Classroom

Name: عصام محمد فاروق ابوالمكارم
Department: Elecronics & Communication
ID: 18011055

Date: 26.12.2019
Operator: عصام محمد فاروق ابوالمكارم

Faculty of Engineering Alexandria University

Alexandria, Egypt

Operator عصام محمد فاروق ابوالمكارم
Telephone 01010026585
Fax Communication 18011055
e-Mail essamessam4320@gmail.com

Table of contents

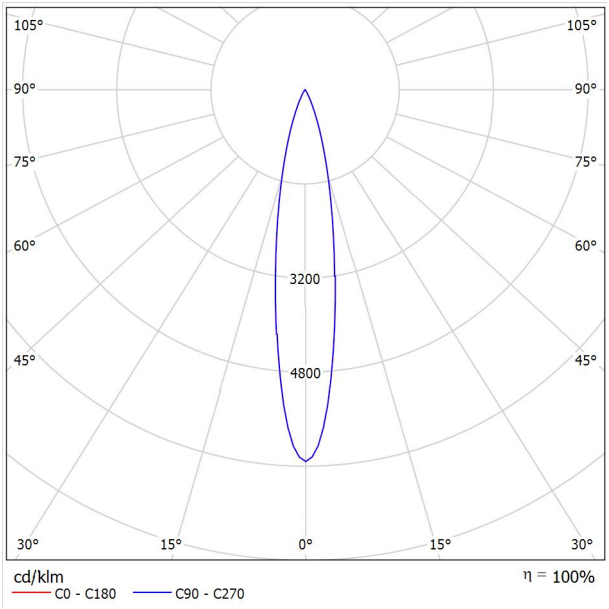
Faculty of Engineering Alexandria University

Alexandria, Egypt

Operator عصام محمد فاروق ابوالمكارم
Telephone 01010026585
Fax Communication 18011055
e-Mail essamessam4320@gmail.com

PHILIPS ST700T PSU 1 xLED17S/PW9-3500 CLM18 / Luminaire Data Sheet

Luminous emittance 1:



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

The best quality of light in miniaturized spots for Fashion Retail TrueFashion is a dedicated LED spot family answering to the specific needs of Fashion Retailers. These miniaturized spots with clean and fine detailing offer contemporary design and blend seamlessly into your store interior for a tailor-made look. This spot family provides the best quality of light by using innovative lenses to optimize the contrasts within the store. Thanks to the Philips fashion light flavors that are specifically developed to enhance colors and visual qualities, TrueFashion ensures a superior light experience. TrueFashion also supports your global expansion plans by being prepared for international certifications. In addition, we offer dedicated logistics and a local presence globally. Fashion is evolving rapidly towards a new balance between online and offline shopping. TrueFashion creates an optimal shopper experience to attract and engage the shopper, while bringing the connected future of lighting in the store by being ready to be connected to Philips fashion concepts such as dynamic window and EasyAim.

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	9.6	10.2	9.8	10.4	10.6	9.6	10.2	9.8	10.4	10.6
	3H	9.5	10.1	9.8	10.3	10.5	9.5	10.1	9.8	10.3	10.5
	4H	9.4	10.0	9.7	10.2	10.5	9.4	10.0	9.7	10.2	10.5
	6H	9.4	9.9	9.7	10.2	10.4	9.4	9.9	9.7	10.2	10.4
	8H	9.3	9.8	9.7	10.1	10.4	9.3	9.8	9.7	10.1	10.4
	12H	9.3	9.8	9.6	10.1	10.4	9.3	9.8	9.6	10.1	10.4
4H	2H	9.5	10.0	9.8	10.3	10.5	9.5	10.0	9.8	10.3	10.5
	3H	9.4	9.8	9.7	10.1	10.4	9.4	9.8	9.7	10.1	10.4
	4H	9.3	9.7	9.7	10.0	10.4	9.3	9.7	9.7	10.0	10.4
	6H	9.2	9.5	9.6	9.9	10.3	9.2	9.5	9.6	9.9	10.3
	8H	9.2	9.5	9.6	9.9	10.2	9.2	9.5	9.6	9.9	10.2
	12H	9.1	9.4	9.6	9.8	10.2	9.1	9.4	9.6	9.8	10.2
8H	4H	9.2	9.5	9.6	9.9	10.3	9.2	9.5	9.6	9.9	10.3
	6H	9.1	9.3	9.6	9.7	10.2	9.1	9.3	9.6	9.7	10.2
	8H	9.1	9.2	9.5	9.7	10.1	9.1	9.2	9.5	9.7	10.1
	12H	9.0	9.1	9.5	9.6	10.1	9.0	9.1	9.5	9.6	10.1
12H	4H	9.2	9.4	9.6	9.8	10.2	9.2	9.4	9.6	9.8	10.2
	6H	9.1	9.2	9.5	9.7	10.1	9.1	9.2	9.5	9.7	10.1
	8H	9.0	9.1	9.5	9.6	10.1	9.0	9.1	9.5	9.6	10.1

Variation of the observer position for the luminaire distances S

S = 1.0H	+5.0 / -5.7	+5.0 / -5.7
S = 1.5H	+7.7 / -9.8	+7.7 / -9.8
S = 2.0H	+9.7 / -12.1	+9.7 / -12.1
Standard table	BK00	BK00
Correction Summand	-9.0	-9.0

Corrected Glare Indices referring to 1800lm Total Luminous Flux

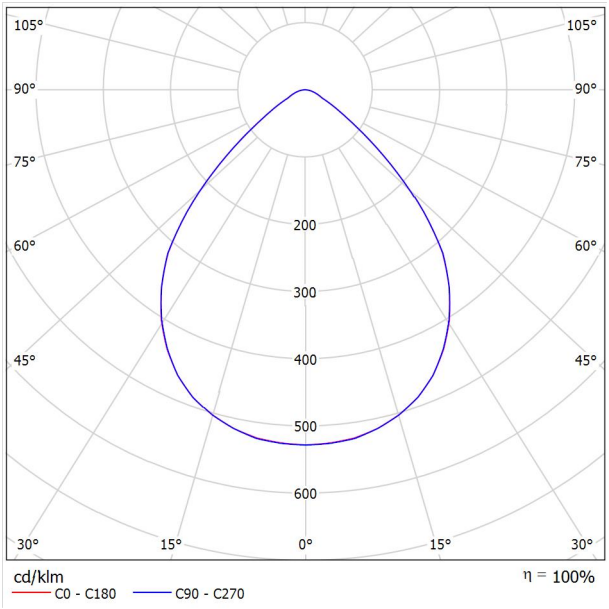
Faculty of Engineering Alexandria University

Alexandria, Egypt

Operator عصام محمد فاروق ابوالمكارم
Telephone 01010026585
Fax Communication 18011055
e-Mail essamessam4320@gmail.com

PHILIPS SM461V W17L169 1xLED28S/840 / Luminaire Data Sheet

Luminous emittance 1:



Luminaire classification according to CIE: 100
CIE flux code: 68 95 99 100 100

PowerBalance surface-mounted – sustainable performance When it comes to lighting an office space with LED luminaires, people are usually willing to invest in sustainability provided the investment pays back. At the same time, the system should comply with office lighting norms to ensure a comfortable working environment. PowerBalance is Philips' most energy-efficient office-norm-compliant LED luminaire. It more than halves energy costs compared to a T5 solution, and the light source has a longer lifetime. This results in significantly lower operational costs, ensuring a payback that meets the needs of the specification market. PowerBalance surface-mounted luminaires are easy to install on ceilings thanks to their intuitive mounting system. PowerBalance is also available in a recessed version.

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	15.5	16.6	15.8	16.8	17.0	15.5	16.6	15.8	16.8	17.0
	3H	15.6	16.5	15.9	16.8	17.0	15.6	16.5	15.9	16.8	17.0
	4H	15.6	16.5	15.9	16.7	17.0	15.6	16.5	15.9	16.7	17.0
	6H	15.6	16.4	16.0	16.7	17.0	15.6	16.4	16.0	16.7	17.0
	8H	15.6	16.4	16.0	16.7	17.0	15.6	16.4	16.0	16.7	17.0
	12H	15.6	16.3	16.0	16.6	17.0	15.6	16.3	16.0	16.6	17.0
4H	2H	15.6	16.5	16.0	16.8	17.0	15.6	16.5	16.0	16.8	17.0
	3H	15.7	16.5	16.1	16.8	17.1	15.7	16.5	16.1	16.8	17.1
	4H	15.8	16.4	16.2	16.8	17.1	15.8	16.4	16.2	16.8	17.1
	6H	15.9	16.4	16.3	16.8	17.2	15.9	16.4	16.3	16.8	17.2
	8H	15.9	16.4	16.3	16.8	17.2	15.9	16.4	16.3	16.8	17.2
	12H	15.9	16.3	16.3	16.7	17.2	15.9	16.3	16.3	16.7	17.2
8H	4H	15.8	16.3	16.2	16.7	17.1	15.8	16.3	16.2	16.7	17.1
	6H	15.9	16.3	16.3	16.7	17.2	15.9	16.3	16.3	16.7	17.2
	8H	15.9	16.3	16.4	16.7	17.2	15.9	16.3	16.4	16.7	17.2
	12H	15.9	16.2	16.4	16.7	17.2	15.9	16.2	16.4	16.7	17.2
12H	4H	15.8	16.2	16.2	16.6	17.0	15.8	16.2	16.2	16.6	17.0
	6H	15.9	16.2	16.3	16.7	17.1	15.9	16.2	16.3	16.7	17.1
	8H	15.9	16.2	16.4	16.7	17.2	15.9	16.2	16.4	16.7	17.2

Variation of the observer position for the luminaire distances S

S = 1.0H	+1.2 / -1.9	+1.2 / -1.9
S = 1.5H	+2.1 / -4.0	+2.1 / -4.0
S = 2.0H	+3.5 / -5.0	+3.5 / -5.0
Standard table	BK01	BK01
Correction Summand	-2.1	-2.1

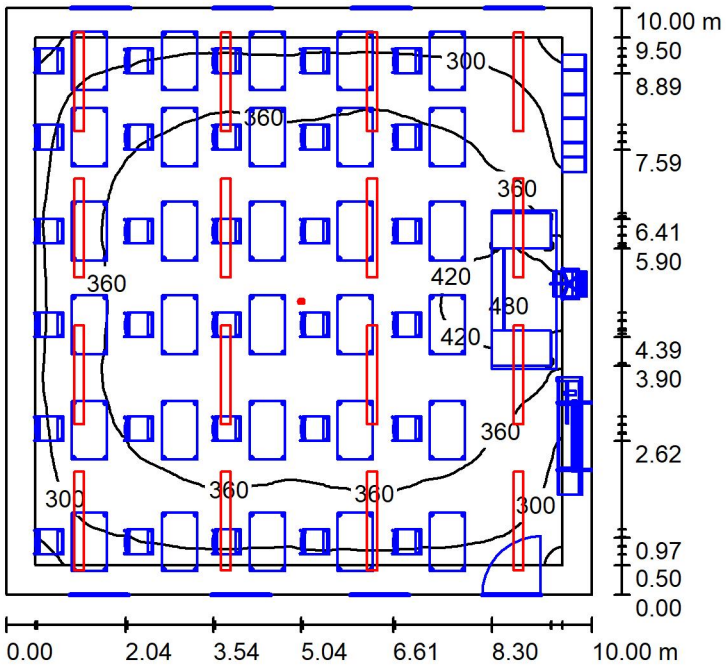
Corrected Glare Indices referring to 2800lm Total Luminous Flux

Faculty of Engineering Alexandria University

Alexandria, Egypt

Operator عصام محمد فاروق ابوالمكارم
Telephone 01010026585
Fax Communication 18011055
e-Mail essamessam4320@gmail.com

Classroom / Summary



Height of Room: 3.500 m, Mounting Height: 3.500 m, Light loss factor: 0.80

Values in Lux, Scale 1:129

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0
Workplane	/	354	218	486	0.614
Floor	10	307	157	384	0.513
Ceiling	80	48	35	382	0.729
Walls (4)	50	127	44	439	/

Workplane:

Height: 0.850 m
Grid: 128 x 128 Points
Boundary Zone: 0.500 m

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.359, Ceiling / Working Plane: 0.136.

Luminaire Parts List

No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	16	PHILIPS SM461V W17L169 1xLED28S/840 (1.000)	2800	2800	20.5
2	1	PHILIPS ST700T PSU 1 xLED17S/PW9-3500 CLM18 (1.000)	1800	1800	24.0
		Total:	46600	Total: 46600	352.0

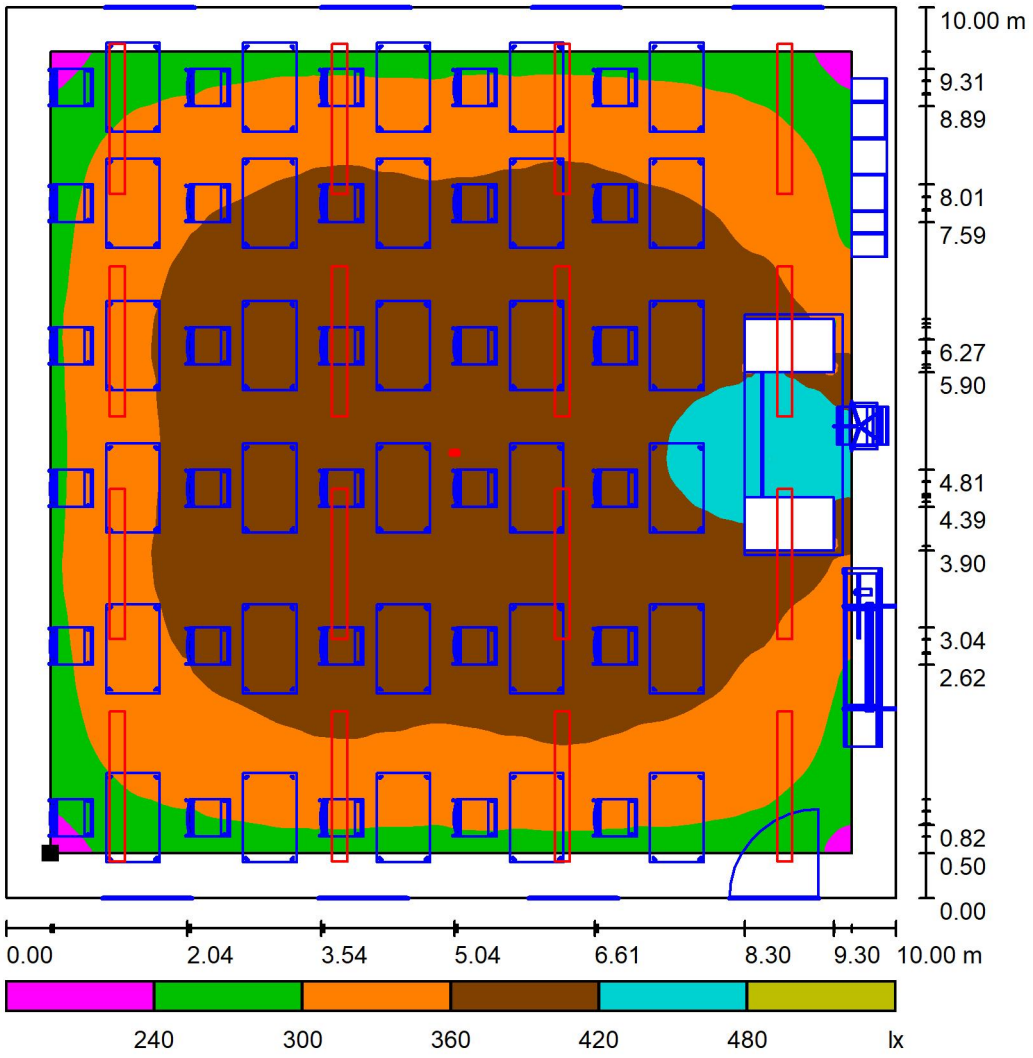
Specific connected load: 3.52 W/m² = 0.99 W/m²/100 lx (Ground area: 100.00 m²)

Faculty of Engineering Alexandria University

Alexandria, Egypt

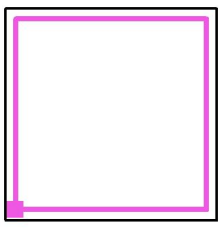
Operator عصام محمد فاروق ابوالمكارم
Telephone 01010026585
Fax Communication 18011055
e-Mail essamessam4320@gmail.com

Classroom / Workplane / Greyscale (E)



Scale 1 : 85

Position of surface in room:
Working plane with 0.500 m
Boundary Zone
Marked point:
(0.500 m, 0.500 m, 0.850 m)



Grid: 128 x 128 Points

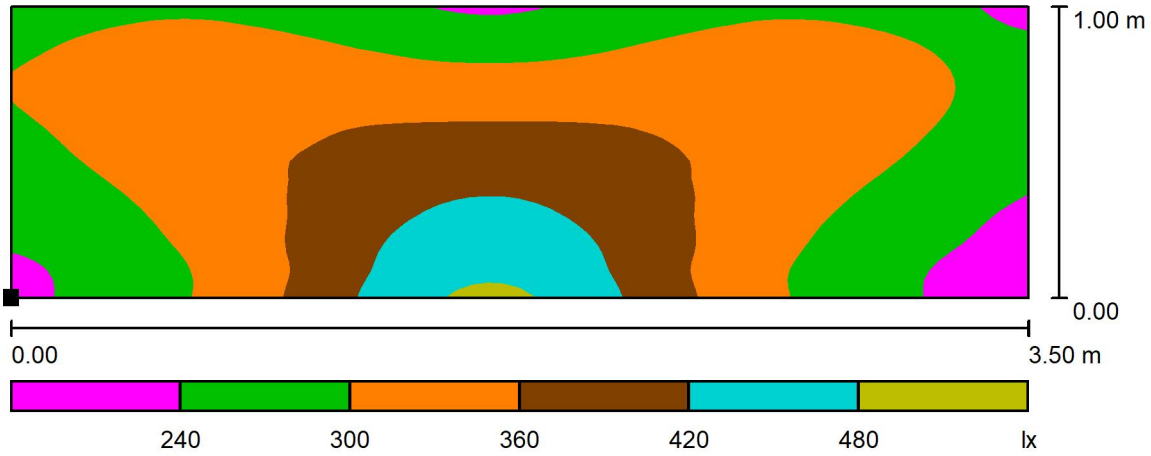
E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0	E_{min} / E_{max}
354	218	486	0.614	0.448

Faculty of Engineering Alexandria University

Alexandria, Egypt

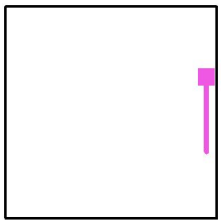
Operator عصام محمد فاروق ابوالمكارم
Telephone 01010026585
Fax Communication 18011055
e-Mail essamessam4320@gmail.com

Classroom / BlackBoard / Greyscale (E, Perpendicular)



Scale 1 : 26

Position of surface in room:
Marked point:
(9.518 m, 6.650 m, 1.761 m)



Grid: 64 x 32 Points

E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0	E_{min} / E_{max}
329	213	490	0.647	0.435