

Light efficiency:

72 Lumen/Watt

Light quality:

CRI: 94.6

Color temperature:

3566 K

Output: 1418 lm

Peak: 302 cd

Power: 19.7 W

PF: 1.0



Tracking number: [n/a](#)

Product name:

**PC30.5MRBOVWDR2012.0VW-ALL  
ON 1 ROW**

Item number:

Date and time:

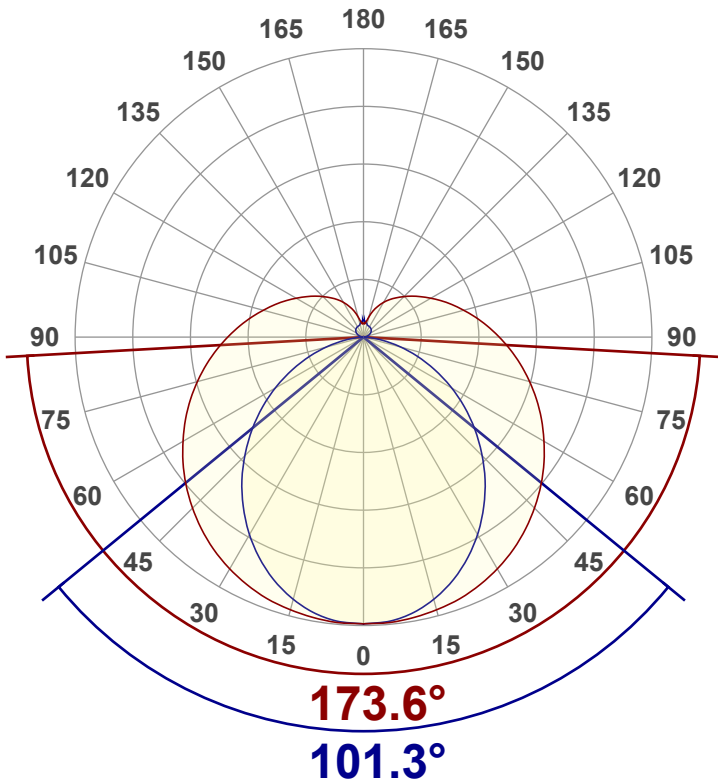
**2024/10/15 17:27:08**

Operator:

**Nick**

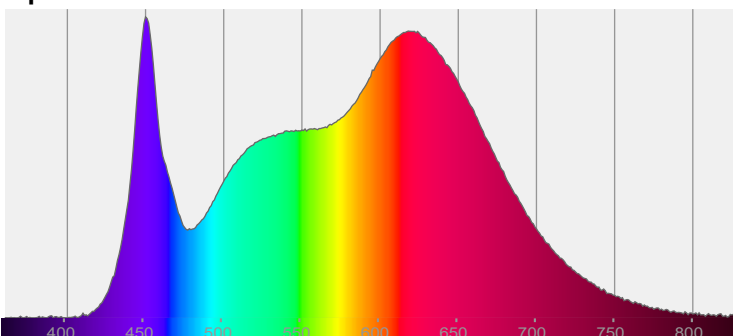
Description:

**DIAMETER 120MM,LENGTH 500MM  
1 ROW RIBBONLYTE INSIDE**



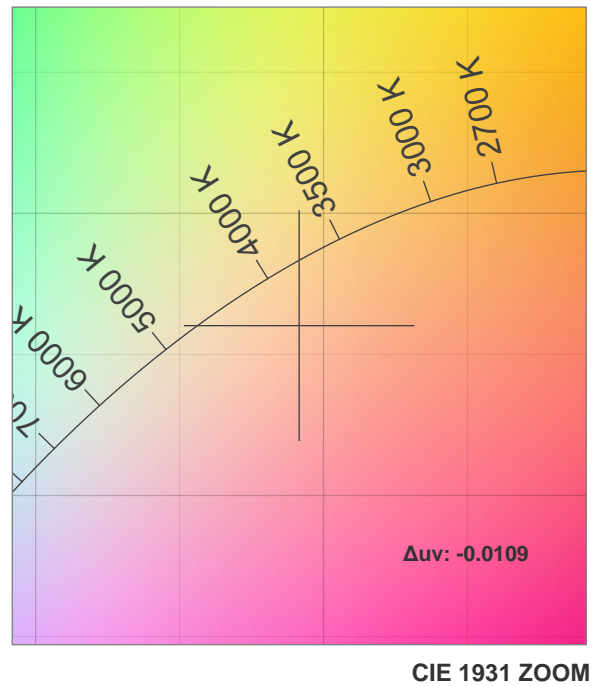
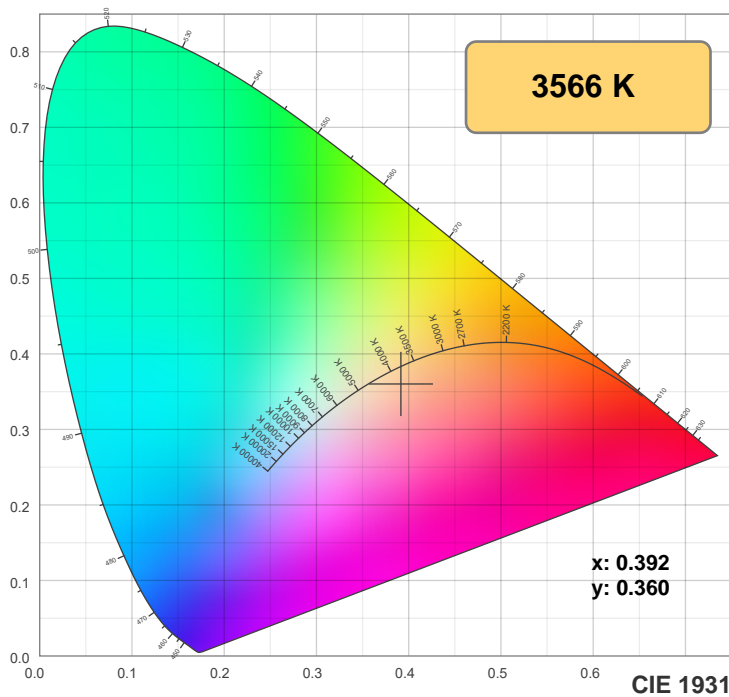
CIE 1931  
x: 0.392  
y: 0.360

Spectra

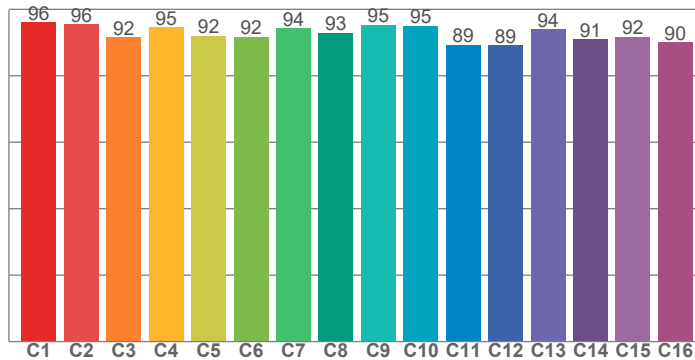


Power

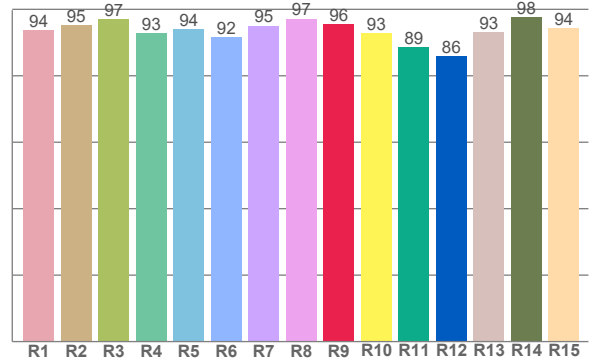
Voltage: 24.0 V  
Current: 0.822 A  
Frequency: 0 Hz



**TM-30: 93.0**



**CRI: 94.6 (R1-R8)**



**CRI R values, only R1-R8 are used to calculate final CRI value**

| R1   | R2   | R3   | R4   | R5   | R6   | R7   | R8   | R9   | R10  | R11  | R12  | R13  | R14  | R15  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 93.7 | 95.3 | 97.0 | 92.9 | 94.1 | 91.6 | 95.1 | 97.2 | 95.5 | 92.9 | 88.6 | 85.9 | 93.2 | 97.5 | 94.4 |

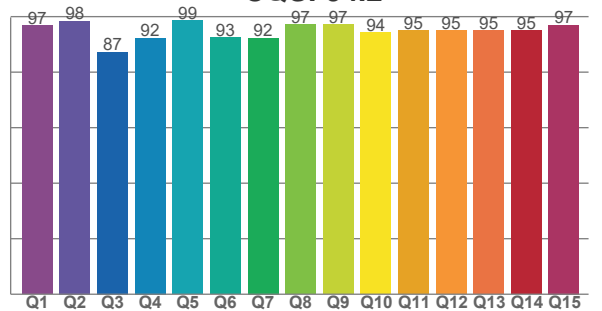
**TM30 C values, 16 binned values out of total of 99 C values**

| C1   | C2   | C3   | C4   | C5   | C6   | C7   | C8   | C9   | C10  | C11  | C12  | C13  | C14  | C15  | C16  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96.0 | 95.6 | 91.6 | 94.6 | 92.1 | 91.7 | 94.3 | 92.9 | 95.3 | 95.0 | 89.4 | 89.2 | 94.0 | 91.0 | 91.8 | 90.1 |

**CQS Q values**

| Q1   | Q2   | Q3   | Q4   | Q5   | Q6   | Q7   | Q8   | Q9   | Q10  | Q11  | Q12  | Q13  | Q14  | Q15  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 96.8 | 98.4 | 87.3 | 92.3 | 98.6 | 92.5 | 92.4 | 97.1 | 97.1 | 94.2 | 94.9 | 95.0 | 95.1 | 95.0 | 97.1 |

**CQS: 94.2**



## Color parameters

| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Color coordinate cie 1931 | Color coordinate cie 1931 | Color coordinate | Color coordinate | Color deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|------------------|------------------|---------------------------------|
| CCT               | CRI                   | CRI R9        | TM30 Rf        | TM30 Rg     | CQS                 | x                         | y                         | u                | v                | Δuv                             |
| 3566 K            | 94.6                  | 95.5          | 93.0           | 105.3       | 94.2                | 0.392                     | 0.360                     | 0.239            | 0.330            | -0.0109                         |

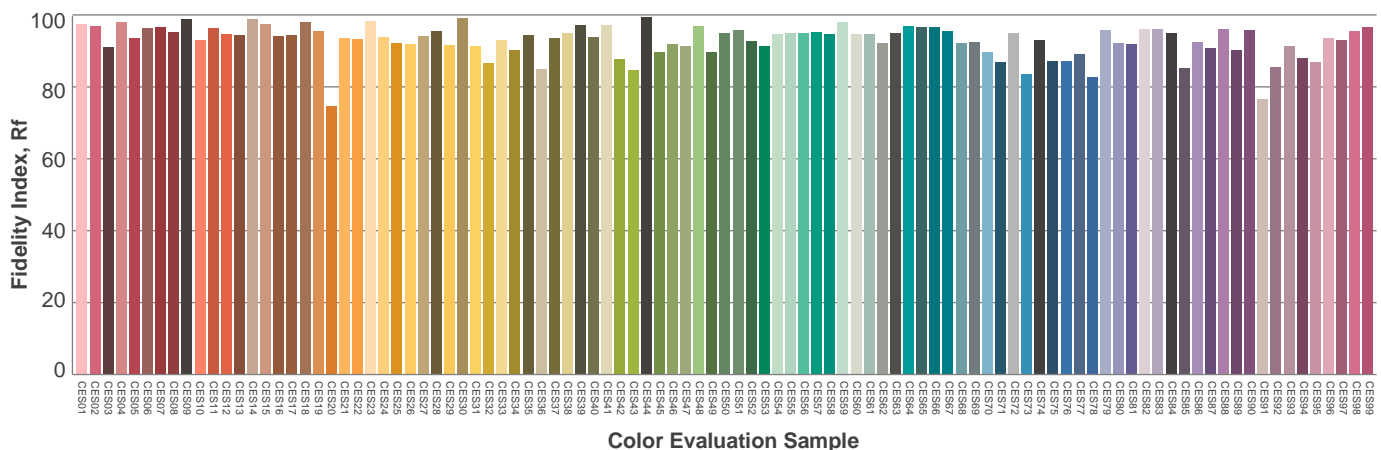
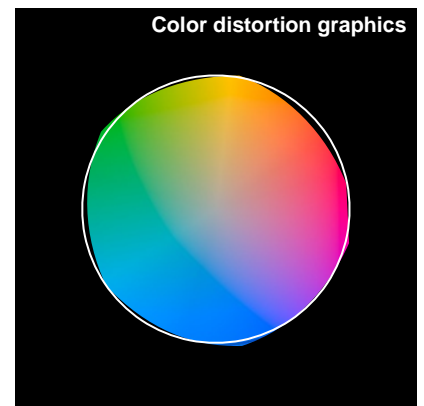
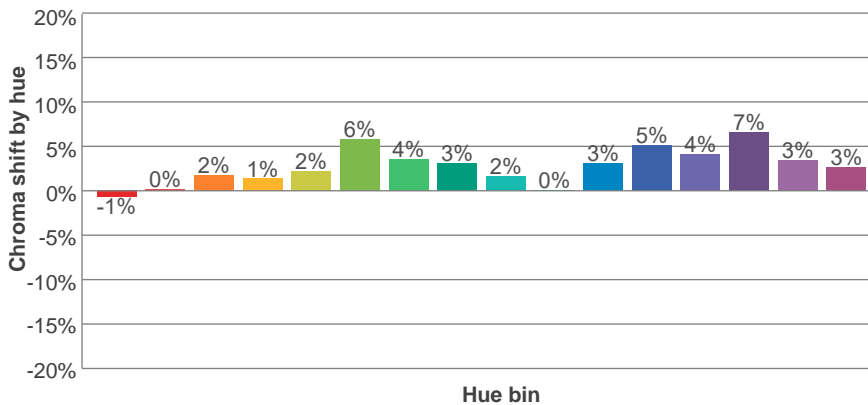
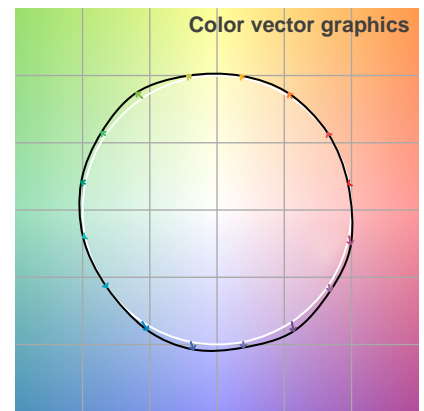
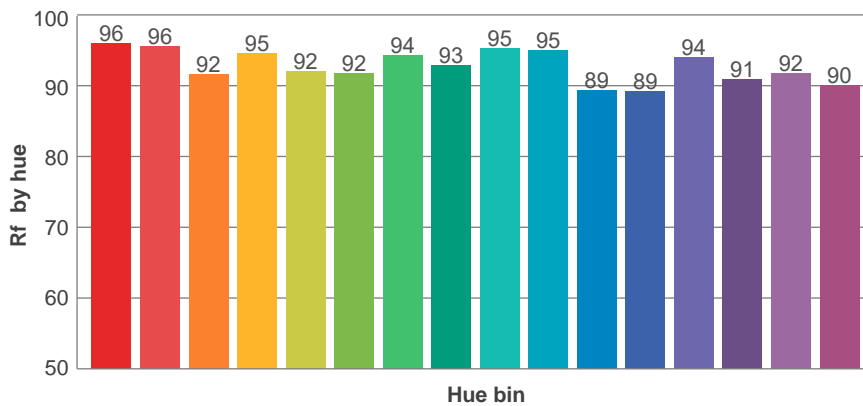
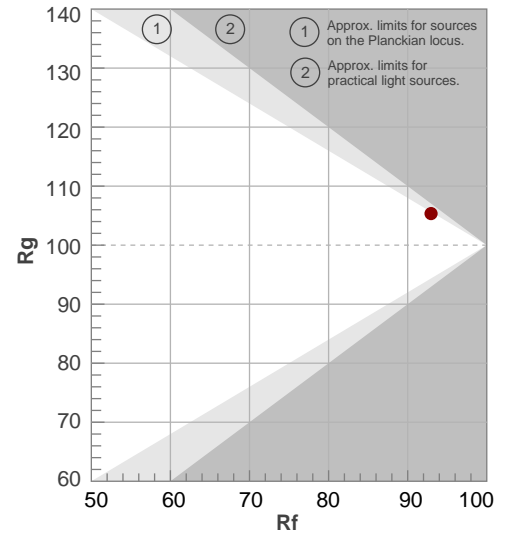
**Rf 93.0**

