

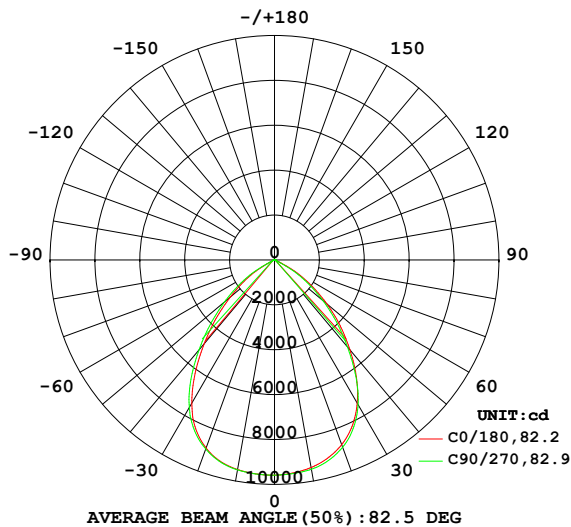
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

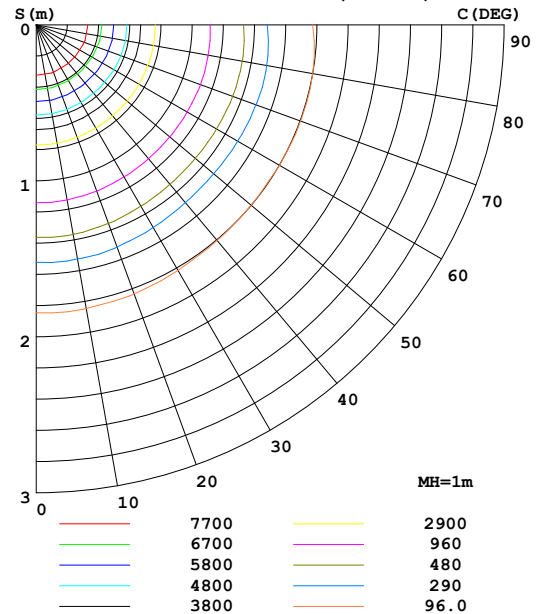
| | | |
|--|-------|------------------|
| Test:U:230.0V I:0.678A P:151.5W PF:0.972 Freq:50.01Hz UTHDi:0.00% ITHDi:0.00% KDisp:0Lamp Flux:16200.2x1 lm | | |
| NAME: P301-B4K (150W with Aluminium reflector) | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: | SUR.: | Shielding Angle: |

| DATA OF LAMP | | PHOTOMETRIC DATA Eff: 106.95 lm/W | | | |
|-------------------|---------|-----------------------------------|--------|-------------------------|----------|
| MODEL | / | Imax (cd) | 9592 | S/MH (C0/180) | 1.15 |
| NOMINAL POWER (W) | / | LOR (%) | 100.0 | S/MH (C90/270) | 1.18 |
| RATED VOLTAGE (V) | / | TOTAL FLUX (lm) | 16200 | η UP,DN (C0-180) | 0.0,49.8 |
| NOMINAL FLUX (lm) | 16200.2 | CIE CLASS | DIRECT | η UP,DN (C180-360) | 0.0,50.2 |
| LAMPS INSIDE | 1 | η up (%) | 0.0 | CIBSE SHR NOM | 1.00 |
| TEST VOLTAGE (V) | / | η down (%) | 100.0 | CIBSE SHR MAX | 1.15 |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



PLANAR ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2024-06-13

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4593]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

| γ | C0 | C45 | C90 | C135 | C180 | C225 | C270 | C315 | γ | Φ zone | Φ total | %lum,lamp |
|-----|-----------------------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|-----------|
| 10 | 9390 | 9414 | 9469 | 9480 | 9482 | 9501 | 9497 | 9451 | 0- 10 | 909.2 | 909.2 | 5.61,5.61 |
| 20 | 8754 | 8758 | 8877 | 8907 | 8915 | 8977 | 8960 | 8863 | 10- 20 | 2607 | 3516 | 21.7,21.7 |
| 30 | 7371 | 7316 | 7451 | 7406 | 7371 | 7450 | 7587 | 7533 | 20- 30 | 3798 | 7314 | 45.1,45.1 |
| 40 | 5238 | 5108 | 5064 | 4867 | 4873 | 4948 | 5235 | 5300 | 30- 40 | 3924 | 11239 | 69.4,69.4 |
| 50 | 3046 | 2851 | 2816 | 2537 | 2562 | 2585 | 2905 | 2997 | 40- 50 | 3000 | 14239 | 87.9,87.9 |
| 60 | 1160 | 999.1 | 927.5 | 663.8 | 750.1 | 798.7 | 986.4 | 1054 | 50- 60 | 1636 | 15874 | 98,98 |
| 70 | 69.74 | 59.99 | 49.39 | 42.22 | 39.16 | 41.80 | 50.86 | 63.78 | 60- 70 | 286.9 | 16161 | 99.8,99.8 |
| 80 | 18.01 | 16.98 | 17.23 | 15.77 | 13.15 | 13.57 | 16.75 | 19.55 | 70- 80 | 31.15 | 16192 | 100,100 |
| 90 | 1.003 | 0.4132 | 0.0355 | 0.0355 | 0.0824 | 0.0708 | 0.0829 | 0.6153 | 80- 90 | 7.908 | 16200 | 100,100 |
| 100 | | | | | | | | | 90-100 | | | |
| 110 | | | | | | | | | 100-110 | | | |
| 120 | | | | | | | | | 110-120 | | | |
| 130 | | | | | | | | | 120-130 | | | |
| 140 | | | | | | | | | 130-140 | | | |
| 150 | | | | | | | | | 140-150 | | | |
| 160 | | | | | | | | | 150-160 | | | |
| 170 | | | | | | | | | 160-170 | | | |
| 180 | | | | | | | | | 170-180 | | | |
| DEG | LUMINOUS INTENSITY:cd | | | | | | | | | UNIT:lm | | |

Conical surface Flux(90deg): 12893 lm

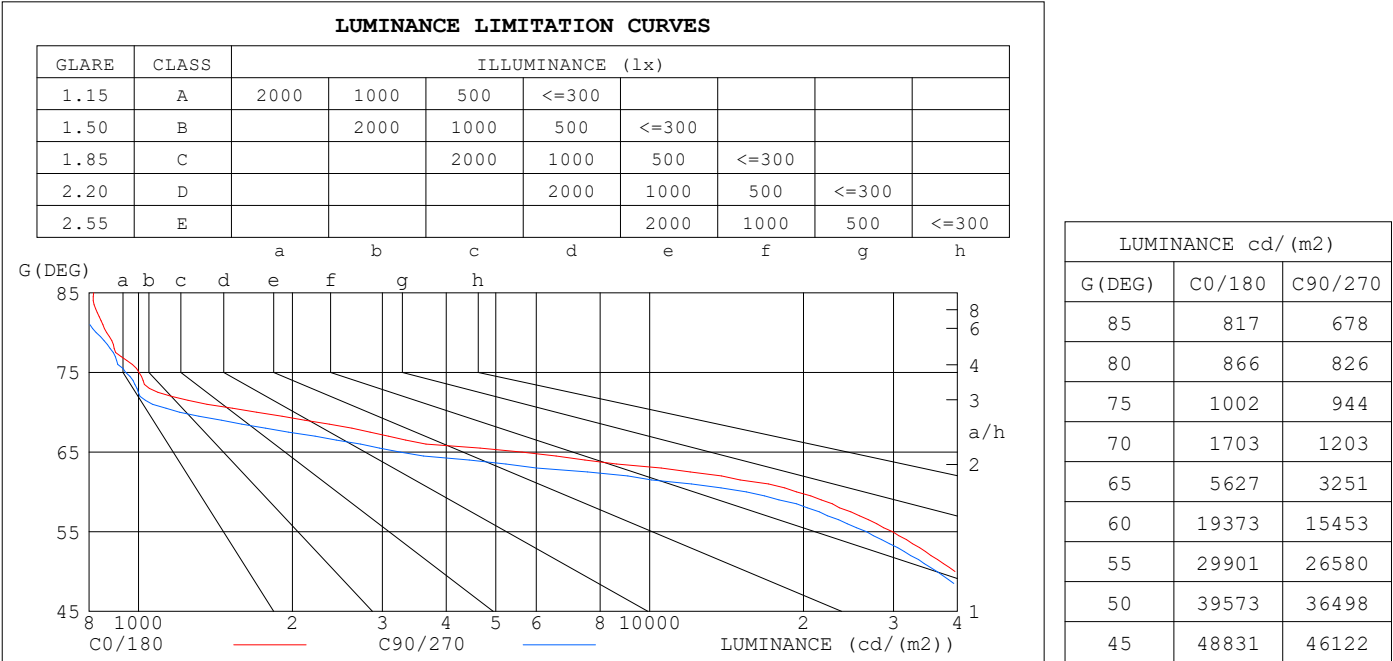
%lum = 79.6%
%lamp = 79.6%

Conical surface Flux(120deg): 15874 lm

%lum = 98.0%
%lamp = 98.0%

| | |
|----------------------|---|
| C Range: 0 - 360DEG | γ Range: 0 - 90DEG |
| C Interval: 22.5DEG | γ Interval: 0.5DEG |
| Test Speed: HIGH | Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465 |
| Temperature:25.3℃ | Humidity:65.0% |
| Operators:ZZX | Test Distance:26.000m [K=0.4593] |
| Test Date:2024-06-13 | Remarks: |

LUMINANCE LIMITATION CURVES



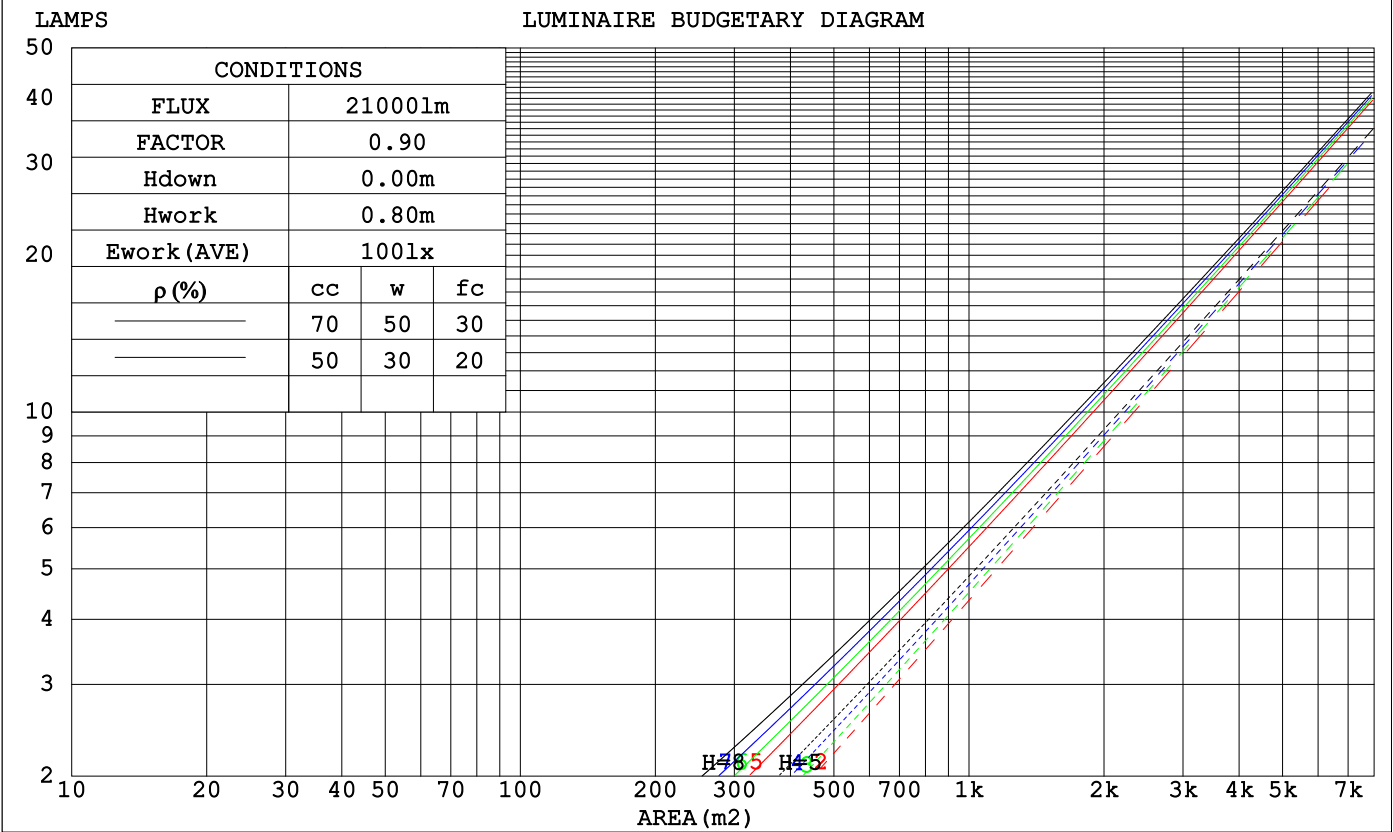
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2024-06-13

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4593]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

| | | | | | | | | | | | | | | | | | |
|------|-----------------------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------|------|--|
| 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 | 1.19 | 1.19 | 1.19 | 1.16 | 1.16 | 1.16 | 1.11 | 1.11 | 1.11 | 1.06 | 1.06 | 1.06 | 1.02 | 1.02 | 1.02 | 1.00 | |
| 1.0 | 1.09 | 1.06 | 1.03 | 1.07 | 1.04 | 1.02 | 1.03 | 1.00 | .98 | .99 | .97 | .95 | .95 | .94 | .93 | .91 | |
| 2.0 | .99 | .94 | .90 | .97 | .93 | .89 | .94 | .90 | .87 | .91 | .88 | .85 | .88 | .85 | .83 | .81 | |
| 3.0 | .90 | .84 | .79 | .88 | .83 | .78 | .86 | .81 | .77 | .83 | .79 | .76 | .81 | .77 | .74 | .73 | |
| 4.0 | .82 | .75 | .70 | .81 | .74 | .69 | .78 | .73 | .68 | .76 | .71 | .68 | .74 | .70 | .67 | .65 | |
| 5.0 | .75 | .68 | .62 | .74 | .67 | .62 | .72 | .66 | .61 | .70 | .65 | .61 | .68 | .64 | .60 | .58 | |
| 6.0 | .69 | .61 | .56 | .68 | .61 | .56 | .66 | .60 | .55 | .64 | .59 | .55 | .63 | .58 | .54 | .53 | |
| 7.0 | .63 | .56 | .51 | .62 | .55 | .50 | .61 | .55 | .50 | .60 | .54 | .50 | .58 | .53 | .49 | .48 | |
| 8.0 | .58 | .51 | .46 | .58 | .51 | .46 | .56 | .50 | .46 | .55 | .50 | .45 | .54 | .49 | .45 | .44 | |
| 9.0 | .54 | .47 | .42 | .53 | .47 | .42 | .52 | .46 | .42 | .51 | .46 | .42 | .50 | .45 | .41 | .40 | |
| 10.0 | .50 | .43 | .39 | .50 | .43 | .39 | .49 | .43 | .38 | .48 | .42 | .38 | .47 | .42 | .38 | .37 | |



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:ZZX
Test Date:2024-06-13

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4593]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

| ρ_{cc} | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|-------------|-----------------------|------|------|------|------|------|----------------------------------|------|------|------|------|------|------|------|------|---|
| ρ_w | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| ρ_{fc} | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| RCR | RCR:Room Cavity Ratio | | | | | | Wall Exitance Coefficients (WEC) | | | | | | | | | |
| 0.0 | | | | | | | | | | | | | | | | |
| 1.0 | .215 | .122 | .039 | .208 | .119 | .038 | .195 | .112 | .036 | .183 | .106 | .034 | .173 | .100 | .032 | |
| 2.0 | .211 | .116 | .035 | .205 | .113 | .035 | .194 | .108 | .034 | .184 | .103 | .032 | .175 | .099 | .031 | |
| 3.0 | .203 | .108 | .032 | .198 | .106 | .032 | .188 | .102 | .031 | .179 | .098 | .030 | .171 | .095 | .029 | |
| 4.0 | .193 | .101 | .030 | .189 | .099 | .029 | .181 | .096 | .029 | .173 | .093 | .028 | .166 | .090 | .027 | |
| 5.0 | .184 | .094 | .027 | .180 | .092 | .027 | .173 | .090 | .026 | .166 | .087 | .026 | .159 | .085 | .026 | |
| 6.0 | .175 | .088 | .025 | .171 | .087 | .025 | .165 | .084 | .025 | .159 | .082 | .024 | .153 | .080 | .024 | |
| 7.0 | .166 | .082 | .023 | .163 | .081 | .023 | .157 | .079 | .023 | .152 | .078 | .023 | .146 | .076 | .022 | |
| 8.0 | .158 | .077 | .022 | .155 | .076 | .022 | .150 | .075 | .021 | .145 | .073 | .021 | .140 | .072 | .021 | |
| 9.0 | .150 | .073 | .020 | .148 | .072 | .020 | .143 | .071 | .020 | .138 | .069 | .020 | .134 | .068 | .020 | |
| 10.0 | .143 | .069 | .019 | .141 | .068 | .019 | .136 | .067 | .019 | .132 | .066 | .019 | .128 | .065 | .019 | |

| ρ_{cc} | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|-------------|-----------------------|------|------|------|------|------|---|------|------|------|------|------|------|------|------|---|
| ρ_w | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| ρ_{fc} | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| RCR | RCR:Room Cavity Ratio | | | | | | Ceiling Cavity Exitance Coefficients (CCEC) | | | | | | | | | |
| 0.0 | .190 | .190 | .190 | .163 | .163 | .163 | .111 | .111 | .111 | .064 | .064 | .064 | .020 | .020 | .020 | |
| 1.0 | .174 | .157 | .142 | .149 | .135 | .122 | .102 | .093 | .084 | .059 | .054 | .049 | .019 | .017 | .016 | |
| 2.0 | .161 | .132 | .108 | .138 | .114 | .093 | .095 | .079 | .065 | .055 | .046 | .038 | .018 | .015 | .012 | |
| 3.0 | .152 | .114 | .084 | .130 | .098 | .073 | .089 | .068 | .051 | .052 | .040 | .030 | .017 | .013 | .010 | |
| 4.0 | .143 | .100 | .067 | .123 | .086 | .058 | .084 | .060 | .041 | .049 | .035 | .024 | .016 | .011 | .008 | |
| 5.0 | .136 | .089 | .054 | .117 | .077 | .047 | .080 | .054 | .033 | .047 | .031 | .020 | .015 | .010 | .006 | |
| 6.0 | .129 | .080 | .045 | .111 | .069 | .039 | .077 | .048 | .028 | .044 | .029 | .016 | .014 | .009 | .005 | |
| 7.0 | .123 | .073 | .038 | .106 | .063 | .033 | .073 | .044 | .023 | .042 | .026 | .014 | .014 | .009 | .005 | |
| 8.0 | .117 | .067 | .032 | .101 | .058 | .028 | .070 | .041 | .020 | .041 | .024 | .012 | .013 | .008 | .004 | |
| 9.0 | .112 | .062 | .028 | .097 | .054 | .024 | .067 | .038 | .017 | .039 | .022 | .010 | .013 | .007 | .003 | |
| 10.0 | .107 | .058 | .025 | .093 | .050 | .022 | .064 | .035 | .015 | .037 | .021 | .009 | .012 | .007 | .003 | |

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3°C
 Operators:ZZX
 Test Date:2024-06-13

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
 Humidity:65.0%
 Test Distance:26.000m [K=0.4593]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

UGR(Unified Glare Rating) Table

| | | | | | | | | | | |
|-----------------|------------------|------|------|------|------|----------------|------|------|------|------|
| 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 | 21.7 | 23.0 | 22.1 | 23.3 | 23.6 | 20.3 | 21.6 | 20.7 | 21.9 | 22.2 |
| 3H | 21.6 | 22.7 | 22.0 | 23.1 | 23.4 | 20.2 | 21.3 | 20.5 | 21.6 | 22.0 |
| 4H | 21.5 | 22.6 | 21.9 | 22.9 | 23.3 | 20.1 | 21.1 | 20.5 | 21.5 | 21.9 |
| 6H | 21.5 | 22.4 | 21.9 | 22.8 | 23.2 | 20.0 | 21.0 | 20.4 | 21.3 | 21.7 |
| 8H | 21.4 | 22.3 | 21.8 | 22.7 | 23.1 | 20.0 | 20.9 | 20.4 | 21.3 | 21.7 |
| 12H | 21.4 | 22.2 | 21.8 | 22.6 | 23.1 | 19.9 | 20.8 | 20.4 | 21.2 | 21.6 |
| 4H 2H | 21.6 | 22.6 | 22.0 | 23.0 | 23.3 | 20.1 | 21.1 | 20.5 | 21.5 | 21.9 |
| 3H | 21.4 | 22.3 | 21.9 | 22.7 | 23.1 | 20.0 | 20.8 | 20.4 | 21.2 | 21.6 |
| 4H | 21.4 | 22.1 | 21.8 | 22.5 | 23.0 | 19.9 | 20.6 | 20.3 | 21.1 | 21.5 |
| 6H | 21.3 | 21.9 | 21.7 | 22.4 | 22.8 | 19.8 | 20.4 | 20.3 | 20.9 | 21.4 |
| 8H | 21.2 | 21.8 | 21.7 | 22.3 | 22.7 | 19.7 | 20.3 | 20.2 | 20.8 | 21.3 |
| 12H | 21.2 | 21.7 | 21.7 | 22.2 | 22.7 | 19.7 | 20.2 | 20.2 | 20.7 | 21.2 |
| 8H 4H | 21.2 | 21.8 | 21.7 | 22.3 | 22.7 | 19.7 | 20.3 | 20.2 | 20.8 | 21.3 |
| 6H | 21.1 | 21.6 | 21.6 | 22.1 | 22.6 | 19.6 | 20.1 | 20.1 | 20.6 | 21.1 |
| 8H | 21.0 | 21.5 | 21.6 | 22.0 | 22.5 | 19.6 | 20.0 | 20.1 | 20.5 | 21.0 |
| 12H | 21.0 | 21.4 | 21.5 | 21.9 | 22.5 | 19.5 | 19.9 | 20.0 | 20.4 | 21.0 |
| 12H 4H | 21.2 | 21.7 | 21.6 | 22.2 | 22.6 | 19.7 | 20.2 | 20.2 | 20.7 | 21.2 |
| 6H | 21.0 | 21.5 | 21.6 | 22.0 | 22.5 | 19.6 | 20.0 | 20.1 | 20.5 | 21.0 |
| 8H | 21.0 | 21.4 | 21.5 | 21.9 | 22.5 | 19.5 | 19.9 | 20.0 | 20.4 | 21.0 |
| CIE190: 2010 | | | | | | | | | | |
| | | | | | | | | | | |

CIE190: 2010
Area: 0.12 m2

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2024-06-13

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4593]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

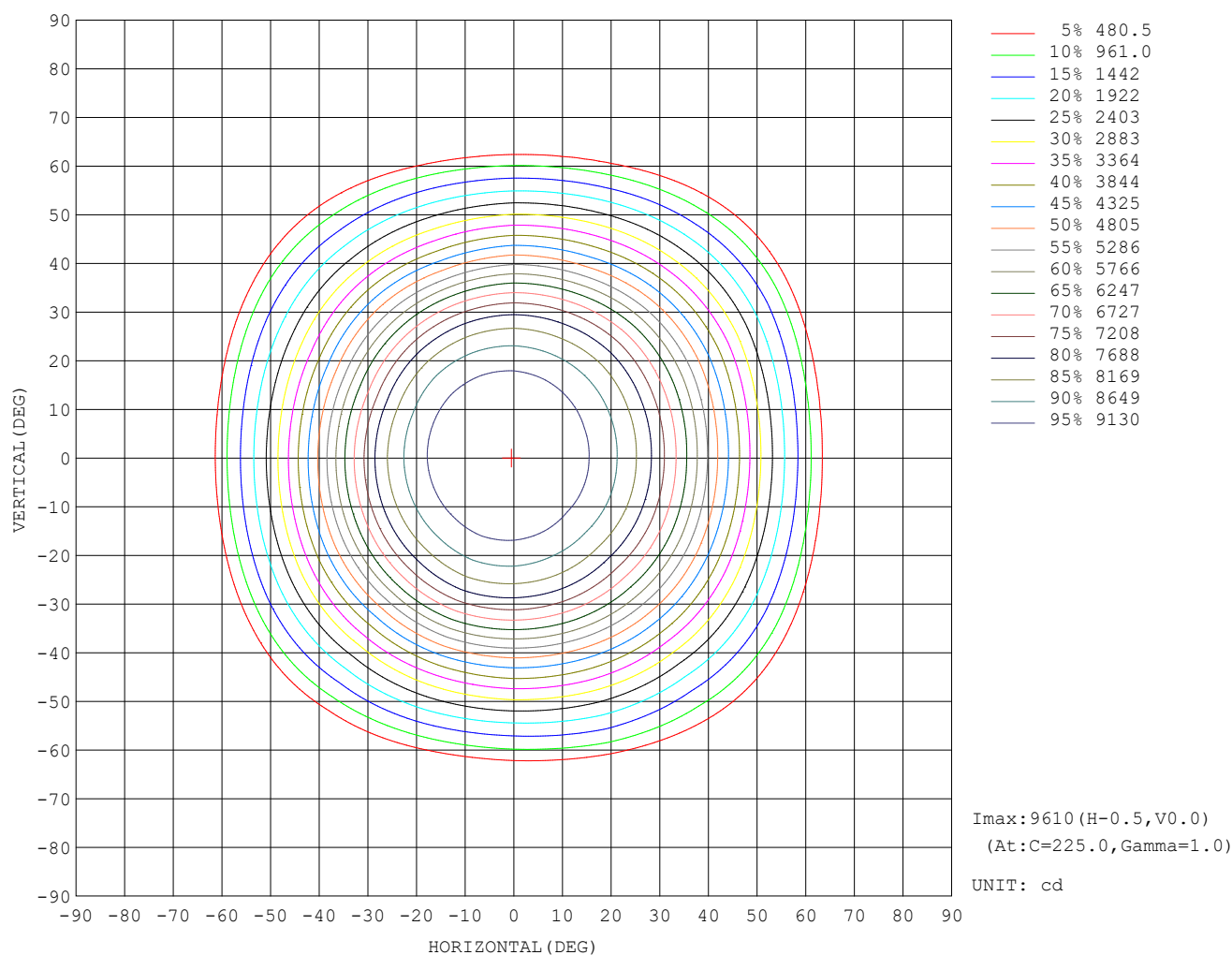
UTILIZATION FACTORS TABLE

| 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) $k(RI) \times RCR = 5$ | | | | | | | | | |
| $k = 0.60$ | 72 | 62 | 57 | 71 | 62 | 57 | 70 | 62 | 57 | 52 |
| 0.80 | 82 | 73 | 67 | 81 | 72 | 67 | 79 | 72 | 67 | 62 |
| 1.00 | 89 | 81 | 76 | 88 | 81 | 76 | 86 | 81 | 75 | 70 |
| 1.25 | 95 | 88 | 83 | 94 | 87 | 83 | 92 | 86 | 82 | 77 |
| 1.50 | 99 | 93 | 88 | 98 | 92 | 87 | 95 | 90 | 86 | 81 |
| 2.00 | 104 | 98 | 94 | 102 | 97 | 93 | 99 | 95 | 92 | 86 |
| 2.50 | 106 | 101 | 97 | 105 | 100 | 96 | 101 | 97 | 94 | 88 |
| 3.00 | 109 | 104 | 100 | 107 | 103 | 99 | 103 | 100 | 97 | 90 |
| 4.00 | 111 | 107 | 104 | 109 | 106 | 103 | 105 | 102 | 100 | 92 |
| 5.00 | 113 | 109 | 107 | 110 | 107 | 105 | 106 | 104 | 102 | 94 |
| ROOM INDEX | UF(total) | | | | | | | | | Direct |
| According to DIN EN 13032-2 2004 | | | | Suspended | | | | SHRNOM = 1.25 | | |

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3°C
 Operators: ZZX
 Test Date: 2024-06-13

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4593]
 Remarks:

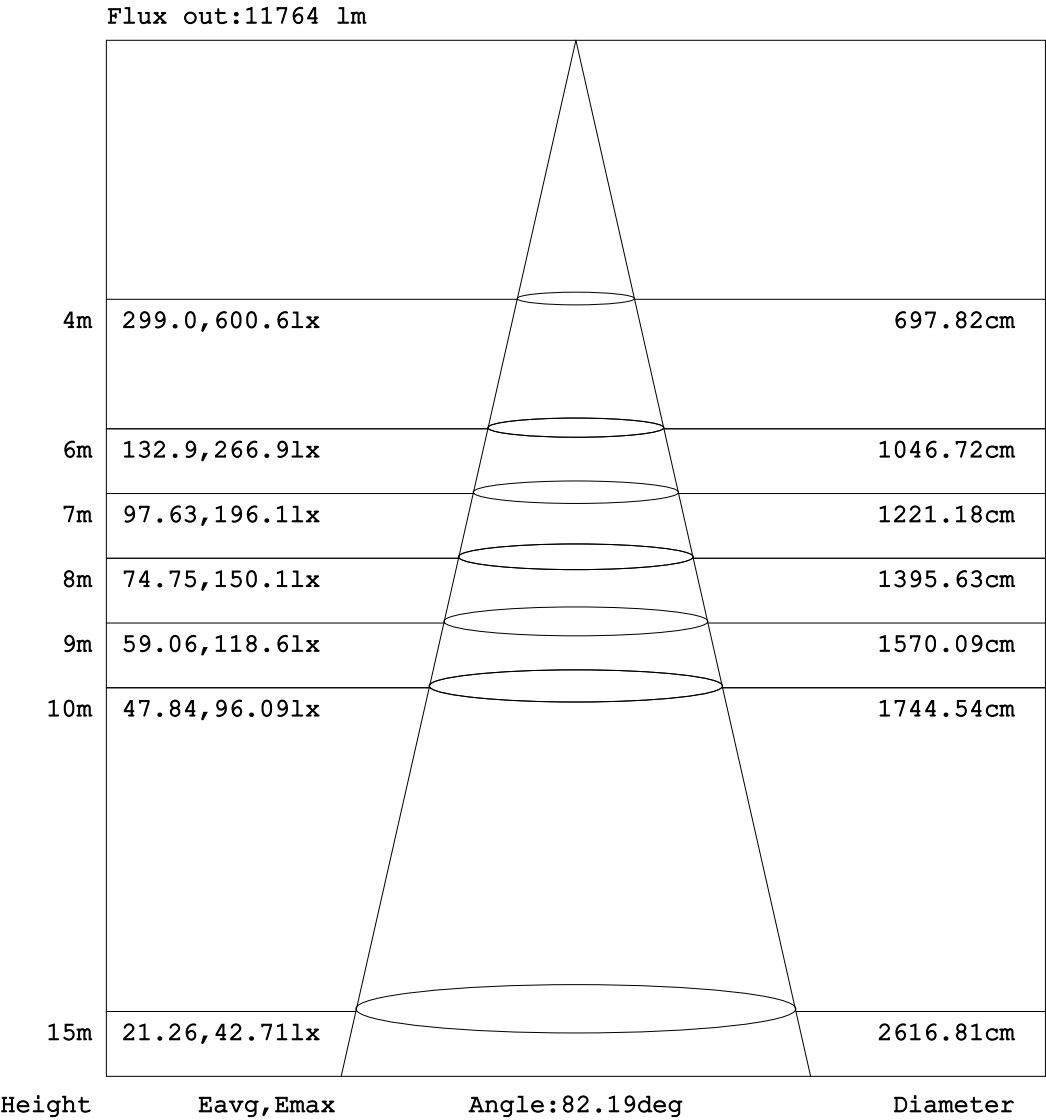
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2024-06-13

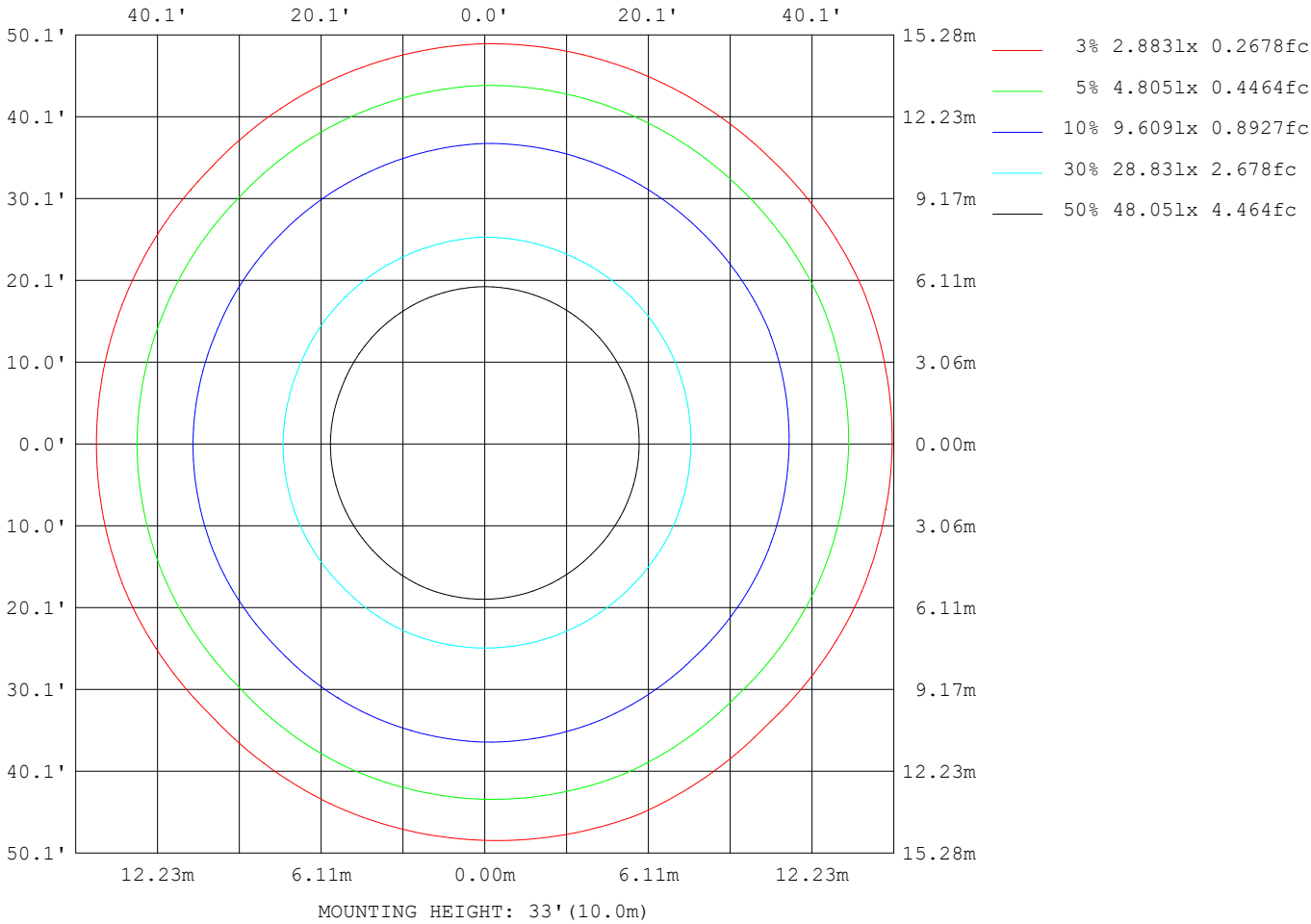
γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4593]
Remarks:

AAI Figure



Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

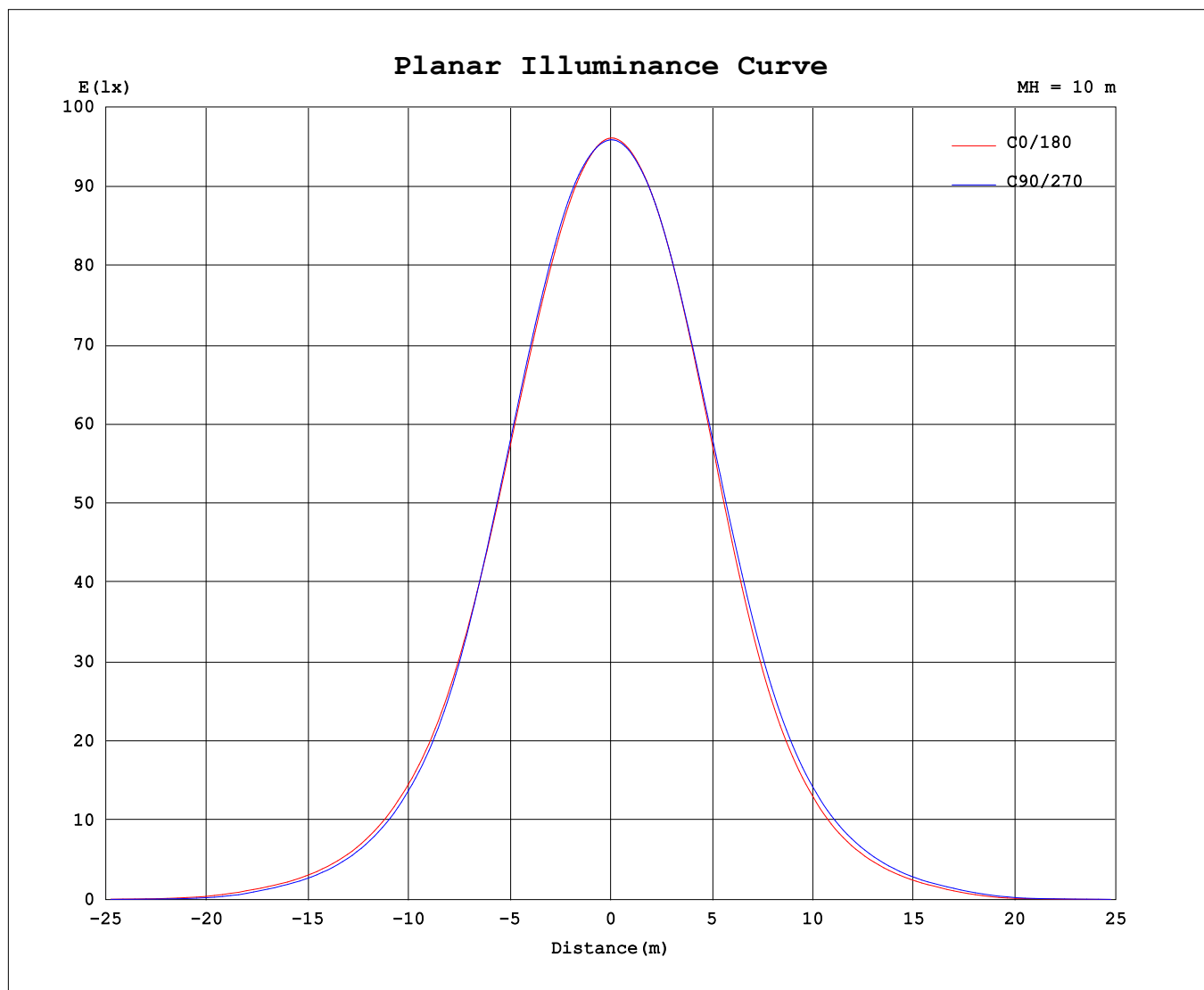
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:ZZX
Test Date:2024-06-13

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4593]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2024-06-13

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity: 65.0%
Test Distance: 26.000m [K=0.4593]
Remarks:

UNIT: cd

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: ZZX
Test Date: 2024-06-13

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.465
Humidity:65.0%
Test Distance:26.000m [K=0.4593]
Remarks:

```