

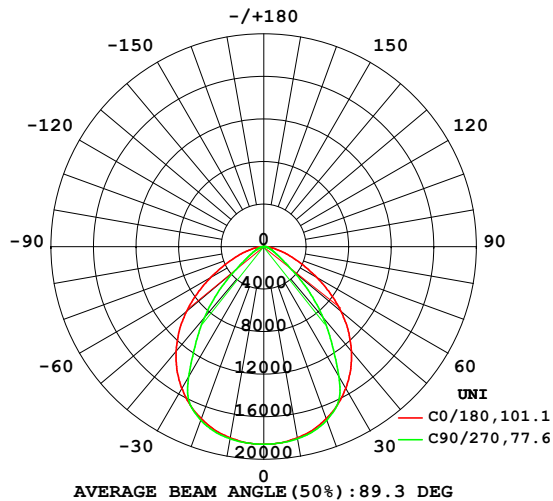
EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

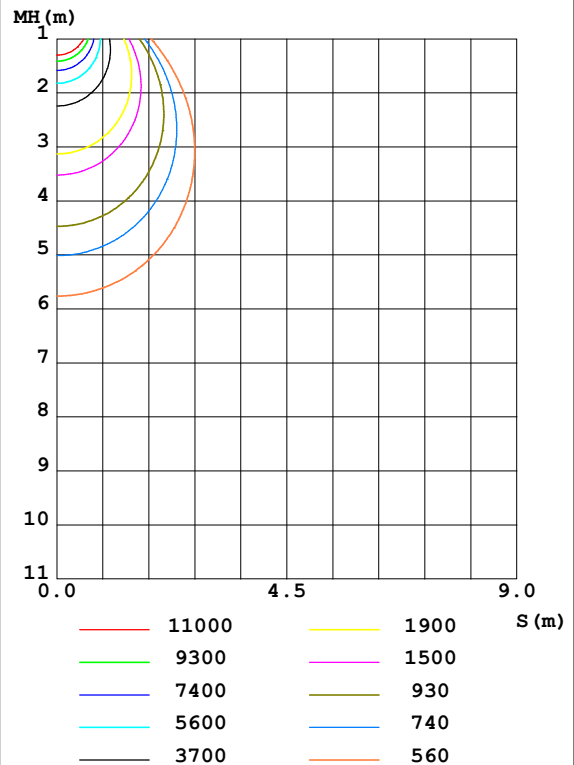
| | | |
|---|-------|------------------|
| Test:U:229.6V I:1.066A P:241.3W PF:0.9858 Freq:50.01Hz UTHDi:0% ITHDi:0% Lamp Flux:38016.4x1 lm | | |
| NAME: LHB09-240-5070-L00403 | TYPE: | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: | SUR.: | Shielding Angle: |

| DATA OF LAMP | | PHOTOMETRIC DATA Eff: 157.58 lm/W | | | |
|------------------|---------|-----------------------------------|--------|-------------------|----------|
| MODEL | / | I _{max} (cd) | 18584 | S/MH (C0/180) | 1.24 |
| NOMINAL POWER(W) | 240 | LOR(%) | 100.0 | S/MH (C90/270) | 1.12 |
| RATED VOLTAGE(V) | 230 | TOTAL FLUX(lm) | 38017 | η UP,DN(C0-180) | 0.0,50.0 |
| NOMINAL FLUX(lm) | 38016.4 | CIE CLASS | DIRECT | η UP,DN(C180-360) | 0.0,50.0 |
| LAMPS INSIDE | 1 | η up (%) | 0.0 | CIBSE SHR NOM | 1.25 |
| TEST VOLTAGE (V) | 230 | η down (%) | 100.0 | CIBSE SHR MAX | 1.35 |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-06-18

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
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 | 1825 | 1830 | 1834 | 1830 | 1825 | 1830 | 1834 | 1830 | 0- 10 | 1760 | 1760 | 4.63,4.63 |
| 20 | 1721 | 1735 | 1735 | 1735 | 1721 | 1735 | 1735 | 1735 | 10- 20 | 5053 | 6813 | 17.9,17.9 |
| 30 | 1541 | 1545 | 1416 | 1545 | 1541 | 1545 | 1416 | 1545 | 20- 30 | 7558 | 14371 | 37.8,37.8 |
| 40 | 1283 | 1196 | 867.7 | 1196 | 1283 | 1196 | 867.7 | 1196 | 30- 40 | 8282 | 22653 | 59.6,59.6 |
| 50 | 948.5 | 712.5 | 367.9 | 712.5 | 948.5 | 712.5 | 367.9 | 712.5 | 40- 50 | 7005 | 29658 | 78,78 |
| 60 | 571.3 | 355.6 | 133.8 | 355.6 | 571.3 | 355.6 | 133.8 | 355.6 | 50- 60 | 4565 | 34223 | 90,90 |
| 70 | 268.4 | 159.9 | 62.50 | 159.9 | 268.4 | 159.9 | 62.50 | 159.9 | 60- 70 | 2461 | 36684 | 96.5,96.5 |
| 80 | 91.15 | 53.74 | 21.87 | 53.74 | 91.15 | 53.74 | 21.87 | 53.74 | 70- 80 | 1092 | 37777 | 99.4,99.4 |
| 90 | 0.2973 | 0.2133 | 0.1658 | 0.2133 | 0.2973 | 0.2133 | 0.1658 | 0.2133 | 80- 90 | 239.9 | 38017 | 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:×10cd | | | | | | | | | UNIT:lm | | |

Conical surface Flux(90deg): 26418 lm

%lum = 69.5%

%lamp = 69.5%

Conical surface Flux(120deg): 34223 lm

%lum = 90.0%

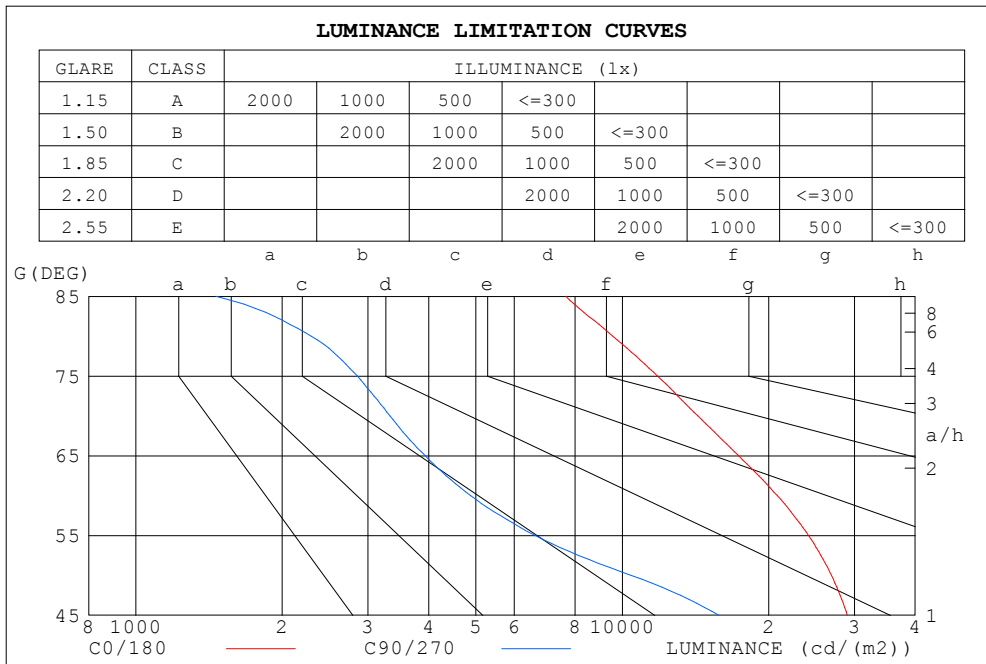
%lamp = 90.0%

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES



| LUMINANCE cd/(m2) | | |
|-------------------|--------|---------|
| G (DEG) | C0/180 | C90/270 |
| 85 | 7652 | 1461 |
| 80 | 9568 | 2296 |
| 75 | 11811 | 2853 |
| 70 | 14306 | 3331 |
| 65 | 17345 | 3938 |
| 60 | 20828 | 4880 |
| 55 | 24147 | 6616 |
| 50 | 26895 | 10432 |
| 45 | 29005 | 15807 |

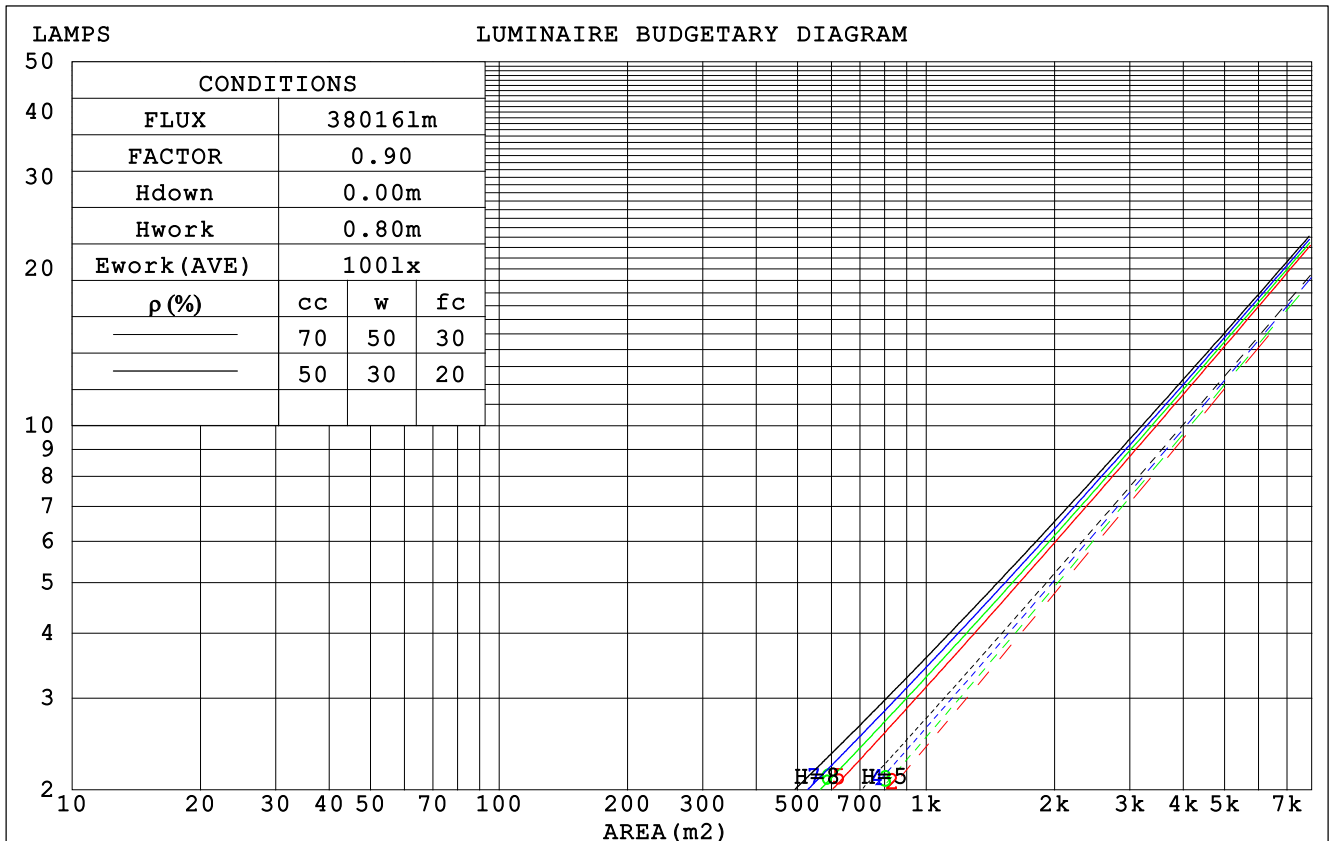
C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2020-06-18

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity: 65.0%
Test Distance: 26.000m [K=0.4589]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

| pcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|-----------------|-----------------------|------|------|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| p _w | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| p _{fc} | 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 | 1.07 | 1.03 | 1.00 | 1.05 | 1.02 | .99 | 1.01 | .98 | .96 | .97 | .95 | .93 | .93 | .91 | .90 | .88 |
| 2.0 | .96 | .90 | .85 | .94 | .88 | .84 | .90 | .86 | .82 | .87 | .83 | .80 | .84 | .81 | .79 | .77 |
| 3.0 | .86 | .79 | .73 | .84 | .78 | .72 | .81 | .76 | .71 | .79 | .74 | .70 | .76 | .72 | .69 | .67 |
| 4.0 | .77 | .70 | .64 | .76 | .69 | .63 | .74 | .67 | .62 | .71 | .66 | .62 | .69 | .65 | .61 | .59 |
| 5.0 | .70 | .62 | .56 | .69 | .61 | .56 | .67 | .60 | .55 | .65 | .59 | .55 | .63 | .58 | .54 | .52 |
| 6.0 | .64 | .56 | .50 | .63 | .55 | .50 | .61 | .54 | .49 | .59 | .53 | .49 | .58 | .53 | .48 | .47 |
| 7.0 | .58 | .50 | .45 | .57 | .50 | .45 | .56 | .49 | .44 | .55 | .49 | .44 | .53 | .48 | .44 | .42 |
| 8.0 | .54 | .46 | .40 | .53 | .45 | .40 | .52 | .45 | .40 | .50 | .44 | .40 | .49 | .44 | .40 | .38 |
| 9.0 | .49 | .42 | .37 | .49 | .42 | .37 | .48 | .41 | .36 | .47 | .41 | .36 | .46 | .40 | .36 | .34 |
| 10.0 | .46 | .38 | .34 | .45 | .38 | .34 | .44 | .38 | .33 | .43 | .38 | .33 | .43 | .37 | .33 | .32 |



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2020-06-18

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity: 65.0%
Test Distance: 26.000m [K=0.4589]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

| 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 | | | | | | | | | | | | | | | Wall Exitance Coefficients(WEC) | | | | | | | | | | | | | | |
| 0.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.0 | .252 | .143 | .045 | .245 | .140 | .044 | .232 | .133 | .042 | .220 | .127 | .041 | .209 | .121 | .039 | | | | | | | | | | | | | | | |
| 2.0 | .243 | .133 | .041 | .237 | .131 | .040 | .226 | .125 | .039 | .215 | .121 | .038 | .206 | .116 | .037 | | | | | | | | | | | | | | | |
| 3.0 | .230 | .122 | .037 | .224 | .120 | .036 | .215 | .116 | .035 | .205 | .113 | .035 | .197 | .109 | .034 | | | | | | | | | | | | | | | |
| 4.0 | .216 | .112 | .033 | .211 | .111 | .033 | .203 | .107 | .032 | .194 | .104 | .032 | .187 | .102 | .031 | | | | | | | | | | | | | | | |
| 5.0 | .203 | .103 | .030 | .199 | .102 | .030 | .191 | .099 | .029 | .184 | .097 | .029 | .177 | .095 | .028 | | | | | | | | | | | | | | | |
| 6.0 | .190 | .095 | .027 | .187 | .094 | .027 | .180 | .092 | .027 | .174 | .090 | .027 | .168 | .088 | .026 | | | | | | | | | | | | | | | |
| 7.0 | .179 | .089 | .025 | .176 | .088 | .025 | .170 | .086 | .025 | .164 | .084 | .024 | .159 | .083 | .024 | | | | | | | | | | | | | | | |
| 8.0 | .169 | .083 | .023 | .166 | .082 | .023 | .161 | .080 | .023 | .156 | .079 | .023 | .151 | .077 | .023 | | | | | | | | | | | | | | | |
| 9.0 | .160 | .077 | .022 | .157 | .077 | .022 | .152 | .075 | .021 | .148 | .074 | .021 | .143 | .073 | .021 | | | | | | | | | | | | | | | |
| 10.0 | .151 | .073 | .020 | .149 | .072 | .020 | .145 | .071 | .020 | .140 | .070 | .020 | .136 | .069 | .020 | | | | | | | | | | | | | | | |

| 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 | | | | | | Ceiling Cavity Exitance Coefficients(CCEC) | | | | | | | | | | |
| 0.0 | .190 | .190 | .190 | .163 | .163 | .163 | .111 | .111 | .111 | .064 | .064 | .064 | .020 | .020 | .020 | | |
| 1.0 | .176 | .157 | .139 | .151 | .134 | .120 | .103 | .092 | .083 | .059 | .054 | .048 | .019 | .017 | .016 | | |
| 2.0 | .166 | .132 | .104 | .142 | .114 | .090 | .097 | .079 | .063 | .056 | .046 | .037 | .018 | .015 | .012 | | |
| 3.0 | .157 | .114 | .080 | .134 | .098 | .069 | .092 | .068 | .049 | .053 | .040 | .029 | .017 | .013 | .009 | | |
| 4.0 | .149 | .100 | .063 | .128 | .087 | .055 | .088 | .060 | .039 | .051 | .035 | .023 | .016 | .012 | .008 | | |
| 5.0 | .141 | .089 | .051 | .121 | .077 | .045 | .084 | .054 | .032 | .048 | .032 | .019 | .016 | .010 | .006 | | |
| 6.0 | .134 | .081 | .042 | .116 | .070 | .037 | .080 | .049 | .026 | .046 | .029 | .016 | .015 | .009 | .005 | | |
| 7.0 | .128 | .074 | .036 | .110 | .064 | .031 | .076 | .045 | .022 | .044 | .026 | .013 | .014 | .009 | .004 | | |
| 8.0 | .122 | .068 | .031 | .105 | .059 | .027 | .073 | .041 | .019 | .042 | .024 | .011 | .014 | .008 | .004 | | |
| 9.0 | .117 | .063 | .027 | .100 | .055 | .023 | .070 | .038 | .017 | .041 | .023 | .010 | .013 | .007 | .003 | | |
| 10.0 | .111 | .059 | .024 | .096 | .051 | .021 | .067 | .036 | .015 | .039 | .021 | .009 | .013 | .007 | .003 | | |

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:LYJ
 Test Date:2020-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
 Humidity:65.0%
 Test Distance:26.000m [K=0.4589]
 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 | 23.1 | 24.6 | 23.5 | 24.9 | 25.2 | 15.0 | 16.5 | 15.4 | 16.8 | 17.1 |
| 3H | 24.2 | 25.5 | 24.6 | 25.8 | 26.2 | 15.7 | 17.0 | 16.1 | 17.3 | 17.7 |
| 4H | 24.6 | 25.8 | 25.0 | 26.1 | 26.5 | 16.0 | 17.2 | 16.4 | 17.5 | 17.9 |
| 6H | 24.8 | 25.9 | 25.2 | 26.3 | 26.7 | 16.1 | 17.2 | 16.5 | 17.6 | 18.0 |
| 8H | 24.8 | 25.9 | 25.3 | 26.3 | 26.7 | 16.1 | 17.2 | 16.6 | 17.6 | 18.0 |
| 12H | 24.9 | 25.9 | 25.3 | 26.3 | 26.7 | 16.1 | 17.1 | 16.6 | 17.5 | 17.9 |
| 4H 2H | 23.2 | 24.4 | 23.6 | 24.7 | 25.1 | 16.7 | 17.9 | 17.1 | 18.3 | 18.7 |
| 3H | 24.5 | 25.4 | 24.9 | 25.8 | 26.3 | 17.5 | 18.5 | 17.9 | 18.9 | 19.3 |
| 4H | 24.9 | 25.8 | 25.4 | 26.2 | 26.7 | 17.7 | 18.6 | 18.2 | 19.0 | 19.5 |
| 6H | 25.3 | 26.0 | 25.7 | 26.5 | 26.9 | 17.9 | 18.7 | 18.4 | 19.1 | 19.6 |
| 8H | 25.3 | 26.1 | 25.8 | 26.5 | 27.0 | 17.9 | 18.6 | 18.4 | 19.1 | 19.5 |
| 12H | 25.4 | 26.0 | 25.9 | 26.5 | 27.0 | 17.9 | 18.5 | 18.4 | 19.0 | 19.5 |
| 8H 4H | 24.9 | 25.6 | 25.4 | 26.1 | 26.5 | 18.5 | 19.2 | 18.9 | 19.6 | 20.1 |
| 6H | 25.3 | 25.9 | 25.8 | 26.4 | 26.9 | 18.7 | 19.3 | 19.2 | 19.8 | 20.2 |
| 8H | 25.4 | 25.9 | 25.9 | 26.5 | 26.9 | 18.7 | 19.2 | 19.2 | 19.8 | 20.3 |
| 12H | 25.5 | 26.0 | 26.0 | 26.5 | 27.1 | 18.7 | 19.2 | 19.3 | 19.7 | 20.3 |
| 12H 4H | 24.9 | 25.5 | 25.4 | 26.0 | 26.5 | 18.6 | 19.2 | 19.1 | 19.7 | 20.2 |
| 6H | 25.3 | 25.8 | 25.8 | 26.3 | 26.8 | 18.8 | 19.4 | 19.4 | 19.8 | 20.4 |
| 8H | 25.4 | 25.9 | 25.9 | 26.4 | 26.9 | 18.9 | 19.4 | 19.4 | 19.9 | 20.4 |
| CIE190: 2010 | | | | | | | | | | |
| | | | | | | | | | | |

CIE190: 2010
Area: 0.221 m2

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-06-18

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

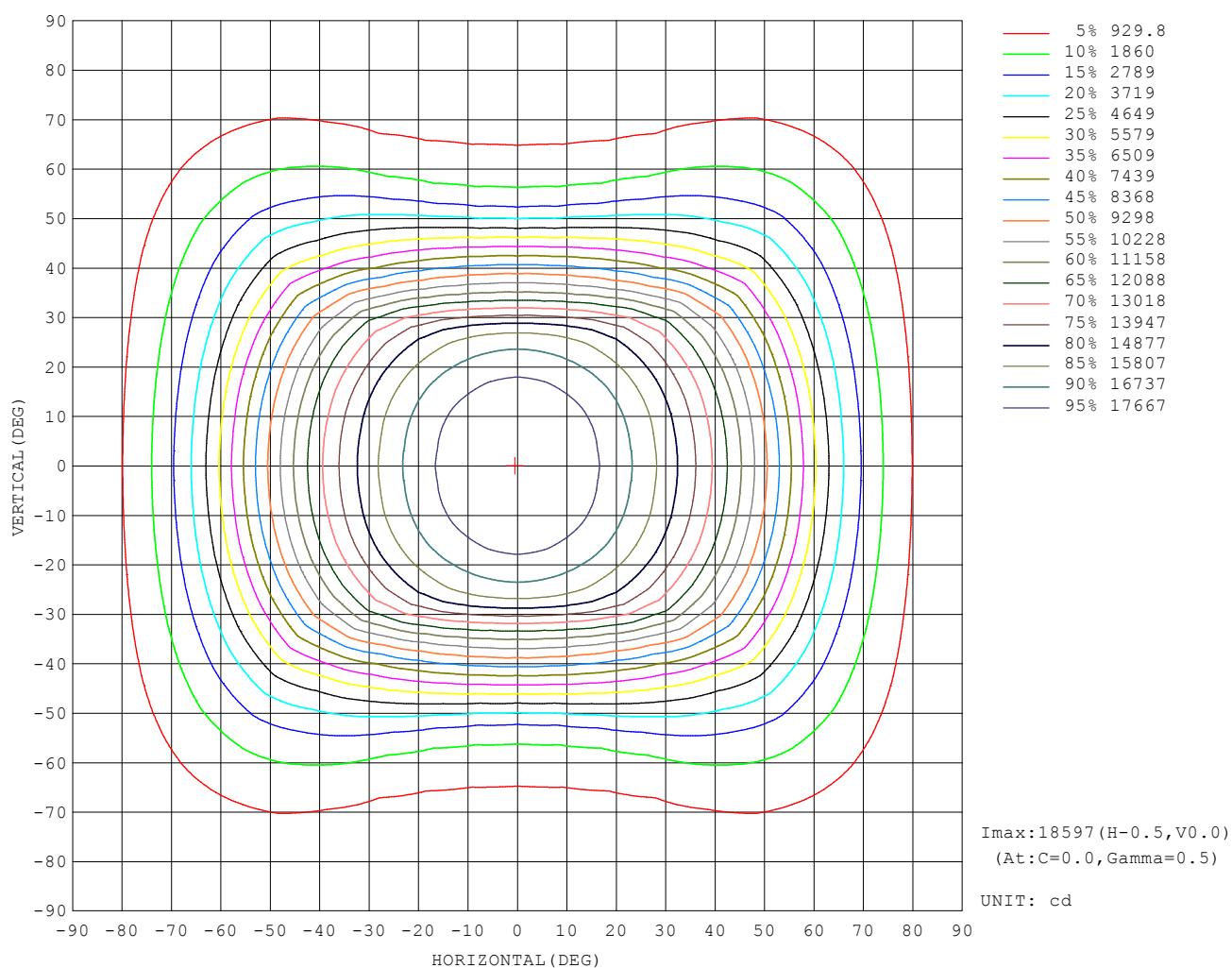
UTILIZATION FACTORS TABLE

| 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) $k(RI) \times RCR = 5$ | | | | | | | | | |
| $k = 0.60$ | 66 | 56 | 50 | 65 | 56 | 50 | 64 | 55 | 50 | 44 |
| 0.80 | 76 | 66 | 60 | 75 | 66 | 60 | 74 | 65 | 59 | 54 |
| 1.00 | 84 | 75 | 69 | 83 | 74 | 68 | 81 | 75 | 68 | 62 |
| 1.25 | 90 | 82 | 76 | 89 | 81 | 76 | 87 | 80 | 75 | 69 |
| 1.50 | 95 | 87 | 81 | 93 | 86 | 81 | 91 | 84 | 80 | 73 |
| 2.00 | 100 | 94 | 88 | 99 | 92 | 88 | 96 | 90 | 86 | 79 |
| 2.50 | 103 | 97 | 92 | 102 | 96 | 91 | 98 | 93 | 90 | 82 |
| 3.00 | 106 | 101 | 96 | 104 | 99 | 95 | 100 | 96 | 93 | 85 |
| 4.00 | 109 | 105 | 101 | 107 | 103 | 100 | 103 | 100 | 97 | 89 |
| 5.00 | 111 | 107 | 104 | 109 | 105 | 102 | 104 | 102 | 99 | 91 |
| ROOM INDEX | UF (total) | | | | | | | | | Direct |
| According to DIN EN 13032-2 2004 | | | Suspended | | | | | SHRNOM = 1.25 | | |

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: LYJ
 Test Date: 2020-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
 Humidity: 65.0%
 Test Distance: 26.000m [K=0.4589]
 Remarks:

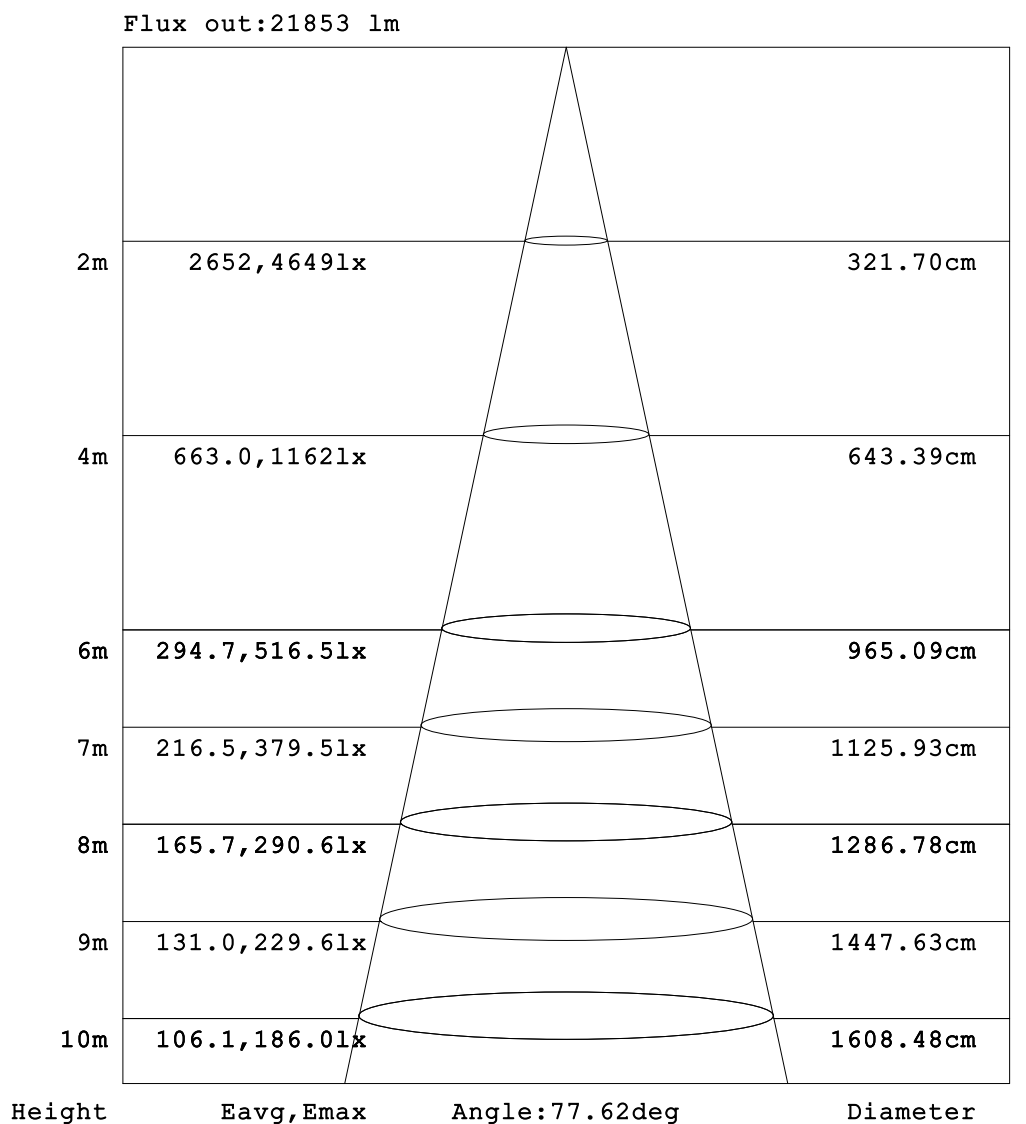
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

AAI Figure



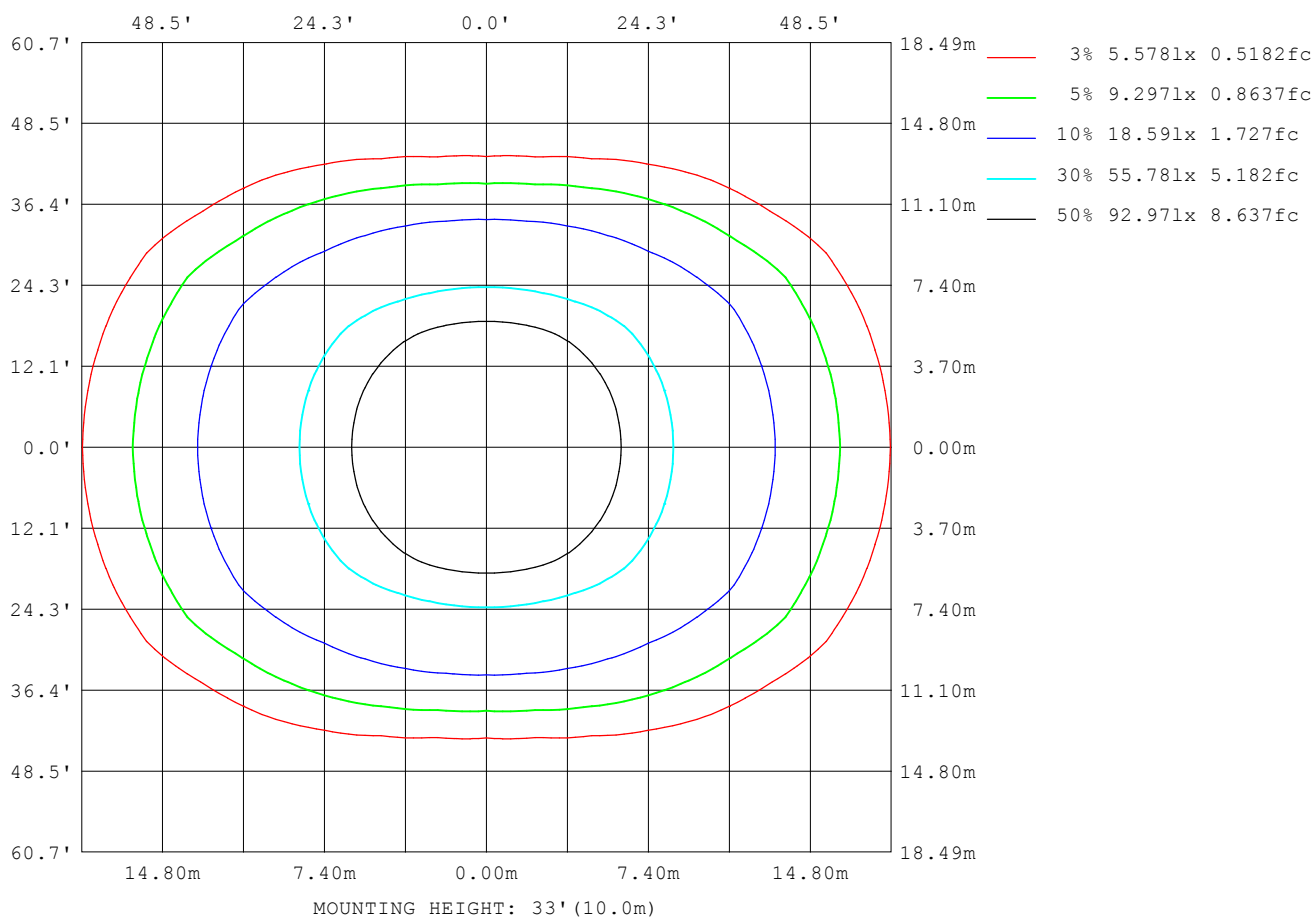
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:LYJ
Test Date:2020-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity:65.0%
Test Distance:26.000m [K=0.4589]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

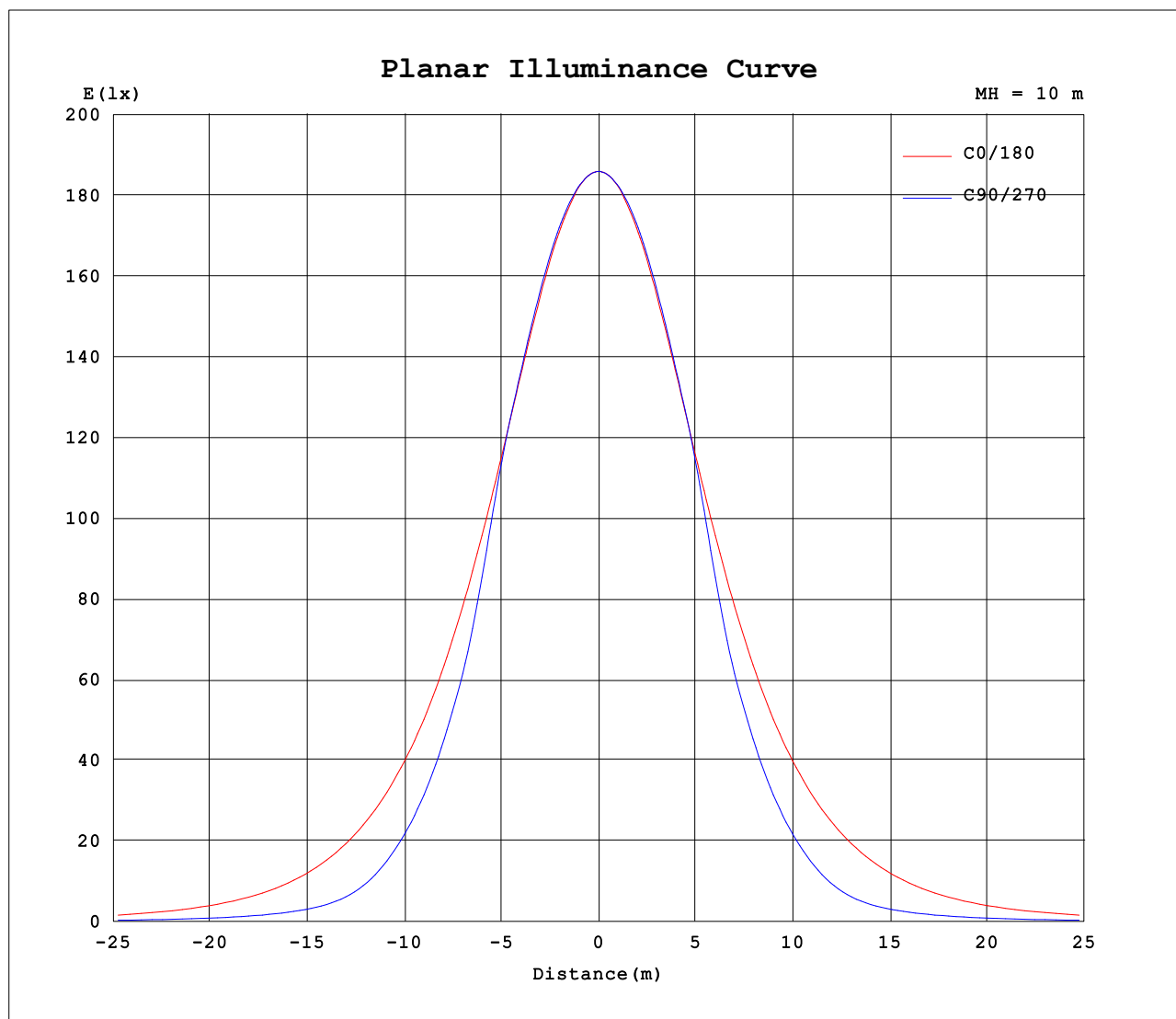
ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2020-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity: 65.0%
Test Distance: 26.000m [K=0.4589]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: LYJ
Test Date: 2020-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.426
Humidity: 65.0%
Test Distance: 26.000m [K=0.4589]
Remarks: