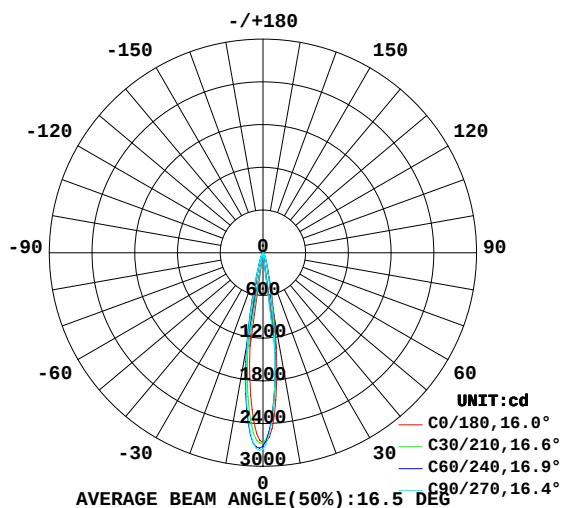


# LUMINAIRE PHOTOMETRIC TEST REPORT

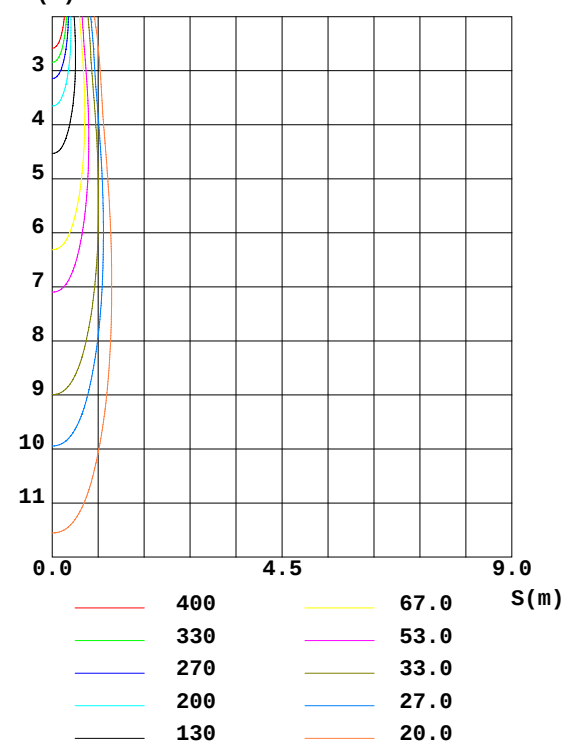
|                                      |        |                   |
|--------------------------------------|--------|-------------------|
| NAME: CL-Spot65-R-uls 3000k-RA90-20D | TYPE:  | WEIGHT:           |
| DIM.:                                | SPEC.: | SERIAL No.:       |
| MFR.:                                | SUR.:  | PROTECTION ANGLE: |

| DATA OF LAMP     |         | PHOTOMETRIC DATA Eff: 36.17 lm/W |        |                    |           |
|------------------|---------|----------------------------------|--------|--------------------|-----------|
| MODEL            |         | I <sub>max</sub> (cd)            | 2805   | S/MH(C0/180)       | 0.28      |
| NOMINAL POWER(W) | 8       | LOR(%)                           | 100.0  | S/MH(C90/270)      | 0.25      |
| RATED VOLTAGE(V) | 24      | TOTAL FLUX(lm)                   | 321.18 | η UP, DN(C0-180)   | 0.2, 46.2 |
| NOMINAL FLUX(lm) | 321.176 | CIE CLASS                        | DIRECT | η UP, DN(C180-360) | 0.2, 53.5 |
| LAMPS INSIDE     | 1       | η up(%)                          | 0.3    | CIBSE SHR NOM      | 0.00      |
| TEST VOLTAGE(V)  | 24      | η down(%)                        | 99.7   | CIBSE SHR MAX      | 1.00      |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:tang  
Test Date:2022-04-13

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.262  
Humidity:65.0%  
Test Distance:7.100m [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       | 910.7                 | 813.4  | 750.0  | 815.1  | 872.0  | 1208   | 1250   | 1023   | 0- 10    | 162.9       | 162.9        | 50.7, 50.7 |
| 20       | 144.0                 | 137.2  | 128.6  | 129.6  | 127.0  | 144.5  | 147.2  | 133.1  | 10- 20   | 99.63       | 262.5        | 81.7, 81.7 |
| 30       | 40.68                 | 48.01  | 44.48  | 40.32  | 37.41  | 37.36  | 37.12  | 37.84  | 20- 30   | 34.03       | 296.5        | 92.3, 92.3 |
| 40       | 14.52                 | 17.58  | 17.63  | 14.88  | 14.10  | 13.63  | 12.75  | 12.52  | 30- 40   | 15.71       | 312.2        | 97.2, 97.2 |
| 50       | 3.513                 | 4.240  | 4.099  | 3.370  | 3.273  | 3.326  | 2.883  | 2.713  | 40- 50   | 6.273       | 318.5        | 99.2, 99.2 |
| 60       | 0.6241                | 0.7577 | 0.6455 | 0.6065 | 0.4757 | 0.3822 | 0.4064 | 0.4836 | 50- 60   | 1.396       | 319.9        | 99.6, 99.6 |
| 70       | 0.0001                | 0.0003 | 0      | 0.0000 | 0      | 0.0001 | 0.0002 | 0      | 60- 70   | 0.2017      | 320.1        | 99.7, 99.7 |
| 80       | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 70- 80   | 0.0000      | 320.1        | 99.7, 99.7 |
| 90       | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 80- 90   | 0           | 320.1        | 99.7, 99.7 |
| 100      | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 90-100   | 0           | 320.1        | 99.7, 99.7 |
| 110      | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 100-110  | 0           | 320.1        | 99.7, 99.7 |
| 120      | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 110-120  | 0           | 320.1        | 99.7, 99.7 |
| 130      | 0                     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 120-130  | 0           | 320.1        | 99.7, 99.7 |
| 140      | 0                     | 0.0000 | 0.0000 | 0      | 0.0007 | 0.0072 | 0      | 0.0048 | 130-140  | 0.0001      | 320.1        | 99.7, 99.7 |
| 150      | 0.2872                | 0.3893 | 0.4161 | 0.3350 | 0.3644 | 0.3094 | 0.2874 | 0.3211 | 140-150  | 0.0665      | 320.2        | 99.7, 99.7 |
| 160      | 1.349                 | 1.439  | 1.483  | 1.413  | 1.341  | 1.239  | 1.212  | 1.284  | 150-160  | 0.3630      | 320.5        | 99.8, 99.8 |
| 170      | 1.939                 | 1.877  | 1.873  | 1.895  | 1.886  | 1.829  | 1.831  | 1.838  | 160-170  | 0.4729      | 321.0        | 99.9, 99.9 |
| 180      | 1.840                 | 1.796  | 1.793  | 1.824  | 1.850  | 1.805  | 1.817  | 1.824  | 170-180  | 0.1771      | 321.2        | 100, 100   |
| DEG      | LUMINOUS INTENSITY:cd |        |        |        |        |        |        |        |          | UNIT:lm     |              |            |

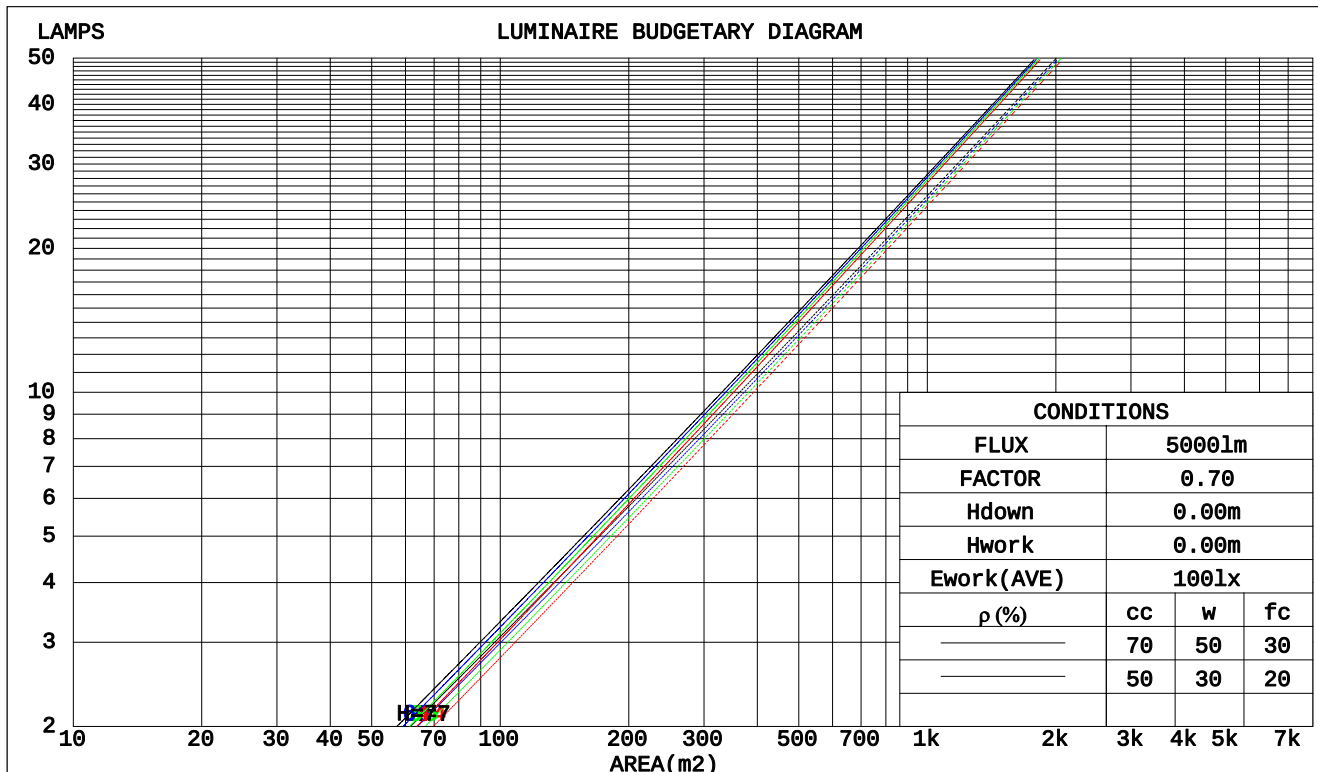
C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:tang  
Test Date:2022-04-13

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.262  
Humidity:65.0%  
Test Distance:7.100m [K=1.0000]  
Remarks:

### CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

|                                  |        |                   |
|----------------------------------|--------|-------------------|
| NAME: Spot65-R-3000k-20D-Ra90-8W | TYPE:  | WEIGHT:           |
| DIM.:                            | SPEC.: | SERIAL No.:       |
| MFR.: VD                         | SUR.:  | PROTECTION ANGLE: |

| $\rho_{CC}$ | 80%                   |      |      | 70%  |      |      | 50%                             |      |      | 30%  |      |      | 10%  |      |      | 0   |
|-------------|-----------------------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------|-----|
| $\rho_W$    | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                             | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0   |
| $\rho_{fc}$ | 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 | 1.02 | 1.02 | 1.02 | .00 |
| 1.0         | 1.13                  | 1.11 | 1.10 | 1.11 | 1.09 | 1.08 | 1.07                            | 1.06 | 1.05 | 1.03 | 1.02 | 1.02 | .00  | .99  | .99  | .97 |
| 2.0         | 1.08                  | 1.06 | 1.03 | 1.07 | 1.04 | 1.02 | 1.04                            | 1.02 | .00  | 1.01 | .99  | .98  | .98  | .97  | .96  | .94 |
| 3.0         | 1.04                  | 1.01 | .98  | 1.03 | .00  | .97  | 1.00                            | .98  | .96  | .98  | .96  | .94  | .96  | .94  | .93  | .92 |
| 4.0         | 1.01                  | .97  | .94  | .99  | .96  | .93  | .97                             | .95  | .92  | .96  | .93  | .91  | .94  | .92  | .90  | .89 |
| 5.0         | .97                   | .94  | .91  | .96  | .93  | .90  | .95                             | .92  | .90  | .93  | .91  | .89  | .92  | .90  | .88  | .87 |
| 6.0         | .94                   | .91  | .88  | .94  | .90  | .88  | .92                             | .89  | .87  | .91  | .89  | .86  | .90  | .88  | .86  | .85 |
| 7.0         | .92                   | .88  | .85  | .91  | .88  | .85  | .90                             | .87  | .85  | .89  | .86  | .84  | .88  | .86  | .84  | .83 |
| 8.0         | .90                   | .86  | .83  | .89  | .86  | .83  | .88                             | .85  | .83  | .87  | .85  | .82  | .87  | .84  | .82  | .81 |
| 9.0         | .88                   | .84  | .81  | .87  | .84  | .81  | .86                             | .83  | .81  | .86  | .83  | .81  | .85  | .82  | .80  | .80 |
| 10.0        | .86                   | .82  | .80  | .85  | .82  | .79  | .85                             | .81  | .79  | .84  | .81  | .79  | .83  | .81  | .79  | .78 |



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:tang  
Test Date:2022-04-13

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.262  
Humidity:65.0%  
Test Distance:7.100m [K=1.0000]  
Remarks:

WEC AND CCEC

|                                  |        |                   |
|----------------------------------|--------|-------------------|
| NAME: Spot65-R-3000k-20D-Ra90-8W | TYPE:  | WEIGHT:           |
| DIM.:                            | SPEC.: | SERIAL No.:       |
| MFR.: VD                         | SUR.:  | PROTECTION ANGLE: |

| $\rho_{CC}$ | 80%                   |      |      | 70%  |      |      | 50%                             |      |      | 30%  |      |      | 10%  |      |      | 0 |  |
|-------------|-----------------------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------|---|--|
| $\rho_W$    | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                             | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |  |
| $\rho_{fc}$ | 20%                   |      |      | 20%  |      |      | 20%                             |      |      | 20%  |      |      | 20%  |      |      | 0 |  |
| RCR         | RCR:Room Cavity Ratio |      |      |      |      |      | Wall Exitance Coefficients(WEC) |      |      |      |      |      |      |      |      |   |  |
| 0.0         |                       |      |      |      |      |      |                                 |      |      |      |      |      |      |      |      |   |  |
| 1.0         | .129                  | .073 | .023 | .122 | .070 | .022 | .110                            | .063 | .020 | .098 | .057 | .018 | .088 | .051 | .016 |   |  |
| 2.0         | .119                  | .065 | .020 | .114 | .063 | .019 | .103                            | .057 | .018 | .094 | .053 | .016 | .085 | .048 | .015 |   |  |
| 3.0         | .111                  | .059 | .018 | .106 | .057 | .017 | .097                            | .053 | .016 | .090 | .049 | .015 | .082 | .045 | .014 |   |  |
| 4.0         | .103                  | .054 | .016 | .099 | .052 | .015 | .092                            | .049 | .015 | .085 | .046 | .014 | .079 | .043 | .013 |   |  |
| 5.0         | .097                  | .049 | .014 | .093 | .048 | .014 | .087                            | .045 | .013 | .082 | .043 | .013 | .076 | .041 | .012 |   |  |
| 6.0         | .091                  | .046 | .013 | .088 | .045 | .013 | .083                            | .043 | .012 | .078 | .041 | .012 | .073 | .039 | .011 |   |  |
| 7.0         | .086                  | .043 | .012 | .084 | .042 | .012 | .079                            | .040 | .012 | .075 | .038 | .011 | .071 | .037 | .011 |   |  |
| 8.0         | .082                  | .040 | .011 | .079 | .039 | .011 | .075                            | .038 | .011 | .072 | .036 | .010 | .068 | .035 | .010 |   |  |
| 9.0         | .078                  | .038 | .010 | .076 | .037 | .010 | .072                            | .036 | .010 | .069 | .035 | .010 | .066 | .033 | .010 |   |  |
| 10.0        | .074                  | .035 | .010 | .072 | .035 | .010 | .069                            | .034 | .010 | .066 | .033 | .009 | .064 | .032 | .009 |   |  |

| ρ <sub>CC</sub> | 80%                   |      |      | 70%  |      |      | 50%                                        |      |      | 30%  |      |      | 10%  |      |      | 0 |
|-----------------|-----------------------|------|------|------|------|------|--------------------------------------------|------|------|------|------|------|------|------|------|---|
| ρ <sub>W</sub>  | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                                        | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| ρ <sub>fC</sub> | 20%                   |      |      | 20%  |      |      | 20%                                        |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR             | RCR:Room Cavity Ratio |      |      |      |      |      | Ceiling Cavity Exitance Coefficients(CCEC) |      |      |      |      |      |      |      |      |   |
| 0.0             | .193                  | .193 | .193 | .165 | .165 | .165 | .113                                       | .113 | .113 | .065 | .065 | .065 | .021 | .021 | .021 |   |
| 1.0             | .170                  | .160 | .151 | .146 | .138 | .130 | .100                                       | .095 | .090 | .057 | .055 | .052 | .018 | .018 | .017 |   |
| 2.0             | .152                  | .135 | .121 | .130 | .117 | .105 | .089                                       | .081 | .073 | .051 | .047 | .043 | .016 | .015 | .014 |   |
| 3.0             | .136                  | .116 | .099 | .117 | .100 | .086 | .080                                       | .069 | .060 | .046 | .041 | .036 | .015 | .013 | .012 |   |
| 4.0             | .123                  | .100 | .083 | .106 | .087 | .072 | .073                                       | .060 | .051 | .042 | .035 | .030 | .014 | .012 | .010 |   |
| 5.0             | .113                  | .088 | .070 | .097 | .076 | .061 | .067                                       | .053 | .043 | .039 | .031 | .025 | .012 | .010 | .008 |   |
| 6.0             | .103                  | .078 | .059 | .089 | .067 | .052 | .061                                       | .047 | .037 | .036 | .028 | .022 | .011 | .009 | .007 |   |
| 7.0             | .095                  | .069 | .051 | .082 | .060 | .045 | .057                                       | .042 | .032 | .033 | .025 | .019 | .011 | .008 | .006 |   |
| 8.0             | .089                  | .063 | .045 | .076 | .054 | .039 | .053                                       | .038 | .028 | .031 | .022 | .016 | .010 | .007 | .005 |   |
| 9.0             | .083                  | .057 | .039 | .071 | .049 | .034 | .049                                       | .035 | .024 | .029 | .020 | .014 | .009 | .007 | .005 |   |
| 10.0            | .078                  | .052 | .035 | .067 | .045 | .030 | .046                                       | .032 | .022 | .027 | .019 | .013 | .009 | .006 | .004 |   |

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:tang  
Test Date:2022-04-13

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 $\gamma$  Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.262  
Humidity:65.0%  
Test Distance:7.100m [K=1.0000]  
Remarks:

### Uncorrected UGR Table

|                                                    |               |      |      |      |                  |               |      |      |      |                   |  |  |  |  |
|----------------------------------------------------|---------------|------|------|------|------------------|---------------|------|------|------|-------------------|--|--|--|--|
| NAME: Spot65-R-3000k-20D-Ra90-8W                   |               |      |      |      | TYPE:            |               |      |      |      | WEIGHT:           |  |  |  |  |
| DIM.:                                              |               |      |      |      | SPEC.:           |               |      |      |      | SERIAL No.:       |  |  |  |  |
| MFR.: VD                                           |               |      |      |      | SUR.:            |               |      |      |      | PROTECTION ANGLE: |  |  |  |  |
| ceiling/cavity                                     | 0.7           | 0.7  | 0.5  | 0.5  | 0.3              | 0.7           | 0.7  | 0.5  | 0.5  | 0.3               |  |  |  |  |
| walls                                              | 0.5           | 0.3  | 0.5  | 0.3  | 0.3              | 0.5           | 0.3  | 0.5  | 0.3  | 0.3               |  |  |  |  |
| working plane                                      | 0.2           | 0.2  | 0.2  | 0.2  | 0.2              | 0.2           | 0.2  | 0.2  | 0.2  | 0.2               |  |  |  |  |
| Room dimensions                                    |               |      |      |      | Viewed crosswise |               |      |      |      | Viewed endwise    |  |  |  |  |
| x = 2H y = 2H                                      | -3.9          | -3.3 | -3.7 | -3.2 | -3.0             | -4.3          | -3.7 | -4.1 | -3.6 | -3.4              |  |  |  |  |
| 3H                                                 | -4.1          | -3.5 | -3.8 | -3.3 | -3.1             | -4.4          | -3.9 | -4.2 | -3.7 | -3.5              |  |  |  |  |
| 4H                                                 | -4.1          | -3.6 | -3.9 | -3.4 | -3.2             | -4.5          | -4.0 | -4.3 | -3.8 | -3.6              |  |  |  |  |
| 6H                                                 | -4.2          | -3.7 | -4.0 | -3.5 | -3.3             | -4.6          | -4.1 | -4.3 | -3.9 | -3.6              |  |  |  |  |
| 8H                                                 | -4.3          | -3.8 | -4.0 | -3.5 | -3.3             | -4.7          | -4.2 | -4.4 | -3.9 | -3.7              |  |  |  |  |
| 12H                                                | -4.3          | -3.9 | -4.0 | -3.6 | -3.3             | -4.7          | -4.2 | -4.4 | -4.0 | -3.7              |  |  |  |  |
| 4H 2H                                              | -4.1          | -3.6 | -3.9 | -3.4 | -3.2             | -4.5          | -4.0 | -4.2 | -3.8 | -3.5              |  |  |  |  |
| 3H                                                 | -4.3          | -3.8 | -4.0 | -3.6 | -3.3             | -4.7          | -4.2 | -4.4 | -3.9 | -3.7              |  |  |  |  |
| 4H                                                 | -4.4          | -4.0 | -4.1 | -3.7 | -3.4             | -4.8          | -4.3 | -4.4 | -4.0 | -3.7              |  |  |  |  |
| 6H                                                 | -4.5          | -4.1 | -4.1 | -3.8 | -3.4             | -4.9          | -4.5 | -4.5 | -4.2 | -3.8              |  |  |  |  |
| 8H                                                 | -4.6          | -4.2 | -4.2 | -3.8 | -3.5             | -4.9          | -4.6 | -4.5 | -4.2 | -3.8              |  |  |  |  |
| 12H                                                | -4.6          | -4.3 | -4.2 | -3.9 | -3.5             | -5.0          | -4.7 | -4.6 | -4.3 | -3.9              |  |  |  |  |
| 8H 4H                                              | -4.6          | -4.2 | -4.2 | -3.8 | -3.5             | -4.9          | -4.6 | -4.5 | -4.2 | -3.8              |  |  |  |  |
| 6H                                                 | -4.7          | -4.4 | -4.2 | -4.0 | -3.6             | -5.0          | -4.7 | -4.6 | -4.3 | -3.9              |  |  |  |  |
| 8H                                                 | -4.7          | -4.5 | -4.3 | -4.0 | -3.6             | -5.1          | -4.8 | -4.7 | -4.4 | -4.0              |  |  |  |  |
| 12H                                                | -4.8          | -4.6 | -4.3 | -4.1 | -3.7             | -5.2          | -4.9 | -4.7 | -4.5 | -4.0              |  |  |  |  |
| 12H 4H                                             | -4.6          | -4.3 | -4.2 | -3.9 | -3.5             | -5.0          | -4.7 | -4.6 | -4.3 | -3.9              |  |  |  |  |
| 6H                                                 | -4.7          | -4.5 | -4.3 | -4.0 | -3.6             | -5.1          | -4.8 | -4.7 | -4.4 | -4.0              |  |  |  |  |
| 8H                                                 | -4.8          | -4.6 | -4.3 | -4.1 | -3.7             | -5.2          | -4.9 | -4.7 | -4.5 | -4.0              |  |  |  |  |
| Variations with the observer position at spacings: |               |      |      |      |                  |               |      |      |      |                   |  |  |  |  |
| S = 1.0H                                           | + 2.5 / -10.9 |      |      |      |                  | + 3.1 / -10.8 |      |      |      |                   |  |  |  |  |
| 1.5H                                               | + 3.8 / - 6.5 |      |      |      |                  | + 4.8 / - 7.8 |      |      |      |                   |  |  |  |  |
| 2.0H                                               | + 5.7 / - 9.8 |      |      |      |                  | + 6.9 / -11.4 |      |      |      |                   |  |  |  |  |

CIE Pub.117 Corrected 321.2 lm Total Lamp Luminous Flux.(8log(F/F0) = -3.9)

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:tang  
Test Date:2022-04-13

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.262  
Humidity:65.0%  
Test Distance:7.100m [K=1.0000]  
Remarks:

UTILIZATION FACTORS TABLE

|                                  |        |                   |
|----------------------------------|--------|-------------------|
| NAME: Spot65-R-3000k-20D-Ra90-8W | TYPE:  | WEIGHT:           |
| DIM.:                            | SPEC.: | SERIAL No.:       |
| MFR.: VD                         | SUR.:  | PROTECTION ANGLE: |

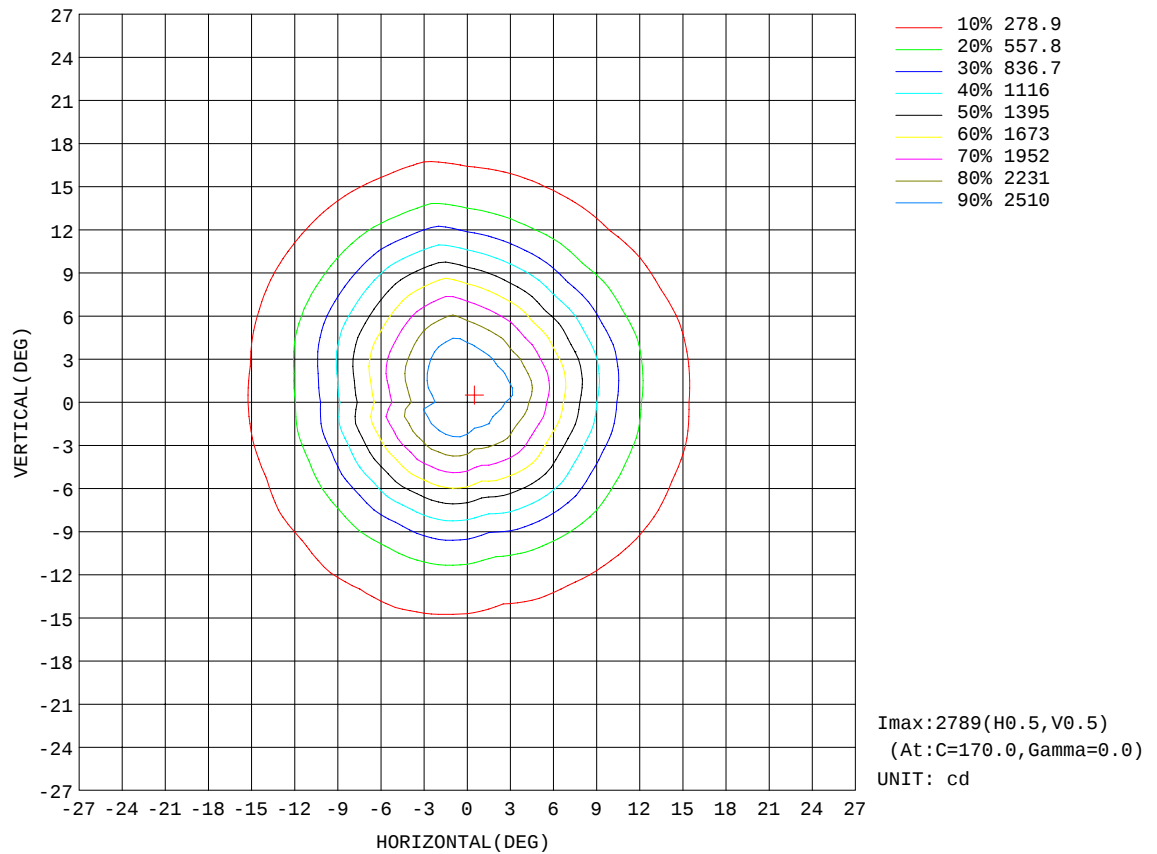
| REFLECTANCE                      |                                                     |     |           |     |     |     |     |               |     |        |
|----------------------------------|-----------------------------------------------------|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| Ceiling                          | 0.8                                                 | 0.8 | 0.8       | 0.7 | 0.7 | 0.7 | 0.5 | 0.5           | 0.5 | 0      |
| Walls                            | 0.7                                                 | 0.5 | 0.3       | 0.7 | 0.5 | 0.3 | 0.7 | 0.5           | 0.3 | 0      |
| Working plane                    | 0.2                                                 | 0.2 | 0.2       | 0.2 | 0.2 | 0.2 | 0.2 | 0.2           | 0.2 | 0      |
| ROOM INDEX                       | UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 90                                                  | 84  | 80        | 89  | 84  | 80  | 89  | 83            | 80  | 77     |
| 0.80                             | 97                                                  | 92  | 88        | 96  | 91  | 88  | 95  | 91            | 88  | 84     |
| 1.00                             | 101                                                 | 96  | 92        | 100 | 95  | 92  | 99  | 95            | 92  | 88     |
| 1.25                             | 105                                                 | 100 | 97        | 104 | 99  | 96  | 102 | 98            | 95  | 91     |
| 1.50                             | 107                                                 | 103 | 100       | 106 | 102 | 99  | 104 | 101           | 98  | 94     |
| 2.00                             | 109                                                 | 106 | 103       | 108 | 105 | 102 | 105 | 103           | 100 | 95     |
| 2.50                             | 111                                                 | 107 | 105       | 109 | 106 | 104 | 106 | 104           | 102 | 96     |
| 3.00                             | 112                                                 | 109 | 107       | 111 | 108 | 106 | 107 | 105           | 103 | 97     |
| 4.00                             | 114                                                 | 112 | 110       | 112 | 110 | 108 | 109 | 107           | 106 | 98     |
| 5.00                             | 115                                                 | 113 | 112       | 113 | 112 | 110 | 109 | 108           | 107 | 99     |
| ROOM INDEX                       | UF(total)                                           |     |           |     |     |     |     |               |     | Direct |
| According to DIN EN 13032-2 2004 |                                                     |     | Suspended |     |     |     |     | SHRNOM = 1.25 |     |        |

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: tang  
Test Date: 2022-04-13

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 $\gamma$  Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.0.262  
Humidity: 65.0%  
Test Distance: 7.100m [K=1.0000]  
Remarks:

### ISOCANDELA DIAGRAM

|                                  |        |                   |
|----------------------------------|--------|-------------------|
| NAME: Spot65-R-3000k-20D-Ra90-8W | TYPE:  | WEIGHT:           |
| DIM.:                            | SPEC.: | SERIAL No.:       |
| MFR.: VD                         | SUR.:  | PROTECTION ANGLE: |

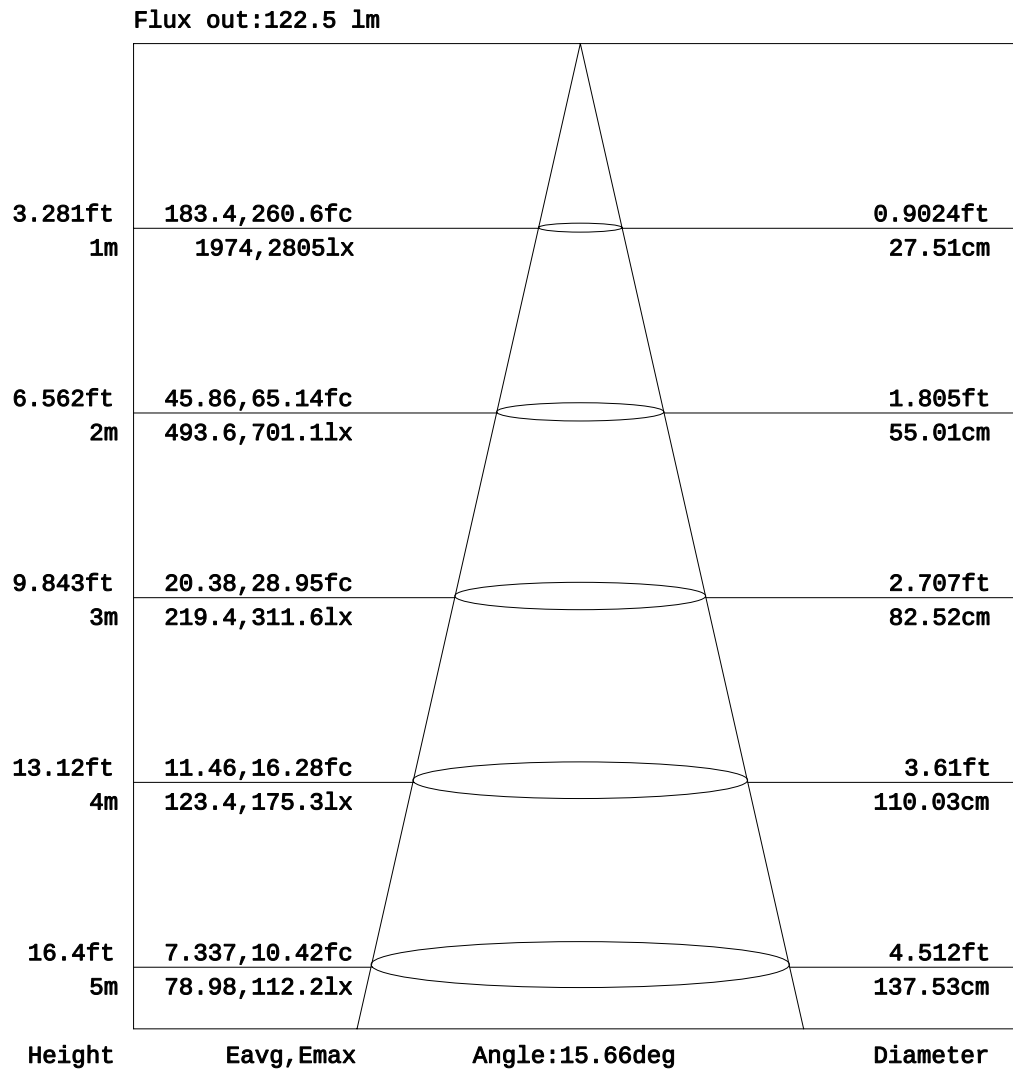


C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: tang  
Test Date: 2022-04-13

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.0.262  
Humidity: 65.0%  
Test Distance: 7.100m [K=1.0000]  
Remarks:

### AAI Figure

|                                  |        |                   |
|----------------------------------|--------|-------------------|
| NAME: Spot65-R-3000k-20D-Ra90-8W | TYPE:  | WEIGHT:           |
| DIM.:                            | SPEC.: | SERIAL No.:       |
| MFR.: VD                         | SUR.:  | PROTECTION ANGLE: |



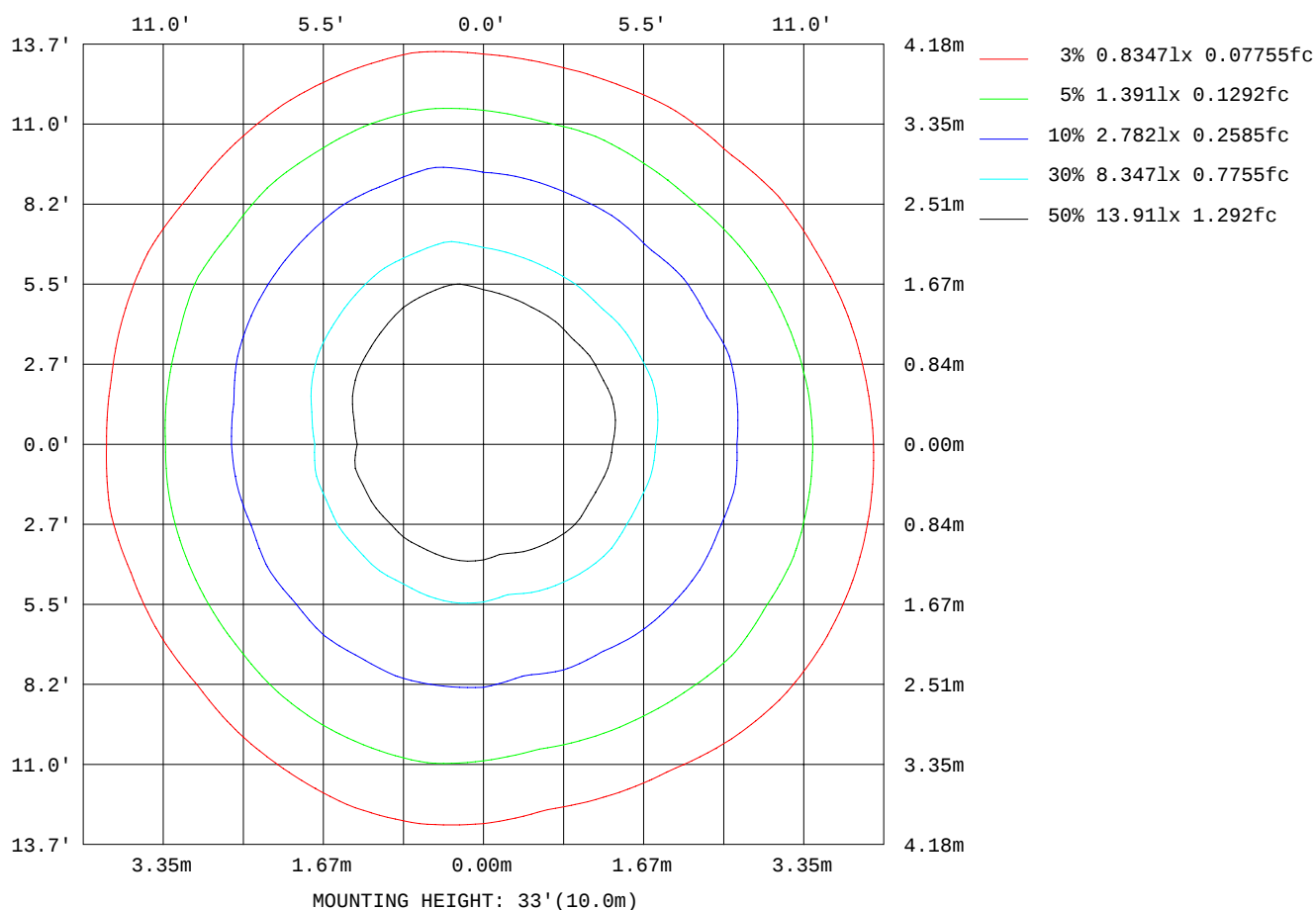
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: tang  
Test Date: 2022-04-13

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.0.262  
Humidity: 65.0%  
Test Distance: 7.100m [K=1.0000]  
Remarks:

### ISOLUX DIAGRAM

|                                  |        |                   |
|----------------------------------|--------|-------------------|
| NAME: Spot65-R-3000k-20D-Ra90-8W | TYPE:  | WEIGHT:           |
| DIM.:                            | SPEC.: | SERIAL No.:       |
| MFR.: VD                         | SUR.:  | PROTECTION ANGLE: |



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: tang  
Test Date: 2022-04-13

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.0.262  
Humidity: 65.0%  
Test Distance: 7.100m [K=1.0000]  
Remarks:

### Average Luminance Table(CIBSE)

|                                  |        |                   |
|----------------------------------|--------|-------------------|
| NAME: Spot65-R-3000k-20D-Ra90-8W | TYPE:  | WEIGHT:           |
| DIM.:                            | SPEC.: | SERIAL No.:       |
| MFR.: VD                         | SUR.:  | PROTECTION ANGLE: |

| Parameter description for average Luminance            | Symbol | Value         | Unit     |
|--------------------------------------------------------|--------|---------------|----------|
| Luminance in Azimuth Plane                             | Bc     | refer Table 2 | cd/sq.m. |
| Intensity at angle Gamma in given azimuth plane        | I      | from data     | cd/klm   |
| Number of lamps                                        | N      | 1             |          |
| Output of each lamp(initial lumens as specified)       | F      | 321.176       | lm       |
| Multiplying factor                                     | K      | 1             |          |
| Luminous area in horizontal plane used in calculations | A      | 0.1           | sq.m.    |
| Angle to the downward vertical from light centre       | Gamma  | from data     | deg      |

Table 1. Calculation parameters for determination of CIBSE LG3:1996 Average Luminance

| G   | C plane(deg) |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |
|-----|--------------|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| deg | 0            | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 |
| 55  | 25           | 26 | 29 | 32 | 35 | 32 | 27 | 26 | 26 | 28 | 33  | 31  | 26  | 25  | 25  | 25  | 25  | 25  | 22  |
| 60  | 12           | 13 | 15 | 15 | 16 | 14 | 13 | 12 | 13 | 13 | 15  | 14  | 13  | 12  | 12  | 11  | 11  | 10  | 10  |
| 65  | 5            | 3  | 5  | 6  | 7  | 5  | 4  | 2  | 3  | 4  | 6   | 5   | 5   | 3   | 5   | 4   | 6   | 5   | 3   |
| 70  | 0            | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   |
| 75  | 0            | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 80  | 0            | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 85  | 0            | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

| CIBSE Category | Gamma (deg) | Average Luminance  |                   | Patch Luminance  |                   |
|----------------|-------------|--------------------|-------------------|------------------|-------------------|
|                |             | maximum calculated | specified maximum | maximum measured | specified maximum |
| Category 1     | 55 to 90    | 35                 | 200               | ---              | 500               |
| Category 2     | 65 to 90    | 7                  | 200               | ---              | 500               |
| Category 3     | 75 to 90    | 0                  | 200               | ---              | 500               |

Table 3. Tabulation of Average and Patch Luminance(cd/sq.m.) for defined CIBSE categories

No match

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:tang  
Test Date:2022-04-13

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.262  
Humidity:65.0%  
Test Distance:7.100m [K=1.0000]  
Remarks:

### Average Luminance Table(CIBSE)

|                                  |        |                   |
|----------------------------------|--------|-------------------|
| NAME: Spot65-R-3000k-20D-Ra90-8W | TYPE:  | WEIGHT:           |
| DIM.:                            | SPEC.: | SERIAL No.:       |
| MFR.: VD                         | SUR.:  | PROTECTION ANGLE: |

| Parameter description for average Luminance            | Symbol | Value         | Unit     |
|--------------------------------------------------------|--------|---------------|----------|
| Luminance in Azimuth Plane                             | Bc     | refer Table 2 | cd/sq.m. |
| Intensity at angle Gamma in given azimuth plane        | I      | from data     | cd/klm   |
| Number of lamps                                        | N      | 1             |          |
| Output of each lamp(initial lumens as specified)       | F      | 321.176       | lm       |
| Multiplying factor                                     | K      | 1             |          |
| Luminous area in horizontal plane used in calculations | A      | 0.1           | sq.m.    |
| Angle to the downward vertical from light centre       | Gamma  | from data     | deg      |

Table 1. Calculation parameters for determination of CIBSE LG3:2001 Average Luminance

| G<br>deg | C plane(deg) |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |
|----------|--------------|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|          | 0            | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 |
| 55       | 25           | 26 | 29 | 32 | 35 | 32 | 27 | 26 | 26 | 28 | 33  | 31  | 26  | 25  | 25  | 25  | 25  | 25  | 22  |
| 60       | 12           | 13 | 15 | 15 | 16 | 14 | 13 | 12 | 13 | 13 | 15  | 14  | 13  | 12  | 12  | 11  | 11  | 10  | 10  |
| 65       | 5            | 3  | 5  | 6  | 7  | 5  | 4  | 2  | 3  | 4  | 6   | 5   | 5   | 3   | 5   | 4   | 6   | 5   | 3   |
| 70       | 0            | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   |
| 75       | 0            | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 80       | 0            | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| 85       | 0            | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

| range<br>(deg) | Maximum<br>measured | Average Luminance(cd/sq.m)                             |                                     |                                    |                                    |
|----------------|---------------------|--------------------------------------------------------|-------------------------------------|------------------------------------|------------------------------------|
|                |                     | Maximum limit for screen type & software category used |                                     |                                    |                                    |
|                |                     | Type I,II screen<br>Some neg.s'ware                    | Type I,II screen<br>Only pos.s'ware | Type III screen<br>Some neg.s'ware | Type III screen<br>Only pos.s'ware |
| 55 to 90       | 35                  | 1000                                                   | 1500                                | 200                                | 500                                |
| 65 to 90       | 7                   | 1000                                                   | 1500                                | 200                                | 500                                |

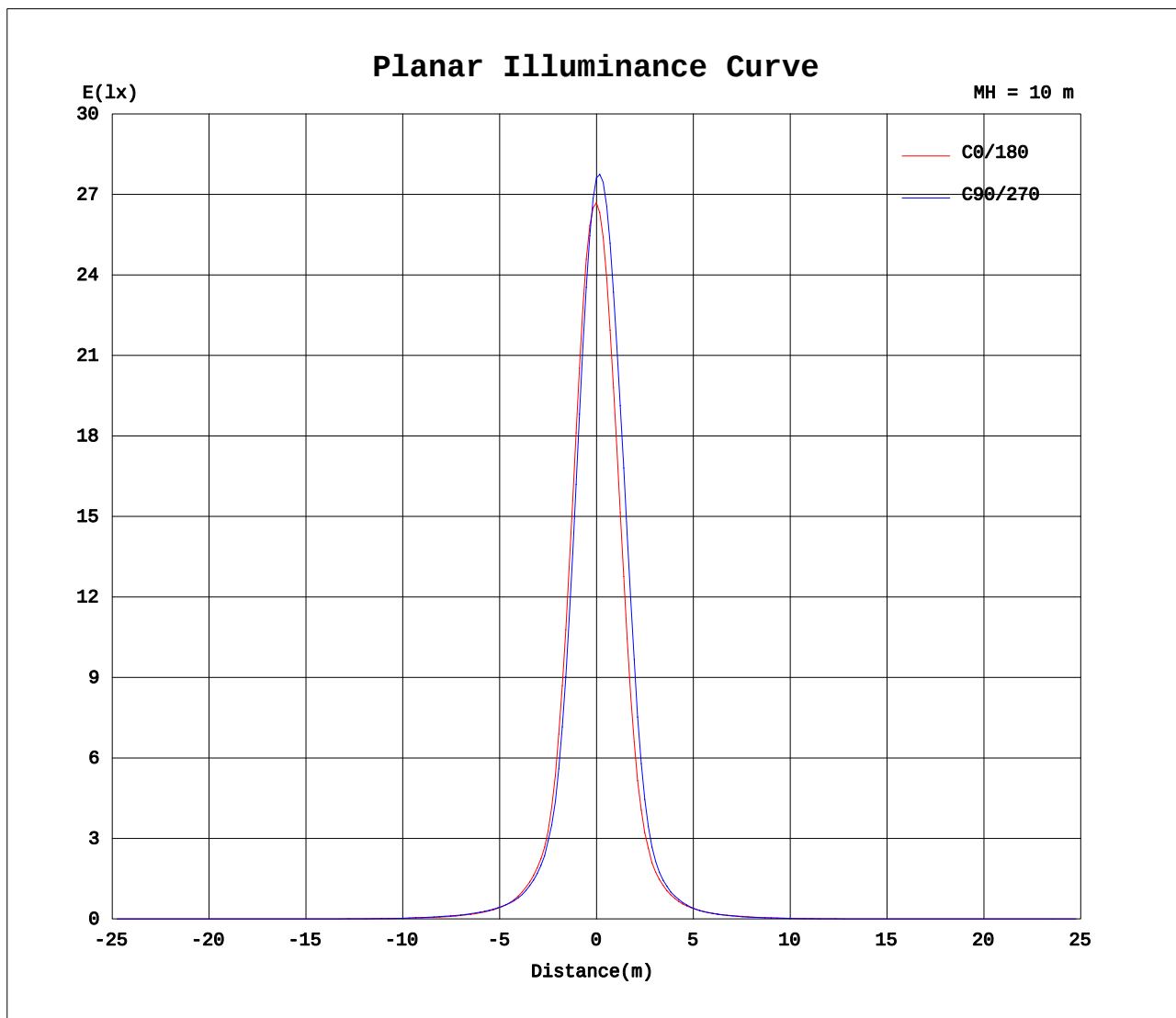
Table 3. Tabulation of average luminance(cd/sq.m.) and luminance limits

The luminaire satisfies the specified luminance criteria for  
Negative Software with Type I & II Screen(Good to Moderate treatment).

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:tang  
Test Date:2022-04-13

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.262  
Humidity:65.0%  
Test Distance:7.100m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: tang  
Test Date: 2022-04-13

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.0.262  
Humidity: 65.0%  
Test Distance: 7.100m [K=1.0000]  
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

|                                  |        |                   |
|----------------------------------|--------|-------------------|
| NAME: Spot65-R-3000k-20D-Ra90-8W | TYPE:  | WEIGHT:           |
| DIM.:                            | SPEC.: | SERIAL No.:       |
| MFR.: VD                         | SUR.:  | PROTECTION ANGLE: |

Table--1

UNIT: cd

| C(°)<br>γ (°) | 0    | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  | 130  | 140  | 150  | 160  | 170  | 180  |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0             | 2669 | 2668 | 2667 | 2670 | 2701 | 2706 | 2718 | 2726 | 2726 | 2762 | 2786 | 2796 | 2803 | 2802 | 2802 | 2804 | 2803 | 2805 | 2669 |
| 5             | 2077 | 2052 | 1981 | 1957 | 1967 | 1936 | 1893 | 1870 | 1818 | 1903 | 1949 | 1980 | 1985 | 2028 | 2016 | 2064 | 2075 | 2134 | 2004 |
| 10            | 911  | 893  | 838  | 818  | 830  | 797  | 763  | 732  | 686  | 750  | 787  | 793  | 777  | 817  | 813  | 844  | 844  | 892  | 872  |
| 15            | 298  | 304  | 289  | 290  | 280  | 265  | 257  | 251  | 246  | 262  | 275  | 284  | 276  | 287  | 274  | 284  | 273  | 287  | 293  |
| 20            | 144  | 144  | 145  | 141  | 141  | 133  | 125  | 123  | 120  | 129  | 137  | 136  | 136  | 133  | 127  | 128  | 126  | 130  | 127  |
| 25            | 71.7 | 73.9 | 77.2 | 79.9 | 78.7 | 75.0 | 70.2 | 68.5 | 68.0 | 72.0 | 75.0 | 74.7 | 71.3 | 67.7 | 65.7 | 67.0 | 66.5 | 66.3 | 65.7 |
| 30            | 40.7 | 42.6 | 46.1 | 49.7 | 49.2 | 46.8 | 43.0 | 41.1 | 40.9 | 44.5 | 47.3 | 46.9 | 43.8 | 41.1 | 39.5 | 40.0 | 39.4 | 38.5 | 37.4 |
| 35            | 24.1 | 24.9 | 27.0 | 30.1 | 30.4 | 28.3 | 25.6 | 24.6 | 24.7 | 27.8 | 30.0 | 29.6 | 26.9 | 25.1 | 24.2 | 24.6 | 24.3 | 23.8 | 23.3 |
| 40            | 14.5 | 14.8 | 16.4 | 18.4 | 17.9 | 17.2 | 15.7 | 15.3 | 15.8 | 17.6 | 18.5 | 18.0 | 16.5 | 15.5 | 14.3 | 14.6 | 15.6 | 15.8 | 14.1 |
| 45            | 7.77 | 7.51 | 8.22 | 9.16 | 9.21 | 8.71 | 7.55 | 7.04 | 7.45 | 8.86 | 9.58 | 9.41 | 8.24 | 8.07 | 8.16 | 8.70 | 9.17 | 8.93 | 7.70 |
| 50            | 3.51 | 3.50 | 3.83 | 4.49 | 4.35 | 4.13 | 3.48 | 3.23 | 3.40 | 4.10 | 4.48 | 4.42 | 3.74 | 3.48 | 3.26 | 3.61 | 3.90 | 3.84 | 3.27 |
| 55            | 1.44 | 1.51 | 1.65 | 1.86 | 2.03 | 1.86 | 1.53 | 1.49 | 1.51 | 1.61 | 1.91 | 1.76 | 1.51 | 1.46 | 1.46 | 1.42 | 1.45 | 1.42 | 1.27 |
| 60            | 0.62 | 0.65 | 0.74 | 0.77 | 0.80 | 0.71 | 0.66 | 0.58 | 0.63 | 0.65 | 0.73 | 0.69 | 0.67 | 0.61 | 0.60 | 0.53 | 0.54 | 0.49 | 0.48 |
| 65            | 0.23 | 0.15 | 0.21 | 0.24 | 0.30 | 0.22 | 0.19 | 0.08 | 0.13 | 0.16 | 0.25 | 0.22 | 0.22 | 0.14 | 0.19 | 0.18 | 0.24 | 0.20 | 0.15 |
| 70            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 |
| 75            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 80            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 85            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 90            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 105           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 110           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 115           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 120           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 125           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 130           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 135           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 140           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 145           | 0.03 | 0.09 | 0.05 | 0.10 | 0.06 | 0.11 | 0.07 | 0.12 | 0.08 | 0.11 | 0.05 | 0.10 | 0.05 | 0.09 | 0.04 | 0.09 | 0.05 | 0.09 | 0.13 |
| 150           | 0.29 | 0.35 | 0.34 | 0.41 | 0.36 | 0.42 | 0.39 | 0.43 | 0.41 | 0.42 | 0.35 | 0.38 | 0.33 | 0.35 | 0.32 | 0.35 | 0.32 | 0.35 | 0.36 |
| 155           | 0.77 | 0.84 | 0.84 | 0.91 | 0.86 | 0.92 | 0.89 | 0.95 | 0.93 | 0.93 | 0.86 | 0.89 | 0.83 | 0.85 | 0.82 | 0.84 | 0.81 | 0.84 | 0.82 |
| 160           | 1.35 | 1.41 | 1.40 | 1.46 | 1.41 | 1.47 | 1.44 | 1.49 | 1.47 | 1.48 | 1.42 | 1.45 | 1.41 | 1.43 | 1.40 | 1.43 | 1.38 | 1.42 | 1.34 |
| 165           | 1.77 | 1.82 | 1.80 | 1.84 | 1.79 | 1.84 | 1.79 | 1.85 | 1.80 | 1.85 | 1.80 | 1.84 | 1.79 | 1.84 | 1.79 | 1.83 | 1.80 | 1.83 | 1.76 |
| 170           | 1.94 | 1.90 | 1.90 | 1.88 | 1.88 | 1.88 | 1.86 | 1.87 | 1.88 | 1.87 | 1.88 | 1.89 | 1.89 | 1.90 | 1.89 | 1.91 | 1.92 | 1.93 | 1.89 |
| 175           | 1.89 | 1.84 | 1.86 | 1.81 | 1.84 | 1.79 | 1.84 | 1.79 | 1.84 | 1.80 | 1.87 | 1.83 | 1.87 | 1.83 | 1.88 | 1.84 | 1.90 | 1.88 | 1.85 |
| 180           | 1.84 | 1.84 | 1.82 | 1.82 | 1.80 | 1.79 | 1.80 | 1.80 | 1.79 | 1.79 | 1.82 | 1.82 | 1.82 | 1.82 | 1.83 | 1.83 | 1.85 | 1.85 | 1.85 |

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: tang  
Test Date: 2022-04-13

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.0.262  
Humidity: 65.0%  
Test Distance: 7.100m [K=1.0000]  
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

|                                  |        |                   |
|----------------------------------|--------|-------------------|
| NAME: Spot65-R-3000k-20D-Ra90-8W | TYPE:  | WEIGHT:           |
| DIM.:                            | SPEC.: | SERIAL No.:       |
| MFR.: VD                         | SUR.:  | PROTECTION ANGLE: |

Table--2

UNIT: cd

| C(°)  | 190  | 200  | 210  | 220  | 230  | 240  | 250  | 260  | 270  | 280  | 290  | 300  | 310  | 320  | 330  | 340  | 350  |    |    |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|----|
| γ (°) | 0    | 5    | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   | 50   | 55   | 60   | 65   | 70   | 75   | 80   | 85 | 90 |
| 0     | 2668 | 2667 | 2670 | 2701 | 2706 | 2718 | 2726 | 2726 | 2762 | 2786 | 2796 | 2803 | 2802 | 2802 | 2804 | 2803 | 2805 |    |    |
| 5     | 2065 | 2160 | 2226 | 2269 | 2334 | 2396 | 2420 | 2450 | 2363 | 2306 | 2264 | 2244 | 2179 | 2185 | 2159 | 2168 | 2146 |    |    |
| 10    | 934  | 1045 | 1130 | 1174 | 1242 | 1315 | 1344 | 1376 | 1250 | 1173 | 1115 | 1079 | 1016 | 1031 | 1004 | 1014 | 972  |    |    |
| 15    | 294  | 330  | 347  | 358  | 385  | 404  | 412  | 432  | 383  | 354  | 339  | 335  | 306  | 324  | 309  | 329  | 310  |    |    |
| 20    | 129  | 135  | 143  | 140  | 149  | 150  | 154  | 154  | 147  | 139  | 140  | 135  | 131  | 135  | 138  | 139  | 142  |    |    |
| 25    | 65.8 | 67.0 | 68.5 | 67.4 | 69.9 | 72.4 | 74.0 | 75.6 | 70.2 | 68.0 | 67.7 | 69.2 | 67.4 | 69.9 | 68.8 | 69.3 | 69.7 |    |    |
| 30    | 37.8 | 37.8 | 37.1 | 37.0 | 37.7 | 38.7 | 38.7 | 38.4 | 37.1 | 37.0 | 37.2 | 37.7 | 37.4 | 38.2 | 38.1 | 38.9 | 39.0 |    |    |
| 35    | 23.4 | 23.7 | 23.0 | 22.0 | 21.9 | 22.2 | 21.8 | 22.2 | 21.0 | 21.2 | 21.7 | 22.1 | 21.8 | 22.5 | 23.1 | 23.6 | 23.3 |    |    |
| 40    | 13.4 | 13.3 | 13.5 | 14.0 | 13.3 | 12.1 | 11.9 | 11.9 | 12.8 | 13.5 | 13.2 | 12.2 | 12.4 | 12.7 | 13.1 | 14.3 | 14.5 |    |    |
| 45    | 6.80 | 7.07 | 7.61 | 7.98 | 7.93 | 7.16 | 6.31 | 6.90 | 6.85 | 6.97 | 7.62 | 7.17 | 6.67 | 6.79 | 6.92 | 7.18 | 7.25 |    |    |
| 50    | 2.93 | 2.94 | 3.09 | 3.42 | 3.23 | 3.06 | 2.74 | 2.82 | 2.88 | 3.15 | 3.09 | 2.83 | 2.64 | 2.78 | 2.98 | 3.26 | 3.29 |    |    |
| 55    | 1.18 | 1.08 | 1.13 | 1.24 | 1.15 | 1.05 | 1.06 | 1.10 | 1.11 | 1.20 | 1.22 | 1.11 | 1.07 | 1.11 | 1.14 | 1.24 | 1.28 |    |    |
| 60    | 0.51 | 0.43 | 0.44 | 0.38 | 0.39 | 0.35 | 0.41 | 0.35 | 0.41 | 0.40 | 0.46 | 0.45 | 0.50 | 0.47 | 0.49 | 0.47 | 0.53 |    |    |
| 65    | 0.17 | 0.12 | 0.17 | 0.13 | 0.16 | 0.09 | 0.12 | 0.09 | 0.16 | 0.15 | 0.19 | 0.14 | 0.18 | 0.15 | 0.21 | 0.17 | 0.22 |    |    |
| 70    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |    |    |
| 75    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |    |    |
| 80    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |    |    |
| 85    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |    |    |
| 90    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |    |    |
| 95    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |    |    |
| 100   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |    |    |
| 105   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |    |    |
| 110   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |    |    |
| 115   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |    |    |
| 120   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |    |    |
| 125   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |    |    |
| 130   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |    |    |
| 135   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |    |    |
| 140   | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |    |    |
| 145   | 0.08 | 0.12 | 0.07 | 0.11 | 0.07 | 0.11 | 0.07 | 0.10 | 0.07 | 0.11 | 0.06 | 0.11 | 0.07 | 0.11 | 0.07 | 0.11 | 0.06 |    |    |
| 150   | 0.32 | 0.35 | 0.30 | 0.33 | 0.29 | 0.32 | 0.27 | 0.31 | 0.29 | 0.34 | 0.29 | 0.34 | 0.30 | 0.34 | 0.30 | 0.35 | 0.31 |    |    |
| 155   | 0.75 | 0.77 | 0.71 | 0.75 | 0.69 | 0.72 | 0.67 | 0.69 | 0.69 | 0.75 | 0.72 | 0.76 | 0.74 | 0.77 | 0.74 | 0.78 | 0.75 |    |    |
| 160   | 1.26 | 1.28 | 1.22 | 1.27 | 1.21 | 1.23 | 1.18 | 1.21 | 1.21 | 1.27 | 1.24 | 1.29 | 1.26 | 1.30 | 1.28 | 1.31 | 1.29 |    |    |
| 165   | 1.69 | 1.71 | 1.64 | 1.69 | 1.64 | 1.67 | 1.61 | 1.65 | 1.63 | 1.70 | 1.67 | 1.72 | 1.68 | 1.73 | 1.69 | 1.74 | 1.70 |    |    |
| 170   | 1.88 | 1.85 | 1.85 | 1.82 | 1.84 | 1.85 | 1.83 | 1.80 | 1.83 | 1.86 | 1.85 | 1.84 | 1.85 | 1.82 | 1.87 | 1.85 | 1.88 |    |    |
| 175   | 1.86 | 1.83 | 1.85 | 1.81 | 1.82 | 1.81 | 1.83 | 1.81 | 1.84 | 1.82 | 1.85 | 1.82 | 1.85 | 1.82 | 1.86 | 1.84 | 1.87 |    |    |
| 180   | 1.85 | 1.83 | 1.82 | 1.81 | 1.80 | 1.80 | 1.81 | 1.81 | 1.82 | 1.81 | 1.82 | 1.82 | 1.83 | 1.82 | 1.84 | 1.84 | 1.86 |    |    |

C Range: 0 - 360DEG  
C Interval: 10.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: tang  
Test Date: 2022-04-13

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.0.262  
Humidity: 65.0%  
Test Distance: 7.100m [K=1.0000]  
Remarks: