

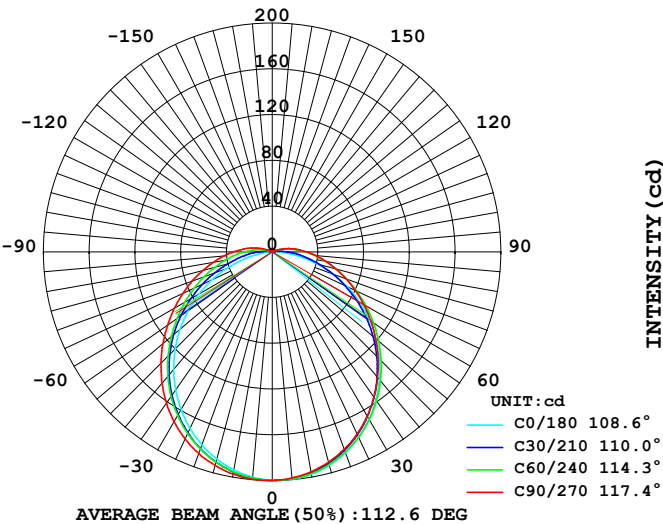
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

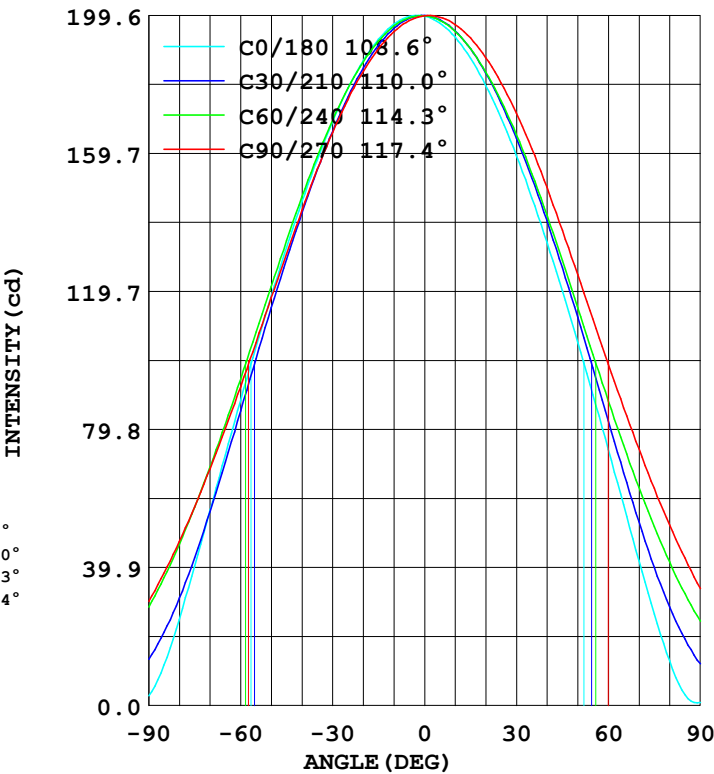
| | | |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER: | | |
| Address: | | |
| NAME: 250mA 4000K with trim | TYPE: | WEIGHT: |
| SPECIFICATION: | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |

| | | | | | |
|------------------|-------|--------------------|--------|------------------|-----------|
| DATA OF LAMP | | Imax(cd) | 199.6 | S/MH(C0/180) | 1.26 |
| MODEL | | EFFICIENCY(%) | 100.0 | S/MH(C90/270) | 1.24 |
| NOMINAL POWER(W) | 8 | TOTAL FLUX(lm) | 624.79 | Voltage(V) | 229.5 |
| RATED VOLTAGE(V) | 230 | EFFICIENCY(lm/W) | 76.2 | Current(A) | 0.040 |
| NOMINAL FLUX(lm) | 624.8 | η up(%) | 4.7 | Power(W) | 8.197 |
| LAMPS QUANTITY | 1 | η down(%) | 95.3 | Power Factor(PF) | 0.884 |
| TEST VOLTAGE(V) | 229.6 | Effective Flux(lm) | 599.5 | EEl | 0.000 (E) |

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



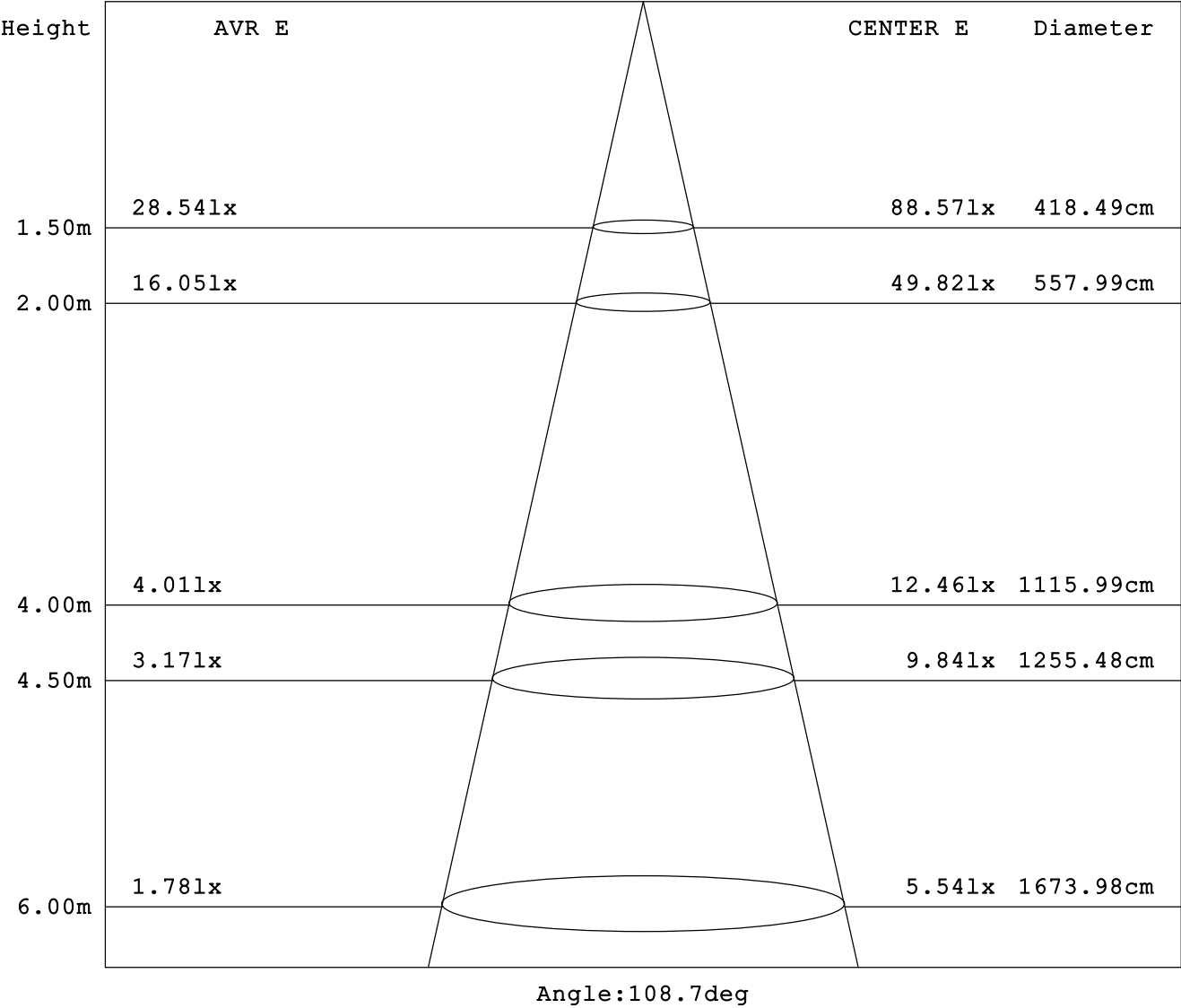
Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:W
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.450 m
Remarks:

AVERAGE AND CENTER E Figure

Report number:

| | | |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER: | | |
| Address: | | |
| NAME: 250mA 4000K with trim | TYPE: | WEIGHT: |
| SPECIFICATION: | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |



Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:W
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.450 m
Remarks:

ZONAL FLUX DIAGRAM

Report number:

| | | |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER: | | |
| Address: | | |
| NAME: 250mA 4000K with trim | TYPE: | WEIGHT: |
| SPECIFICATION: | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |

| γ | C0 | C45 | C90 | C135 | C180 | C225 | C270 | C315 | γ | Zone | total |
|-------|-----------------------|-------|-------|-------|-------|-------|-------|-------|---------|---------|-------|
| 5.0 | 199.2 | 198.7 | 198.0 | 197.7 | 197.2 | 198.1 | 198.9 | 199.2 | 0- 5 | 4.756 | 4.756 |
| 10.0 | 196.9 | 196.1 | 194.7 | 194.1 | 193.2 | 194.9 | 196.8 | 196.9 | 5- 10 | 14.09 | 18.85 |
| 15.0 | 192.6 | 191.5 | 189.8 | 188.6 | 187.1 | 189.8 | 193.0 | 192.8 | 10- 15 | 22.91 | 41.76 |
| 20.0 | 186.4 | 185.2 | 183.3 | 181.5 | 179.2 | 183.0 | 187.2 | 186.8 | 15- 20 | 30.89 | 72.65 |
| 25.0 | 178.5 | 177.2 | 175.2 | 172.7 | 169.9 | 174.5 | 180.0 | 179.1 | 20- 25 | 37.76 | 110.4 |
| 30.0 | 168.7 | 167.6 | 165.6 | 162.5 | 159.0 | 164.5 | 171.2 | 169.9 | 25- 30 | 43.28 | 153.7 |
| 35.0 | 157.7 | 156.7 | 155.0 | 151.1 | 146.8 | 153.1 | 161.0 | 159.1 | 30- 35 | 47.31 | 201.0 |
| 40.0 | 145.7 | 144.7 | 143.1 | 138.6 | 133.8 | 140.9 | 149.8 | 147.4 | 35- 40 | 49.73 | 250.7 |
| 45.0 | 132.4 | 131.7 | 130.5 | 125.2 | 119.8 | 127.5 | 137.3 | 134.5 | 40- 45 | 50.50 | 301.2 |
| 50.0 | 118.3 | 118.0 | 117.9 | 111.4 | 104.9 | 113.6 | 124.5 | 120.7 | 45- 50 | 49.70 | 350.9 |
| 55.0 | 103.8 | 104.1 | 104.9 | 97.32 | 89.82 | 99.57 | 111.7 | 106.9 | 50- 55 | 47.43 | 398.3 |
| 60.0 | 88.25 | 89.78 | 92.18 | 83.11 | 73.97 | 85.18 | 98.74 | 92.64 | 55- 60 | 43.88 | 442.2 |
| 65.0 | 72.40 | 75.86 | 80.11 | 69.43 | 58.05 | 71.25 | 86.04 | 78.57 | 60- 65 | 39.30 | 481.5 |
| 70.0 | 56.47 | 62.54 | 68.40 | 56.58 | 41.91 | 58.12 | 74.25 | 65.15 | 65- 70 | 33.96 | 515.5 |
| 75.0 | 40.27 | 50.01 | 57.40 | 44.69 | 26.41 | 45.84 | 62.76 | 52.37 | 70- 75 | 28.22 | 543.7 |
| 80.0 | 24.84 | 38.80 | 47.48 | 34.27 | 12.92 | 34.95 | 52.12 | 40.84 | 75- 80 | 22.41 | 566.1 |
| 85.0 | 11.71 | 29.06 | 38.27 | 25.41 | 3.141 | 25.77 | 42.62 | 30.77 | 80- 85 | 16.94 | 583.1 |
| 90.0 | 2.784 | 20.92 | 30.13 | 18.17 | 0.857 | 18.24 | 33.84 | 22.24 | 85- 90 | 12.30 | 595.4 |
| 95.0 | 1.285 | 14.56 | 23.20 | 12.56 | 0.857 | 12.49 | 26.27 | 15.53 | 90- 95 | 8.798 | 604.2 |
| 100.0 | 1.142 | 9.460 | 17.06 | 8.139 | 1.000 | 7.711 | 19.84 | 10.06 | 95-100 | 6.124 | 610.3 |
| 105.0 | 1.142 | 5.569 | 10.92 | 4.676 | 1.071 | 4.034 | 13.42 | 5.390 | 100-105 | 3.900 | 614.2 |
| 110.0 | 1.213 | 2.748 | 4.641 | 2.534 | 1.285 | 2.320 | 6.854 | 2.713 | 105-110 | 2.125 | 616.3 |
| 115.0 | 1.285 | 1.963 | 2.927 | 1.963 | 1.356 | 1.820 | 3.641 | 1.963 | 110-115 | 1.198 | 617.5 |
| 120.0 | 1.428 | 1.713 | 2.142 | 1.749 | 1.499 | 1.677 | 2.641 | 1.749 | 115-120 | 0.927 | 618.5 |
| 125.0 | 1.570 | 1.677 | 1.856 | 1.749 | 1.642 | 1.713 | 2.142 | 1.677 | 120-125 | 0.806 | 619.3 |
| 130.0 | 1.642 | 1.749 | 1.856 | 1.820 | 1.785 | 1.820 | 1.927 | 1.785 | 125-130 | 0.764 | 620.0 |
| 135.0 | 1.713 | 1.856 | 1.927 | 1.892 | 1.927 | 1.927 | 1.999 | 1.892 | 130-135 | 0.746 | 620.8 |
| 140.0 | 1.856 | 1.963 | 1.999 | 2.034 | 1.999 | 2.034 | 2.070 | 1.999 | 135-140 | 0.722 | 621.5 |
| 145.0 | 1.927 | 2.034 | 2.142 | 2.106 | 2.142 | 2.142 | 2.142 | 2.106 | 140-145 | 0.681 | 622.2 |
| 150.0 | 2.070 | 2.142 | 2.213 | 2.177 | 2.213 | 2.213 | 2.213 | 2.177 | 145-150 | 0.630 | 622.8 |
| 155.0 | 2.142 | 2.213 | 2.213 | 2.213 | 2.284 | 2.284 | 2.284 | 2.249 | 150-155 | 0.559 | 623.4 |
| 160.0 | 2.213 | 2.284 | 2.284 | 2.284 | 2.356 | 2.391 | 2.356 | 2.356 | 155-160 | 0.479 | 623.8 |
| 165.0 | 2.284 | 2.356 | 2.356 | 2.356 | 2.427 | 2.427 | 2.427 | 2.427 | 160-165 | 0.387 | 624.2 |
| 170.0 | 2.356 | 2.427 | 2.427 | 2.427 | 2.499 | 2.463 | 2.499 | 2.463 | 165-170 | 0.285 | 624.5 |
| 175.0 | 2.427 | 2.427 | 2.499 | 2.427 | 2.499 | 2.499 | 2.499 | 2.499 | 170-175 | 0.176 | 624.7 |
| 180.0 | 2.499 | 2.499 | 2.499 | 2.499 | 2.499 | 2.499 | 2.499 | 2.499 | 175-180 | 0.060 | 624.7 |
| DEG | LUMINOUS INTENSITY:cd | | | | | | | | | UNIT:lm | |

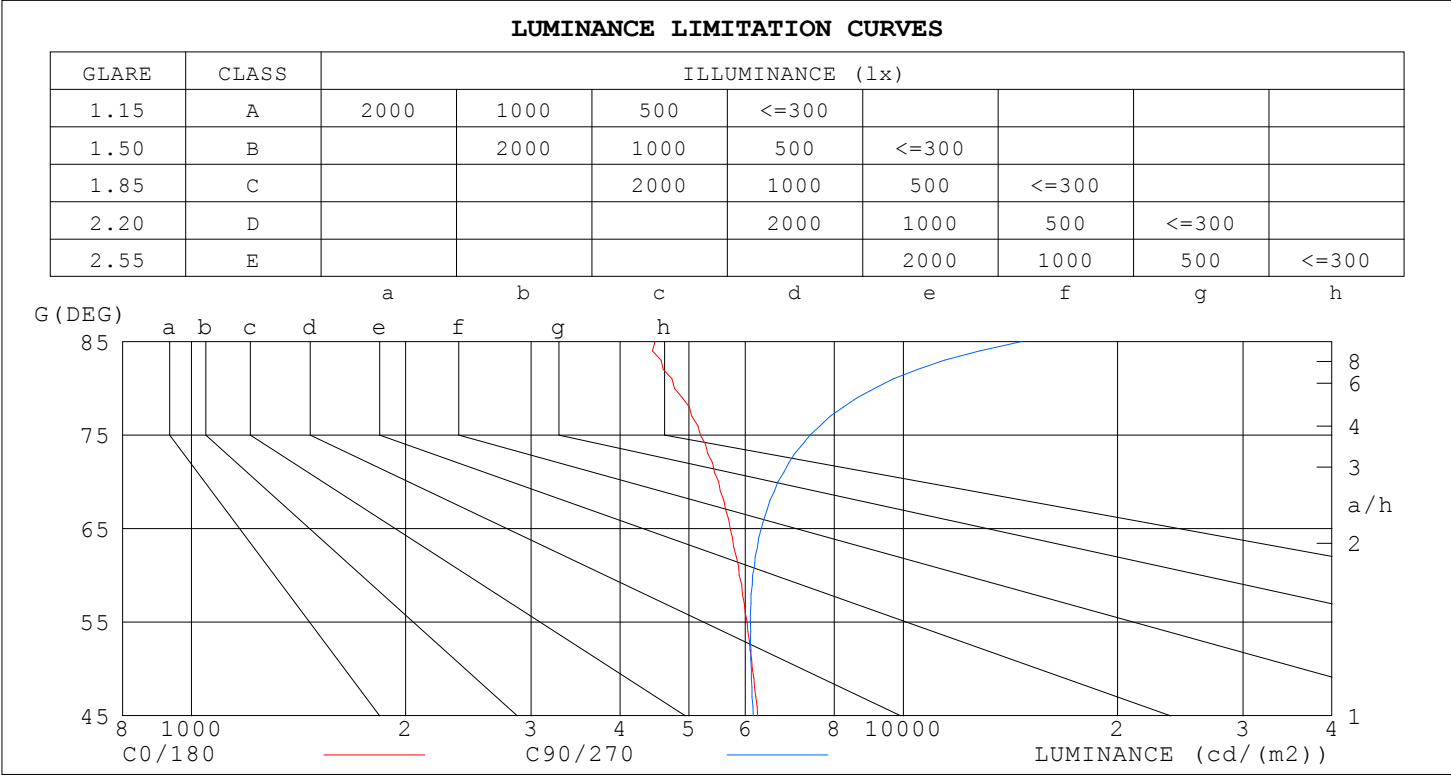
Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:W
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.450 m
Remarks:

LUMINANCE LIMITATION CURVES

Report number:

| | | |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER: | | |
| Address: | | |
| NAME: 250mA 4000K with trim | TYPE: | WEIGHT: |
| SPECIFICATION: | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |



| LUMINANCE cd/m2 | | |
|-----------------|--------|---------|
| G (DEG) | C0/180 | C90/270 |
| 85 | 4479 | 14637 |
| 80 | 4770 | 9115 |
| 75 | 5187 | 7394 |
| 70 | 5504 | 6667 |
| 65 | 5711 | 6319 |
| 60 | 5884 | 6145 |
| 55 | 6033 | 6100 |
| 50 | 6135 | 6117 |
| 45 | 6244 | 6153 |

Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:W
Test Date:2023年06月16日

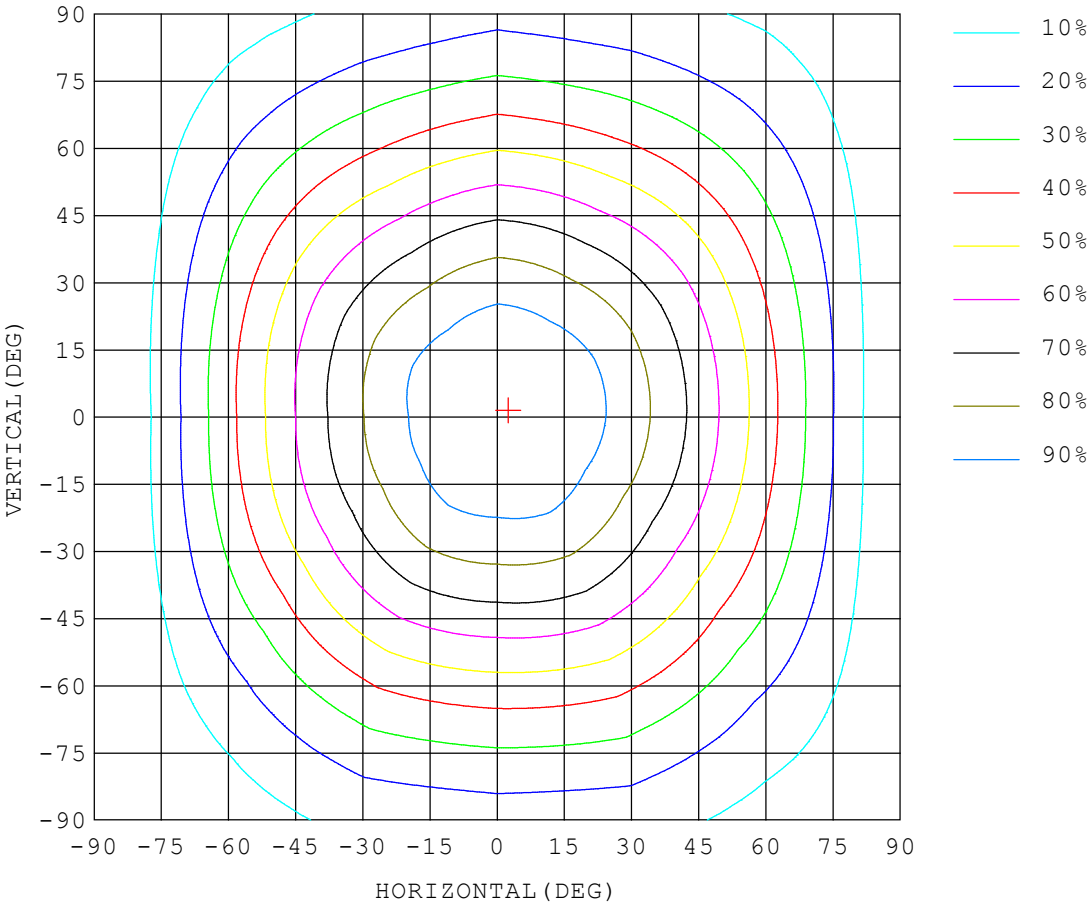
Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.450 m
Remarks:

ISOCANDELA DIAGRAM

Report number:

| | | |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER: | | |
| Address: | | |
| NAME: 250mA 4000K with trim | TYPE: | WEIGHT: |
| SPECIFICATION: | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |

UNIT: cd



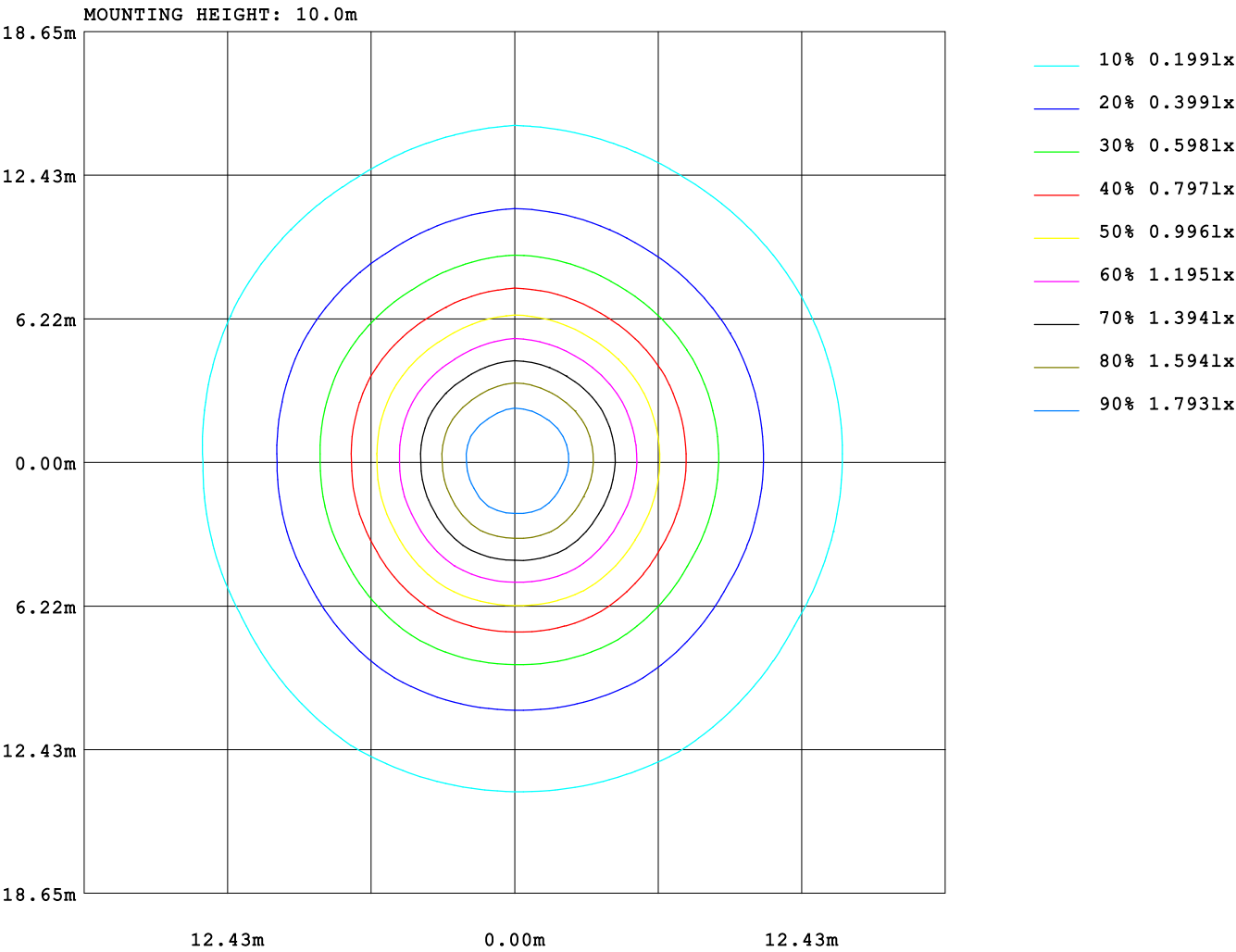
Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:W
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.450 m
Remarks:

ISOLUX DIAGRAM

Report number:

| | | |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER: | | |
| Address: | | |
| NAME: 250mA 4000K with trim | TYPE: | WEIGHT: |
| SPECIFICATION: | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |



Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:W
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.450 m
Remarks:

AREA LUMINOUS FLUX

Report number:

| | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|--|--|--|--|--|--|--|--|------------------------------|--|--|--|--|--|-------------|--|--|--|--|--|
| MANUFACTURER: | | | | | | | | | | | | | | | | | | | | |
| Address: | | | | | | | | | | | | | | | | | | | | |
| NAME: 250mA 4000K with trim | | | | | | | | | TYPE: | | | | | | WEIGHT: | | | | | |
| SPECIFICATION: | | | | | | | | | DIMENSION: 0.265*0.135*0.118 | | | | | | SERIAL No.: | | | | | |

| VERTICAL (DEG) | AREA FLUX DIAGRAM | | | | | | | | | | | | | | | | | | UNIT:lm | | Φ t | Φ a |
|----------------|-------------------|------|------|------|------|------|------|------|------------------|------|------|------|------|------|------|------|------|------|---------|------|-----|-----|
| | 0.01 | 0.06 | 0.16 | 0.32 | 0.51 | 0.72 | 0.92 | 1.09 | 1.24 | 1.25 | 1.14 | 1.00 | 0.82 | 0.61 | 0.41 | 0.23 | 0.09 | 0.02 | 10.6 | 9.76 | | |
| 90 | | | | | | | | | | | | | | | | | | | | | | |
| 80 | 0.01 | 0.08 | 0.24 | 0.48 | 0.77 | 1.08 | 1.38 | 1.64 | 1.84 | 1.86 | 1.71 | 1.49 | 1.21 | 0.90 | 0.60 | 0.33 | 0.13 | 0.02 | 15.8 | 15.4 | | |
| 70 | 0.01 | 0.10 | 0.33 | 0.68 | 1.08 | 1.52 | 1.93 | 2.28 | 2.54 | 2.57 | 2.37 | 2.06 | 1.67 | 1.24 | 0.82 | 0.44 | 0.17 | 0.03 | 21.8 | 21.6 | | |
| 60 | 0.01 | 0.13 | 0.44 | 0.89 | 1.43 | 2.00 | 2.53 | 2.99 | 3.30 | 3.33 | 3.08 | 2.67 | 2.17 | 1.61 | 1.04 | 0.56 | 0.21 | 0.03 | 28.5 | 28.3 | | |
| 50 | 0.02 | 0.16 | 0.54 | 1.10 | 1.79 | 2.50 | 3.15 | 3.70 | 4.07 | 4.11 | 3.81 | 3.31 | 2.68 | 1.98 | 1.27 | 0.68 | 0.25 | 0.04 | 35.2 | 35.0 | | |
| 40 | 0.02 | 0.19 | 0.63 | 1.29 | 2.11 | 2.96 | 3.73 | 4.36 | 4.78 | 4.82 | 4.47 | 3.90 | 3.16 | 2.31 | 1.48 | 0.78 | 0.28 | 0.04 | 41.3 | 41.3 | | |
| 30 | 0.02 | 0.21 | 0.70 | 1.44 | 2.37 | 3.34 | 4.22 | 4.90 | 5.35 | 5.39 | 5.03 | 4.40 | 3.55 | 2.58 | 1.65 | 0.86 | 0.31 | 0.04 | 46.4 | 46.3 | | |
| | 0.02 | 0.22 | 0.75 | 1.54 | 2.53 | 3.58 | 4.56 | 5.31 | 5.74 | 5.79 | 5.43 | 4.74 | 3.80 | 2.76 | 1.76 | 0.92 | 0.33 | 0.04 | 49.8 | 49.8 | | |
| | 0.02 | 0.23 | 0.76 | 1.58 | 2.59 | 3.67 | 4.68 | 5.49 | 5.95 | 5.99 | 5.63 | 4.90 | 3.92 | 2.84 | 1.81 | 0.94 | 0.33 | 0.04 | 51.4 | 51.3 | | |
| | 0.02 | 0.22 | 0.76 | 1.56 | 2.57 | 3.64 | 4.64 | 5.45 | 5.93 | 5.97 | 5.59 | 4.86 | 3.89 | 2.82 | 1.80 | 0.94 | 0.33 | 0.04 | 51.0 | 50.9 | | |
| | 0.02 | 0.22 | 0.73 | 1.51 | 2.47 | 3.49 | 4.46 | 5.26 | 5.71 | 5.75 | 5.37 | 4.64 | 3.71 | 2.70 | 1.72 | 0.90 | 0.32 | 0.04 | 49.0 | 48.9 | | |
| -30 | 0.02 | 0.21 | 0.68 | 1.39 | 2.27 | 3.22 | 4.15 | 4.89 | 5.27 | 5.30 | 5.00 | 4.31 | 3.42 | 2.48 | 1.58 | 0.83 | 0.30 | 0.04 | 45.4 | 45.3 | | |
| -40 | 0.02 | 0.18 | 0.60 | 1.22 | 2.00 | 2.87 | 3.71 | 4.34 | 4.66 | 4.69 | 4.45 | 3.86 | 3.06 | 2.19 | 1.40 | 0.74 | 0.27 | 0.04 | 40.3 | 40.2 | | |
| -50 | 0.01 | 0.15 | 0.50 | 1.02 | 1.69 | 2.45 | 3.16 | 3.66 | 3.92 | 3.96 | 3.76 | 3.30 | 2.62 | 1.87 | 1.18 | 0.63 | 0.23 | 0.03 | 34.2 | 34.0 | | |
| -60 | 0.01 | 0.12 | 0.40 | 0.82 | 1.37 | 1.98 | 2.56 | 2.94 | 3.15 | 3.18 | 3.02 | 2.68 | 2.13 | 1.52 | 0.95 | 0.51 | 0.19 | 0.03 | 27.6 | 27.4 | | |
| -70 | 0.01 | 0.09 | 0.30 | 0.62 | 1.05 | 1.52 | 1.96 | 2.23 | 2.40 | 2.42 | 2.30 | 2.06 | 1.65 | 1.17 | 0.73 | 0.39 | 0.15 | 0.02 | 21.1 | 20.8 | | |
| -80 | 0.01 | 0.07 | 0.21 | 0.44 | 0.75 | 1.10 | 1.41 | 1.60 | 1.72 | 1.74 | 1.65 | 1.49 | 1.20 | 0.85 | 0.53 | 0.28 | 0.11 | 0.02 | 15.2 | 14.7 | | |
| -90 | 0.01 | 0.05 | 0.14 | 0.29 | 0.50 | 0.74 | 0.94 | 1.06 | 1.14 | 1.15 | 1.10 | 1.00 | 0.82 | 0.57 | 0.35 | 0.19 | 0.08 | 0.02 | 10.1 | 9.22 | | |
| | -90 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | HORIZONTAL (DEG) | | | | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | | |
| Φ t | 0.25 | 2.72 | 8.85 | 18.2 | 29.9 | 42.4 | 54.1 | 63.2 | 68.7 | 69.3 | 64.9 | 56.7 | 45.5 | 33.0 | 21.1 | 11.1 | 4.10 | 0.59 | 625 | | | |
| Φ a | 0.00 | 1.72 | 8.16 | 17.7 | 29.7 | 42.4 | 54.1 | 63.2 | 68.7 | 69.3 | 64.9 | 56.7 | 45.5 | 33.0 | 20.9 | 10.7 | 3.53 | 0.13 | | 600 | | |

Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:W
Test Date:2023年06月16日

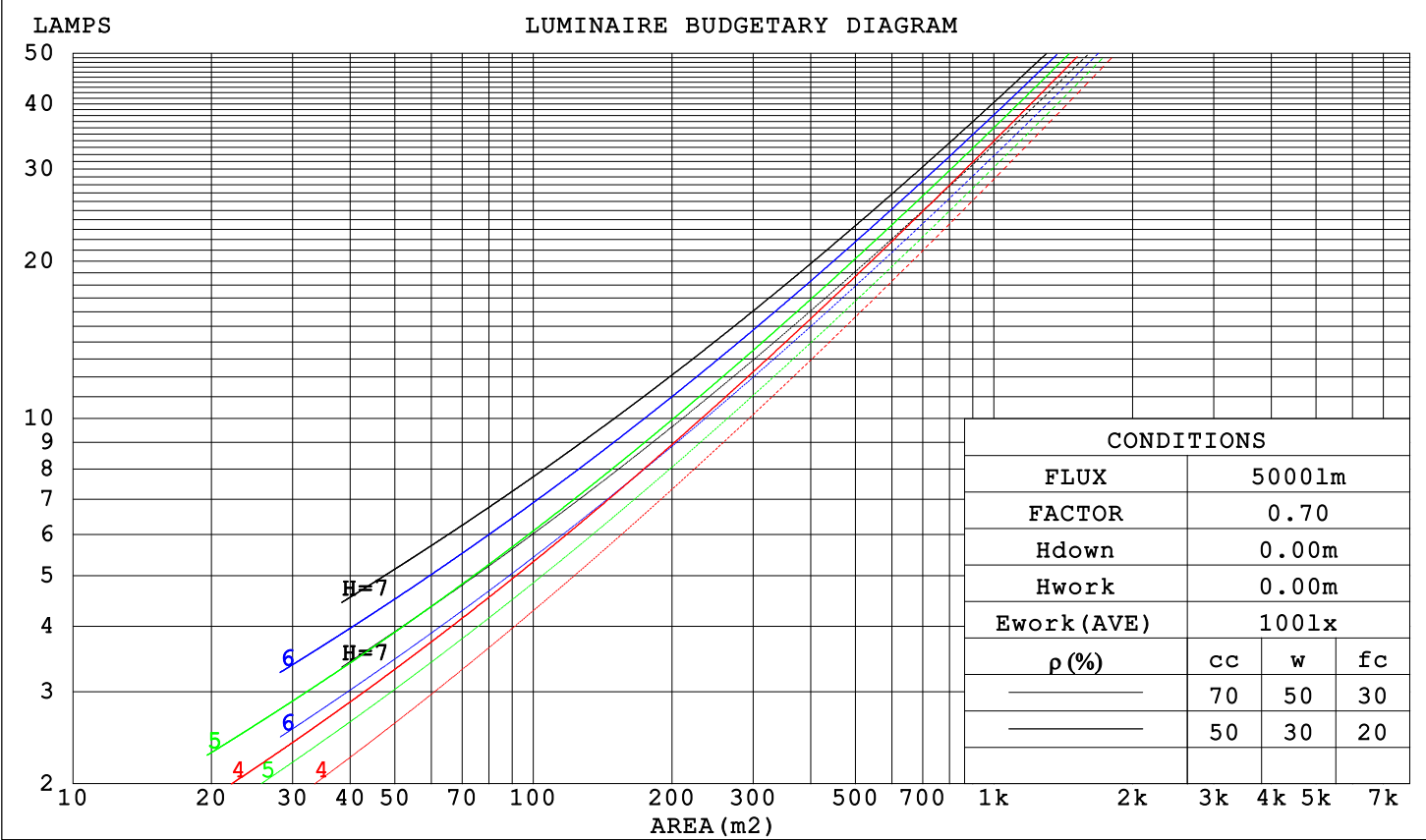
Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.450 m
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

| | | | | | | | | | | | | | | | |
|-----------------------------|--|--|--|--|--|--|--|------------------------------|--|--|--|-------------|--|--|--|
| MANUFACTURER: | | | | | | | | | | | | | | | |
| Address: | | | | | | | | | | | | | | | |
| NAME: 250mA 4000K with trim | | | | | | | | TYPE: | | | | WEIGHT: | | | |
| SPECIFICATION: | | | | | | | | DIMENSION: 0.265*0.135*0.118 | | | | SERIAL No.: | | | |

| | | | | | | | | | | | | | | | | |
|------|-----------------------|------|------|---------------------------------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|
| pcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
| pw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| pfc | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| RCR | RCR:Room Cavity Ratio | | | Coefficients of Utilization(CU) | | | | | | | | | | | | |
| 0.0 | 1.18 | 1.18 | 1.18 | 1.15 | 1.15 | 1.15 | 1.08 | 1.08 | 1.08 | 1.03 | 1.03 | 1.03 | .98 | .98 | .98 | .95 |
| 1.0 | 1.01 | .96 | .92 | .98 | .94 | .90 | .93 | .89 | .86 | .88 | .85 | .83 | .84 | .82 | .79 | .77 |
| 2.0 | .87 | .80 | .74 | .85 | .78 | .73 | .81 | .75 | .70 | .77 | .72 | .68 | .73 | .69 | .66 | .63 |
| 3.0 | .76 | .68 | .61 | .75 | .67 | .60 | .71 | .64 | .59 | .67 | .62 | .57 | .64 | .59 | .55 | .53 |
| 4.0 | .68 | .59 | .52 | .66 | .57 | .51 | .63 | .56 | .50 | .60 | .54 | .49 | .57 | .52 | .47 | .45 |
| 5.0 | .60 | .51 | .44 | .59 | .50 | .44 | .56 | .49 | .43 | .54 | .47 | .42 | .51 | .46 | .41 | .39 |
| 6.0 | .54 | .45 | .39 | .53 | .44 | .38 | .51 | .43 | .37 | .49 | .42 | .37 | .47 | .41 | .36 | .34 |
| 7.0 | .49 | .40 | .34 | .48 | .40 | .34 | .46 | .39 | .33 | .44 | .38 | .33 | .43 | .37 | .32 | .30 |
| 8.0 | .45 | .36 | .30 | .44 | .36 | .30 | .42 | .35 | .30 | .41 | .34 | .29 | .39 | .33 | .29 | .27 |
| 9.0 | .41 | .33 | .27 | .40 | .32 | .27 | .39 | .32 | .27 | .37 | .31 | .26 | .36 | .30 | .26 | .24 |
| 10.0 | .38 | .30 | .25 | .37 | .30 | .24 | .36 | .29 | .24 | .35 | .28 | .24 | .34 | .28 | .23 | .22 |



Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:W
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.450 m
Remarks:

WEC AND CCEC

Report number:

| | | | | | | | | | | | | | | | |
|-----------------------------|--|--|--|--|--|--|--|------------------------------|--|--|--|-------------|--|--|--|
| MANUFACTURER: | | | | | | | | | | | | | | | |
| Address: | | | | | | | | | | | | | | | |
| NAME: 250mA 4000K with trim | | | | | | | | TYPE: | | | | WEIGHT: | | | |
| SPECIFICATION: | | | | | | | | DIMENSION: 0.265*0.135*0.118 | | | | SERIAL No.: | | | |

| | | | | | | | | | | | | | | | | |
|-----------------|-----------------------|------|------|------|------|------|----------------------------------|------|------|------|------|------|------|------|------|---|
| pcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
| pw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| pf _c | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| RCR | RCR:Room Cavity Ratio | | | | | | Wall Exitance Coefficients (WEC) | | | | | | | | | |
| 0.0 | | | | | | | | | | | | | | | | |
| 1.0 | .344 | .196 | .062 | .335 | .191 | .061 | .319 | .183 | .058 | .305 | .176 | .056 | .291 | .169 | .054 | |
| 2.0 | .310 | .170 | .052 | .302 | .166 | .051 | .288 | .160 | .050 | .275 | .154 | .048 | .262 | .148 | .047 | |
| 3.0 | .281 | .150 | .045 | .274 | .147 | .044 | .261 | .142 | .043 | .250 | .137 | .042 | .239 | .132 | .041 | |
| 4.0 | .256 | .133 | .039 | .250 | .131 | .039 | .239 | .127 | .038 | .228 | .123 | .037 | .218 | .119 | .036 | |
| 5.0 | .235 | .120 | .035 | .230 | .118 | .034 | .220 | .114 | .034 | .210 | .111 | .033 | .201 | .107 | .032 | |
| 6.0 | .217 | .109 | .031 | .212 | .107 | .031 | .203 | .104 | .030 | .194 | .101 | .030 | .186 | .098 | .029 | |
| 7.0 | .201 | .099 | .028 | .197 | .098 | .028 | .189 | .095 | .027 | .181 | .093 | .027 | .173 | .090 | .026 | |
| 8.0 | .187 | .092 | .026 | .183 | .090 | .026 | .176 | .088 | .025 | .169 | .086 | .025 | .162 | .083 | .024 | |
| 9.0 | .175 | .085 | .024 | .172 | .084 | .023 | .165 | .081 | .023 | .158 | .079 | .023 | .152 | .077 | .022 | |
| 10.0 | .164 | .079 | .022 | .161 | .078 | .022 | .155 | .076 | .021 | .149 | .074 | .021 | .144 | .072 | .021 | |

| | | | | | | | | | | | | | | | | |
|-----------------|-----------------------|------|------|------|------|------|---|------|------|------|------|------|------|------|------|---|
| pcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
| pw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| pf _c | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| RCR | RCR:Room Cavity Ratio | | | | | | Ceiling Cavity Exitance Coefficients (CCEC) | | | | | | | | | |
| 0.0 | .226 | .226 | .226 | .193 | .193 | .193 | .132 | .132 | .132 | .076 | .076 | .076 | .024 | .024 | .024 | |
| 1.0 | .219 | .192 | .168 | .187 | .165 | .144 | .128 | .113 | .100 | .074 | .066 | .058 | .024 | .021 | .019 | |
| 2.0 | .211 | .168 | .132 | .181 | .145 | .114 | .124 | .100 | .080 | .071 | .058 | .047 | .023 | .019 | .015 | |
| 3.0 | .203 | .151 | .109 | .174 | .130 | .095 | .120 | .090 | .066 | .069 | .053 | .039 | .022 | .017 | .013 | |
| 4.0 | .195 | .138 | .094 | .168 | .119 | .082 | .115 | .083 | .057 | .067 | .049 | .034 | .021 | .016 | .011 | |
| 5.0 | .188 | .128 | .083 | .161 | .110 | .072 | .111 | .077 | .051 | .064 | .045 | .030 | .021 | .015 | .010 | |
| 6.0 | .180 | .119 | .076 | .155 | .103 | .066 | .107 | .072 | .047 | .062 | .043 | .028 | .020 | .014 | .009 | |
| 7.0 | .173 | .113 | .070 | .149 | .098 | .061 | .103 | .068 | .043 | .060 | .040 | .026 | .019 | .013 | .008 | |
| 8.0 | .167 | .107 | .066 | .144 | .093 | .057 | .099 | .065 | .041 | .058 | .038 | .024 | .019 | .013 | .008 | |
| 9.0 | .161 | .102 | .062 | .138 | .088 | .054 | .096 | .062 | .039 | .056 | .037 | .023 | .018 | .012 | .008 | |
| 10.0 | .155 | .098 | .060 | .133 | .085 | .052 | .093 | .060 | .037 | .054 | .035 | .022 | .018 | .012 | .007 | |

Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:W
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.450 m
Remarks:

Uncorrected UGR Table

Report number:

| | | | | | | | | | | | |
|--|---------------|------------------|------|------|------------------------------|---------------|----------------|-------------|------|------|------|
| MANUFACTURER: | | | | | | | | | | | |
| Address: | | | | | | | | | | | |
| NAME: 250mA 4000K with trim | | | | | TYPE: | | | WEIGHT: | | | |
| SPECIFICATION: | | | | | DIMENSION: 0.265*0.135*0.118 | | | SERIAL No.: | | | |
| ceiling/cavity | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | |
| walls | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | |
| working plane | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| x = 2H y = 2H | 18.6 | 20.1 | 19.0 | 20.4 | 20.7 | 19.0 | 20.5 | 19.3 | 20.8 | 21.1 | |
| | 20.2 | 21.6 | 20.6 | 21.9 | 22.3 | 20.9 | 22.3 | 21.3 | 22.6 | 23.0 | |
| | 20.9 | 22.2 | 21.3 | 22.5 | 22.9 | 21.9 | 23.3 | 22.3 | 23.6 | 24.0 | |
| | 21.4 | 22.6 | 21.8 | 23.0 | 23.4 | 23.0 | 24.2 | 23.4 | 24.6 | 25.0 | |
| | 21.6 | 22.8 | 22.0 | 23.1 | 23.5 | 23.6 | 24.8 | 24.0 | 25.1 | 25.5 | |
| | 21.7 | 22.9 | 22.1 | 23.2 | 23.6 | 24.2 | 25.4 | 24.6 | 25.7 | 26.2 | |
| 4H | 2H | 19.3 | 20.6 | 19.7 | 21.0 | 21.3 | 19.6 | 20.9 | 20.0 | 21.3 | 21.6 |
| | 3H | 21.1 | 22.2 | 21.5 | 22.6 | 23.0 | 21.8 | 23.0 | 22.2 | 23.4 | 23.8 |
| | 4H | 21.9 | 22.9 | 22.3 | 23.3 | 23.8 | 23.0 | 24.1 | 23.5 | 24.5 | 24.9 |
| | 6H | 22.6 | 23.5 | 23.0 | 23.9 | 24.4 | 24.3 | 25.2 | 24.7 | 25.6 | 26.1 |
| | 8H | 22.8 | 23.7 | 23.3 | 24.1 | 24.6 | 24.9 | 25.8 | 25.4 | 26.3 | 26.8 |
| | 12H | 23.0 | 23.8 | 23.5 | 24.3 | 24.8 | 25.7 | 26.5 | 26.2 | 27.0 | 27.5 |
| 8H | 4H | 22.4 | 23.3 | 22.9 | 23.7 | 24.2 | 23.3 | 24.2 | 23.8 | 24.7 | 25.2 |
| | 6H | 23.3 | 24.0 | 23.8 | 24.5 | 25.0 | 24.9 | 25.6 | 25.4 | 26.1 | 26.7 |
| | 8H | 23.7 | 24.3 | 24.2 | 24.8 | 25.4 | 25.8 | 26.4 | 26.3 | 26.9 | 27.5 |
| | 12H | 24.0 | 24.6 | 24.5 | 25.1 | 25.7 | 26.8 | 27.3 | 27.3 | 27.9 | 28.4 |
| 12H | 4H | 22.5 | 23.3 | 23.0 | 23.8 | 24.3 | 23.4 | 24.2 | 23.9 | 24.7 | 25.2 |
| | 6H | 23.5 | 24.2 | 24.0 | 24.7 | 25.2 | 25.0 | 25.7 | 25.5 | 26.2 | 26.7 |
| | 8H | 24.0 | 24.6 | 24.5 | 25.1 | 25.7 | 26.0 | 26.6 | 26.5 | 27.1 | 27.7 |
| Variations with the observer position at spacings: | | | | | | | | | | | |
| S = 1.0H | + 0.1 / - 0.2 | | | | | + 0.1 / - 0.1 | | | | | |
| 1.5H | + 0.2 / - 0.3 | | | | | + 0.2 / - 0.3 | | | | | |
| 2.0H | + 0.1 / - 0.3 | | | | | + 0.2 / - 0.4 | | | | | |

CIE Pub.117 Corrected 624.7 lm Total Lamp Luminous Flux.(8log(F/F0) = -1.6)

Test System:HopooColor HPG1800
 Temperature:25.3DEG
 Operators:W
 Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:8.450 m
 Remarks:

UTILIZATION FACTORS TABLE

Report number:

| | | |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER: | | |
| Address: | | |
| NAME: 250mA 4000K with trim | TYPE: | WEIGHT: |
| SPECIFICATION: | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |

| REFLECTANCE | | | | | | | | | | |
|----------------------------------|--|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| Ceiling | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0 |
| Walls | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0 |
| Working plane | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0 |
| ROOM INDEX | UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$ | | | | | | | | | |
| $k = 0.60$ | 55 | 43 | 36 | 54 | 43 | 36 | 53 | 42 | 36 | 29 |
| 0.80 | 64 | 52 | 45 | 63 | 52 | 45 | 61 | 51 | 44 | 37 |
| 1.00 | 73 | 61 | 53 | 71 | 60 | 53 | 69 | 61 | 52 | 45 |
| 1.25 | 80 | 68 | 61 | 78 | 67 | 60 | 75 | 66 | 59 | 51 |
| 1.50 | 84 | 74 | 66 | 83 | 73 | 66 | 79 | 71 | 64 | 56 |
| 2.00 | 91 | 82 | 75 | 89 | 80 | 74 | 85 | 78 | 72 | 63 |
| 2.50 | 95 | 87 | 80 | 93 | 85 | 79 | 89 | 82 | 77 | 67 |
| 3.00 | 99 | 91 | 85 | 96 | 89 | 84 | 92 | 86 | 81 | 71 |
| 4.00 | 103 | 96 | 91 | 100 | 94 | 89 | 95 | 90 | 86 | 76 |
| 5.00 | 106 | 100 | 95 | 103 | 98 | 93 | 98 | 93 | 90 | 79 |
| ROOM INDEX | UF(total) | | | | | | | | | Direct |
| According to DIN EN 13032-2 2004 | | | Suspended | | | | | SHRNOM = 1.25 | | |

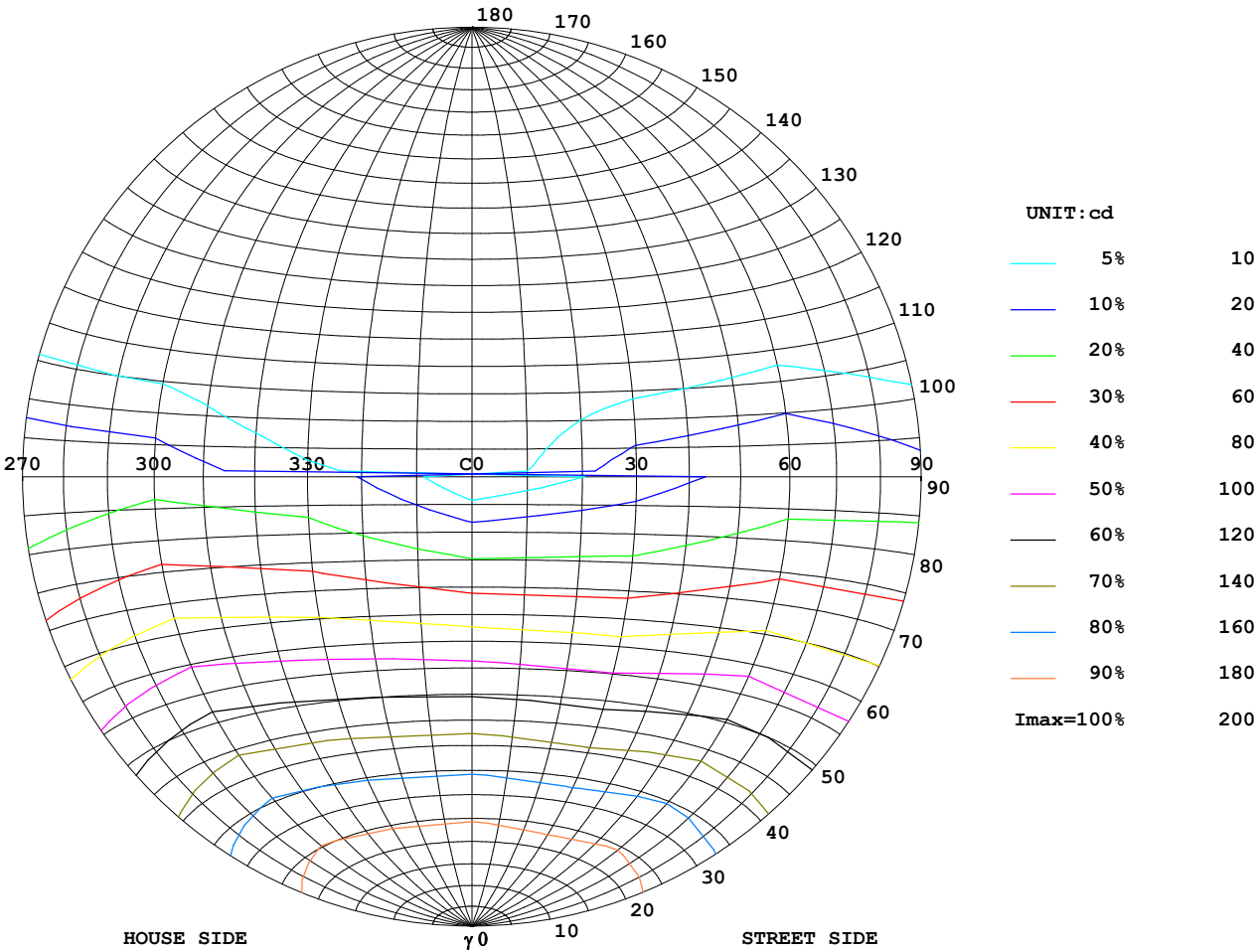
Test System: HopooColor HPG1800
 Temperature: 25.3DEG
 Operators: W
 Test Date: 2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 8.450 m
 Remarks:

ISOCANDELA DIAGRAM

Report number:

| | | |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER: | | |
| Address: | | |
| NAME: 250mA 4000K with trim | TYPE: | WEIGHT: |
| SPECIFICATION: | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |



Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:W
Test Date:2023年06月16日

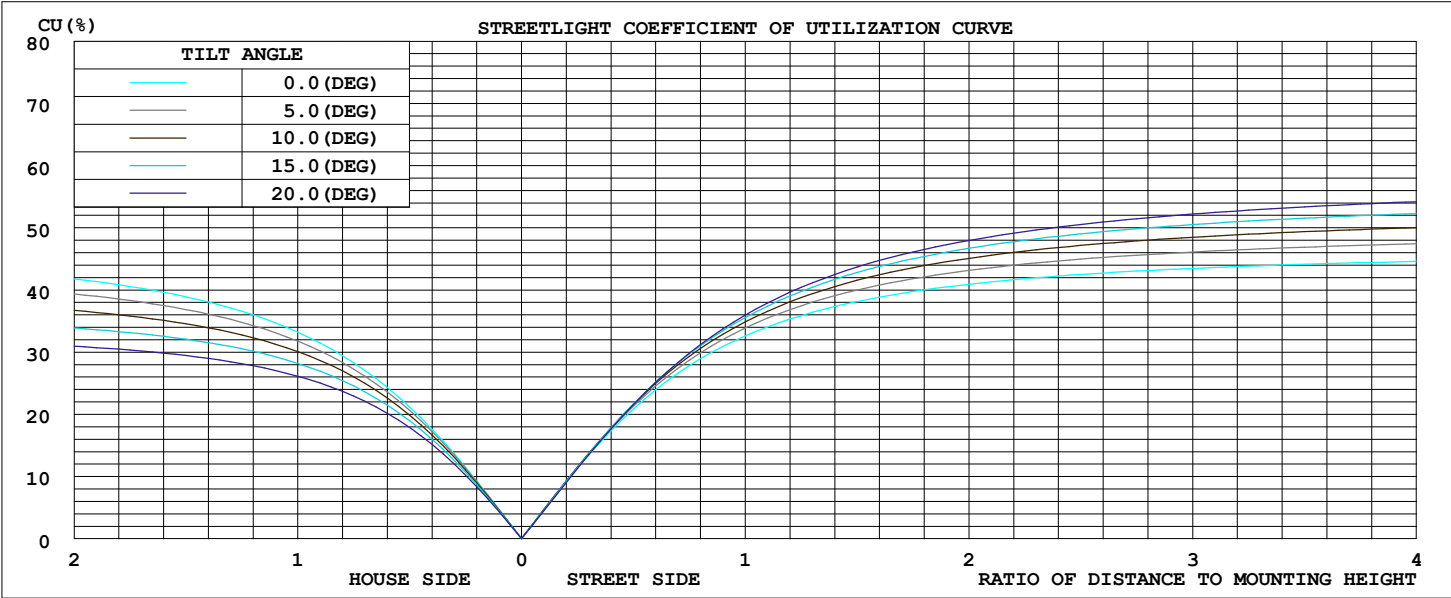
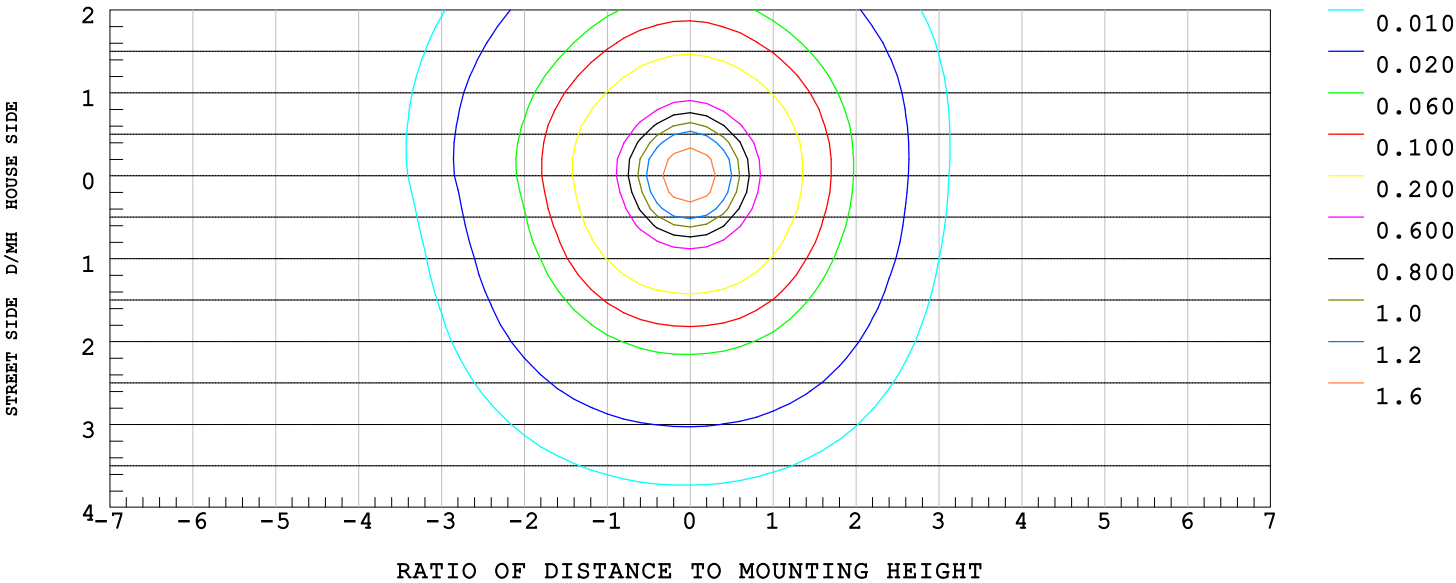
Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.450 m
Remarks:

ISOLUX DIAGRAM

Report number:

| | | |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER: | | |
| Address: | | |
| NAME: 250mA 4000K with trim | TYPE: | WEIGHT: |
| SPECIFICATION: | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |

ILLUMINANCE AT MH=10 m,Enadir = 1.99 lx



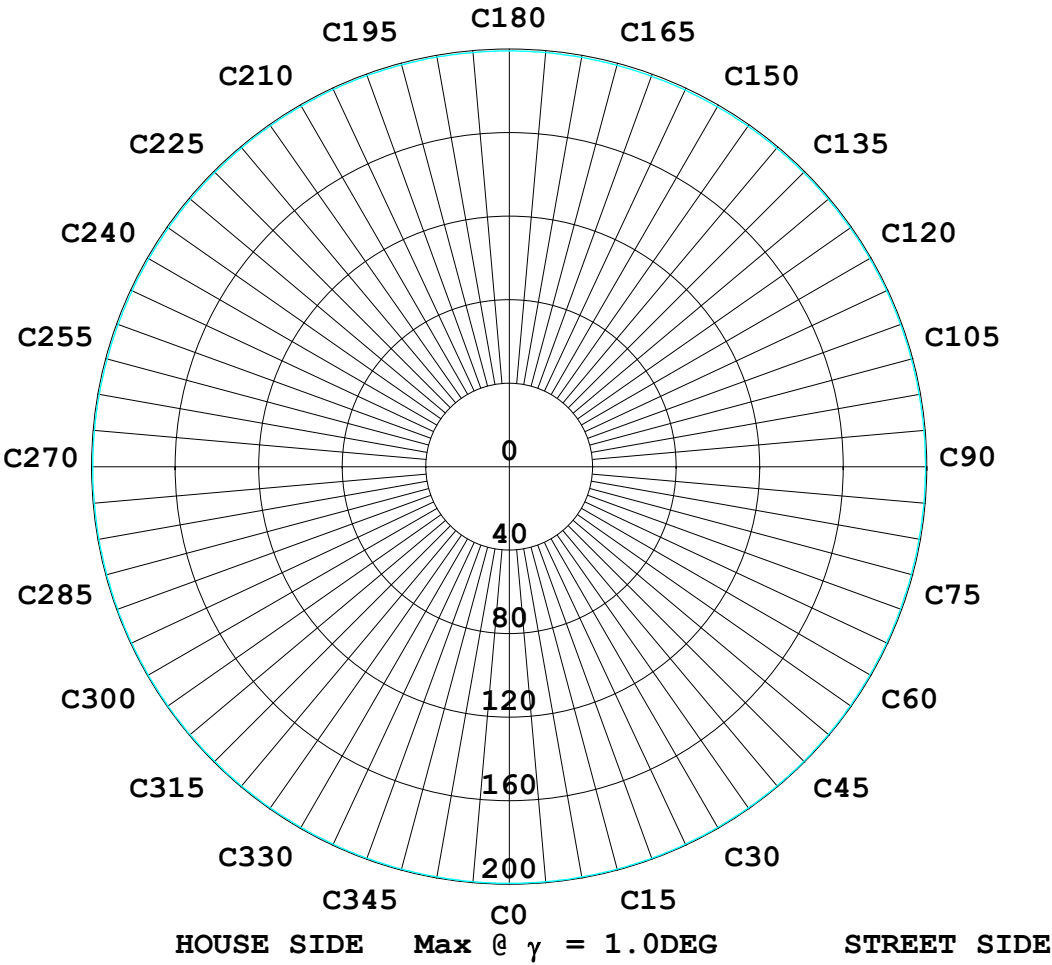
Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:W
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.450 m
Remarks:

ISOCANDELA DIAGRAM

Report number:

| | | |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER: | | |
| Address: | | |
| NAME: 250mA 4000K with trim | TYPE: | WEIGHT: |
| SPECIFICATION: | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |



Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:W
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.450 m
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Report number:

| | | |
|-----------------------------|------------------------------|-------------|
| MANUFACTURER: | | |
| Address: | | |
| NAME: 250mA 4000K with trim | TYPE: | WEIGHT: |
| SPECIFICATION: | DIMENSION: 0.265*0.135*0.118 | SERIAL No.: |

UNIT: cd

| C (DEG) γ (DEG) | 0 | 30 | 60 | 90 | 120 | 150 | 180 | 210 | 240 | 270 | 300 | 330 |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0.0 | 199 | 199 | 199 | 199 | 200 | 199 | 199 | 199 | 199 | 199 | 200 | 199 |
| 5.0 | 199 | 199 | 199 | 198 | 198 | 197 | 197 | 198 | 198 | 199 | 199 | 199 |
| 10.0 | 197 | 196 | 196 | 195 | 195 | 193 | 193 | 195 | 195 | 197 | 197 | 197 |
| 15.0 | 193 | 191 | 192 | 190 | 190 | 187 | 187 | 190 | 190 | 193 | 192 | 194 |
| 20.0 | 186 | 184 | 186 | 183 | 184 | 180 | 179 | 183 | 183 | 187 | 186 | 188 |
| 25.0 | 179 | 176 | 179 | 175 | 175 | 170 | 170 | 174 | 175 | 180 | 179 | 180 |
| 30.0 | 169 | 166 | 169 | 166 | 166 | 159 | 159 | 164 | 165 | 171 | 169 | 171 |
| 35.0 | 158 | 155 | 159 | 155 | 155 | 148 | 147 | 153 | 154 | 161 | 158 | 160 |
| 40.0 | 146 | 142 | 147 | 143 | 143 | 135 | 134 | 140 | 142 | 150 | 147 | 148 |
| 45.0 | 132 | 129 | 134 | 131 | 130 | 121 | 120 | 127 | 129 | 137 | 134 | 135 |
| 50.0 | 118 | 115 | 121 | 118 | 116 | 106 | 105 | 112 | 115 | 125 | 120 | 121 |
| 55.0 | 104 | 100 | 108 | 105 | 103 | 91.4 | 89.8 | 97.6 | 102 | 112 | 107 | 107 |
| 60.0 | 88.2 | 85.1 | 94.3 | 92.1 | 89.8 | 76.4 | 73.9 | 82.3 | 88.0 | 98.7 | 93.4 | 91.8 |
| 65.0 | 72.4 | 70.4 | 81.3 | 80.1 | 76.9 | 61.9 | 58.0 | 67.2 | 75.2 | 86.0 | 80.5 | 76.6 |
| 70.0 | 56.4 | 56.0 | 69.0 | 68.4 | 64.9 | 48.1 | 41.9 | 53.1 | 63.0 | 74.2 | 67.9 | 62.3 |
| 75.0 | 40.2 | 42.6 | 57.3 | 57.4 | 53.6 | 35.7 | 26.4 | 39.9 | 51.6 | 62.7 | 56.2 | 48.4 |
| 80.0 | 24.8 | 31.0 | 46.5 | 47.4 | 43.2 | 25.2 | 12.9 | 28.4 | 41.4 | 52.1 | 45.6 | 35.9 |
| 85.0 | 11.7 | 21.1 | 36.9 | 38.2 | 34.2 | 16.6 | 3.14 | 19.2 | 32.3 | 42.6 | 35.9 | 25.5 |
| 90.0 | 2.78 | 13.3 | 28.4 | 30.1 | 26.1 | 10.2 | 0.86 | 12.0 | 24.4 | 33.8 | 27.5 | 16.9 |
| 95.0 | 1.28 | 7.92 | 21.2 | 23.2 | 19.3 | 5.78 | 0.86 | 6.99 | 17.9 | 26.2 | 20.5 | 10.4 |
| 100.0 | 1.14 | 3.64 | 15.2 | 17.0 | 13.7 | 2.49 | 1.00 | 3.28 | 12.1 | 19.8 | 14.4 | 5.64 |
| 105.0 | 1.14 | 1.71 | 9.42 | 10.9 | 7.85 | 1.49 | 1.07 | 1.85 | 6.21 | 13.4 | 8.13 | 2.64 |
| 110.0 | 1.21 | 1.28 | 4.21 | 4.64 | 3.78 | 1.28 | 1.28 | 1.49 | 3.14 | 6.85 | 3.71 | 1.71 |
| 115.0 | 1.28 | 1.28 | 2.64 | 2.92 | 2.49 | 1.42 | 1.35 | 1.49 | 2.14 | 3.64 | 2.42 | 1.49 |
| 120.0 | 1.42 | 1.42 | 1.99 | 2.14 | 1.99 | 1.49 | 1.49 | 1.57 | 1.78 | 2.64 | 1.92 | 1.57 |
| 125.0 | 1.57 | 1.57 | 1.78 | 1.85 | 1.85 | 1.64 | 1.64 | 1.71 | 1.71 | 2.14 | 1.71 | 1.64 |
| 130.0 | 1.64 | 1.64 | 1.85 | 1.85 | 1.85 | 1.78 | 1.78 | 1.78 | 1.85 | 1.92 | 1.78 | 1.78 |
| 135.0 | 1.71 | 1.78 | 1.92 | 1.92 | 1.92 | 1.85 | 1.92 | 1.92 | 1.92 | 1.99 | 1.92 | 1.85 |
| 140.0 | 1.85 | 1.92 | 1.99 | 1.99 | 2.07 | 1.99 | 1.99 | 1.99 | 2.07 | 2.07 | 1.99 | 1.99 |
| 145.0 | 1.92 | 1.99 | 2.07 | 2.14 | 2.14 | 2.07 | 2.14 | 2.14 | 2.14 | 2.14 | 2.14 | 2.07 |
| 150.0 | 2.07 | 2.14 | 2.14 | 2.21 | 2.21 | 2.14 | 2.21 | 2.21 | 2.21 | 2.21 | 2.21 | 2.14 |
| 155.0 | 2.14 | 2.21 | 2.21 | 2.21 | 2.21 | 2.21 | 2.28 | 2.28 | 2.28 | 2.28 | 2.28 | 2.21 |
| 160.0 | 2.21 | 2.28 | 2.28 | 2.28 | 2.28 | 2.28 | 2.35 | 2.42 | 2.35 | 2.35 | 2.35 | 2.35 |
| 165.0 | 2.28 | 2.35 | 2.35 | 2.35 | 2.35 | 2.35 | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 |
| 170.0 | 2.35 | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 | 2.49 | 2.42 | 2.49 | 2.49 | 2.49 | 2.42 |
| 175.0 | 2.42 | 2.42 | 2.42 | 2.49 | 2.42 | 2.42 | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| 180.0 | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |

Test System:HopooColor HPG1800
Temperature:25.3DEG
Operators:W
Test Date:2023年06月16日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.450 m
Remarks: