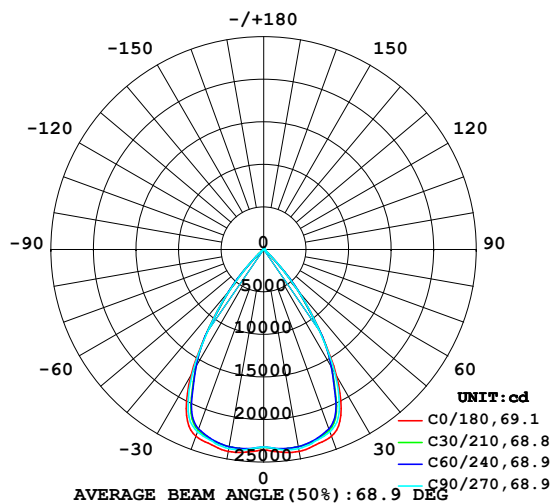


## LUMINAIRE PHOTOMETRIC TEST REPORT

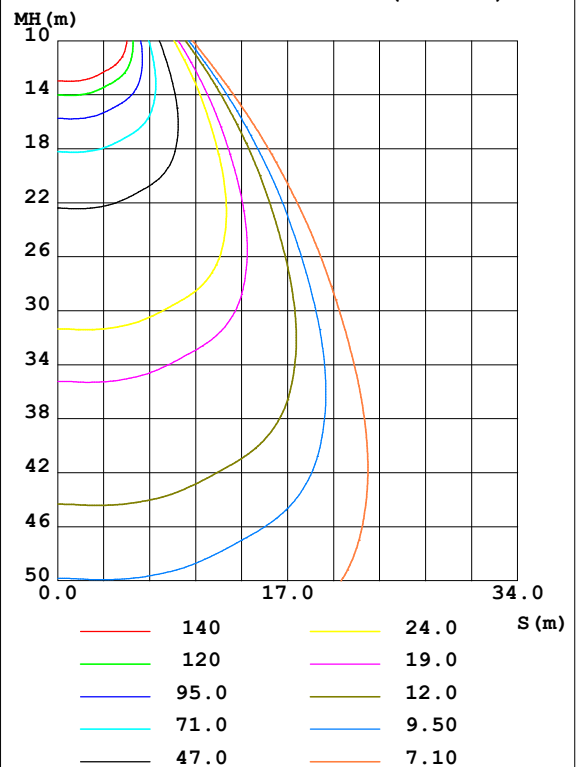
|  |       |                  |
|--|-------|------------------|
| Test:U:230.3V I:0.8741A P:197.9W PF:0.9832 Freq:49.99Hz Lamp Flux:27512.4x1 lm |       |                  |
| NAME: H29APC-20-R360-70-40H-3803030R8  | TYPE: | WEIGHT:          |
| SPEC.:   | DIM.: | SERIAL No.:      |
| MFR.: ERVAN  | SUR.: | Shielding Angle: |

| DATA OF LAMP     |         | PHOTOMETRIC DATA Eff: 139.02 lm/W |        |                        |          |
|------------------|---------|-----------------------------------|--------|------------------------|----------|
| MODEL            |         | Imax(cd)                          | 24109  | S/MH(C0/180)           | 1.01     |
| NOMINAL POWER(W) | 200     | LOR(%)                            | 100.0  | S/MH(C90/270)          | 1.01     |
| RATED VOLTAGE(V) | 230     | TOTAL FLUX(lm)                    | 27512  | $\eta$ UP,DN(C0-180)   | 0.5,49.5 |
| NOMINAL FLUX(lm) | 27512.4 | CIE CLASS                         | DIRECT | $\eta$ UP,DN(C180-360) | 0.5,49.5 |
| LAMPS INSIDE     | 1       | $\eta$ up(%)                      | 1.0    | CIBSE SHR NOM          | 1.00     |
| TEST VOLTAGE(V)  | 100     | $\eta$ down(%)                    | 99.0   | CIBSE SHR MAX          | 1.00     |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:QC  
 Test Date:2020-07-08

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:53.0%  
 Test Distance:10.380m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

| $\gamma$ | C0                        | C45    | C90    | C135   | C180   | C225   | C270   | C315   | $\gamma$ | $\Phi$ zone | $\Phi$ total | %lum, lamp |
|----------|---------------------------|--------|--------|--------|--------|--------|--------|--------|----------|-------------|--------------|------------|
| 10       | 2411                      | 2343   | 2376   | 2343   | 2411   | 2343   | 2376   | 2343   | 0- 10    | 2252        | 2252         | 8.19, 8.19 |
| 20       | 2335                      | 2239   | 2281   | 2239   | 2335   | 2239   | 2281   | 2239   | 10- 20   | 6580        | 8832         | 32.1, 32.1 |
| 30       | 1712                      | 1562   | 1673   | 1562   | 1712   | 1562   | 1673   | 1562   | 20- 30   | 9237        | 18069        | 65.7, 65.7 |
| 40       | 612.1                     | 617.6  | 606.9  | 617.6  | 612.1  | 617.6  | 606.9  | 617.6  | 30- 40   | 6862        | 24931        | 90.6, 90.6 |
| 50       | 52.87                     | 54.20  | 52.00  | 54.20  | 52.87  | 54.20  | 52.00  | 54.20  | 40- 50   | 1919        | 26850        | 97.6, 97.6 |
| 60       | 13.66                     | 13.73  | 13.37  | 13.73  | 13.66  | 13.73  | 13.37  | 13.73  | 50- 60   | 216.6       | 27067        | 98.4, 98.4 |
| 70       | 7.936                     | 7.954  | 7.801  | 7.954  | 7.936  | 7.954  | 7.801  | 7.954  | 60- 70   | 102.0       | 27169        | 98.8, 98.8 |
| 80       | 3.481                     | 3.493  | 3.368  | 3.493  | 3.481  | 3.493  | 3.368  | 3.493  | 70- 80   | 59.75       | 27229        | 99, 99     |
| 90       | 0.0894                    | 0.0860 | 0.0851 | 0.0860 | 0.0894 | 0.0860 | 0.0851 | 0.0860 | 80- 90   | 14.72       | 27243        | 99, 99     |
| 100      | 0.3426                    | 0.3368 | 0.3222 | 0.3368 | 0.3426 | 0.3368 | 0.3222 | 0.3368 | 90-100   | 1.809       | 27245        | 99, 99     |
| 110      | 1.252                     | 1.195  | 1.208  | 1.195  | 1.252  | 1.195  | 1.208  | 1.195  | 100-110  | 7.509       | 27253        | 99.1, 99.1 |
| 120      | 2.807                     | 2.728  | 2.756  | 2.728  | 2.807  | 2.728  | 2.756  | 2.728  | 110-120  | 19.02       | 27272        | 99.1, 99.1 |
| 130      | 4.945                     | 4.882  | 4.869  | 4.882  | 4.945  | 4.882  | 4.869  | 4.882  | 120-130  | 33.53       | 27305        | 99.2, 99.2 |
| 140      | 7.623                     | 7.533  | 7.523  | 7.533  | 7.623  | 7.533  | 7.523  | 7.533  | 130-140  | 47.65       | 27353        | 99.4, 99.4 |
| 150      | 10.21                     | 10.09  | 10.07  | 10.09  | 10.21  | 10.09  | 10.07  | 10.09  | 140-150  | 55.22       | 27408        | 99.6, 99.6 |
| 160      | 12.58                     | 12.40  | 12.40  | 12.40  | 12.58  | 12.40  | 12.40  | 12.40  | 150-160  | 51.76       | 27460        | 99.8, 99.8 |
| 170      | 14.81                     | 14.56  | 14.56  | 14.56  | 14.81  | 14.56  | 14.56  | 14.56  | 160-170  | 38.10       | 27498        | 99.9, 99.9 |
| 180      | 15.87                     | 15.69  | 15.60  | 15.69  | 15.87  | 15.69  | 15.60  | 15.69  | 170-180  | 14.43       | 27512        | 100, 100   |
| DEG      | LUMINOUS INTENSITY: *10cd |        |        |        |        |        |        |        |          | UNIT: lm    |              |            |

Conical surface Flux(90deg): 26399 lm

%lum = 96.0%

%lamp = 96.0%

Conical surface Flux(120deg): 27067 lm

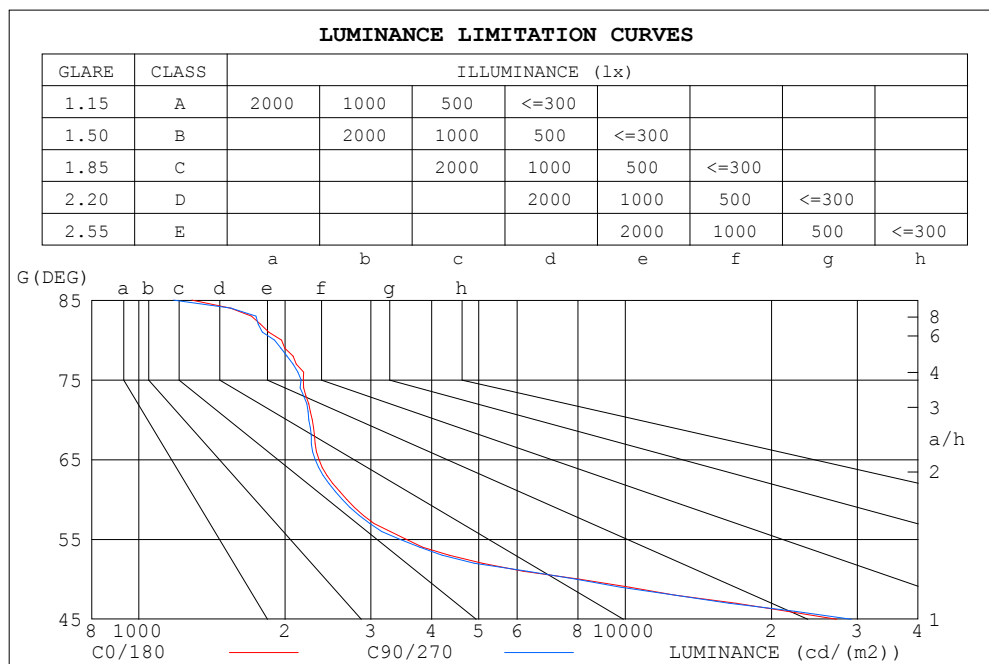
%lum = 98.4%

%lamp = 98.4%

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: QC  
 Test Date: 2020-07-08

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity: 53.0%  
 Test Distance: 10.380m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES



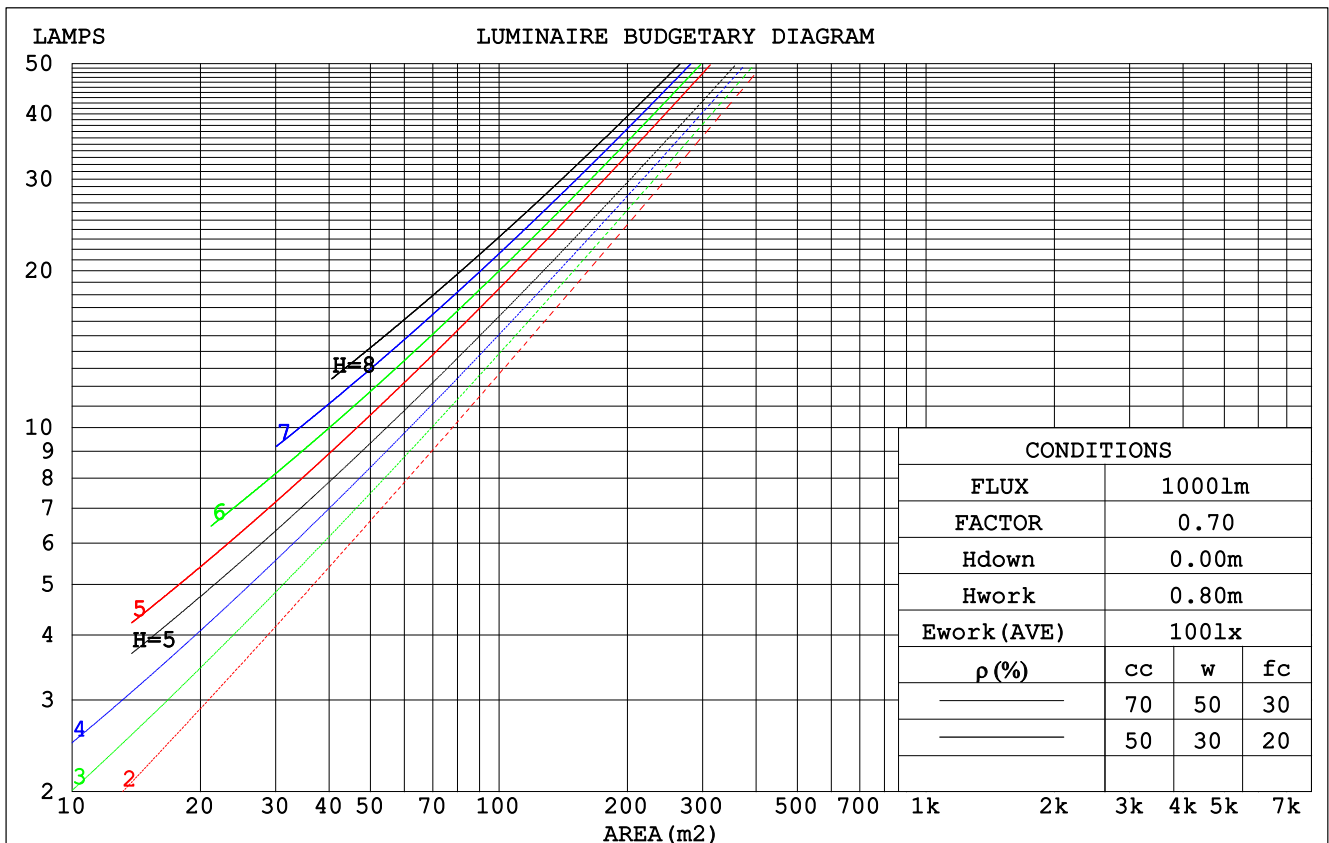
| LUMINANCE cd/(m2) |        |         |
|-------------------|--------|---------|
| G (DEG)           | C0/180 | C90/270 |
| 85                | 1287   | 1179    |
| 80                | 1965   | 1902    |
| 75                | 2180   | 2157    |
| 70                | 2275   | 2236    |
| 65                | 2347   | 2304    |
| 60                | 2678   | 2621    |
| 55                | 3546   | 3440    |
| 50                | 8064   | 7932    |
| 45                | 27195  | 29179   |

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: QC  
Test Date: 2020-07-08

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity: 53.0%  
Test Distance: 10.380m [K=1.0000]  
Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

| pcc             | 80%                   |      |      | 70%  |      |      | 50%                             |      |      | 30%  |      |      | 10%  |      |      | 0   |
|-----------------|-----------------------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------|-----|
| p <sub>w</sub>  | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                             | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0   |
| p <sub>fc</sub> | 20%                   |      |      | 20%  |      |      | 20%                             |      |      | 20%  |      |      | 20%  |      |      | 0   |
| RCR             | RCR:Room Cavity Ratio |      |      |      |      |      | Coefficients of Utilization(CU) |      |      |      |      |      |      |      |      |     |
| 0.0             | 1.19                  | 1.19 | 1.19 | 1.16 | 1.16 | 1.16 | 1.11                            | 1.11 | 1.11 | 1.06 | 1.06 | 1.06 | 1.01 | 1.01 | 1.01 | .99 |
| 1.0             | 1.10                  | 1.08 | 1.05 | 1.08 | 1.06 | 1.04 | 1.04                            | 1.02 | 1.00 | .90  | .98  | .97  | .96  | .95  | .94  | .92 |
| 2.0             | 1.02                  | .98  | .94  | 1.00 | .96  | .93  | .97                             | .94  | .91  | .94  | .91  | .89  | .91  | .89  | .87  | .85 |
| 3.0             | .95                   | .90  | .85  | .93  | .89  | .85  | .91                             | .87  | .83  | .88  | .85  | .82  | .86  | .83  | .80  | .79 |
| 4.0             | .88                   | .82  | .78  | .87  | .82  | .77  | .85                             | .80  | .76  | .82  | .79  | .75  | .80  | .77  | .74  | .73 |
| 5.0             | .82                   | .76  | .72  | .81  | .75  | .71  | .79                             | .74  | .70  | .77  | .73  | .70  | .76  | .72  | .69  | .67 |
| 6.0             | .77                   | .70  | .66  | .76  | .70  | .66  | .74                             | .69  | .65  | .73  | .68  | .65  | .71  | .67  | .64  | .63 |
| 7.0             | .72                   | .65  | .61  | .71  | .65  | .61  | .70                             | .64  | .60  | .68  | .64  | .60  | .67  | .63  | .60  | .58 |
| 8.0             | .67                   | .61  | .57  | .67  | .61  | .57  | .65                             | .60  | .56  | .64  | .59  | .56  | .63  | .59  | .56  | .54 |
| 9.0             | .63                   | .57  | .53  | .63  | .57  | .53  | .62                             | .56  | .52  | .61  | .56  | .52  | .60  | .55  | .52  | .51 |
| 10.0            | .59                   | .53  | .49  | .59  | .53  | .49  | .58                             | .53  | .49  | .57  | .52  | .49  | .56  | .52  | .49  | .47 |



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: QC  
 Test Date: 2020-07-08

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity: 53.0%  
 Test Distance: 10.380m [K=1.0000]  
 Remarks:

WEC AND CCEC

| pcc  | 80%                   |      |      | 70%  |      |      | 50%                             |      |      | 30%  |      |      | 10%  |      |      | 0 |
|------|-----------------------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------|---|
| pw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                             | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| pfc  | 20%                   |      |      | 20%  |      |      | 20%                             |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Wall Exitance Coefficients(WEC) |      |      |      |      |      |      |      |      |   |
| 0.0  |                       |      |      |      |      |      |                                 |      |      |      |      |      |      |      |      |   |
| 1.0  | .185                  | .105 | .033 | .178 | .101 | .032 | .165                            | .094 | .030 | .152 | .088 | .028 | .141 | .082 | .026 |   |
| 2.0  | .178                  | .097 | .030 | .172 | .095 | .029 | .161                            | .089 | .028 | .150 | .084 | .026 | .141 | .080 | .025 |   |
| 3.0  | .170                  | .090 | .027 | .165 | .088 | .027 | .155                            | .084 | .026 | .146 | .080 | .025 | .138 | .076 | .024 |   |
| 4.0  | .162                  | .084 | .025 | .158 | .082 | .024 | .149                            | .079 | .024 | .141 | .076 | .023 | .134 | .073 | .022 |   |
| 5.0  | .155                  | .079 | .023 | .151 | .077 | .023 | .143                            | .075 | .022 | .137 | .072 | .021 | .130 | .070 | .021 |   |
| 6.0  | .148                  | .074 | .021 | .144 | .073 | .021 | .138                            | .071 | .021 | .132 | .068 | .020 | .126 | .066 | .020 |   |
| 7.0  | .141                  | .070 | .020 | .138 | .069 | .020 | .133                            | .067 | .019 | .127 | .065 | .019 | .122 | .063 | .019 |   |
| 8.0  | .135                  | .066 | .019 | .133 | .065 | .018 | .127                            | .064 | .018 | .123 | .062 | .018 | .118 | .061 | .018 |   |
| 9.0  | .130                  | .063 | .018 | .127 | .062 | .017 | .123                            | .061 | .017 | .118 | .059 | .017 | .114 | .058 | .017 |   |
| 10.0 | .124                  | .060 | .017 | .122 | .059 | .016 | .118                            | .058 | .016 | .114 | .057 | .016 | .110 | .055 | .016 |   |

| pcc  | 80%                   |      |      | 70%  |      |      | 50%  |      |      | 30%  |      |      | 10%  |      |      | 0 |
|------|-----------------------|------|------|------|------|------|--|------|------|------|------|------|------|------|------|---|
| pw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| pfc  | 20%                   |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Ceiling Cavity Exitance Coefficients(CCEC) |      |      |      |      |      |      |      |      |   |
| 0.0  | .198                  | .198 | .198 | .169 | .169 | .169 | .115                                       | .115 | .115 | .066 | .066 | .066 | .021 | .021 | .021 |   |
| 1.0  | .179                  | .165 | .152 | .153 | .141 | .131 | .105                                       | .097 | .090 | .060 | .056 | .053 | .019 | .018 | .017 |   |
| 2.0  | .165                  | .140 | .119 | .141 | .121 | .103 | .097                                       | .083 | .072 | .056 | .049 | .042 | .018 | .016 | .014 |   |
| 3.0  | .153                  | .121 | .096 | .131 | .105 | .083 | .090                                       | .073 | .058 | .052 | .042 | .034 | .017 | .014 | .011 |   |
| 4.0  | .143                  | .107 | .079 | .123 | .092 | .069 | .084                                       | .064 | .048 | .049 | .038 | .029 | .016 | .012 | .009 |   |
| 5.0  | .135                  | .095 | .066 | .116 | .082 | .057 | .080                                       | .058 | .041 | .046 | .034 | .024 | .015 | .011 | .008 |   |
| 6.0  | .128                  | .086 | .056 | .110 | .075 | .049 | .076                                       | .052 | .035 | .044 | .031 | .021 | .014 | .010 | .007 |   |
| 7.0  | .121                  | .079 | .049 | .104 | .068 | .042 | .072                                       | .048 | .030 | .042 | .028 | .018 | .014 | .009 | .006 |   |
| 8.0  | .116                  | .073 | .043 | .100 | .063 | .037 | .069                                       | .044 | .026 | .040 | .026 | .016 | .013 | .009 | .005 |   |
| 9.0  | .111                  | .068 | .038 | .096 | .059 | .033 | .066                                       | .041 | .024 | .039 | .024 | .014 | .012 | .008 | .005 |   |
| 10.0 | .107                  | .063 | .034 | .092 | .055 | .030 | .064                                       | .039 | .021 | .037 | .023 | .013 | .012 | .008 | .004 |   |

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:QC  
Test Date:2020-07-08

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:53.0%  
Test Distance:10.380m [K=1.0000]  
Remarks:

UGR(Unified Glare Rating) Table

|  |                  |      |     |      |      |                |      |     |      |      |
|--|------------------|------|-----|------|------|----------------|------|-----|------|------|
| ceiling/cavity                                     | 0.7              | 0.7  | 0.5 | 0.5  | 0.3  | 0.7            | 0.7  | 0.5 | 0.5  | 0.3  |
| walls  | 0.5              | 0.3  | 0.5 | 0.3  | 0.3  | 0.5            | 0.3  | 0.5 | 0.3  | 0.3  |
| working plane                                      | 0.2              | 0.2  | 0.2 | 0.2  | 0.2  | 0.2            | 0.2  | 0.2 | 0.2  | 0.2  |
| Room dimensions                                    | Viewed crosswise |      |     |      |      | Viewed endwise |      |     |      |      |
| x = 2H y = 2H                                      | 9.7              | 10.7 | 9.9 | 10.9 | 11.1 | 9.7            | 10.7 | 9.9 | 10.9 | 11.1 |
| 3H   | 9.5              | 10.5 | 9.8 | 10.7 | 10.9 | 9.5            | 10.4 | 9.8 | 10.7 | 10.9 |
| 4H   | 9.5              | 10.3 | 9.8 | 10.6 | 10.8 | 9.4            | 10.3 | 9.7 | 10.5 | 10.8 |
| 6H   | 9.4              | 10.2 | 9.7 | 10.4 | 10.7 | 9.4            | 10.2 | 9.7 | 10.4 | 10.7 |
| 8H   | 9.3              | 10.1 | 9.7 | 10.4 | 10.7 | 9.3            | 10.1 | 9.6 | 10.4 | 10.6 |
| 12H  | 9.3              | 10.0 | 9.6 | 10.3 | 10.6 | 9.3            | 10.0 | 9.6 | 10.3 | 10.6 |
| 4H 2H  | 9.4              | 10.3 | 9.7 | 10.5 | 10.8 | 9.4            | 10.3 | 9.7 | 10.5 | 10.8 |
| 3H   | 9.3              | 10.0 | 9.6 | 10.3 | 10.6 | 9.3            | 10.0 | 9.6 | 10.3 | 10.6 |
| 4H   | 9.2              | 9.9  | 9.6 | 10.2 | 10.5 | 9.2            | 9.8  | 9.5 | 10.2 | 10.5 |
| 6H   | 9.1              | 9.7  | 9.5 | 10.1 | 10.4 | 9.1            | 9.7  | 9.5 | 10.0 | 10.4 |
| 8H   | 9.1              | 9.6  | 9.5 | 10.0 | 10.4 | 9.1            | 9.6  | 9.5 | 10.0 | 10.3 |
| 12H  | 9.0              | 9.5  | 9.5 | 9.9  | 10.3 | 9.0            | 9.5  | 9.4 | 9.9  | 10.3 |
| 8H 4H  | 9.1              | 9.6  | 9.5 | 10.0 | 10.4 | 9.0            | 9.6  | 9.5 | 9.9  | 10.3 |
| 6H   | 9.0              | 9.4  | 9.4 | 9.8  | 10.3 | 9.0            | 9.4  | 9.4 | 9.8  | 10.2 |
| 8H   | 8.9              | 9.3  | 9.4 | 9.8  | 10.2 | 8.9            | 9.3  | 9.4 | 9.7  | 10.2 |
| 12H  | 8.9              | 9.2  | 9.4 | 9.7  | 10.2 | 8.9            | 9.2  | 9.3 | 9.7  | 10.1 |
| 12H 4H   | 9.0              | 9.5  | 9.4 | 9.9  | 10.3 | 9.0            | 9.5  | 9.4 | 9.9  | 10.3 |
| 6H   | 8.9              | 9.3  | 9.4 | 9.8  | 10.2 | 8.9            | 9.3  | 9.4 | 9.7  | 10.2 |
| 8H   | 8.9              | 9.2  | 9.4 | 9.7  | 10.2 | 8.9            | 9.2  | 9.3 | 9.7  | 10.1 |
| Variations with the observer position at spacings: |                  |      |     |      |      |                |      |     |      |      |
| S = 1.0H   | + 3.2 / -12.0    |      |     |      |      | + 3.1 / -12.0  |      |     |      |      |
| 1.5H   | + 5.7 / -11.4    |      |     |      |      | + 5.6 / -11.3  |      |     |      |      |
| 2.0H   | + 7.0 / - 4.6    |      |     |      |      | + 7.3 / - 4.9  |      |     |      |      |

CIE Pub.117, 27512 lm Total Lamp Luminous Flux Correct (8log(F/F0) = 11.5)

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:QC  
Test Date:2020-07-08

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:53.0%  
Test Distance:10.380m [K=1.0000]  
Remarks:

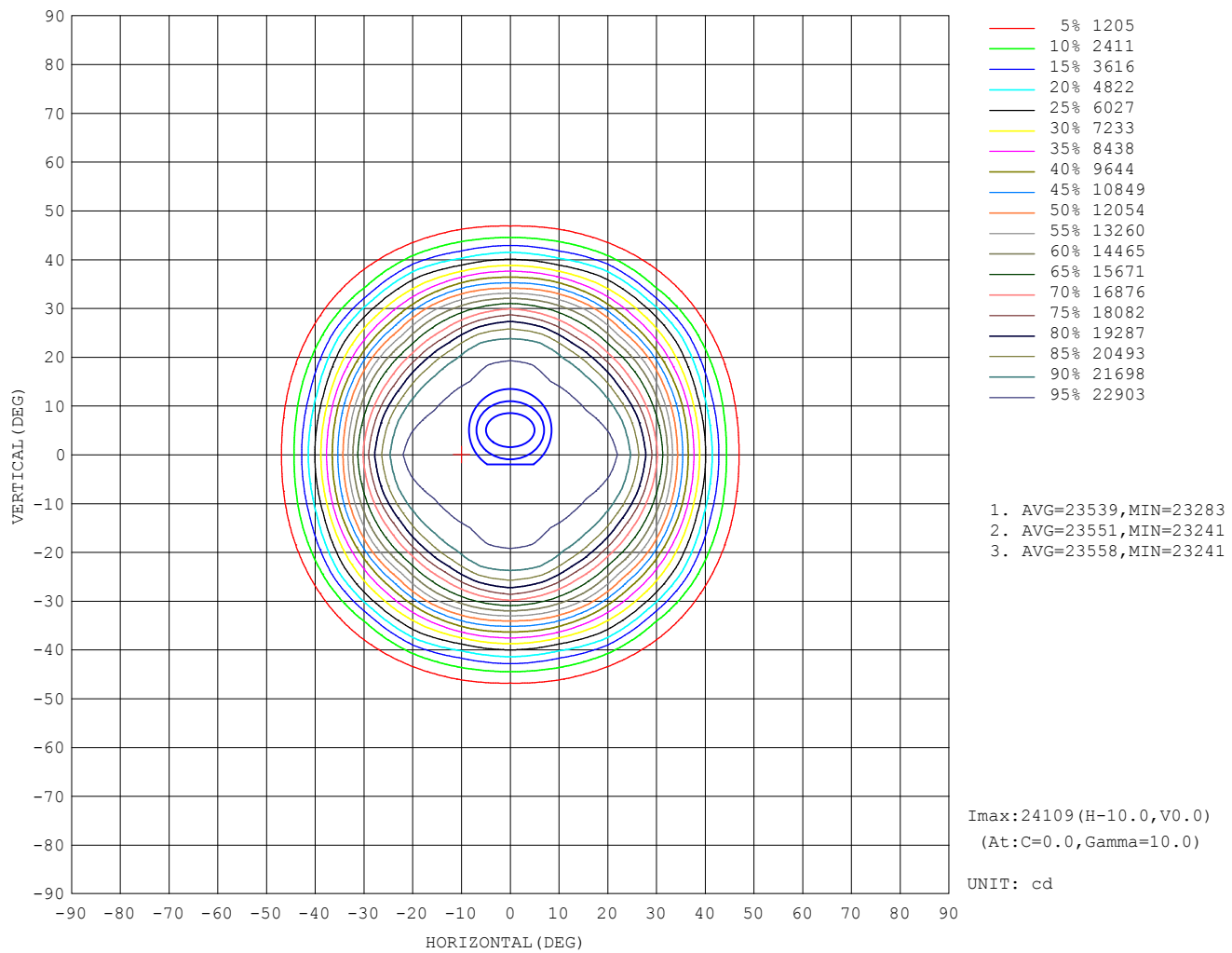
## UTILIZATION FACTORS TABLE

| REFLECTANCE                      |  |     |           |     |     |     |     |               |     |        |
|----------------------------------|--|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| Ceiling                          | 0.8  | 0.8 | 0.8       | 0.7 | 0.7 | 0.7 | 0.5 | 0.5           | 0.5 | 0      |
| Walls                            | 0.7  | 0.5 | 0.3       | 0.7 | 0.5 | 0.3 | 0.7 | 0.5           | 0.3 | 0      |
| Working plane                    | 0.2  | 0.2 | 0.2       | 0.2 | 0.2 | 0.2 | 0.2 | 0.2           | 0.2 | 0      |
| ROOM INDEX                       | UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 86   | 79  | 75        | 85  | 79  | 75  | 84  | 78            | 75  | 71     |
| 0.80                             | 93   | 87  | 83        | 93  | 87  | 83  | 91  | 86            | 83  | 79     |
| 1.00                             | 98   | 92  | 89        | 97  | 92  | 88  | 96  | 92            | 88  | 84     |
| 1.25                             | 102  | 97  | 93        | 101 | 96  | 93  | 99  | 95            | 92  | 88     |
| 1.50                             | 105  | 100 | 97        | 104 | 99  | 96  | 101 | 98            | 95  | 90     |
| 2.00                             | 108  | 104 | 100       | 106 | 103 | 100 | 104 | 100           | 98  | 92     |
| 2.50                             | 110  | 106 | 103       | 108 | 104 | 102 | 105 | 102           | 100 | 94     |
| 3.00                             | 111  | 108 | 105       | 109 | 106 | 104 | 106 | 103           | 101 | 95     |
| 4.00                             | 113  | 110 | 108       | 111 | 109 | 107 | 107 | 105           | 104 | 96     |
| 5.00                             | 115  | 112 | 110       | 112 | 110 | 109 | 108 | 107           | 105 | 97     |
| 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: 25.3DEG  
 Operators: QC  
 Test Date: 2020-07-08

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity: 53.0%  
 Test Distance: 10.380m [K=1.0000]  
 Remarks:

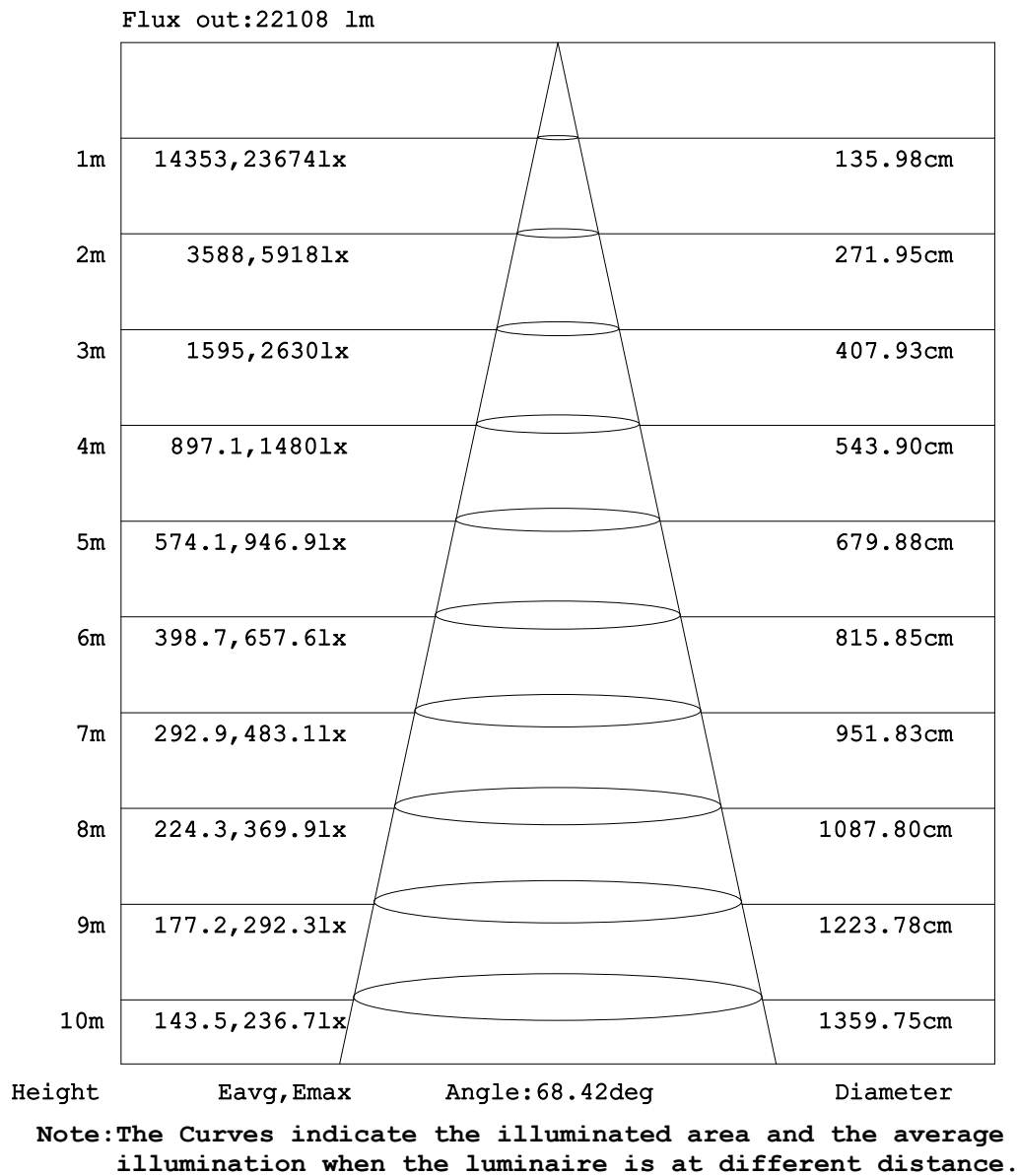
# ISOCANDELA DIAGRAM



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:QC  
Test Date:2020-07-08

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:53.0%  
Test Distance:10.380m [K=1.0000]  
Remarks:

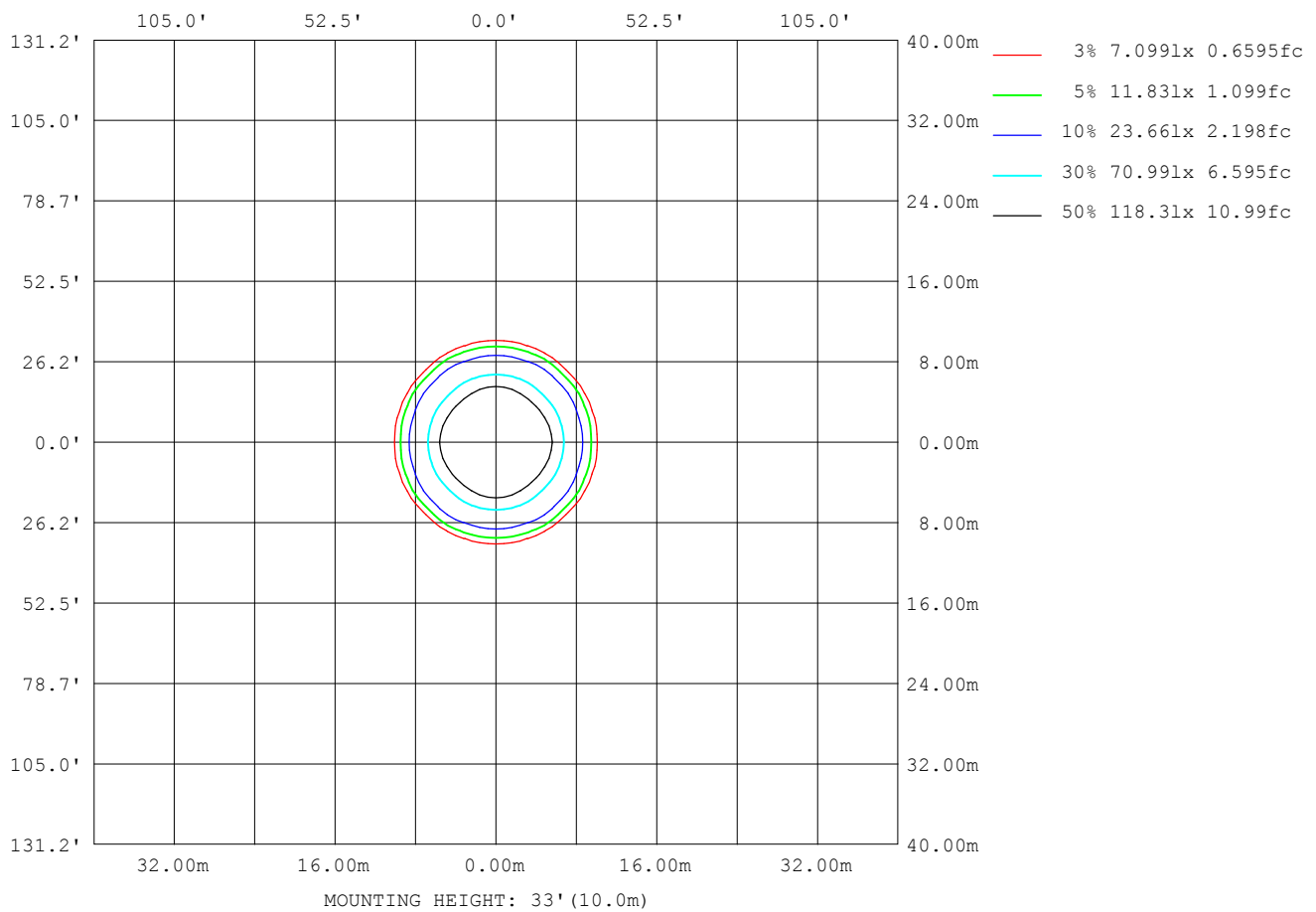
AAI Figure



C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:QC  
 Test Date:2020-07-08

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:53.0%  
 Test Distance:10.380m [K=1.0000]  
 Remarks:

# ISOLUX DIAGRAM



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: QC  
Test Date: 2020-07-08

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity: 53.0%  
Test Distance: 10.380m [K=1.0000]  
Remarks:

## LED Avg.L Report

|  |       |                  |
|--|-------|------------------|
| Test:U:230.3V I:0.8741A P:197.9W PF:0.9832 Freq:49.99Hz Lamp Flux:27512.4x1 lm |       |                  |
| NAME: H29APC-20-R360-70-40H-3803030R8  | TYPE: | WEIGHT:          |
| SPEC.:   | DIM.: | SERIAL No.:      |
| MFR.: ERVAN  | SUR.: | Shielding Angle: |

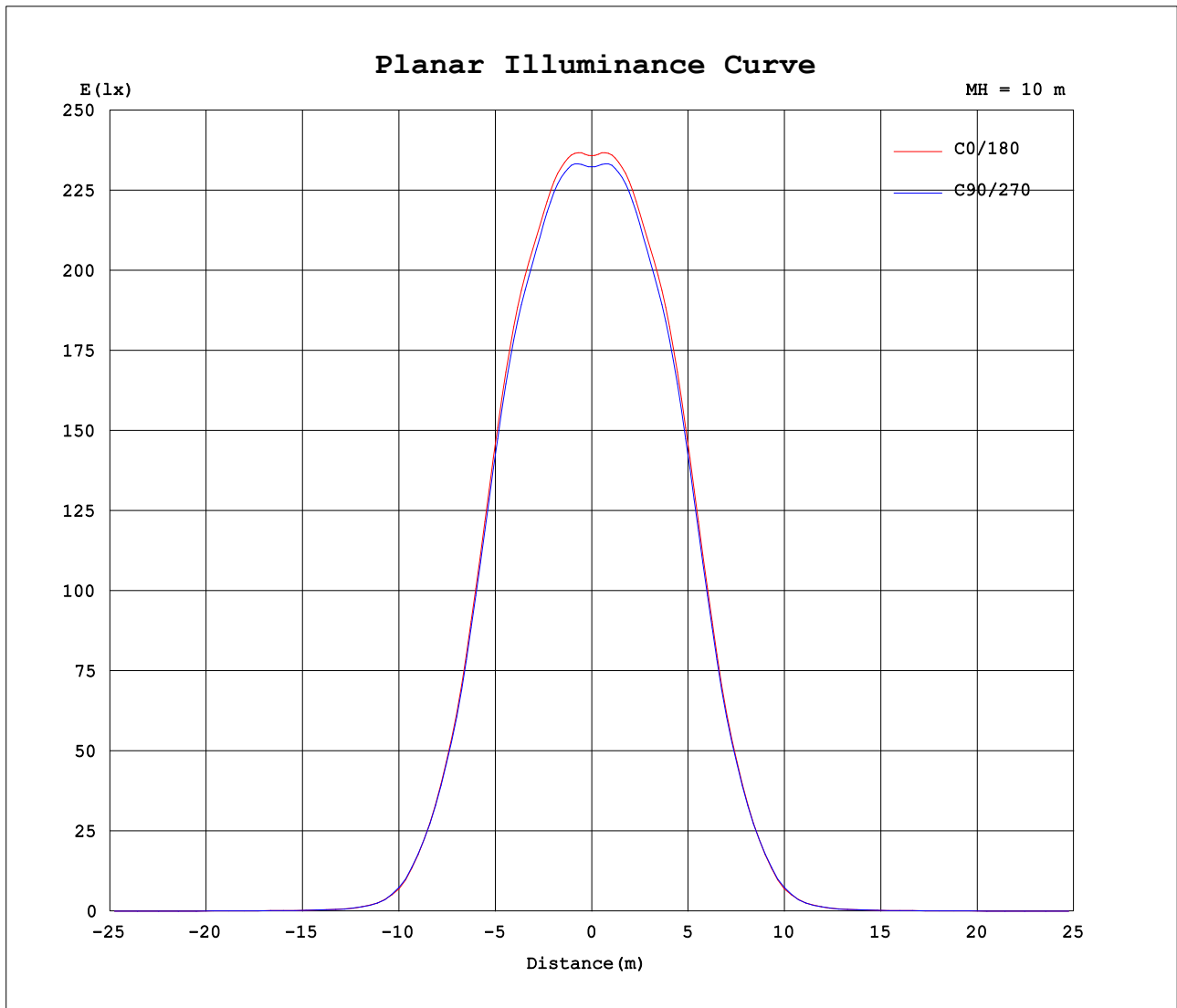
| AvgL             | cd/m2 |
|------------------|-------|
| L_0~180 (65) av  | 2347  |
| L_0~180 (75) av  | 2180  |
| L_0~180 (85) av  | 1287  |
| L_90~270 (65) av | 2304  |
| L_90~270 (75) av | 2157  |
| L_90~270 (85) av | 1179  |
| L_45 (65) av     | 2353  |
| L_45 (75) av     | 2157  |
| L_45 (85) av     | 1290  |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:QC  
 Test Date:2020-07-08

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity:53.0%  
 Test Distance:10.380m [K=1.0000]  
 Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: QC  
Test Date: 2020-07-08

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity: 53.0%  
Test Distance: 10.380m [K=1.0000]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: ×10cd

| C (DEG)<br>γ (DEG) | 0    | 15   | 30   | 45   | 60   | 75   | 90   | 105  | 120  | 135  | 150  | 165  | 180  | 195  | 210  | 225  | 240  | 255  | 270  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0                  | 2358 | 2328 | 2327 | 2324 | 2323 | 2323 | 2323 | 2323 | 2323 | 2324 | 2327 | 2328 | 2358 | 2328 | 2327 | 2324 | 2323 | 2323 | 2323 |
| 5                  | 2392 | 2361 | 2353 | 2347 | 2349 | 2357 | 2359 | 2357 | 2349 | 2347 | 2353 | 2361 | 2392 | 2361 | 2353 | 2347 | 2349 | 2357 | 2359 |
| 10                 | 2411 | 2373 | 2353 | 2343 | 2354 | 2370 | 2376 | 2370 | 2354 | 2343 | 2353 | 2373 | 2411 | 2373 | 2353 | 2343 | 2354 | 2370 | 2376 |
| 15                 | 2377 | 2340 | 2324 | 2315 | 2317 | 2327 | 2335 | 2327 | 2317 | 2315 | 2324 | 2340 | 2377 | 2340 | 2324 | 2315 | 2317 | 2327 | 2335 |
| 20                 | 2335 | 2294 | 2257 | 2239 | 2243 | 2278 | 2281 | 2278 | 2243 | 2239 | 2257 | 2294 | 2335 | 2294 | 2257 | 2239 | 2243 | 2278 | 2281 |
| 25                 | 2149 | 2104 | 2029 | 1996 | 2012 | 2088 | 2100 | 2088 | 2012 | 1996 | 2029 | 2104 | 2149 | 2104 | 2029 | 1996 | 2012 | 2088 | 2100 |
| 30                 | 1712 | 1650 | 1599 | 1562 | 1593 | 1635 | 1673 | 1635 | 1593 | 1562 | 1599 | 1650 | 1712 | 1650 | 1599 | 1562 | 1593 | 1635 | 1673 |
| 35                 | 1126 | 1130 | 1108 | 1068 | 1113 | 1123 | 1104 | 1123 | 1113 | 1068 | 1108 | 1130 | 1126 | 1130 | 1108 | 1068 | 1113 | 1123 | 1104 |
| 40                 | 612  | 596  | 631  | 618  | 634  | 591  | 607  | 591  | 634  | 618  | 631  | 596  | 612  | 596  | 631  | 618  | 634  | 591  | 607  |
| 45                 | 196  | 217  | 212  | 193  | 215  | 216  | 210  | 216  | 215  | 193  | 212  | 217  | 196  | 217  | 212  | 193  | 215  | 216  | 210  |
| 50                 | 52.9 | 50.8 | 53.8 | 54.2 | 53.7 | 50.6 | 52.0 | 50.6 | 53.7 | 54.2 | 53.8 | 50.8 | 52.9 | 50.8 | 53.8 | 54.2 | 53.7 | 50.6 | 52.0 |
| 55                 | 20.7 | 20.4 | 21.1 | 22.3 | 21.5 | 20.5 | 20.1 | 20.5 | 21.5 | 22.3 | 21.1 | 20.4 | 20.7 | 20.4 | 21.1 | 22.3 | 21.5 | 20.5 | 20.1 |
| 60                 | 13.7 | 13.6 | 13.8 | 13.7 | 13.7 | 13.6 | 13.4 | 13.6 | 13.7 | 13.7 | 13.8 | 13.6 | 13.7 | 13.6 | 13.8 | 13.7 | 13.7 | 13.6 | 13.4 |
| 65                 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 9.93 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 9.93 |
| 70                 | 7.94 | 7.84 | 7.79 | 7.95 | 7.80 | 7.84 | 7.80 | 7.84 | 7.80 | 7.95 | 7.79 | 7.84 | 7.94 | 7.84 | 7.79 | 7.95 | 7.80 | 7.84 | 7.80 |
| 75                 | 5.76 | 5.69 | 5.66 | 5.69 | 5.69 | 5.71 | 5.69 | 5.71 | 5.69 | 5.69 | 5.66 | 5.69 | 5.76 | 5.69 | 5.66 | 5.69 | 5.69 | 5.71 | 5.69 |
| 80                 | 3.48 | 3.40 | 3.44 | 3.49 | 3.44 | 3.34 | 3.37 | 3.34 | 3.44 | 3.49 | 3.44 | 3.40 | 3.48 | 3.40 | 3.44 | 3.49 | 3.44 | 3.34 | 3.37 |
| 85                 | 1.14 | 1.12 | 1.10 | 1.15 | 1.07 | 1.04 | 1.05 | 1.04 | 1.07 | 1.15 | 1.10 | 1.12 | 1.14 | 1.12 | 1.10 | 1.15 | 1.07 | 1.04 | 1.05 |
| 90                 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.08 | 0.09 | 0.08 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.08 | 0.09 |
| 95                 | 0.15 | 0.15 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.15 | 0.15 | 0.15 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 |
| 100                | 0.34 | 0.34 | 0.34 | 0.34 | 0.33 | 0.33 | 0.32 | 0.33 | 0.33 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.33 | 0.33 | 0.32 |
| 105                | 0.70 | 0.69 | 0.68 | 0.68 | 0.67 | 0.68 | 0.67 | 0.68 | 0.67 | 0.68 | 0.68 | 0.69 | 0.70 | 0.69 | 0.68 | 0.68 | 0.67 | 0.68 | 0.67 |
| 110                | 1.25 | 1.22 | 1.20 | 1.19 | 1.19 | 1.21 | 1.21 | 1.21 | 1.19 | 1.19 | 1.20 | 1.22 | 1.25 | 1.22 | 1.20 | 1.19 | 1.19 | 1.21 | 1.21 |
| 115                | 1.97 | 1.92 | 1.88 | 1.87 | 1.88 | 1.91 | 1.92 | 1.91 | 1.88 | 1.87 | 1.88 | 1.92 | 1.97 | 1.92 | 1.88 | 1.87 | 1.88 | 1.91 | 1.92 |
| 120                | 2.81 | 2.76 | 2.74 | 2.73 | 2.73 | 2.75 | 2.76 | 2.75 | 2.73 | 2.73 | 2.74 | 2.76 | 2.81 | 2.76 | 2.74 | 2.73 | 2.73 | 2.75 | 2.76 |
| 125                | 3.78 | 3.74 | 3.72 | 3.72 | 3.72 | 3.72 | 3.72 | 3.72 | 3.72 | 3.72 | 3.72 | 3.74 | 3.78 | 3.74 | 3.72 | 3.72 | 3.72 | 3.72 | 3.72 |
| 130                | 4.95 | 4.89 | 4.89 | 4.88 | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 | 4.88 | 4.89 | 4.89 | 4.95 | 4.89 | 4.89 | 4.88 | 4.87 | 4.87 | 4.87 |
| 135                | 6.25 | 6.18 | 6.18 | 6.18 | 6.17 | 6.16 | 6.16 | 6.16 | 6.17 | 6.18 | 6.18 | 6.18 | 6.25 | 6.18 | 6.18 | 6.18 | 6.17 | 6.16 | 6.16 |
| 140                | 7.62 | 7.54 | 7.54 | 7.53 | 7.52 | 7.52 | 7.52 | 7.52 | 7.52 | 7.53 | 7.54 | 7.54 | 7.62 | 7.54 | 7.54 | 7.53 | 7.52 | 7.52 | 7.52 |
| 145                | 8.97 | 8.86 | 8.86 | 8.86 | 8.84 | 8.85 | 8.85 | 8.85 | 8.84 | 8.86 | 8.86 | 8.86 | 8.97 | 8.86 | 8.86 | 8.86 | 8.84 | 8.85 | 8.85 |
| 150                | 10.2 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.2 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 |
| 155                | 11.4 | 11.2 | 11.3 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.2 | 11.3 | 11.2 | 11.4 | 11.2 | 11.3 | 11.2 | 11.2 | 11.2 | 11.2 |
| 160                | 12.6 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.6 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 |
| 165                | 13.8 | 13.6 | 13.6 | 13.5 | 13.5 | 13.6 | 13.6 | 13.6 | 13.5 | 13.5 | 13.6 | 13.6 | 13.8 | 13.6 | 13.6 | 13.5 | 13.5 | 13.6 | 13.6 |
| 170                | 14.8 | 14.6 | 14.6 | 14.6 | 14.6 | 14.6 | 14.6 | 14.6 | 14.6 | 14.6 | 14.6 | 14.6 | 14.8 | 14.6 | 14.6 | 14.6 | 14.6 | 14.6 | 14.6 |
| 175                | 15.6 | 15.4 | 15.4 | 15.3 | 15.4 | 15.3 | 15.3 | 15.3 | 15.4 | 15.3 | 15.4 | 15.4 | 15.6 | 15.4 | 15.4 | 15.3 | 15.4 | 15.3 | 15.3 |
| 180                | 15.9 | 15.7 | 15.7 | 15.7 | 15.7 | 15.6 | 15.6 | 15.6 | 15.7 | 15.7 | 15.7 | 15.7 | 15.9 | 15.7 | 15.7 | 15.7 | 15.7 | 15.6 | 15.6 |

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:QC  
Test Date:2020-07-08

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity:53.0%  
Test Distance:10.380m [K=1.0000]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Table--2

UNIT: ×10cd

| C (DEG)<br>γ (DEG) | 285  | 300  | 315  | 330  | 345  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------|------|------|------|------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 0                  | 2323 | 2323 | 2324 | 2327 | 2328 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5                  | 2357 | 2349 | 2347 | 2353 | 2361 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10                 | 2370 | 2354 | 2343 | 2353 | 2373 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15                 | 2327 | 2317 | 2315 | 2324 | 2340 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 20                 | 2278 | 2243 | 2239 | 2257 | 2294 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 25                 | 2088 | 2012 | 1996 | 2029 | 2104 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 30                 | 1635 | 1593 | 1562 | 1599 | 1650 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 35                 | 1123 | 1113 | 1068 | 1108 | 1130 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40                 | 591  | 634  | 618  | 631  | 596  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 45                 | 216  | 215  | 193  | 212  | 217  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 50                 | 50.6 | 53.7 | 54.2 | 53.8 | 50.8 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 55                 | 20.5 | 21.5 | 22.3 | 21.1 | 20.4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 60                 | 13.6 | 13.7 | 13.7 | 13.8 | 13.6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 65                 | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70                 | 7.84 | 7.80 | 7.95 | 7.79 | 7.84 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 75                 | 5.71 | 5.69 | 5.69 | 5.66 | 5.69 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 80                 | 3.34 | 3.44 | 3.49 | 3.44 | 3.40 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 85                 | 1.04 | 1.07 | 1.15 | 1.10 | 1.12 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 90                 | 0.08 | 0.09 | 0.09 | 0.09 | 0.09 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 95                 | 0.14 | 0.14 | 0.14 | 0.14 | 0.15 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 100                | 0.33 | 0.33 | 0.34 | 0.34 | 0.34 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 105                | 0.68 | 0.67 | 0.68 | 0.68 | 0.69 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 110                | 1.21 | 1.19 | 1.19 | 1.20 | 1.22 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 115                | 1.91 | 1.88 | 1.87 | 1.88 | 1.92 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 120                | 2.75 | 2.73 | 2.73 | 2.74 | 2.76 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 125                | 3.72 | 3.72 | 3.72 | 3.72 | 3.74 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 130                | 4.87 | 4.87 | 4.88 | 4.89 | 4.89 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 135                | 6.16 | 6.17 | 6.18 | 6.18 | 6.18 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 140                | 7.52 | 7.52 | 7.53 | 7.54 | 7.54 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 145                | 8.85 | 8.84 | 8.86 | 8.86 | 8.86 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 150                | 10.1 | 10.1 | 10.1 | 10.1 | 10.1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 155                | 11.2 | 11.2 | 11.2 | 11.3 | 11.2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 160                | 12.4 | 12.4 | 12.4 | 12.4 | 12.4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 165                | 13.6 | 13.5 | 13.5 | 13.6 | 13.6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 170                | 14.6 | 14.6 | 14.6 | 14.6 | 14.6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 175                | 15.3 | 15.4 | 15.3 | 15.4 | 15.4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 180                | 15.6 | 15.7 | 15.7 | 15.7 | 15.7 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: QC  
 Test Date: 2020-07-08

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity: 53.0%  
 Test Distance: 10.380m [K=1.0000]  
 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   | 23583  | 23278  | 23265  | 23245  | 23234  | 23226  | 23232  | 23226  | 23234  | 23245  |
| 3.0   | 23768  | 23462  | 23417  | 23389  | 23383  | 23391  | 23403  | 23391  | 23383  | 23389  |
| 6.0   | 23988  | 23654  | 23552  | 23486  | 23535  | 23628  | 23667  | 23628  | 23535  | 23486  |
| 9.0   | 24090  | 23731  | 23558  | 23469  | 23549  | 23697  | 23763  | 23697  | 23549  | 23469  |
| 12.0  | 24025  | 23654  | 23451  | 23342  | 23426  | 23591  | 23659  | 23591  | 23426  | 23342  |
| 15.0  | 23769  | 23396  | 23243  | 23145  | 23167  | 23274  | 23350  | 23274  | 23167  | 23145  |
| 18.0  | 23566  | 23139  | 22895  | 22791  | 22763  | 23003  | 23047  | 23003  | 22763  | 22791  |
| 21.0  | 23161  | 22773  | 22354  | 22138  | 22190  | 22623  | 22621  | 22623  | 22190  | 22138  |
| 24.0  | 22075  | 21676  | 21043  | 20692  | 20867  | 21523  | 21586  | 21523  | 20867  | 20692  |
| 27.0  | 19986  | 19404  | 18499  | 18250  | 18375  | 19174  | 19522  | 19174  | 18375  | 18250  |
| 30.0  | 17117  | 16497  | 15990  | 15616  | 15931  | 16353  | 16734  | 16353  | 15931  | 15616  |
| 33.0  | 13593  | 13495  | 13338  | 12806  | 13388  | 13427  | 13306  | 13427  | 13388  | 12806  |
| 36.0  | 10158  | 10197  | 9896   | 9640   | 9961   | 10126  | 9976   | 10126  | 9961   | 9640   |
| 39.0  | 7087   | 6965   | 7088   | 7017   | 7105   | 6901   | 7013   | 6901   | 7105   | 7017   |
| 42.0  | 4318   | 4184   | 4589   | 4290   | 4640   | 4166   | 4363   | 4166   | 4640   | 4290   |
| 45.0  | 1961   | 2169   | 2120   | 1929   | 2147   | 2158   | 2105   | 2158   | 2147   | 1929   |
| 48.0  | 866.7  | 891.8  | 891.8  | 889.1  | 904.1  | 885.7  | 865.8  | 885.7  | 904.1  | 889.1  |
| 51.0  | 396.1  | 401.7  | 431.7  | 418.8  | 429.8  | 390.1  | 404.0  | 390.1  | 429.8  | 418.8  |
| 54.0  | 229.9  | 227.4  | 241.7  | 248.2  | 245.0  | 227.0  | 226.7  | 227.0  | 245.0  | 248.2  |
| 57.0  | 169.2  | 169.4  | 171.7  | 176.3  | 172.0  | 169.4  | 165.9  | 169.4  | 172.0  | 176.3  |
| 60.0  | 136.6  | 136.5  | 137.5  | 137.3  | 137.5  | 136.3  | 133.7  | 136.3  | 137.5  | 137.3  |
| 63.0  | 112.9  | 112.8  | 113.2  | 113.8  | 113.2  | 112.9  | 110.9  | 112.9  | 113.8  | 113.2  |
| 66.0  | 96.20  | 95.57  | 95.49  | 96.04  | 95.56  | 95.76  | 94.45  | 95.76  | 95.56  | 96.04  |
| 69.0  | 83.63  | 82.50  | 82.09  | 83.22  | 82.34  | 82.61  | 82.40  | 82.61  | 82.34  | 83.22  |
| 72.0  | 70.50  | 69.68  | 70.10  | 70.70  | 70.36  | 69.84  | 69.90  | 69.84  | 70.36  | 70.70  |
| 75.0  | 57.55  | 56.87  | 56.56  | 56.93  | 56.93  | 57.15  | 56.94  | 57.15  | 56.93  | 56.93  |
| 78.0  | 44.01  | 43.37  | 43.27  | 44.24  | 43.50  | 42.83  | 42.77  | 42.83  | 43.50  | 44.24  |
| 81.0  | 29.54  | 29.01  | 29.39  | 29.91  | 29.26  | 28.43  | 28.64  | 28.43  | 29.26  | 29.91  |
| 84.0  | 16.45  | 16.11  | 16.20  | 16.65  | 16.22  | 15.94  | 16.49  | 15.94  | 16.22  | 16.65  |
| 87.0  | 4.235  | 4.217  | 4.488  | 5.557  | 4.924  | 5.524  | 5.283  | 5.524  | 4.924  | 5.557  |
| 90.0  | 0.8942 | 0.8536 | 0.8620 | 0.8603 | 0.8542 | 0.8443 | 0.8511 | 0.8443 | 0.8542 | 0.8603 |
| 93.0  | 1.166  | 1.111  | 1.104  | 1.109  | 1.086  | 1.083  | 1.073  | 1.083  | 1.086  | 1.109  |
| 96.0  | 1.750  | 1.704  | 1.666  | 1.645  | 1.625  | 1.660  | 1.606  | 1.660  | 1.625  | 1.645  |
| 99.0  | 2.900  | 2.863  | 2.848  | 2.813  | 2.800  | 2.788  | 2.720  | 2.788  | 2.800  | 2.813  |
| 102.0 | 4.655  | 4.581  | 4.599  | 4.603  | 4.530  | 4.486  | 4.397  | 4.486  | 4.530  | 4.603  |
| 105.0 | 7.015  | 6.904  | 6.811  | 6.770  | 6.722  | 6.801  | 6.704  | 6.801  | 6.722  | 6.770  |
| 108.0 | 10.10  | 9.880  | 9.716  | 9.640  | 9.663  | 9.783  | 9.699  | 9.783  | 9.663  | 9.640  |
| 111.0 | 13.12  | 13.48  | 13.22  | 13.16  | 13.14  | 13.37  | 13.38  | 13.37  | 13.14  | 13.16  |
| 114.0 | 18.14  | 17.66  | 17.30  | 17.20  | 17.23  | 17.53  | 17.64  | 17.53  | 17.23  | 17.20  |
| 117.0 | 22.90  | 22.43  | 22.10  | 21.95  | 22.02  | 22.29  | 22.41  | 22.29  | 22.02  | 21.95  |
| 120.0 | 28.07  | 27.62  | 27.39  | 27.28  | 27.30  | 27.48  | 27.56  | 27.48  | 27.30  | 27.28  |
| 123.0 | 33.70  | 33.27  | 33.12  | 33.05  | 33.04  | 33.13  | 33.13  | 33.13  | 33.04  | 33.05  |
| 126.0 | 40.00  | 39.55  | 39.43  | 39.36  | 39.37  | 39.39  | 39.35  | 39.39  | 39.37  | 39.36  |
| 129.0 | 46.97  | 46.45  | 46.40  | 46.36  | 46.32  | 46.30  | 46.24  | 46.30  | 46.32  | 46.36  |
| 132.0 | 54.53  | 53.92  | 53.93  | 53.89  | 53.79  | 53.76  | 53.70  | 53.76  | 53.79  | 53.89  |
| 135.0 | 62.48  | 61.80  | 61.83  | 61.83  | 61.67  | 61.65  | 61.57  | 61.65  | 61.67  | 61.83  |
| 138.0 | 70.76  | 69.90  | 69.96  | 69.95  | 69.74  | 69.80  | 69.75  | 69.80  | 69.74  | 69.95  |
| 141.0 | 78.95  | 78.04  | 78.04  | 77.99  | 77.83  | 77.87  | 77.88  | 77.87  | 77.83  | 77.99  |
| 144.0 | 87.02  | 86.02  | 86.01  | 85.95  | 85.80  | 85.84  | 85.86  | 85.84  | 85.80  | 85.95  |
| 147.0 | 94.71  | 93.61  | 93.65  | 93.63  | 93.46  | 93.48  | 93.50  | 93.48  | 93.46  | 93.63  |
| 150.0 | 102.1  | 100.8  | 100.9  | 100.9  | 100.7  | 100.7  | 100.7  | 100.7  | 100.7  | 100.9  |
| 153.0 | 109.2  | 107.8  | 108.0  | 107.8  | 107.7  | 107.6  | 107.7  | 107.6  | 107.7  | 107.8  |
| 156.0 | 116.2  | 114.8  | 114.9  | 114.7  | 114.6  | 114.5  | 114.7  | 114.5  | 114.6  | 114.7  |
| 159.0 | 123.4  | 121.9  | 122.0  | 121.7  | 121.7  | 121.6  | 121.7  | 121.6  | 121.7  | 121.7  |
| 162.0 | 130.7  | 129.0  | 128.9  | 128.5  | 128.6  | 128.6  | 128.6  | 128.6  | 128.6  | 128.5  |
| 165.0 | 137.8  | 136.1  | 135.8  | 135.4  | 135.5  | 135.6  | 135.6  | 135.6  | 135.5  | 135.4  |
| 168.0 | 144.5  | 142.7  | 142.3  | 141.9  | 142.0  | 142.0  | 142.0  | 142.0  | 141.9  | 142.0  |
| 171.0 | 150.1  | 148.2  | 147.9  | 147.6  | 147.7  | 147.6  | 147.6  | 147.6  | 147.7  | 147.6  |
| 174.0 | 154.6  | 152.7  | 152.5  | 152.3  | 152.4  | 152.1  | 152.0  | 152.1  | 152.4  | 152.3  |
| 177.0 | 157.3  | 155.5  | 155.4  | 155.3  | 155.2  | 154.8  | 154.5  | 154.8  | 155.2  | 155.3  |
| 180.0 | 158.7  | 157.1  | 157.0  | 156.9  | 156.8  | 156.3  | 156.0  | 156.3  | 156.8  | 156.9  |
| G/C   | 150.0  | 165.0  | 180.0  | 195.0  | 210.0  | 225.0  | 240.0  | 255.0  | 270.0  | 285.0  |
| 0.0   | 23265  | 23278  | 23583  | 23278  | 23265  | 23245  | 23234  | 23226  | 23232  | 23226  |
| 3.0   | 23417  | 23462  | 23768  | 23462  | 23417  | 23389  | 23383  | 23391  | 23403  | 23391  |
| 6.0   | 23552  | 23654  | 23988  | 23654  | 23552  | 23486  | 23535  | 23628  | 23667  | 23628  |
| 9.0   | 23558  | 23731  | 24090  | 23731  | 23558  | 23469  | 23549  | 23697  | 23763  | 23697  |
| 12.0  | 23451  | 23654  | 24025  | 23654  | 23451  | 23342  | 23426  | 23591  | 23659  | 23591  |
| 15.0  | 23243  | 23396  | 23769  | 23396  | 23243  | 23145  | 23167  | 23274  | 23350  | 23274  |
| 18.0  | 22895  | 23139  | 23566  | 23139  | 22895  | 22791  | 22763  | 23003  | 23047  | 23003  |
| 21.0  | 22354  | 22773  | 23161  | 22773  | 22354  | 22138  | 22190  | 22623  | 22621  | 22623  |
| 24.0  | 21043  | 21676  | 22075  | 21043  | 20692  | 20867  | 21523  | 21586  | 21523  | 20867  |
| 27.0  | 18499  | 19404  | 19986  | 18499  | 18250  | 18375  | 19174  | 19522  | 19174  | 18375  |
| 30.0  | 15990  | 16497  | 17117  | 16497  | 15990  | 15616  | 15931  | 16353  | 16734  | 16353  |

C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: QC  
Test Date: 2020-07-08

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
Humidity: 53.0%  
Test Distance: 10.380m [K=1.0000]  
Remarks:

## Photometric Data Table [cd]

|       |        |        |        |        |        |        |        |        |        |        |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 33.0  | 13338  | 13495  | 13593  | 13495  | 13338  | 12806  | 13388  | 13427  | 13306  | 13427  |
| 36.0  | 9896   | 10197  | 10158  | 10197  | 9896   | 9640   | 9961   | 10126  | 9976   | 10126  |
| 39.0  | 7088   | 6965   | 7087   | 6965   | 7088   | 7017   | 7105   | 6901   | 7013   | 6901   |
| 42.0  | 4589   | 4184   | 4318   | 4184   | 4589   | 4290   | 4640   | 4166   | 4363   | 4166   |
| 45.0  | 2120   | 2169   | 1961   | 2169   | 2120   | 1929   | 2147   | 2158   | 2105   | 2158   |
| 48.0  | 891.8  | 891.8  | 866.7  | 891.8  | 891.8  | 889.1  | 904.1  | 885.7  | 865.8  | 885.7  |
| 51.0  | 431.7  | 401.7  | 396.1  | 401.7  | 431.7  | 418.8  | 429.8  | 390.1  | 404.0  | 390.1  |
| 54.0  | 241.7  | 227.4  | 229.9  | 227.4  | 241.7  | 248.2  | 245.0  | 227.0  | 226.7  | 227.0  |
| 57.0  | 171.7  | 169.4  | 169.2  | 169.4  | 171.7  | 176.3  | 172.0  | 169.4  | 165.9  | 169.4  |
| 60.0  | 137.5  | 136.5  | 136.6  | 136.5  | 137.5  | 137.3  | 137.5  | 136.3  | 133.7  | 136.3  |
| 63.0  | 113.2  | 112.8  | 112.9  | 112.8  | 113.2  | 113.8  | 113.2  | 112.9  | 110.9  | 112.9  |
| 66.0  | 95.49  | 95.57  | 96.20  | 95.57  | 95.49  | 96.04  | 95.56  | 95.76  | 94.45  | 95.76  |
| 69.0  | 82.09  | 82.50  | 83.63  | 82.50  | 82.09  | 83.22  | 82.34  | 82.61  | 82.40  | 82.61  |
| 72.0  | 70.10  | 69.68  | 70.50  | 69.68  | 70.10  | 70.70  | 70.36  | 69.84  | 69.90  | 69.84  |
| 75.0  | 56.56  | 56.87  | 57.55  | 56.87  | 56.56  | 56.93  | 56.93  | 57.15  | 56.94  | 57.15  |
| 78.0  | 43.27  | 43.37  | 44.01  | 43.37  | 43.27  | 44.24  | 43.50  | 42.83  | 42.77  | 42.83  |
| 81.0  | 29.39  | 29.01  | 29.54  | 29.01  | 29.39  | 29.91  | 29.26  | 28.43  | 28.64  | 28.43  |
| 84.0  | 16.20  | 16.11  | 16.45  | 16.11  | 16.20  | 16.65  | 16.22  | 15.94  | 16.49  | 15.94  |
| 87.0  | 4.488  | 4.217  | 4.235  | 4.217  | 4.488  | 5.557  | 4.924  | 5.524  | 5.283  | 5.524  |
| 90.0  | 0.8620 | 0.8536 | 0.8942 | 0.8536 | 0.8620 | 0.8603 | 0.8542 | 0.8443 | 0.8511 | 0.8443 |
| 93.0  | 1.104  | 1.111  | 1.166  | 1.111  | 1.104  | 1.109  | 1.086  | 1.083  | 1.073  | 1.083  |
| 96.0  | 1.666  | 1.704  | 1.750  | 1.704  | 1.666  | 1.645  | 1.625  | 1.660  | 1.606  | 1.660  |
| 99.0  | 2.848  | 2.863  | 2.900  | 2.863  | 2.848  | 2.813  | 2.800  | 2.788  | 2.720  | 2.788  |
| 102.0 | 4.599  | 4.581  | 4.655  | 4.581  | 4.599  | 4.603  | 4.530  | 4.486  | 4.397  | 4.486  |
| 105.0 | 6.811  | 6.904  | 7.015  | 6.904  | 6.811  | 6.770  | 6.722  | 6.801  | 6.704  | 6.801  |
| 108.0 | 9.716  | 9.880  | 10.10  | 9.880  | 9.716  | 9.640  | 9.663  | 9.783  | 9.699  | 9.783  |
| 111.0 | 13.22  | 13.48  | 13.82  | 13.48  | 13.22  | 13.16  | 13.14  | 13.37  | 13.38  | 13.37  |
| 114.0 | 17.30  | 17.66  | 18.14  | 17.66  | 17.30  | 17.20  | 17.23  | 17.53  | 17.64  | 17.53  |
| 117.0 | 22.10  | 22.43  | 22.90  | 22.43  | 22.10  | 21.95  | 22.02  | 22.29  | 22.41  | 22.29  |
| 120.0 | 27.39  | 27.62  | 28.07  | 27.62  | 27.39  | 27.28  | 27.30  | 27.48  | 27.56  | 27.48  |
| 123.0 | 33.12  | 33.27  | 33.70  | 33.27  | 33.12  | 33.05  | 33.04  | 33.13  | 33.13  | 33.13  |
| 126.0 | 39.43  | 39.55  | 40.00  | 39.55  | 39.43  | 39.36  | 39.37  | 39.39  | 39.35  | 39.39  |
| 129.0 | 46.40  | 46.45  | 46.97  | 46.45  | 46.40  | 46.36  | 46.32  | 46.30  | 46.24  | 46.30  |
| 132.0 | 53.93  | 53.92  | 54.53  | 53.92  | 53.93  | 53.89  | 53.79  | 53.76  | 53.70  | 53.76  |
| 135.0 | 61.83  | 61.80  | 62.48  | 61.80  | 61.83  | 61.83  | 61.67  | 61.65  | 61.57  | 61.65  |
| 138.0 | 69.96  | 69.90  | 70.76  | 69.90  | 69.96  | 69.95  | 69.74  | 69.80  | 69.75  | 69.80  |
| 141.0 | 78.04  | 78.04  | 78.95  | 78.04  | 78.04  | 77.99  | 77.83  | 77.87  | 77.88  | 77.87  |
| 144.0 | 86.01  | 86.02  | 87.02  | 86.02  | 86.01  | 85.95  | 85.80  | 85.84  | 85.86  | 85.84  |
| 147.0 | 93.65  | 93.61  | 94.71  | 93.61  | 93.65  | 93.63  | 93.46  | 93.48  | 93.50  | 93.48  |
| 150.0 | 100.9  | 100.8  | 102.1  | 100.8  | 100.9  | 100.9  | 100.7  | 100.7  | 100.7  | 100.7  |
| 153.0 | 108.0  | 107.8  | 109.2  | 107.8  | 108.0  | 107.8  | 107.7  | 107.6  | 107.7  | 107.6  |
| 156.0 | 114.9  | 114.8  | 116.2  | 114.8  | 114.9  | 114.7  | 114.6  | 114.5  | 114.7  | 114.5  |
| 159.0 | 122.0  | 121.9  | 123.4  | 121.9  | 122.0  | 121.7  | 121.7  | 121.6  | 121.7  | 121.6  |
| 162.0 | 128.9  | 129.0  | 130.7  | 129.0  | 128.9  | 128.5  | 128.6  | 128.6  | 128.6  | 128.6  |
| 165.0 | 135.8  | 136.1  | 137.8  | 136.1  | 135.8  | 135.4  | 135.5  | 135.6  | 135.6  | 135.6  |
| 168.0 | 142.3  | 142.7  | 144.5  | 142.7  | 142.3  | 141.9  | 142.0  | 142.0  | 142.0  | 142.0  |
| 171.0 | 147.9  | 148.2  | 150.1  | 148.2  | 147.9  | 147.6  | 147.7  | 147.6  | 147.6  | 147.6  |
| 174.0 | 152.5  | 152.7  | 154.6  | 152.7  | 152.5  | 152.3  | 152.4  | 152.1  | 152.0  | 152.1  |
| 177.0 | 155.4  | 155.5  | 157.3  | 155.5  | 155.4  | 155.3  | 155.2  | 154.8  | 154.5  | 154.8  |
| 180.0 | 157.0  | 157.1  | 158.7  | 157.1  | 157.0  | 156.9  | 156.8  | 156.3  | 156.0  | 156.3  |
| G/C   | 300.0  | 315.0  | 330.0  | 345.0  |        |        |        |        |        |        |
| 0.0   | 23234  | 23245  | 23265  | 23278  |        |        |        |        |        |        |
| 3.0   | 23383  | 23389  | 23417  | 23462  |        |        |        |        |        |        |
| 6.0   | 23535  | 23486  | 23552  | 23654  |        |        |        |        |        |        |
| 9.0   | 23549  | 23469  | 23558  | 23731  |        |        |        |        |        |        |
| 12.0  | 23426  | 23342  | 23451  | 23654  |        |        |        |        |        |        |
| 15.0  | 23167  | 23145  | 23243  | 23396  |        |        |        |        |        |        |
| 18.0  | 22763  | 22791  | 22895  | 23139  |        |        |        |        |        |        |
| 21.0  | 22190  | 22138  | 22354  | 22773  |        |        |        |        |        |        |
| 24.0  | 20867  | 20692  | 21043  | 21676  |        |        |        |        |        |        |
| 27.0  | 18375  | 18250  | 18499  | 19404  |        |        |        |        |        |        |
| 30.0  | 15931  | 15616  | 15990  | 16497  |        |        |        |        |        |        |
| 33.0  | 13388  | 12806  | 13338  | 13495  |        |        |        |        |        |        |
| 36.0  | 9961   | 9640   | 9896   | 10197  |        |        |        |        |        |        |
| 39.0  | 7105   | 7017   | 7088   | 6965   |        |        |        |        |        |        |
| 42.0  | 4640   | 4290   | 4589   | 4184   |        |        |        |        |        |        |
| 45.0  | 2147   | 1929   | 2120   | 2169   |        |        |        |        |        |        |
| 48.0  | 904.1  | 889.1  | 891.8  | 891.8  |        |        |        |        |        |        |
| 51.0  | 429.8  | 418.8  | 431.7  | 401.7  |        |        |        |        |        |        |
| 54.0  | 245.0  | 248.2  | 241.7  | 227.4  |        |        |        |        |        |        |
| 57.0  | 172.0  | 176.3  | 171.7  | 169.4  |        |        |        |        |        |        |
| 60.0  | 137.5  | 137.3  | 137.5  | 136.5  |        |        |        |        |        |        |
| 63.0  | 113.2  | 113.8  | 113.2  | 112.8  |        |        |        |        |        |        |
| 66.0  | 95.56  | 96.04  | 95.49  | 95.57  |        |        |        |        |        |        |

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: QC  
 Test Date: 2020-07-08

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity: 53.0%  
 Test Distance: 10.380m [K=1.0000]  
 Remarks:

## Photometric Data Table [cd]

|       |        |        |        |        |
|-------|--------|--------|--------|--------|
| 69.0  | 82.34  | 83.22  | 82.09  | 82.50  |
| 72.0  | 70.36  | 70.70  | 70.10  | 69.68  |
| 75.0  | 56.93  | 56.93  | 56.56  | 56.87  |
| 78.0  | 43.50  | 44.24  | 43.27  | 43.37  |
| 81.0  | 29.26  | 29.91  | 29.39  | 29.01  |
| 84.0  | 16.22  | 16.65  | 16.20  | 16.11  |
| 87.0  | 4.924  | 5.557  | 4.488  | 4.217  |
| 90.0  | 0.8542 | 0.8603 | 0.8620 | 0.8536 |
| 93.0  | 1.086  | 1.109  | 1.104  | 1.111  |
| 96.0  | 1.625  | 1.645  | 1.666  | 1.704  |
| 99.0  | 2.800  | 2.813  | 2.848  | 2.863  |
| 102.0 | 4.530  | 4.603  | 4.599  | 4.581  |
| 105.0 | 6.722  | 6.770  | 6.811  | 6.904  |
| 108.0 | 9.663  | 9.640  | 9.716  | 9.880  |
| 111.0 | 13.14  | 13.16  | 13.22  | 13.48  |
| 114.0 | 17.23  | 17.20  | 17.30  | 17.66  |
| 117.0 | 22.02  | 21.95  | 22.10  | 22.43  |
| 120.0 | 27.30  | 27.28  | 27.39  | 27.62  |
| 123.0 | 33.04  | 33.05  | 33.12  | 33.27  |
| 126.0 | 39.37  | 39.36  | 39.43  | 39.55  |
| 129.0 | 46.32  | 46.36  | 46.40  | 46.45  |
| 132.0 | 53.79  | 53.89  | 53.93  | 53.92  |
| 135.0 | 61.67  | 61.83  | 61.83  | 61.80  |
| 138.0 | 69.74  | 69.95  | 69.96  | 69.90  |
| 141.0 | 77.83  | 77.99  | 78.04  | 78.04  |
| 144.0 | 85.80  | 85.95  | 86.01  | 86.02  |
| 147.0 | 93.46  | 93.63  | 93.65  | 93.61  |
| 150.0 | 100.7  | 100.9  | 100.9  | 100.8  |
| 153.0 | 107.7  | 107.8  | 108.0  | 107.8  |
| 156.0 | 114.6  | 114.7  | 114.9  | 114.8  |
| 159.0 | 121.7  | 121.7  | 122.0  | 121.9  |
| 162.0 | 128.6  | 128.5  | 128.9  | 129.0  |
| 165.0 | 135.5  | 135.4  | 135.8  | 136.1  |
| 168.0 | 142.0  | 141.9  | 142.3  | 142.7  |
| 171.0 | 147.7  | 147.6  | 147.9  | 148.2  |
| 174.0 | 152.4  | 152.3  | 152.5  | 152.7  |
| 177.0 | 155.2  | 155.3  | 155.4  | 155.5  |
| 180.0 | 156.8  | 156.9  | 157.0  | 157.1  |

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: QC  
 Test Date: 2020-07-08

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.362  
 Humidity: 53.0%  
 Test Distance: 10.380m [K=1.0000]  
 Remarks: