

Addendum 1 to Code of Practice for Energy Efficiency of Lighting Installations, 2007 edition

Amendments are hereby stipulated as follows:

1) Replace the entire Table (LG2) in Sub-clause 4.1, (page 3) with the following table:

Table (LG2): Minimum Allowable Values of Luminous Efficacy for Various Types of Lamps

| Lamp Type | | | Lamp Code | Nominal Lamp Wattage { L_w } | Minimum Allowable Luminous Efficacy (lm/W) | |
|---|-------------------|---|-----------|---|--|----------|
| Fluorescent tube | | | MCF | L_w | Colour Temperature | |
| | | | | | < 6000°K | ≥ 6000°K |
| T5 Luminous Efficacy referenced at 35°C operating temperature | Tubular & U-Shape | High Efficiency type with Lumen per unit tube length < 2700 Lumen/m | | 14 | 87 | 80 |
| | | | | 21 | 90 | 84 |
| | | | | 28 | 93 | 87 |
| | | | | 35 | 94 | 87 |
| | Circular | High Output type with Lumen per unit tube length ≥ 2700 Lumen/m | | 24 | 75 | 71 |
| | | | | 39 | 81 | 76 |
| | | | | 49 | 90 | 85 |
| | | | | 54 | 83 | 79 |
| | | | | 80 | 79 | 75 |
| | | | | 40W – 60W | 70 | 65 |
| T8 & Non-T5 Luminous Efficacy referenced at 25°C operating temperature | | | | < 40W | 75 | 70 |
| | | | | < 15 | 49 | 45 |
| | | | | 15 | 63 | 59 |
| | | | 18 | 71 | 69 | |
| | | | 30 | 76 | 73 | |
| | | | 36 | 88 | 86 | |
| | | | ≥ 58 | 85 | 82 | |
| For Fluorescent tubes of same type having a Wattage falling between two indicated values, the L_w can be calculated by linear interpolation between the two Luminous Efficacy values of the two closest Wattage values indicated. | | | | | | |
| Compact Fluorescent | | | CFN | Comply with latest requirements on minimum allowable luminous efficacy in The HK Voluntary Energy Efficiency Labelling Scheme for Compact Fluorescent Lamps, EMSD, available for download at http://www.emsd.gov.hk/emsd/eng/pee/eels_sch_doc.shtml . (Extract at Appendix A) | | |
| Non-integrated Type with NO built-in controlgear | | | | | | |
| Integrated Type with built-in controlgear | | | CFG | | | |
| Metal Halide | | | MBI | $\{L_w\} < 100 \text{ W}$ | 70 | |
| | | | | $100 \leq \{L_w\} < 400 \text{ W}$ | 75 | |
| | | | | $\{L_w\} \geq 400 \text{ W}$ | 85 | |
| Mercury Vapour | | | MBF | $\{L_w\} \leq 50 \text{ W}$ | 35 | |
| | | | | $50 \text{ W} < \{L_w\} < 250 \text{ W}$ | 45 | |
| | | | | $\{L_w\} \geq 250 \text{ W}$ | 50 | |
| Low Pressure Sodium Vapour | | | SOX | $20 \text{ W} \leq \{L_w\}$ | 100 | |
| | | | | $20 \text{ W} < \{L_w\} < 40 \text{ W}$ | 130 | |
| | | | | $40 \text{ W} \leq \{L_w\} < 100 \text{ W}$ | 140 | |
| | | | | $\{L_w\} \geq 100 \text{ W}$ | 160 | |
| High Pressure Sodium Vapour | | | SON | $\{L_w\} < 50 \text{ W}$ | 30 | |
| | | | | $50 \text{ W} \leq \{L_w\} < 125 \text{ W}$ | 65 | |
| | | | | $125 \text{ W} \leq \{L_w\} < 500 \text{ W}$ | 85 | |
| | | | | $\{L_w\} \geq 500 \text{ W}$ | 120 | |
| Blended Vapour <i>(with built-in tungsten filament)</i> | | | MBTF | $\{L_w\} \leq 100 \text{ W}$ | 10 | |
| | | | | $100 \text{ W} < \{L_w\} \leq 160 \text{ W}$ | 15 | |
| | | | | $160 \text{ W} < \{L_w\} < 300 \text{ W}$ | 20 | |
| | | | | $\{L_w\} \geq 300 \text{ W}$ | 25 | |

| | | | |
|---|-----|--|----|
| Tungsten Filament (including reflector lamps) | GLS | $\{L_w\} < 20 \text{ W}$ | 6 |
| | | $20 \text{ W} \leq \{L_w\} < 40 \text{ W}$ | 8 |
| | | $40 \text{ W} \leq \{L_w\} < 60 \text{ W}$ | 10 |
| | | $60 \text{ W} \leq \{L_w\} < 100 \text{ W}$ | 12 |
| | | $100 \text{ W} \leq \{L_w\} < 150 \text{ W}$ | 13 |
| | | $\{L_w\} \geq 150 \text{ W}$ | 14 |
| Tungsten Halogen (including reflector lamps) | TH | $\{L_w\} < 20 \text{ W}$ | 12 |
| | | $20 \text{ W} \leq \{L_w\} \leq 100 \text{ W}$ | 15 |
| | | $100 \text{ W} < \{L_w\} \leq 500 \text{ W}$ | 16 |
| | | $500 \text{ W} < \{L_w\} < 1000 \text{ W}$ | 19 |
| | | $\{L_w\} \geq 1000 \text{ W}$ | 22 |

2) Add the following paragraph after Table (LG2) in Sub-clause 4.1 (page 3)

Exception:

A maximum of 5% of lamps in a space, calculated based on the total lighting load in corresponding space, subject to the space meeting LPD requirements in Table (LG4).

3) Add the following paragraph to Sub-clause 4.2 (page 4) on controlgear loss:

Exception:

A maximum of 5% of lamps in a space, calculated based on the total lighting load in corresponding space, subject to the space meeting LPD requirements in Table (LG4).

4) In Sub-clause 4.2 on LPD, the **lighting energy approach** applicable to Spaces A1 & A14 (page 5) **applies to all types of spaces.**

5) Add the following paragraph to Sub-clause 4.4 (page 7) on lighting control:

Exception:

In a space with LPD lower than the LPD values in Table (LG4), fewer no. of control points could be provided, the percentage of which should not be less than the ratio given by the difference between required LPD and actual LPD to the required LPD.

6) Replace in Appendix C1 (page 18) the table for Form LG-1 with the following table:

| Data of Lamps & Luminaires | | | | | Office | Sheet 1 of (1) | Form LG-1 | |
|----------------------------|---|---|--|---|----------------------------|-------------------------------|---|-------------------------|
| Luminaire Designation | Lamp Code <i>quoted from Table (LG2)</i> | Nominal Lamp Wattage $\{L_w\}$ <i>(Lamp only)</i> | Luminous Efficacy | | No. of Lamps per Luminaire | No. of Ballasts per Luminaire | Power Consumption per Luminaire (lamp + ballast) | |
| | | | Luminous Efficacy <i>(manufacturer data) at prescribed operating hours in Table (LG1)</i> | Minimum Allowable Value <i>Table (LG2)</i> | | | Circuit Wattage {CW} <i>Manufacturer data or calculated by: $\{n\} \times \{L_w\} + \{Controlgear Loss per Luminaire\}$</i> | Maximum Allowable Value |
| | | | (lm/W) | (lm/W) | | | (W) | (W) |
| FL2 | MCF T5 | 14 | 98 | 87 | 2 | 1 | 31.6 | 32 |
| FL4 | MCF T5 | 28 | 98 | 93 | 1 | 1 | 30.5 | 32 |
| FL5 | MCF T5 | 28 | 98 | 93 | 2 | 1 | 59.1 | 62.1 |
| FL6 | MCF T5 | 35 | 99 | 94 | 1 | 1 | 38.5 | 39 |

Addendum 1 to Code of Practice for Energy Efficiency of Lighting Installations, 2007

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|------|------------|----|----|----|---|---|------|------|
| FL7 | MCF T5 | 35 | 99 | 94 | 2 | 1 | 77 | 77.2 |
| FL8 | CFN 2-tube | 16 | 67 | 65 | 1 | 1 | 17.2 | 19 |
| FL9 | CFN 2-tube | 12 | 69 | 65 | 1 | 1 | 13.5 | 16 |
| FL10 | MCF T5 | 14 | 98 | 87 | 1 | 1 | 16.4 | 17 |

7) Replace in Appendix C2 (page 21) the table for Form LG-1 with the following table:

| Data of Lamps & Luminaires | | | | Office | | Sheet 1 of (1) | | Form LG-1 | |
|----------------------------|---|---|--|---|----------------------------|-------------------------------|---|-------------------------|-----|
| Luminaire Designation | Lamp Code <i>quoted from Table (LG2)</i> | Nominal Lamp Wattage $\{L_w\}$ <i>(Lamp only)</i> | Luminous Efficacy | | No. of Lamps per Luminaire | No. of Ballasts per Luminaire | Power Consumption per Luminaire (lamp + ballast) | | |
| | | | Luminous Efficacy <i>(manufacturer data) at prescribed operating hours in Table (LG1)</i> | Minimum Allowable Value <i>Table (LG2)</i> | | | Circuit Wattage {CW} <i>Manufacturer data or calculated by: $\{n\} \times \{L_w\} + \{Controlgear Loss per Luminaire\}$</i> | Maximum Allowable Value | |
| | | | (lm/W) | (lm/W) | | | {n} per Luminaire | (W) | (W) |
| BH1 | MBI | 100 | 87 | 75 | 1 | 1 | 110 | 111.8 | |
| BH2 | SON | 100 | 85 | 65 | 1 | 1 | 110.5 | 111.8 | |
| BH3 | MCF T5 | 35 | 97 | 94 | 1 | 1 | 38.5 | 39 | |
| BH4 | TH | 150 | 17.2 | 16 | 1 | N.A. | 150 | N.A. | |
| BH5 | MBI | 70 | 88 | 70 | 1 | 1 | 78.5 | 80 | |
| BH6 | SON | 50 | 83 | 65 | 1 | 1 | 57.2 | 58.8 | |
| BH7 | GLS | 40 | 10 | 10 | 1 | N.A. | 40 | N.A. | |

8) Replace in Appendix C3 (page 24) the table for Form LG-1 with the following table:

| Data of Lamps & Luminaires | | | | Office | | Sheet 1 of (1) | | Form LG-1 | |
|----------------------------|---|---|--|---|----------------------------|-------------------------------|---|-------------------------|-----|
| Luminaire Designation | Lamp Code <i>quoted from Table (LG2)</i> | Nominal Lamp Wattage $\{L_w\}$ <i>(Lamp only)</i> | Luminous Efficacy | | No. of Lamps per Luminaire | No. of Ballasts per Luminaire | Power Consumption per Luminaire (lamp + ballast) | | |
| | | | Luminous Efficacy <i>(manufacturer data) at prescribed operating hours in Table (LG1)</i> | Minimum Allowable Value <i>Table (LG2)</i> | | | Circuit Wattage {CW} <i>Manufacturer data or calculated by: $\{n\} \times \{L_w\} + \{Controlgear Loss per Luminaire\}$</i> | Maximum Allowable Value | |
| | | | (lm/W) | (lm/W) | | | {n} per Luminaire | (W) | (W) |
| BR1 | GLS | 60 | 14 | 12 | 1 | N.A. | 60 | N.A. | |
| BR2 | CFG | 22 | 60 | 55 | 1 | 1 | 24 | 25 | |
| BR3 | GLS | 40 | 11 | 10 | 1 | N.A. | 40 | N.A. | |
| BR4 | TH | 35 | 19 | 15 | 1 | 1 | 37.8 | N.A. | |
| BR5 | GLS | 100 | 13 | 13 | 1 | N.A. | 100 | N.A. | |
| BR6 | MCF | 13 | 70 | 49 | 1 | 1 | 15 | 15.7 | |
| BR7 | TH | 35 | 20 | 15 | 1 | 1 | 37.8 | N.A. | |
| TL1 | GLS | 40 | 14 | 10 | 1 | N.A. | 40 | N.A. | |
| TL2 | CFN 2-tube | 13 | 69 | 65 | 1 | 1 | 16 | 16.7 | |
| TL3 | TH | 20 | 18 | 15 | 1 | 1 | 22.8 | N.A. | |

Addendum 1 to Code of Practice for Energy Efficiency of Lighting Installations, 2007

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|-----|------------|-----|----|-----------|---|------|------|-------------|
| FR1 | CFN 2-tube | 6.5 | 68 | <i>50</i> | 1 | 1 | 7.5 | <i>9</i> |
| FR2 | TH | 35 | 15 | <i>15</i> | 1 | 1 | 37 | <i>N.A.</i> |
| FR3 | GLS | 30 | 11 | <i>8</i> | 6 | N.A. | 180 | <i>N.A.</i> |
| FR4 | CFG | 8 | 60 | <i>45</i> | 2 | 1 | 18 | <i>19</i> |
| FR5 | MCF T5 | 21 | 97 | <i>90</i> | 1 | 1 | 22.8 | <i>24</i> |

(Amendments are shown in red)

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