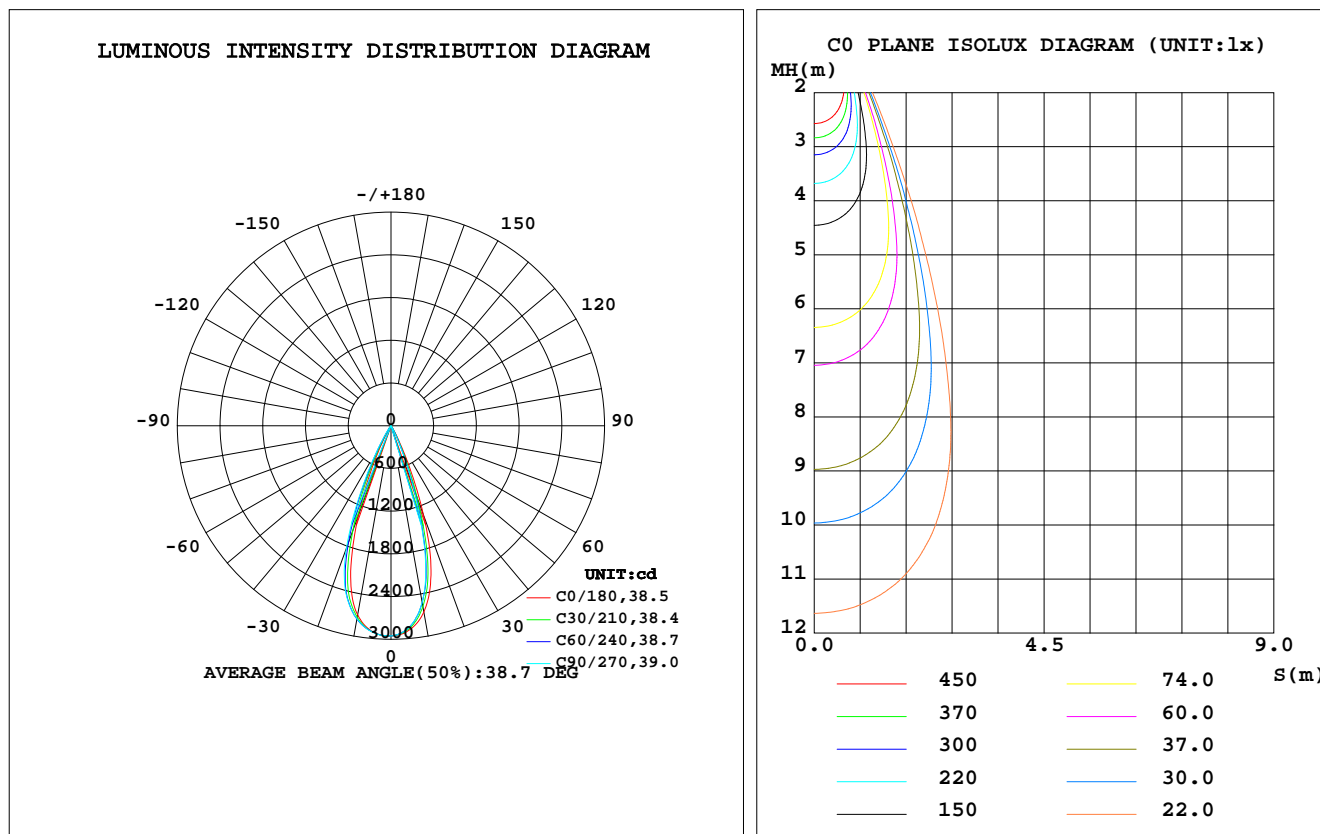


LUMINAIRE PHOTOMETRIC TEST REPORT

| | | |
|--------------------------|--------------------|------------------|
| NAME: VM060-VF61RA01-15W | TYPE:indoor lights | WEIGHT:1 |
| SPEC.:3000K-CRI90-38D | DIM.: | SERIAL No.: |
| | SUR.: | Shielding Angle: |

| DATA OF LAMP | | PHOTOMETRIC DATA | | | |
|------------------|-------------------|------------------|--------|--------------------|----------|
| MODEL | BXRE-30G1000-C-7X | Imax(cd) | 2954 | S/MH(C0/180) | 0.59 |
| NOMINAL POWER(W) | 15 | LOR(%) | 100.0 | S/MH(C90/270) | 0.65 |
| RATED VOLTAGE(V) | 230 | TOTAL FLUX(lm) | 1195.9 | η UP, DN(C0-180) | 1.3,42.1 |
| NOMINAL FLUX(lm) | 1195.85 | CIE CLASS | DIRECT | η UP, DN(C180-360) | 1.2,55.4 |
| LAMPS INSIDE | 1 | η up(%) | 2.5 | CIBSE SHR NOM | 0.50 |
| TEST VOLTAGE(V) | 230 | η down(%) | 97.5 | CIBSE SHR MAX | 0.60 |



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:LGL
 Test Date:2021-08-12

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.190m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

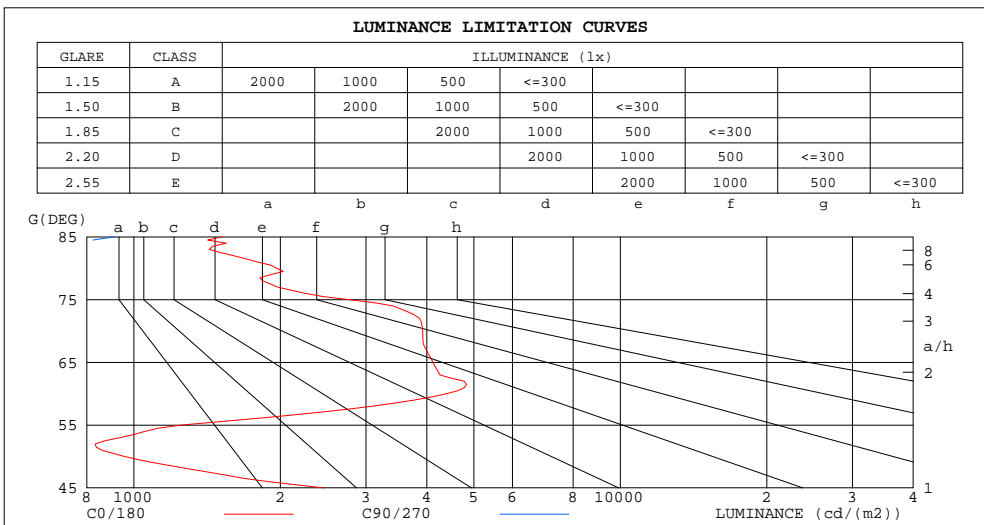
| γ | C0 | C45 | C90 | C135 | C180 | C225 | C270 | C315 | γ | Φ zone | Φ total | Φ lum,lamp |
|----------|-----------------------|--------|--------|--------|--------|--------|--------|--------|----------|-------------|--------------|-----------------|
| 10 | 2657 | 2564 | 2520 | 2618 | 2697 | 2737 | 2756 | 2742 | 0- 10 | 268.8 | 268.8 | 22.5,22.5 |
| 20 | 1339 | 1028 | 919.5 | 1117 | 1346 | 1639 | 1831 | 1690 | 10- 20 | 578.5 | 847.3 | 70.9,70.9 |
| 30 | 122.0 | 75.68 | 60.60 | 66.59 | 121.7 | 241.6 | 313.7 | 222.8 | 20- 30 | 279.2 | 1127 | 94.2,94.2 |
| 40 | 14.69 | 9.841 | 7.459 | 8.399 | 13.70 | 20.94 | 27.44 | 20.53 | 30- 40 | 32.63 | 1159 | 96.9,96.9 |
| 50 | 1.720 | 1.176 | 0.6400 | 0.4084 | 0.7278 | 1.658 | 1.787 | 1.377 | 40- 50 | 4.428 | 1164 | 97.3,97.3 |
| 60 | 6.156 | 0.8628 | 0.7785 | 0.5796 | 0.3522 | 0.8879 | 0.4468 | 0.4841 | 50- 60 | 0.8525 | 1164 | 97.4,97.4 |
| 70 | 3.759 | 0.3128 | 0.1915 | 0.2642 | 0.1818 | 0.1827 | 0.1701 | 0.1776 | 60- 70 | 0.8955 | 1165 | 97.4,97.4 |
| 80 | 0.9563 | 0.2727 | 0.2079 | 0.2469 | 0.1949 | 0.1597 | 0.1814 | 0.1776 | 70- 80 | 0.4288 | 1166 | 97.5,97.5 |
| 90 | 0.2734 | 0.2623 | 0.2395 | 0.2689 | 0.2300 | 0.1893 | 0.2146 | 0.2042 | 80- 90 | 0.2559 | 1166 | 97.5,97.5 |
| 100 | 1.890 | 0.4868 | 0.2543 | 0.3908 | 0.2912 | 0.2312 | 0.2655 | 0.2709 | 90-100 | 0.4000 | 1166 | 97.5,97.5 |
| 110 | 0.6379 | 0.5147 | 0.4221 | 0.4463 | 0.3635 | 0.2731 | 0.3163 | 0.3107 | 100-110 | 0.4631 | 1167 | 97.6,97.6 |
| 120 | 1.386 | 1.382 | 1.594 | 1.360 | 1.081 | 0.7698 | 0.7377 | 0.8157 | 110-120 | 0.6538 | 1168 | 97.6,97.6 |
| 130 | 4.048 | 4.865 | 5.250 | 4.924 | 4.021 | 3.353 | 3.057 | 3.506 | 120-130 | 2.172 | 1170 | 97.8,97.8 |
| 140 | 9.335 | 10.15 | 10.67 | 10.04 | 9.285 | 8.124 | 7.717 | 8.339 | 130-140 | 5.033 | 1175 | 98.2,98.2 |
| 150 | 14.57 | 15.30 | 15.82 | 15.39 | 14.68 | 13.78 | 13.40 | 13.87 | 140-150 | 7.476 | 1182 | 98.9,98.9 |
| 160 | 17.44 | 17.03 | 17.31 | 17.34 | 17.31 | 17.28 | 18.07 | 17.74 | 150-160 | 7.520 | 1190 | 99.5,99.5 |
| 170 | 14.79 | 14.28 | 14.66 | 15.06 | 15.22 | 15.68 | 15.93 | 15.48 | 160-170 | 4.707 | 1194 | 99.9,99.9 |
| 180 | 14.34 | 14.51 | 14.46 | 14.89 | 14.38 | 14.49 | 14.48 | 14.88 | 170-180 | 1.402 | 1196 | 100,100 |
| DEG | LUMINOUS INTENSITY:cd | | | | | | | | | UNIT:lm | | |

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:LGL
 Test Date:2021-08-12

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.190m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

| | | |
|--------------------------|--------------------|------------------|
| NAME: VM060-VF61RA01-15W | TYPE:indoor lights | WEIGHT:1 |
| SPEC.:3000K-CRI90-38D | DIM.: | SERIAL No.: |
| | SUR.: | Shielding Angle: |



| LUMINANCE cd/(m2) | | |
|-------------------|--------|---------|
| G(DEG) | C0/180 | C90/270 |
| 85 | 1517 | 915 |
| 80 | 1966 | 423 |
| 75 | 2760 | 275 |
| 70 | 3924 | 198 |
| 65 | 4121 | 613 |
| 60 | 4396 | 550 |
| 55 | 1252 | 439 |
| 50 | 955 | 352 |
| 45 | 2460 | 763 |

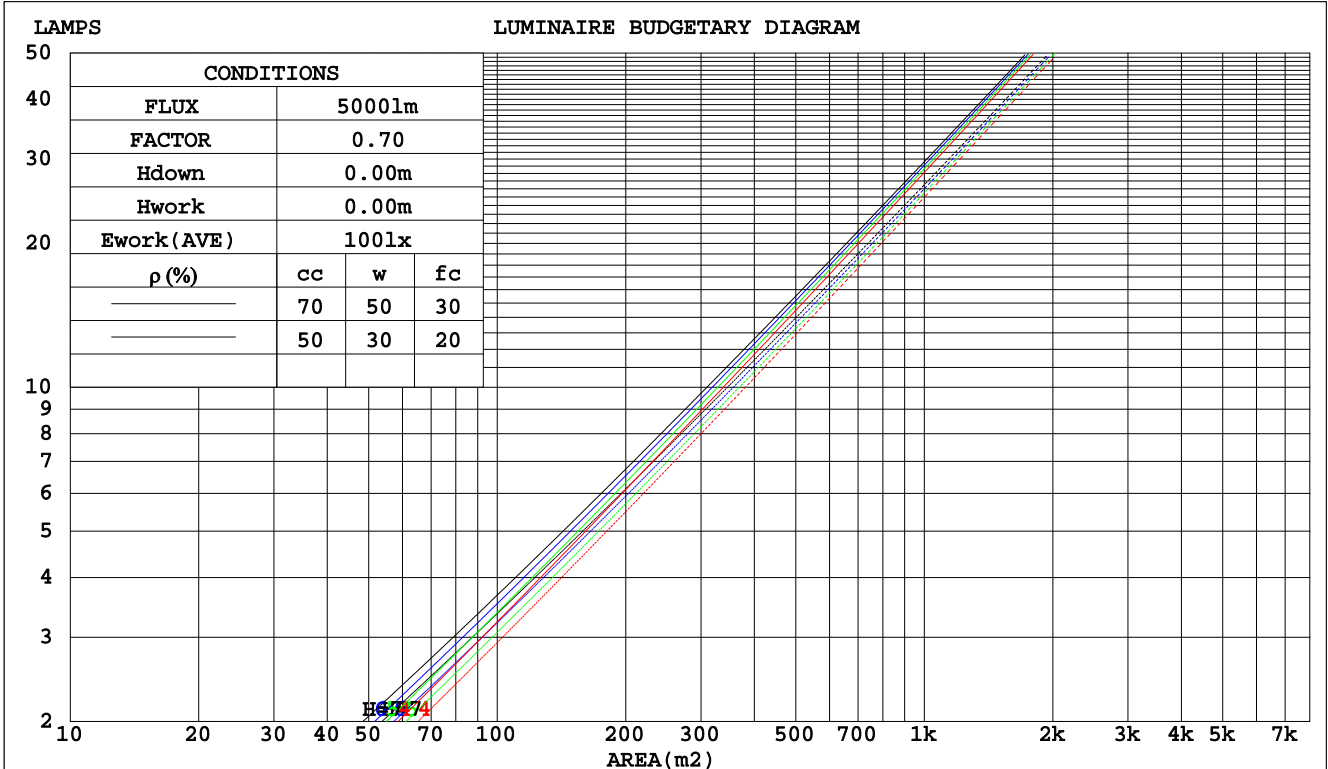
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature: 28DEG
 Operators: LGL
 Test Date: 2021-08-12

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity: 65.0%
 Test Distance: 5.190m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

| | | |
|--------------------------|--------------------|------------------|
| NAME: VM060-VF61RA01-15W | TYPE:indoor lights | WEIGHT:1 |
| SPEC.:3000K-CRI90-38D | DIM.: | SERIAL No.: |
| | SUR.: | Shielding Angle: |

| pcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|
| | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| pw | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| 0.0 | 1.18 | 1.18 | 1.18 | 1.15 | 1.15 | 1.15 | 1.10 | 1.10 | 1.10 | 1.05 | 1.05 | 1.05 | .00 | .00 | .00 | .98 |
| 1.0 | 1.12 | 1.10 | 1.08 | 1.09 | 1.08 | 1.06 | 1.05 | 1.03 | 1.02 | 1.01 | .00 | .99 | .97 | .96 | .95 | .94 |
| 2.0 | 1.06 | 1.03 | .00 | 1.04 | 1.01 | .99 | 1.00 | .98 | .96 | .97 | .95 | .94 | .94 | .93 | .91 | .90 |
| 3.0 | 1.01 | .97 | .94 | .99 | .96 | .93 | .96 | .93 | .91 | .94 | .91 | .89 | .91 | .89 | .88 | .86 |
| 4.0 | .96 | .92 | .89 | .95 | .91 | .88 | .93 | .89 | .87 | .90 | .88 | .85 | .88 | .86 | .84 | .83 |
| 5.0 | .92 | .88 | .84 | .91 | .87 | .84 | .89 | .86 | .83 | .87 | .84 | .82 | .86 | .83 | .81 | .80 |
| 6.0 | .88 | .84 | .80 | .87 | .83 | .80 | .86 | .82 | .79 | .84 | .81 | .79 | .83 | .80 | .78 | .77 |
| 7.0 | .85 | .80 | .77 | .84 | .80 | .77 | .83 | .79 | .76 | .82 | .78 | .76 | .80 | .77 | .75 | .74 |
| 8.0 | .82 | .77 | .74 | .81 | .77 | .74 | .80 | .76 | .73 | .79 | .75 | .73 | .78 | .75 | .73 | .71 |
| 9.0 | .79 | .74 | .71 | .78 | .74 | .71 | .77 | .73 | .71 | .76 | .73 | .70 | .75 | .72 | .70 | .69 |
| 10.0 | .76 | .72 | .69 | .76 | .71 | .68 | .75 | .71 | .68 | .74 | .70 | .68 | .73 | .70 | .68 | .67 |



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature: 28DEG
 Operators: LGL
 Test Date: 2021-08-12

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity: 65.0%
 Test Distance: 5.190m [K=1.0000]
 Remarks:

WEC AND CCEC

| | | |
|--------------------------|--------------------|------------------|
| NAME: VM060-VF61RA01-15W | TYPE:indoor lights | WEIGHT:1 |
| SPEC.:3000K-CRI90-38D | DIM.: | SERIAL No.: |
| | SUR.: | Shielding Angle: |

| ρcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|------|-----------------------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------|---|
| ρw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| ρfc | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| RCR | RCR:Room Cavity Ratio | | | | | | Wall Exitance Coefficients(WEC) | | | | | | | | | |
| 0.0 | | | | | | | | | | | | | | | | |
| 1.0 | .148 | .084 | .027 | .140 | .080 | .025 | .126 | .073 | .023 | .114 | .066 | .021 | .102 | .059 | .019 | |
| 2.0 | .137 | .075 | .023 | .131 | .072 | .022 | .120 | .067 | .021 | .109 | .061 | .019 | .099 | .056 | .018 | |
| 3.0 | .129 | .069 | .021 | .124 | .066 | .020 | .114 | .062 | .019 | .105 | .057 | .018 | .096 | .053 | .016 | |
| 4.0 | .121 | .063 | .019 | .117 | .061 | .018 | .108 | .057 | .017 | .100 | .054 | .016 | .093 | .051 | .015 | |
| 5.0 | .115 | .058 | .017 | .111 | .057 | .017 | .104 | .054 | .016 | .097 | .051 | .015 | .090 | .048 | .014 | |
| 6.0 | .109 | .055 | .016 | .106 | .053 | .015 | .099 | .051 | .015 | .093 | .048 | .014 | .088 | .046 | .014 | |
| 7.0 | .104 | .051 | .015 | .101 | .050 | .014 | .095 | .048 | .014 | .090 | .046 | .013 | .085 | .044 | .013 | |
| 8.0 | .099 | .049 | .014 | .097 | .048 | .013 | .092 | .046 | .013 | .087 | .044 | .013 | .082 | .042 | .012 | |
| 9.0 | .095 | .046 | .013 | .093 | .045 | .013 | .088 | .044 | .012 | .084 | .042 | .012 | .080 | .041 | .012 | |
| 10.0 | .092 | .044 | .012 | .089 | .043 | .012 | .085 | .042 | .012 | .081 | .040 | .011 | .078 | .039 | .011 | |

| ρcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|------|-----------------------|------|------|------|------|------|--|------|------|------|------|------|------|------|------|---|
| ρw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| ρfc | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| RCR | RCR:Room Cavity Ratio | | | | | | Ceiling Cavity Exitance Coefficients(CCEC) | | | | | | | | | |
| 0.0 | | | | | | | | | | | | | | | | |
| 1.0 | .209 | .209 | .209 | .179 | .179 | .179 | .122 | .122 | .122 | .070 | .070 | .070 | .022 | .022 | .022 | |
| 2.0 | .188 | .177 | .166 | .161 | .152 | .143 | .110 | .104 | .099 | .063 | .060 | .058 | .020 | .019 | .019 | |
| 3.0 | .171 | .152 | .136 | .146 | .131 | .118 | .100 | .090 | .082 | .058 | .053 | .048 | .019 | .017 | .016 | |
| 4.0 | .157 | .133 | .114 | .134 | .115 | .099 | .092 | .080 | .069 | .053 | .046 | .041 | .017 | .015 | .013 | |
| 5.0 | .145 | .118 | .097 | .124 | .102 | .084 | .085 | .071 | .059 | .049 | .041 | .035 | .016 | .014 | .012 | |
| 6.0 | .135 | .106 | .084 | .116 | .091 | .073 | .080 | .064 | .052 | .046 | .037 | .031 | .015 | .012 | .010 | |
| 7.0 | .126 | .096 | .074 | .109 | .083 | .064 | .075 | .058 | .045 | .043 | .034 | .027 | .014 | .011 | .009 | |
| 8.0 | .119 | .088 | .066 | .103 | .076 | .057 | .071 | .053 | .041 | .041 | .031 | .024 | .013 | .010 | .008 | |
| 9.0 | .113 | .081 | .059 | .097 | .070 | .052 | .067 | .049 | .037 | .039 | .029 | .022 | .013 | .010 | .007 | |
| 10.0 | .108 | .076 | .054 | .093 | .066 | .047 | .064 | .046 | .034 | .037 | .027 | .020 | .012 | .009 | .007 | |
| 10.0 | .103 | .071 | .050 | .089 | .062 | .044 | .062 | .043 | .031 | .036 | .026 | .018 | .012 | .008 | .006 | |

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:LGL
 Test Date:2021-08-12

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.190m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

| | | | | | | | | | | | | | | |
|--|------------------|-----|-----|-----|--------------------|----------------|-----|-----|-----|------------------|--|--|--|--|
| NAME: VM060-VF61RA01-15W | | | | | TYPE:indoor lights | | | | | WEIGHT:1 | | | | |
| SPEC.:3000K-CRI90-38D | | | | | DIM.: | | | | | SERIAL No.: | | | | |
| | | | | | SUR.: | | | | | Shielding 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 | 4.9 | 5.6 | 5.2 | 5.8 | 6.0 | 1.9 | 2.6 | 2.1 | 2.8 | 3.0 | | | | |
| 3H | 6.2 | 6.8 | 6.5 | 7.1 | 7.3 | 1.8 | 2.4 | 2.1 | 2.7 | 2.9 | | | | |
| 4H | 6.7 | 7.3 | 7.0 | 7.5 | 7.8 | 1.7 | 2.3 | 2.0 | 2.6 | 2.8 | | | | |
| 6H | 6.8 | 7.4 | 7.1 | 7.6 | 7.9 | 1.7 | 2.2 | 2.0 | 2.5 | 2.8 | | | | |
| 8H | 6.8 | 7.4 | 7.1 | 7.7 | 8.0 | 1.6 | 2.2 | 2.0 | 2.5 | 2.8 | | | | |
| 12H | 6.8 | 7.3 | 7.2 | 7.6 | 8.0 | 1.7 | 2.2 | 2.0 | 2.5 | 2.8 | | | | |
| 4H 2H | 4.7 | 5.3 | 5.0 | 5.6 | 5.8 | 1.7 | 2.3 | 2.0 | 2.6 | 2.8 | | | | |
| 3H | 6.0 | 6.6 | 6.4 | 6.9 | 7.2 | 1.6 | 2.1 | 1.9 | 2.4 | 2.7 | | | | |
| 4H | 6.6 | 7.1 | 7.0 | 7.4 | 7.8 | 1.5 | 2.0 | 1.9 | 2.4 | 2.7 | | | | |
| 6H | 6.7 | 7.2 | 7.1 | 7.5 | 7.9 | 1.5 | 1.9 | 1.9 | 2.3 | 2.7 | | | | |
| 8H | 6.7 | 7.1 | 7.2 | 7.5 | 8.0 | 1.5 | 1.9 | 1.9 | 2.3 | 2.7 | | | | |
| 12H | 6.8 | 7.1 | 7.2 | 7.5 | 8.0 | 1.6 | 2.0 | 2.0 | 2.4 | 2.8 | | | | |
| 8H 4H | 6.4 | 6.8 | 6.9 | 7.2 | 7.6 | 1.5 | 1.9 | 1.9 | 2.3 | 2.7 | | | | |
| 6H | 6.6 | 6.9 | 7.0 | 7.3 | 7.8 | 1.5 | 1.8 | 2.0 | 2.3 | 2.7 | | | | |
| 8H | 6.6 | 6.9 | 7.1 | 7.4 | 7.9 | 1.6 | 1.9 | 2.0 | 2.3 | 2.8 | | | | |
| 12H | 6.6 | 6.9 | 7.2 | 7.4 | 7.9 | 1.7 | 2.0 | 2.2 | 2.5 | 3.0 | | | | |
| 12H 4H | 6.4 | 6.7 | 6.8 | 7.2 | 7.6 | 1.4 | 1.8 | 1.9 | 2.2 | 2.7 | | | | |
| 6H | 6.5 | 6.8 | 7.0 | 7.3 | 7.8 | 1.5 | 1.8 | 2.0 | 2.2 | 2.7 | | | | |
| 8H | 6.6 | 6.8 | 7.1 | 7.3 | 7.8 | 1.6 | 1.8 | 2.1 | 2.3 | 2.8 | | | | |
| Variations with the observer position at spacings: | | | | | | | | | | | | | | |
| S = 1.0H | + 2.2 / - 1.4 | | | | | + 2.8 / - 3.9 | | | | | | | | |
| 1.5H | + 4.2 / - 1.4 | | | | | + 5.2 / - 3.6 | | | | | | | | |
| 2.0H | + 2.9 / - 2.0 | | | | | + 0.9 / - 0.9 | | | | | | | | |

CIE Pub.117, 1196 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 0.6)

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:LGL
 Test Date:2021-08-12

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.190m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

| | | |
|--------------------------|--------------------|------------------|
| NAME: VM060-VF61RA01-15W | TYPE:indoor lights | WEIGHT:1 |
| SPEC.:3000K-CRI90-38D | DIM.: | SERIAL No.: |
| | SUR.: | Shielding Angle: |

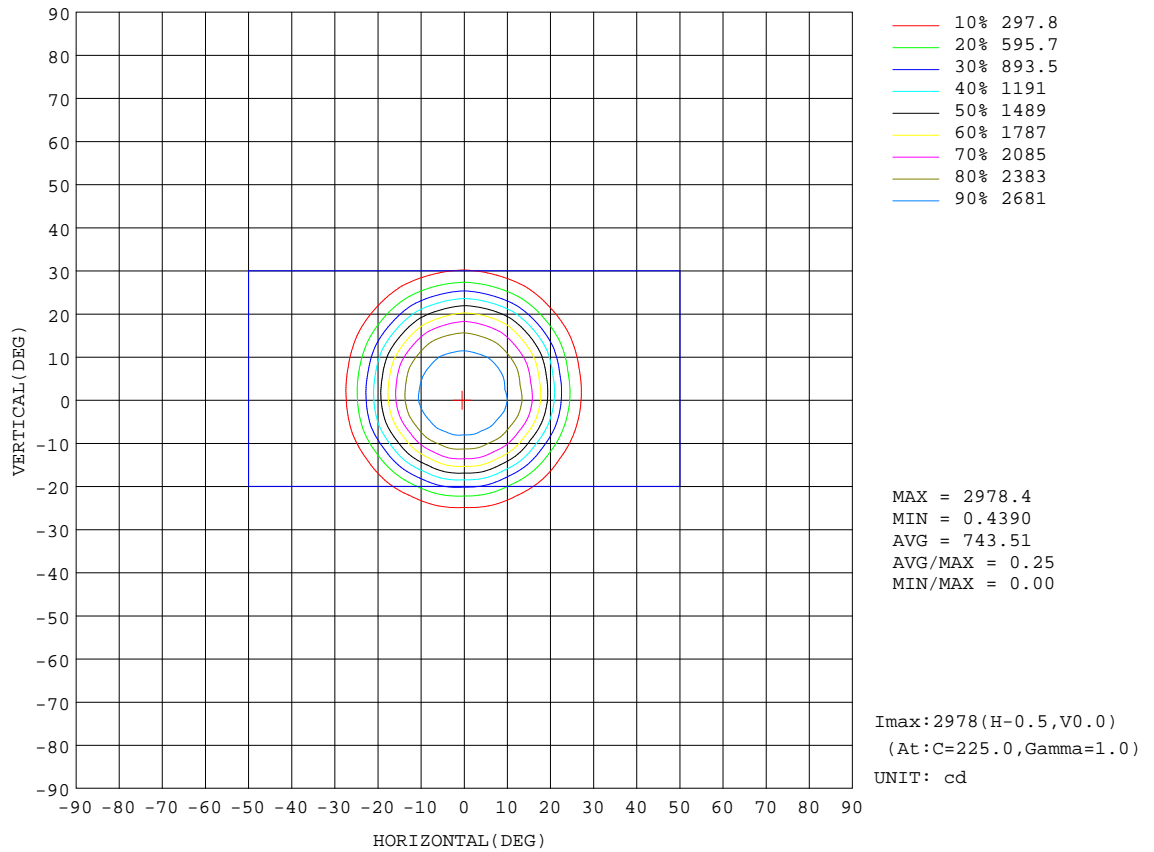
| REFLECTANCE | | | | | | | | | | |
|----------------------------------|---|-----|-----------|-----|-----|-----|---------------|-----|-----|--------|
| Ceiling | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0 |
| Walls | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0 |
| Working plane | 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 | 90 | 84 | 81 | 89 | 84 | 80 | 88 | 83 | 80 | 77 |
| 0.80 | 97 | 91 | 88 | 96 | 91 | 88 | 95 | 90 | 87 | 84 |
| 1.00 | 100 | 95 | 92 | 100 | 95 | 92 | 98 | 94 | 91 | 87 |
| 1.25 | 104 | 99 | 96 | 103 | 99 | 96 | 101 | 97 | 95 | 90 |
| 1.50 | 107 | 102 | 99 | 105 | 101 | 99 | 103 | 100 | 97 | 93 |
| 2.00 | 109 | 105 | 102 | 107 | 104 | 101 | 104 | 101 | 99 | 94 |
| 2.50 | 110 | 107 | 104 | 109 | 105 | 103 | 105 | 103 | 101 | 94 |
| 3.00 | 112 | 109 | 106 | 110 | 107 | 105 | 106 | 104 | 102 | 95 |
| 4.00 | 114 | 111 | 109 | 111 | 109 | 107 | 107 | 106 | 104 | 97 |
| 5.00 | 115 | 113 | 111 | 113 | 111 | 109 | 108 | 107 | 106 | 98 |
| ROOM INDEX | UF(total) | | | | | | | | | Direct |
| According to DIN EN 13032-2 2004 | | | Suspended | | | | SHRNOM = 1.25 | | | |

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:LGL
 Test Date:2021-08-12

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.190m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

| | | |
|--------------------------|--------------------|------------------|
| NAME: VM060-VF61RA01-15W | TYPE:indoor lights | WEIGHT:1 |
| SPEC.:3000K-CRI90-38D | DIM.: | SERIAL No.: |
| | SUR.: | Shielding Angle: |

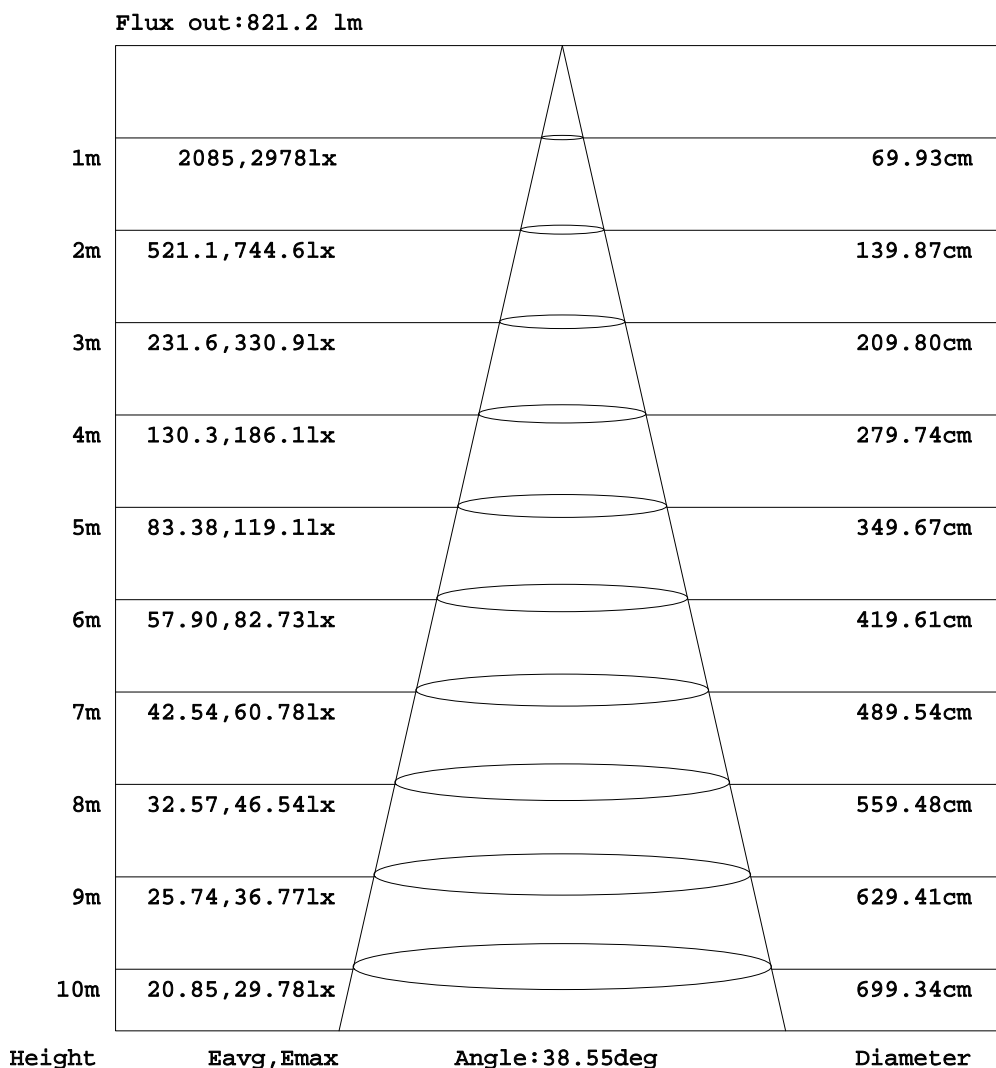


C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature: 28DEG
 Operators: LGL
 Test Date: 2021-08-12

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity: 65.0%
 Test Distance: 5.190m [K=1.0000]
 Remarks:

AAI Figure

| | | |
|--------------------------|--------------------|------------------|
| NAME: VM060-VF61RA01-15W | TYPE:indoor lights | WEIGHT:1 |
| SPEC.:3000K-CRI90-38D | DIM.: | SERIAL No.: |
| | SUR.: | Shielding Angle: |



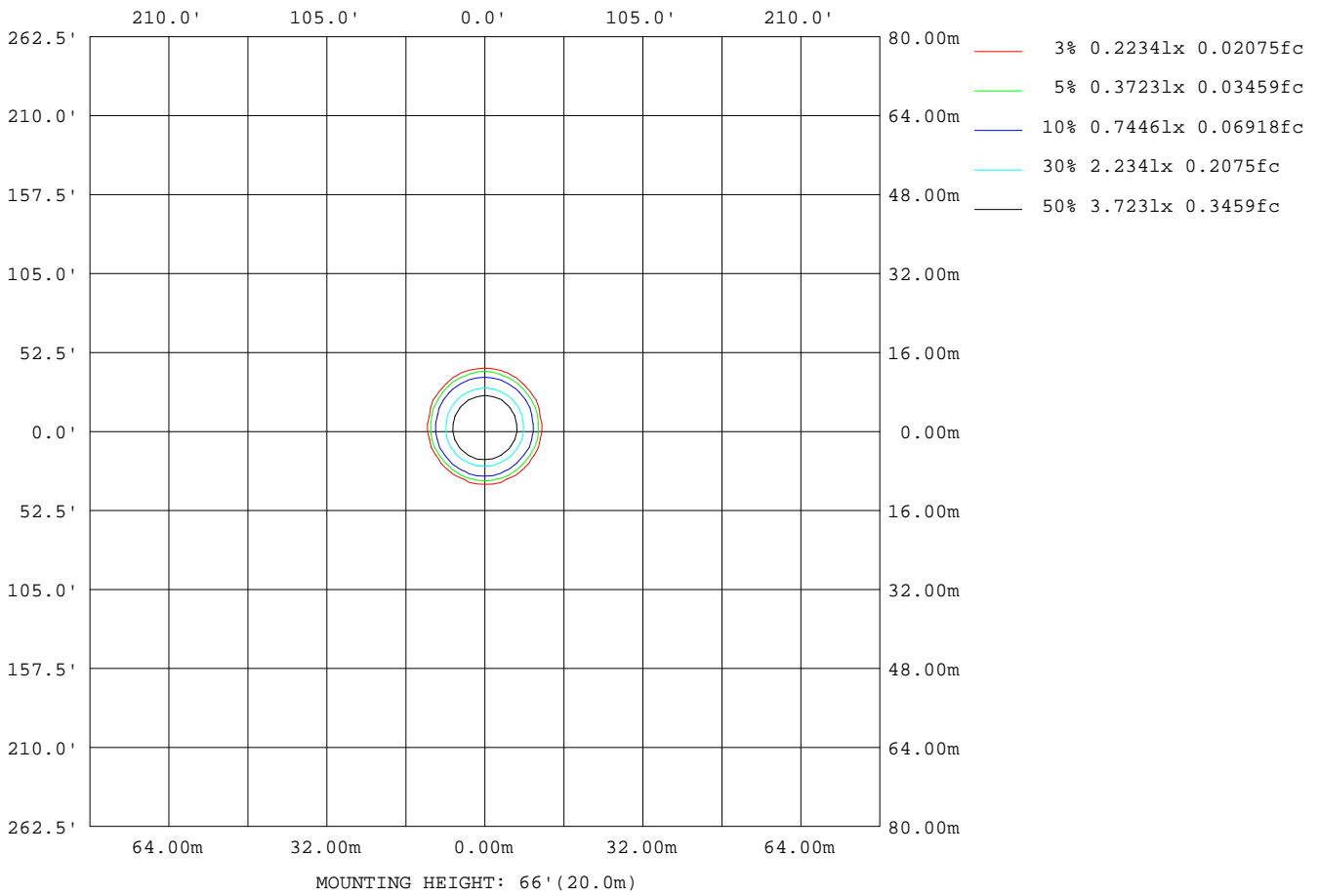
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:LGL
 Test Date:2021-08-12

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.190m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

| | | |
|--------------------------|--------------------|------------------|
| NAME: VM060-VF61RA01-15W | TYPE:indoor lights | WEIGHT:1 |
| SPEC.:3000K-CRI90-38D | DIM.: | SERIAL No.: |
| | SUR.: | Shielding Angle: |



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:LGL
 Test Date:2021-08-12

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.190m [K=1.0000]
 Remarks:

LED Avg.L Report

| | | |
|--------------------------|--------------------|------------------|
| NAME: VM060-VF61RA01-15W | TYPE:indoor lights | WEIGHT:1 |
| SPEC.:3000K-CRI90-38D | DIM.: | SERIAL No.: |
| | SUR.: | Shielding Angle: |

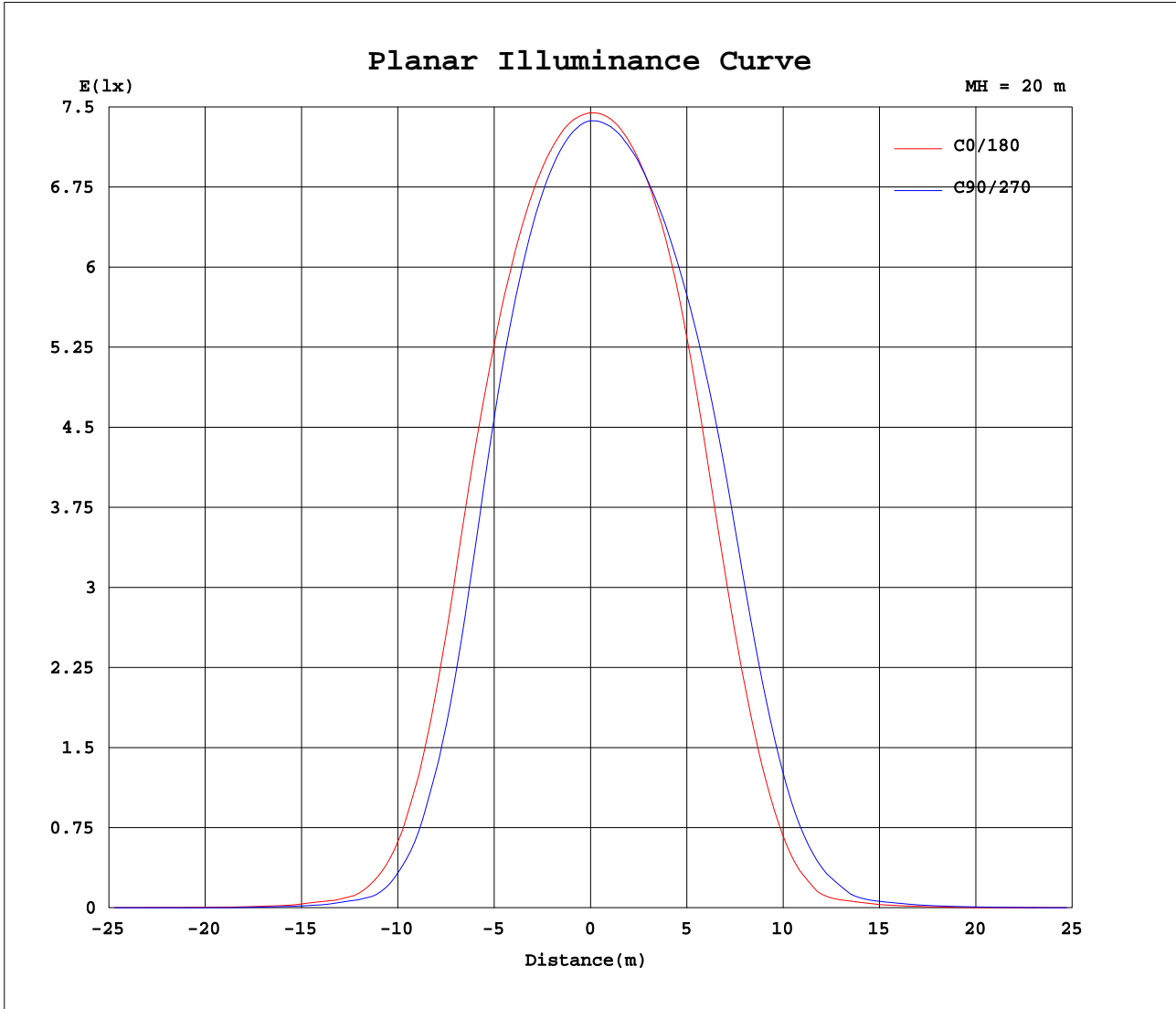
| AvgL | cd/m2 |
|----------------|-------|
| L_0~180(65)av | 2176 |
| L_0~180(75)av | 1497 |
| L_0~180(85)av | 1183 |
| L_90~270(65)av | 442 |
| L_90~270(75)av | 251 |
| L_90~270(85)av | 858 |
| L_45(65)av | 332 |
| L_45(75)av | 316 |
| L_45(85)av | 882 |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:LGL
 Test Date:2021-08-12

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.190m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature: 28DEG
 Operators: LGL
 Test Date: 2021-08-12

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity: 65.0%
 Test Distance: 5.190m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

| | | |
|--------------------------|--------------------|------------------|
| NAME: VM060-VF61RA01-15W | TYPE:indoor lights | WEIGHT:1 |
| SPEC.:3000K-CRI90-38D | DIM.: | SERIAL No.: |
| | SUR.: | Shielding Angle: |

Table--1

UNIT: cd

| C(DEG) γ (DEG) | 0 | 15 | 30 | 45 | 60 | 75 | 90 | 105 | 120 | 135 | 150 | 165 | 180 | 195 | 210 | 225 | 240 | 255 | 270 |
|-------------------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|
| 0 | 2952 | 2952 | 2952 | 2952 | 2952 | 2952 | 2952 | 2952 | 2952 | 2952 | 2952 | 2952 | 2952 | 2952 | 2952 | 2952 | 2952 | 2952 | 2952 |
| 5 | 2885 | 2880 | 2865 | 2863 | 2848 | 2850 | 2848 | 2859 | 2866 | 2887 | 2893 | 2909 | 2906 | 2905 | 2912 | 2907 | 2911 | 2909 | 2913 |
| 10 | 2657 | 2635 | 2580 | 2564 | 2524 | 2531 | 2520 | 2555 | 2566 | 2618 | 2644 | 2697 | 2697 | 2707 | 2730 | 2737 | 2757 | 2752 | 2756 |
| 15 | 2173 | 2117 | 2001 | 1957 | 1877 | 1881 | 1851 | 1901 | 1906 | 1992 | 2037 | 2155 | 2193 | 2251 | 2342 | 2379 | 2430 | 2427 | 2441 |
| 20 | 1339 | 1227 | 1079 | 1028 | 939 | 944 | 919 | 983 | 1010 | 1117 | 1177 | 1304 | 1346 | 1427 | 1574 | 1639 | 1750 | 1767 | 1831 |
| 25 | 524 | 446 | 362 | 341 | 306 | 308 | 288 | 314 | 323 | 384 | 420 | 513 | 558 | 628 | 733 | 795 | 894 | 908 | 950 |
| 30 | 122 | 103 | 81.5 | 75.7 | 68.7 | 64.2 | 60.6 | 60.6 | 60.9 | 66.6 | 73.4 | 96.1 | 122 | 147 | 206 | 242 | 290 | 296 | 314 |
| 35 | 41.8 | 38.8 | 32.4 | 28.6 | 23.4 | 22.2 | 20.2 | 20.6 | 20.4 | 22.3 | 24.3 | 31.8 | 37.4 | 42.6 | 49.0 | 55.6 | 60.4 | 66.5 | 68.0 |
| 40 | 14.7 | 13.1 | 11.0 | 9.84 | 8.38 | 8.13 | 7.46 | 7.58 | 7.44 | 8.40 | 9.29 | 11.8 | 13.7 | 16.0 | 19.3 | 20.9 | 23.9 | 25.3 | 27.4 |
| 45 | 4.87 | 4.27 | 3.32 | 2.67 | 2.07 | 1.91 | 1.53 | 1.42 | 1.28 | 1.35 | 1.46 | 2.06 | 2.81 | 4.28 | 6.55 | 7.62 | 8.91 | 9.30 | 10.0 |
| 50 | 1.72 | 1.73 | 1.53 | 1.18 | 0.94 | 0.78 | 0.64 | 0.50 | 0.44 | 0.41 | 0.44 | 0.55 | 0.73 | 1.01 | 1.49 | 1.66 | 1.71 | 1.68 | 1.79 |
| 55 | 2.01 | 1.59 | 1.38 | 1.01 | 0.87 | 0.81 | 0.71 | 0.61 | 0.51 | 0.45 | 0.41 | 0.41 | 0.50 | 0.71 | 0.91 | 0.98 | 0.74 | 0.60 | 0.50 |
| 60 | 6.16 | 4.23 | 1.39 | 0.86 | 0.87 | 0.88 | 0.78 | 0.70 | 0.62 | 0.58 | 0.44 | 0.38 | 0.35 | 0.50 | 0.75 | 0.89 | 0.66 | 0.51 | 0.45 |
| 65 | 4.88 | 3.27 | 1.11 | 0.27 | 0.34 | 0.83 | 0.73 | 0.64 | 0.62 | 0.63 | 0.48 | 0.39 | 0.32 | 0.29 | 0.30 | 0.51 | 0.45 | 0.34 | 0.32 |
| 70 | 3.76 | 2.79 | 1.13 | 0.31 | 0.23 | 0.20 | 0.19 | 0.19 | 0.24 | 0.26 | 0.25 | 0.23 | 0.18 | 0.17 | 0.17 | 0.18 | 0.15 | 0.16 | 0.17 |
| 75 | 2.00 | 1.67 | 0.35 | 0.31 | 0.24 | 0.21 | 0.20 | 0.21 | 0.23 | 0.26 | 0.26 | 0.24 | 0.19 | 0.17 | 0.16 | 0.17 | 0.16 | 0.16 | 0.17 |
| 80 | 0.96 | 0.36 | 0.30 | 0.27 | 0.24 | 0.23 | 0.21 | 0.23 | 0.22 | 0.25 | 0.27 | 0.25 | 0.19 | 0.16 | 0.17 | 0.16 | 0.17 | 0.16 | 0.18 |
| 85 | 0.37 | 0.26 | 0.26 | 0.27 | 0.24 | 0.24 | 0.23 | 0.24 | 0.22 | 0.25 | 0.25 | 0.26 | 0.21 | 0.18 | 0.19 | 0.17 | 0.18 | 0.17 | 0.20 |
| 90 | 0.27 | 0.26 | 0.27 | 0.26 | 0.24 | 0.26 | 0.24 | 0.24 | 0.24 | 0.27 | 0.25 | 0.26 | 0.23 | 0.20 | 0.21 | 0.19 | 0.20 | 0.19 | 0.21 |
| 95 | 2.11 | 0.38 | 0.41 | 0.37 | 0.27 | 0.26 | 0.24 | 0.25 | 0.25 | 0.32 | 0.31 | 0.27 | 0.25 | 0.23 | 0.24 | 0.21 | 0.23 | 0.21 | 0.24 |
| 100 | 1.89 | 1.64 | 1.34 | 0.49 | 0.30 | 0.27 | 0.25 | 0.27 | 0.27 | 0.39 | 0.40 | 0.30 | 0.29 | 0.24 | 0.25 | 0.23 | 0.25 | 0.23 | 0.27 |
| 105 | 0.68 | 0.98 | 1.13 | 0.52 | 0.34 | 0.31 | 0.28 | 0.31 | 0.31 | 0.41 | 0.42 | 0.39 | 0.32 | 0.26 | 0.27 | 0.24 | 0.27 | 0.25 | 0.29 |
| 110 | 0.64 | 0.76 | 0.70 | 0.51 | 0.43 | 0.46 | 0.42 | 0.43 | 0.41 | 0.45 | 0.44 | 0.42 | 0.36 | 0.30 | 0.30 | 0.27 | 0.30 | 0.28 | 0.32 |
| 115 | 0.79 | 0.88 | 0.83 | 0.66 | 0.69 | 0.81 | 0.82 | 0.78 | 0.71 | 0.66 | 0.67 | 0.62 | 0.52 | 0.45 | 0.41 | 0.39 | 0.41 | 0.37 | 0.41 |
| 120 | 1.39 | 1.46 | 1.50 | 1.38 | 1.54 | 1.55 | 1.59 | 1.55 | 1.58 | 1.36 | 1.36 | 1.22 | 1.08 | 0.95 | 0.82 | 0.77 | 0.75 | 0.72 | 0.74 |
| 125 | 2.81 | 2.67 | 2.72 | 2.78 | 3.03 | 3.10 | 3.12 | 3.12 | 3.01 | 2.79 | 2.62 | 2.38 | 2.24 | 2.05 | 1.83 | 1.74 | 1.59 | 1.59 | 1.56 |
| 130 | 4.05 | 4.26 | 4.64 | 4.87 | 5.19 | 5.18 | 5.25 | 5.17 | 5.18 | 4.92 | 4.61 | 4.21 | 4.02 | 3.79 | 3.49 | 3.35 | 3.13 | 3.10 | 3.06 |
| 135 | 6.46 | 6.75 | 7.22 | 7.41 | 7.72 | 7.79 | 7.82 | 7.76 | 7.71 | 7.39 | 7.20 | 6.67 | 6.40 | 6.13 | 5.75 | 5.53 | 5.27 | 5.24 | 5.16 |
| 140 | 9.33 | 9.61 | 10.0 | 10.2 | 10.4 | 10.6 | 10.7 | 10.6 | 10.4 | 10.04 | 9.95 | 9.53 | 9.29 | 8.96 | 8.40 | 8.12 | 8.02 | 7.84 | 7.72 |
| 145 | 12.2 | 12.4 | 12.8 | 12.9 | 13.2 | 13.3 | 13.5 | 13.4 | 13.2 | 12.9 | 12.7 | 12.4 | 12.1 | 11.8 | 11.2 | 11.0 | 10.7 | 10.7 | 10.6 |
| 150 | 14.6 | 14.8 | 15.1 | 15.3 | 15.6 | 15.7 | 15.8 | 15.8 | 15.6 | 15.4 | 15.2 | 14.9 | 14.7 | 14.4 | 14.0 | 13.8 | 13.5 | 13.5 | 13.4 |
| 155 | 16.3 | 16.5 | 16.6 | 16.8 | 17.0 | 17.1 | 17.1 | 17.2 | 17.1 | 17.0 | 16.9 | 16.8 | 16.6 | 16.4 | 16.2 | 16.1 | 15.9 | 16.0 | 15.8 |
| 160 | 17.4 | 17.0 | 16.8 | 17.0 | 17.2 | 17.2 | 17.3 | 17.3 | 17.3 | 17.3 | 17.2 | 17.3 | 17.3 | 17.2 | 17.3 | 17.3 | 17.3 | 17.4 | 18.1 |
| 165 | 16.4 | 16.5 | 16.1 | 15.9 | 16.0 | 16.2 | 16.3 | 16.4 | 16.3 | 16.4 | 16.5 | 16.7 | 16.5 | 16.8 | 16.9 | 17.0 | 17.1 | 17.2 | 17.4 |
| 170 | 14.8 | 14.6 | 14.3 | 14.3 | 14.4 | 14.5 | 14.7 | 14.8 | 14.8 | 15.1 | 15.3 | 15.6 | 15.2 | 15.4 | 15.6 | 15.7 | 15.8 | 15.8 | 15.9 |
| 175 | 14.0 | 13.9 | 13.8 | 14.0 | 14.0 | 14.0 | 14.0 | 14.1 | 14.4 | 14.7 | 14.9 | 14.9 | 14.4 | 14.5 | 14.7 | 14.8 | 14.8 | 14.8 | 14.8 |
| 180 | 14.3 | 14.3 | 14.4 | 14.5 | 14.4 | 14.4 | 14.5 | 14.5 | 14.6 | 14.9 | 14.8 | 14.8 | 14.4 | 14.3 | 14.4 | 14.5 | 14.4 | 14.4 | 14.5 |

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:LGL
 Test Date:2021-08-12

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.190m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

| | | |
|--------------------------|--------------------|------------------|
| NAME: VM060-VF61RA01-15W | TYPE:indoor lights | WEIGHT:1 |
| SPEC.:3000K-CRI90-38D | DIM.: | SERIAL No.: |
| | SUR.: | Shielding Angle: |

Table--2

UNIT: cd

| C(DEG) γ (DEG) | 285 | 300 | 315 | 330 | 345 | | | | | | | | | | | | | | |
|-------------------|------|------|------|------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 0 | 2952 | 2952 | 2952 | 2952 | 2952 | | | | | | | | | | | | | | |
| 5 | 2913 | 2915 | 2909 | 2906 | 2893 | | | | | | | | | | | | | | |
| 10 | 2750 | 2758 | 2742 | 2726 | 2683 | | | | | | | | | | | | | | |
| 15 | 2414 | 2410 | 2357 | 2312 | 2219 | | | | | | | | | | | | | | |
| 20 | 1802 | 1797 | 1690 | 1622 | 1458 | | | | | | | | | | | | | | |
| 25 | 902 | 887 | 791 | 721 | 586 | | | | | | | | | | | | | | |
| 30 | 288 | 271 | 223 | 192 | 142 | | | | | | | | | | | | | | |
| 35 | 65.7 | 59.7 | 55.1 | 48.9 | 43.7 | | | | | | | | | | | | | | |
| 40 | 25.6 | 24.4 | 20.5 | 18.3 | 15.8 | | | | | | | | | | | | | | |
| 45 | 9.32 | 8.81 | 7.29 | 6.46 | 5.26 | | | | | | | | | | | | | | |
| 50 | 1.59 | 1.50 | 1.38 | 1.41 | 1.62 | | | | | | | | | | | | | | |
| 55 | 0.46 | 0.40 | 0.53 | 0.79 | 1.83 | | | | | | | | | | | | | | |
| 60 | 0.43 | 0.38 | 0.48 | 0.77 | 4.48 | | | | | | | | | | | | | | |
| 65 | 0.28 | 0.17 | 0.18 | 0.30 | 3.43 | | | | | | | | | | | | | | |
| 70 | 0.17 | 0.17 | 0.18 | 0.31 | 2.57 | | | | | | | | | | | | | | |
| 75 | 0.17 | 0.18 | 0.18 | 0.20 | 1.41 | | | | | | | | | | | | | | |
| 80 | 0.17 | 0.19 | 0.18 | 0.20 | 0.24 | | | | | | | | | | | | | | |
| 85 | 0.18 | 0.20 | 0.19 | 0.21 | 0.22 | | | | | | | | | | | | | | |
| 90 | 0.20 | 0.22 | 0.20 | 0.23 | 0.23 | | | | | | | | | | | | | | |
| 95 | 0.23 | 0.26 | 0.24 | 0.27 | 0.31 | | | | | | | | | | | | | | |
| 100 | 0.25 | 0.28 | 0.27 | 0.33 | 1.32 | | | | | | | | | | | | | | |
| 105 | 0.27 | 0.30 | 0.28 | 0.37 | 0.42 | | | | | | | | | | | | | | |
| 110 | 0.31 | 0.33 | 0.31 | 0.39 | 0.46 | | | | | | | | | | | | | | |
| 115 | 0.41 | 0.42 | 0.39 | 0.59 | 0.68 | | | | | | | | | | | | | | |
| 120 | 0.79 | 0.80 | 0.82 | 1.09 | 1.32 | | | | | | | | | | | | | | |
| 125 | 1.70 | 1.69 | 1.83 | 1.96 | 2.59 | | | | | | | | | | | | | | |
| 130 | 3.23 | 3.28 | 3.51 | 3.64 | 3.96 | | | | | | | | | | | | | | |
| 135 | 5.38 | 5.49 | 5.75 | 5.96 | 6.38 | | | | | | | | | | | | | | |
| 140 | 7.97 | 8.05 | 8.34 | 8.69 | 9.34 | | | | | | | | | | | | | | |
| 145 | 10.7 | 10.8 | 11.1 | 11.4 | 12.3 | | | | | | | | | | | | | | |
| 150 | 13.5 | 13.6 | 13.9 | 14.1 | 14.5 | | | | | | | | | | | | | | |
| 155 | 15.9 | 15.9 | 16.0 | 16.1 | 16.3 | | | | | | | | | | | | | | |
| 160 | 17.2 | 17.2 | 17.7 | 17.7 | 17.0 | | | | | | | | | | | | | | |
| 165 | 17.2 | 17.0 | 16.8 | 16.6 | 16.6 | | | | | | | | | | | | | | |
| 170 | 15.8 | 15.7 | 15.5 | 15.4 | 15.3 | | | | | | | | | | | | | | |
| 175 | 14.8 | 14.9 | 14.9 | 14.6 | 14.6 | | | | | | | | | | | | | | |
| 180 | 14.5 | 14.6 | 14.9 | 14.8 | 14.7 | | | | | | | | | | | | | | |

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: MEDIUM
 Temperature:28DEG
 Operators:LGL
 Test Date:2021-08-12

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.190m [K=1.0000]
 Remarks: