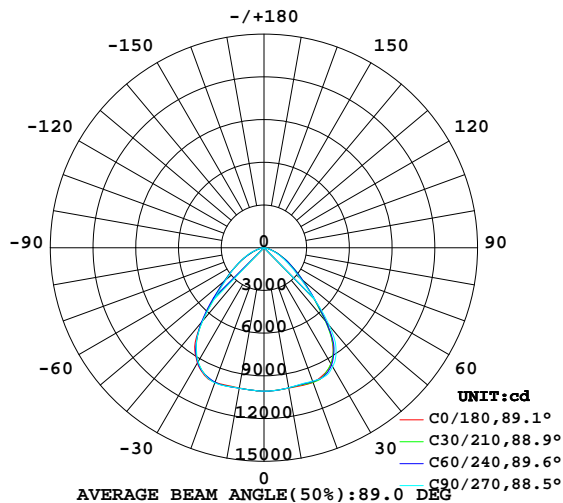


LUMINAIRE PHOTOMETRIC TEST REPORT

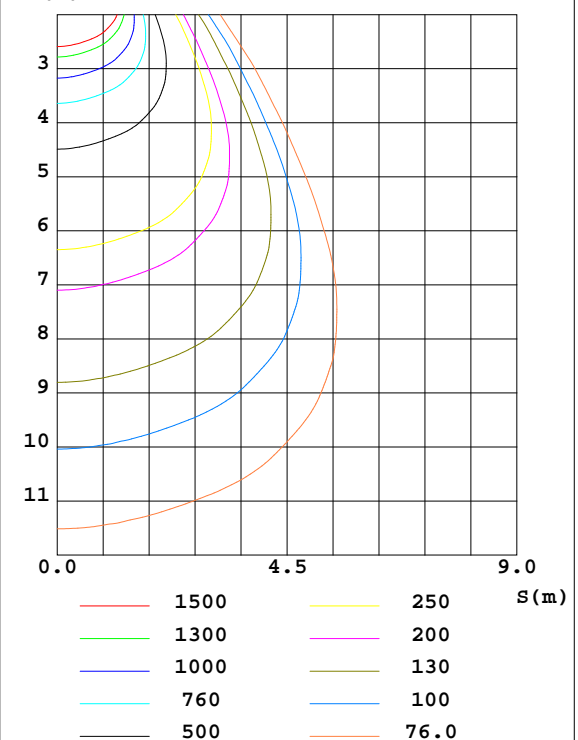
| | | |
|---|----------------|-------------------|
| Test:U:231.1V I:0.6439A P:147.1W PF:0.9787 Lamp Flux:21588.2x1 lm | | |
| NAME: 270800 | TYPE: | WEIGHT: |
| DIM.: | SPEC.: | SERIAL No.: |
| MFR.: | SUR.:0.15*0.15 | PROTECTION ANGLE: |

| DATA OF LAMP | | PHOTOMETRIC DATA Eff: 146.76 lm/W | | | |
|------------------|---------|-----------------------------------|--------|-------------------|----------|
| MODEL | 270800 | I _{max} (cd) | 10109 | S/MH(C0/180) | 1.27 |
| NOMINAL POWER(W) | 147.1 | LOR(%) | 100.0 | S/MH(C90/270) | 1.28 |
| RATED VOLTAGE(V) | 232 | TOTAL FLUX(lm) | 21588 | η UP,DN(C0-180) | 0.0,49.8 |
| NOMINAL FLUX(lm) | 21588.2 | CIE CLASS | DIRECT | η UP,DN(C180-360) | 0.0,50.2 |
| LAMPS INSIDE | 1 | η up(%) | 0.0 | CIBSE SHR NOM | 1.25 |
| TEST VOLTAGE(V) | 231.1 | η down(%) | 100.0 | CIBSE SHR MAX | 1.30 |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-09-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:7.000m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

| γ | C0 | C45 | C90 | C135 | C180 | C225 | C270 | C315 | γ | Φ zone | Φ total | $\%lum, lamp$ |
|----------|--------------------------|-------|-------|-------|-------|-------|-------|-------|----------|-------------|--------------|---------------|
| 10 | 1002 | 999.0 | 999.0 | 997.7 | 999.8 | 1002 | 1002 | 1001 | 0- 10 | 957.2 | 957.2 | 4.43,4.43 |
| 20 | 1006 | 1003 | 996.4 | 994.7 | 1005 | 1005 | 1010 | 1004 | 10- 20 | 2838 | 3795 | 17.6,17.6 |
| 30 | 940.8 | 945.1 | 964.2 | 952.3 | 935.8 | 928.2 | 926.0 | 930.4 | 20- 30 | 4538 | 8333 | 38.6,38.6 |
| 40 | 682.7 | 674.7 | 713.9 | 714.1 | 674.5 | 677.5 | 668.4 | 686.1 | 30- 40 | 5223 | 13556 | 62.8,62.8 |
| 50 | 343.1 | 355.4 | 329.4 | 360.3 | 354.9 | 364.9 | 348.3 | 366.7 | 40- 50 | 3879 | 17435 | 80.8,80.8 |
| 60 | 176.7 | 187.1 | 163.6 | 176.9 | 195.9 | 189.3 | 196.8 | 188.6 | 50- 60 | 2331 | 19766 | 91.6,91.6 |
| 70 | 76.48 | 73.78 | 64.60 | 70.33 | 84.40 | 81.51 | 93.38 | 85.21 | 60- 70 | 1260 | 21026 | 97.4,97.4 |
| 80 | 19.88 | 18.34 | 16.04 | 17.70 | 21.88 | 22.97 | 24.14 | 22.75 | 70- 80 | 463.8 | 21490 | 99.5,99.5 |
| 90 | 1.701 | 1.669 | 1.650 | 1.708 | 2.936 | 3.049 | 3.376 | 3.063 | 80- 90 | 98.31 | 21588 | 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 | | |

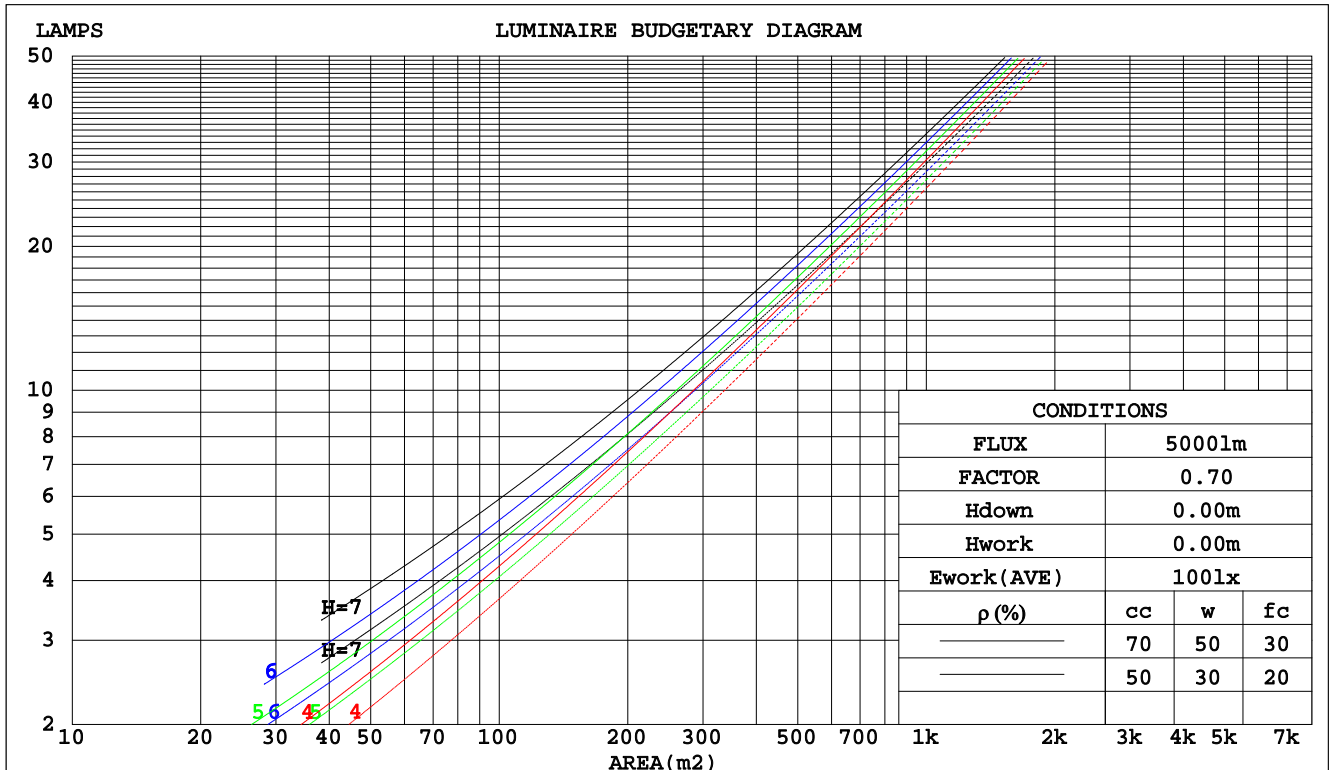
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2022-09-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:7.000m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

| | | |
|---|----------------|-------------------|
| Test:U:231.1V I:0.6439A P:147.1W PF:0.9787 Lamp Flux:21588.2x1 lm | | |
| NAME: 270800 | TYPE: | WEIGHT: |
| DIM.: | SPEC.: | SERIAL No.: |
| MFR.: | SUR.:0.15*0.15 | PROTECTION ANGLE: |

| 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 | | | | | | | | | | | | | | | |



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2022-09-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity: 65.0%
 Test Distance: 7.000m [K=1.0000]
 Remarks:

WEC AND CCEC

| | | | | | | | | |
|---|--|--|----------------|--|--|-------------------|--|--|
| Test:U:231.1V I:0.6439A P:147.1W PF:0.9787 Lamp Flux:21588.2x1 lm | | | | | | | | |
| NAME: 270800 | | | TYPE: | | | WEIGHT: | | |
| DIM.: | | | SPEC.: | | | SERIAL No.: | | |
| MFR.: | | | SUR.:0.15*0.15 | | | PROTECTION ANGLE: | | |

| 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 | .243 | .138 | .044 | .236 | .135 | .043 | .223 | .128 | .041 | .212 | .122 | .039 | .201 | .116 | .037 | |
| 2.0 | .236 | .129 | .040 | .230 | .127 | .039 | .219 | .122 | .038 | .208 | .117 | .037 | .199 | .112 | .035 | |
| 3.0 | .224 | .119 | .036 | .219 | .117 | .035 | .209 | .113 | .034 | .200 | .110 | .034 | .191 | .106 | .033 | |
| 4.0 | .211 | .110 | .032 | .207 | .108 | .032 | .198 | .105 | .031 | .190 | .102 | .031 | .183 | .099 | .030 | |
| 5.0 | .199 | .101 | .029 | .195 | .100 | .029 | .187 | .098 | .029 | .180 | .095 | .028 | .174 | .093 | .028 | |
| 6.0 | .187 | .094 | .027 | .184 | .093 | .027 | .177 | .091 | .026 | .171 | .089 | .026 | .165 | .087 | .026 | |
| 7.0 | .177 | .087 | .025 | .174 | .087 | .025 | .168 | .085 | .024 | .162 | .083 | .024 | .157 | .081 | .024 | |
| 8.0 | .167 | .082 | .023 | .164 | .081 | .023 | .159 | .079 | .023 | .154 | .078 | .022 | .149 | .076 | .022 | |
| 9.0 | .158 | .077 | .021 | .156 | .076 | .021 | .151 | .075 | .021 | .146 | .073 | .021 | .142 | .072 | .021 | |
| 10.0 | .150 | .072 | .020 | .148 | .071 | .020 | .143 | .070 | .020 | .139 | .069 | .020 | .135 | .068 | .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 | .140 | .150 | .135 | .120 | .103 | .093 | .083 | .059 | .054 | .048 | .019 | .017 | .016 | |
| 2.0 | .165 | .132 | .105 | .141 | .114 | .091 | .097 | .079 | .063 | .056 | .046 | .037 | .018 | .015 | .012 | |
| 3.0 | .156 | .114 | .081 | .133 | .098 | .070 | .092 | .068 | .049 | .053 | .040 | .029 | .017 | .013 | .009 | |
| 4.0 | .148 | .100 | .064 | .127 | .087 | .056 | .087 | .060 | .039 | .050 | .035 | .023 | .016 | .012 | .008 | |
| 5.0 | .140 | .089 | .052 | .120 | .077 | .045 | .083 | .054 | .032 | .048 | .032 | .019 | .015 | .010 | .006 | |
| 6.0 | .133 | .081 | .043 | .115 | .070 | .037 | .079 | .049 | .026 | .046 | .029 | .016 | .015 | .009 | .005 | |
| 7.0 | .127 | .074 | .036 | .109 | .064 | .032 | .076 | .045 | .022 | .044 | .026 | .013 | .014 | .009 | .004 | |
| 8.0 | .121 | .068 | .031 | .104 | .059 | .027 | .072 | .041 | .019 | .042 | .024 | .011 | .014 | .008 | .004 | |
| 9.0 | .116 | .063 | .027 | .100 | .055 | .024 | .069 | .038 | .017 | .040 | .023 | .010 | .013 | .007 | .003 | |
| 10.0 | .111 | .059 | .024 | .096 | .051 | .021 | .066 | .036 | .015 | .039 | .021 | .009 | .013 | .007 | .003 | |

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-09-19

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:7.000m [K=1.0000]
Remarks:

Uncorrected UGR Table

| | | | | | | | | | | | |
|---|-----|------------------|------|------|----------------|------|----------------|-------------------|------|------|------|
| Test:U:231.1V I:0.6439A P:147.1W PF:0.9787 Lamp Flux:21588.2x1 lm | | | | | | | | | | | |
| NAME: 270800 | | | | | TYPE: | | | WEIGHT: | | | |
| DIM.: | | | | | SPEC.: | | | SERIAL No.: | | | |
| MFR.: | | | | | SUR.:0.15*0.15 | | | PROTECTION ANGLE: | | | |
| 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 | | 31.0 | 32.3 | 31.2 | 32.5 | 32.7 | 30.9 | 32.2 | 31.2 | 32.4 | 32.6 |
| 3H | | 31.4 | 32.6 | 31.7 | 32.8 | 33.0 | 31.3 | 32.5 | 31.5 | 32.7 | 32.9 |
| 4H | | 31.5 | 32.6 | 31.8 | 32.8 | 33.1 | 31.3 | 32.4 | 31.6 | 32.7 | 32.9 |
| 6H | | 31.5 | 32.5 | 31.8 | 32.8 | 33.0 | 31.3 | 32.3 | 31.6 | 32.6 | 32.9 |
| 8H | | 31.4 | 32.5 | 31.8 | 32.7 | 33.0 | 31.2 | 32.3 | 31.6 | 32.5 | 32.8 |
| 12H | | 31.4 | 32.4 | 31.7 | 32.7 | 33.0 | 31.2 | 32.2 | 31.5 | 32.5 | 32.8 |
| 4H 2H | | 31.1 | 32.3 | 31.4 | 32.5 | 32.8 | 31.1 | 32.2 | 31.4 | 32.5 | 32.7 |
| 3H | | 31.7 | 32.7 | 32.0 | 32.9 | 33.2 | 31.6 | 32.5 | 31.9 | 32.8 | 33.1 |
| 4H | | 31.8 | 32.7 | 32.2 | 33.0 | 33.3 | 31.7 | 32.5 | 32.0 | 32.9 | 33.2 |
| 6H | | 31.8 | 32.6 | 32.2 | 33.0 | 33.3 | 31.7 | 32.5 | 32.1 | 32.8 | 33.2 |
| 8H | | 31.8 | 32.6 | 32.3 | 32.9 | 33.3 | 31.7 | 32.4 | 32.1 | 32.7 | 33.1 |
| 12H | | 31.8 | 32.5 | 32.2 | 32.9 | 33.3 | 31.6 | 32.3 | 32.0 | 32.7 | 33.1 |
| 8H 4H | | 31.8 | 32.5 | 32.2 | 32.9 | 33.2 | 31.6 | 32.4 | 32.0 | 32.7 | 33.1 |
| 6H | | 31.9 | 32.5 | 32.3 | 32.9 | 33.3 | 31.7 | 32.3 | 32.1 | 32.7 | 33.1 |
| 8H | | 31.9 | 32.4 | 32.3 | 32.8 | 33.3 | 31.7 | 32.2 | 32.1 | 32.6 | 33.1 |
| 12H | | 31.9 | 32.3 | 32.4 | 32.8 | 33.3 | 31.7 | 32.1 | 32.2 | 32.6 | 33.0 |
| 12H 4H | | 31.7 | 32.4 | 32.2 | 32.8 | 33.2 | 31.6 | 32.3 | 32.0 | 32.6 | 33.0 |
| 6H | | 31.8 | 32.4 | 32.3 | 32.8 | 33.2 | 31.7 | 32.2 | 32.1 | 32.6 | 33.1 |
| 8H | | 31.9 | 32.3 | 32.3 | 32.8 | 33.2 | 31.7 | 32.1 | 32.2 | 32.6 | 33.0 |
| Variations with the observer position at spacings: | | | | | | | | | | | |
| S = 1.0H | | + 0.8 / - 1.2 | | | | | + 0.9 / - 1.3 | | | | |
| 1.5H | | + 0.9 / - 0.7 | | | | | + 1.0 / - 1.1 | | | | |
| 2.0H | | + 1.6 / - 1.2 | | | | | + 1.7 / - 1.5 | | | | |

CIE Pub.117 Corrected 21588 lm Total Lamp Luminous Flux.(8log(F/F0) = 10.7)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-09-19

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:7.000m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

| | | |
|---|----------------|-------------------|
| Test:U:231.1V I:0.6439A P:147.1W PF:0.9787 Lamp Flux:21588.2x1 lm | | |
| NAME: 270800 | TYPE: | WEIGHT: |
| DIM.: | SPEC.: | SERIAL No.: |
| MFR.: | SUR.:0.15*0.15 | PROTECTION ANGLE: |

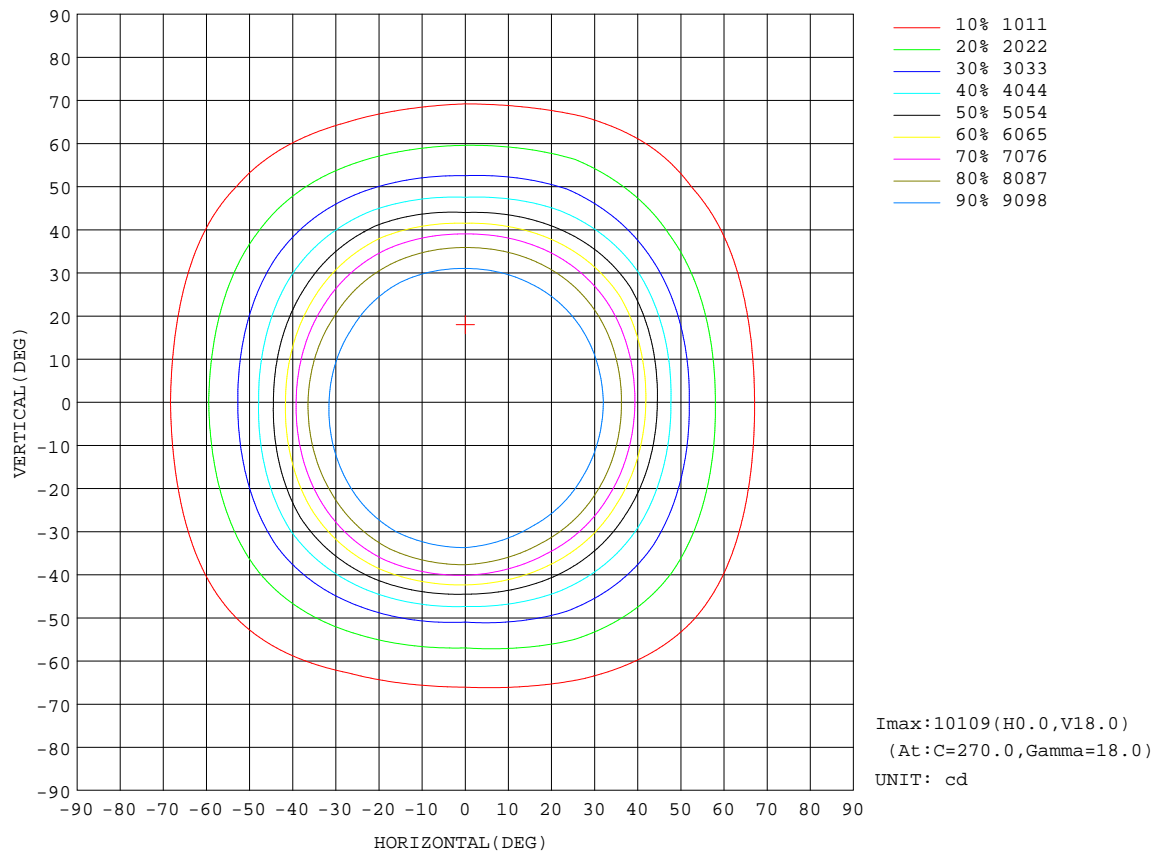
| REFLECTANCE | | | | | | | | | | |
|----------------------------------|---|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| Ceiling | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0 |
| Walls | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0 |
| Working plane | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0 |
| ROOM INDEX | UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$ | | | | | | | | | |
| $k = 0.60$ | 68 | 58 | 52 | 67 | 58 | 52 | 66 | 58 | 52 | 47 |
| 0.80 | 78 | 68 | 62 | 77 | 68 | 62 | 75 | 67 | 62 | 56 |
| 1.00 | 86 | 77 | 71 | 85 | 76 | 71 | 83 | 77 | 70 | 64 |
| 1.25 | 92 | 84 | 78 | 91 | 83 | 78 | 88 | 82 | 77 | 71 |
| 1.50 | 96 | 88 | 83 | 95 | 88 | 83 | 92 | 86 | 81 | 75 |
| 2.00 | 101 | 95 | 90 | 100 | 94 | 89 | 97 | 92 | 88 | 81 |
| 2.50 | 104 | 98 | 94 | 102 | 97 | 93 | 99 | 94 | 91 | 84 |
| 3.00 | 107 | 102 | 97 | 105 | 100 | 96 | 101 | 97 | 94 | 87 |
| 4.00 | 110 | 105 | 102 | 108 | 104 | 101 | 104 | 101 | 98 | 90 |
| 5.00 | 112 | 108 | 105 | 109 | 106 | 103 | 105 | 102 | 100 | 92 |
| ROOM INDEX | UF(total) | | | | | | | | | Direct |
| According to DIN EN 13032-2 2004 | | | Suspended | | | | | SHRNOM = 1.25 | | |

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-09-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:7.000m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

| | | |
|---|----------------|-------------------|
| Test:U:231.1V I:0.6439A P:147.1W PF:0.9787 Lamp Flux:21588.2x1 lm | | |
| NAME: 270800 | TYPE: | WEIGHT: |
| DIM.: | SPEC.: | SERIAL No.: |
| MFR.: | SUR.:0.15*0.15 | PROTECTION ANGLE: |

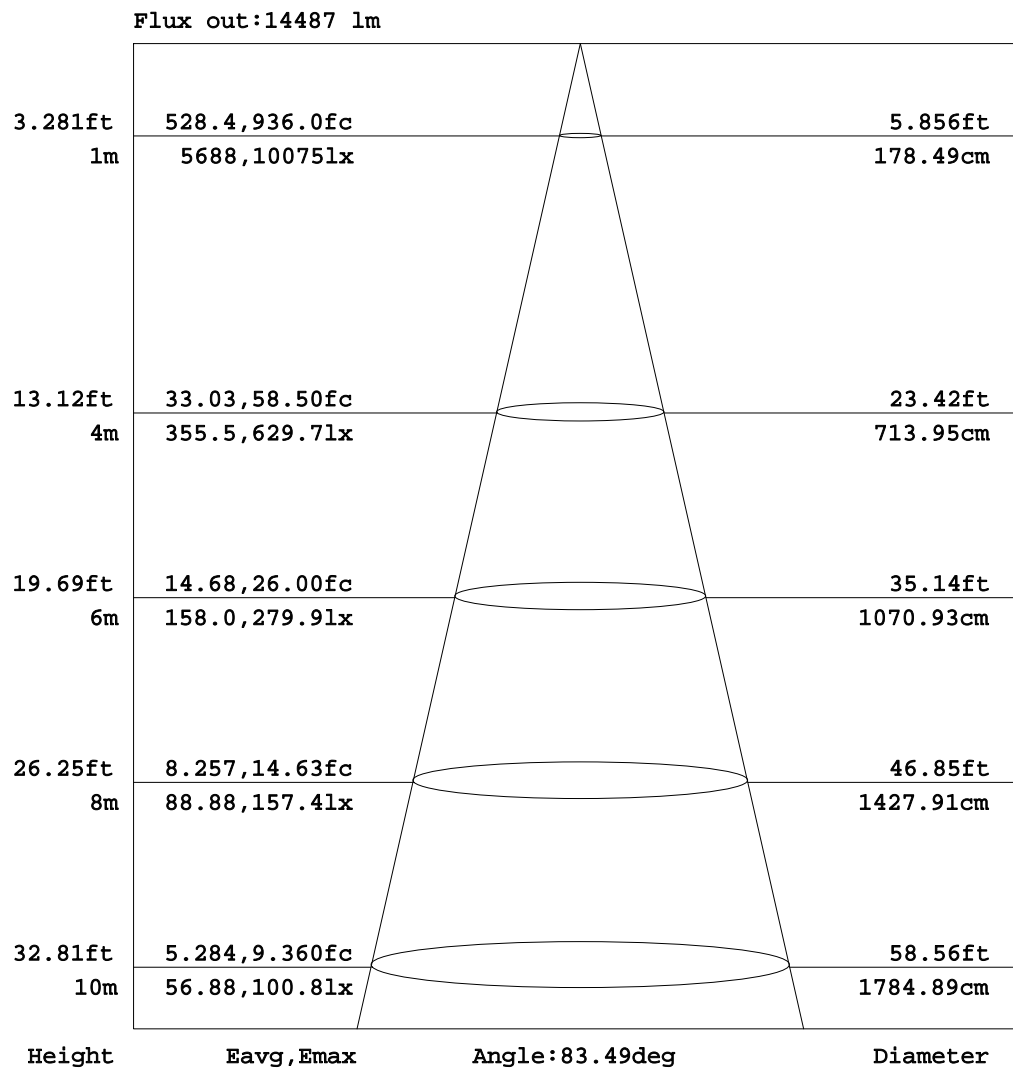


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-09-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:7.000m [K=1.0000]
Remarks:

AAI Figure

| | | |
|---|----------------|-------------------|
| Test:U:231.1V I:0.6439A P:147.1W PF:0.9787 Lamp Flux:21588.2x1 lm | | |
| NAME: 270800 | TYPE: | WEIGHT: |
| DIM.: | SPEC.: | SERIAL No.: |
| MFR.: | SUR.:0.15*0.15 | PROTECTION ANGLE: |



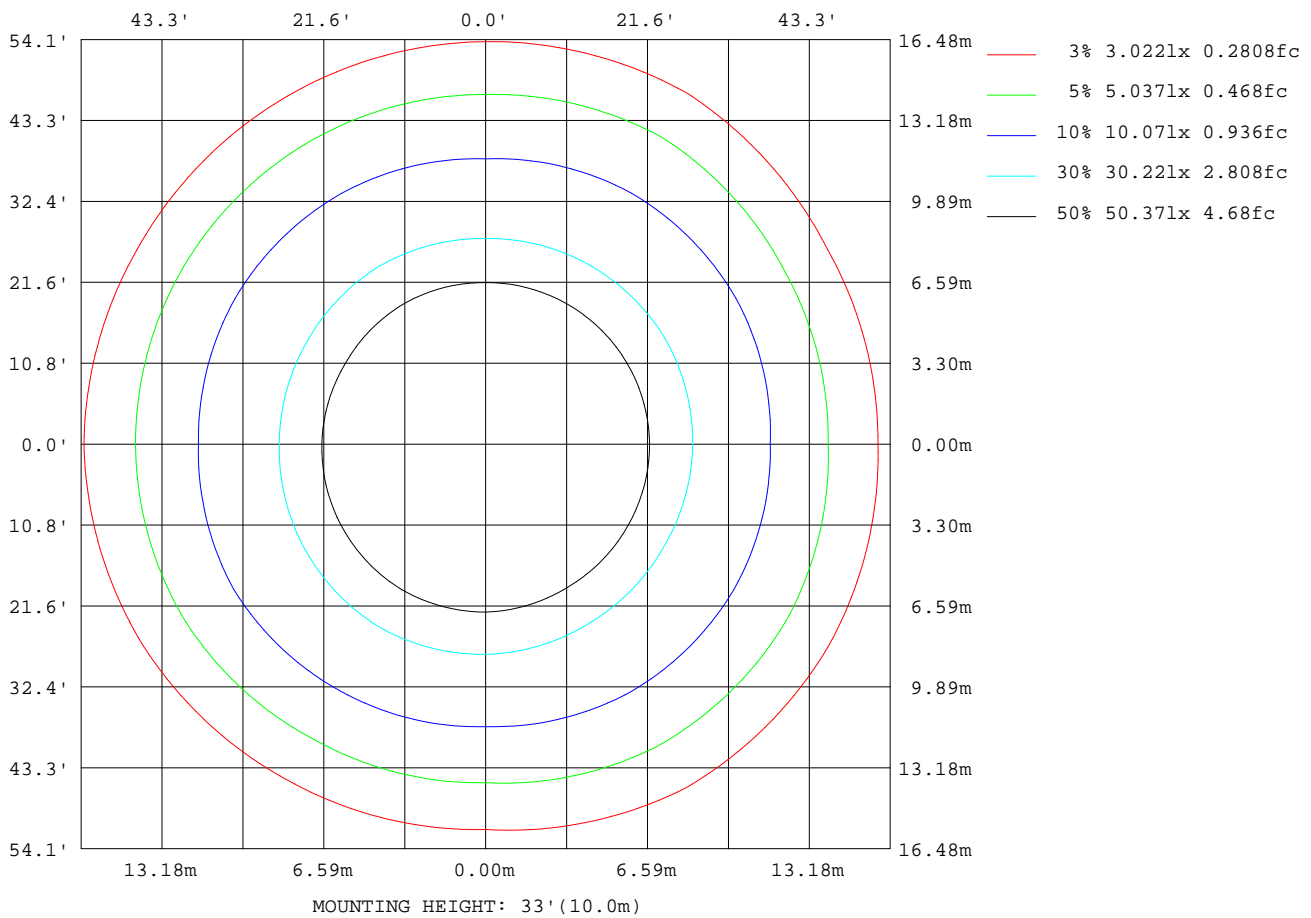
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-09-19

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:7.000m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

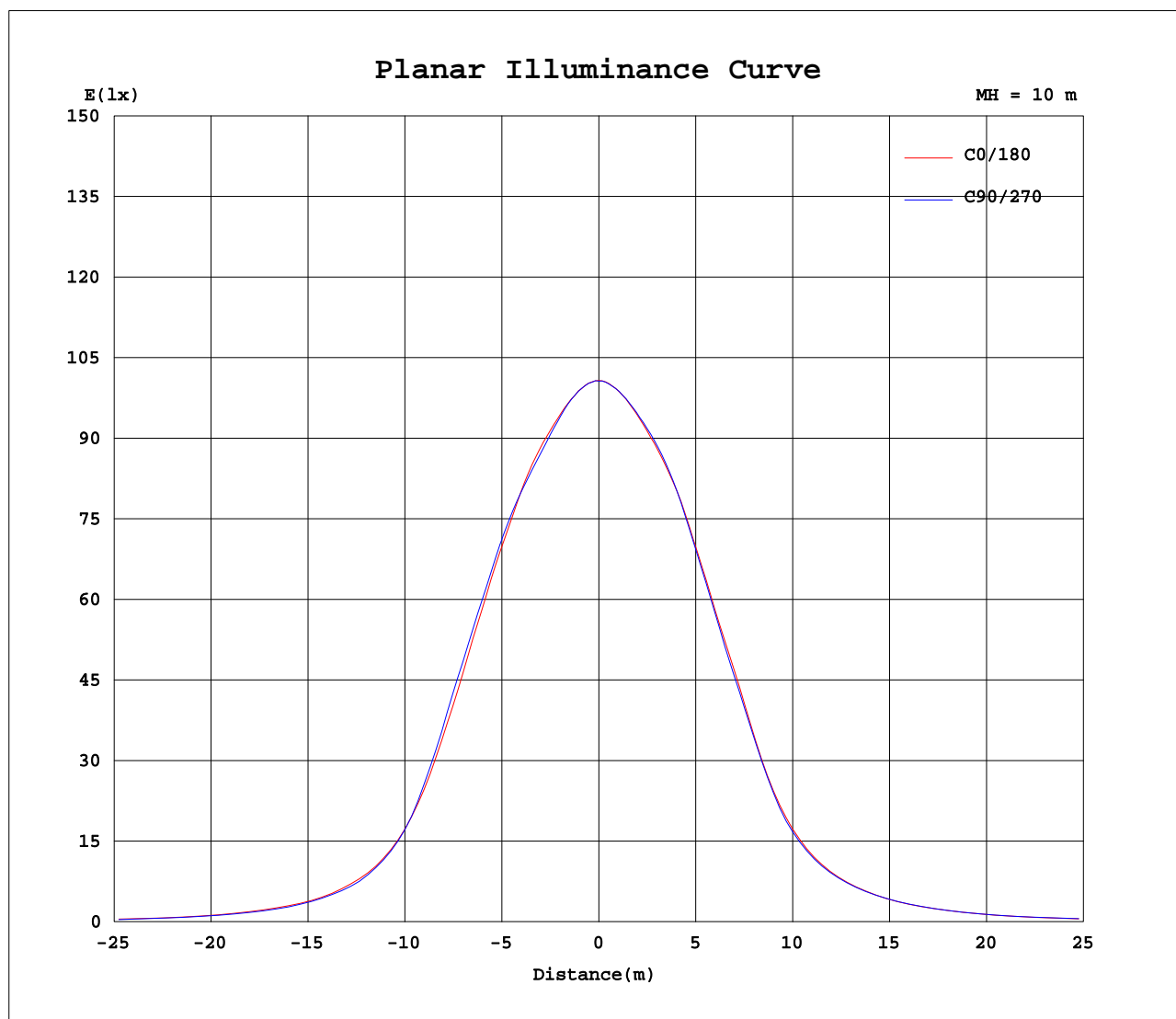
| | | |
|---|----------------|-------------------|
| Test:U:231.1V I:0.6439A P:147.1W PF:0.9787 Lamp Flux:21588.2x1 lm | | |
| NAME: 270800 | TYPE: | WEIGHT: |
| DIM.: | SPEC.: | SERIAL No.: |
| MFR.: | SUR.:0.15*0.15 | PROTECTION ANGLE: |



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2022-09-19

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:7.000m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2022-09-19

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 7.000m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:7.000m [K=1.0000]
Remarks:

```