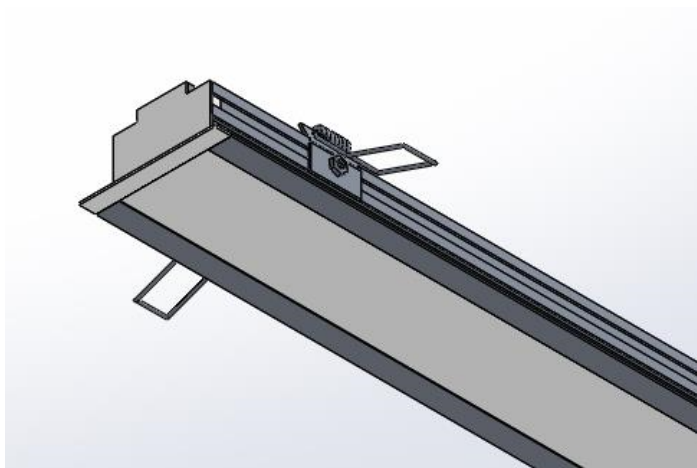


# SLED9104 E46 BARRA M80B 99W 4000K 80 2724mm



Fluxo luminoso – 9945 lm

Potência – 98,7 W

Intensidade pico – 3978cd

CCT – 4056K

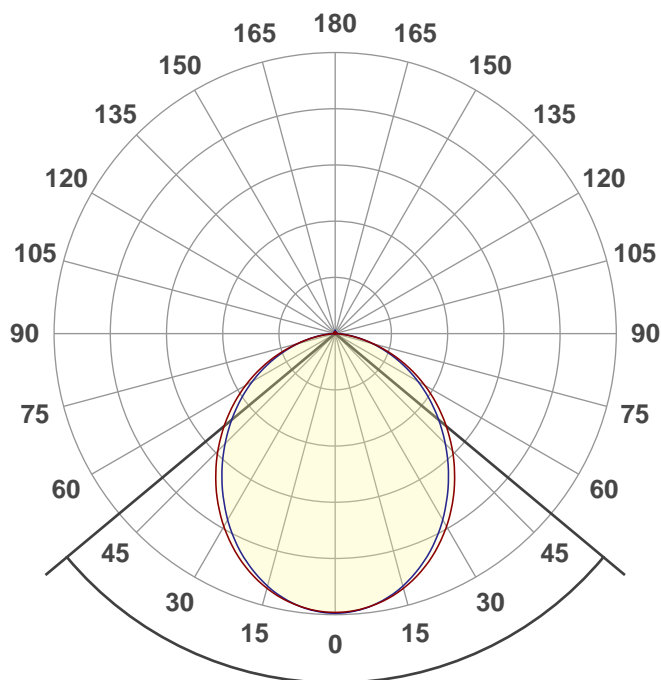


IRC – 82,6

Coordenada CIE 1931 – x- 0,380 y- 0,383

Data do ensaio

17/11/2022 12:00:03



Facho de abertura

**100,4°**

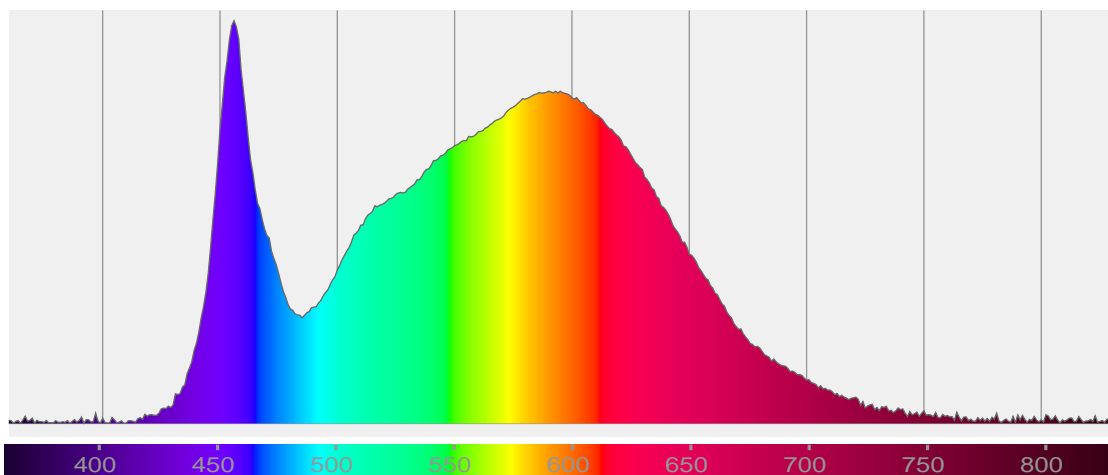
**Rf 82,4**

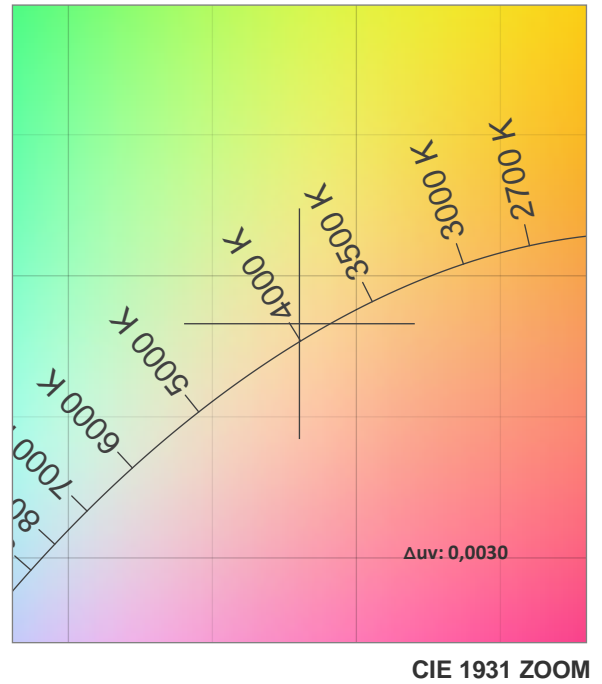
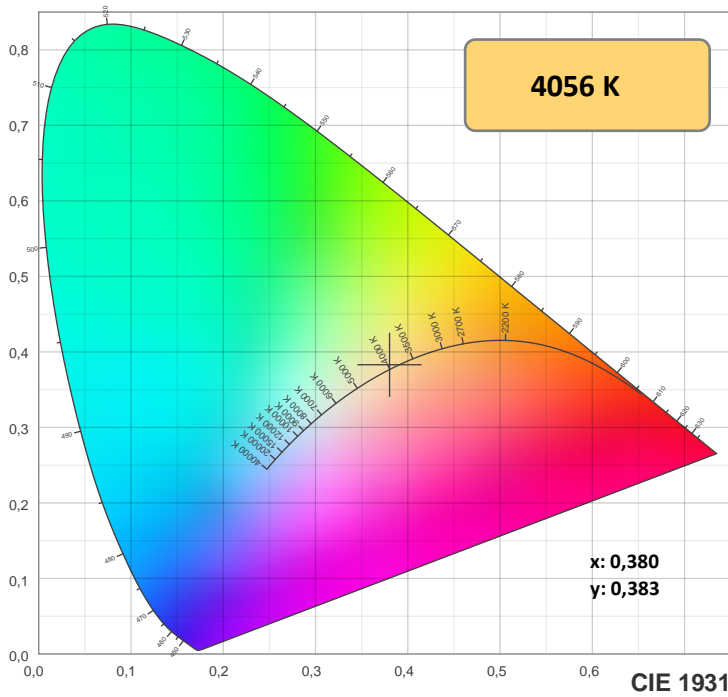
Fidelity index Rf

**Rg 92,2**

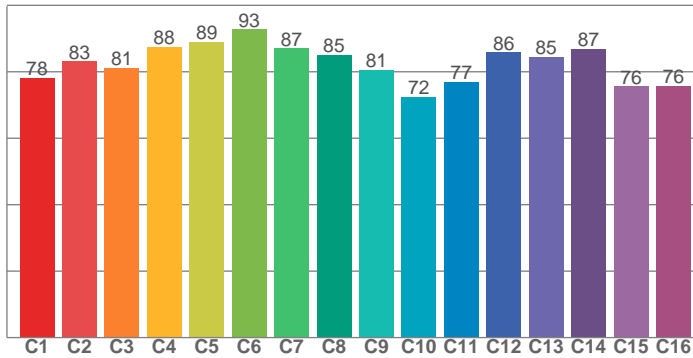
Gamut index Rg

| Hue Bin | R <sub>f</sub> | Shifts (%) |      |
|---------|----------------|------------|------|
|         |                | Chroma     | Hue  |
| 1       | 78             | -12%       | 1%   |
| 2       | 83             | -7%        | 5%   |
| 3       | 81             | -5%        | 9%   |
| 4       | 88             | -3%        | 4%   |
| 5       | 89             | -5%        | 2%   |
| 6       | 93             | -3%        | -2%  |
| 7       | 87             | -8%        | 0%   |
| 8       | 85             | -8%        | 4%   |
| 9       | 81             | -7%        | 12%  |
| 10      | 72             | -5%        | 17%  |
| 11      | 77             | 5%         | 15%  |
| 12      | 86             | 5%         | 4%   |
| 13      | 85             | 6%         | -9%  |
| 14      | 87             | 3%         | -9%  |
| 15      | 76             | -3%        | -17% |
| 16      | 76             | -7%        | -12% |

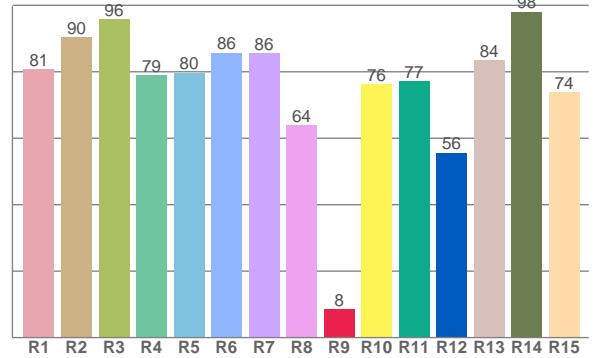




TM-30: 82,4



CRI: 82,6 (R1-R8)



CRIRA R1-R8 / CRIre R1-R15

| R1   | R2   | R3   | R4   | R5   | R6   | R7   | R8   | R9  | R10  | R11  | R12  | R13  | R14  | R15  |
|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|
| 80,7 | 90,4 | 95,9 | 79,0 | 79,7 | 85,7 | 85,6 | 64,0 | 8,5 | 76,2 | 77,2 | 55,6 | 83,5 | 98,1 | 73,9 |

TM30 valores C. 16 valores extraídos dos 99.

