

LED Downlight FUSION Series FF5-11W-840-24D Specular



|                     |         |                          |
|---------------------|---------|--------------------------|
| Light Output Ratio: | 100.0%  |                          |
| Luminaire Power:    | 13.45 W |                          |
| SHR Nominal:        | 0.00    | Calculated using the TM5 |
| SHR Maximum:        | 1.00    | fine grid method.        |

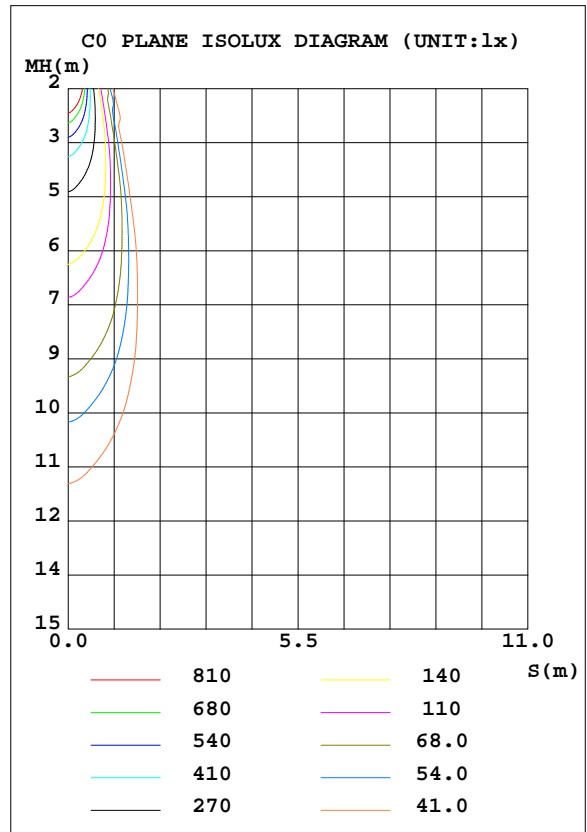
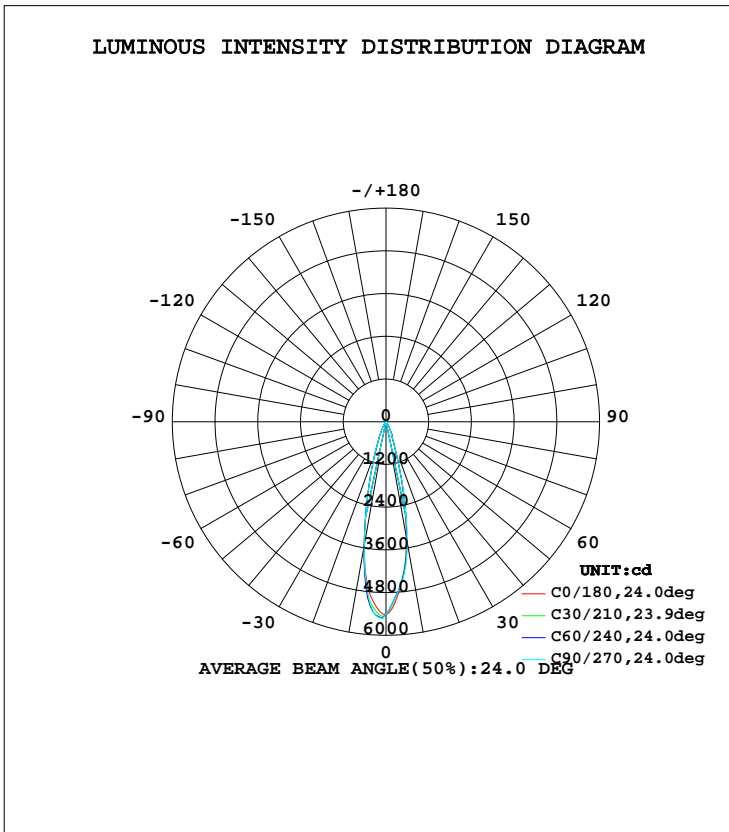
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.2DEG  
Operators: Cao Chengpei  
Test Date: 2016-06-23

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.288  
Humidity: 52%  
Test Distance: 5.850m [K=1.0000]  
Remarks:

**LUMINAIRE PHOTOMETRIC TEST REPORT**

|   |                          |             |
|---|--------------------------|-------------|
| Test:U:220.0V I:0.0675A P:13.45W PF:0.9047 Lamp Flux:1145.77x1 lm |                          |             |
| NAME: FF5-11W-840-24D Specular                                    | TYPE:Downlight           | SERIAL No.: |
| SPEC.:4000K   | DIM.: L153mm*W45mm*H60mm |             |
| MFR.: NEKO LIGHTING AG  |                          |             |

| DATA OF LAMP     |            | PHOTOMETRIC DATA      |        |                    |           | Eff: 85.21 lm/W |
|------------------|------------|-----------------------|--------|--------------------|-----------|-----------------|
| MODEL            | CREE-4000K | I <sub>max</sub> (cd) | 5526   | S/MH(C0/180)       | 0.41      |                 |
| NOMINAL POWER(W) | 13.0       | LOR(%)                | 100.0  | S/MH(C90/270)      | 0.41      |                 |
| RATED VOLTAGE(V) | 220        | TOTAL FLUX(lm)        | 1145.8 | η UP, DN(C0-180)   | 0.0, 48.3 |                 |
| NOMINAL FLUX(lm) | 1145.77    | CIE CLASS             | DIRECT | η UP, DN(C180-360) | 0.0, 51.7 |                 |
| LAMPS INSIDE     | 1          | η up(%)               | 0.0    | CIBSE SHR NOM      | 0.00      |                 |
| TEST VOLTAGE(V)  | 220        | η down(%)             | 100.0  | CIBSE SHR MAX      | 1.00      |                 |



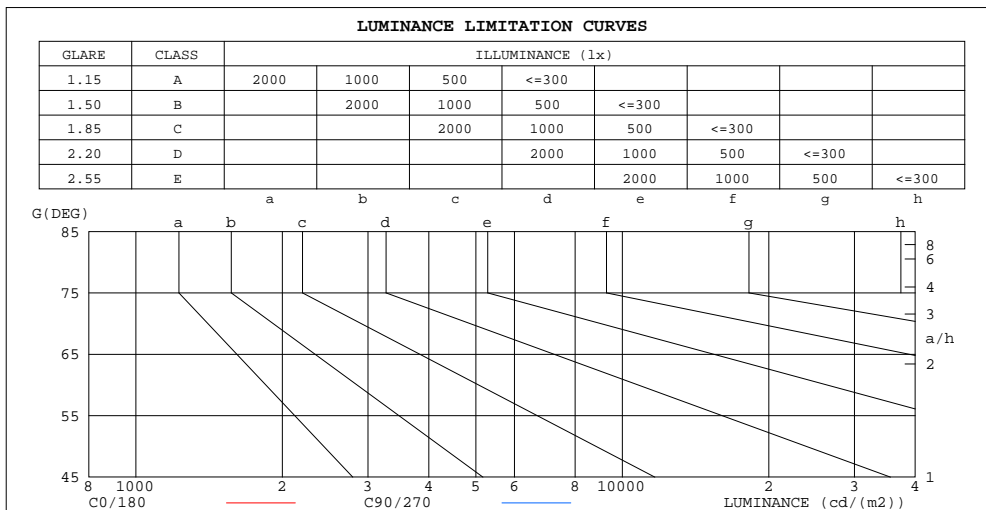
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.2DEG  
Operators:Cao Chengpei  
Test Date:2016-06-23

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.288  
Humidity:52%  
Test Distance:5.850m [K=1.0000]  
Remarks:

**ZONAL FLUX DIAGRAM  
AND LUMINANCE LIMITATION CURVES**

**ZONAL FLUX DIAGRAM:**

| $\gamma$ | C0                    | C45    | C90    | C135   | C180   | C225   | C270   | C315   | $\gamma$ | $\Phi$ zone | $\Phi$ total | #lum,lamp |
|----------|-----------------------|--------|--------|--------|--------|--------|--------|--------|----------|-------------|--------------|-----------|
| 10       | 3311                  | 3407   | 3401   | 3467   | 3526   | 3513   | 3514   | 3428   | 0- 10    | 419.1       | 419.1        | 36.6,36.6 |
| 20       | 677.5                 | 635.0  | 611.8  | 689.6  | 770.2  | 841.2  | 854.6  | 810.0  | 10- 20   | 494.0       | 913.0        | 79.7,79.7 |
| 30       | 181.2                 | 183.8  | 186.3  | 187.2  | 186.9  | 188.9  | 195.0  | 194.6  | 20- 30   | 178.5       | 1092         | 95.3,95.3 |
| 40       | 17.67                 | 16.07  | 14.84  | 15.15  | 16.58  | 19.17  | 22.64  | 20.81  | 30- 40   | 48.41       | 1140         | 99.5,99.5 |
| 50       | 2.121                 | 1.584  | 1.524  | 1.854  | 2.244  | 2.127  | 1.939  | 2.232  | 40- 50   | 3.740       | 1144         | 99.8,99.8 |
| 60       | 0.9873                | 0.7153 | 0.6887 | 0.8003 | 0.9659 | 0.8762 | 0.8000 | 0.9764 | 50- 60   | 1.223       | 1145         | 99.9,99.9 |
| 70       | 0.3966                | 0.3257 | 0.3304 | 0.3300 | 0.3426 | 0.3389 | 0.3086 | 0.3773 | 60- 70   | 0.5441      | 1145         | 100,100   |
| 80       | 0.1557                | 0.1298 | 0.1450 | 0.1298 | 0.1233 | 0.1279 | 0.1107 | 0.1492 | 70- 80   | 0.2420      | 1146         | 100,100   |
| 90       | 0.0490                | 0.0447 | 0.0511 | 0.0447 | 0.0362 | 0.0362 | 0.0341 | 0.0383 | 80- 90   | 0.0792      | 1146         | 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     |              |           |



| LUMINANCE cd/(m2) |        |         |
|-------------------|--------|---------|
| G(DEG)            | C0/180 | C90/270 |
| 85                | 135    | 139     |
| 80                | 130    | 121     |
| 75                | 144    | 126     |
| 70                | 168    | 140     |
| 65                | 213    | 160     |
| 60                | 287    | 200     |
| 55                | 387    | 267     |
| 50                | 479    | 344     |
| 45                | 605    | 417     |

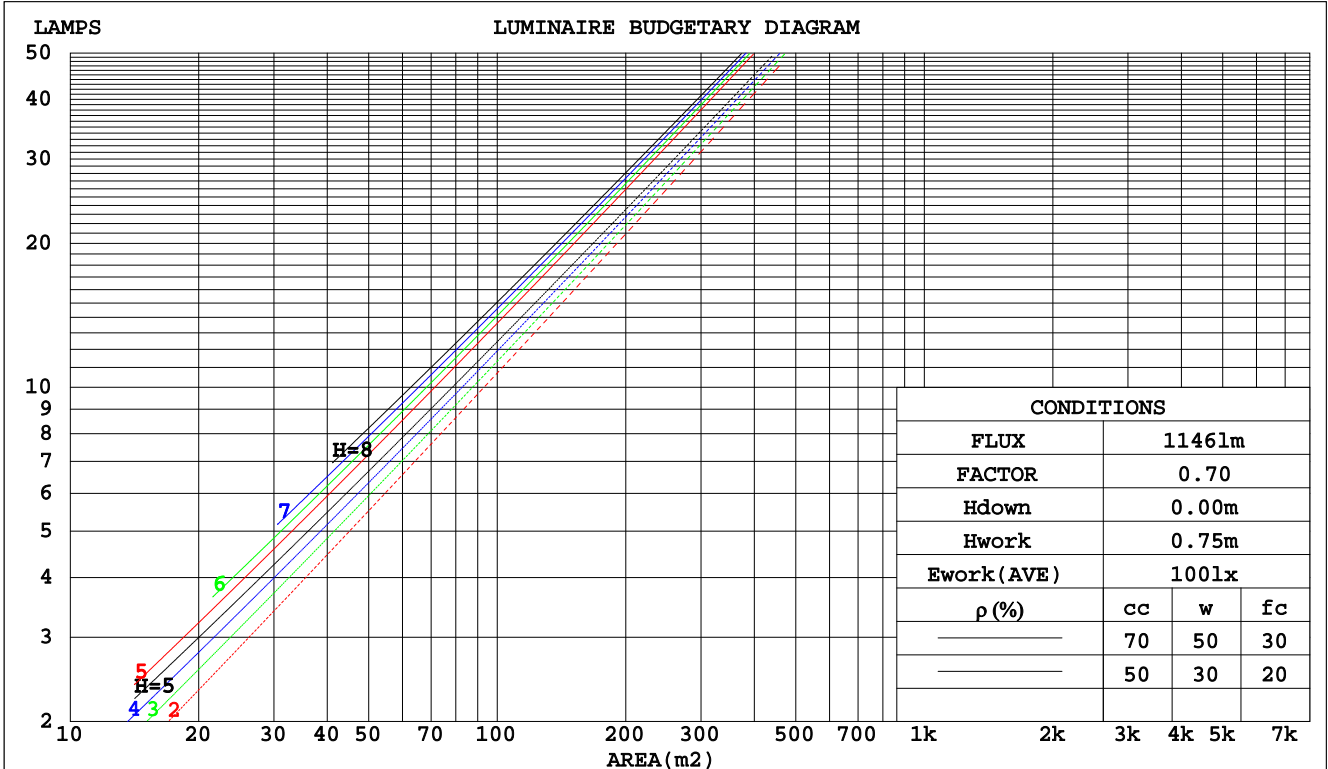
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.2DEG  
 Operators: Cao Chengpei  
 Test Date: 2016-06-23

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.288  
 Humidity: 52%  
 Test Distance: 5.850m [K=1.0000]  
 Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

|   |                          |             |
|---|--------------------------|-------------|
| Test:U:220.0V I:0.0675A P:13.45W PF:0.9047 Lamp Flux:1145.77x1 lm |                          |             |
| NAME: FF5-11W-840-24D Specular                                    | TYPE:Downlight           | SERIAL No.: |
| SPEC.:4000K   | DIM.: L153mm*W45mm*H60mm |             |
| MFR.: NEKO LIGHTING AG  |                          |             |

| pcc  | 80%                             |      |      | 70%  |      |      | 50%  |      |      | 30%  |      |      | 10%  |      |      | 0    |
|------|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|      | 50%                             | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0    |
| pw   |                                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| pfc  |                                 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 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  | 1.13                            | 1.11 | 1.09 | 1.11 | 1.09 | 1.08 | 1.07 | 1.06 | 1.04 | 1.03 | 1.02 | 1.01 | .00  | .99  | .98  | .97  |
| 2.0  | 1.08                            | 1.05 | 1.02 | 1.06 | 1.03 | 1.01 | 1.03 | 1.01 | .99  | 1.00 | .98  | .97  | .98  | .96  | .95  | .94  |
| 3.0  | 1.03                            | .00  | .97  | 1.02 | .99  | .96  | .00  | .97  | .95  | .97  | .95  | .93  | .95  | .93  | .92  | .91  |
| 4.0  | .99                             | .95  | .92  | .98  | .95  | .92  | .96  | .93  | .91  | .94  | .92  | .90  | .93  | .91  | .89  | .88  |
| 5.0  | .96                             | .92  | .89  | .95  | .91  | .88  | .93  | .90  | .88  | .92  | .89  | .87  | .90  | .88  | .86  | .85  |
| 6.0  | .93                             | .88  | .85  | .92  | .88  | .85  | .91  | .87  | .85  | .89  | .86  | .84  | .88  | .86  | .84  | .83  |
| 7.0  | .90                             | .85  | .83  | .89  | .85  | .82  | .88  | .84  | .82  | .87  | .84  | .82  | .86  | .83  | .81  | .80  |
| 8.0  | .87                             | .83  | .80  | .86  | .83  | .80  | .85  | .82  | .80  | .85  | .82  | .79  | .84  | .81  | .79  | .78  |
| 9.0  | .84                             | .80  | .78  | .84  | .80  | .78  | .83  | .80  | .77  | .82  | .79  | .77  | .82  | .79  | .77  | .76  |
| 10.0 | .82                             | .78  | .75  | .82  | .78  | .75  | .81  | .78  | .75  | .80  | .77  | .75  | .80  | .77  | .75  | .74  |



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.2DEG  
 Operators:Cao Chengpei  
 Test Date:2016-06-23

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.288  
 Humidity:52%  
 Test Distance:5.850m [K=1.0000]  
 Remarks:

WEC AND CCEC

|   |                          |             |
|---|--------------------------|-------------|
| Test:U:220.0V I:0.0675A P:13.45W PF:0.9047 Lamp Flux:1145.77x1 lm |                          |             |
| NAME: FF5-11W-840-24D Specular                                    | TYPE:Downlight           | SERIAL No.: |
| SPEC.:4000K   | DIM.: L153mm*W45mm*H60mm |             |
| MFR.: NEKO LIGHTING AG  |                          |             |

| 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  | .135                  | .077 | .024 | .129 | .073 | .023 | .116                            | .067 | .021 | .105 | .061 | .019 | .094 | .055 | .018 |   |
| 2.0  | .125                  | .069 | .021 | .120 | .066 | .020 | .110                            | .061 | .019 | .100 | .056 | .018 | .092 | .052 | .016 |   |
| 3.0  | .117                  | .062 | .019 | .112 | .060 | .018 | .104                            | .056 | .017 | .096 | .053 | .016 | .089 | .049 | .015 |   |
| 4.0  | .109                  | .057 | .017 | .106 | .055 | .016 | .098                            | .052 | .016 | .092 | .049 | .015 | .086 | .047 | .014 |   |
| 5.0  | .103                  | .053 | .015 | .100 | .051 | .015 | .094                            | .049 | .014 | .088 | .046 | .014 | .083 | .044 | .013 |   |
| 6.0  | .098                  | .049 | .014 | .095 | .048 | .014 | .090                            | .046 | .013 | .085 | .044 | .013 | .080 | .042 | .013 |   |
| 7.0  | .093                  | .046 | .013 | .090 | .045 | .013 | .086                            | .043 | .012 | .081 | .042 | .012 | .077 | .040 | .012 |   |
| 8.0  | .088                  | .043 | .012 | .086 | .042 | .012 | .082                            | .041 | .012 | .079 | .040 | .011 | .075 | .039 | .011 |   |
| 9.0  | .085                  | .041 | .011 | .083 | .040 | .011 | .079                            | .039 | .011 | .076 | .038 | .011 | .073 | .037 | .011 |   |
| 10.0 | .081                  | .039 | .011 | .079 | .038 | .011 | .076                            | .037 | .011 | .073 | .036 | .010 | .070 | .035 | .010 |   |

| 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  | .190                  | .190 | .190 | .163 | .163 | .163 | .111                                       | .111 | .111 | .064 | .064 | .064 | .020 | .020 | .020 |   |
| 1.0  | .168                  | .158 | .148 | .144 | .135 | .128 | .098                                       | .093 | .088 | .057 | .054 | .051 | .018 | .017 | .017 |   |
| 2.0  | .150                  | .133 | .118 | .129 | .114 | .102 | .088                                       | .079 | .071 | .051 | .046 | .042 | .016 | .015 | .014 |   |
| 3.0  | .135                  | .113 | .096 | .116 | .098 | .083 | .079                                       | .068 | .058 | .046 | .040 | .034 | .015 | .013 | .011 |   |
| 4.0  | .122                  | .098 | .079 | .105 | .085 | .069 | .072                                       | .059 | .048 | .042 | .035 | .029 | .013 | .011 | .009 |   |
| 5.0  | .112                  | .086 | .066 | .096 | .074 | .058 | .066                                       | .052 | .041 | .038 | .030 | .024 | .012 | .010 | .008 |   |
| 6.0  | .103                  | .076 | .056 | .088 | .065 | .049 | .061                                       | .046 | .034 | .035 | .027 | .020 | .011 | .009 | .007 |   |
| 7.0  | .095                  | .067 | .048 | .082 | .058 | .042 | .057                                       | .041 | .029 | .033 | .024 | .018 | .011 | .008 | .006 |   |
| 8.0  | .089                  | .061 | .041 | .076 | .053 | .036 | .053                                       | .037 | .025 | .031 | .022 | .015 | .010 | .007 | .005 |   |
| 9.0  | .083                  | .055 | .036 | .072 | .048 | .031 | .050                                       | .033 | .022 | .029 | .020 | .013 | .009 | .006 | .004 |   |
| 10.0 | .078                  | .050 | .031 | .067 | .044 | .027 | .047                                       | .031 | .019 | .027 | .018 | .012 | .009 | .006 | .004 |   |

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.2DEG  
 Operators:Cao Chengpei  
 Test Date:2016-06-23

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.288  
 Humidity:52%  
 Test Distance:5.850m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

|   |                          |             |
|---|--------------------------|-------------|
| Test:U:220.0V I:0.0675A P:13.45W PF:0.9047 Lamp Flux:1145.77x1 lm |                          |             |
| NAME: FF5-11W-840-24D Specular                                    | TYPE:Downlight           | SERIAL No.: |
| SPEC.:4000K   | DIM.: L153mm*W45mm*H60mm |             |
| MFR.: NEKO LIGHTING AG  |                          |             |

|  |                  |     |     |     |     |                |     |     |     |     |
|--|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|-----|
| 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                                      | 6.2              | 6.8 | 6.4 | 7.0 | 7.1 | 6.0            | 6.7 | 6.2 | 6.8 | 7.0 |
| 3H   | 6.1              | 6.7 | 6.3 | 6.8 | 7.0 | 5.9            | 6.5 | 6.1 | 6.7 | 6.9 |
| 4H   | 6.0              | 6.5 | 6.2 | 6.8 | 7.0 | 5.8            | 6.4 | 6.1 | 6.6 | 6.8 |
| 6H   | 5.9              | 6.4 | 6.2 | 6.7 | 6.9 | 5.7            | 6.3 | 6.0 | 6.5 | 6.7 |
| 8H   | 5.9              | 6.4 | 6.1 | 6.6 | 6.9 | 5.7            | 6.2 | 6.0 | 6.5 | 6.7 |
| 12H  | 5.8              | 6.3 | 6.1 | 6.6 | 6.8 | 5.6            | 6.1 | 6.0 | 6.4 | 6.7 |
| 4H 2H  | 6.0              | 6.5 | 6.2 | 6.7 | 7.0 | 5.8            | 6.4 | 6.1 | 6.6 | 6.8 |
| 3H   | 5.8              | 6.3 | 6.1 | 6.6 | 6.8 | 5.6            | 6.1 | 5.9 | 6.4 | 6.7 |
| 4H   | 5.7              | 6.2 | 6.1 | 6.5 | 6.8 | 5.6            | 6.0 | 5.9 | 6.3 | 6.6 |
| 6H   | 5.6              | 6.0 | 6.0 | 6.4 | 6.7 | 5.5            | 5.9 | 5.8 | 6.2 | 6.5 |
| 8H   | 5.6              | 6.0 | 6.0 | 6.3 | 6.7 | 5.4            | 5.8 | 5.8 | 6.1 | 6.5 |
| 12H  | 5.5              | 5.9 | 5.9 | 6.2 | 6.6 | 5.4            | 5.7 | 5.8 | 6.1 | 6.5 |
| 8H 4H  | 5.6              | 5.9 | 6.0 | 6.3 | 6.7 | 5.4            | 5.8 | 5.8 | 6.1 | 6.5 |
| 6H   | 5.5              | 5.8 | 5.9 | 6.2 | 6.6 | 5.3            | 5.6 | 5.7 | 6.0 | 6.4 |
| 8H   | 5.4              | 5.7 | 5.9 | 6.1 | 6.5 | 5.2            | 5.5 | 5.7 | 5.9 | 6.4 |
| 12H  | 5.3              | 5.6 | 5.8 | 6.0 | 6.5 | 5.2            | 5.4 | 5.6 | 5.9 | 6.3 |
| 12H 4H   | 5.5              | 5.9 | 5.9 | 6.2 | 6.6 | 5.3            | 5.7 | 5.7 | 6.1 | 6.4 |
| 6H   | 5.4              | 5.7 | 5.8 | 6.1 | 6.5 | 5.2            | 5.5 | 5.7 | 5.9 | 6.4 |
| 8H   | 5.3              | 5.6 | 5.8 | 6.0 | 6.5 | 5.2            | 5.4 | 5.6 | 5.9 | 6.3 |
| Variations with the observer position at spacings: |                  |     |     |     |     |                |     |     |     |     |
| S = 1.0H   | + 3.7 / - 9.8    |     |     |     |     | + 4.2 / -10.8  |     |     |     |     |
| 1.5H   | + 6.5 / - 9.2    |     |     |     |     | + 7.0 / - 9.8  |     |     |     |     |
| 2.0H   | + 2.3 / - 1.9    |     |     |     |     | + 1.4 / - 1.3  |     |     |     |     |

CIE Pub.117 Corrected 1146 lm Total Lamp Luminous Flux.(8log(F/F0) = 0.5)

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.2DEG  
 Operators:Cao Chengpei  
 Test Date:2016-06-23

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.288  
 Humidity:52%  
 Test Distance:5.850m [K=1.0000]  
 Remarks:

**UTILIZATION FACTORS TABLE**

|   |                          |             |
|---|--------------------------|-------------|
| Test:U:220.0V I:0.0675A P:13.45W PF:0.9047 Lamp Flux:1145.77x1 lm |                          |             |
| NAME: FF5-11W-840-24D Specular                                    | TYPE:Downlight           | SERIAL No.: |
| SPEC.:4000K   | DIM.: L153mm*W45mm*H60mm |             |
| MFR.: NEKO LIGHTING AG  |                          |             |

| 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                         | 91  | 86  | 82        | 91  | 85  | 82  | 90            | 85  | 82  | 79     |
| 0.80                             | 98  | 93  | 90        | 98  | 93  | 90  | 96            | 92  | 89  | 86     |
| 1.00                             | 102   | 97  | 94        | 101 | 96  | 93  | 100           | 96  | 93  | 89     |
| 1.25                             | 105   | 101 | 98        | 104 | 100 | 97  | 103           | 99  | 97  | 93     |
| 1.50                             | 108   | 104 | 101       | 107 | 103 | 100 | 104           | 101 | 99  | 95     |
| 2.00                             | 110   | 106 | 103       | 109 | 105 | 103 | 106           | 103 | 101 | 96     |
| 2.50                             | 111   | 108 | 105       | 110 | 107 | 104 | 107           | 104 | 102 | 97     |
| 3.00                             | 113   | 110 | 107       | 111 | 108 | 106 | 108           | 106 | 104 | 98     |
| 4.00                             | 115   | 112 | 110       | 113 | 111 | 109 | 109           | 107 | 106 | 99     |
| 5.00                             | 116   | 114 | 112       | 114 | 112 | 111 | 110           | 109 | 107 | 100    |
| 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: HIGH  
 Temperature:25.2DEG  
 Operators:Cao Chengpei  
 Test Date:2016-06-23

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.288  
 Humidity:52%  
 Test Distance:5.850m [K=1.0000]  
 Remarks:

**ISOCANDELA DIAGRAM**

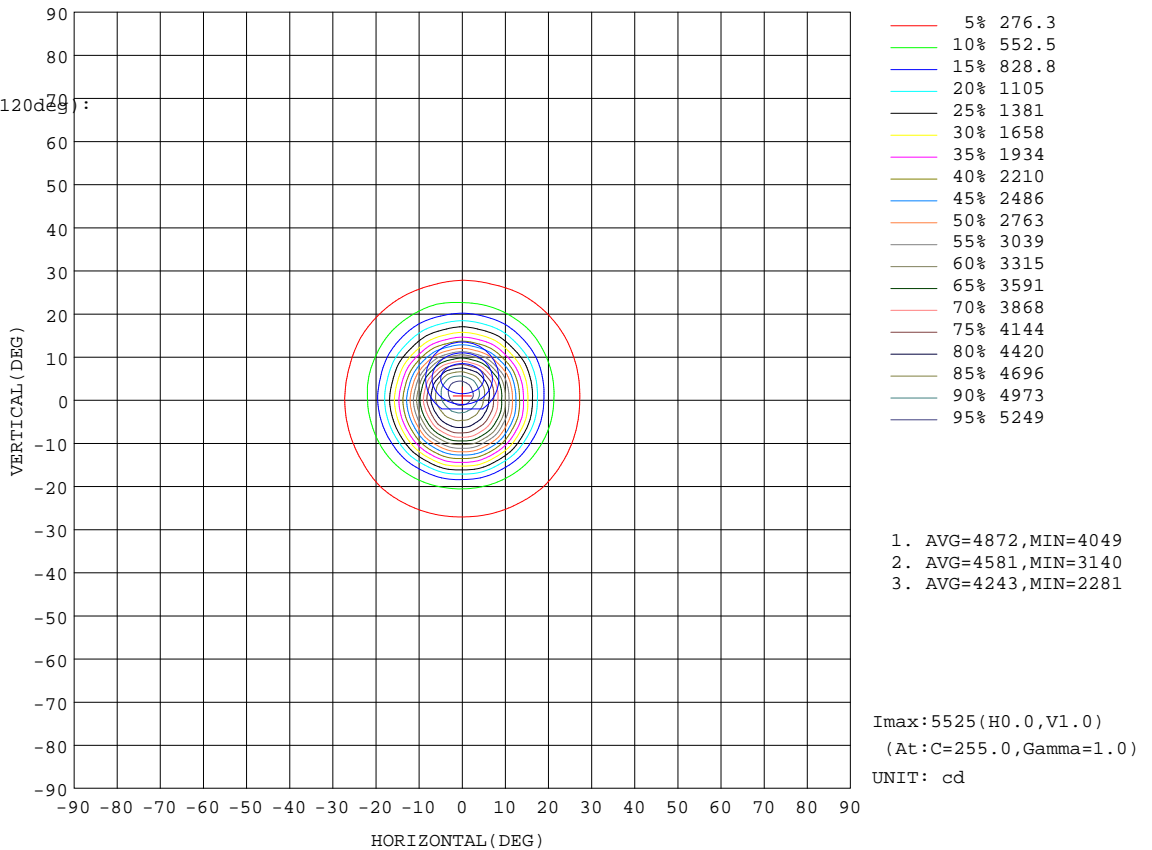
|   |                          |             |
|---|--------------------------|-------------|
| Test:U:220.0V I:0.0675A P:13.45W PF:0.9047 Lamp Flux:1145.77x1 lm |                          |             |
| NAME: FF5-11W-840-24D Specular                                    | TYPE:Downlight           | SERIAL No.: |
| SPEC.:4000K   | DIM.: L153mm*W45mm*H60mm |             |
| MFR.: NEKO LIGHTING AG  |                          |             |

Conical surface Flux(90deg):

1142.8 lm  
%lum = 99.7%  
%lamp = 99.7%

Conical surface Flux(120deg):

1144.9 lm  
%lum = 99.9%  
%lamp = 99.9%



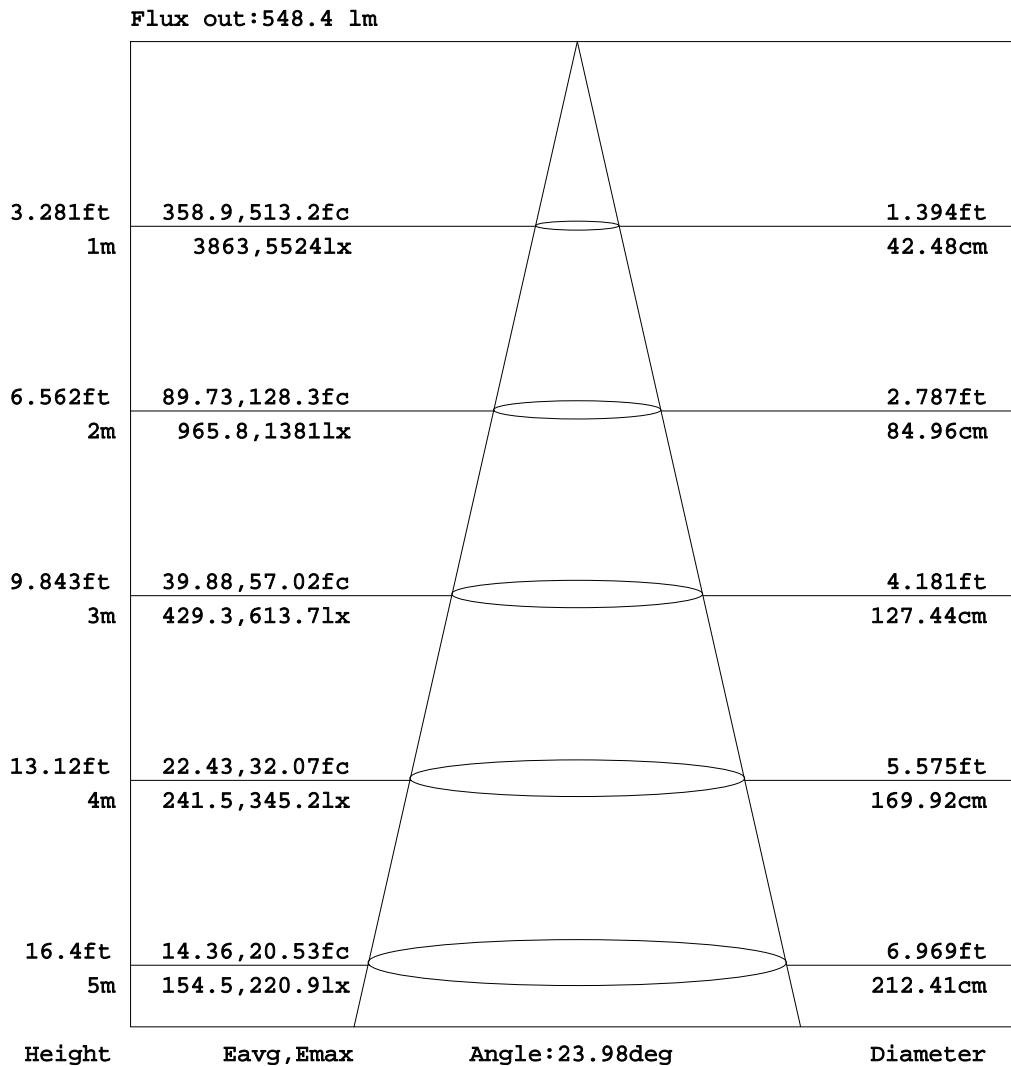
C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.2DEG  
Operators:Cao Chengpei  
Test Date:2016-06-23

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.288  
Humidity:52%  
Test Distance:5.850m [K=1.0000]  
Remarks:



**AAI Figure**

|   |                          |             |
|---|--------------------------|-------------|
| Test:U:220.0V I:0.0675A P:13.45W PF:0.9047 Lamp Flux:1145.77x1 lm |                          |             |
| NAME: FF5-11W-840-24D Specular                                    | TYPE:Downlight           | SERIAL No.: |
| SPEC.:4000K   | DIM.: L153mm*W45mm*H60mm |             |
| MFR.: NEKO LIGHTING AG  |                          |             |



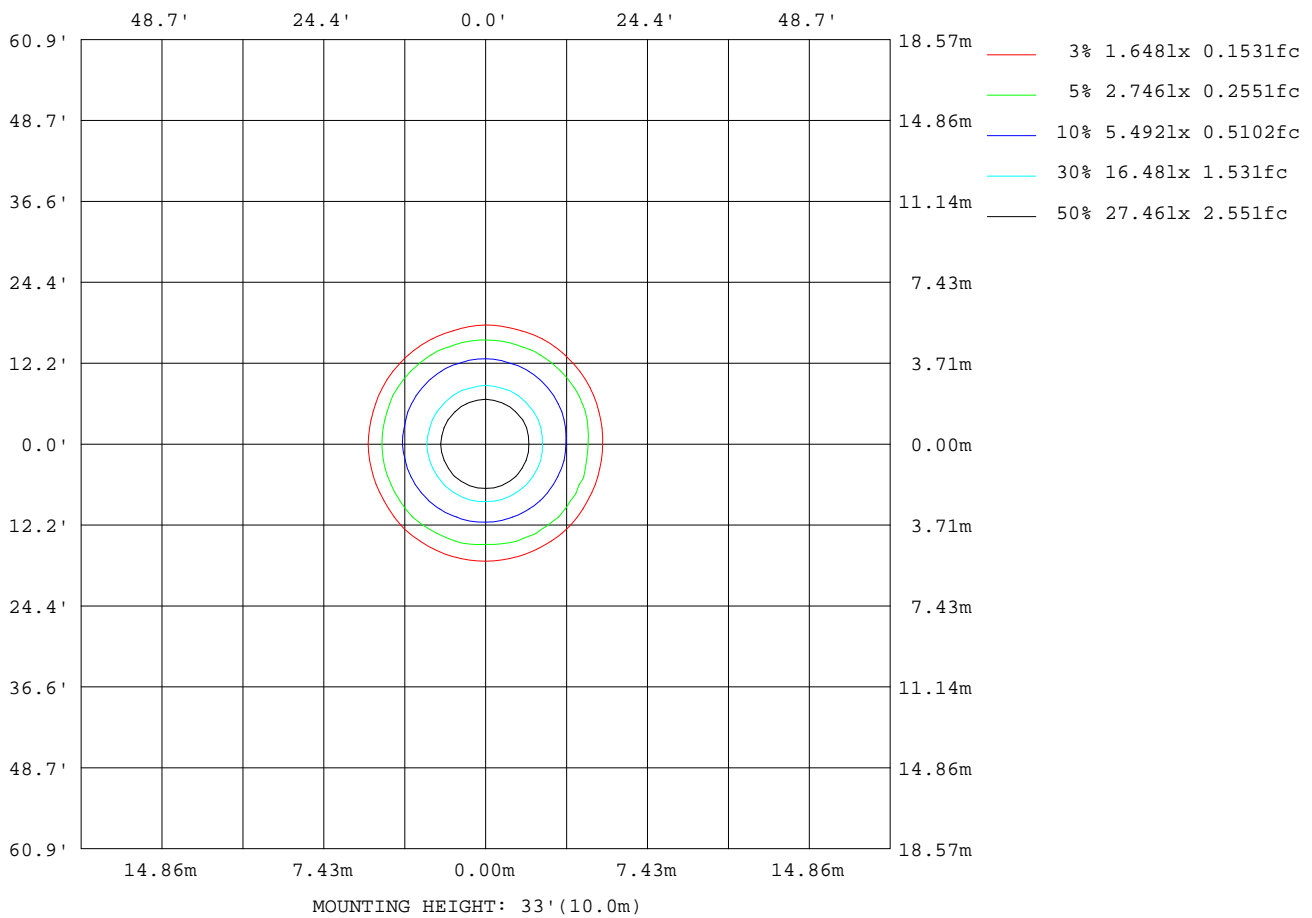
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.2DEG  
Operators:Cao Chengpei  
Test Date:2016-06-23

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.288  
Humidity:52%  
Test Distance:5.850m [K=1.0000]  
Remarks:

**ISOLUX DIAGRAM**

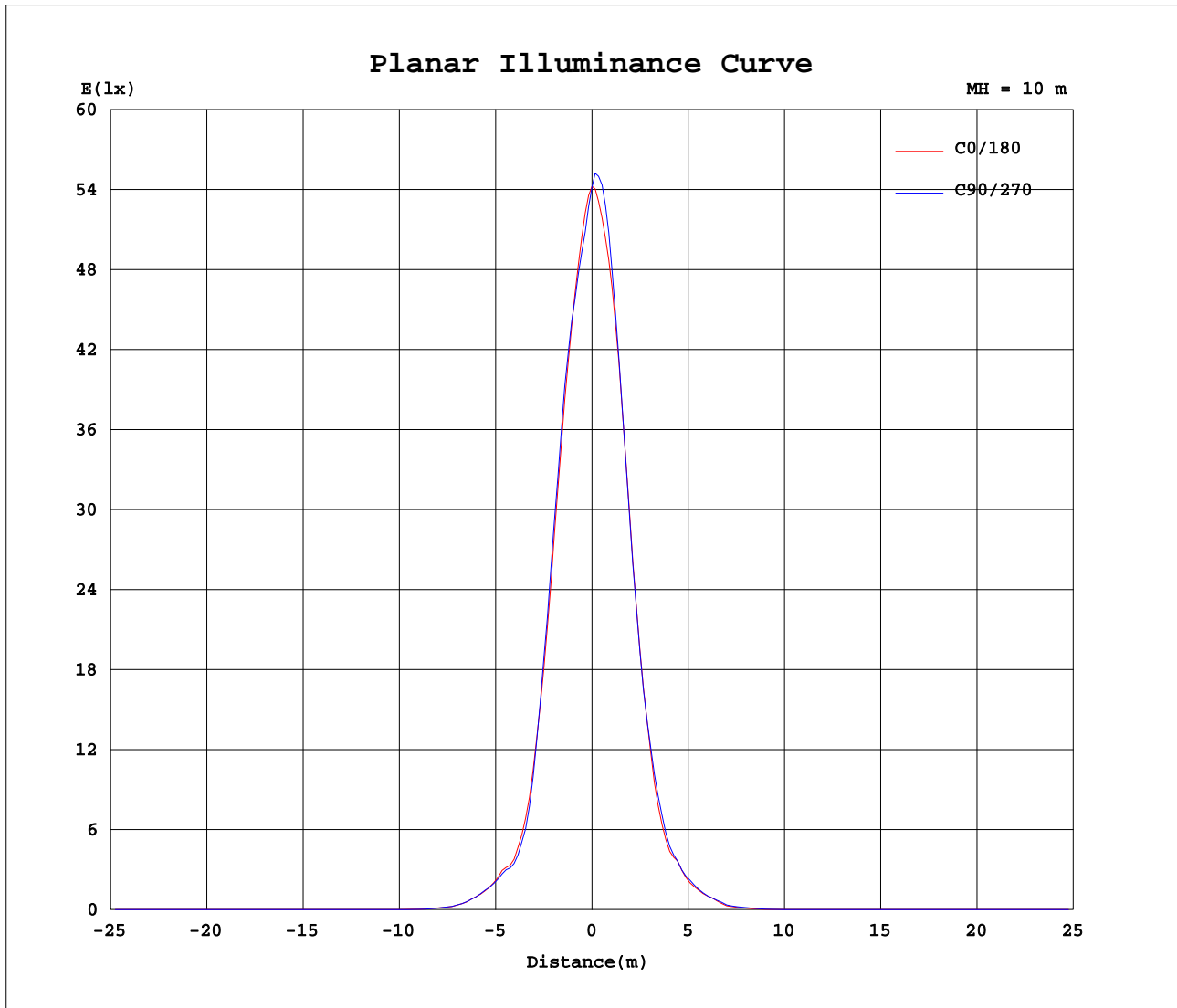
|   |                          |             |
|---|--------------------------|-------------|
| Test:U:220.0V I:0.0675A P:13.45W PF:0.9047 Lamp Flux:1145.77x1 lm |                          |             |
| NAME: FF5-11W-840-24D Specular                                    | TYPE:Downlight           | SERIAL No.: |
| SPEC.:4000K   | DIM.: L153mm*W45mm*H60mm |             |
| MFR.: NEKO LIGHTING AG  |                          |             |



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.2DEG  
Operators:Cao Chengpei  
Test Date:2016-06-23

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.288  
Humidity:52%  
Test Distance:5.850m [K=1.0000]  
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.2DEG  
 Operators: Cao Chengpei  
 Test Date: 2016-06-23

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.288  
 Humidity: 52%  
 Test Distance: 5.850m [K=1.0000]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

|   |                          |             |
|---|--------------------------|-------------|
| Test:U:220.0V I:0.0675A P:13.45W PF:0.9047 Lamp Flux:1145.77x1 lm |                          |             |
| NAME: FF5-11W-840-24D Specular                                    | TYPE:Downlight           | SERIAL No.: |
| SPEC.:4000K   | DIM.: L153mm*W45mm*H60mm |             |
| MFR.: NEKO LIGHTING AG  |                          |             |

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                  | 5426 | 5428 | 5415 | 5431 | 5414 | 5438 | 5419 | 5447 | 5431 | 5453 | 5445 | 5458 | 5426 | 5428 | 5415 | 5431 | 5414 | 5438 | 5419 |
| 5                  | 4675 | 4658 | 4621 | 4644 | 4621 | 4649 | 4632 | 4683 | 4693 | 4754 | 4773 | 4853 | 4928 | 4986 | 5086 | 5145 | 5181 | 5161 | 5136 |
| 10                 | 3311 | 3358 | 3348 | 3407 | 3388 | 3448 | 3401 | 3465 | 3442 | 3467 | 3445 | 3472 | 3526 | 3493 | 3572 | 3513 | 3566 | 3485 | 3514 |
| 15                 | 1711 | 1750 | 1721 | 1761 | 1726 | 1784 | 1743 | 1805 | 1784 | 1816 | 1788 | 1826 | 1845 | 1801 | 1844 | 1809 | 1849 | 1797 | 1830 |
| 20                 | 678  | 668  | 633  | 635  | 621  | 603  | 612  | 622  | 642  | 690  | 702  | 734  | 770  | 778  | 828  | 841  | 870  | 845  | 855  |
| 25                 | 396  | 396  | 390  | 388  | 387  | 373  | 359  | 372  | 370  | 392  | 386  | 393  | 398  | 397  | 421  | 419  | 424  | 395  | 401  |
| 30                 | 181  | 183  | 180  | 184  | 180  | 184  | 186  | 185  | 184  | 187  | 182  | 185  | 187  | 184  | 189  | 189  | 191  | 186  | 195  |
| 35                 | 62.6 | 59.3 | 67.7 | 59.0 | 67.6 | 56.9 | 64.0 | 55.4 | 60.8 | 53.7 | 57.7 | 50.2 | 52.0 | 61.4 | 55.3 | 69.7 | 62.2 | 71.1 | 64.2 |
| 40                 | 17.7 | 17.4 | 16.1 | 16.1 | 15.4 | 15.5 | 14.8 | 14.9 | 14.4 | 15.1 | 14.5 | 15.0 | 16.6 | 17.0 | 18.1 | 19.2 | 21.8 | 20.6 | 22.6 |
| 45                 | 2.95 | 2.84 | 2.48 | 2.29 | 2.06 | 2.02 | 2.03 | 2.14 | 2.25 | 2.39 | 2.52 | 2.66 | 2.83 | 2.84 | 2.87 | 2.78 | 2.79 | 2.64 | 2.77 |
| 50                 | 2.12 | 1.93 | 1.74 | 1.58 | 1.49 | 1.46 | 1.52 | 1.61 | 1.72 | 1.85 | 2.00 | 2.13 | 2.24 | 2.25 | 2.21 | 2.13 | 2.05 | 1.97 | 1.94 |
| 55                 | 1.53 | 1.37 | 1.22 | 1.10 | 1.05 | 1.02 | 1.06 | 1.11 | 1.19 | 1.29 | 1.41 | 1.51 | 1.59 | 1.56 | 1.53 | 1.45 | 1.39 | 1.34 | 1.33 |
| 60                 | 0.99 | 0.88 | 0.80 | 0.72 | 0.69 | 0.66 | 0.69 | 0.71 | 0.76 | 0.80 | 0.88 | 0.93 | 0.97 | 0.95 | 0.91 | 0.88 | 0.83 | 0.81 | 0.80 |
| 65                 | 0.62 | 0.56 | 0.53 | 0.48 | 0.48 | 0.44 | 0.47 | 0.47 | 0.50 | 0.51 | 0.55 | 0.55 | 0.56 | 0.56 | 0.53 | 0.52 | 0.49 | 0.50 | 0.48 |
| 70                 | 0.40 | 0.36 | 0.36 | 0.33 | 0.33 | 0.31 | 0.33 | 0.32 | 0.34 | 0.33 | 0.36 | 0.34 | 0.34 | 0.36 | 0.33 | 0.34 | 0.31 | 0.33 | 0.31 |
| 75                 | 0.26 | 0.23 | 0.24 | 0.22 | 0.23 | 0.20 | 0.22 | 0.21 | 0.23 | 0.21 | 0.24 | 0.22 | 0.21 | 0.23 | 0.20 | 0.22 | 0.20 | 0.21 | 0.20 |
| 80                 | 0.16 | 0.13 | 0.15 | 0.13 | 0.15 | 0.13 | 0.15 | 0.13 | 0.15 | 0.13 | 0.15 | 0.13 | 0.12 | 0.14 | 0.11 | 0.13 | 0.11 | 0.13 | 0.11 |
| 85                 | 0.08 | 0.06 | 0.08 | 0.06 | 0.08 | 0.06 | 0.08 | 0.06 | 0.08 | 0.06 | 0.08 | 0.06 | 0.05 | 0.06 | 0.04 | 0.06 | 0.04 | 0.06 | 0.04 |
| 90                 | 0.05 | 0.04 | 0.05 | 0.04 | 0.05 | 0.04 | 0.05 | 0.04 | 0.05 | 0.04 | 0.05 | 0.04 | 0.04 | 0.04 | 0.03 | 0.04 | 0.03 | 0.04 | 0.03 |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.2DEG  
 Operators:Cao Chengpei  
 Test Date:2016-06-23  
 γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.288  
 Humidity:52%  
 Test Distance:5.850m [K=1.0000]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

|   |                          |             |
|---|--------------------------|-------------|
| Test:U:220.0V I:0.0675A P:13.45W PF:0.9047 Lamp Flux:1145.77x1 lm |                          |             |
| NAME: FF5-11W-840-24D Specular                                    | TYPE:Downlight           | SERIAL No.: |
| SPEC.:4000K   | DIM.: L153mm*W45mm*H60mm |             |
| MFR.: NEKO LIGHTING AG  |                          |             |

Table--2

UNIT: cd

| C( DEG)<br>γ (DEG) | 285  | 300  | 315  | 330  | 345  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------|------|------|------|------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 0                  | 5447 | 5431 | 5453 | 5445 | 5458 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5                  | 5067 | 5030 | 4939 | 4879 | 4784 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10                 | 3456 | 3494 | 3428 | 3448 | 3375 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15                 | 1805 | 1849 | 1794 | 1797 | 1757 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 20                 | 836  | 846  | 810  | 790  | 731  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 25                 | 397  | 414  | 411  | 424  | 419  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 30                 | 191  | 198  | 195  | 193  | 187  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 35                 | 71.1 | 64.4 | 69.3 | 61.2 | 65.9 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40                 | 21.4 | 23.7 | 20.8 | 21.4 | 18.9 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 45                 | 2.76 | 3.09 | 3.12 | 3.35 | 3.18 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 50                 | 1.97 | 2.10 | 2.23 | 2.29 | 2.25 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 55                 | 1.35 | 1.46 | 1.58 | 1.65 | 1.63 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 60                 | 0.84 | 0.89 | 0.98 | 1.03 | 1.04 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 65                 | 0.52 | 0.54 | 0.59 | 0.61 | 0.64 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70                 | 0.34 | 0.34 | 0.38 | 0.37 | 0.40 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 75                 | 0.22 | 0.22 | 0.25 | 0.24 | 0.26 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 80                 | 0.14 | 0.12 | 0.15 | 0.13 | 0.16 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 85                 | 0.07 | 0.05 | 0.07 | 0.05 | 0.08 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 90                 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |

|                        |  |
|------------------------|--|
| C Range: 0 - 360DEG    | γ Range: 0 - 90DEG                               |
| C Interval: 15.0DEG    | γ Interval: 1.0DEG                               |
| Test Speed: HIGH       | Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.288 |
| Temperature:25.2DEG    | Humidity:52%                                     |
| Operators:Cao Chengpei | Test Distance:5.850m [K=1.0000]                  |
| Test Date:2016-06-23   | Remarks:   |

Photometric Data Table [cd]

|      |        |        |        |        |        |        |        |        |        |        |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| G/C  | 0.0    | 15.0   | 30.0   | 45.0   | 60.0   | 75.0   | 90.0   | 105.0  | 120.0  | 135.0  |
| 0.0  | 5426   | 5428   | 5415   | 5431   | 5414   | 5438   | 5419   | 5447   | 5431   | 5453   |
| 3.0  | 5063   | 5031   | 4972   | 4970   | 4931   | 4958   | 4951   | 4985   | 4998   | 5050   |
| 6.0  | 4450   | 4456   | 4429   | 4450   | 4435   | 4481   | 4487   | 4515   | 4528   | 4575   |
| 9.0  | 3631   | 3687   | 3672   | 3725   | 3710   | 3770   | 3740   | 3780   | 3756   | 3799   |
| 12.0 | 2628   | 2684   | 2687   | 2749   | 2743   | 2779   | 2757   | 2783   | 2749   | 2798   |
| 15.0 | 1711   | 1750   | 1721   | 1761   | 1726   | 1784   | 1743   | 1805   | 1784   | 1816   |
| 18.0 | 979.0  | 971.9  | 926.3  | 932.2  | 895.6  | 915.7  | 901.4  | 942.5  | 951.7  | 1004   |
| 21.0 | 576.0  | 560.1  | 540.6  | 531.0  | 512.0  | 512.6  | 505.4  | 523.8  | 553.5  | 580.1  |
| 24.0 | 415.5  | 392.1  | 394.0  | 395.4  | 411.2  | 400.4  | 393.3  | 417.0  | 412.4  | 442.4  |
| 27.0 | 285.4  | 283.5  | 280.4  | 283.0  | 277.6  | 278.9  | 278.5  | 281.1  | 283.4  | 289.8  |
| 30.0 | 181.2  | 183.2  | 179.8  | 183.8  | 180.0  | 183.6  | 186.3  | 184.7  | 183.7  | 187.2  |
| 33.0 | 99.99  | 102.8  | 98.56  | 98.41  | 101.7  | 102.8  | 103.7  | 110.2  | 111.9  | 112.9  |
| 36.0 | 44.99  | 46.58  | 46.55  | 48.24  | 47.79  | 48.67  | 47.49  | 47.23  | 45.79  | 45.14  |
| 39.0 | 25.98  | 25.43  | 24.60  | 25.00  | 23.56  | 23.62  | 21.35  | 22.38  | 21.25  | 22.48  |
| 42.0 | 7.798  | 7.784  | 7.334  | 7.193  | 6.663  | 6.633  | 6.401  | 6.637  | 6.445  | 6.631  |
| 45.0 | 2.945  | 2.836  | 2.480  | 2.288  | 2.058  | 2.022  | 2.031  | 2.142  | 2.248  | 2.387  |
| 48.0 | 2.366  | 2.170  | 1.959  | 1.786  | 1.680  | 1.650  | 1.716  | 1.806  | 1.937  | 2.074  |
| 51.0 | 2.006  | 1.814  | 1.633  | 1.482  | 1.403  | 1.373  | 1.426  | 1.507  | 1.616  | 1.744  |
| 54.0 | 1.648  | 1.478  | 1.320  | 1.196  | 1.134  | 1.105  | 1.145  | 1.207  | 1.294  | 1.399  |
| 57.0 | 1.299  | 1.160  | 1.034  | 0.9324 | 0.8870 | 0.8600 | 0.8892 | 0.9281 | 0.9980 | 1.075  |
| 60.0 | 0.9873 | 0.8834 | 0.7953 | 0.7153 | 0.6908 | 0.6599 | 0.6887 | 0.7089 | 0.7570 | 0.8003 |
| 63.0 | 0.7443 | 0.6726 | 0.6227 | 0.5598 | 0.5459 | 0.5173 | 0.5416 | 0.5492 | 0.5907 | 0.6045 |
| 66.0 | 0.5672 | 0.5131 | 0.4904 | 0.4428 | 0.4414 | 0.4130 | 0.4328 | 0.4301 | 0.4606 | 0.4598 |
| 69.0 | 0.4350 | 0.3960 | 0.3902 | 0.3513 | 0.3603 | 0.3363 | 0.3496 | 0.3427 | 0.3667 | 0.3598 |
| 72.0 | 0.3390 | 0.3065 | 0.3092 | 0.2768 | 0.2921 | 0.2661 | 0.2899 | 0.2725 | 0.2985 | 0.2789 |
| 75.0 | 0.2560 | 0.2320 | 0.2410 | 0.2150 | 0.2282 | 0.2023 | 0.2239 | 0.2087 | 0.2303 | 0.2129 |
| 78.0 | 0.1962 | 0.1724 | 0.1877 | 0.1639 | 0.1770 | 0.1575 | 0.1748 | 0.1596 | 0.1770 | 0.1617 |
| 81.0 | 0.1429 | 0.1191 | 0.1365 | 0.1128 | 0.1323 | 0.1106 | 0.1343 | 0.1128 | 0.1323 | 0.1149 |
| 84.0 | 0.0960 | 0.0765 | 0.0939 | 0.0702 | 0.0939 | 0.0744 | 0.0939 | 0.0702 | 0.0918 | 0.0702 |
| 87.0 | 0.0597 | 0.0447 | 0.0597 | 0.0447 | 0.0619 | 0.0447 | 0.0619 | 0.0447 | 0.0619 | 0.0447 |
| 90.0 | 0.0490 | 0.0426 | 0.0490 | 0.0447 | 0.0490 | 0.0447 | 0.0511 | 0.0447 | 0.0490 | 0.0447 |
| G/C  | 150.0  | 165.0  | 180.0  | 195.0  | 210.0  | 225.0  | 240.0  | 255.0  | 270.0  | 285.0  |
| 0.0  | 5445   | 5458   | 5426   | 5428   | 5415   | 5431   | 5414   | 5438   | 5419   | 5447   |
| 3.0  | 5073   | 5142   | 5209   | 5268   | 5329   | 5383   | 5446   | 5455   | 5458   | 5423   |
| 6.0  | 4589   | 4654   | 4736   | 4777   | 4875   | 4910   | 4967   | 4907   | 4863   | 4797   |
| 9.0  | 3767   | 3804   | 3875   | 3857   | 3932   | 3899   | 3947   | 3876   | 3888   | 3824   |
| 12.0 | 2740   | 2759   | 2795   | 2747   | 2779   | 2749   | 2789   | 2740   | 2773   | 2729   |
| 15.0 | 1788   | 1826   | 1845   | 1801   | 1844   | 1809   | 1849   | 1797   | 1830   | 1805   |
| 18.0 | 1010   | 1056   | 1105   | 1100   | 1152   | 1150   | 1184   | 1162   | 1182   | 1159   |
| 21.0 | 604.2  | 617.3  | 646.6  | 650.7  | 693.8  | 703.7  | 726.1  | 699.7  | 709.0  | 692.2  |
| 24.0 | 457.8  | 462.1  | 477.9  | 468.7  | 511.1  | 508.3  | 518.2  | 496.4  | 476.1  | 476.2  |
| 27.0 | 275.6  | 280.2  | 284.7  | 282.4  | 291.0  | 289.7  | 293.6  | 294.2  | 311.8  | 301.8  |
| 30.0 | 182.3  | 185.3  | 186.9  | 183.8  | 189.0  | 188.9  | 191.2  | 186.2  | 195.0  | 191.3  |
| 33.0 | 111.8  | 112.9  | 112.6  | 119.3  | 116.8  | 127.8  | 122.1  | 128.3  | 119.9  | 122.5  |
| 36.0 | 43.19  | 42.43  | 43.84  | 44.13  | 46.46  | 49.29  | 51.48  | 50.94  | 52.34  | 51.14  |
| 39.0 | 21.01  | 20.84  | 22.34  | 22.92  | 25.27  | 26.85  | 30.67  | 29.98  | 31.85  | 31.84  |
| 42.0 | 6.554  | 6.806  | 7.319  | 7.297  | 7.604  | 7.612  | 7.947  | 7.776  | 8.161  | 8.078  |
| 45.0 | 2.525  | 2.656  | 2.832  | 2.842  | 2.872  | 2.775  | 2.794  | 2.643  | 2.770  | 2.765  |
| 48.0 | 2.223  | 2.351  | 2.474  | 2.493  | 2.459  | 2.372  | 2.287  | 2.210  | 2.186  | 2.227  |
| 51.0 | 1.889  | 2.012  | 2.120  | 2.115  | 2.080  | 1.989  | 1.913  | 1.835  | 1.813  | 1.846  |
| 54.0 | 1.527  | 1.637  | 1.724  | 1.703  | 1.662  | 1.586  | 1.522  | 1.460  | 1.443  | 1.475  |
| 57.0 | 1.179  | 1.260  | 1.321  | 1.296  | 1.260  | 1.196  | 1.147  | 1.104  | 1.096  | 1.128  |
| 60.0 | 0.8786 | 0.9301 | 0.9659 | 0.9466 | 0.9127 | 0.8762 | 0.8277 | 0.8080 | 0.8000 | 0.8357 |
| 63.0 | 0.6590 | 0.6768 | 0.6957 | 0.6888 | 0.6532 | 0.6397 | 0.6000 | 0.5971 | 0.5873 | 0.6247 |
| 66.0 | 0.4948 | 0.5002 | 0.5044 | 0.5075 | 0.4767 | 0.4755 | 0.4448 | 0.4520 | 0.4427 | 0.4733 |
| 69.0 | 0.3838 | 0.3767 | 0.3746 | 0.3859 | 0.3639 | 0.3624 | 0.3384 | 0.3539 | 0.3405 | 0.3730 |
| 72.0 | 0.3071 | 0.2874 | 0.2852 | 0.2985 | 0.2745 | 0.2878 | 0.2618 | 0.2814 | 0.2618 | 0.2942 |
| 75.0 | 0.2368 | 0.2193 | 0.2128 | 0.2260 | 0.2043 | 0.2217 | 0.1958 | 0.2132 | 0.1958 | 0.2239 |
| 78.0 | 0.1812 | 0.1617 | 0.1532 | 0.1706 | 0.1426 | 0.1599 | 0.1383 | 0.1599 | 0.1447 | 0.1685 |
| 81.0 | 0.1322 | 0.1086 | 0.1022 | 0.1215 | 0.0957 | 0.1130 | 0.0999 | 0.1130 | 0.1020 | 0.1237 |
| 84.0 | 0.0896 | 0.0680 | 0.0637 | 0.0789 | 0.0594 | 0.0747 | 0.0552 | 0.0747 | 0.0615 | 0.0811 |
| 87.0 | 0.0597 | 0.0447 | 0.0362 | 0.0427 | 0.0341 | 0.0427 | 0.0362 | 0.0448 | 0.0362 | 0.0469 |
| 90.0 | 0.0469 | 0.0447 | 0.0362 | 0.0362 | 0.0341 | 0.0362 | 0.0341 | 0.0362 | 0.0341 | 0.0405 |
| G/C  | 300.0  | 315.0  | 330.0  | 345.0  |        |        |        |        |        |        |
| 0.0  | 5431   | 5453   | 5445   | 5458   |        |        |        |        |        |        |
| 3.0  | 5361   | 5278   | 5245   | 5177   |        |        |        |        |        |        |
| 6.0  | 4798   | 4699   | 4644   | 4551   |        |        |        |        |        |        |
| 9.0  | 3852   | 3787   | 3781   | 3714   |        |        |        |        |        |        |
| 12.0 | 2769   | 2705   | 2755   | 2681   |        |        |        |        |        |        |
| 15.0 | 1849   | 1794   | 1797   | 1757   |        |        |        |        |        |        |
| 18.0 | 1171   | 1126   | 1113   | 1045   |        |        |        |        |        |        |
| 21.0 | 703.7  | 671.6  | 656.8  | 619.4  |        |        |        |        |        |        |

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.2DEG  
 Operators: Cao Chengpei  
 Test Date: 2016-06-23

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.288  
 Humidity: 52%  
 Test Distance: 5.850m [K=1.0000]  
 Remarks:

Photometric Data Table [cd]

|      |        |        |        |        |
|------|--------|--------|--------|--------|
| 24.0 | 476.4  | 463.0  | 451.3  | 438.7  |
| 27.0 | 312.8  | 310.4  | 307.7  | 298.0  |
| 30.0 | 198.4  | 194.6  | 192.9  | 187.3  |
| 33.0 | 120.3  | 117.4  | 115.2  | 108.2  |
| 36.0 | 52.42  | 50.10  | 48.46  | 46.83  |
| 39.0 | 31.72  | 28.63  | 29.18  | 27.09  |
| 42.0 | 8.564  | 8.458  | 8.592  | 8.280  |
| 45.0 | 3.092  | 3.119  | 3.353  | 3.184  |
| 48.0 | 2.355  | 2.478  | 2.525  | 2.489  |
| 51.0 | 1.971  | 2.102  | 2.167  | 2.131  |
| 54.0 | 1.584  | 1.708  | 1.780  | 1.756  |
| 57.0 | 1.215  | 1.318  | 1.390  | 1.384  |
| 60.0 | 0.8916 | 0.9764 | 1.028  | 1.042  |
| 63.0 | 0.6575 | 0.7186 | 0.7468 | 0.7698 |
| 66.0 | 0.4916 | 0.5394 | 0.5491 | 0.5820 |
| 69.0 | 0.3725 | 0.4135 | 0.4107 | 0.4413 |
| 72.0 | 0.2895 | 0.3177 | 0.3149 | 0.3453 |
| 75.0 | 0.2171 | 0.2452 | 0.2362 | 0.2601 |
| 78.0 | 0.1595 | 0.1833 | 0.1723 | 0.1940 |
| 81.0 | 0.1043 | 0.1301 | 0.1128 | 0.1407 |
| 84.0 | 0.0616 | 0.0811 | 0.0659 | 0.0939 |
| 87.0 | 0.0383 | 0.0469 | 0.0383 | 0.0555 |
| 90.0 | 0.0383 | 0.0383 | 0.0383 | 0.0405 |

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.2DEG  
 Operators: Cao Chengpei  
 Test Date: 2016-06-23

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.288  
 Humidity: 52%  
 Test Distance: 5.850m [K=1.0000]  
 Remarks: