

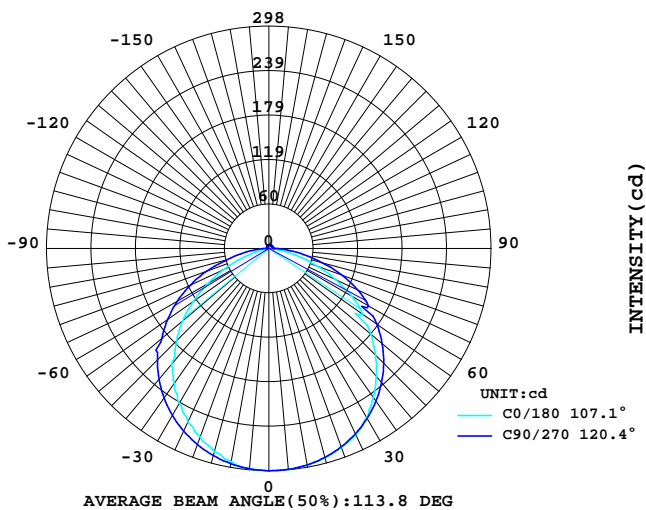
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

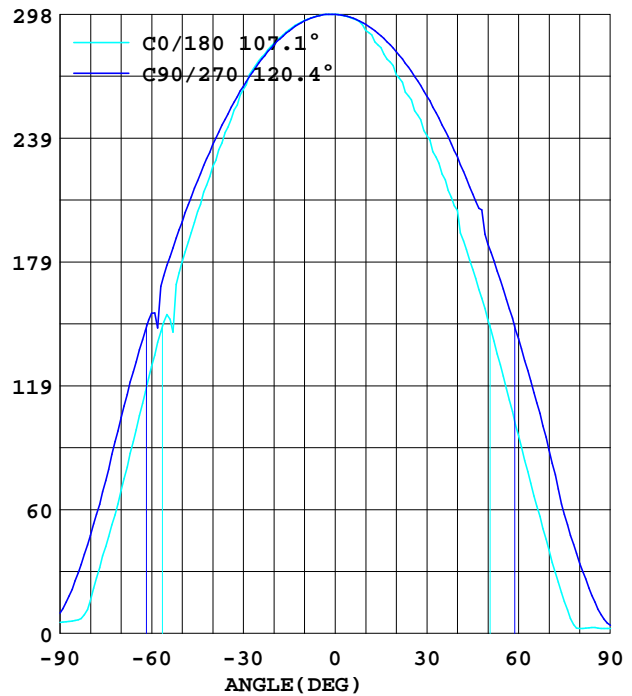
| | | | |
|----------------------------------|-----------|----------------------|------------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | TYPE: IP20 | WEIGHT: |
| SPECIFICATION: 1M | CCT(K): 0 | DIMENSION: 1000*10MM | SERIAL No.: 190820-004 |

| | | | | | |
|------------------|-------|--------------------|--------|------------------|-------|
| DATA OF LAMP | | Imax(cd) | 298.2 | S/MH(C0/180) | 1.30 |
| MODEL | 2835 | EFFICIENCY(%) | 100.0 | S/MH(C90/270) | 1.31 |
| NOMINAL POWER(W) | 10.23 | TOTAL FLUX(lm) | 915.13 | Voltage(V) | 24.00 |
| RATED VOLTAGE(V) | 24 | EFFICIENCY(lm/W) | 89.5 | Current(A) | 0.426 |
| NOMINAL FLUX(lm) | 915.1 | h up(%) | 3.0 | Power(W) | 10.23 |
| LAMPS QUANTITY | 1 | h down(%) | 97.0 | Power Factor(PF) | 1.000 |
| TEST VOLTAGE(V) | 24.0 | Effective Flux(lm) | 874.3 | EEL | 0.149 |

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月20日

Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.800 m
Remarks:

Color Temperature Data List

Report number:

| | | | |
|----------------------------------|-----------|----------------------|------------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | TYPE: IP20 | WEIGHT: |
| SPECIFICATION: 1M | CCT(K): 0 | DIMENSION: 1000*10MM | SERIAL No.: 190820-004 |

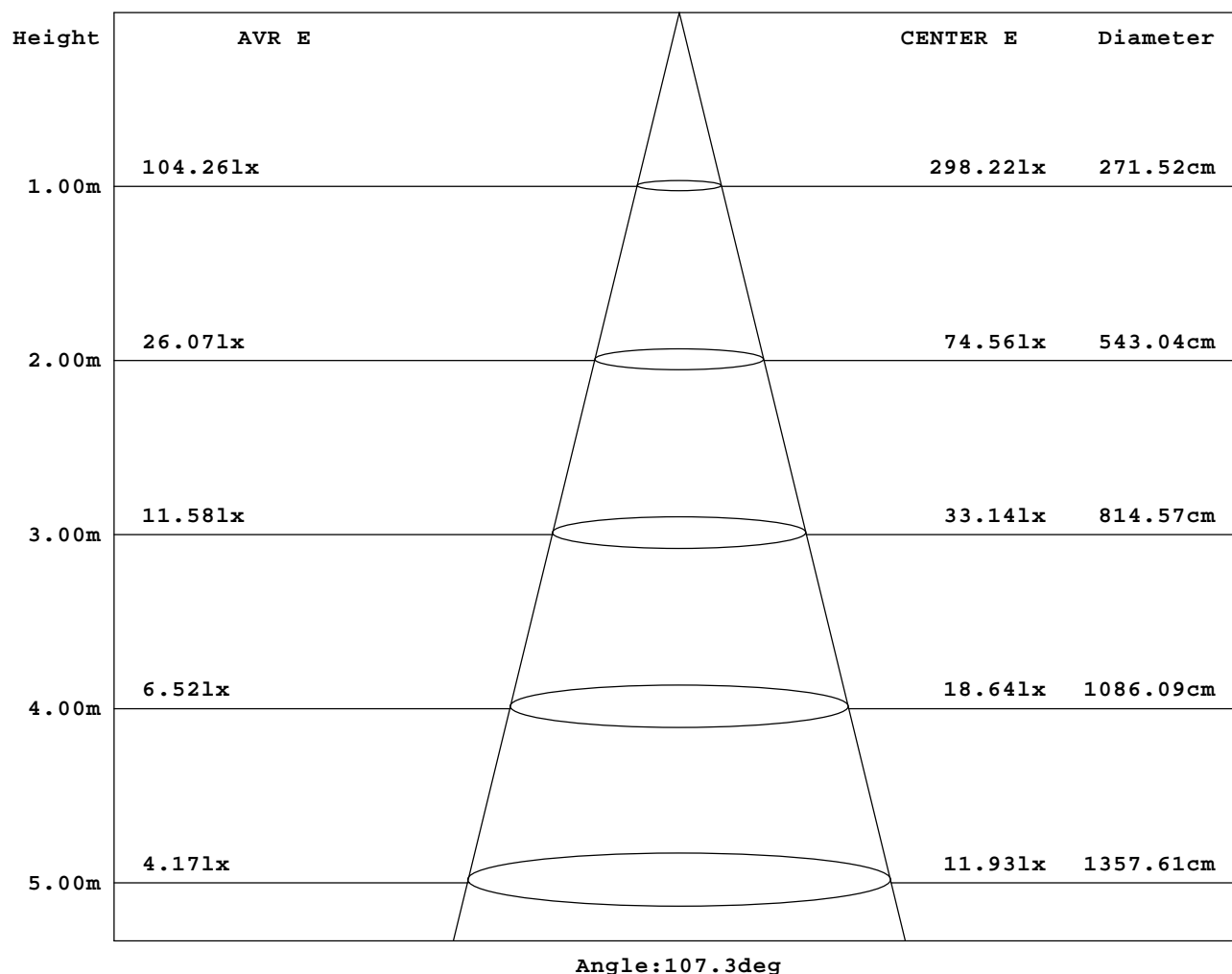
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月20日

Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.800 m
Remarks:

AVERAGE AND CENTER E Figure

Report number:

| | | | |
|----------------------------------|-----------|----------------------|------------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | TYPE: IP20 | WEIGHT: |
| SPECIFICATION: 1M | CCT(K): 0 | DIMENSION: 1000*10MM | SERIAL No.: 190820-004 |



Test System: HOPOO HPG1800
Temperature: 25.3DEG
Operators:
Test Date: 2019年08月20日

Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 8.800 m
Remarks:

GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

Report number:

| | | | |
|----------------------------------|-----------|----------------------|------------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | TYPE: IP20 | WEIGHT: |
| SPECIFICATION: 1M | CCT(K): 0 | DIMENSION: 1000*10MM | SERIAL No.: 190820-004 |

| g | C0 | C45 | C90 | C135 | C180 | C225 | C270 | C315 | g | Zone | tBtal |
|-------|-----------------------|-------|-------|-------|-------|-------|-------|-------|---------|---------|-------|
| 5.0 | 297.6 | 296.8 | 297.6 | 296.6 | 296.6 | 297.6 | 296.7 | 297.3 | 0- 5 | 7.117 | 7.117 |
| 10.0 | 295.2 | 293.5 | 295.0 | 293.4 | 290.4 | 295.1 | 293.3 | 294.6 | 5- 10 | 21.14 | 28.26 |
| 15.0 | 290.7 | 288.0 | 290.1 | 285.6 | 282.1 | 287.7 | 287.7 | 290.0 | 10- 15 | 34.51 | 62.78 |
| 20.0 | 284.1 | 280.4 | 283.3 | 280.4 | 269.0 | 281.4 | 280.1 | 283.1 | 15- 20 | 46.81 | 109.5 |
| 25.0 | 275.7 | 271.0 | 274.7 | 271.0 | 256.9 | 274.9 | 270.7 | 274.5 | 20- 25 | 57.85 | 167.4 |
| 30.0 | 262.1 | 259.2 | 263.5 | 259.1 | 239.8 | 263.9 | 258.8 | 263.6 | 25- 30 | 67.05 | 234.5 |
| 35.0 | 243.9 | 245.4 | 250.2 | 245.1 | 221.1 | 250.5 | 244.8 | 250.5 | 30- 35 | 74.09 | 308.6 |
| 40.0 | 224.7 | 230.1 | 235.4 | 229.6 | 203.7 | 235.7 | 229.5 | 236.0 | 35- 40 | 78.75 | 387.3 |
| 45.0 | 203.2 | 212.3 | 217.9 | 211.4 | 175.3 | 218.2 | 211.5 | 218.8 | 40- 45 | 80.72 | 468.0 |
| 50.0 | 179.1 | 189.1 | 198.2 | 188.0 | 150.9 | 198.5 | 187.5 | 199.5 | 45- 50 | 80.09 | 548.1 |
| 55.0 | 153.5 | 166.8 | 177.3 | 165.1 | 124.0 | 177.5 | 165.9 | 179.1 | 50- 55 | 75.81 | 623.9 |
| 60.0 | 128.6 | 142.7 | 154.1 | 140.5 | 95.09 | 153.9 | 141.7 | 154.5 | 55- 60 | 68.85 | 692.8 |
| 65.0 | 98.11 | 117.9 | 130.7 | 115.3 | 66.13 | 130.8 | 115.9 | 133.5 | 60- 65 | 61.62 | 754.4 |
| 70.0 | 68.92 | 91.14 | 103.9 | 88.04 | 40.34 | 104.8 | 88.35 | 108.2 | 65- 70 | 50.75 | 805.2 |
| 75.0 | 41.89 | 63.65 | 73.64 | 60.63 | 15.33 | 77.05 | 57.22 | 80.84 | 70- 75 | 37.91 | 843.1 |
| 80.0 | 15.87 | 35.77 | 47.16 | 34.84 | 2.400 | 49.94 | 33.60 | 53.66 | 75- 80 | 24.65 | 867.7 |
| 85.0 | 6.272 | 17.73 | 25.40 | 15.17 | 2.865 | 27.25 | 15.10 | 30.12 | 80- 85 | 13.75 | 881.5 |
| 90.0 | 5.343 | 5.343 | 9.834 | 3.794 | 2.400 | 11.46 | 3.949 | 12.85 | 85- 90 | 6.272 | 887.8 |
| 95.0 | 4.956 | 2.323 | 5.808 | 2.090 | 2.632 | 6.117 | 2.400 | 6.504 | 90- 95 | 2.720 | 890.5 |
| 100.0 | 4.723 | 2.478 | 5.265 | 2.245 | 2.787 | 5.730 | 2.555 | 5.730 | 95-100 | 2.173 | 892.7 |
| 105.0 | 4.568 | 2.787 | 5.033 | 2.478 | 3.020 | 5.730 | 2.710 | 5.498 | 100-105 | 2.112 | 894.8 |
| 110.0 | 4.568 | 2.632 | 4.878 | 2.710 | 3.175 | 5.420 | 2.942 | 5.265 | 105-110 | 2.070 | 896.8 |
| 115.0 | 4.568 | 2.865 | 4.801 | 3.252 | 3.407 | 5.188 | 3.097 | 5.188 | 110-115 | 2.015 | 898.9 |
| 120.0 | 4.568 | 3.020 | 4.801 | 3.252 | 3.562 | 5.111 | 3.329 | 5.111 | 115-120 | 1.979 | 900.8 |
| 125.0 | 4.646 | 3.252 | 4.801 | 3.252 | 3.794 | 5.111 | 3.484 | 5.111 | 120-125 | 1.907 | 902.7 |
| 130.0 | 4.646 | 3.484 | 4.801 | 3.407 | 3.949 | 5.111 | 3.639 | 5.111 | 125-130 | 1.839 | 904.6 |
| 135.0 | 4.723 | 3.639 | 4.878 | 3.639 | 4.181 | 5.188 | 3.872 | 5.188 | 130-135 | 1.758 | 906.3 |
| 140.0 | 4.878 | 3.872 | 4.956 | 3.872 | 4.336 | 5.265 | 4.026 | 5.265 | 135-140 | 1.659 | 908.0 |
| 145.0 | 4.956 | 4.026 | 5.033 | 4.026 | 4.491 | 5.343 | 4.181 | 5.265 | 140-145 | 1.537 | 909.5 |
| 150.0 | 5.033 | 4.181 | 5.111 | 4.181 | 4.646 | 5.343 | 4.336 | 5.343 | 145-150 | 1.390 | 910.9 |
| 155.0 | 5.111 | 4.336 | 5.188 | 4.259 | 4.801 | 5.343 | 4.414 | 5.420 | 150-155 | 1.218 | 912.1 |
| 160.0 | 5.188 | 4.414 | 5.265 | 4.414 | 4.956 | 5.420 | 4.568 | 5.420 | 155-160 | 1.029 | 913.2 |
| 165.0 | 5.265 | 4.568 | 5.343 | 4.491 | 5.033 | 5.420 | 4.646 | 5.420 | 160-165 | 0.821 | 914.0 |
| 170.0 | 5.343 | 4.646 | 5.343 | 4.568 | 5.111 | 5.420 | 4.723 | 5.420 | 165-170 | 0.598 | 914.6 |
| 175.0 | 5.343 | 4.646 | 5.343 | 4.646 | 5.188 | 5.420 | 4.723 | 5.420 | 170-175 | 0.364 | 915.0 |
| 180.0 | 5.343 | 4.801 | 5.265 | 4.801 | 5.420 | 5.265 | 4.801 | 5.265 | 175-180 | 0.122 | 915.1 |
| DEG | LUMINOUS INTENSITY:cd | | | | | | | | | UNIT:lm | |

Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月20日

Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.800 m
Remarks:

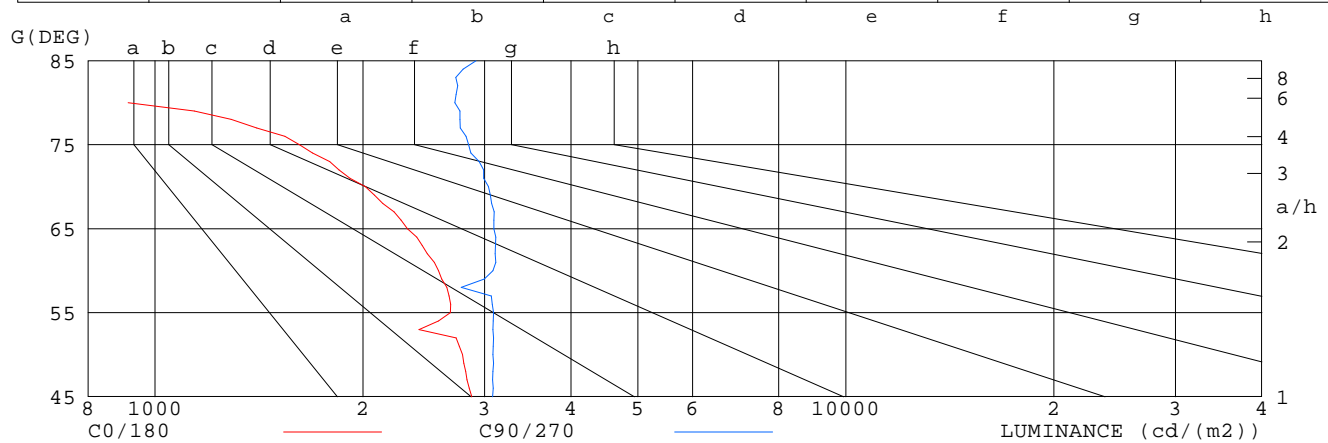
LUMINANCE LIMITATION CURVES

Report number:

| | | | |
|----------------------------------|-----------|----------------------|------------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | TYPE: IP20 | WEIGHT: |
| SPECIFICATION: 1M | CCT(K): 0 | DIMENSION: 1000*10MM | SERIAL No.: 190820-004 |

LUMINANCE LIMITATION CURVES

| GLARE | CLASS | ILLUMINANCE (lx) | | | | | | | |
|-------|-------|------------------|------|------|-------|-------|-------|-------|-------|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.50 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 | 500 | <=300 | | |
| 2.20 | D | | | | 2000 | 1000 | 500 | <=300 | |
| 2.55 | E | | | | | 2000 | 1000 | 500 | <=300 |



| LUMINANCE cd/m2 | | |
|-----------------|--------|---------|
| G (DEG) | C0/180 | C90/270 |
| 85 | 720 | 2914 |
| 80 | 914 | 2716 |
| 75 | 1619 | 2845 |
| 70 | 2015 | 3039 |
| 65 | 2322 | 3095 |
| 60 | 2573 | 3084 |
| 55 | 2677 | 3092 |
| 50 | 2788 | 3084 |
| 45 | 2875 | 3083 |

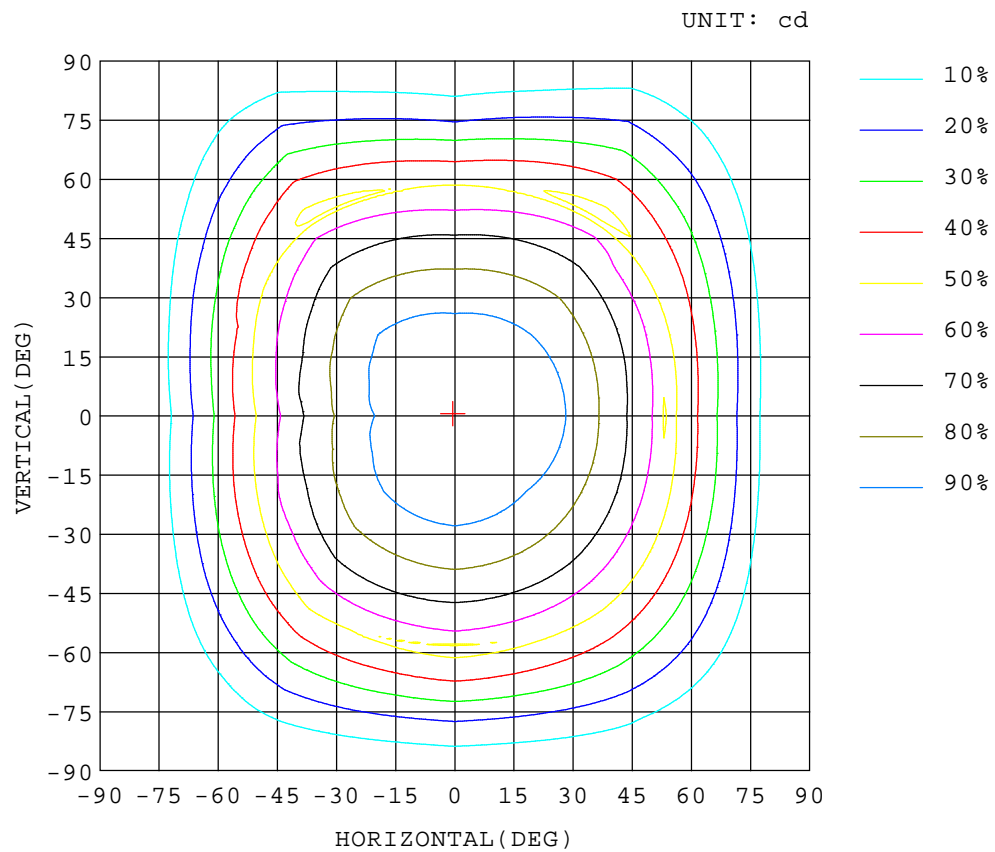
Test System: HOPOO HPG1800
 Temperature: 25.3 DEG
 Operators:
 Test Date: 2019年08月20日

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 8.800 m
 Remarks:

ISOCANDELA DIAGRAM

Report number:

| | | | |
|----------------------------------|-----------|----------------------|------------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | TYPE: IP20 | WEIGHT: |
| SPECIFICATION: 1M | CCT(K): 0 | DIMENSION: 1000*10MM | SERIAL No.: 190820-004 |



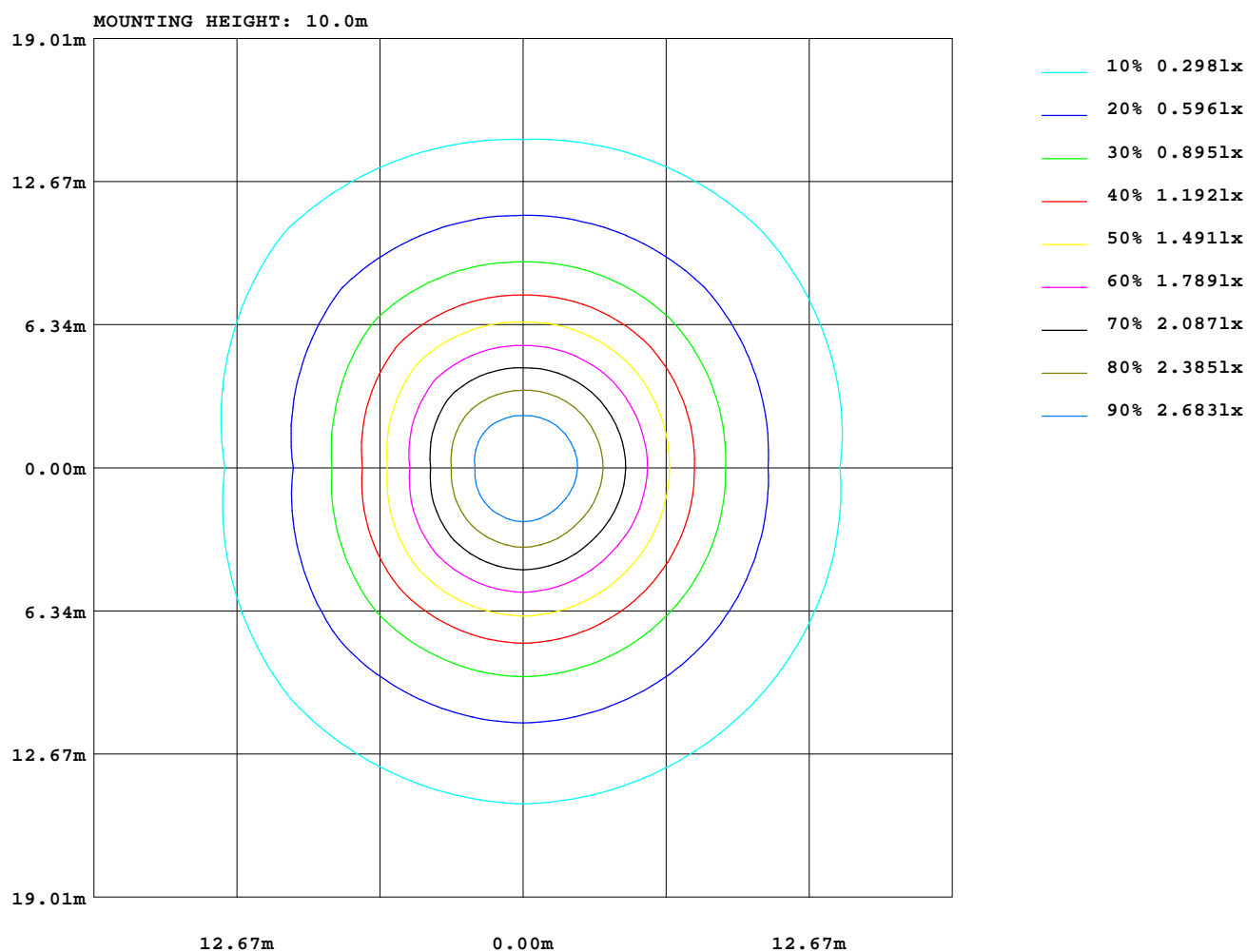
Test System: HOPOO HPG1800
Temperature: 25.3 DEG
Operators:
Test Date: 2019年08月20日

Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 8.800 m
Remarks:

ISOLUX DIAGRAM

Report number:

| | | | |
|----------------------------------|-----------|----------------------|------------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | TYPE: IP20 | WEIGHT: |
| SPECIFICATION: 1M | CCT(K): 0 | DIMENSION: 1000*10MM | SERIAL No.: 190820-004 |



Test System: HOPOO HPG1800
Temperature: 25.3DEG
Operators:
Test Date: 2019年08月20日

Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 8.800 m
Remarks:

GONIOPHOTOMETERS SYSTEM TEST REPORT

AREA LUMINOUS FLUX

Report number:

| | | | | | | | | | |
|----------------------------------|--|--|-----------|--|------------|----------------------|--|--|------------------------|
| MANUFACTURER: | | | | | | | | | |
| Address: | | | | | | | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | | | | TYPE: IP20 | | | | |
| SPECIFICATION: 1M | | | CCT(K): 0 | | | DIMENSION: 1000*10MM | | | SERIAL No.: 190820-004 |

| 90 | AREA FLUX DIAGRAM | | | | | | | | | | | | | | | | | | UNIT:lm | | Φ t | Φ a | | | | |
|---------------|-------------------|------|------|------|------|------|------|------|-----------------|------|------|------|------|------|------|------|------|------|---------|------|-----|-----|----|----|----|----|
| | 0.01 | 0.05 | 0.14 | 0.28 | 0.46 | 0.55 | 0.58 | 0.58 | 0.53 | 0.54 | 0.60 | 0.62 | 0.60 | 0.51 | 0.32 | 0.17 | 0.07 | 0.02 | 6.63 | 1.87 | | | | | | |
| 80 | 0.01 | 0.08 | 0.25 | 0.59 | 1.10 | 1.46 | 1.69 | 1.82 | 1.83 | 1.84 | 1.86 | 1.75 | 1.53 | 1.18 | 0.67 | 0.30 | 0.10 | 0.02 | 18.1 | 17.1 | | | | | | |
| 70 | 0.01 | 0.10 | 0.37 | 0.97 | 1.84 | 2.56 | 3.07 | 3.42 | 3.54 | 3.55 | 3.45 | 3.13 | 2.63 | 1.96 | 1.13 | 0.49 | 0.13 | 0.02 | 32.4 | 31.9 | | | | | | |
| 60 | 0.01 | 0.12 | 0.53 | 1.38 | 2.52 | 3.54 | 4.23 | 4.76 | 5.01 | 5.02 | 4.77 | 4.24 | 3.58 | 2.66 | 1.58 | 0.72 | 0.18 | 0.02 | 44.9 | 44.5 | | | | | | |
| 50 | 0.01 | 0.14 | 0.69 | 1.73 | 2.99 | 4.34 | 5.38 | 6.06 | 6.39 | 6.39 | 6.07 | 5.40 | 4.38 | 3.15 | 1.98 | 0.92 | 0.24 | 0.02 | 56.3 | 56.0 | | | | | | |
| 40 | 0.01 | 0.16 | 0.83 | 1.97 | 3.43 | 5.01 | 6.26 | 7.04 | 7.41 | 7.41 | 7.04 | 6.27 | 5.11 | 3.64 | 2.28 | 1.08 | 0.30 | 0.02 | 65.3 | 65.1 | | | | | | |
| 30 | 0.01 | 0.17 | 0.91 | 2.14 | 3.75 | 5.39 | 6.85 | 7.77 | 8.18 | 8.18 | 7.76 | 6.89 | 5.59 | 4.03 | 2.50 | 1.21 | 0.34 | 0.02 | 71.7 | 71.5 | | | | | | |
| VERTICAL(DEG) | 0.01 | 0.18 | 0.94 | 2.24 | 3.88 | 5.60 | 7.10 | 8.19 | 8.68 | 8.69 | 8.25 | 7.31 | 5.92 | 4.29 | 2.62 | 1.28 | 0.36 | 0.02 | 75.6 | 75.4 | | | | | | |
| | 0.01 | 0.16 | 0.92 | 2.22 | 3.85 | 5.60 | 7.12 | 8.29 | 8.95 | 8.96 | 8.49 | 7.53 | 6.07 | 4.37 | 2.67 | 1.30 | 0.36 | 0.02 | 76.9 | 76.8 | | | | | | |
| | 0.01 | 0.16 | 0.91 | 2.21 | 3.84 | 5.58 | 7.10 | 8.27 | 8.93 | 8.95 | 8.46 | 7.51 | 6.05 | 4.36 | 2.66 | 1.29 | 0.35 | 0.02 | 76.7 | 76.5 | | | | | | |
| | 0.01 | 0.16 | 0.91 | 2.20 | 3.83 | 5.53 | 7.02 | 8.13 | 8.70 | 8.71 | 8.18 | 7.24 | 5.85 | 4.23 | 2.59 | 1.25 | 0.34 | 0.02 | 74.9 | 74.8 | | | | | | |
| | 0.01 | 0.15 | 0.86 | 2.09 | 3.65 | 5.28 | 6.71 | 7.71 | 8.24 | 8.24 | 7.71 | 6.77 | 5.49 | 3.93 | 2.45 | 1.16 | 0.32 | 0.02 | 70.8 | 70.6 | | | | | | |
| | 0.01 | 0.13 | 0.76 | 1.87 | 3.29 | 4.84 | 6.14 | 7.02 | 7.51 | 7.51 | 7.02 | 6.15 | 4.94 | 3.51 | 2.18 | 1.01 | 0.27 | 0.02 | 64.2 | 64.0 | | | | | | |
| | 0.01 | 0.11 | 0.61 | 1.56 | 2.82 | 4.13 | 5.25 | 6.07 | 6.53 | 6.53 | 6.08 | 5.27 | 4.19 | 3.00 | 1.81 | 0.83 | 0.21 | 0.02 | 55.0 | 54.8 | | | | | | |
| | 0.01 | 0.08 | 0.43 | 1.18 | 2.22 | 3.28 | 4.15 | 4.82 | 5.22 | 5.23 | 4.84 | 4.19 | 3.33 | 2.35 | 1.39 | 0.61 | 0.14 | 0.02 | 43.5 | 43.1 | | | | | | |
| | 0.01 | 0.07 | 0.27 | 0.77 | 1.52 | 2.29 | 2.97 | 3.52 | 3.88 | 3.88 | 3.55 | 3.02 | 2.35 | 1.62 | 0.92 | 0.37 | 0.10 | 0.02 | 31.1 | 30.5 | | | | | | |
| | 0.01 | 0.05 | 0.16 | 0.40 | 0.79 | 1.21 | 1.62 | 1.96 | 2.19 | 2.20 | 1.98 | 1.65 | 1.25 | 0.84 | 0.46 | 0.20 | 0.07 | 0.02 | 17.0 | 15.6 | | | | | | |
| 0.01 | 0.03 | 0.07 | 0.14 | 0.25 | 0.38 | 0.53 | 0.66 | 0.76 | 0.77 | 0.68 | 0.56 | 0.43 | 0.30 | 0.18 | 0.10 | 0.05 | 0.01 | 5.91 | 1.79 | | | | | | | |
| -90 | -90 | -80 | -70 | -60 | -50 | -40 | -30 | -20 | HORIZONTAL(DEG) | | | | | | | | | | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| Φ t | 0.19 | 2.09 | 10.5 | 25.9 | 46.1 | 66.6 | 83.8 | 96.1 | 103 | 103 | 96.8 | 85.5 | 69.3 | 50.0 | 30.4 | 14.3 | 3.94 | 0.38 | 915 | | | | | | | |
| Φ a | 0.00 | 0.56 | 9.29 | 25.0 | 45.3 | 65.8 | 83.0 | 95.3 | 102 | 102 | 96.1 | 84.8 | 68.6 | 49.2 | 29.5 | 13.3 | 2.64 | 0.00 | | 874 | | | | | | |

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月20日

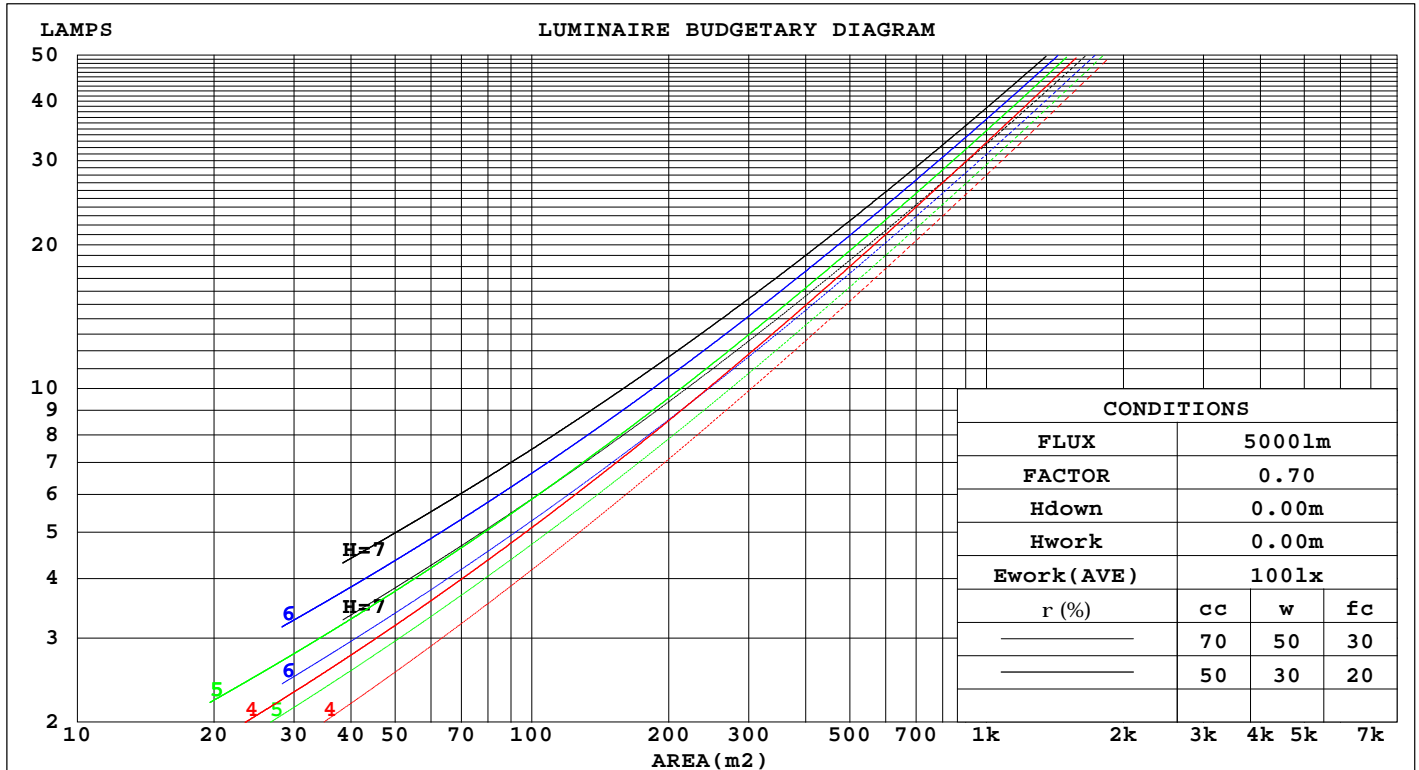
Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:8.800 m
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

| | | | |
|----------------------------------|-----------|----------------------|------------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | TYPE: IP20 | WEIGHT: |
| SPECIFICATION: 1M | CCT(K): 0 | DIMENSION: 1000*10MM | SERIAL No.: 190820-004 |

| rcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|-----------------|-----------------------|------|------|---------------------------------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|
| rw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| r _{fc} | 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 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | .99 | .99 | .99 | .97 |
| 1.0 | 1.03 | .99 | .95 | 1.00 | .96 | .93 | .96 | .92 | .89 | .91 | .89 | .86 | .87 | .85 | .83 | .81 |
| 2.0 | .90 | .83 | .77 | .87 | .81 | .76 | .83 | .78 | .73 | .80 | .75 | .71 | .76 | .72 | .69 | .67 |
| 3.0 | .78 | .70 | .64 | .77 | .69 | .63 | .73 | .67 | .61 | .70 | .65 | .60 | .67 | .62 | .58 | .56 |
| 4.0 | .69 | .60 | .54 | .68 | .60 | .53 | .65 | .58 | .52 | .62 | .56 | .51 | .60 | .54 | .50 | .48 |
| 5.0 | .62 | .53 | .46 | .61 | .52 | .46 | .58 | .51 | .45 | .56 | .49 | .44 | .54 | .48 | .43 | .41 |
| 6.0 | .56 | .47 | .40 | .54 | .46 | .40 | .52 | .45 | .39 | .50 | .44 | .39 | .49 | .43 | .38 | .36 |
| 7.0 | .50 | .41 | .35 | .49 | .41 | .35 | .48 | .40 | .35 | .46 | .39 | .34 | .44 | .38 | .34 | .32 |
| 8.0 | .46 | .37 | .31 | .45 | .37 | .31 | .43 | .36 | .31 | .42 | .35 | .30 | .41 | .35 | .30 | .28 |
| 9.0 | .42 | .34 | .28 | .41 | .33 | .28 | .40 | .33 | .28 | .39 | .32 | .27 | .37 | .31 | .27 | .25 |
| 10.0 | .39 | .31 | .26 | .38 | .31 | .25 | .37 | .30 | .25 | .36 | .29 | .25 | .35 | .29 | .25 | .23 |



Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月20日

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:8.800 m
 Remarks:

GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

Report number:

| | | | | | | | | | | | |
|----------------------------------|--|--|--|-----------|--|------------|----------------------|--|---------|------------------------|--|
| MANUFACTURER: | | | | | | | | | | | |
| Address: | | | | | | | | | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | | | | | TYPE: IP20 | | | WEIGHT: | | |
| SPECIFICATION: 1M | | | | CCT(K): 0 | | | DIMENSION: 1000*10MM | | | SERIAL No.: 190820-004 | |

| rcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|------|-----------------------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------|---|
| rw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| rfc | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| RCR | RCR:Room Cavity Ratio | | | | | | Wall Exitance Coefficients(WEC) | | | | | | | | | |
| 0.0 | | | | | | | | | | | | | | | | |
| 1.0 | .314 | .178 | .057 | .306 | .174 | .055 | .291 | .167 | .053 | .277 | .160 | .051 | .264 | .153 | .049 | |
| 2.0 | .294 | .161 | .049 | .287 | .158 | .049 | .273 | .152 | .047 | .261 | .146 | .046 | .250 | .141 | .045 | |
| 3.0 | .271 | .144 | .043 | .265 | .142 | .043 | .253 | .137 | .042 | .242 | .133 | .041 | .232 | .128 | .040 | |
| 4.0 | .250 | .130 | .038 | .244 | .128 | .038 | .234 | .124 | .037 | .224 | .120 | .036 | .215 | .117 | .036 | |
| 5.0 | .231 | .118 | .034 | .226 | .116 | .034 | .217 | .113 | .033 | .208 | .110 | .033 | .200 | .107 | .032 | |
| 6.0 | .214 | .107 | .031 | .210 | .106 | .030 | .201 | .103 | .030 | .193 | .100 | .030 | .186 | .098 | .029 | |
| 7.0 | .199 | .098 | .028 | .195 | .097 | .028 | .188 | .095 | .027 | .180 | .092 | .027 | .174 | .090 | .027 | |
| 8.0 | .186 | .091 | .026 | .182 | .090 | .025 | .175 | .088 | .025 | .169 | .086 | .025 | .163 | .084 | .024 | |
| 9.0 | .174 | .084 | .024 | .171 | .083 | .023 | .165 | .081 | .023 | .159 | .080 | .023 | .153 | .078 | .023 | |
| 10.0 | .164 | .078 | .022 | .161 | .078 | .022 | .155 | .076 | .021 | .150 | .074 | .021 | .145 | .073 | .021 | |

| rcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 | |
|------|-----------------------|------|------|------|------|------|--|------|------|------|------|------|------|------|------|---|--|
| rw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 | |
| rfc | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 | |
| RCR | RCR:Room Cavity Ratio | | | | | | Ceiling Cavity Exitance Coefficients(CCEC) | | | | | | | | | | |
| 0.0 | .213 | .213 | .213 | .182 | .182 | .182 | .124 | .124 | .124 | .071 | .071 | .071 | .023 | .023 | .023 | | |
| 1.0 | .204 | .179 | .157 | .174 | .154 | .135 | .119 | .106 | .093 | .069 | .061 | .054 | .022 | .020 | .018 | | |
| 2.0 | .196 | .155 | .121 | .168 | .133 | .104 | .115 | .092 | .073 | .066 | .054 | .043 | .021 | .017 | .014 | | |
| 3.0 | .188 | .138 | .097 | .161 | .119 | .084 | .111 | .082 | .059 | .064 | .048 | .035 | .021 | .016 | .011 | | |
| 4.0 | .180 | .124 | .081 | .155 | .107 | .071 | .106 | .075 | .050 | .062 | .044 | .029 | .020 | .014 | .010 | | |
| 5.0 | .173 | .114 | .070 | .149 | .099 | .061 | .102 | .069 | .043 | .059 | .040 | .026 | .019 | .013 | .008 | | |
| 6.0 | .166 | .106 | .063 | .143 | .092 | .054 | .098 | .064 | .039 | .057 | .038 | .023 | .018 | .012 | .008 | | |
| 7.0 | .159 | .099 | .057 | .137 | .086 | .049 | .095 | .060 | .035 | .055 | .035 | .021 | .018 | .012 | .007 | | |
| 8.0 | .153 | .093 | .052 | .131 | .081 | .046 | .091 | .057 | .032 | .053 | .033 | .019 | .017 | .011 | .006 | | |
| 9.0 | .147 | .088 | .049 | .126 | .077 | .043 | .087 | .054 | .030 | .051 | .032 | .018 | .017 | .010 | .006 | | |
| 10.0 | .141 | .084 | .046 | .121 | .073 | .040 | .084 | .051 | .029 | .049 | .030 | .017 | .016 | .010 | .006 | | |

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月20日

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:8.800 m
 Remarks:

GONIOPHOTOMETERS SYSTEM TEST REPORT

UGR Table

Report number:

| | | | | |
|----------------------------------|-----------|----------------------|------------|------------------------|
| MANUFACTURER: | | | | |
| Address: | | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | | TYPE: IP20 | WEIGHT: |
| SPECIFICATION: 1M | CCT(K): 0 | DIMENSION: 1000*10MM | | SERIAL No.: 190820-004 |

| | | | | | | | | | | | |
|--|-----|------------------|------|------|------|------|----------------|------|------|------|------|
| 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 | 2H | 16.2 | 17.7 | 16.5 | 17.9 | 18.2 | 16.8 | 18.3 | 17.1 | 18.6 | 18.8 |
| | 3H | 17.5 | 18.8 | 17.8 | 19.1 | 19.4 | 18.6 | 20.0 | 18.9 | 20.2 | 20.5 |
| | 4H | 17.8 | 19.2 | 18.2 | 19.5 | 19.8 | 19.3 | 20.6 | 19.6 | 20.9 | 21.2 |
| | 6H | 18.0 | 19.2 | 18.4 | 19.5 | 19.9 | 19.8 | 21.0 | 20.2 | 21.4 | 21.7 |
| | 8H | 18.0 | 19.2 | 18.4 | 19.5 | 19.9 | 20.0 | 21.2 | 20.4 | 21.5 | 21.9 |
| | 12H | 17.9 | 19.1 | 18.3 | 19.4 | 19.8 | 20.2 | 21.3 | 20.6 | 21.7 | 22.0 |
| 4H | 2H | 16.9 | 18.2 | 17.3 | 18.5 | 18.8 | 17.4 | 18.7 | 17.8 | 19.0 | 19.3 |
| | 3H | 18.4 | 19.5 | 18.8 | 19.9 | 20.2 | 19.3 | 20.5 | 19.7 | 20.8 | 21.2 |
| | 4H | 18.9 | 19.9 | 19.3 | 20.3 | 20.7 | 20.1 | 21.2 | 20.6 | 21.6 | 22.0 |
| | 6H | 19.1 | 20.0 | 19.6 | 20.4 | 20.9 | 20.8 | 21.7 | 21.2 | 22.1 | 22.5 |
| | 8H | 19.1 | 20.0 | 19.6 | 20.4 | 20.9 | 21.1 | 21.9 | 21.5 | 22.3 | 22.8 |
| | 12H | 19.1 | 19.9 | 19.6 | 20.4 | 20.8 | 21.3 | 22.1 | 21.8 | 22.5 | 23.0 |
| 8H | 4H | 19.2 | 20.1 | 19.7 | 20.5 | 21.0 | 20.3 | 21.2 | 20.8 | 21.6 | 22.1 |
| | 6H | 19.6 | 20.3 | 20.1 | 20.8 | 21.2 | 21.1 | 21.8 | 21.6 | 22.3 | 22.8 |
| | 8H | 19.7 | 20.3 | 20.2 | 20.8 | 21.3 | 21.5 | 22.1 | 22.0 | 22.6 | 23.1 |
| | 12H | 19.7 | 20.3 | 20.2 | 20.8 | 21.3 | 21.8 | 22.4 | 22.3 | 22.9 | 23.4 |
| 12H | 4H | 19.2 | 20.0 | 19.7 | 20.5 | 20.9 | 20.3 | 21.1 | 20.8 | 21.6 | 22.0 |
| | 6H | 19.7 | 20.3 | 20.2 | 20.8 | 21.3 | 21.2 | 21.8 | 21.7 | 22.3 | 22.8 |
| | 8H | 19.8 | 20.3 | 20.3 | 20.8 | 21.4 | 21.6 | 22.1 | 22.1 | 22.6 | 23.1 |
| Variations with the observer position at spacings: | | | | | | | | | | | |
| S = 1.0H | | + 0.2 / - 0.2 | | | | | + 0.1 / - 0.1 | | | | |
| 1.5H | | + 0.2 / - 0.4 | | | | | + 0.1 / - 0.2 | | | | |
| 2.0H | | + 0.2 / - 0.4 | | | | | + 0.2 / - 0.2 | | | | |

CIE Pub.117 Corrected 915.1 lm Total Lamp Luminous Flux.(8log(F/F0) = -0.3)

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月20日

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:8.800 m
 Remarks:

UTILIZATION FACTORS TABLE

Report number:

| | | | |
|----------------------------------|-----------|----------------------|------------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | TYPE: IP20 | WEIGHT: |
| SPECIFICATION: 1M | CCT(K): 0 | DIMENSION: 1000*10MM | SERIAL No.: 190820-004 |

| 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) $k(RI) \times RCR = 5$ | | | | | | | | | |
| $k = 0.60$ | 56 | 44 | 37 | 55 | 44 | 37 | 54 | 43 | 37 | 30 |
| 0.80 | 66 | 54 | 47 | 65 | 54 | 47 | 63 | 53 | 46 | 39 |
| 1.00 | 75 | 63 | 56 | 73 | 63 | 55 | 71 | 64 | 55 | 47 |
| 1.25 | 82 | 71 | 64 | 80 | 70 | 63 | 77 | 68 | 62 | 54 |
| 1.50 | 87 | 77 | 69 | 85 | 76 | 69 | 81 | 73 | 68 | 59 |
| 2.00 | 94 | 85 | 78 | 92 | 83 | 77 | 88 | 81 | 76 | 67 |
| 2.50 | 98 | 90 | 83 | 95 | 88 | 82 | 91 | 85 | 80 | 71 |
| 3.00 | 101 | 94 | 88 | 99 | 92 | 87 | 94 | 89 | 84 | 75 |
| 4.00 | 105 | 99 | 94 | 102 | 97 | 93 | 98 | 93 | 90 | 80 |
| 5.00 | 108 | 103 | 98 | 105 | 100 | 97 | 100 | 96 | 93 | 83 |
| ROOM INDEX | UF(total) | | | | | | | | | Direct |
| According to DIN EN 13032-2 2004 | | | Suspended | | | | | SHRNOM = 1.25 | | |

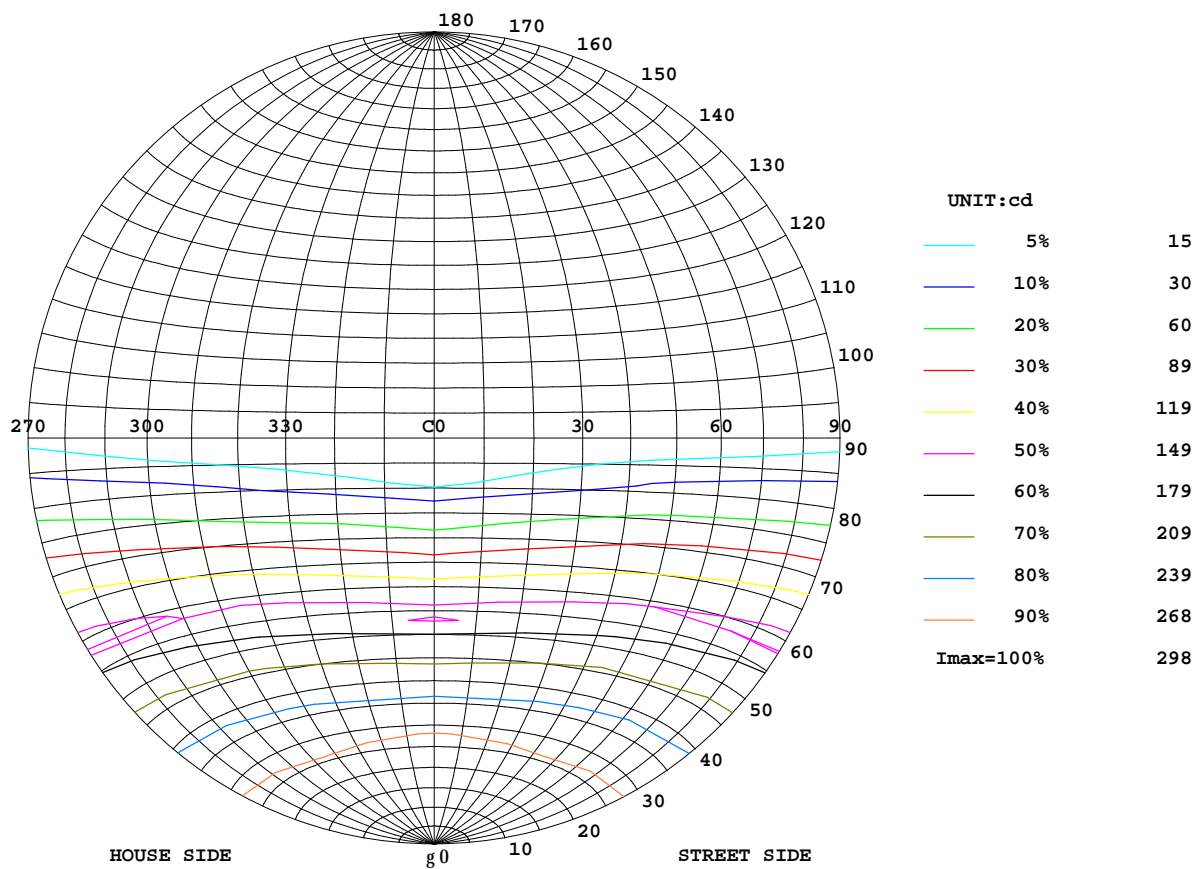
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月20日

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:8.800 m
 Remarks:

ISOCANDELA DIAGRAM

Report number:

| | | | |
|----------------------------------|-----------|----------------------|------------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | TYPE: IP20 | WEIGHT: |
| SPECIFICATION: 1M | CCT(K): 0 | DIMENSION: 1000*10MM | SERIAL No.: 190820-004 |



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月20日

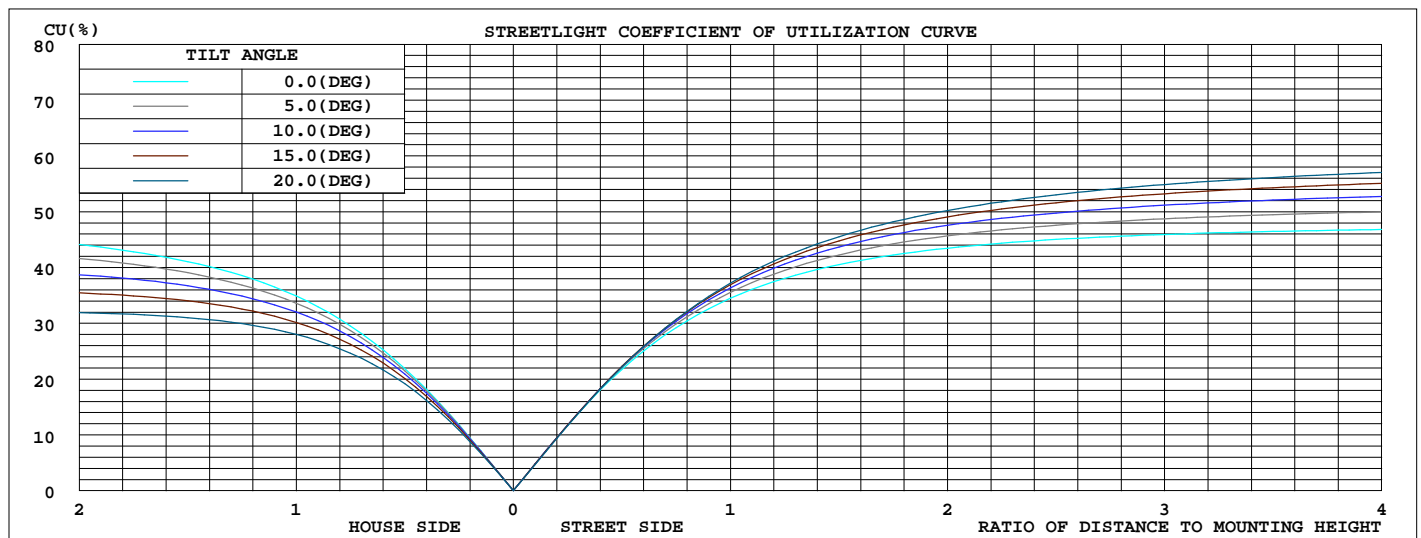
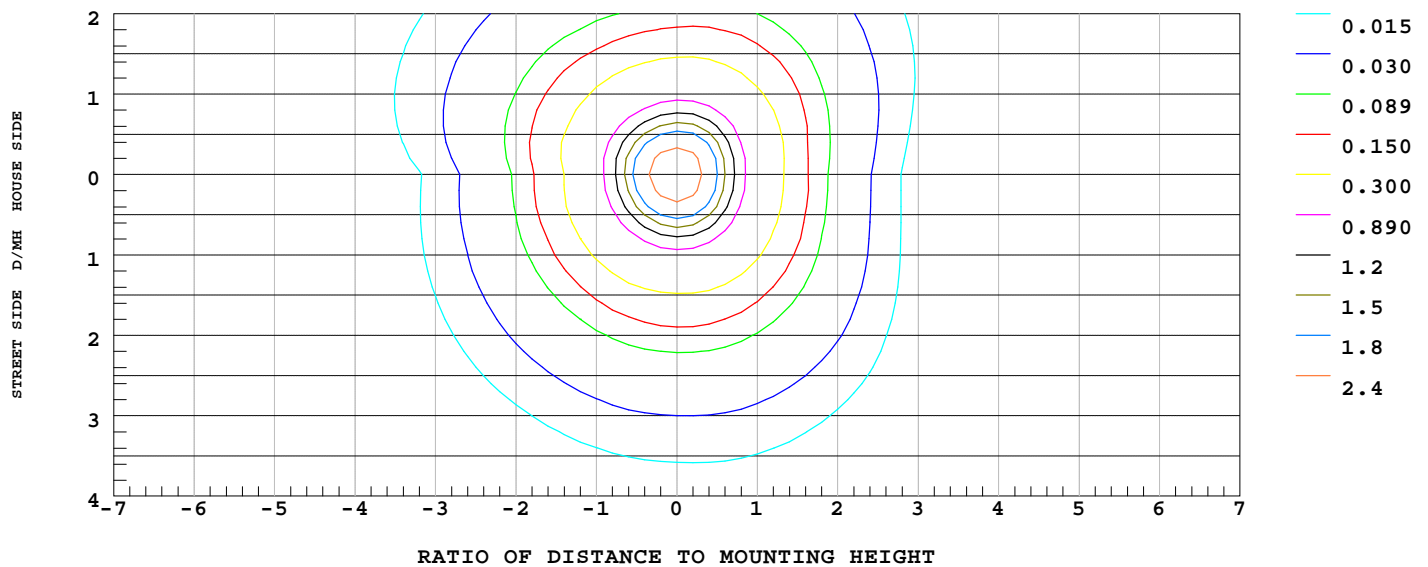
Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.800 m
Remarks:

ISOLUX DIAGRAM

Report number:

| | | | |
|----------------------------------|-----------|----------------------|------------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | TYPE: IP20 | WEIGHT: |
| SPECIFICATION: 1M | CCT(K): 0 | DIMENSION: 1000*10MM | SERIAL No.: 190820-004 |

ILLUMINANCE AT MH=10 m, Enadir = 2.98 lx



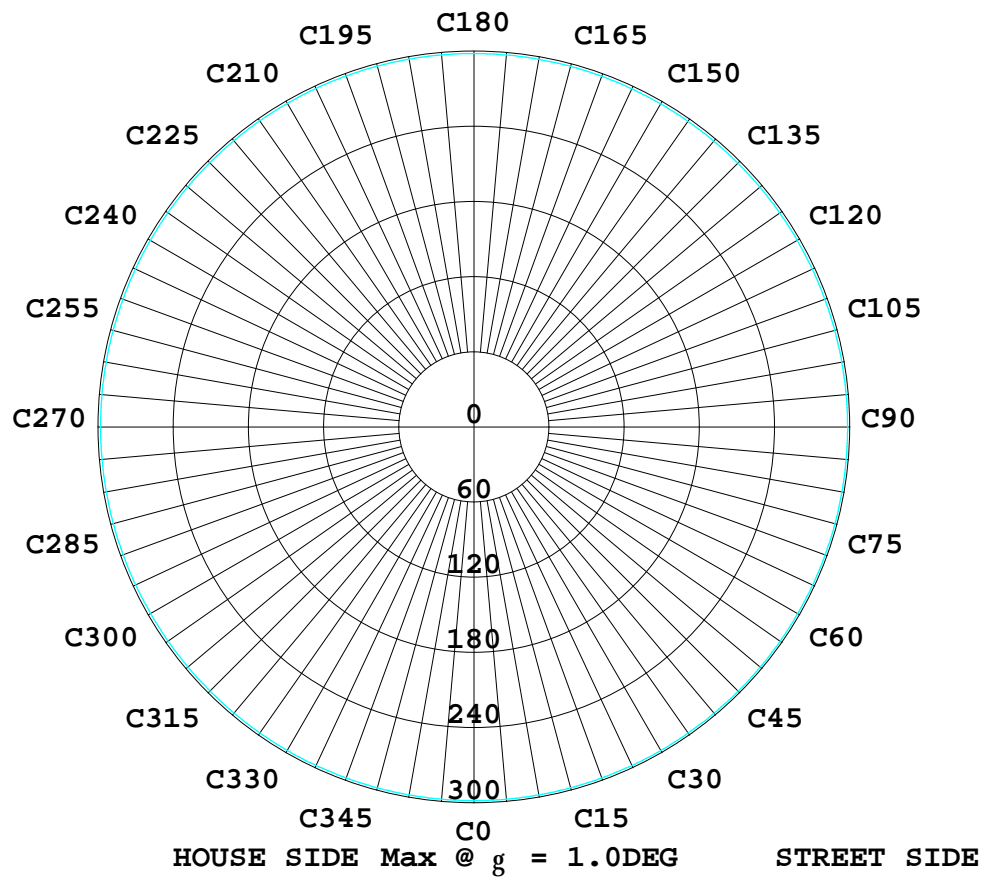
Test System: HOPOO HPG1800
Temperature: 25.3 DEG
Operators:
Test Date: 2019年08月20日

Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 8.800 m
Remarks:

ISOCANDELA DIAGRAM

Report number:

| | | | |
|----------------------------------|-----------|----------------------|------------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | TYPE: IP20 | WEIGHT: |
| SPECIFICATION: 1M | CCT(K): 0 | DIMENSION: 1000*10MM | SERIAL No.: 190820-004 |



Test System: HOPOO HPG1800
Temperature: 25.3DEG
Operators:
Test Date: 2019年08月20日

Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 8.800 m
Remarks:

GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINOUS DISTRIBUTION INTENSITY DATA

Report number:

| | | | |
|----------------------------------|-----------|----------------------|------------------------|
| MANUFACTURER: | | | |
| Address: | | | |
| NAME: RS-BF2835-24V-100-10-20-WW | | TYPE: IP20 | WEIGHT: |
| SPECIFICATION: 1M | CCT(K): 0 | DIMENSION: 1000*10MM | SERIAL No.: 190820-004 |

UNIT: cd

| C(DEG) | 0 | 45 | 90 | 135 | 180 | 225 | 270 | 315 |
|---------|------|------|------|------|------|------|------|------|
| γ (DEG) | | | | | | | | |
| 0.0 | 298 | 298 | 298 | 298 | 298 | 298 | 298 | 298 |
| 5.0 | 298 | 297 | 298 | 297 | 297 | 298 | 297 | 297 |
| 10.0 | 295 | 294 | 295 | 293 | 290 | 295 | 293 | 295 |
| 15.0 | 291 | 288 | 290 | 286 | 282 | 288 | 288 | 290 |
| 20.0 | 284 | 280 | 283 | 280 | 269 | 281 | 280 | 283 |
| 25.0 | 276 | 271 | 275 | 271 | 257 | 275 | 271 | 275 |
| 30.0 | 262 | 259 | 264 | 259 | 240 | 264 | 259 | 264 |
| 35.0 | 244 | 245 | 250 | 245 | 221 | 251 | 245 | 251 |
| 40.0 | 225 | 230 | 235 | 230 | 204 | 236 | 230 | 236 |
| 45.0 | 203 | 212 | 218 | 211 | 175 | 218 | 212 | 219 |
| 50.0 | 179 | 189 | 198 | 188 | 151 | 199 | 188 | 200 |
| 55.0 | 154 | 167 | 177 | 165 | 124 | 178 | 166 | 179 |
| 60.0 | 129 | 143 | 154 | 141 | 95.0 | 154 | 142 | 155 |
| 65.0 | 98.1 | 118 | 131 | 115 | 66.1 | 131 | 116 | 134 |
| 70.0 | 68.9 | 91.1 | 104 | 88.0 | 40.3 | 105 | 88.3 | 108 |
| 75.0 | 41.8 | 63.6 | 73.6 | 60.6 | 15.3 | 77.0 | 57.2 | 80.8 |
| 80.0 | 15.8 | 35.7 | 47.1 | 34.8 | 2.40 | 49.9 | 33.6 | 53.6 |
| 85.0 | 6.27 | 17.7 | 25.4 | 15.1 | 2.86 | 27.2 | 15.1 | 30.1 |
| 90.0 | 5.34 | 5.34 | 9.83 | 3.79 | 2.40 | 11.4 | 3.94 | 12.8 |
| 95.0 | 4.95 | 2.32 | 5.80 | 2.09 | 2.63 | 6.11 | 2.40 | 6.50 |
| 100.0 | 4.72 | 2.47 | 5.26 | 2.24 | 2.78 | 5.73 | 2.55 | 5.73 |
| 105.0 | 4.56 | 2.78 | 5.03 | 2.47 | 3.02 | 5.73 | 2.71 | 5.49 |
| 110.0 | 4.56 | 2.63 | 4.87 | 2.71 | 3.17 | 5.42 | 2.94 | 5.26 |
| 115.0 | 4.56 | 2.86 | 4.80 | 3.25 | 3.40 | 5.18 | 3.09 | 5.18 |
| 120.0 | 4.56 | 3.02 | 4.80 | 3.25 | 3.56 | 5.11 | 3.32 | 5.11 |
| 125.0 | 4.64 | 3.25 | 4.80 | 3.25 | 3.79 | 5.11 | 3.48 | 5.11 |
| 130.0 | 4.64 | 3.48 | 4.80 | 3.40 | 3.94 | 5.11 | 3.63 | 5.11 |
| 135.0 | 4.72 | 3.63 | 4.87 | 3.63 | 4.18 | 5.18 | 3.87 | 5.18 |
| 140.0 | 4.87 | 3.87 | 4.95 | 3.87 | 4.33 | 5.26 | 4.02 | 5.26 |
| 145.0 | 4.95 | 4.02 | 5.03 | 4.02 | 4.49 | 5.34 | 4.18 | 5.26 |
| 150.0 | 5.03 | 4.18 | 5.11 | 4.18 | 4.64 | 5.34 | 4.33 | 5.34 |
| 155.0 | 5.11 | 4.33 | 5.18 | 4.25 | 4.80 | 5.34 | 4.41 | 5.42 |
| 160.0 | 5.18 | 4.41 | 5.26 | 4.41 | 4.95 | 5.42 | 4.56 | 5.42 |
| 165.0 | 5.26 | 4.56 | 5.34 | 4.49 | 5.03 | 5.42 | 4.64 | 5.42 |
| 170.0 | 5.34 | 4.64 | 5.34 | 4.56 | 5.11 | 5.42 | 4.72 | 5.42 |
| 175.0 | 5.34 | 4.64 | 5.34 | 4.64 | 5.18 | 5.42 | 4.72 | 5.42 |
| 180.0 | 5.34 | 4.80 | 5.26 | 4.80 | 5.42 | 5.26 | 4.80 | 5.26 |

Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月20日

Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:8.800 m
Remarks: