Ballincollig Housing External Stairs

Fagerhult Lighting Ltd:
F1 Calmount Park:
Ballymount:
Dublin 12:

Date: 05.12.2019
Operator: Ronan Lowry
Ballincollig Housing External Stairs

Fagerhult Lighting Ltd
F1 Calmount Park, Ballymount, Dublin 12

Operator Ronan Lowry
Telephone 01 4260200
Fax
e-Mail ronan.lowry@fagerhult.ie

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      Value Chart (E, Perpendicular)
WHITECROFT K6H44KHB KOLO IP65 HOOD / Luminaire Data Sheet

Luminous emittance 1:

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

Luminaire classification according to CIE: 93
CIE flux code: 39 76 94 93 100

Surface mounted circular IP65 LED bulkhead luminaire in 400mm diameter.
Polycarbonate opal diffuser. Supplied with trim ring – as Whitecroft Lighting KOLO IP65 HOOD
3 Pieces  WHITECROFT K6H44KHB KOLO IP65 HOOD  
Article No.: K6H44KHB  
Luminous flux (Luminaire): 1008 lm  
Luminous flux (Lamps): 1008 lm  
Luminaire Wattage: 14.2 W  
Luminaire classification according to CIE: 93  
CIE flux code: 39 76 94 93 100  
Fitting: 1 x K6H44KHB (Correction Factor 1.000).
Exterior Scene 1 / Luminaires (layout plan)

Luminaire Parts List

<table>
<thead>
<tr>
<th>No.</th>
<th>Pieces</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>WHITECROFT K6H44KHB KOLO IP65 HOOD</td>
</tr>
</tbody>
</table>
Object parts list

<table>
<thead>
<tr>
<th>No.</th>
<th>Pieces</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24</td>
<td>Extrusion Volume</td>
</tr>
</tbody>
</table>
Exterior Scene 1 / Calculation surfaces (results overview)

Calculation Surface List

<table>
<thead>
<tr>
<th>No.</th>
<th>Designation</th>
<th>Type</th>
<th>Grid</th>
<th>$E_{av}$ [lx]</th>
<th>$E_{min}$ [lx]</th>
<th>$E_{max}$ [lx]</th>
<th>$u_0$</th>
<th>$E_{min} / E_{max}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Landing</td>
<td>perpendicular</td>
<td>128 x 32</td>
<td>54</td>
<td>3.70</td>
<td>177</td>
<td>0.068</td>
<td>0.021</td>
</tr>
<tr>
<td>2</td>
<td>Stairs</td>
<td>perpendicular</td>
<td>64 x 32</td>
<td>99</td>
<td>11</td>
<td>235</td>
<td>0.108</td>
<td>0.045</td>
</tr>
<tr>
<td>3</td>
<td>Half Landing</td>
<td>perpendicular</td>
<td>32 x 32</td>
<td>40</td>
<td>24</td>
<td>66</td>
<td>0.596</td>
<td>0.358</td>
</tr>
<tr>
<td>4</td>
<td>Stairs</td>
<td>perpendicular</td>
<td>32 x 64</td>
<td>105</td>
<td>9.47</td>
<td>279</td>
<td>0.090</td>
<td>0.034</td>
</tr>
</tbody>
</table>

Summary of Results

<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity</th>
<th>Average [lx]</th>
<th>Min [lx]</th>
<th>Max [lx]</th>
<th>$u_0$</th>
<th>$E_{min} / E_{max}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>perpendicular</td>
<td>4</td>
<td>76</td>
<td>3.70</td>
<td>279</td>
<td>0.05</td>
<td>0.01</td>
</tr>
</tbody>
</table>
Exterior Scene 1 / Landing / Value Chart (E, Perpendicular)

Not all calculated values could be displayed.

Position of surface in external scene:
Marked point:
(4.837 m, 32.939 m, 4.015 m)

Grid: 128 x 32 Points

<table>
<thead>
<tr>
<th></th>
<th>E_{av} [lx]</th>
<th>E_{min} [lx]</th>
<th>E_{max} [lx]</th>
<th>u0</th>
<th>E_{min} / E_{max}</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>54</td>
<td>3.70</td>
<td>177</td>
<td>0.068</td>
<td>0.021</td>
</tr>
</tbody>
</table>
**Exterior Scene 1 / Stairs / Value Chart (E, Perpendicular)**

Values in Lux, Scale 1 : 26

Grid: 64 x 32 Points

- $E_{av}$ [lx] = 99
- $E_{min}$ [lx] = 11
- $E_{max}$ [lx] = 235
- $u_0$ = 0.108
- $E_{min} / E_{max}$ = 0.045

---

Not all calculated values could be displayed.

Position of surface in external scene:
Marked point:
(11.124 m, 32.982 m, 4.026 m)
Exterior Scene 1 / Half Landing / Value Chart (E, Perpendicular)

Not all calculated values could be displayed.

Position of surface in external scene:
Marked point:
(13.747 m, 32.859 m, 2.014 m)

Grid: 32 x 32 Points

<table>
<thead>
<tr>
<th>( E_{\text{av}} ) [lx]</th>
<th>( E_{\text{min}} ) [lx]</th>
<th>( E_{\text{max}} ) [lx]</th>
<th>( u_0 )</th>
<th>( \frac{E_{\text{min}}}{E_{\text{max}}} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>24</td>
<td>66</td>
<td>0.596</td>
<td>0.358</td>
</tr>
</tbody>
</table>
Not all calculated values could be displayed.

Position of surface in external scene:
Marked point:
(13.700 m, 30.133 m, 0.085 m)

Grid: 32 x 64 Points

<table>
<thead>
<tr>
<th>Eav [lx]</th>
<th>Emin [lx]</th>
<th>Emax [lx]</th>
<th>u0</th>
<th>Emin / Emax</th>
</tr>
</thead>
<tbody>
<tr>
<td>105</td>
<td>9.47</td>
<td>279</td>
<td>0.090</td>
<td>0.034</td>
</tr>
</tbody>
</table>
Ballincollig Housing

Fagerhult Lighting Ltd:
F1 Calmount Park:
Ballymount:
Dublin 12:

Date: 05.12.2019
Operator: Ronan Lowry
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      Surface 1
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      Surface 1
        Value Chart (E) 12
Luminous emittance 1:

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

Luminaire classification according to CIE: 93
CIE flux code: 39 76 94 93 100

Surface mounted circular IP65 LED bulkhead luminaire in 400mm diameter. Polycarbonate opal diffuser. Supplied with trim ring – as Whitecroft Lighting KOLO IP65 HOOD
Exterior Scene 1 / Planning data

Maintenance factor: 0.80, ULR (Upward Light Ratio): 2.5%

Scale 1:1711

Luminaire Parts List

<table>
<thead>
<tr>
<th>No.</th>
<th>Pieces</th>
<th>Designation (Correction Factor)</th>
<th>( \Phi ) (Luminaire) [lm]</th>
<th>( \Phi ) (Lamps) [lm]</th>
<th>P [W]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>WHITECROFT K6H44KH Kolo IP65 Hood (1.000)</td>
<td>1008</td>
<td>1008</td>
<td>14.2</td>
</tr>
</tbody>
</table>

Total: 20160  Total: 20160  284.0
Exterior Scene 1 / Luminaire parts list

20 Pieces  WHITECROFT K6H44KHB KOLO IP65 HOOD
Article No.: K6H44KHB
Luminous flux (Luminaire): 1008 lm
Luminous flux (Lamps): 1008 lm
Luminaire Wattage: 14.2 W
Luminaire classification according to CIE: 93
CIE flux code: 39 76 94 93 100
Fitting: 1 x K6H44KHB (Correction Factor 1.000).
Exterior Scene 1 / 3D Rendering
Exterior Scene 1 / False Colour Rendering

![False Colour Rendering Image]
Exterior Scene 1 / Rear 44-46 / Surface 1 / Value Chart (E)

Not all calculated values could be displayed.

Position of surface in external scene:
Marked point:
(241.279 m, 109.487 m, 0.000 m)

Grid: 128 x 64 Points

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$E_{av}$ [lx]</td>
<td>$E_{min}$ [lx]</td>
<td>$E_{max}$ [lx]</td>
<td>$u_0$</td>
<td>$E_{min} / E_{max}$</td>
</tr>
<tr>
<td>49</td>
<td>2.11</td>
<td>218</td>
<td>0.044</td>
<td>0.010</td>
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</table>

Values in Lux, Scale 1 : 179
Exterior Scene 1 / Rear 41-43 / Surface 1 / Value Chart (E)

Not all calculated values could be displayed.

Position of surface in external scene:
Marked point: (243.168 m, 110.032 m, 0.000 m)

Grid: 128 x 64 Points

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>$E_{av}$ [lx]</td>
<td>50</td>
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<tr>
<td>$E_{min}$ [lx]</td>
<td>3.03</td>
</tr>
<tr>
<td>$E_{max}$ [lx]</td>
<td>216</td>
</tr>
<tr>
<td>$u_0$</td>
<td>0.061</td>
</tr>
<tr>
<td>$E_{min} / E_{max}$</td>
<td>0.014</td>
</tr>
</tbody>
</table>
Not all calculated values could be displayed.

Position of surface in external scene:
Marked point:
(284.325 m, 141.445 m, 0.000 m)

Grid: 128 x 64 Points

<table>
<thead>
<tr>
<th>$E_{av}$ [lx]</th>
<th>$E_{min}$ [lx]</th>
<th>$E_{max}$ [lx]</th>
<th>$u_0$</th>
<th>$E_{min} / E_{max}$</th>
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</thead>
<tbody>
<tr>
<td>39</td>
<td>1.53</td>
<td>231</td>
<td>0.039</td>
<td>0.007</td>
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</table>
Exterior Scene 1 / Rear 50-52 / Surface 1 / Value Chart (E)

Not all calculated values could be displayed.

Position of surface in external scene:
Marked point:
(290.175 m, 122.955 m, 0.000 m)

Grid: 128 x 128 Points

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>$E_{av}$ [lx]</td>
<td>$E_{min}$ [lx]</td>
<td>$E_{max}$ [lx]</td>
<td>$u_0$</td>
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<tr>
<td></td>
<td>53</td>
<td>4.25</td>
<td>225</td>
<td>0.081</td>
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</tbody>
</table>
Exterior Scene 1 / Rear 68-70 / Surface 1 / Value Chart (E)

Not all calculated values could be displayed.

Position of surface in external scene:
Marked point:
(377.995 m, 171.095 m, 0.000 m)

Grid: 128 x 128 Points

Values in Lux, Scale 1 : 182

<table>
<thead>
<tr>
<th>$E_{av}$ [lx]</th>
<th>$E_{min}$ [lx]</th>
<th>$E_{max}$ [lx]</th>
<th>$u_0$</th>
<th>$E_{min} / E_{max}$</th>
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<tbody>
<tr>
<td>47</td>
<td>0.18</td>
<td>223</td>
<td>0.004</td>
<td>0.001</td>
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</tbody>
</table>
Outdoor Lighting Report

This design has been prepared in accordance with the HEA/HEMSA Guidance Note - CDM2015 Regulations, Issue 1.1 dated 09/04/15 - Procedure 2 for an outline design. The information in this report does not account for installation considerations, site conditions or provide any form of risk assessment. Urbis' design service is advisory only and it is the responsibility of the recipient of this information to verify that the design is suitable for the intended application. No account is taken for the blocking effect caused by buildings, trees etc. The calculation shown assumes that the whole area considered is in the same plane.

PREPARED BY: Urbis Schreder Limited
Sapphire House
Lime Tree Way
Chineham
Basingstoke
RG23 8GG
Tel. 01256 354446
www.urbis-schreder.com
**General Data**
Dimensions in Metres Angles in Degrees
Grid Origin 63.0m x 372.0m
Area 250.0m x 153.0m
Sample Spacing 1.50m x 1.50m

**Luminares**

**Luminaire A Data**

<table>
<thead>
<tr>
<th>Supplier</th>
<th>AXIA 2.1 5167 - 16 Nichia NVSL219CT 690 mA NW 230V Without protector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>16 Nichia NVSL219CT</td>
</tr>
<tr>
<td>Lamp(s)</td>
<td>16 Nichia NVSL219CT</td>
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<tr>
<td>Lamp Flux (klm)</td>
<td>4.28</td>
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<tr>
<td>File Name</td>
<td>AXIA 2.1 5167 16 Nichia NVSL219CT ESDm A NW 383332 Without protector 230V TF</td>
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<td>Maintenance Factor</td>
<td>0.83</td>
</tr>
<tr>
<td>Imax70,80,90(cd/klm)</td>
<td>956.2, 194.5, 0.0</td>
</tr>
<tr>
<td>Lamp S/P Ratio</td>
<td>0.00</td>
</tr>
<tr>
<td>No. in Project</td>
<td>12</td>
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**Layout**

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<th>Type</th>
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<th>Y</th>
<th>Height</th>
<th>Angle</th>
<th>Tilt</th>
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<th>Target</th>
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<td>X</td>
<td>Y</td>
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<tr>
<td>5</td>
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<td>6</td>
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<td>225.00</td>
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<td>0.00</td>
<td>0.50</td>
<td></td>
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<td>9</td>
<td>A</td>
<td>272.61</td>
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<td>19.00</td>
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<td>10</td>
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<td>0.50</td>
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<tr>
<td>12</td>
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<td>0.00</td>
<td>0.50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Horizontal Illuminance (lux)

Grid 1

Results

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Eav</td>
<td>5.08</td>
</tr>
<tr>
<td>Emin</td>
<td>0.76</td>
</tr>
<tr>
<td>Emax</td>
<td>12.14</td>
</tr>
<tr>
<td>Emin/Emax</td>
<td>0.06</td>
</tr>
<tr>
<td>Emin/Eav</td>
<td>0.15</td>
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</tbody>
</table>