0	11.2
	3H	12.2	13.0	12.5	13.3	13.5	9.7	10.6	10.0	10.8	11.1
	4H	12.1	12.9	12.4	13.2	13.4	9.6	10.4	9.9	10.7	11.0
	6H	12.0	12.7	12.3	13.0	13.3	9.6	10.3	9.9	10.6	10.9
	8H	12.0	12.7	12.3	13.0	13.3	9.5	10.2	9.9	10.5	10.8
	12H	11.9	12.6	12.3	12.9	13.2	9.5	10.2	9.8	10.5	10.8
4H	2H	12.2	13.1	12.6	13.3	13.6	10.0	10.8	10.3	11.0	11.3
	3H	12.1	12.8	12.5	13.1	13.4	9.8	10.5	10.2	10.8	11.1
	4H	12.0	12.8	12.4	13.0	13.3	9.8	10.3	10.1	10.7	11.0
	6H	12.0	12.5	12.4	12.8	13.2	9.7	10.2	10.1	10.6	10.9
	8H	11.9	12.4	12.4	12.8	13.2	9.7	10.1	10.1	10.5	10.9
	12H	11.9	12.3	12.3	12.7	13.1	9.6	10.0	10.1	10.4	10.8
6H	4H	11.9	12.4	12.3	12.8	13.2	9.6	10.1	10.1	10.5	10.9
	6H	11.8	12.2	12.3	12.6	13.1	9.6	9.9	10.0	10.4	10.8
	8H	11.8	12.1	12.3	12.6	13.0	9.5	9.8	10.0	10.3	10.8
	12H	11.7	12.0	12.2	12.5	13.0	9.5	9.8	10.0	10.2	10.7
12H	4H	11.9	12.3	12.3	12.7	13.1	9.6	10.0	10.0	10.4	10.8
	6H	11.8	12.1	12.3	12.6	13.0	9.5	9.8	10.0	10.3	10.8
	8H	11.7	12.0	12.2	12.5	13.0	9.5	9.8	10.0	10.2	10.7
Variation of the observer position for the luminaire distances S											
S = 1.0H		+1.1 / -3.0					+1.9 / -5.3				
S = 1.5H		+2.9 / -12.5					+3.4 / -16.4				
S = 2.0H		+4.5 / -28.7					+4.6 / -24.0				
Standard table		9K00					9K00				
Correction Summand		-7.2					-9.2				
Corrected Glare Indices referring to 4000lm Total Luminous Flux											

Operator
Telephone
Fax
e-Mail

Room 1 / Summary



Height of Room: 2.900 m, Mounting Height: 2.800 m, Maintenance factor: 0.80

Values in Lux, Scale 1:94

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0
Workplane	/	560	323	779	0.577
Floor	20	469	292	592	0.623
Ceiling	70	100	67	117	0.670
Walls (4)	50	228	74	564	/

Workplane:
Height: 0.750 m
Grid: 32 x 64 Points
Boundary Zone: 0.000 m

UGR (CIE, SHR = 1.00.)

	Lengthways-	Across
Left Wall	12	<10
Lower Wall	12	<10

to luminaire axis

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.400, Ceiling / Working Plane: 0.178.

Luminaire Parts List

No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	6	ESSYSTEM 7135001 KT 414.1P-AM DIM (1.000)	3452	4800	60.0
			Total: 20715	Total: 28800	360.0

Specific connected load: 15.27 W/m² = 2.73 W/m²/100 lx (Ground area: 23.57 m²)

Operator
Telephone
Fax
e-Mail

Room 1 / Photometric Results

Total Luminous Flux: 20715 lm
Total Load: 360.0 W
Maintenance factor: 0.80
Boundary Zone: 0.000 m

Surface	Average illuminances [lx]			Reflection factor [%]	Average luminance [cd/m²]
	direct	indirect	total		
Workplane	460	100	560	/	/
Floor	364	105	469	20	30
Ceiling	0.16	100	100	70	22
Wall 1	93	97	190	50	30
Wall 2	149	96	245	50	39
Wall 3	93	97	190	50	30
Wall 4	149	96	245	50	39

Uniformity on the working plane
u0: 0.577 (1:2)
E_{min} / E_{max}: 0.415 (1:2)

UGR	Lengthways-	Across	to luminaire axis
Left Wall	12	<10	
Lower Wall	12	<10	

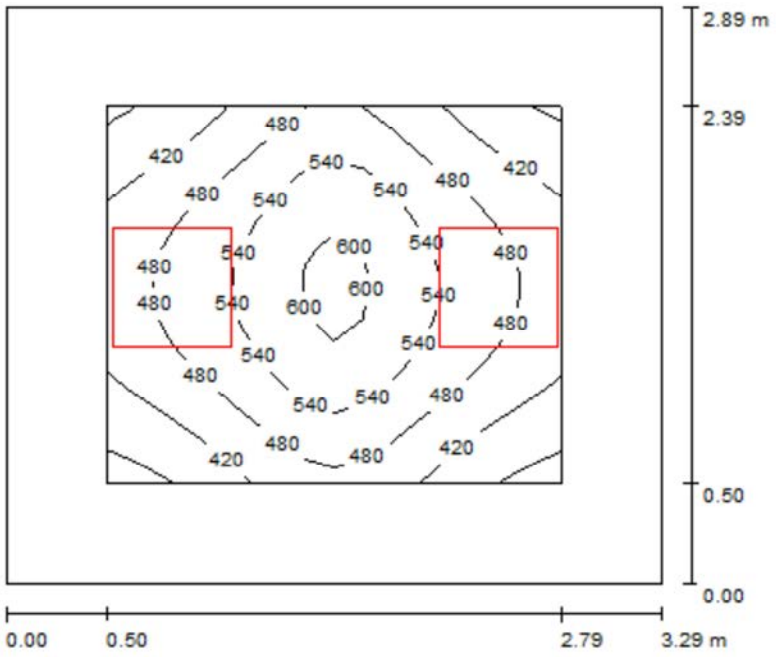
(CIE, SHR = 1.00.)

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.400, Ceiling / Working Plane: 0.178.

Specific connected load: 15.27 W/m² = 2.73 W/m²/100 lx (Ground area: 23.57 m²)

Operator
Telephone
Fax
e-Mail

Room 2 / Summary



Height of Room: 2.900 m, Mounting Height: 2.900 m, Maintenance factor: 0.80

Values in Lux, Scale 1:38

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0
Workplane	/	486	339	621	0.698
Floor	20	310	222	375	0.714
Ceiling	70	69	48	86	0.694
Walls (4)	50	164	47	533	/

Workplane:
Height: 0.750 m
Grid: 16 x 16 Points
Boundary Zone: 0.500 m

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.333, Ceiling / Working Plane: 0.142.

Luminaire Parts List

No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	2	ESSYSTEM 7135001 KT 414.1P-AM DIM (1.000)	3452	4800	60.0
			Total: 6905	Total: 9600	120.0

Specific connected load: 12.61 W/m² = 2.59 W/m²/100 lx (Ground area: 9.51 m²)

Operator
Telephone
Fax
e-Mail

Room 2 / Photometric Results

Total Luminous Flux: 6905 lm
Total Load: 120.0 W
Maintenance factor: 0.80
Boundary Zone: 0.500 m

Surface	Average illuminances [lx]			Reflection factor [%]	Average luminance [cd/m²]
	direct	indirect	total		
Workplane	411	75	486	/	/
Floor	229	82	310	20	20
Ceiling	0.15	69	69	70	15
Wall 1	69	72	141	50	22
Wall 2	119	69	188	50	30
Wall 3	75	73	147	50	23
Wall 4	117	69	186	50	30

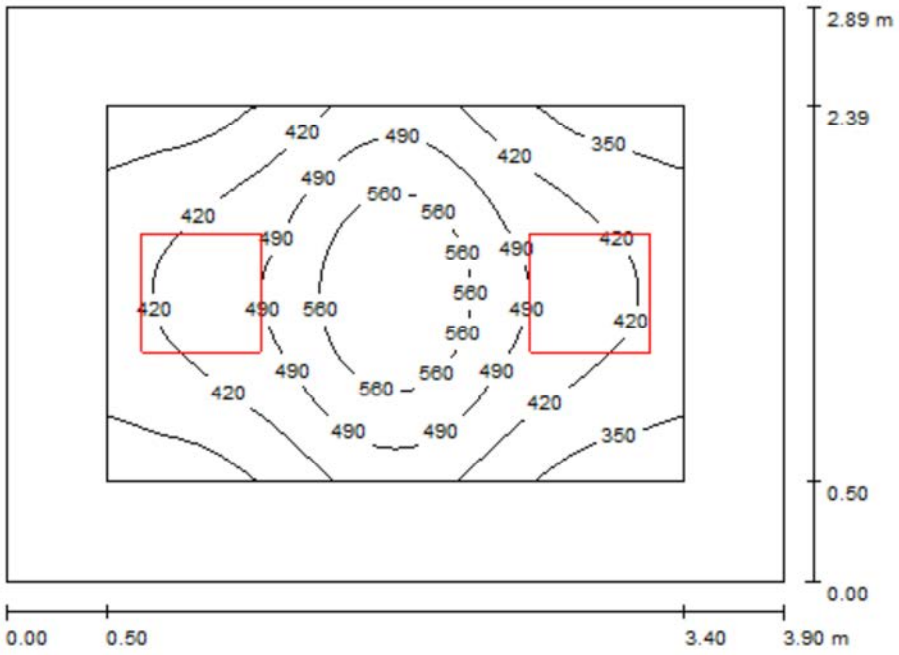
Uniformity on the working plane
u0: 0.698 (1:1)
E_{min} / E_{max}: 0.547 (1:2)

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.333, Ceiling / Working Plane: 0.142.

Specific connected load: 12.61 W/m² = 2.59 W/m²/100 lx (Ground area: 9.51 m²)

Operator
Telephone
Fax
e-Mail

Room 3 / Summary



Height of Room: 2.900 m, Mounting Height: 2.800 m, Maintenance factor: 0.80

Values in Lux, Scale 1:38

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0
Workplane	/	446	303	621	0.678
Floor	20	292	203	386	0.695
Ceiling	70	57	40	68	0.711
Walls (4)	50	136	40	389	/

Workplane:
Height: 0.750 m
Grid: 32 x 32 Points
Boundary Zone: 0.500 m

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.285, Ceiling / Working Plane: 0.127.

Luminaire Parts List

No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	2	ESSYSTEM 7135001 KT 414.1P-AM DIM (1.000)	3452	4800	60.0
			Total: 6905	Total: 9600	120.0

Specific connected load: 10.65 W/m² = 2.39 W/m²/100 lx (Ground area: 11.27 m²)

Operator
Telephone
Fax
e-Mail

Room 3 / Photometric Results

Total Luminous Flux: 6905 lm
Total Load: 120.0 W
Maintenance factor: 0.80
Boundary Zone: 0.500 m

Surface	Average illuminances [lx]			Reflection factor [%]	Average luminance [cd/m²]
	direct	indirect	total		
Workplane	388	58	446	/	/
Floor	222	69	292	20	19
Ceiling	0.11	57	57	70	13
Wall 1	62	61	123	50	20
Wall 2	97	58	154	50	25
Wall 3	63	61	123	50	20
Wall 4	97	58	154	50	25

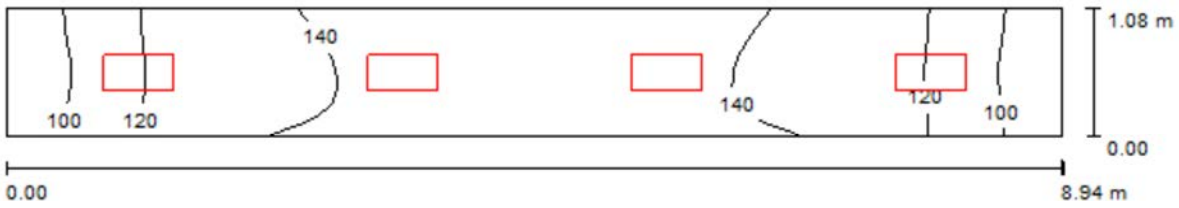
Uniformity on the working plane
u0: 0.678 (1:1)
E_{min} / E_{max}: 0.487 (1:2)

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.285, Ceiling / Working Plane: 0.127.

Specific connected load: 10.65 W/m² = 2.39 W/m²/100 lx (Ground area: 11.27 m²)

Operator
Telephone
Fax
e-Mail

Koridor / Summary



Height of Room: 2.900 m, Mounting Height: 2.900 m, Maintenance factor: 0.80

Values in Lux, Scale 1:64

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0
Workplane	/	129	90	149	0.697
Floor	20	129	90	150	0.695
Ceiling	70	62	41	81	0.658
Walls (4)	50	129	42	535	/

Workplane:

Height:	0.000 m
Grid:	64 x 8 Points
Boundary Zone:	0.000 m

Illuminance Quotient (according to LG7): Walls / Working Plane: 1.002, Ceiling / Working Plane: 0.478.

Luminaire Parts List

No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	4	ESSYSTEM 6050001 KT 214.P-AM (1.000)	1550	2400	32.0
			Total: 6200	Total: 9600	128.0

Specific connected load: 13.24 W/m² = 10.24 W/m²/100 lx (Ground area: 9.67 m²)

Operator
Telephone
Fax
e-Mail

Koridor / Photometric Results

Total Luminous Flux: 6200 lm
Total Load: 128.0 W
Maintenance factor: 0.80
Boundary Zone: 0.000 m

Surface	Average illuminances [lx]			Reflection factor [%]	Average luminance [cd/m²]
	direct	indirect	total		
Workplane	82	47	129	/	/
Floor	82	47	129	20	8.23
Ceiling	1.01	61	62	70	14
Wall 1	76	58	134	50	21
Wall 2	37	52	89	50	14
Wall 3	76	58	134	50	21
Wall 4	37	53	90	50	14

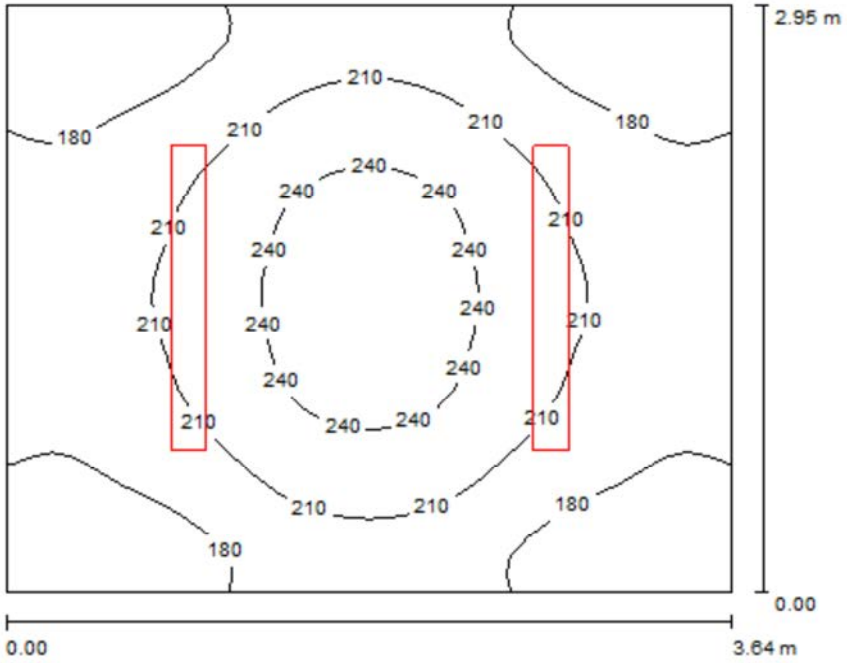
Uniformity on the working plane
u0: 0.697 (1:1)
E_{min} / E_{max}: 0.604 (1:2)

Illuminance Quotient (according to LG7): Walls / Working Plane: 1.002, Ceiling / Working Plane: 0.478.

Specific connected load: 13.24 W/m² = 10.24 W/m²/100 lx (Ground area: 9.67 m²)

Operator
Telephone
Fax
e-Mail

Dressroom / Summary



Height of Room: 2.900 m, Mounting Height: 2.900 m, Maintenance factor: 0.80

Values in Lux, Scale 1:38

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0
Workplane	/	201	147	256	0.732
Floor	20	202	149	255	0.738
Ceiling	70	50	35	75	0.701
Walls (4)	50	113	36	261	/

Workplane:

Height:	0.000 m
Grid:	32 x 32 Points
Boundary Zone:	0.000 m

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.563, Ceiling / Working Plane: 0.247.

Luminaire Parts List

No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	2	ESSYSTEM 6730001 TR135.RPA (1.000)	2551	3300	41.0
			Total: 5102	Total: 6600	82.0

Specific connected load: 7.63 W/m² = 3.79 W/m²/100 lx (Ground area: 10.75 m²)

Operator
Telephone
Fax
e-Mail

Dressroom / Photometric Results

Total Luminous Flux: 5102 lm
Total Load: 82.0 W
Maintenance factor: 0.80
Boundary Zone: 0.000 m

Surface	Average illuminances [lx]			Reflection factor [%]	Average luminance [cd/m²]
	direct	indirect	total		
Workplane	147	54	201	/	/
Floor	147	54	202	20	13
Ceiling	1.30	48	50	70	11
Wall 1	54	49	103	50	16
Wall 2	79	47	126	50	20
Wall 3	54	49	103	50	16
Wall 4	79	47	126	50	20

Uniformity on the working plane
u0: 0.732 (1:1)
E_{min} / E_{max}: 0.577 (1:2)

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.563, Ceiling / Working Plane: 0.247.

Specific connected load: 7.63 W/m² = 3.79 W/m²/100 lx (Ground area: 10.75 m²)