| C1   | C2   | C3   | C4   | C5   | C6   | C7   | C8   | C9   | C10  | C11  | C12  | C13  | C14  | C15  | C16  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 78,1 | 83,2 | 81,2 | 87,5 | 89,0 | 92,8 | 87,0 | 85,1 | 80,6 | 72,4 | 77,0 | 85,8 | 84,6 | 86,8 | 75,7 | 75,8 |

## Parametros de cor

| Temperatura de cor | Índice de reprodução de cor | Reprodução de cor vermelho R9 | Color fidelity | Color gamut | Color quality scale | Coordenada de cor cie 1931 | Coordenada de cor cie 1931 | Coordenada de cor | Coordenada de cor | Color deviation from black body |
|--------------------|-----------------------------|-------------------------------|----------------|-------------|---------------------|----------------------------|----------------------------|-------------------|-------------------|---------------------------------|
| CCT                | IRC                         | CRI R9                        | TM30 Rf        | TM30 Rg     | CQS                 | x                          | y                          | u                 | v                 | $\Delta uv$                     |
| 4056 K             | 82,6                        | 8,5                           | 82,4           | 92,2        | 81,7                | 0,380                      | 0,383                      | 0,222             | 0,336             | 0,0030                          |

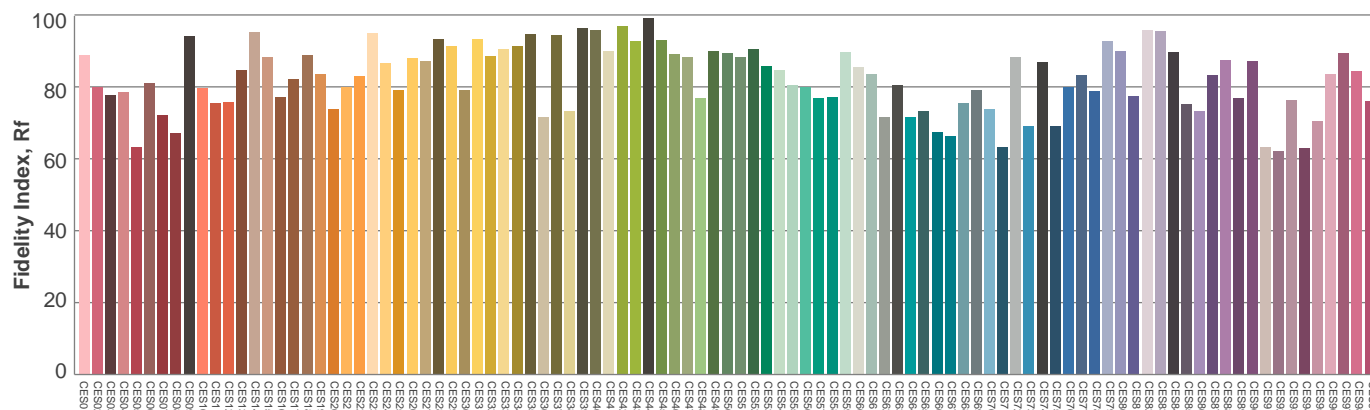
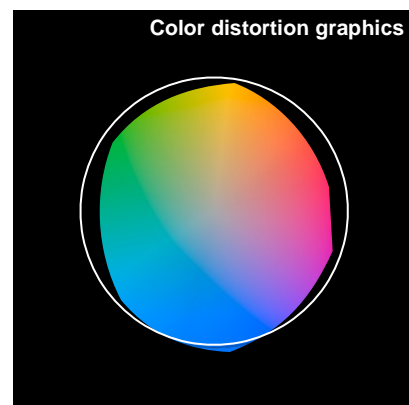
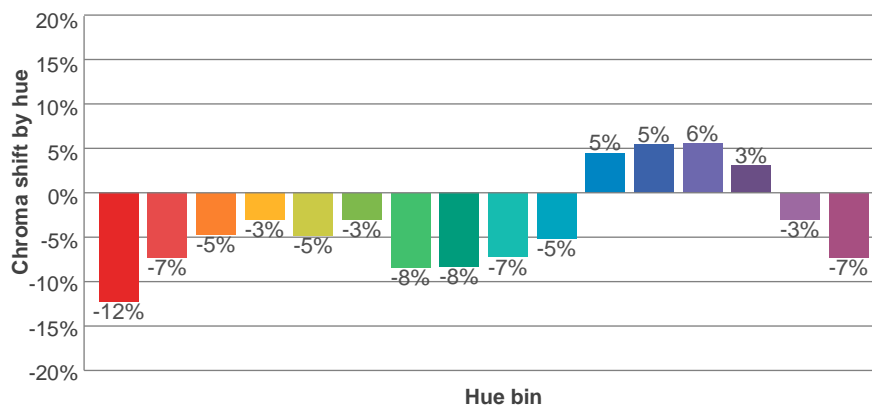
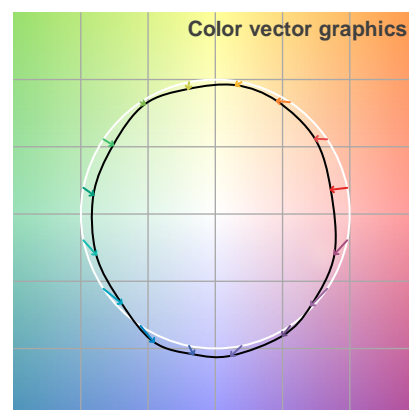
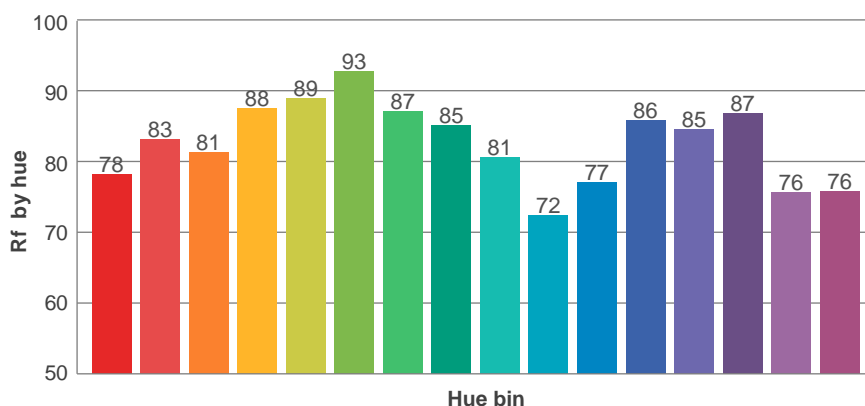
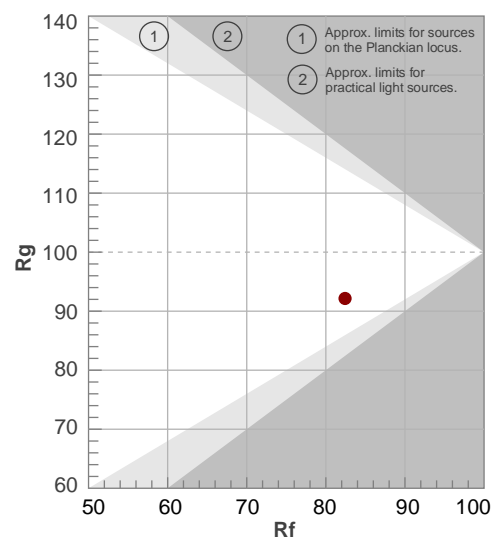
**Rf 82,4**

Fidelity index Rf

**Rg 92,2**

Gamut index Rg

| Hue Bin | Ri | Shifts (%) |      |
|---------|----|------------|------|
|         |    | Chroma     | Hue  |
| 1       | 78 | -12%       | 1%   |
| 2       | 83 | -7%        | 5%   |
| 3       | 81 | -5%        | 9%   |
| 4       | 88 | -3%        | 4%   |
| 5       | 89 | -5%        | 2%   |
| 6       | 93 | -3%        | -2%  |
| 7       | 87 | -8%        | 0%   |
| 8       | 85 | -8%        | 4%   |
| 9       | 81 | -7%        | 12%  |
| 10      | 72 | -5%        | 17%  |
| 11      | 77 | 5%         | 15%  |
| 12      | 86 | 5%         | 4%   |
| 13      | 85 | 6%         | -9%  |
| 14      | 87 | 3%         | -9%  |
| 15      | 76 | -3%        | -17% |
| 16      | 76 | -7%        | -12% |



Avaliação todas as amostras de cores

**Glare Evaluation According to UGR**

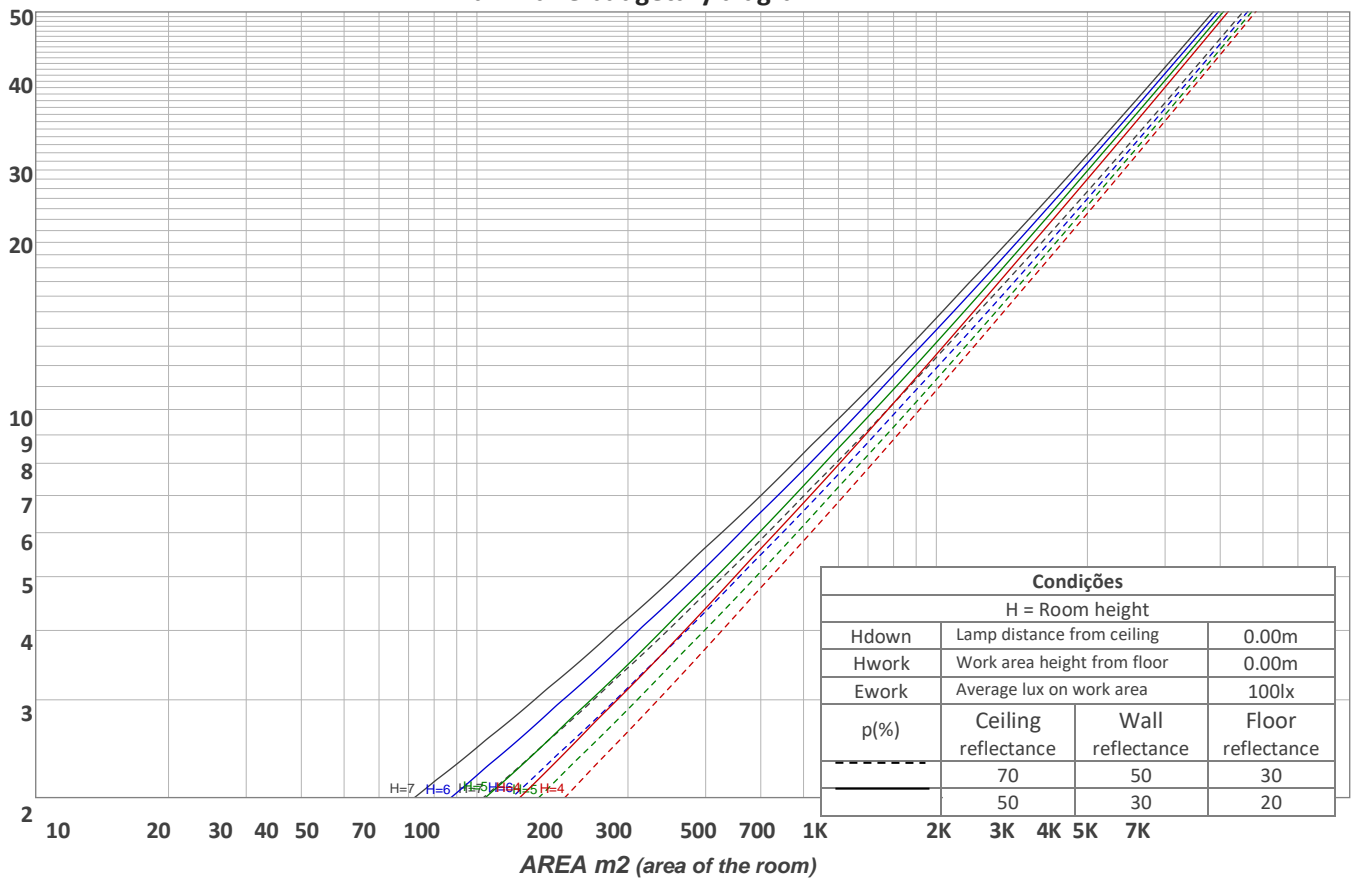
|  |     |  |      |      |      |      |   |      |      |      |      |
|--|-----|--|------|------|------|------|---|------|------|------|------|
| p Ceiling  |     | 70   | 70   | 50   | 50   | 30   | 70                                      | 70   | 50   | 50   | 30   |
| p Walls  |     | 50   | 30   | 50   | 30   | 30   | 50                                      | 30   | 50   | 30   | 30   |
| p Floor  |     | 20   | 20   | 20   | 20   | 20   | 20                                      | 20   | 20   | 20   | 20   |
| Room size<br>X      Y  |     | Viewing direction at right angles to lamp axis |      |      |      |      | Viewing direction parallel to lamp axis |      |      |      |      |
| 2H   | 2H  | 23,7   | 24,8 | 23,9 | 25,1 | 25,4 | 23,3                                    | 24,5 | 23,5 | 24,8 | 25,0 |
|  | 3H  | 25,0   | 26,2 | 25,4 | 26,5 | 26,7 | 24,6                                    | 25,8 | 25,0 | 26,1 | 26,3 |
|  | 4H  | 25,5   | 26,6 | 25,9 | 26,9 | 27,2 | 25,1                                    | 26,3 | 25,5 | 26,6 | 26,8 |
|  | 6H  | 25,9   | 26,9 | 26,2 | 27,2 | 27,6 | 25,6                                    | 26,6 | 25,9 | 26,9 | 27,2 |
|  | 8H  | 25,9   | 26,9 | 26,3 | 27,2 | 27,7 | 25,6                                    | 26,6 | 26,0 | 26,9 | 27,4 |
|  | 12H | 25,9   | 26,9 | 26,3 | 27,2 | 27,7 | 25,7                                    | 26,6 | 26,0 | 27,0 | 27,4 |
| 4H   | 2H  | 24,2   | 25,3 | 24,6 | 25,6 | 25,9 | 23,9                                    | 25,0 | 24,3 | 25,3 | 25,6 |
|  | 3H  | 25,8   | 26,8 | 26,2 | 27,1 | 27,6 | 25,5                                    | 26,4 | 25,9 | 26,8 | 27,2 |
|  | 4H  | 26,4   | 27,2 | 26,8 | 27,7 | 28,2 | 26,1                                    | 26,9 | 26,5 | 27,4 | 27,9 |
|  | 6H  | 26,8   | 27,6 | 27,3 | 28,0 | 28,4 | 26,5                                    | 27,4 | 27,0 | 27,7 | 28,1 |
|  | 8H  | 26,9   | 27,6 | 27,4 | 28,0 | 28,4 | 26,7                                    | 27,4 | 27,2 | 27,8 | 28,2 |
|  | 12H | 26,9   | 27,5 | 27,4 | 28,0 | 28,5 | 26,7                                    | 27,4 | 27,2 | 27,8 | 28,3 |
| 8H   | 4H  | 26,6   | 27,3 | 27,1 | 27,7 | 28,1 | 26,3                                    | 27,1 | 26,8 | 27,5 | 27,8 |
|  | 6H  | 27,1   | 27,7 | 27,6 | 28,2 | 28,7 | 26,9                                    | 27,5 | 27,4 | 28,0 | 28,5 |
|  | 8H  | 27,3   | 27,8 | 27,8 | 28,3 | 29,0 | 27,1                                    | 27,6 | 27,7 | 28,2 | 28,8 |
|  | 12H | 27,4   | 27,8 | 28,0 | 28,3 | 28,9 | 27,3                                    | 27,7 | 27,8 | 28,2 | 28,8 |
| 12H  | 4H  | 26,6   | 27,2 | 27,1 | 27,6 | 28,1 | 26,3                                    | 26,9 | 26,8 | 27,4 | 27,9 |
|  | 6H  | 27,2   | 27,7 | 27,7 | 28,2 | 28,9 | 27,0                                    | 27,5 | 27,5 | 28,0 | 28,6 |
|  | 8H  | 27,4   | 27,8 | 28,0 | 28,3 | 28,9 | 27,2                                    | 27,6 | 27,8 | 28,1 | 28,8 |
| Variation of the observer position for the luminaire distance S  |     |  |      |      |      |      |   |      |      |      |      |
| S = 1.0H   |     | 0,1 / -0,1                                     |      |      |      |      | 0,1 / -0,1                              |      |      |      |      |
| S = 1.5H   |     | 0,2 / -0,3                                     |      |      |      |      | 0,2 / -0,3                              |      |      |      |      |
| S = 2.0H   |     | 0,5 / -0,6                                     |      |      |      |      | 0,5 / -0,7                              |      |      |      |      |
| Standard table   |     | n/a  |      |      |      |      | n/a                                     |      |      |      |      |
| Correction summand   |     | n/a  |      |      |      |      | n/a                                     |      |      |      |      |
| Corrected glare indices referring to 9945 lm total luminous flux |     |  |      |      |      |      |   |      |      |      |      |

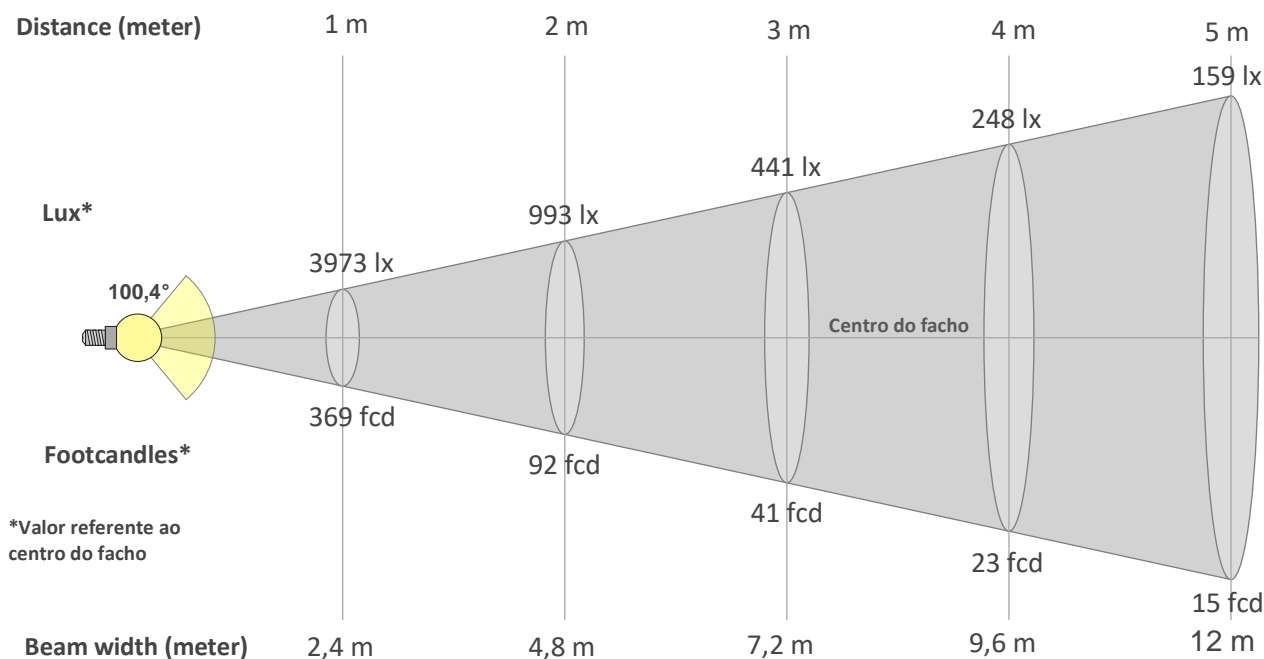
**Coeficiente de utilização**

| Ceiling reflectance | 80   |     |     |     | 70  |     |     |     | 50  |     |     | 30  |     |     | 10  |     |     | 0  |
|---------------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Wall reflectance    | 70   | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 0  |
| Floor reflectance   | 20   | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 20  | 0  |
| RCR                 | (RCR: Room Cavity Ratio) Room Values are expressed as percentage of Lumens delivered to the task surface |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| 0                   | 119  | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 101 | 101 | 101 | 99 |
| 1                   | 109  | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 95  | 92  | 94  | 91  | 89  | 90  | 88  | 86  | 84 |
| 2                   | 99   | 91  | 84  | 79  | 97  | 89  | 83  | 78  | 86  | 80  | 76  | 82  | 78  | 74  | 79  | 75  | 72  | 70 |
| 3                   | 90   | 80  | 72  | 66  | 88  | 78  | 71  | 65  | 75  | 69  | 64  | 73  | 67  | 63  | 70  | 65  | 61  | 59 |
| 4                   | 83   | 71  | 62  | 56  | 81  | 70  | 61  | 55  | 67  | 60  | 54  | 65  | 59  | 54  | 62  | 57  | 53  | 51 |
| 5                   | 76   | 63  | 55  | 48  | 74  | 62  | 54  | 48  | 60  | 53  | 47  | 58  | 52  | 46  | 56  | 50  | 46  | 44 |
| 6                   | 70   | 57  | 48  | 42  | 68  | 56  | 48  | 42  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 40  | 38 |
| 7                   | 65   | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 49  | 42  | 37  | 48  | 41  | 36  | 47  | 41  | 36  | 34 |
| 8                   | 61   | 47  | 39  | 33  | 59  | 47  | 39  | 33  | 45  | 38  | 33  | 44  | 37  | 32  | 43  | 37  | 32  | 30 |
| 9                   | 57   | 43  | 35  | 30  | 55  | 43  | 35  | 30  | 42  | 34  | 29  | 41  | 34  | 29  | 39  | 33  | 29  | 27 |
| 10                  | 53   | 40  | 32  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  | 38  | 31  | 27  | 37  | 31  | 26  | 25 |

**Quantidade de luminárias**

**Luminaire budgetary diagram**





### Beam intensities from 1-20m

| 1m       | 2m      | 3m    | 4m      | 5m      | 6m      | 7m     | 8m     | 9m     | 10m    | 11m    | 12m    | 13m    | 14m    | 15m    | 16m    | 17m    | 18m    | 19m    | 20m    |
|----------|---------|-------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 3,3ft    | 6,6ft   | 9,8ft | 13,1ft  | 16,4ft  | 19,7ft  | 23ft   | 26,2ft | 29,5ft | 32,8ft | 36,1ft | 39,4ft | 42,7ft | 45,9ft | 49,2ft | 52,5ft | 55,8ft | 59,1ft | 62,3ft | 65,6ft |
| 3973lx   | 993lx   | 441lx | 248lx   | 159lx   | 110lx   | 81lx   | 62lx   | 49lx   | 40lx   | 33lx   | 28lx   | 24lx   | 20lx   | 18lx   | 16lx   | 14lx   | 12lx   | 11lx   | 10lx   |
| 369,1fcd | 92,3fcd | 41fcd | 23,1fcd | 14,8fcd | 10,3fcd | 7,5fcd | 5,8fcd | 4,6fcd | 3,7fcd | 3,1fcd | 2,6fcd | 2,2fcd | 1,9fcd | 1,6fcd | 1,4fcd | 1,3fcd | 1,1fcd | 1fcd   | 0,9fcd |

### Intensities in 0° c-plane

| 0°   | 5°   | 10°  | 15°  | 20°  | 25°  | 30°  | 35°  | 40°  | 45°  | 50°  | 55°  | 60°  | 65°  | 70° | 75° | 80° | 85° | 90° | 95° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| 3973 | 3944 | 3871 | 3754 | 3594 | 3398 | 3170 | 2917 | 2645 | 2363 | 2070 | 1773 | 1472 | 1167 | 862 | 566 | 297 | 92  | 7   | 5   |
| 100% | 99%  | 97%  | 94%  | 90%  | 86%  | 80%  | 73%  | 67%  | 59%  | 52%  | 45%  | 37%  | 29%  | 22% | 14% | 7%  | 2%  | 0%  | 0%  |

### Intensities in 90° c-plane

| 0°   | 5°   | 10°  | 15°  | 20°  | 25°  | 30°  | 35°  | 40°  | 45°  | 50°  | 55°  | 60°  | 65°  | 70° | 75° | 80° | 85° | 90° | 95° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| 3973 | 3948 | 3861 | 3721 | 3534 | 3313 | 3062 | 2788 | 2506 | 2217 | 1930 | 1645 | 1360 | 1079 | 805 | 549 | 313 | 111 | 8   | 4   |
| 100% | 99%  | 97%  | 94%  | 89%  | 83%  | 77%  | 70%  | 63%  | 56%  | 49%  | 41%  | 34%  | 27%  | 20% | 14% | 8%  | 3%  | 0%  | 0%  |

### Intensities in 180° c-plane

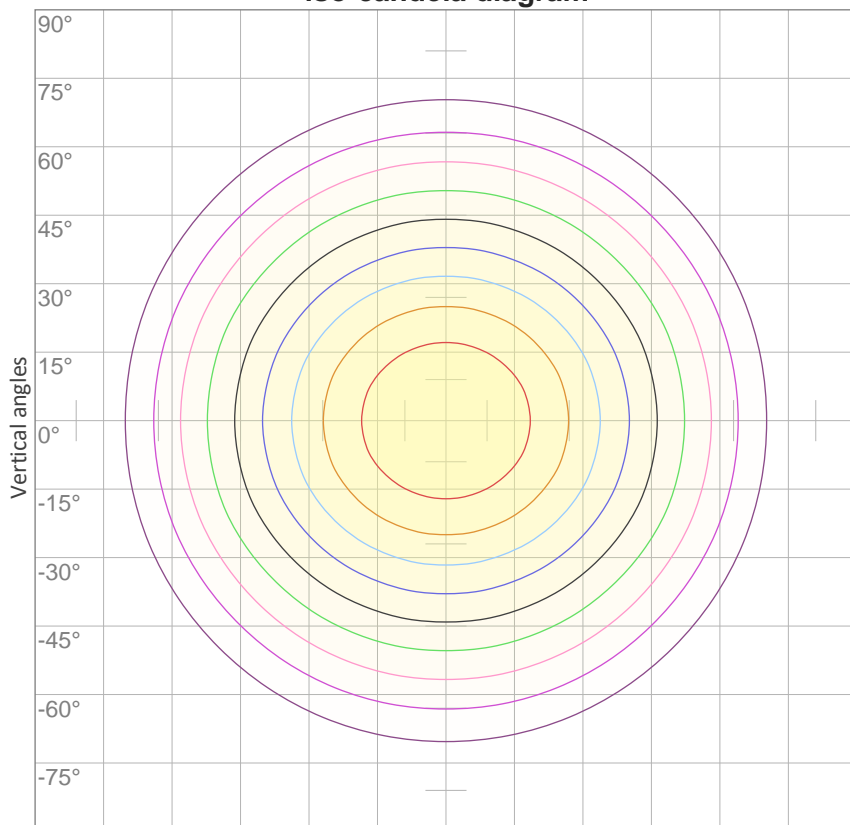
| 0°   | 5°   | 10°  | 15°  | 20°  | 25°  | 30°  | 35°  | 40°  | 45°  | 50°  | 55°  | 60°  | 65°  | 70° | 75° | 80° | 85° | 90° | 95° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| 3973 | 3944 | 3871 | 3754 | 3594 | 3398 | 3170 | 2917 | 2645 | 2363 | 2070 | 1773 | 1472 | 1167 | 862 | 566 | 297 | 92  | 7   | 5   |
| 100% | 99%  | 97%  | 94%  | 90%  | 86%  | 80%  | 73%  | 67%  | 59%  | 52%  | 45%  | 37%  | 29%  | 22% | 14% | 7%  | 2%  | 0%  | 0%  |

### Intensities in 270° c-plane

| 0°   | 5°   | 10°  | 15°  | 20°  | 25°  | 30°  | 35°  | 40°  | 45°  | 50°  | 55°  | 60°  | 65°  | 70° | 75° | 80° | 85° | 90° | 95° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| 3973 | 3948 | 3861 | 3721 | 3534 | 3313 | 3062 | 2788 | 2506 | 2217 | 1930 | 1645 | 1360 | 1079 | 805 | 549 | 313 | 111 | 8   | 4   |
| 100% | 99%  | 97%  | 94%  | 89%  | 83%  | 77%  | 70%  | 63%  | 56%  | 49%  | 41%  | 34%  | 27%  | 20% | 14% | 8%  | 3%  | 0%  | 0%  |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 100,4°         | 156,2°          | 170,3°            | 79,3%                        | 55,0%                       |

iso-candela diagram



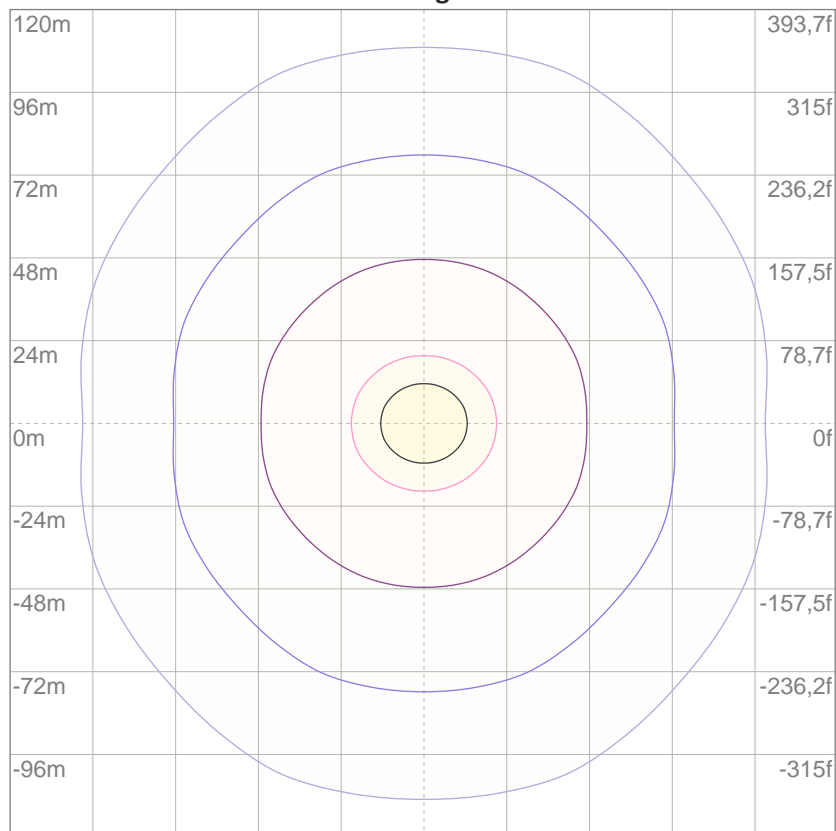
|     |         |
|-----|---------|
| 10% | 397 cd  |
| 20% | 795 cd  |
| 30% | 1192 cd |
| 40% | 1589 cd |
| 50% | 1986 cd |
| 60% | 2384 cd |
| 70% | 2781 cd |
| 80% | 3178 cd |
| 90% | 3576 cd |

Conditions:

Number of c-planes: 16

Candela at center: 3973 cd

iso-lux diagram



Mounting height: 10 meters

|     |         |
|-----|---------|
| 3%  | 1,19 lx |
| 5%  | 1,99 lx |
| 10% | 3,97 lx |
| 30% | 11,9 lx |
| 50% | 19,9 lx |

Conditions:

Number of c-planes: 16

Lux at center: 39,7 lx

*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

**Potência**

|  |  |  |  |  |  |
|--|--|--|--|--|--|
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|  |  |  |  |  |  |

**Vttagem: 238 V**  
**Corrente: 0,414 A**  
**Frequência: 0 Hz**  
**FP: 0,56**

**THD**



**THD corrente: n/a**  
**THD tensão: n/a**