Fidelity index Rf

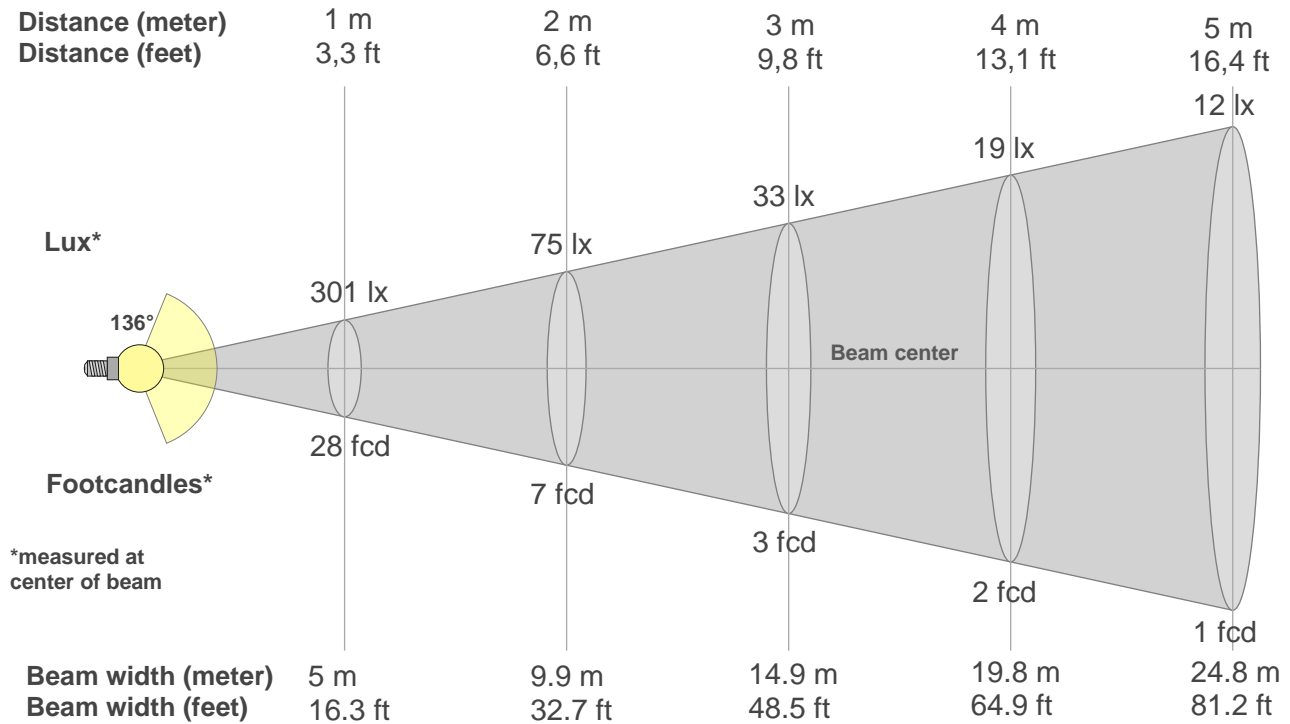
**Rg 105.3**

Gamut index Rg

| Hue Bin | R <sub>f</sub> | Shifts (%) |     |
|---------|----------------|------------|-----|
|         |                | Chroma     | Hue |
| 1       | 96             | -1%        | 0%  |
| 2       | 96             | 0%         | 2%  |
| 3       | 92             | 2%         | 4%  |
| 4       | 95             | 1%         | 2%  |
| 5       | 92             | 2%         | 2%  |
| 6       | 92             | 6%         | 1%  |
| 7       | 94             | 4%         | 0%  |
| 8       | 93             | 3%         | -1% |
| 9       | 95             | 2%         | 0%  |
| 10      | 95             | 0%         | 2%  |
| 11      | 89             | 3%         | 6%  |
| 12      | 89             | 5%         | 3%  |
| 13      | 94             | 4%         | -1% |
| 14      | 91             | 7%         | -3% |
| 15      | 92             | 3%         | -3% |
| 16      | 90             | 3%         | -5% |



## Beam details



### 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 |
| 301lx | 75lx  | 33lx   | 19lx   | 12lx   | 8lx    | 6lx    | 5lx    | 4lx    | 3lx    | 2lx    | 2lx    | 2lx    | 2lx    | 1lx    | 1lx    | 1lx    | 1lx    | 1lx    | 1lx    |
| 28fcd | 7fcd  | 3.1fcd | 1.8fcd | 1.1fcd | 0.8fcd | 0.6fcd | 0.4fcd | 0.3fcd | 0.3fcd | 0.2fcd | 0.2fcd | 0.2fcd | 0.1fcd | 0.1fcd | 0.1fcd | 0.1fcd | 0.1fcd | 0.1fcd | 0.1fcd |

### Intensities in 0° c-plane

| 0°   | 9°  | 18° | 27° | 36° | 45° | 54° | 63° | 72° | 81° | 90° | 99° | 108° | 117° | 126° | 135° | 144° | 153° | 162° | 171° |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| 301  | 299 | 294 | 285 | 271 | 254 | 234 | 211 | 188 | 165 | 143 | 122 | 103  | 87   | 72   | 60   | 49   | 38   | 26   | 16   |
| 100% | 99% | 98% | 94% | 90% | 84% | 77% | 70% | 62% | 55% | 47% | 40% | 34%  | 29%  | 24%  | 20%  | 16%  | 13%  | 9%   | 5%   |

### Intensities in 90° c-plane

| 0°   | 9°  | 18° | 27° | 36° | 45° | 54° | 63° | 72° | 81° | 90° | 99° | 108° | 117° | 126° | 135° | 144° | 153° | 162° | 171° |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| 301  | 295 | 277 | 250 | 215 | 176 | 135 | 93  | 53  | 19  | 2   | 2   | 5    | 8    | 10   | 11   | 12   | 13   | 13   | 16   |
| 100% | 98% | 92% | 83% | 71% | 58% | 45% | 31% | 18% | 6%  | 1%  | 1%  | 2%   | 3%   | 3%   | 4%   | 4%   | 4%   | 4%   | 5%   |

### Intensities in 180° c-plane

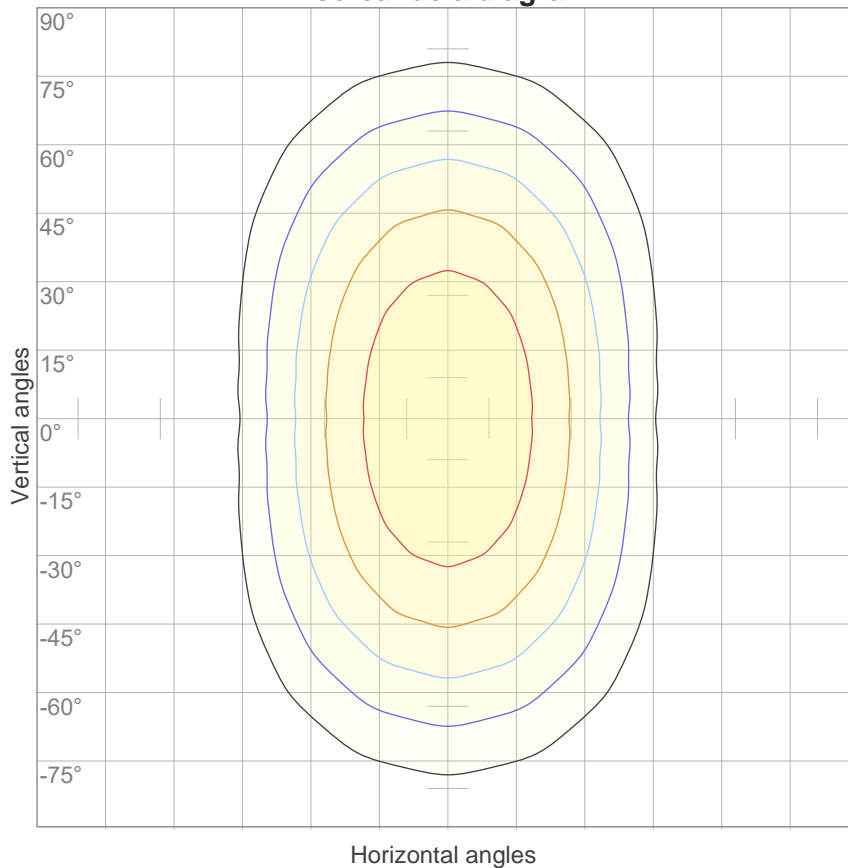
| 0°   | 9°  | 18° | 27° | 36° | 45° | 54° | 63° | 72° | 81° | 90° | 99° | 108° | 117° | 126° | 135° | 144° | 153° | 162° | 171° |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| 301  | 299 | 294 | 285 | 271 | 254 | 234 | 211 | 188 | 165 | 143 | 122 | 103  | 87   | 72   | 60   | 49   | 38   | 26   | 16   |
| 100% | 99% | 98% | 94% | 90% | 84% | 77% | 70% | 62% | 55% | 47% | 40% | 34%  | 29%  | 24%  | 20%  | 16%  | 13%  | 9%   | 5%   |

### Intensities in 270° c-plane

| 0°   | 9°  | 18° | 27° | 36° | 45° | 54° | 63° | 72° | 81° | 90° | 99° | 108° | 117° | 126° | 135° | 144° | 153° | 162° | 171° |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| 301  | 295 | 277 | 250 | 215 | 176 | 135 | 93  | 53  | 19  | 2   | 2   | 5    | 8    | 10   | 11   | 12   | 13   | 13   | 16   |
| 100% | 98% | 92% | 83% | 71% | 58% | 45% | 31% | 18% | 6%  | 1%  | 1%  | 2%   | 3%   | 3%   | 4%   | 4%   | 4%   | 4%   | 5%   |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 136°           | 265.3°          | 360°              | 51.1%                        | 33.5%                       |

**iso-candela diagram**



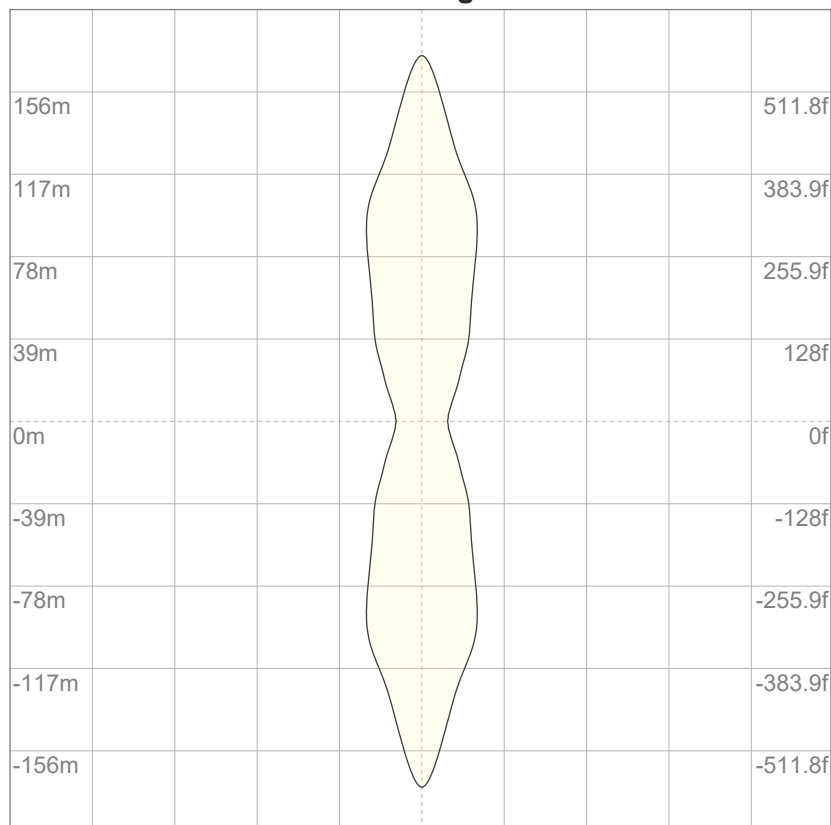
|     |        |
|-----|--------|
| 10% | 30 cd  |
| 20% | 60 cd  |
| 30% | 90 cd  |
| 40% | 121 cd |
| 50% | 151 cd |
| 60% | 181 cd |
| 70% | 211 cd |
| 80% | 241 cd |
| 90% | 271 cd |

Conditions:

Number of c-planes: 24

Candela at center: 301 cd

**iso-lux diagram**



|     |          |
|-----|----------|
| 3%  | 90.4m lx |
| 5%  | 0.151 lx |
| 10% | 0.301 lx |
| 30% | 0.904 lx |
| 50% | 1.51 lx  |

Conditions:

Number of c-planes: 24

Lux at center: 3.01 lx

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

Glare evaluation according to UGR

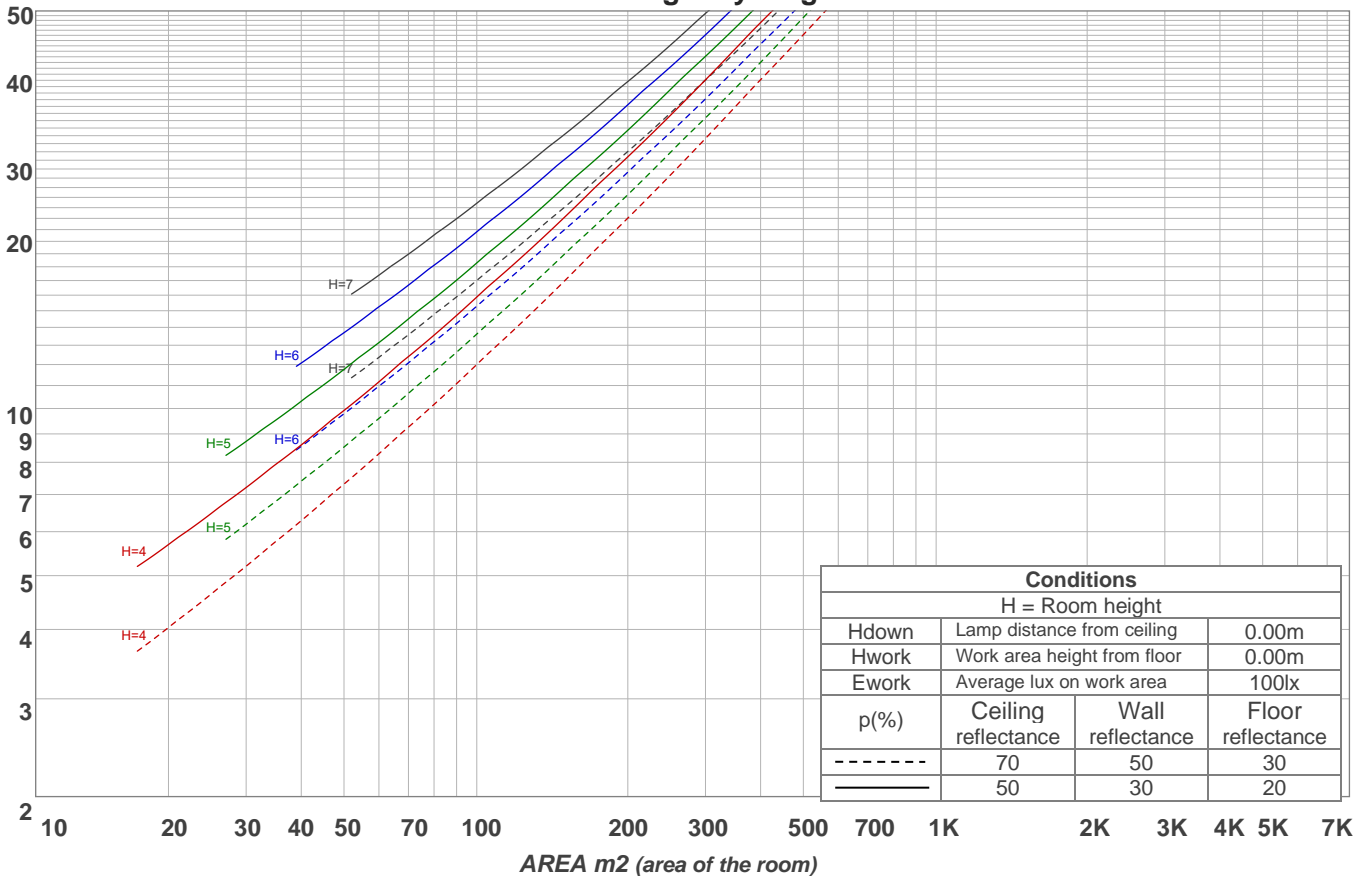
|  |     |   |      |      |      |      |   |      |      |      |      |
|--|-----|---|------|------|------|------|---|------|------|------|------|
| p Ceiling  |     | 70  | 70   | 50   | 50   | 30   | 70                                      | 70   | 50   | 50   | 30   |
| p Walls  |     | 50  | 30   | 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<br>lamp axis |      |      |      |      | Viewing direction parallel to lamp axis |      |      |      |      |
| 2H   | 2H  | 15.1  | 16.2 | 15.6 | 16.8 | 17.5 | 13.3                                    | 14.5 | 13.9 | 15.1 | 15.7 |
|  | 3H  | 17.1  | 18.2 | 17.8 | 18.9 | 19.5 | 14.5                                    | 15.6 | 15.1 | 16.2 | 16.8 |
|  | 4H  | 18.2  | 19.3 | 18.9 | 19.9 | 20.6 | 14.9                                    | 15.9 | 15.6 | 16.5 | 17.2 |
|  | 6H  | 19.3  | 20.2 | 19.9 | 20.9 | 21.6 | 15.2                                    | 16.1 | 15.8 | 16.7 | 17.5 |
|  | 8H  | 19.8  | 20.8 | 20.4 | 21.4 | 22.2 | 15.2                                    | 16.2 | 15.8 | 16.8 | 17.6 |
|  | 12H | 20.3  | 21.3 | 21.0 | 21.9 | 22.7 | 15.2                                    | 16.2 | 15.9 | 16.8 | 17.6 |
| 4H   | 2H  | 15.5  | 16.6 | 16.2 | 17.2 | 17.9 | 14.2                                    | 15.2 | 14.9 | 15.9 | 16.5 |
|  | 3H  | 17.9  | 18.9 | 18.6 | 19.5 | 20.3 | 15.7                                    | 16.7 | 16.3 | 17.2 | 18.0 |
|  | 4H  | 19.1  | 20.2 | 19.8 | 20.7 | 21.5 | 16.2                                    | 17.3 | 16.9 | 17.7 | 18.6 |
|  | 6H  | 20.3  | 21.2 | 21.1 | 21.8 | 22.6 | 16.6                                    | 17.4 | 17.3 | 18.0 | 18.8 |
|  | 8H  | 21.0  | 21.7 | 21.7 | 22.4 | 23.1 | 16.7                                    | 17.4 | 17.4 | 18.1 | 18.8 |
|  | 12H | 21.6  | 22.1 | 22.3 | 22.9 | 23.7 | 16.7                                    | 17.3 | 17.5 | 18.1 | 18.9 |
| 8H   | 4H  | 19.3  | 20.0 | 20.1 | 20.7 | 21.5 | 16.9                                    | 17.6 | 17.7 | 18.3 | 19.1 |
|  | 6H  | 20.9  | 21.4 | 21.6 | 22.2 | 23.0 | 17.6                                    | 18.1 | 18.4 | 18.9 | 19.8 |
|  | 8H  | 21.6  | 22.1 | 22.4 | 22.9 | 23.9 | 17.9                                    | 18.3 | 18.6 | 19.2 | 20.1 |
|  | 12H | 22.4  | 22.8 | 23.2 | 23.6 | 24.5 | 18.0                                    | 18.5 | 18.8 | 19.2 | 20.1 |
| 12H  | 4H  | 19.3  | 19.9 | 20.1 | 20.7 | 21.5 | 17.1                                    | 17.7 | 17.8 | 18.4 | 19.2 |
|  | 6H  | 20.9  | 21.4 | 21.7 | 22.2 | 23.2 | 17.9                                    | 18.4 | 18.7 | 19.2 | 20.2 |
|  | 8H  | 21.8  | 22.2 | 22.6 | 23.0 | 23.9 | 18.3                                    | 18.7 | 19.1 | 19.5 | 20.4 |
| Variation of the observer position for the luminaire distance S                |     |   |      |      |      |      |   |      |      |      |      |
| S = 1.0H   |     | 0.1 / 0.0   |      |      |      |      | 0.1 / -0.1                              |      |      |      |      |
| S = 1.5H   |     | 0.1 / -0.1  |      |      |      |      | 0.1 / -0.2                              |      |      |      |      |
| S = 2.0H   |     | 0.2 / -0.2  |      |      |      |      | 0.3 / -0.5                              |      |      |      |      |
| CIE 117-1995. Corrected glare indices referring to 1418 lm total luminous flux |     |   |      |      |      |      |   |      |      |      |      |

## Coefficients of Utilization

| 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                   | 114  | 114 | 114 | 114 | 109 | 109 | 109 | 109 | 99 | 99 | 99 | 90 | 90 | 90 | 82 | 82 | 82 | 78 |
| 1                   | 101  | 95  | 90  | 85  | 96  | 90  | 86  | 81  | 82 | 78 | 75 | 74 | 71 | 69 | 67 | 65 | 63 | 59 |
| 2                   | 91   | 81  | 74  | 67  | 86  | 77  | 70  | 64  | 70 | 65 | 60 | 64 | 59 | 55 | 58 | 54 | 51 | 47 |
| 3                   | 82   | 71  | 62  | 55  | 78  | 67  | 59  | 53  | 61 | 54 | 49 | 55 | 50 | 45 | 50 | 46 | 42 | 39 |
| 4                   | 75   | 62  | 53  | 46  | 71  | 59  | 51  | 44  | 54 | 47 | 41 | 49 | 43 | 38 | 44 | 39 | 35 | 32 |
| 5                   | 68   | 55  | 46  | 39  | 65  | 53  | 44  | 37  | 48 | 41 | 35 | 44 | 38 | 33 | 40 | 34 | 30 | 28 |
| 6                   | 63   | 49  | 40  | 33  | 60  | 47  | 39  | 32  | 43 | 36 | 30 | 39 | 33 | 28 | 36 | 31 | 26 | 24 |
| 7                   | 58   | 44  | 35  | 29  | 55  | 43  | 34  | 28  | 39 | 32 | 27 | 36 | 30 | 25 | 33 | 27 | 23 | 21 |
| 8                   | 54   | 40  | 32  | 26  | 51  | 39  | 31  | 25  | 36 | 29 | 24 | 33 | 27 | 22 | 30 | 25 | 21 | 19 |
| 9                   | 50   | 37  | 29  | 23  | 48  | 35  | 28  | 22  | 33 | 26 | 21 | 30 | 24 | 20 | 28 | 22 | 19 | 17 |
| 10                  | 47   | 34  | 26  | 21  | 45  | 33  | 25  | 20  | 30 | 24 | 19 | 28 | 22 | 18 | 26 | 21 | 17 | 15 |

LAMPS (number of lamps)

## Luminaire budgetary diagram



## Zonal Lumen Summary

| 0°-10°    | 10°-20°   | 20°-30°   | 30°-40°   | 40°-50°   | 50°-60°   | 60°-70°   | 70°-80°   | 80°-90°   |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| {LUM0-10} | 82.1 lm   | 126 lm    | 155 lm    | 168 lm    | 165 lm    | 150 lm    | 128 lm    | 104 lm    |
| 90°-100°  | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
| 83.8 lm   | 67.3 lm   | 53.2 lm   | 40.7 lm   | 29.4 lm   | 19.3 lm   | 11.0 lm   | 4.93 lm   | 1.49 lm   |

LCS table

| BUG rating:       | B1 U3 G1 |          |
|-------------------|----------|----------|
| Forward light     | Lumens   | Lumens % |
| Low(0-30):        | 118.1    | 8.3%     |
| Medium(30-60):    | 243.8    | 17.2%    |
| High(60-80):      | 139.3    | 9.8%     |
| Very high(80-90): | 52.1     | 3.7%     |
| Back light        |          |          |
| Low(0-30):        | 118.1    | 8.3%     |
| Medium(30-60):    | 243.8    | 17.2%    |
| High(60-80):      | 139.3    | 9.8%     |
| Very high(80-90): | 52.1     | 3.7%     |
| Uplight           |          |          |
| Low(90-100):      | 83.9     | 5.9%     |
| High(100-180):    | 227.6    | 16%      |

LCS graph

