

Light efficiency:

46 Lumen/Watt

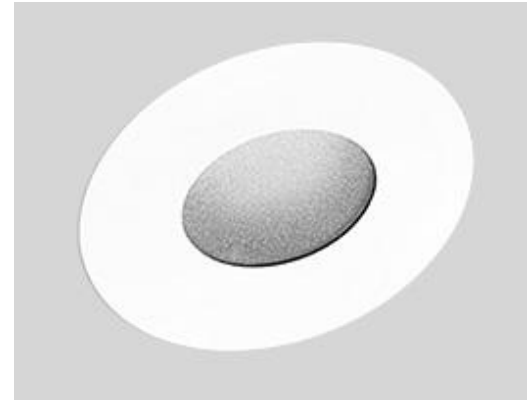
Output: 449 lm

Light quality:

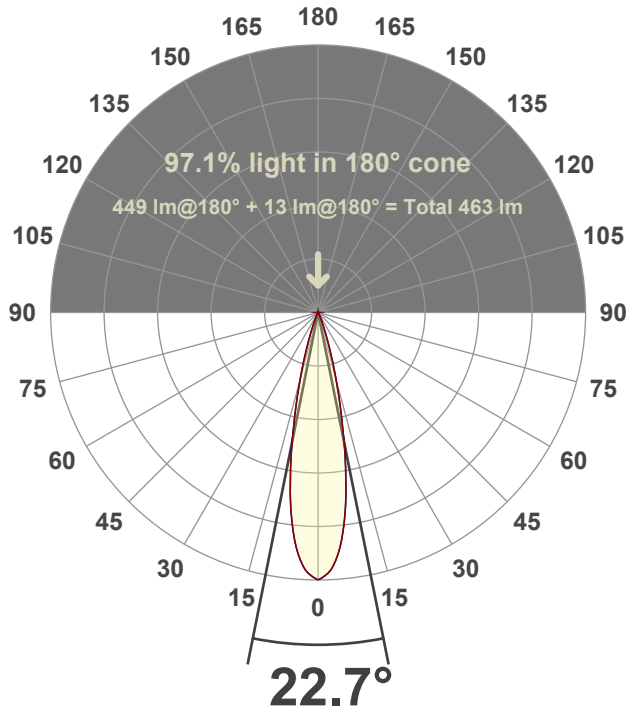
CRI: 96.0

Peak: 2726 cd

Power: 9.8 W



Beam angle



Test number:

CR4D-RA-FL-Z-T9-TW1840-24

Luminaire Model:

CORE 4" ROUND FLAT T9 1840 24°

Date and time:

8/21/2025 4:25:20 PM

LUM: 449

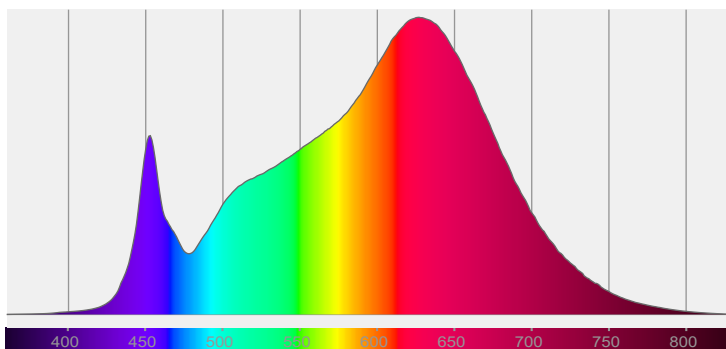
Primary Optic = 22.7°

2891 K

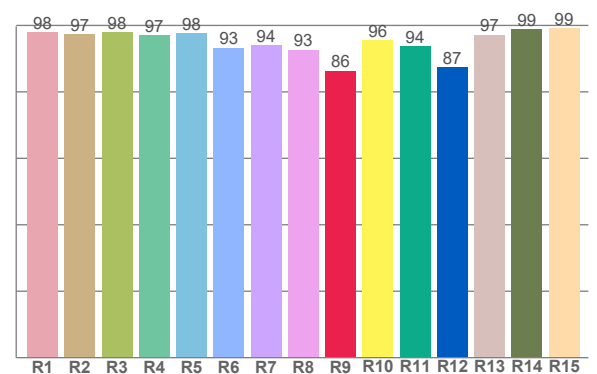
Measured at Mid-Point of Tuneable White CCT Range

\*Variation due to source size, bezel geometry, or secondary optics

Spectra



CRI: 96.0 (R1-R8)



Color parameters

|  | 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 |
|--|-----------------------|---------------|---------------------|---------------------|---------------------|---------------------------|---------------------------|------------------|------------------|---------------------------------|
|  | CRI                   | CRI R9        | TM30 R <sub>f</sub> | TM30 R <sub>g</sub> | CQS                 | x                         | y                         | u                | v                | Δuv                             |
|  | 96.0                  | 86.4          | 94.0                | 103.4               | 93.4                | 0.436                     | 0.390                     | 0.257            | 0.344            | -0.0058                         |

**$R_f$  94.0**

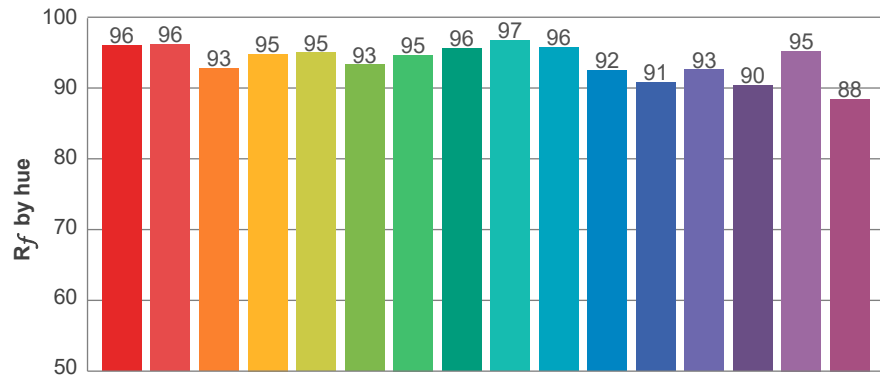
Fidelity index  $R_f$

**$R_g$  103.4**

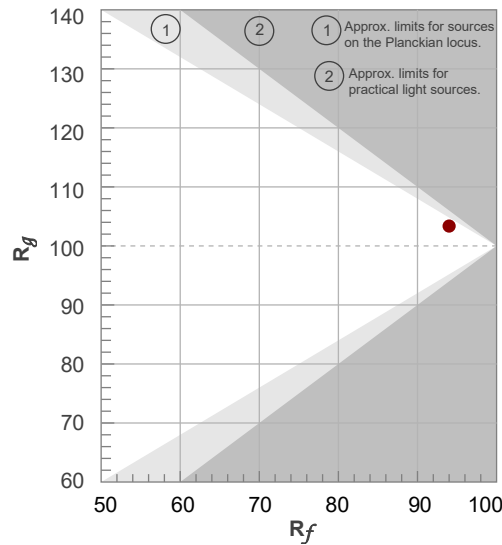
Gammut index  $R_g$

TM30: 94.0

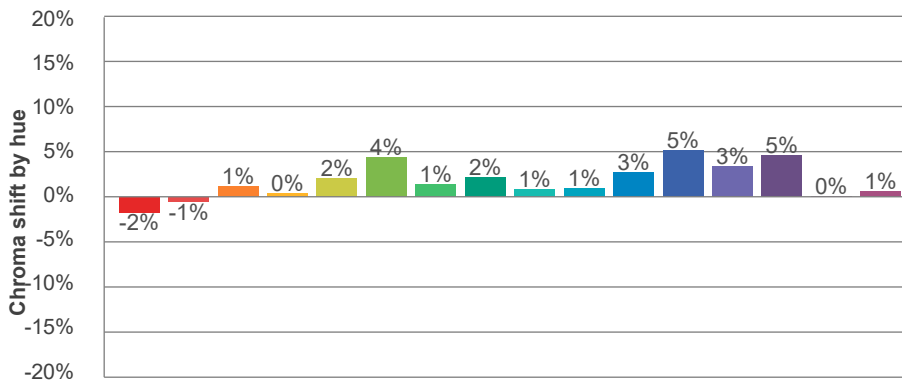
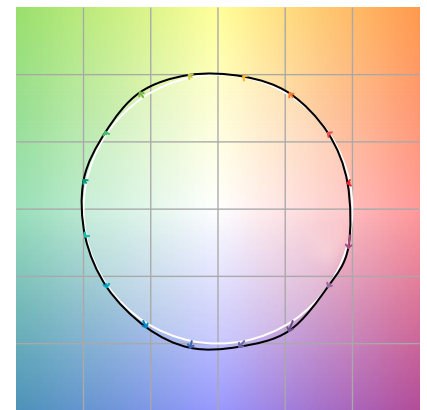
TM-30Color



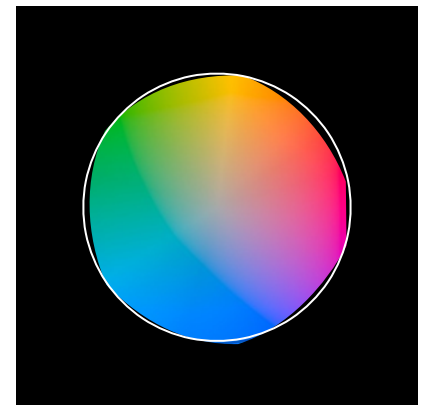
| Hue Bin | $R_f$ | Graphic shifts (%) |     |
|---------|-------|--------------------|-----|
|         |       | Chroma             | Hue |
| 1       | 96    | -2%                | 0%  |
| 2       | 96    | -1%                | 2%  |
| 3       | 93    | 1%                 | 4%  |
| 4       | 95    | 0%                 | 1%  |
| 5       | 95    | 2%                 | 2%  |
| 6       | 93    | 4%                 | 0%  |
| 7       | 95    | 1%                 | -1% |
| 8       | 96    | 2%                 | -2% |
| 9       | 97    | 1%                 | 1%  |
| 10      | 96    | 1%                 | 2%  |
| 11      | 92    | 3%                 | 4%  |
| 12      | 91    | 5%                 | 0%  |
| 13      | 93    | 3%                 | -4% |
| 14      | 90    | 5%                 | -6% |
| 15      | 95    | 0%                 | -2% |
| 16      | 88    | 1%                 | -9% |



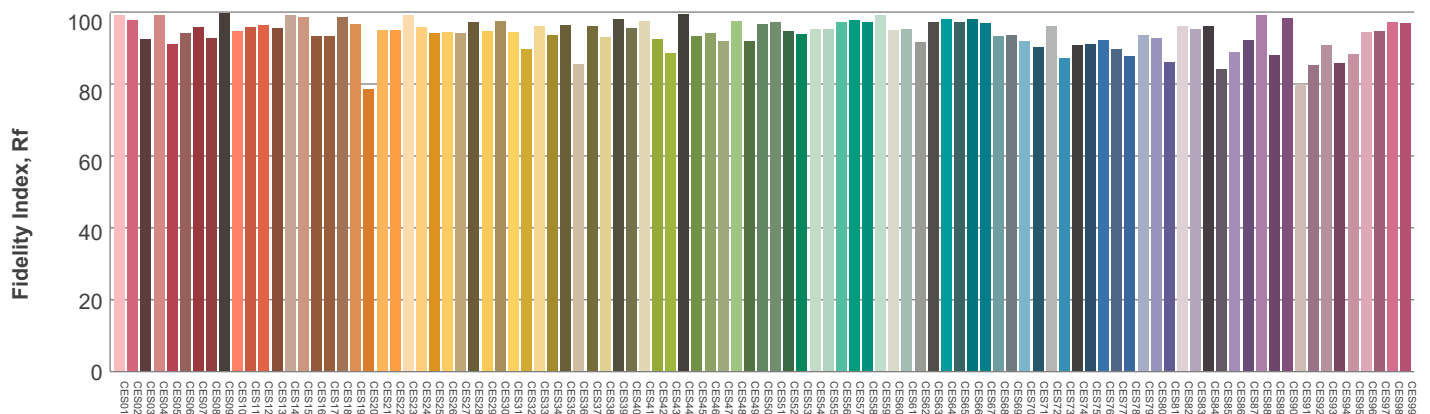
Color vector graphics



Color distortion

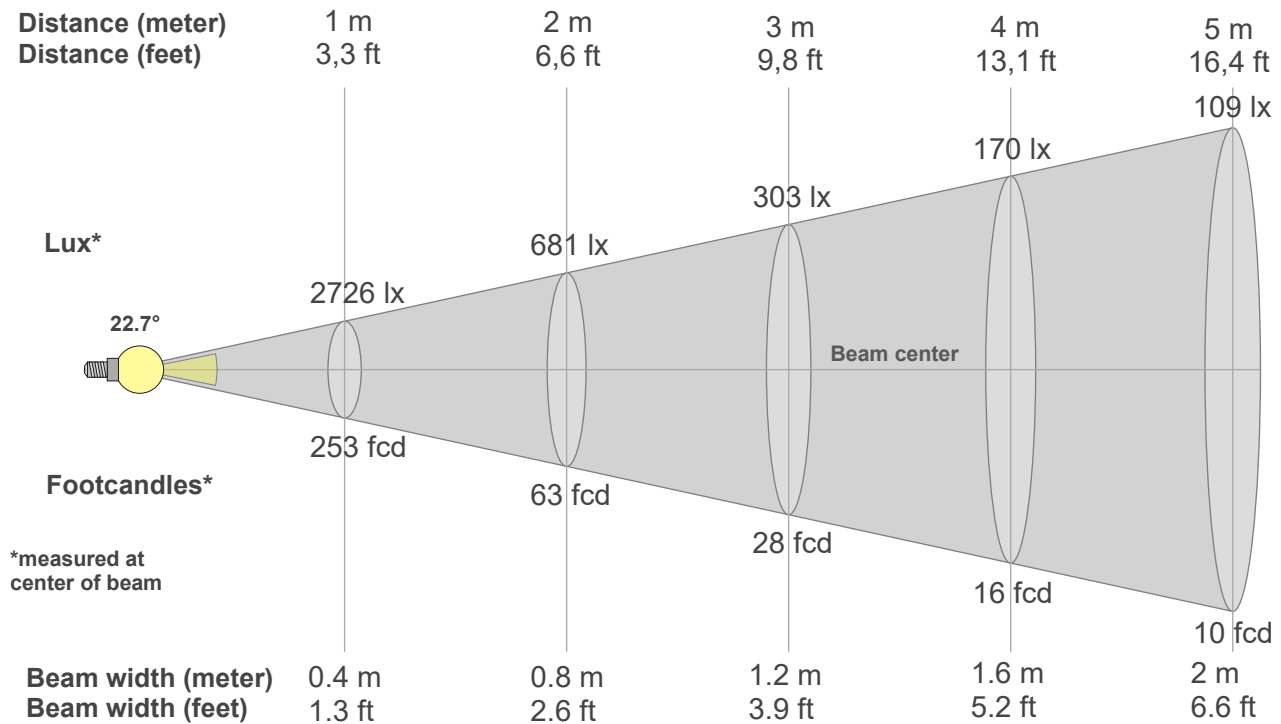


Hue bin



Color Evaluation Sample

## 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 |
| 2726lx   | 681lx   | 303lx   | 170lx   | 109lx   | 76lx   | 56lx   | 43lx   | 34lx   | 27lx   | 23lx   | 19lx   | 16lx   | 14lx   | 12lx   | 11lx   | 9lx    | 8lx    | 8lx    | 7lx    |
| 253.2fcd | 63.3fcd | 28.1fcd | 15.8fcd | 10.1fcd | 7fcd   | 5.2fcd | 4fcd   | 3.1fcd | 2.5fcd | 2.1fcd | 1.8fcd | 1.5fcd | 1.3fcd | 1.1fcd | 1fcd   | 0.9fcd | 0.8fcd | 0.7fcd | 0.6fcd |

### Intensities in 0° c-plane

| 0°   | 1°   | 2°   | 3°   | 4°   | 5°   | 6°   | 7°   | 8°   | 9°   | 10°  | 11°  | 12°  | 13°  | 14° | 15° | 16° | 17° | 18° | 19° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| 2726 | 2711 | 2669 | 2628 | 2538 | 2440 | 2322 | 2166 | 2010 | 1820 | 1623 | 1427 | 1233 | 1038 | 877 | 723 | 582 | 470 | 358 | 280 |
| 100% | 99%  | 98%  | 96%  | 93%  | 90%  | 85%  | 79%  | 74%  | 67%  | 60%  | 52%  | 45%  | 38%  | 32% | 27% | 21% | 17% | 13% | 10% |

### Intensities in 90° c-plane

| 0°   | 1°   | 2°   | 3°   | 4°   | 5°   | 6°   | 7°   | 8°   | 9°   | 10°  | 11°  | 12°  | 13°  | 14° | 15° | 16° | 17° | 18° | 19° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| 2726 | 2711 | 2669 | 2628 | 2538 | 2440 | 2322 | 2166 | 2010 | 1820 | 1623 | 1427 | 1233 | 1038 | 877 | 723 | 582 | 470 | 358 | 280 |
| 100% | 99%  | 98%  | 96%  | 93%  | 90%  | 85%  | 79%  | 74%  | 67%  | 60%  | 52%  | 45%  | 38%  | 32% | 27% | 21% | 17% | 13% | 10% |

### Intensities in 180° c-plane

| 0°   | 1°   | 2°   | 3°   | 4°   | 5°   | 6°   | 7°   | 8°   | 9°   | 10°  | 11°  | 12°  | 13°  | 14° | 15° | 16° | 17° | 18° | 19° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| 2726 | 2711 | 2669 | 2628 | 2538 | 2440 | 2322 | 2166 | 2010 | 1820 | 1623 | 1427 | 1233 | 1038 | 877 | 723 | 582 | 470 | 358 | 280 |
| 100% | 99%  | 98%  | 96%  | 93%  | 90%  | 85%  | 79%  | 74%  | 67%  | 60%  | 52%  | 45%  | 38%  | 32% | 27% | 21% | 17% | 13% | 10% |

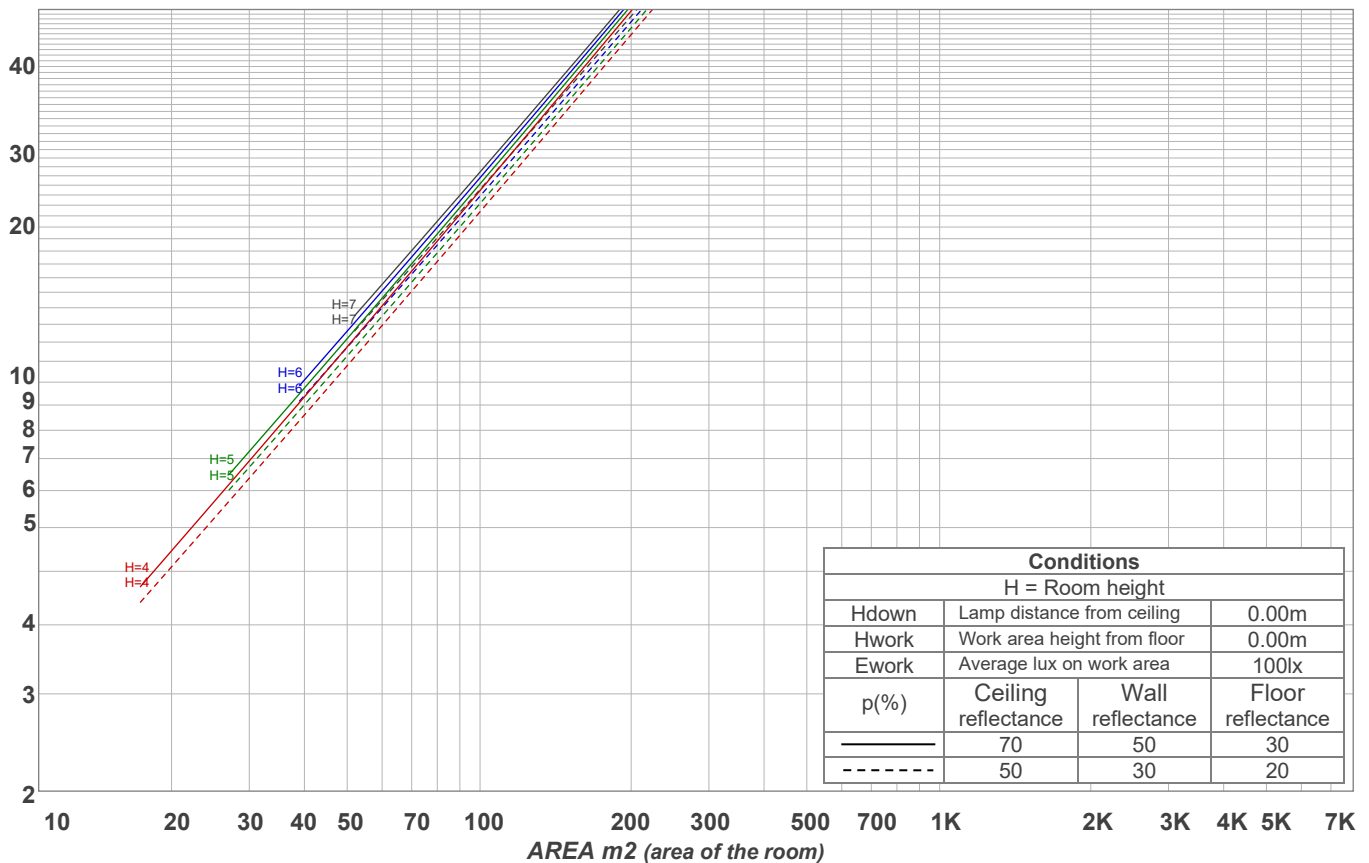
### Intensities in 270° c-plane

| 0°   | 1°   | 2°   | 3°   | 4°   | 5°   | 6°   | 7°   | 8°   | 9°   | 10°  | 11°  | 12°  | 13°  | 14° | 15° | 16° | 17° | 18° | 19° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| 2726 | 2711 | 2669 | 2628 | 2538 | 2440 | 2322 | 2166 | 2010 | 1820 | 1623 | 1427 | 1233 | 1038 | 877 | 723 | 582 | 470 | 358 | 280 |
| 100% | 99%  | 98%  | 96%  | 93%  | 90%  | 85%  | 79%  | 74%  | 67%  | 60%  | 52%  | 45%  | 38%  | 32% | 27% | 21% | 17% | 13% | 10% |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 22.7°          | 38.2°           | 47.5°             | 98.1%                        | 97.5%                       |

LAMPS (number of lamps)  
50

## Light planning Luminaire budgetary diagram



## Luminaire budgetary diagram AREA m² (area of the room) 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                   | 119                                                                                                      | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1                   | 115                                                                                                      | 113 | 111 | 109 | 113 | 111 | 109 | 107 | 107 | 105 | 104 | 103 | 102 | 101 | 100 | 99  | 98  | 97  |
| 2                   | 112                                                                                                      | 108 | 105 | 103 | 109 | 106 | 104 | 102 | 103 | 101 | 99  | 100 | 99  | 97  | 98  | 96  | 95  | 94  |
| 3                   | 108                                                                                                      | 104 | 101 | 98  | 107 | 103 | 100 | 97  | 100 | 98  | 96  | 98  | 96  | 94  | 96  | 94  | 93  | 92  |
| 4                   | 106                                                                                                      | 101 | 97  | 94  | 104 | 100 | 96  | 94  | 98  | 95  | 93  | 96  | 93  | 92  | 94  | 92  | 91  | 89  |
| 5                   | 103                                                                                                      | 98  | 94  | 91  | 102 | 97  | 93  | 91  | 95  | 92  | 90  | 94  | 91  | 89  | 92  | 90  | 89  | 87  |
| 6                   | 101                                                                                                      | 95  | 91  | 88  | 99  | 94  | 91  | 88  | 93  | 90  | 88  | 92  | 89  | 87  | 91  | 88  | 87  | 86  |
| 7                   | 98                                                                                                       | 93  | 89  | 86  | 97  | 92  | 89  | 86  | 91  | 88  | 86  | 90  | 87  | 85  | 89  | 87  | 85  | 84  |
| 8                   | 96                                                                                                       | 90  | 87  | 84  | 95  | 90  | 86  | 84  | 89  | 86  | 84  | 88  | 85  | 83  | 87  | 85  | 83  | 82  |
| 9                   | 94                                                                                                       | 88  | 85  | 82  | 93  | 88  | 85  | 82  | 87  | 84  | 82  | 87  | 84  | 82  | 86  | 83  | 82  | 81  |
| 10                  | 92                                                                                                       | 87  | 83  | 81  | 92  | 86  | 83  | 81  | 86  | 83  | 80  | 85  | 82  | 80  | 84  | 82  | 80  | 79  |

## Zonal Lumen Summary

| 0°-10°   | 10°-20°   | 20°-30°   | 30°-40°   | 40°-50°   | 50°-60°   | 60°-70°   | 70°-80°   | 80°-90°   |
|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 207 lm   | 201 lm    | 27.8 lm   | 1.84 lm   | 1.55 lm   | 1.84 lm   | 2.16 lm   | 2.70 lm   | 3.63 lm   |
| 90°-100° | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
| 0.000 lm | 0.000 lm  | 0.000 lm  | 0.000 lm  | 0.000 lm  | 0.000 lm  | 0.000 lm  | 0.000 lm  | 0.000 lm  |

[www.specialty-lighting.com](http://www.specialty-lighting.com) As a result of our continuous improvement, values are subject to change without notice. These are delivered results and can vary +/- 10% from published source data range.