

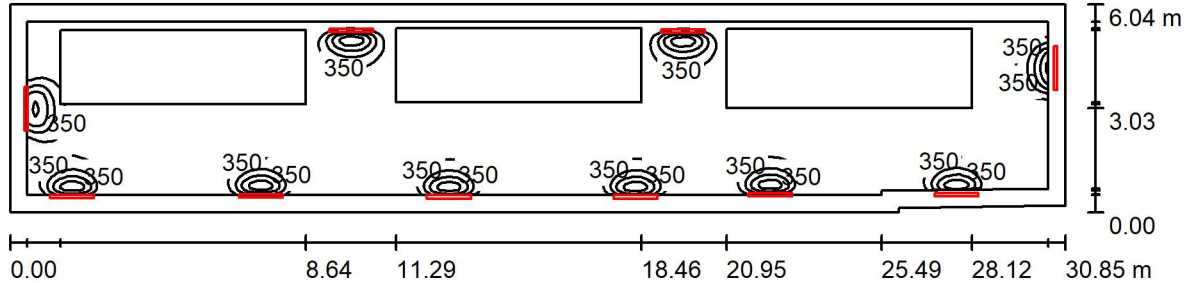


UCLH PHASE 5
LEVEL 6
LIGHT CALCS REPORT



Operator
Telephone
Fax
e-Mail

R6.003 PLANT ENCLOSURE / N / Summary



Height of Room: 2.800 m, Maintenance factor: 0.80

Values in Lux, Scale 1:221

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u_0
Workplane	/	208	0.26	1674	0.001
Floor	20	135	0.81	491	0.006
Ceiling	0	112	2.21	346	0.020
Walls (6)	10	49	0.71	169	/

Workplane:

Height: 0.750 m
Grid: 128 x 128 Points
Boundary Zone: 0.500 m

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.279, Ceiling / Working Plane: 0.535.

Luminaire Parts List

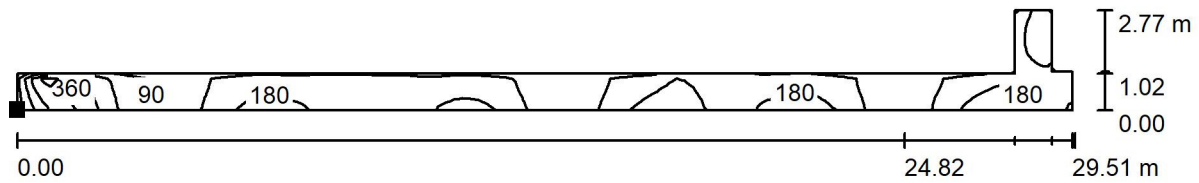
No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	8	WHITECROFT ACH64K ACL INDUSTRY (1.000)	6404	6404	47.5
2	2	WHITECROFT ACH64K ACL INDUSTRY (1.000)	6404	6404	47.5
			Total: 64040	Total: 64040	475.0

Specific connected load: $2.56 \text{ W/m}^2 = 1.23 \text{ W/m}^2/100 \text{ lx}$ (Ground area: 185.37 m^2)



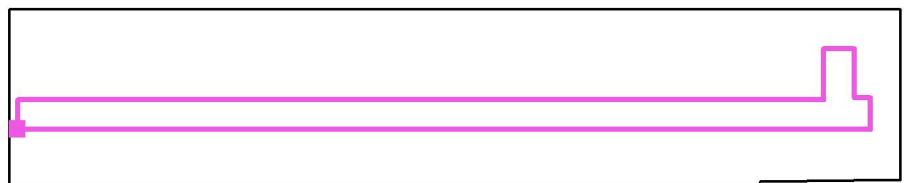
Operator
 Telephone
 Fax
 e-Mail

R6.003 PLANT ENCLOSURE / N / Calculation Surface 1 / Isolines (E, Perpendicular)



Values in Lux, Scale 1 : 211

Position of surface in room:
 Marked point:
 (35.821 m, 31.600 m, 0.000 m)



Grid: 128 x 16 Points

E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u_0	E_{min} / E_{max}
150	56	486	0.375	0.116



Operator
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R6.003 PLANT ENCLOSURE / E / Summary



Height of Room: 2.800 m, Maintenance factor: 0.80

Values in Lux, Scale 1:221

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u_0
Workplane	/	15	0.00	166	0.000
Floor	20	9.27	0.00	45	0.000
Ceiling	0	7.29	0.04	31	0.005
Walls (6)	10	2.69	0.00	13	/

Workplane:

Height: 0.750 m
Grid: 128 x 128 Points
Boundary Zone: 0.500 m

Emergency lighting scene (EN 1838):

Only direct light is calculated. Contributions of reflected light are ignored.

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.246, Ceiling / Working Plane: 0.468.

Luminaire Parts List

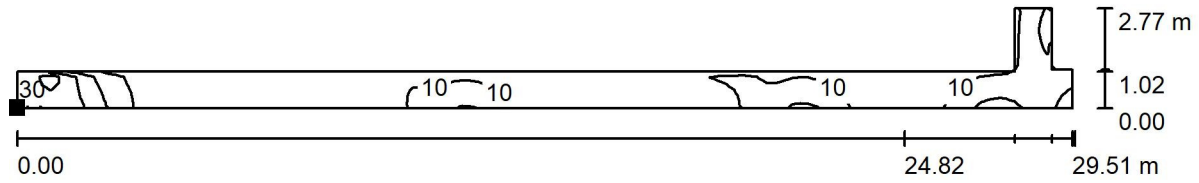
No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	8	WHITECROFT ACH64K ACL INDUSTRY (1.000)	640	640	47.5
			Total: 5123	Total: 5123	380.0

Specific connected load: $2.05 \text{ W/m}^2 = 13.31 \text{ W/m}^2/100 \text{ lx}$ (Ground area: 185.37 m^2)



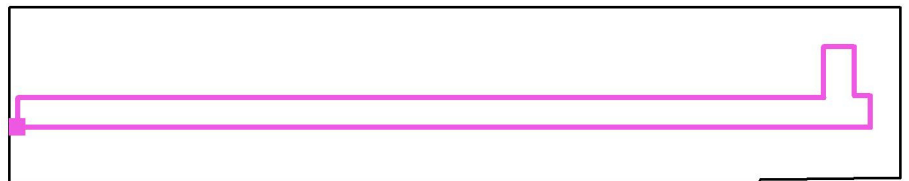
Operator
 Telephone
 Fax
 e-Mail

R6.003 PLANT ENCLOSURE / E / Calculation Surface 1 / Isolines (E, Perpendicular)



Values in Lux, Scale 1 : 211

Position of surface in room:
 Marked point:
 (35.821 m, 31.600 m, 0.000 m)



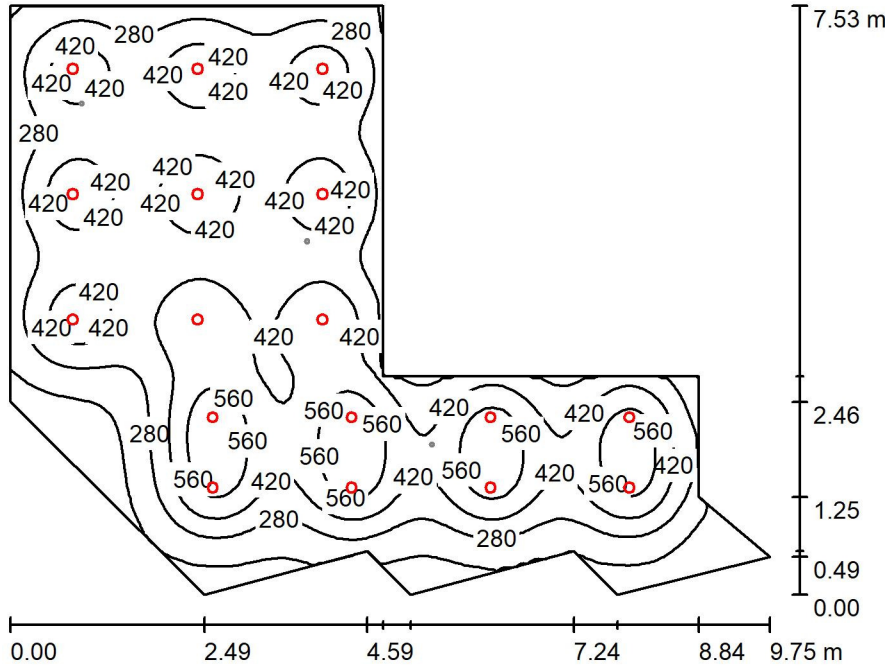
Grid: 128 x 16 Points

E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0	E_{min} / E_{max}
9.72	0.57	45	0.058	0.013



Operator
Telephone
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R6.401 Lobby / N / Summary



Height of Room: 3.000 m, Maintenance factor: 0.80

Values in Lux, Scale 1:97

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u_0
Workplane	/	368	21	684	0.058
Floor	20	346	41	546	0.119
Ceiling	70	48	23	60	0.485
Walls (12)	50	73	20	194	/

Workplane:

Height: 0.750 m
Grid: 128 x 128 Points
Boundary Zone: 0.000 m

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.181, Ceiling / Working Plane: 0.131.

Luminaire Parts List

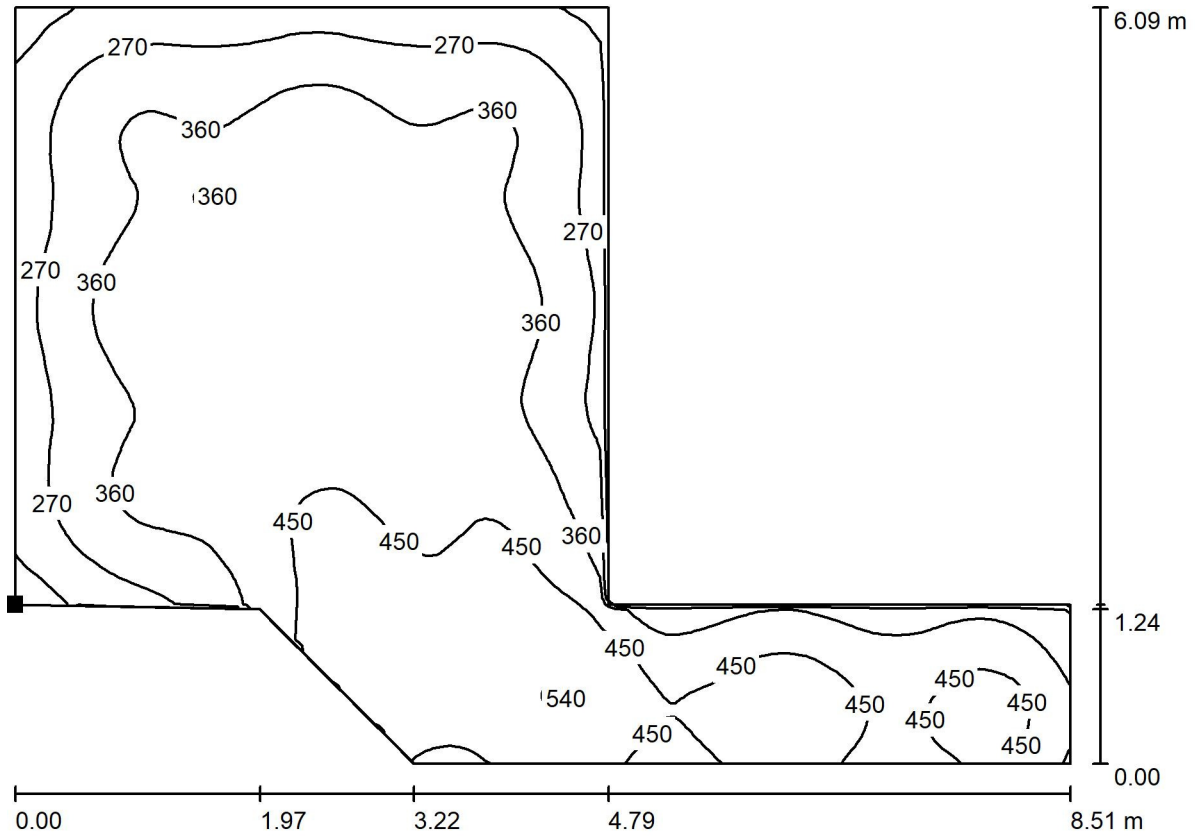
No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	17	WHITECROFT CNXH14K CONCERT XL (1.000)	1179	1162	13.2
			Total: 20038	Total: 19754	224.4

Specific connected load: 5.20 W/m² = 1.41 W/m²/100 lx (Ground area: 43.13 m²)



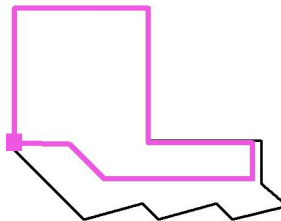
Operator
Telephone
Fax
e-Mail

R6.401 Lobby / N / Surface 1 / Isolines (E, Perpendicular)



Values in Lux, Scale 1 : 61

Position of surface in room:
Marked point:
(61.590 m, 24.800 m, 0.000 m)



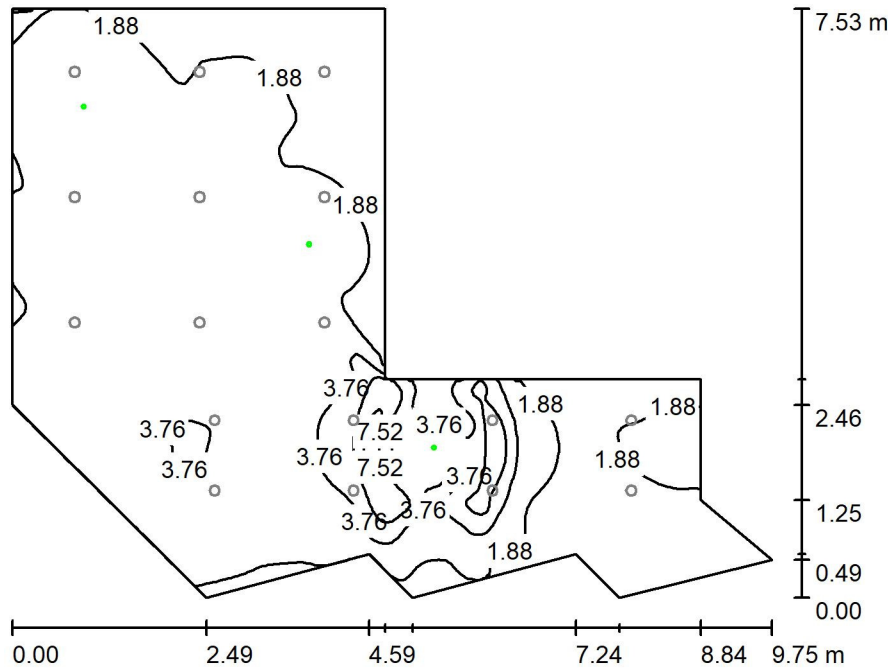
Grid: 128 x 128 Points

E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0	E_{min} / E_{max}
375	130	544	0.348	0.240



Operator
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R6.401 Lobby / E / Summary



Height of Room: 3.000 m, Maintenance factor: 0.80

Values in Lux, Scale 1:97

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	$u0$
Workplane	/	2.49	0.01	9.42	0.004
Floor	20	1.68	0.03	5.38	0.018
Ceiling	70	0.04	0.00	4.99	0.000
Walls (12)	50	3.07	0.00	64	/

Workplane:

Height: 0.750 m
Grid: 128 x 128 Points
Boundary Zone: 0.000 m

Emergency lighting scene (EN 1838):

Only direct light is calculated. Contributions of reflected light are ignored.

Illuminance Quotient (according to LG7): Walls / Working Plane: 1.494, Ceiling / Working Plane: 0.018.

Luminaire Parts List

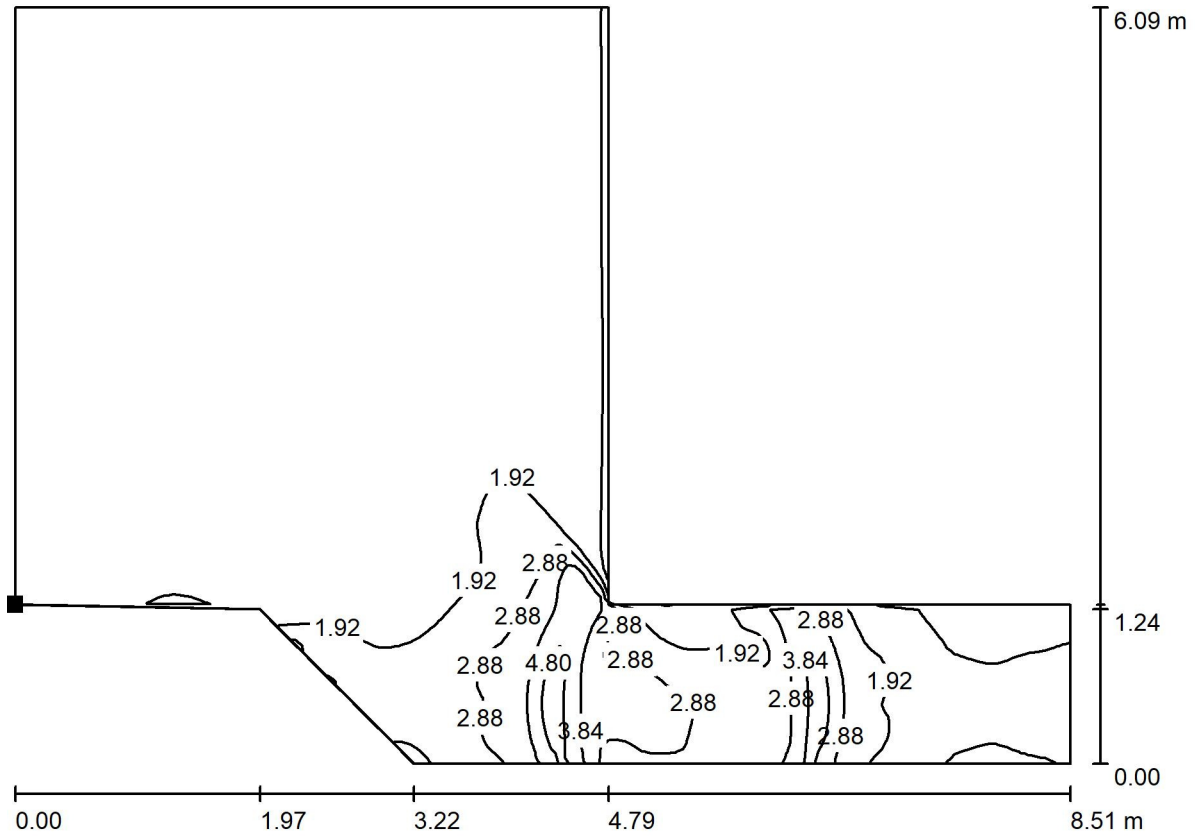
No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	2	WHITECROFT FLE31 (OPEN AREA) FLORIN E3 (1.000)	159	140	3.0
2	1	WHITECROFT FLE32 (ESCAPE ROUTE) FLORIN E3 (1.000)	150	140	3.0
			Total: 468	Total: 420	9.0

Specific connected load: $0.21 \text{ W/m}^2 = 8.37 \text{ W/m}^2/100 \text{ lx}$ (Ground area: 43.13 m^2)



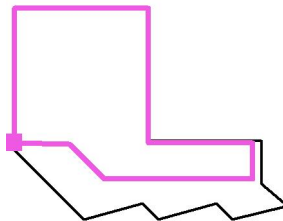
Operator
Telephone
Fax
e-Mail

R6.401 Lobby / E / Surface 1 / Isolines (E, Perpendicular)



Values in Lux, Scale 1 : 61

Position of surface in room:
Marked point:
(61.590 m, 24.800 m, 0.000 m)



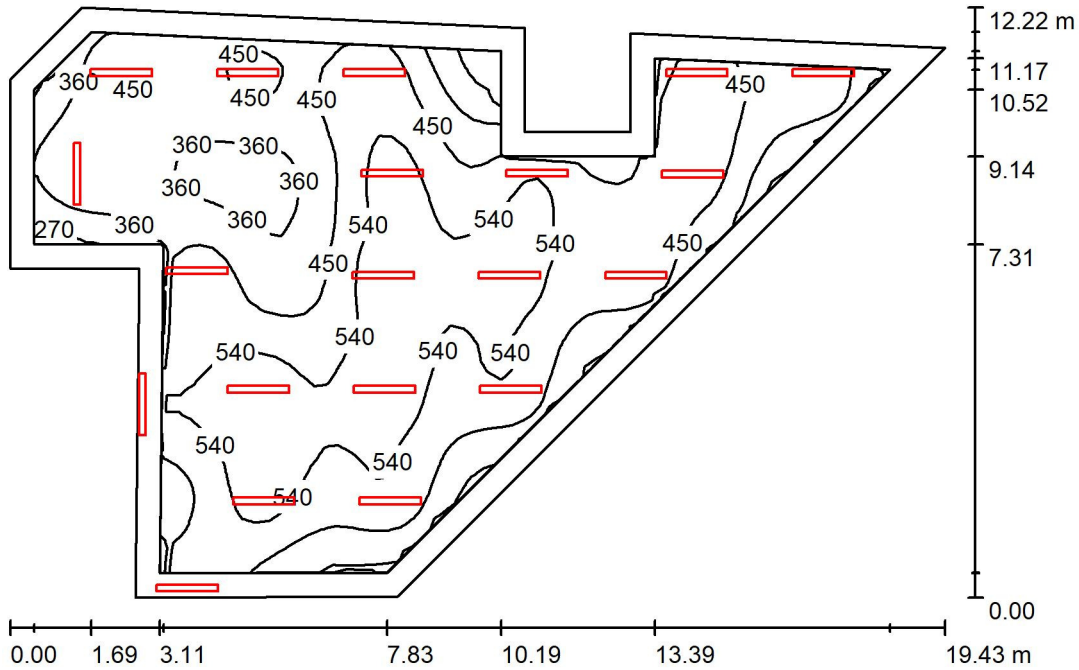
Grid: 128 x 128 Points

E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0	E_{min} / E_{max}
1.65	0.64	5.44	0.390	0.118



Operator
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R6.002 Plant enclosure / N / Summary



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

Values in Lux, Scale 1:157

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u_0
Workplane	/	468	194	613	0.415
Floor	20	401	135	529	0.337
Ceiling	70	136	68	790	0.497
Walls (11)	50	279	87	6704	/

Workplane:

Height: 0.750 m
Grid: 64 x 64 Points
Boundary Zone: 0.500 m

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.642, Ceiling / Working Plane: 0.291.

Luminaire Parts List

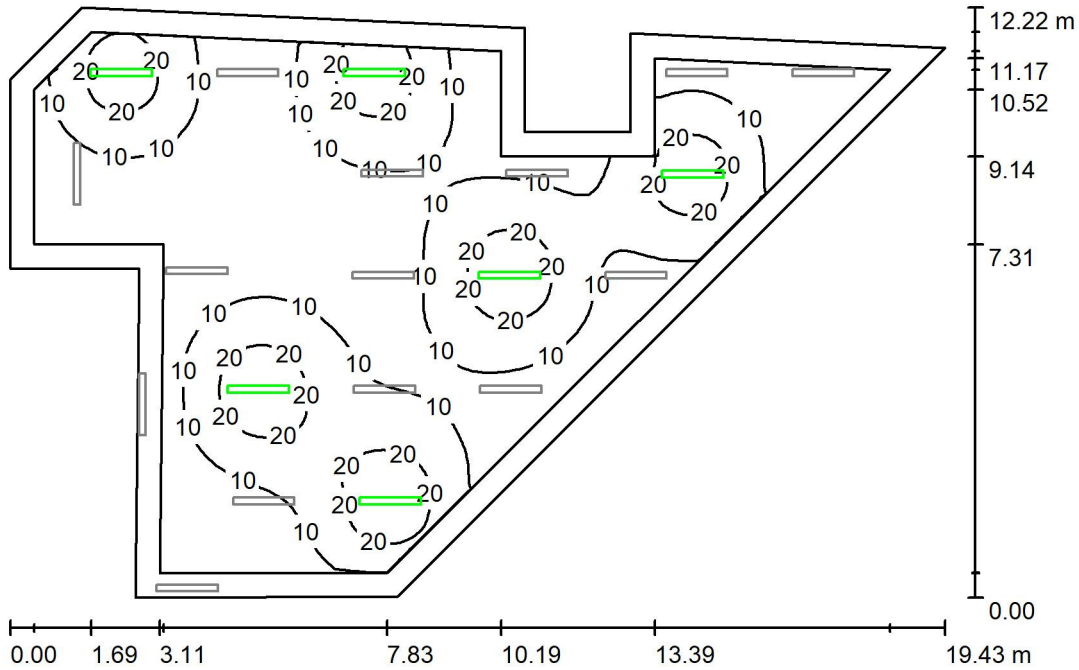
No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	14	WHITECROFT ACH44K ACL INDUSTRY (1.000)	4630	4630	33.5
2	6	WHITECROFT ACH44K ACL INDUSTRY (1.000)	4630	4630	33.5
Total:			92600	92600	670.0

Specific connected load: 4.75 W/m² = 1.01 W/m²/100 lx (Ground area: 141.19 m²)



Operator
Telephone
Fax
e-Mail

R6.002 Plant enclosure / E / Summary



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

Values in Lux, Scale 1:157

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u_0
Workplane	/	12	0.72	28	0.062
Floor	20	9.09	0.51	17	0.056
Ceiling	70	0.91	0.01	17	0.006
Walls (11)	50	4.91	0.12	35	/

Workplane:

Height: 0.750 m
Grid: 128 x 128 Points
Boundary Zone: 0.500 m

Emergency lighting scene (EN 1838):

Only direct light is calculated. Contributions of reflected light are ignored.

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.442, Ceiling / Working Plane: 0.078.

Luminaire Parts List

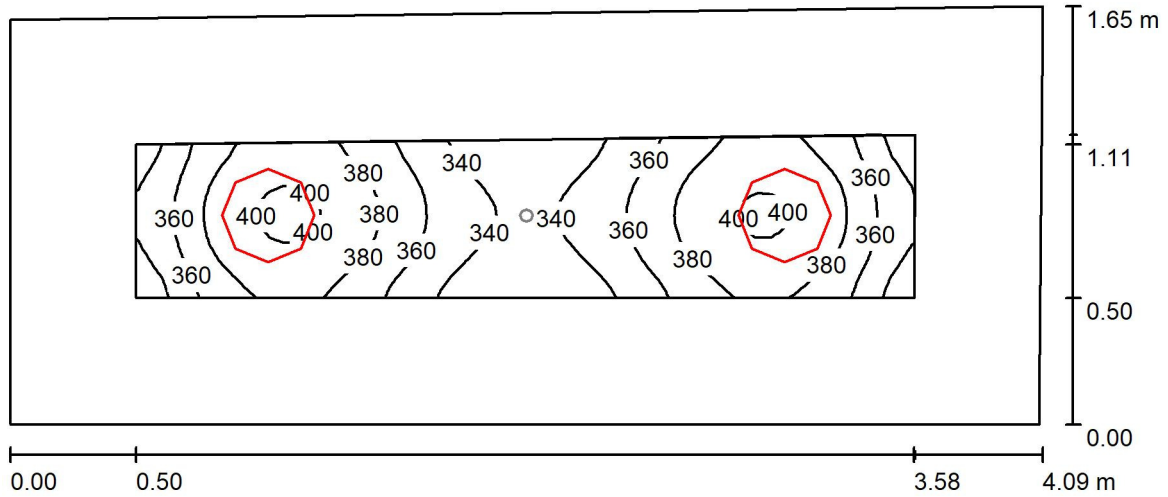
No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	6	WHITECROFT ACH44K ACL INDUSTRY (1.000)	463	463	33.5
			Total: 2778	Total: 2778	201.0

Specific connected load: $1.42 \text{ W/m}^2 = 12.27 \text{ W/m}^2/100 \text{ lx}$ (Ground area: 141.19 m^2)



Operator
Telephone
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R6.101 Lobby / N / Summary



Height of Room: 2.300 m, Maintenance factor: 0.80

Values in Lux, Scale 1:30

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u_0
Workplane	/	366	324	406	0.885
Floor	20	214	150	247	0.703
Ceiling	70	99	70	175	0.701
Walls (4)	50	185	93	387	/

Workplane:

Height: 0.750 m
Grid: 64 x 16 Points
Boundary Zone: 0.500 m

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.577, Ceiling / Working Plane: 0.271.

Luminaire Parts List

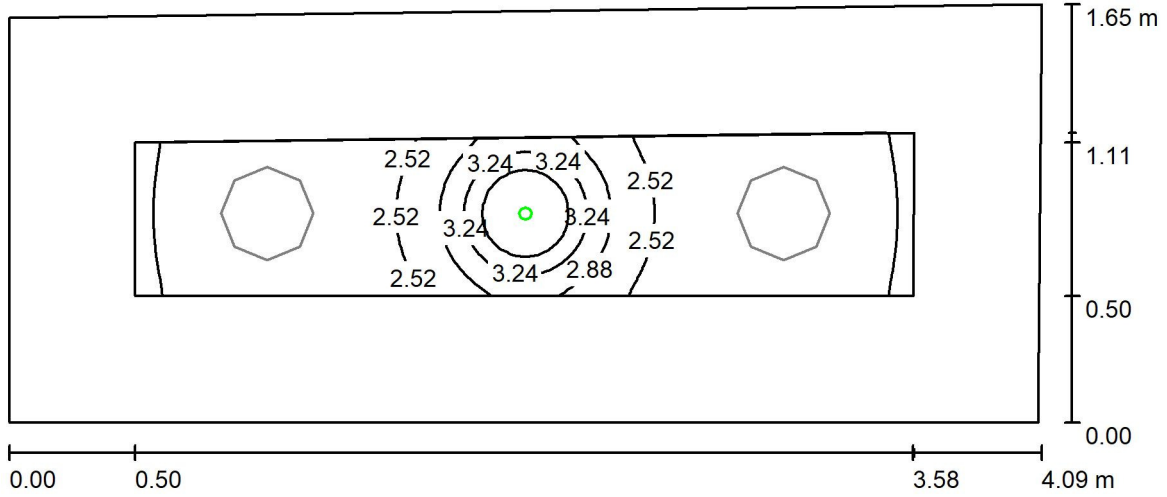
No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	2	WHITECROFT HZH34K HORIZON 360 (1.000)	2341	2341	24.0
			Total: 4682	Total: 4682	48.0

Specific connected load: $7.22 \text{ W/m}^2 = 1.97 \text{ W/m}^2/100 \text{ lx}$ (Ground area: 6.65 m^2)



Operator
Telephone
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e-Mail

R6.101 Lobby / E / Summary



Height of Room: 2.300 m, Maintenance factor: 0.80

Values in Lux, Scale 1:30

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u_0
Workplane	/	2.51	2.10	3.90	0.838
Floor	20	1.12	0.98	1.76	0.876
Ceiling	70	0.06	0.00	4.41	0.000
Walls (4)	50	4.56	0.13	85	/

Workplane:

Height: 0.750 m
Grid: 64 x 16 Points
Boundary Zone: 0.500 m

Emergency lighting scene (EN 1838):

Only direct light is calculated. Contributions of reflected light are ignored.

Illuminance Quotient (according to LG7): Walls / Working Plane: 2.608, Ceiling / Working Plane: 0.024.

Luminaire Parts List

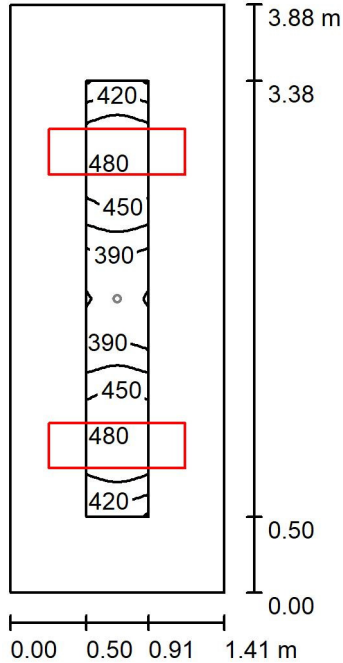
No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	1	WHITECROFT FLE31 (OPEN AREA) FLORIN E3 (1.000)	159	140	3.0
Total:			159	140	3.0

Specific connected load: $0.45 \text{ W/m}^2 = 18.00 \text{ W/m}^2/100 \text{ lx}$ (Ground area: 6.65 m^2)



Operator
Telephone
Fax
e-Mail

R6.401 Lobby / N / Summary



Height of Room: 2.300 m, Maintenance factor: 0.80

Values in Lux, Scale 1:50

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u_0
Workplane	/	429	358	483	0.834
Floor	20	252	171	297	0.676
Ceiling	70	74	50	87	0.675
Walls (4)	50	160	61	396	/

Workplane:

Height: 0.750 m
Grid: 8 x 32 Points
Boundary Zone: 0.500 m

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.412, Ceiling / Working Plane: 0.172.

Luminaire Parts List

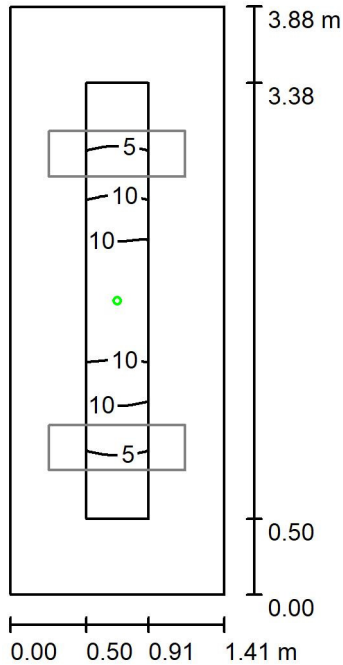
No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	2	Whitecroft Lighting NA Cityline Full Hex 900 x 300 1425lms (Type 1)* (1.000)	1988	2000	13.0
*Modified Technical Specifications			Total: 3976	Total: 4000	26.0

Specific connected load: $4.75 \text{ W/m}^2 = 1.11 \text{ W/m}^2/100 \text{ lx}$ (Ground area: 5.48 m^2)



Operator
Telephone
Fax
e-Mail

R6.401 Lobby / E / Summary



Height of Room: 2.300 m, Maintenance factor: 0.80

Values in Lux, Scale 1:50

Surface	ρ [%]	E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0
Workplane	/	7.48	3.58	15	0.480
Floor	20	3.28	0.98	7.65	0.298
Ceiling	70	0.19	0.00	5.25	0.000
Walls (4)	50	4.21	0.30	25	/

Workplane:

Height: 0.750 m
Grid: 8 x 32 Points
Boundary Zone: 0.500 m

Emergency lighting scene (EN 1838):

Only direct light is calculated. Contributions of reflected light are ignored.

Illuminance Quotient (according to LG7): Walls / Working Plane: 0.738, Ceiling / Working Plane: 0.025.

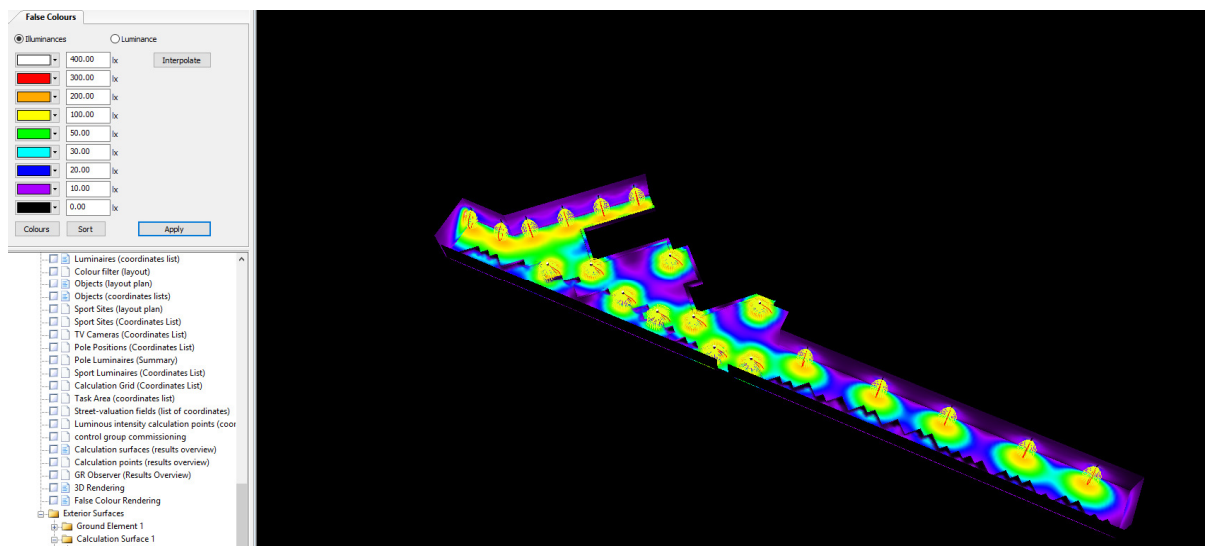
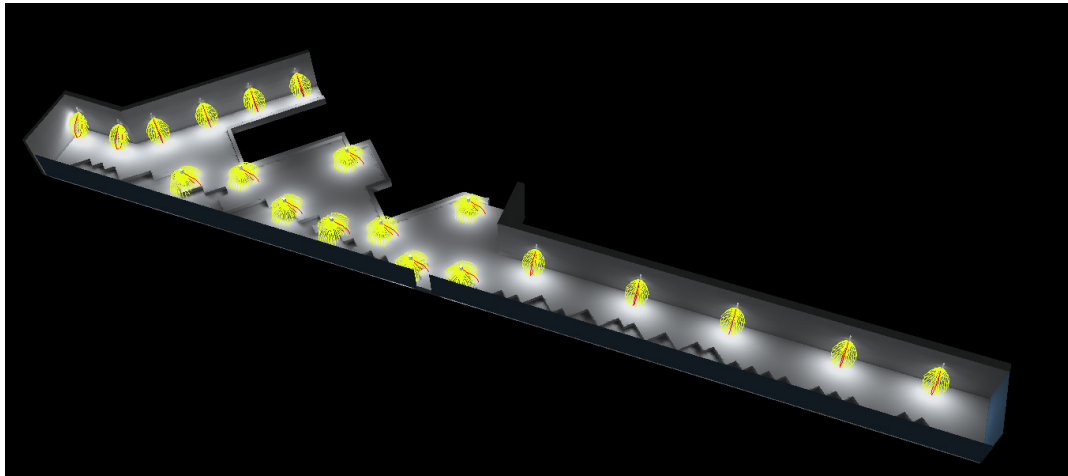
Luminaire Parts List

No.	Pieces	Designation (Correction Factor)	Φ (Luminaire) [lm]	Φ (Lamps) [lm]	P [W]
1	1	WHITECROFT FLE32 (ESCAPE ROUTE) FLORIN E3 (1.000)	150	140	3.0
			Total: 150	Total: 140	3.0

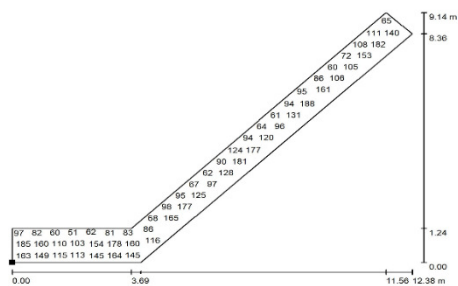
Specific connected load: $0.55 \text{ W/m}^2 = 7.33 \text{ W/m}^2/100 \text{ lx}$ (Ground area: 5.48 m^2)

UCLH PHASE 5

Level 06 Lighting Calculations.



Exterior Scene 1 / Calculation Surface 1 / Value Chart (E, Perpendicular)



Values in Lux, Scale 1 : 89

Not all calculated values could be displayed.
Position of surface in external scene:
Marked point: (23.789 m, 26.300 m, 0.250 m)



Grid: 128 x 64 Points

E_{av} [lx]
116

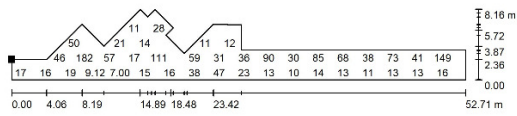
E_{min} [lx]
23

E_{max} [lx]
190

u_0
0.202

E_{min} / E_{max}
0.123

Exterior Scene 1 / Calculation Surface 2 / Value Chart (E, Perpendicular)



Values in Lux, Scale 1 : 377

Not all calculated values could be displayed.

Position of surface in external scene:
Marked point: (23.744 m, 26.326 m, 0.250 m)

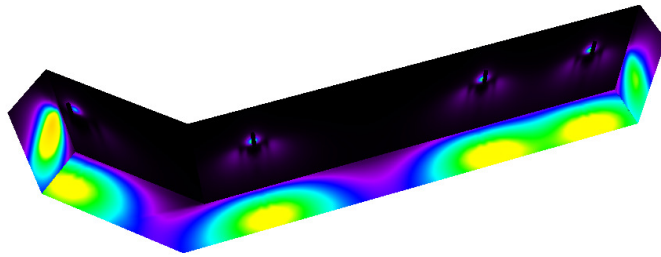


Grid: 128 x 128 Points

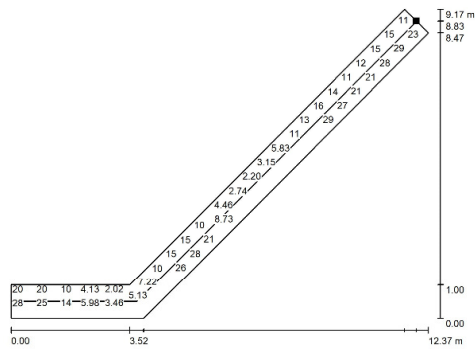
E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	$u0$	E_{min} / E_{max}
44	2.58	265	0.058	0.010

Emergency Lighting Calculations:

False Colours interface showing a color scale for illuminance values. The scale ranges from 0.00 lx (black) to 500.00 lx (red). Other values include 3.00, 5.00, 10.00, 20.00, 25.00, 200.00, and 437.50 lx. The interface includes options for 'Interpolate', 'Colours', 'Sort', and 'Apply'.



Room 1 / Light scene 1 / Escape Route 1 / Value Chart (E)



Values in Lux, Scale 1 : 89

Not all calculated values could be displayed.

Position of surface in room:
Marked point: (35.739 m, 35.104 m, 0.000 m)



Grid: 128 x 128 Points

E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	$u0$	E_{min} / E_{max}
13	1.22	30	0.091	0.040

Centre line: E_{min} : 2.75 lx, E_{min} / E_{max} : 0.10 (1 : 10).

False Colours

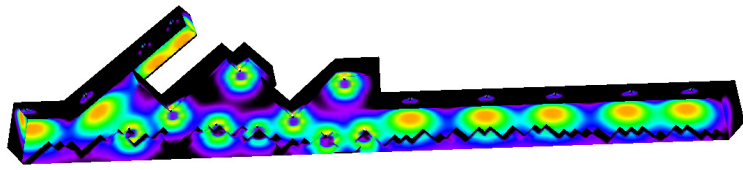
Illuminances Luminance

Interpolate

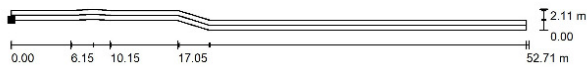
500.00	lx
437.50	lx
30.00	lx
20.00	lx
10.00	lx
5.00	lx
3.00	lx
1.50	lx
0.85	lx

Colours Sort Apply

- Maintenance plan
- Floor plan
- Luminaires (layout plan)
- Luminaires (coordinates list)
- Colour filter (layout)
- Objects (layout plan)
- Objects (coordinates lists)
- Room elements (layout plan)
- Room elements (coordinates list)
- Sport Sites (layout plan)
- Sport Sites (Coordinates List)



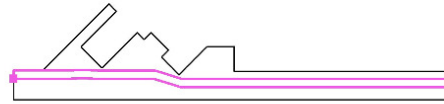
Room 2 / Light scene 1 / Escape Route 1 / Value Chart (E)



Values in Lux, Scale 1 : 377

Not all calculated values could be displayed.

Position of surface in room:
Marked point: (23.744 m, 26.500 m, 0.250 m)



Grid: 115 x 5 Points

E_{av} [lx]
10

E_{min} [lx]
1.35

E_{max} [lx]
37

u0
0.130

E_{min} / E_{max}
0.037

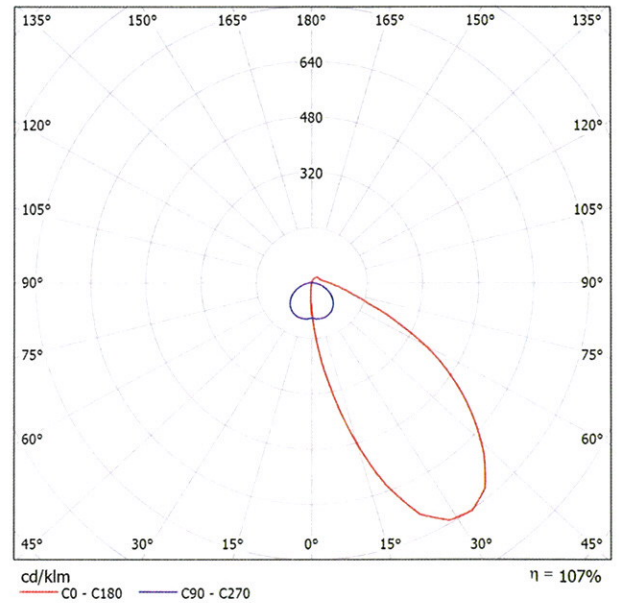
Centre line: E_{min} : 2.00 lx, E_{min} / E_{max} : 0.06 (1 : 18).

Operator
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Whitecroft Lighting K6H44KHB Kolo IP65 Hood / Luminaire Data Sheet

See our luminaire catalog for an image of the luminaire.

Luminous emittance 1:



Luminaire classification according to CIE: 93
CIE flux code: 39 76 94 93 107

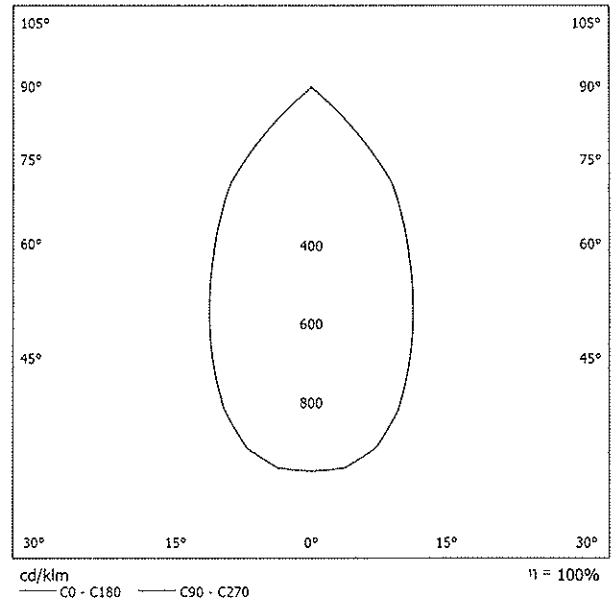
Due to missing symmetry properties, no UGR table can be displayed for this luminaire.

Operator
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Philip Payne AVTN636 Emergency LED Twin Spot Wide / Luminaire Data Sheet

See our luminaire catalog for an image of the luminaire.

Luminous emittance 1:



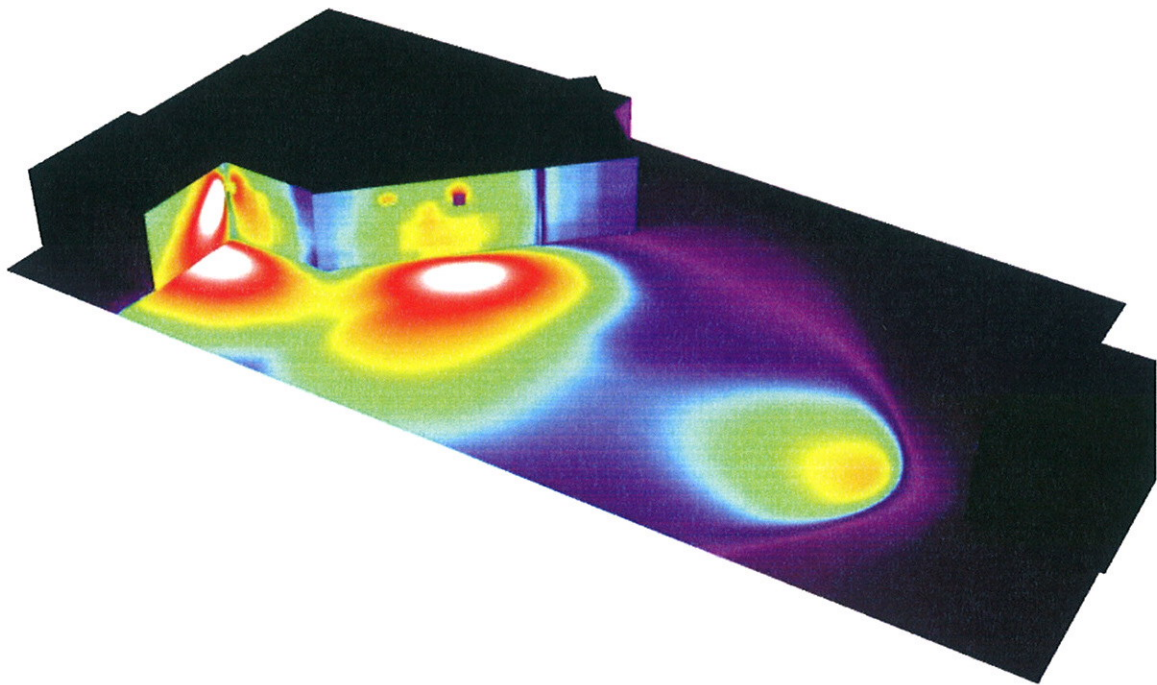
Luminaire classification according to CIE: 100
CIE flux code: 88 99 100 100 100

Luminous emittance 1:

Glare Evaluation According to UGR											
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p 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	-2.0	-1.2	-1.7	-1.0	-0.8	-2.0	-1.2	-1.7	-1.0	-0.8
	3H	-1.4	-0.7	-1.1	-0.4	-0.2	-1.4	-0.7	-1.1	-0.4	-0.2
	4H	-1.2	-0.6	-0.9	-0.3	-0.0	-1.2	-0.6	-0.9	-0.3	-0.0
	6H	-1.2	-0.6	-0.9	-0.3	-0.0	-1.2	-0.6	-0.9	-0.3	-0.0
	8H	-1.2	-0.6	-0.9	-0.3	-0.0	-1.2	-0.6	-0.9	-0.3	-0.0
4H	12H	-1.2	-0.7	-0.9	-0.4	-0.1	-1.2	-0.7	-0.9	-0.4	-0.1
	2H	-1.8	-1.1	-1.5	-0.9	-0.6	-1.8	-1.1	-1.5	-0.9	-0.6
	3H	-1.0	-0.5	-0.7	-0.2	0.2	-1.0	-0.5	-0.7	-0.2	0.2
	4H	-0.8	-0.4	-0.4	-0.0	0.3	-0.8	-0.4	-0.4	-0.0	0.3
	6H	-0.8	-0.4	-0.3	0.0	0.4	-0.8	-0.4	-0.3	0.0	0.4
8H	8H	-0.8	-0.4	-0.3	-0.0	0.4	-0.8	-0.4	-0.3	-0.0	0.4
	12H	-0.8	-0.5	-0.3	-0.1	0.4	-0.8	-0.5	-0.3	-0.1	0.4
	4H	-0.8	-0.5	-0.4	-0.1	0.3	-0.8	-0.5	-0.4	-0.1	0.3
	6H	-0.7	-0.4	-0.3	-0.0	0.4	-0.7	-0.4	-0.3	-0.0	0.4
12H	8H	-0.7	-0.5	-0.2	-0.0	0.4	-0.7	-0.5	-0.2	-0.0	0.4
	12H	-0.7	-0.5	-0.2	-0.1	0.4	-0.7	-0.5	-0.2	-0.1	0.4
	4H	-0.8	-0.5	-0.4	-0.1	0.3	-0.8	-0.5	-0.4	-0.1	0.3
6H	6H	-0.7	-0.5	-0.3	-0.1	0.4	-0.7	-0.5	-0.3	-0.1	0.4
	8H	-0.7	-0.5	-0.2	-0.1	0.4	-0.7	-0.5	-0.2	-0.1	0.4
	8H	-0.7	-0.5	-0.2	-0.1	0.4	-0.7	-0.5	-0.2	-0.1	0.4
Variation of the observer position for the luminance distances S											
S = 1.0H		+2.9 / -13.5					+2.9 / -13.5				
S = 1.5H		+5.1 / -15.0					+5.1 / -15.0				
S = 2.0H		+7.1 / -16.1					+7.1 / -16.1				
Standard table Correction Summand		BK00 -1.0					BK00 -1.0				
Corrected Glare Indices referring to 243lm Total Luminous Flux											

Operator
Telephone
Fax
e-Mail

Exterior Scene 1 / False Colour Rendering



0 0.50 1 2 3 5 10 20 50 lx