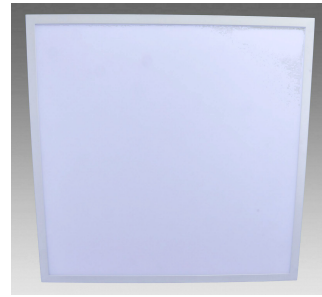


filename : NTU43-66-840.LDT  
 meas. number : 2280/C1  
 luminaire number : NTU43/66/840  
 date / operator : 26-05-2017

**default lamp type(s)**

| no of lamps | lamp type        | luminaire lumens | input wattage |
|-------------|------------------|------------------|---------------|
| 1           | LED MODULE 4000K | 4365 lm          | 41.9 W        |

**dimensions**

| luminaire |          | luminous area |          |
|-----------|----------|---------------|----------|
| length    | : 595 mm | length        | : 555 mm |
| width     | : 595 mm | width         | : 555 mm |
| height    | : 10 mm  | height        | : 0 mm   |

**coordinate system**

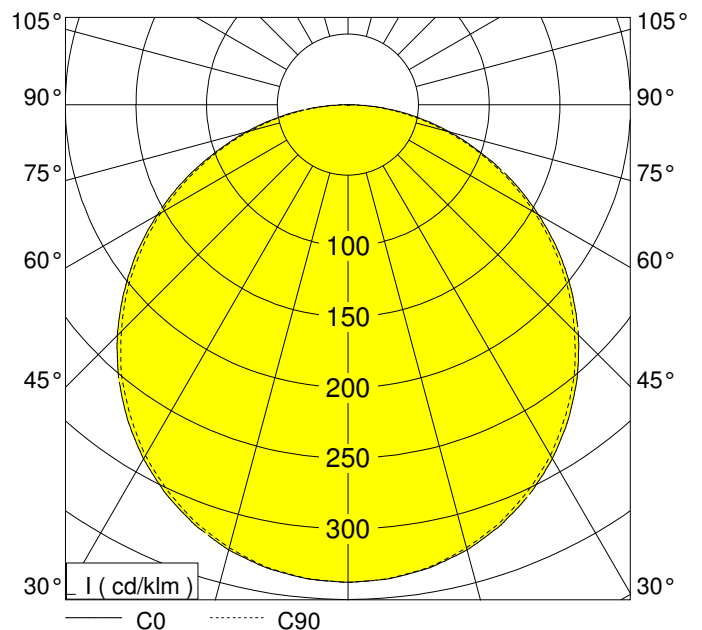
|                                   |          |                   |           |
|-----------------------------------|----------|-------------------|-----------|
| no of planes                      | : 7      | samples / plane   | : 37      |
| first c-plane                     | : 0.0 °  | first gamma-angle | : 0.0 °   |
| step angle                        | : 15.0 ° | step angle        | : 5.0 °   |
| last c-plane                      | : 90.0 ° | last gamma-angle  | : 180.0 ° |
| symmetrics : symmetry to C0 / C90 |          |                   |           |

**performance**

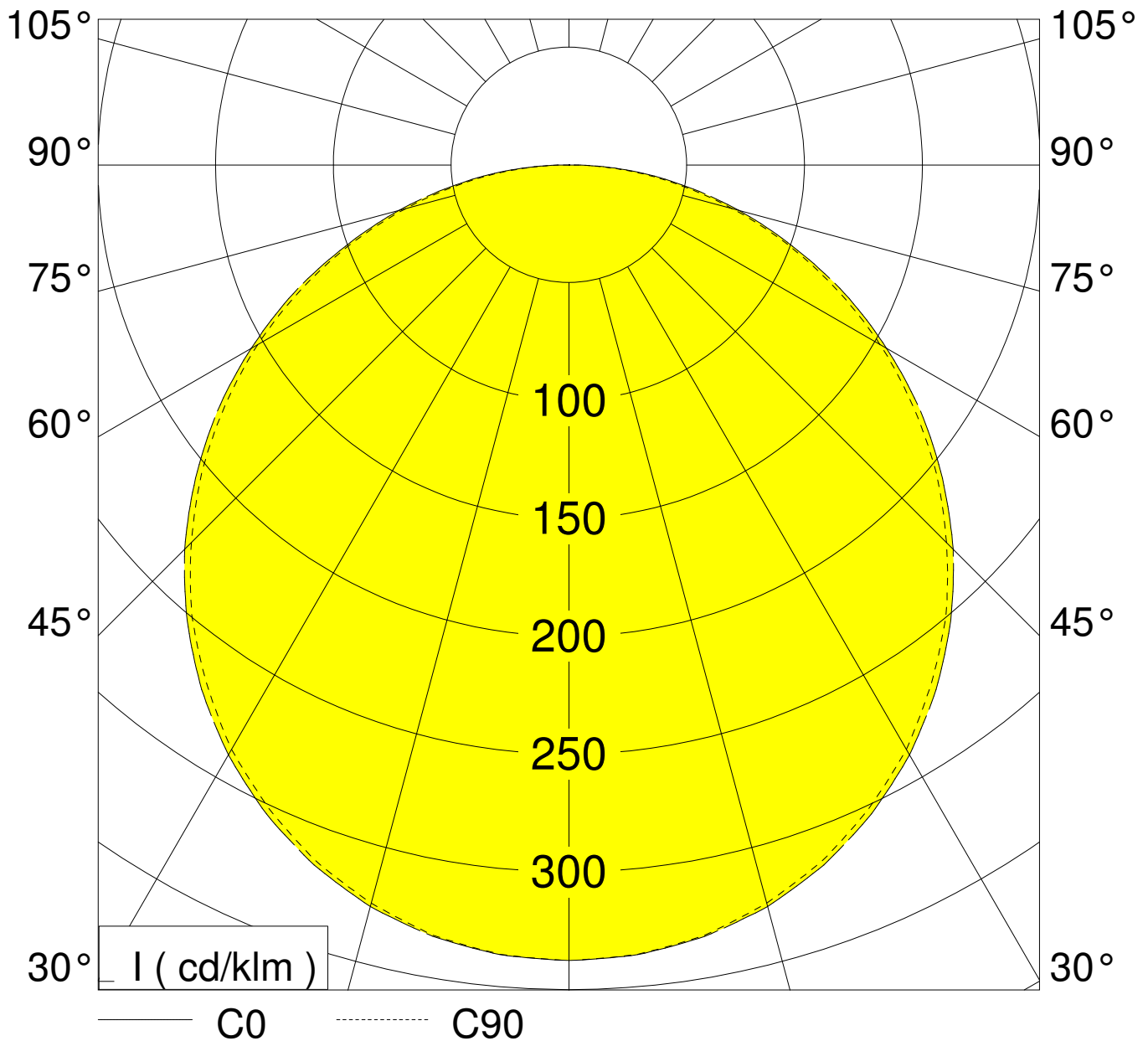
light output ratio : 100.0 %  
 DFF : 100.0 %  
 UFF : 0.0 %

**classification**

LiTG / DIN : A40  
 UTE : 1.00E  
 CIE : 46 77 95 100 100  
 BZ : 4 5 5 5 5 5 5 5  
 Ambient Temperature : 25 degC  
 Input Voltage : 240 V  
 Circuit Watts : 41.9W  
 Amps (running) : 0.180A  
 V.A. : 43.20VA  
 Power Factor : 0.97  
 CCT : 4000K (declared)  
 CRI (Ra) : 83  
 Luminaire Lumens : 4365LLm  
 Output Current DC : 1040mA  
 Output Voltage DC : 36.4V  
 Output Power : 37.86W  
 Luminaire Lm/circ.Watt : 104Lm/circ.Watt  
 Driver Efficiency : 90%  
 Driver Details : ARC-EC1105-40Q1-30



Measurements made are in absolute units. The luminaire is treated as if it was a lamp as it is not possible to measure each LED separately - hence an LOR of 100%  
The Light output ratio in real terms would be less than 100%. If it was possible to compare real LED lumens with the total output from the luminaire we could obtain an actual LOR  
This also means that the total lumens emitted from the LED's would be greater than the Luminaire Lumens measured. In reality the LED lumens would approximate to this value divided by the actual Light Output.



|        | C 0.0    | C 15.0 | C 30.0 | C 45.0 | C 60.0 | C 75.0 | C 90.0 |
|--------|----------|--------|--------|--------|--------|--------|--------|
| 0.0°   | 337.40   | 337.40 | 337.40 | 337.40 | 337.40 | 337.40 | 337.40 |
| 5.0°   | 336.20   | 336.30 | 336.40 | 336.20 | 336.10 | 336.00 | 336.00 |
| 10.0°  | 332.20   | 332.30 | 332.30 | 332.20 | 332.10 | 331.90 | 331.70 |
| 15.0°  | 325.60   | 325.40 | 325.30 | 325.00 | 324.70 | 324.40 | 324.10 |
| 20.0°  | 316.00   | 315.90 | 315.70 | 315.40 | 315.10 | 314.60 | 314.10 |
| 25.0°  | 303.70   | 303.60 | 303.40 | 303.00 | 302.50 | 301.80 | 301.10 |
| 30.0°  | 288.90   | 288.80 | 288.70 | 288.10 | 287.40 | 286.80 | 286.20 |
| 35.0°  | 271.60   | 271.30 | 271.00 | 270.40 | 269.80 | 268.90 | 268.10 |
| 40.0°  | 252.00   | 252.00 | 252.10 | 251.20 | 250.30 | 249.60 | 248.90 |
| 45.0°  | 230.50   | 230.20 | 230.00 | 229.20 | 228.50 | 227.50 | 226.50 |
| 50.0°  | 206.80   | 206.90 | 207.00 | 206.10 | 205.20 | 204.30 | 203.40 |
| 55.0°  | 182.10   | 181.90 | 181.80 | 180.90 | 180.00 | 179.00 | 178.10 |
| 60.0°  | 155.60   | 155.90 | 156.20 | 155.20 | 154.20 | 153.30 | 152.50 |
| 65.0°  | 129.10   | 128.80 | 128.60 | 127.80 | 127.00 | 126.30 | 125.50 |
| 70.0°  | 100.90   | 101.20 | 101.50 | 101.00 | 100.50 | 99.60  | 98.70  |
| 75.0°  | 74.60    | 74.50  | 74.50  | 73.30  | 72.20  | 72.00  | 71.70  |
| 80.0°  | 48.70    | 48.70  | 48.60  | 48.30  | 47.90  | 47.00  | 46.20  |
| 85.0°  | 24.50    | 24.40  | 24.20  | 24.10  | 23.90  | 23.10  | 22.30  |
| 90.0°  | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 95.0°  | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 100.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 105.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 110.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 115.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 120.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 125.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 130.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 135.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 140.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 145.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 150.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 155.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 160.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 165.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 170.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 175.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
| 180.0° | 0.00     | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
|        | cd / klm |        |        |        |        |        |        |

| glare rating 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-workplane                                      |      | 20                              | 20   | 20   | 20   | 20                              | 20             | 20   | 20   | 20   | 20   |
| room dimensions<br>X                      Y      |      | viewed crosswise                |      |      |      |                                 | viewed endwise |      |      |      |      |
| 2H                                               | 2H   | 18.1                            | 19.7 | 18.4 | 19.9 | 20.1                            | 18.0           | 19.6 | 18.3 | 19.8 | 20.0 |
|                                                  | 3H   | 19.2                            | 20.4 | 19.5 | 20.6 | 20.7                            | 19.1           | 20.3 | 19.3 | 20.4 | 20.6 |
|                                                  | 4H   | 20.0                            | 21.1 | 20.3 | 21.3 | 21.5                            | 19.9           | 21.0 | 20.1 | 21.2 | 21.4 |
|                                                  | 6H   | 20.6                            | 21.7 | 20.9 | 21.9 | 22.1                            | 20.4           | 21.5 | 20.7 | 21.7 | 22.0 |
|                                                  | 8H   | 20.9                            | 21.9 | 21.2 | 22.2 | 22.4                            | 20.7           | 21.8 | 21.0 | 22.0 | 22.2 |
|                                                  | 12H  | 21.1                            | 22.2 | 21.4 | 22.4 | 22.7                            | 20.9           | 22.0 | 21.2 | 22.2 | 22.5 |
| 4H                                               | 2H   | 18.3                            | 19.4 | 18.6 | 19.6 | 19.8                            | 18.2           | 19.3 | 18.5 | 19.5 | 19.7 |
|                                                  | 3H   | 20.3                            | 21.4 | 20.6 | 21.6 | 21.9                            | 20.2           | 21.3 | 20.5 | 21.5 | 21.8 |
|                                                  | 4H   | 21.3                            | 22.3 | 21.6 | 22.6 | 22.9                            | 21.2           | 22.2 | 21.5 | 22.5 | 22.8 |
|                                                  | 6H   | 21.8                            | 22.7 | 22.2 | 23.0 | 23.3                            | 21.7           | 22.5 | 22.0 | 22.8 | 23.1 |
|                                                  | 8H   | 22.2                            | 23.0 | 22.5 | 23.3 | 23.6                            | 22.0           | 22.8 | 22.4 | 23.1 | 23.5 |
|                                                  | 12H  | 22.6                            | 23.4 | 23.0 | 23.7 | 24.1                            | 22.4           | 23.2 | 22.8 | 23.5 | 23.9 |
| 8H                                               | 4H   | 21.5                            | 22.3 | 21.9 | 22.6 | 23.0                            | 21.4           | 22.2 | 21.8 | 22.5 | 22.8 |
|                                                  | 6H   | 22.7                            | 23.4 | 23.1 | 23.8 | 24.2                            | 22.5           | 23.3 | 23.0 | 23.7 | 24.1 |
|                                                  | 8H   | 23.2                            | 23.9 | 23.7 | 24.3 | 24.8                            | 23.0           | 23.8 | 23.5 | 24.2 | 24.7 |
|                                                  | 12H  | 23.4                            | 24.0 | 23.9 | 24.5 | 25.0                            | 23.3           | 23.8 | 23.7 | 24.3 | 24.8 |
| 12H                                              | 4H   | 21.7                            | 22.5 | 22.1 | 22.9 | 23.3                            | 21.6           | 22.4 | 22.0 | 22.7 | 23.1 |
|                                                  | 6H   | 22.9                            | 23.6 | 23.4 | 24.0 | 24.5                            | 22.7           | 23.5 | 23.2 | 23.9 | 24.4 |
|                                                  | 8H   | 23.2                            | 23.8 | 23.7 | 24.3 | 24.8                            | 23.1           | 23.7 | 23.6 | 24.1 | 24.6 |
| variation of observer position                   |      |                                 |      |      |      |                                 |                |      |      |      |      |
| S =                                              | 1.0H | +0.1/                      -0.1 |      |      |      | +0.1/                      -0.1 |                |      |      |      |      |
|                                                  | 1.5H | +0.2/                      -0.3 |      |      |      | +0.2/                      -0.3 |                |      |      |      |      |
|                                                  | 2.0H | +0.3/                      -0.5 |      |      |      | +0.3/                      -0.5 |                |      |      |      |      |
| standard-table                                   |      | BK07                            |      |      |      |                                 | BK07           |      |      |      |      |
| correction for luminaire                         |      | 6.1                             |      |      |      |                                 | 6.0            |      |      |      |      |
| correct glare indices for a total flux of 4365lm |      |                                 |      |      |      |                                 |                |      |      |      |      |

| class |   | glare rating for service value of illuminance (lx) |      |      |     |       |       |      |       |       |
|-------|---|----------------------------------------------------|------|------|-----|-------|-------|------|-------|-------|
| A     | A | 1000                                               | 750  | 500  | --  | ≤ 300 |       |      |       |       |
| 1     | B | 2000                                               | 1500 | 1000 | 750 | 500   | ≤ 300 |      |       |       |
| 2     | D |                                                    |      |      |     | 2000  | 1000  | 500  | ≤ 300 |       |
| 3     | E |                                                    |      |      |     |       | 2000  | 1000 | 500   | ≤ 300 |

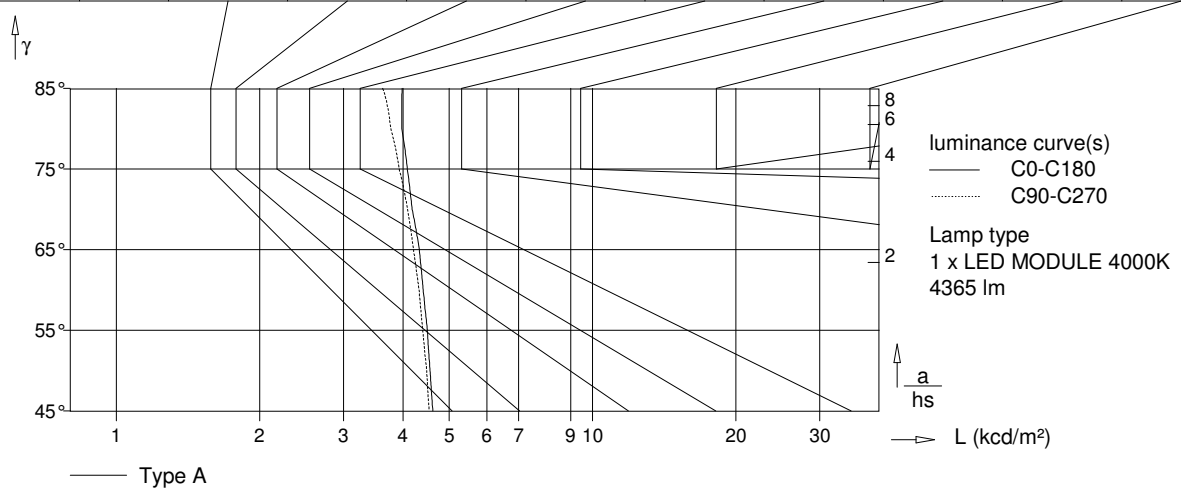


Table of intensities

| gamma | C 0    | C 90   | C 180  | C 270  |
|-------|--------|--------|--------|--------|
| 45°   | 4619.4 | 4539.2 | 4619.4 | 4539.2 |
| 50°   | 4559.1 | 4484.2 | 4559.1 | 4484.2 |
| 55°   | 4499.0 | 4400.2 | 4499.0 | 4400.2 |
| 60°   | 4410.0 | 4322.1 | 4410.0 | 4322.1 |
| 65°   | 4328.9 | 4208.2 | 4328.9 | 4208.2 |
| 70°   | 4180.6 | 4089.4 | 4180.6 | 4089.4 |
| 75°   | 4084.5 | 3925.7 | 4084.5 | 3925.7 |
| 80°   | 3974.3 | 3770.2 | 3974.3 | 3770.2 |
| 85°   | 3983.5 | 3625.8 | 3983.5 | 3625.8 |

all values in cd/m²

| <b>utilization factors / TM5</b> |    |    |            |     |      |                |     |     |     |     |     |
|----------------------------------|----|----|------------|-----|------|----------------|-----|-----|-----|-----|-----|
| reflection                       |    |    | room index |     |      |                |     |     |     |     |     |
| C                                | W  | F  | 0.75       | 1.0 | 1.25 | 1.5            | 2.0 | 2.5 | 3.0 | 4.0 | 5.0 |
| 70                               | 50 | 20 | 59         | 67  | 75   | 80             | 87  | 92  | 95  | 100 | 103 |
| 70                               | 30 | 20 | 51         | 59  | 67   | 73             | 81  | 86  | 90  | 96  | 99  |
| 70                               | 10 | 20 | 46         | 54  | 62   | 67             | 76  | 81  | 86  | 92  | 96  |
| 50                               | 50 | 20 | 57         | 65  | 72   | 77             | 84  | 88  | 92  | 96  | 99  |
| 50                               | 30 | 20 | 50         | 58  | 66   | 71             | 79  | 84  | 87  | 92  | 96  |
| 50                               | 10 | 20 | 45         | 53  | 61   | 66             | 74  | 80  | 84  | 89  | 93  |
| 30                               | 50 | 20 | 56         | 63  | 70   | 75             | 81  | 85  | 88  | 92  | 95  |
| 30                               | 30 | 20 | 50         | 57  | 64   | 69             | 76  | 81  | 85  | 89  | 92  |
| 30                               | 10 | 20 | 45         | 53  | 60   | 65             | 73  | 78  | 82  | 87  | 90  |
| 0                                | 0  | 0  | 43         | 50  | 57   | 62             | 69  | 74  | 78  | 82  | 85  |
| BZ-class                         |    |    | 4          | 5   | 5    | 5              | 5   | 5   | 5   | 5   | 5   |
| SHRnom : 1.50                    |    |    |            |     |      | SHRmax : 1.622 |     |     |     |     |     |

