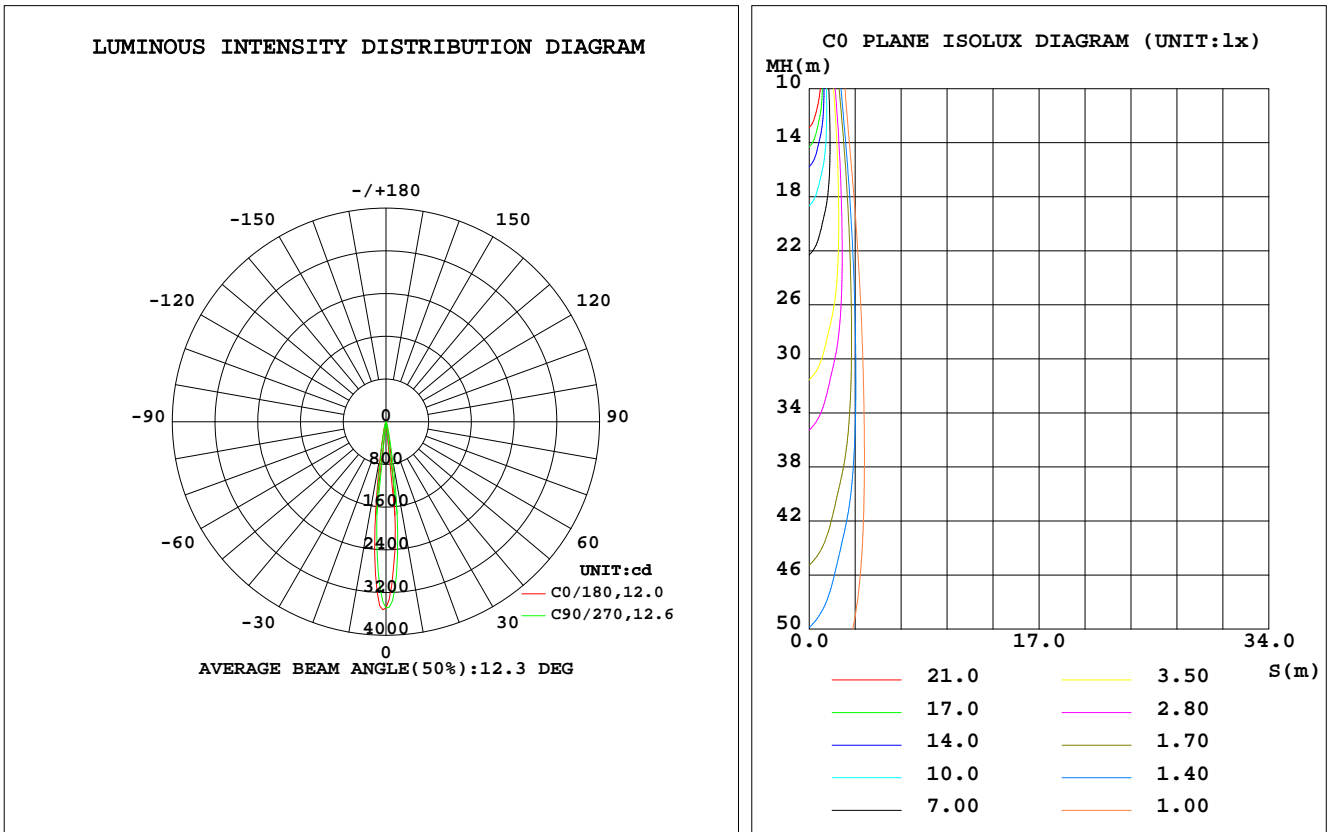


LUMINAIRE PHOTOMETRIC TEST REPORT

| | | |
|--|----------|---------------------|
| Test:U:0V I:0A P:0W PF:0 Freq:0Hz Lamp Flux:225.166x1 lm | | |
| NAME: LED spotlight | TYPE:LED | WEIGHT:N/A |
| SPEC.:N/A | DIM.: | SERIAL No.:N/A |
| MFR.: Astera LED Technology GmbH | SUR.: | Shielding Angle:N/A |

| DATA OF LAMP | | PHOTOMETRIC DATA | | | |
|------------------|------------------|------------------|--------|------------------------|----------|
| MODEL | AX3-A warm white | Imax(cd) | 3523 | S/MH(C0/180) | 0.22 |
| NOMINAL POWER(W) | | LOR(%) | 100.0 | S/MH(C90/270) | 0.20 |
| RATED VOLTAGE(V) | | TOTAL FLUX(lm) | 225.17 | η UP,DN(C0-180) | 0.0,53.5 |
| NOMINAL FLUX(lm) | 225.166 | CIE CLASS | DIRECT | η UP,DN(C180-360) | 0.2,46.3 |
| LAMPS INSIDE | 1 | η up(%) | 0.2 | CIBSE SHR NOM | 0.00 |
| TEST VOLTAGE(V) | | η down(%) | 99.8 | CIBSE SHR MAX | 1.00 |



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Seth
 Test Date:2017-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity:65.7%
 Test Distance:26.000m [K=1.4966]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

| γ | C0 | C45 | C90 | C135 | C180 | C225 | C270 | C315 | γ | Φ zone | Φ total | %lum, lamp |
|----------|-----------------------|--------|--------|--------|--------|--------|--------|--------|----------|-------------|--------------|------------|
| 10 | 392.6 | 508.7 | 704.3 | 661.0 | 567.1 | 480.1 | 455.4 | 411.8 | 0- 10 | 152.2 | 152.2 | 67.6,67.6 |
| 20 | 45.69 | 53.87 | 66.86 | 72.53 | 62.09 | 54.15 | 51.90 | 51.70 | 10- 20 | 46.76 | 198.9 | 88.4,88.4 |
| 30 | 10.31 | 10.65 | 12.04 | 12.29 | 10.26 | 10.02 | 9.549 | 9.785 | 20- 30 | 11.05 | 210.0 | 93.3,93.3 |
| 40 | 5.194 | 5.367 | 5.128 | 5.379 | 4.334 | 4.170 | 4.012 | 4.508 | 30- 40 | 4.200 | 214.2 | 95.1,95.1 |
| 50 | 4.252 | 4.430 | 4.440 | 4.602 | 4.422 | 3.322 | 3.333 | 4.259 | 40- 50 | 3.331 | 217.5 | 96.6,96.6 |
| 60 | 4.589 | 4.430 | 4.440 | 4.515 | 3.993 | 2.981 | 3.072 | 3.745 | 50- 60 | 3.632 | 221.2 | 98.2,98.2 |
| 70 | 2.387 | 2.827 | 0.8613 | 2.734 | 1.359 | 1.184 | 0 | 1.446 | 60- 70 | 2.947 | 224.1 | 99.5,99.5 |
| 80 | 0.3406 | 0.0872 | 0.0854 | 0.0859 | 0 | 0 | 0 | 0 | 70- 80 | 0.6514 | 224.8 | 99.8,99.8 |
| 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80- 90 | 0.0138 | 224.8 | 99.8,99.8 |
| 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90-100 | 0 | 224.8 | 99.8,99.8 |
| 110 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100-110 | 0 | 224.8 | 99.8,99.8 |
| 120 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 110-120 | 0 | 224.8 | 99.8,99.8 |
| 130 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 120-130 | 0 | 224.8 | 99.8,99.8 |
| 140 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 130-140 | 0 | 224.8 | 99.8,99.8 |
| 150 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0003 | 0.0835 | 140-150 | 0.0001 | 224.8 | 99.8,99.8 |
| 160 | 0 | 0 | 0 | 0 | 1.105 | 0.5111 | 1.291 | 1.874 | 150-160 | 0.1214 | 224.9 | 99.9,99.9 |
| 170 | 0 | 0 | 0 | 0 | 0.6794 | 0.5065 | 1.366 | 1.616 | 160-170 | 0.2360 | 225.1 | 100,100 |
| 180 | 0 | 0 | 0 | 0.0852 | 0.5099 | 0 | 0 | 0 | 170-180 | 0.0326 | 225.2 | 100,100 |
| DEG | LUMINOUS INTENSITY:cd | | | | | | | | | UNIT:lm | | |

Conical surface Flux(90deg): 215.86 lm

%lum = 95.9%

%lamp = 95.9%

Conical surface Flux(120deg): 221.16 lm

%lum = 98.2%

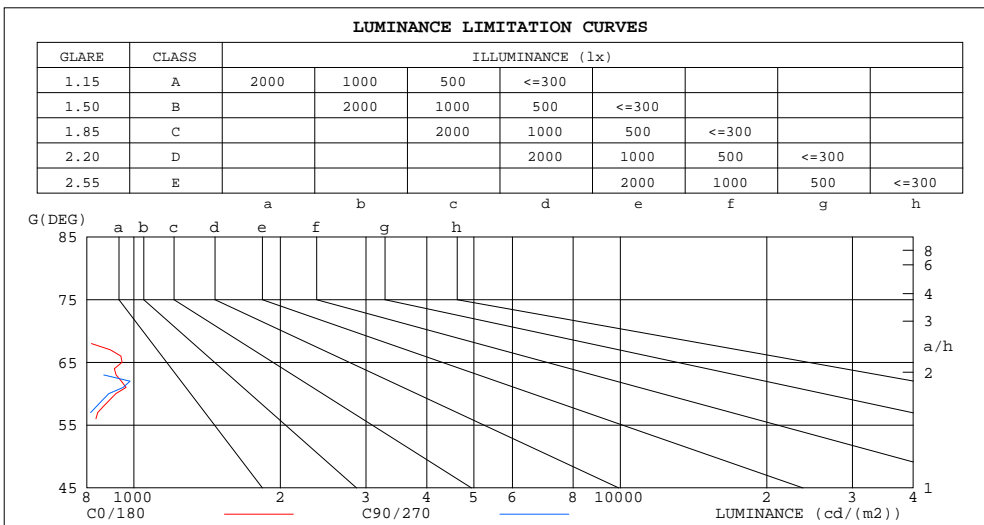
%lamp = 98.2%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Seth
 Test Date:2017-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity:65.7%
 Test Distance:26.000m [K=1.4966]
 Remarks:

LUMINANCE LIMITATION CURVES

| | | |
|--|----------|---------------------|
| Test:U:0V I:0A P:0W PF:0 Freq:0Hz Lamp Flux:225.166x1 lm | | |
| NAME: LED spotlight | TYPE:LED | WEIGHT:N/A |
| SPEC.:N/A | DIM.: | SERIAL No.:N/A |
| MFR.: Astera LED Technology GmbH | SUR.: | Shielding Angle:N/A |



| LUMINANCE cd/(m2) | | |
|-------------------|--------|---------|
| G(DEG) | C0/180 | C90/270 |
| 85 | 0 | 0 |
| 80 | 196 | 49 |
| 75 | 493 | 100 |
| 70 | 698 | 252 |
| 65 | 945 | 647 |
| 60 | 918 | 888 |
| 55 | 785 | 774 |
| 50 | 661 | 691 |
| 45 | 685 | 652 |

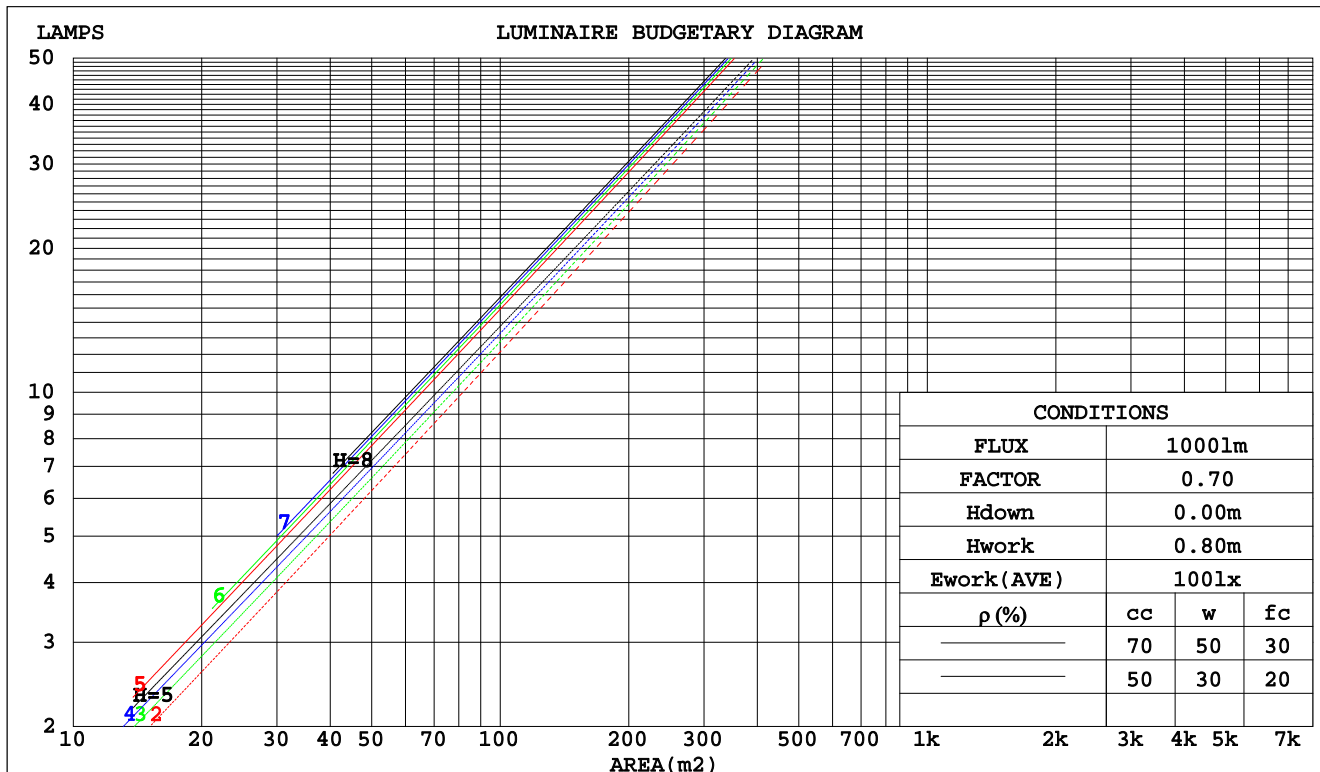
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Seth
 Test Date:2017-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity:65.7%
 Test Distance:26.000m [K=1.4966]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

| | | |
|--|----------|---------------------|
| Test:U:0V I:0A P:0W PF:0 Freq:0Hz Lamp Flux:225.166x1 lm | | |
| NAME: LED spotlight | TYPE:LED | WEIGHT:N/A |
| SPEC.:N/A | DIM.: | SERIAL No.:N/A |
| MFR.: Astera LED Technology GmbH | SUR.: | Shielding Angle:N/A |

| 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 | 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 | .00 |
| 1.0 | 1.14 | 1.12 | 1.10 | 1.11 | 1.10 | 1.09 | 1.07 | 1.06 | 1.05 | 1.04 | 1.03 | 1.02 | 1.00 | .00 | .99 | .98 |
| 2.0 | 1.09 | 1.06 | 1.04 | 1.07 | 1.05 | 1.03 | 1.04 | 1.02 | 1.01 | 1.01 | 1.00 | .99 | .99 | .98 | .97 | .95 |
| 3.0 | 1.05 | 1.02 | .00 | 1.04 | 1.01 | .99 | 1.02 | .99 | .97 | .99 | .98 | .96 | .97 | .96 | .95 | .93 |
| 4.0 | 1.02 | .99 | .96 | 1.01 | .98 | .96 | .99 | .97 | .95 | .98 | .95 | .94 | .96 | .94 | .93 | .92 |
| 5.0 | .00 | .96 | .94 | .99 | .96 | .93 | .97 | .95 | .93 | .96 | .94 | .92 | .95 | .93 | .91 | .90 |
| 6.0 | .98 | .94 | .92 | .97 | .94 | .91 | .96 | .93 | .91 | .94 | .92 | .90 | .93 | .91 | .90 | .89 |
| 7.0 | .96 | .92 | .90 | .95 | .92 | .90 | .94 | .91 | .89 | .93 | .91 | .89 | .92 | .90 | .88 | .88 |
| 8.0 | .94 | .91 | .88 | .94 | .90 | .88 | .93 | .90 | .88 | .92 | .89 | .88 | .91 | .89 | .87 | .87 |
| 9.0 | .92 | .89 | .87 | .92 | .89 | .87 | .91 | .89 | .87 | .91 | .88 | .87 | .90 | .88 | .86 | .86 |
| 10.0 | .91 | .88 | .86 | .91 | .88 | .86 | .90 | .88 | .86 | .90 | .87 | .86 | .89 | .87 | .85 | .85 |



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Seth
 Test Date:2017-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity:65.7%
 Test Distance:26.000m [K=1.4966]
 Remarks:

WEC AND CCEC

| | | | | | | | | | |
|--|--|--|--|--|----------|--|--|---------------------|--|
| Test:U:0V I:0A P:0W PF:0 Freq:0Hz Lamp Flux:225.166x1 lm | | | | | | | | | |
| NAME: LED spotlight | | | | | TYPE:LED | | | WEIGHT:N/A | |
| SPEC.:N/A | | | | | DIM.: | | | SERIAL No.:N/A | |
| MFR.: Astera LED Technology GmbH | | | | | SUR.: | | | Shielding Angle:N/A | |

| 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 | | | | | | Wall Exitance Coefficients(WEC) | | | | | | | | | | |
| 0.0 | | | | | | | | | | | | | | | | | |
| 1.0 | .123 | .070 | .022 | .116 | .066 | .021 | .104 | .059 | .019 | .092 | .053 | .017 | .082 | .047 | .015 | | |
| 2.0 | .112 | .062 | .019 | .107 | .059 | .018 | .097 | .054 | .017 | .087 | .049 | .015 | .079 | .044 | .014 | | |
| 3.0 | .103 | .055 | .016 | .098 | .053 | .016 | .090 | .049 | .015 | .082 | .045 | .014 | .075 | .042 | .013 | | |
| 4.0 | .095 | .049 | .014 | .091 | .048 | .014 | .084 | .044 | .013 | .077 | .042 | .013 | .071 | .039 | .012 | | |
| 5.0 | .087 | .045 | .013 | .084 | .043 | .013 | .078 | .041 | .012 | .073 | .038 | .011 | .068 | .036 | .011 | | |
| 6.0 | .081 | .041 | .012 | .079 | .040 | .011 | .074 | .038 | .011 | .069 | .036 | .011 | .064 | .034 | .010 | | |
| 7.0 | .076 | .037 | .011 | .074 | .037 | .010 | .069 | .035 | .010 | .065 | .033 | .010 | .061 | .032 | .009 | | |
| 8.0 | .071 | .035 | .010 | .069 | .034 | .010 | .065 | .033 | .009 | .062 | .031 | .009 | .059 | .030 | .009 | | |
| 9.0 | .067 | .032 | .009 | .065 | .032 | .009 | .062 | .031 | .009 | .059 | .030 | .008 | .056 | .028 | .008 | | |
| 10.0 | .063 | .030 | .008 | .062 | .030 | .008 | .059 | .029 | .008 | .056 | .028 | .008 | .054 | .027 | .008 | | |

| 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 | | | | | | Ceiling Cavity Exitance Coefficients(CCEC) | | | | | | | | | |
| 0.0 | .192 | .192 | .192 | .164 | .164 | .164 | .112 | .112 | .112 | .064 | .064 | .064 | .021 | .021 | .021 | |
| 1.0 | .169 | .159 | .151 | .144 | .137 | .130 | .099 | .094 | .090 | .057 | .054 | .052 | .018 | .018 | .017 | |
| 2.0 | .150 | .134 | .121 | .128 | .115 | .105 | .088 | .080 | .073 | .051 | .046 | .043 | .016 | .015 | .014 | |
| 3.0 | .134 | .115 | .099 | .115 | .099 | .086 | .079 | .069 | .060 | .045 | .040 | .036 | .015 | .013 | .012 | |
| 4.0 | .120 | .099 | .083 | .103 | .085 | .072 | .071 | .060 | .051 | .041 | .035 | .030 | .013 | .011 | .010 | |
| 5.0 | .109 | .086 | .070 | .093 | .075 | .061 | .064 | .052 | .043 | .037 | .031 | .025 | .012 | .010 | .008 | |
| 6.0 | .099 | .076 | .060 | .085 | .066 | .052 | .059 | .046 | .037 | .034 | .027 | .022 | .011 | .009 | .007 | |
| 7.0 | .090 | .067 | .051 | .078 | .058 | .045 | .054 | .041 | .032 | .031 | .024 | .019 | .010 | .008 | .006 | |
| 8.0 | .083 | .060 | .045 | .072 | .052 | .039 | .049 | .037 | .028 | .029 | .022 | .016 | .009 | .007 | .005 | |
| 9.0 | .077 | .054 | .039 | .066 | .047 | .034 | .046 | .033 | .024 | .027 | .020 | .014 | .009 | .006 | .005 | |
| 10.0 | .071 | .049 | .035 | .061 | .043 | .030 | .043 | .030 | .021 | .025 | .018 | .013 | .008 | .006 | .004 | |

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Seth
 Test Date:2017-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity:65.7%
 Test Distance:26.000m [K=1.4966]
 Remarks:

UGR(Unified Glare Rating) Table

| | | | | | | | | | | |
|--|------------------|-----|-----|-----|----------|----------------|-----|---------------------|-----|-----|
| Test:U:0V I:0A P:0W PF:0 Freq:0Hz Lamp Flux:225.166x1 lm | | | | | | | | | | |
| NAME: LED spotlight | | | | | TYPE:LED | | | WEIGHT:N/A | | |
| SPEC.:N/A | | | | | DIM.: | | | SERIAL No.:N/A | | |
| MFR.: Astera LED Technology GmbH | | | | | SUR.: | | | Shielding Angle:N/A | | |
| 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 | 4.9 | 5.4 | 5.1 | 5.6 | 5.7 | 5.5 | 6.0 | 5.7 | 6.1 | 6.3 |
| 3H | 6.9 | 7.4 | 7.1 | 7.5 | 7.7 | 6.4 | 6.9 | 6.6 | 7.1 | 7.3 |
| 4H | 7.2 | 7.7 | 7.5 | 7.9 | 8.1 | 6.4 | 6.9 | 6.6 | 7.1 | 7.3 |
| 6H | 7.3 | 7.7 | 7.6 | 8.0 | 8.2 | 6.3 | 6.8 | 6.6 | 7.0 | 7.2 |
| 8H | 7.2 | 7.7 | 7.5 | 7.9 | 8.2 | 6.3 | 6.7 | 6.5 | 6.9 | 7.2 |
| 12H | 7.2 | 7.6 | 7.5 | 7.9 | 8.2 | 6.2 | 6.6 | 6.5 | 6.9 | 7.2 |
| 4H 2H | 6.1 | 6.6 | 6.4 | 6.8 | 7.0 | 6.5 | 7.0 | 6.8 | 7.2 | 7.4 |
| 3H | 7.9 | 8.4 | 8.2 | 8.6 | 8.9 | 7.4 | 7.9 | 7.7 | 8.1 | 8.4 |
| 4H | 8.3 | 8.7 | 8.6 | 9.0 | 9.3 | 7.4 | 7.8 | 7.7 | 8.1 | 8.4 |
| 6H | 8.4 | 8.7 | 8.7 | 9.1 | 9.4 | 7.3 | 7.6 | 7.6 | 8.0 | 8.3 |
| 8H | 8.3 | 8.7 | 8.7 | 9.0 | 9.4 | 7.2 | 7.5 | 7.6 | 7.9 | 8.3 |
| 12H | 8.3 | 8.6 | 8.7 | 8.9 | 9.3 | 7.2 | 7.5 | 7.6 | 7.8 | 8.2 |
| 8H 4H | 8.3 | 8.6 | 8.7 | 9.0 | 9.3 | 7.5 | 7.8 | 7.8 | 8.1 | 8.5 |
| 6H | 8.4 | 8.7 | 8.8 | 9.1 | 9.5 | 7.3 | 7.6 | 7.8 | 8.0 | 8.4 |
| 8H | 8.3 | 8.6 | 8.8 | 9.0 | 9.4 | 7.3 | 7.5 | 7.7 | 7.9 | 8.4 |
| 12H | 8.3 | 8.5 | 8.7 | 8.9 | 9.4 | 7.2 | 7.4 | 7.7 | 7.9 | 8.3 |
| 12H 4H | 8.2 | 8.6 | 8.6 | 8.9 | 9.3 | 7.4 | 7.7 | 7.8 | 8.1 | 8.5 |
| 6H | 8.3 | 8.6 | 8.8 | 9.0 | 9.4 | 7.3 | 7.5 | 7.7 | 8.0 | 8.4 |
| 8H | 8.3 | 8.5 | 8.7 | 8.9 | 9.4 | 7.2 | 7.4 | 7.7 | 7.9 | 8.3 |
| Variations with the observer position at spacings: | | | | | | | | | | |
| S = 1.0H | + 0.3 / - 0.4 | | | | | + 0.7 / - 0.8 | | | | |
| 1.5H | + 0.4 / - 0.6 | | | | | + 0.9 / - 1.1 | | | | |
| 2.0H | + 1.0 / - 0.9 | | | | | + 1.9 / - 2.5 | | | | |

CIE Pub.117 Corrected 225.2 lm Total Lamp Luminous Flux.(8log(F/F0) = -5.2)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.5DEG
Operators:Seth
Test Date:2017-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
Humidity:65.7%
Test Distance:26.000m [K=1.4966]
Remarks:

UTILIZATION FACTORS TABLE

| | | |
|--|----------|---------------------|
| Test:U:0V I:0A P:0W PF:0 Freq:0Hz Lamp Flux:225.166x1 lm | | |
| NAME: LED spotlight | TYPE:LED | WEIGHT:N/A |
| SPEC.:N/A | DIM.: | SERIAL No.:N/A |
| MFR.: Astera LED Technology GmbH | SUR.: | Shielding Angle:N/A |

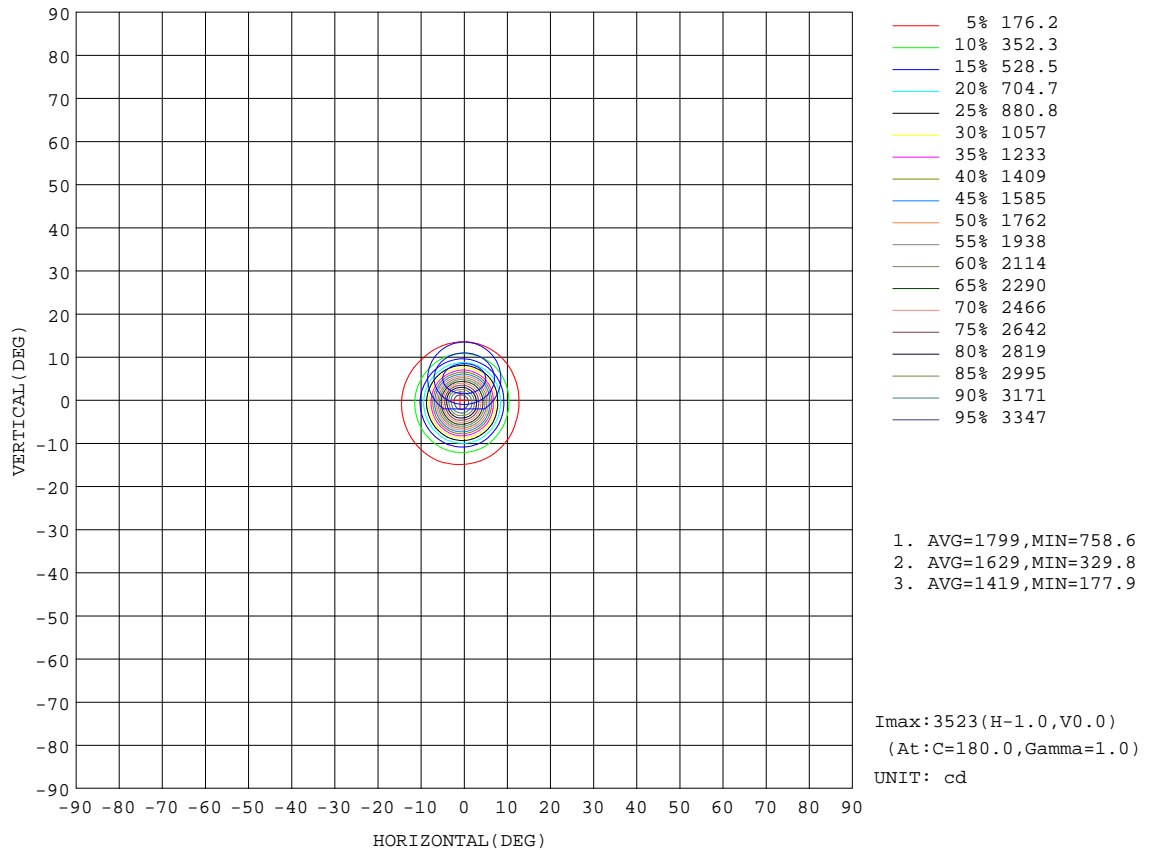
| REFLECTANCE | | | | | | | | | | |
|----------------------------------|---|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| Ceiling | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0 |
| Walls | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0 |
| Working plane | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0 |
| ROOM INDEX | UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$ | | | | | | | | | |
| $k = 0.60$ | 89 | 82 | 79 | 88 | 82 | 79 | 87 | 82 | 79 | 75 |
| 0.80 | 96 | 90 | 86 | 95 | 90 | 86 | 94 | 89 | 86 | 82 |
| 1.00 | 100 | 94 | 91 | 99 | 94 | 91 | 97 | 94 | 90 | 86 |
| 1.25 | 104 | 99 | 95 | 103 | 98 | 95 | 101 | 97 | 94 | 90 |
| 1.50 | 106 | 102 | 98 | 105 | 101 | 98 | 103 | 99 | 97 | 92 |
| 2.00 | 109 | 105 | 102 | 107 | 104 | 101 | 105 | 102 | 99 | 94 |
| 2.50 | 110 | 107 | 104 | 109 | 105 | 103 | 106 | 103 | 101 | 95 |
| 3.00 | 112 | 109 | 106 | 110 | 107 | 105 | 107 | 104 | 103 | 96 |
| 4.00 | 114 | 111 | 109 | 112 | 110 | 108 | 108 | 106 | 105 | 98 |
| 5.00 | 115 | 113 | 111 | 113 | 111 | 110 | 109 | 108 | 107 | 99 |
| 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:24.5DEG
 Operators:Seth
 Test Date:2017-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity:65.7%
 Test Distance:26.000m [K=1.4966]
 Remarks:

ISOCANDELA DIAGRAM

| | | |
|--|----------|---------------------|
| Test:U:0V I:0A P:0W PF:0 Freq:0Hz Lamp Flux:225.166x1 lm | | |
| NAME: LED spotlight | TYPE:LED | WEIGHT:N/A |
| SPEC.:N/A | DIM.: | SERIAL No.:N/A |
| MFR.: Astera LED Technology GmbH | SUR.: | Shielding Angle:N/A |

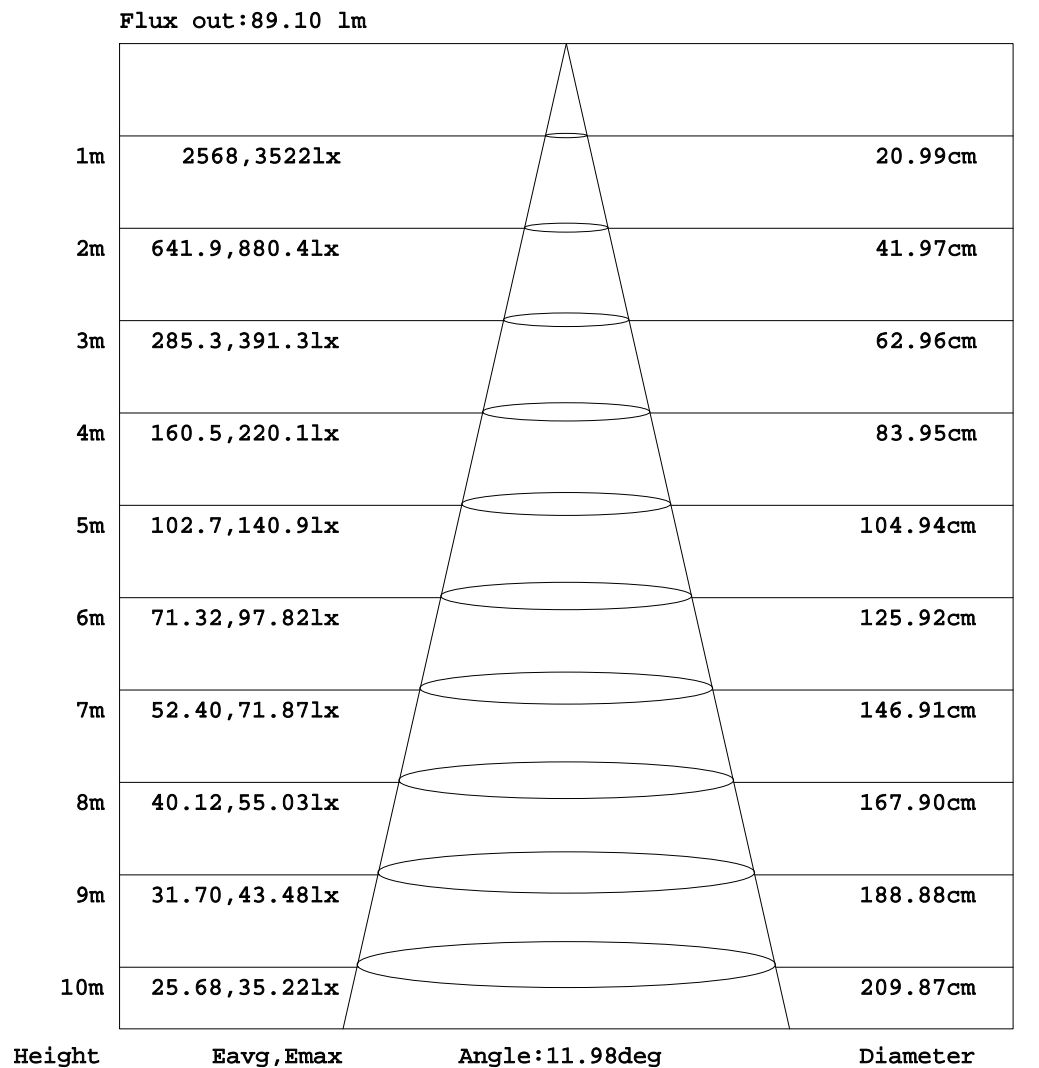


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Seth
 Test Date:2017-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity:65.7%
 Test Distance:26.000m [K=1.4966]
 Remarks:

AAI Figure

| | | |
|--|----------|---------------------|
| Test:U:0V I:0A P:0W PF:0 Freq:0Hz Lamp Flux:225.166x1 lm | | |
| NAME: LED spotlight | TYPE:LED | WEIGHT:N/A |
| SPEC.:N/A | DIM.: | SERIAL No.:N/A |
| MFR.: Astera LED Technology GmbH | SUR.: | Shielding Angle:N/A |



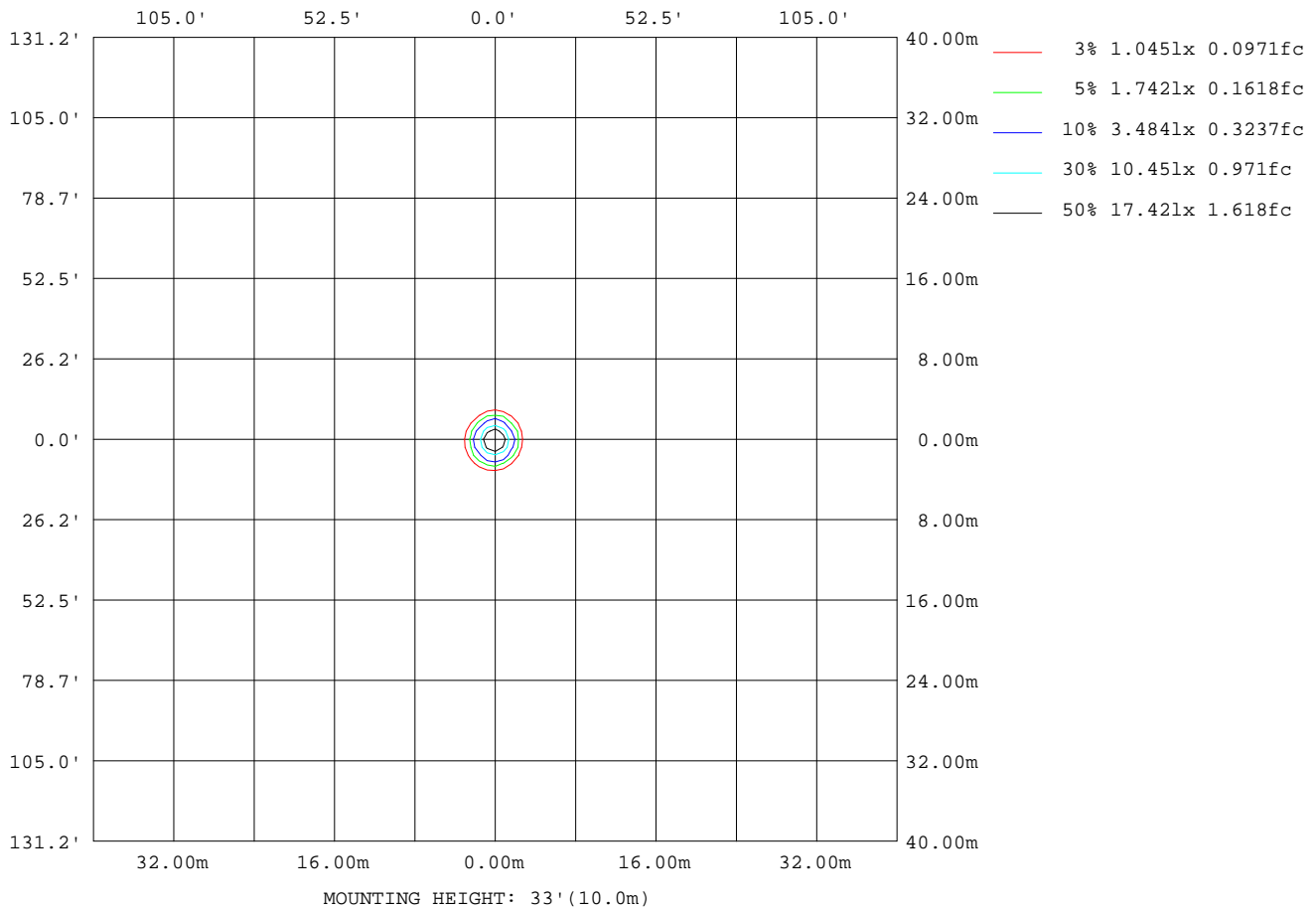
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:24.5DEG
 Operators:Seth
 Test Date:2017-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
 Humidity:65.7%
 Test Distance:26.000m [K=1.4966]
 Remarks:

ISOLUX DIAGRAM

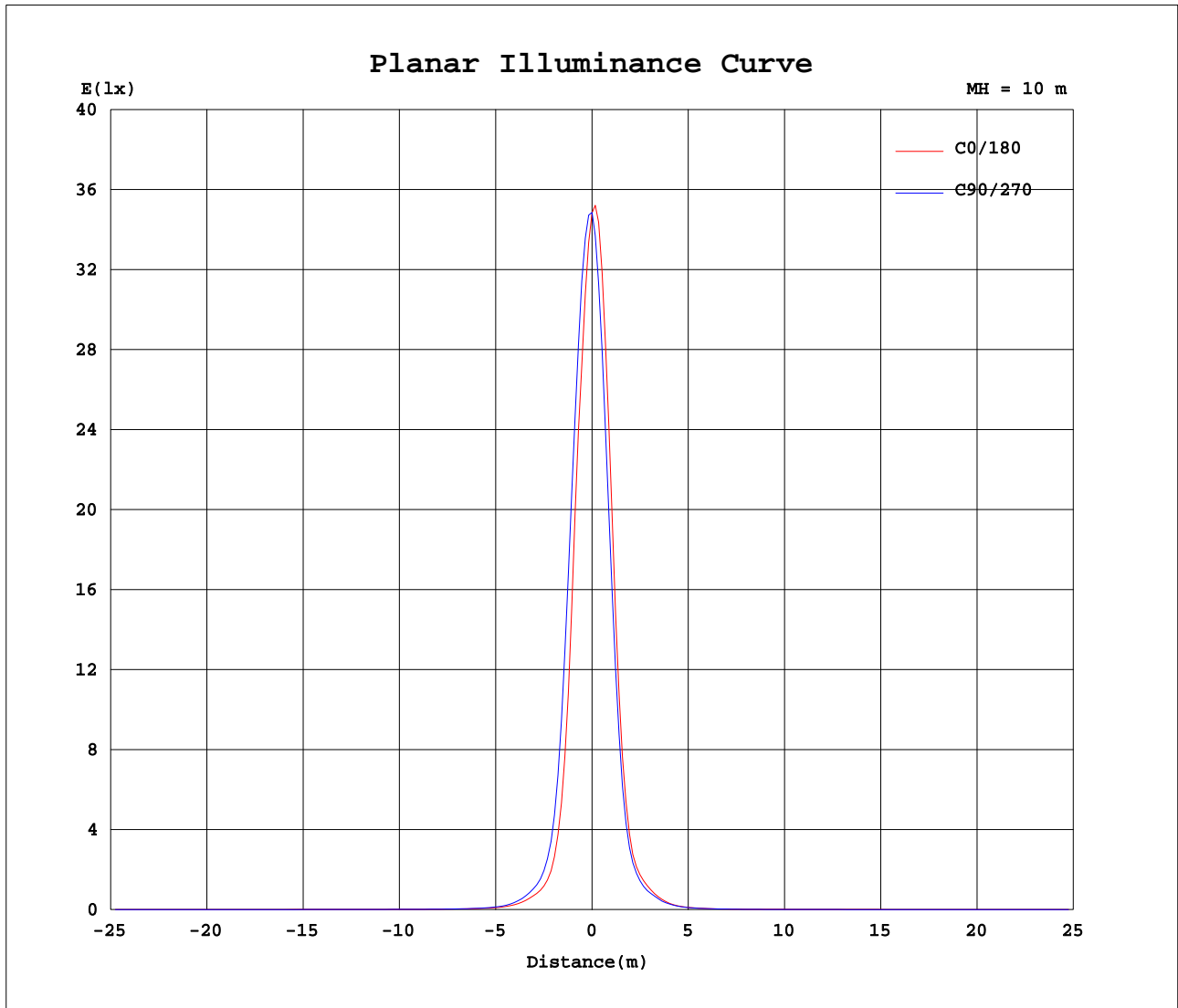
| | | |
|--|----------|---------------------|
| Test:U:0V I:0A P:0W PF:0 Freq:0Hz Lamp Flux:225.166x1 lm | | |
| NAME: LED spotlight | TYPE:LED | WEIGHT:N/A |
| SPEC.:N/A | DIM.: | SERIAL No.:N/A |
| MFR.: Astera LED Technology GmbH | SUR.: | Shielding Angle:N/A |



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.5DEG
Operators:Seth
Test Date:2017-06-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.352
Humidity:65.7%
Test Distance:26.000m [K=1.4966]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 24.5DEG
Operators: Seth
Test Date: 2017-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.352
Humidity: 65.7%
Test Distance: 26.000m [K=1.4966]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

| | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|----------|--|--|--|--|---------------------|--|--|--|--|
| Test:U:0V I:0A P:0W PF:0 Freq:0Hz Lamp Flux:225.166x1 lm | | | | | | | | | | | | | | | | | | |
| NAME: LED spotlight | | | | | | | | | TYPE:LED | | | | | WEIGHT:N/A | | | | |
| SPEC.:N/A | | | | | | | | | DIM.: | | | | | SERIAL No.:N/A | | | | |
| MFR.: Astera LED Technology GmbH | | | | | | | | | SUR.: | | | | | Shielding Angle:N/A | | | | |

Table--1

UNIT: cd

| C(DEG) γ (DEG) | 0 | 22.5 | 45 | 67.5 | 90 | 112.5 | 135 | 157.5 | 180 | 202.5 | 225 | 247.5 | 270 | 292.5 | 315 | 337.5 | | | |
|-------------------|------|------|------|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|--|--|
| 0 | 3484 | 3494 | 3485 | 3484 | 3486 | 3457 | 3471 | 3478 | 3484 | 3494 | 3485 | 3484 | 3486 | 3457 | 3471 | 3478 | | | |
| 5 | 2003 | 2138 | 2260 | 2380 | 2492 | 2620 | 2596 | 2523 | 2448 | 2329 | 2205 | 2099 | 2008 | 1982 | 1983 | 1981 | | | |
| 10 | 393 | 425 | 509 | 628 | 704 | 715 | 661 | 603 | 567 | 506 | 480 | 471 | 455 | 424 | 412 | 389 | | | |
| 15 | 108 | 119 | 137 | 153 | 171 | 185 | 181 | 171 | 162 | 149 | 136 | 134 | 130 | 128 | 128 | 118 | | | |
| 20 | 45.7 | 48.6 | 53.9 | 60.0 | 66.9 | 73.3 | 72.5 | 66.1 | 62.1 | 56.8 | 54.2 | 54.2 | 51.9 | 51.9 | 51.7 | 50.6 | | | |
| 25 | 18.2 | 19.2 | 20.1 | 22.0 | 24.3 | 25.2 | 24.2 | 21.6 | 21.2 | 20.1 | 19.2 | 19.0 | 18.9 | 19.1 | 19.0 | 19.3 | | | |
| 30 | 10.3 | 10.3 | 10.7 | 11.6 | 12.0 | 12.5 | 12.3 | 10.9 | 10.3 | 9.65 | 10.0 | 9.74 | 9.55 | 9.60 | 9.79 | 9.65 | | | |
| 35 | 6.97 | 6.42 | 6.48 | 7.19 | 7.18 | 7.16 | 7.25 | 6.89 | 5.69 | 5.72 | 5.88 | 5.64 | 5.45 | 5.78 | 5.88 | 6.03 | | | |
| 40 | 5.19 | 5.38 | 5.37 | 5.22 | 5.13 | 5.46 | 5.38 | 5.18 | 4.33 | 4.43 | 4.17 | 4.10 | 4.01 | 4.09 | 4.51 | 4.84 | | | |
| 45 | 4.84 | 4.45 | 4.60 | 4.54 | 4.61 | 4.94 | 4.86 | 4.50 | 4.25 | 3.50 | 3.49 | 3.50 | 3.33 | 3.92 | 4.26 | 4.25 | | | |
| 50 | 4.25 | 4.36 | 4.43 | 4.28 | 4.44 | 4.60 | 4.60 | 4.25 | 4.42 | 3.33 | 3.32 | 3.25 | 3.33 | 4.00 | 4.26 | 4.25 | | | |
| 55 | 4.50 | 4.36 | 4.43 | 4.36 | 4.44 | 4.60 | 4.52 | 4.25 | 4.42 | 3.25 | 3.15 | 3.25 | 3.07 | 4.00 | 4.17 | 3.99 | | | |
| 60 | 4.59 | 4.36 | 4.43 | 5.39 | 4.44 | 4.60 | 4.52 | 4.33 | 3.99 | 2.82 | 2.98 | 2.82 | 3.07 | 3.23 | 3.75 | 3.40 | | | |
| 65 | 3.99 | 4.44 | 4.43 | 4.79 | 2.73 | 4.26 | 4.26 | 3.74 | 2.63 | 2.29 | 2.21 | 2.05 | 1.36 | 2.54 | 2.98 | 2.80 | | | |
| 70 | 2.39 | 2.48 | 2.83 | 1.55 | 0.86 | 1.54 | 2.73 | 2.39 | 1.36 | 1.11 | 1.18 | 0.09 | 0.00 | 0.08 | 1.45 | 1.35 | | | |
| 75 | 1.28 | 1.28 | 1.37 | 0.34 | 0.26 | 0.34 | 1.46 | 1.36 | 0.42 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.17 | 0.00 | | | |
| 80 | 0.34 | 0.44 | 0.09 | 0.00 | 0.09 | 0.09 | 0.09 | 0.51 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 85 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 100 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 105 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 110 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 115 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 120 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 125 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 130 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 135 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 140 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 145 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | |
| 150 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | | |
| 155 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 0.43 | 0.09 | 0.61 | 0.60 | 0.52 | 0.69 | 0.34 | | | |
| 160 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.10 | 1.62 | 0.51 | 2.40 | 1.29 | 1.62 | 1.87 | 1.62 | | | |
| 165 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.10 | 1.62 | 0.51 | 3.00 | 1.88 | 1.45 | 1.87 | 2.55 | | | |
| 170 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.68 | 1.20 | 0.51 | 1.96 | 1.37 | 1.28 | 1.62 | 1.27 | | | |
| 175 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.51 | 0.51 | 0.09 | 0.51 | 0.09 | 0.34 | 0.00 | 0.42 | | | |
| 180 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 0.17 | 0.51 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | | | |

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 Operators:Seth
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