

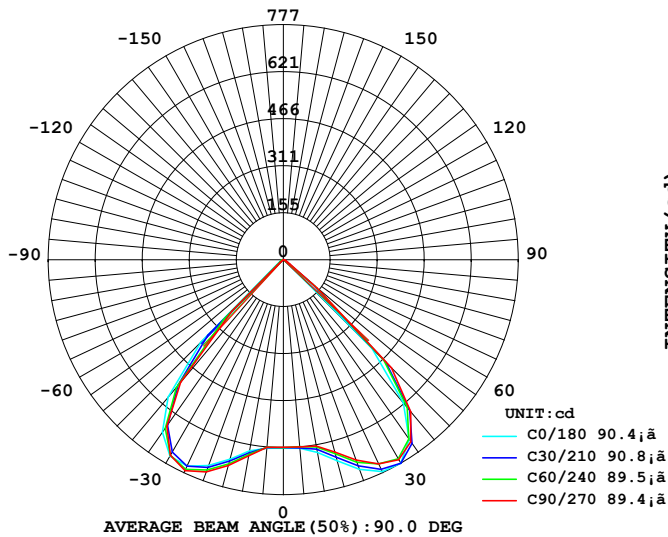
## LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

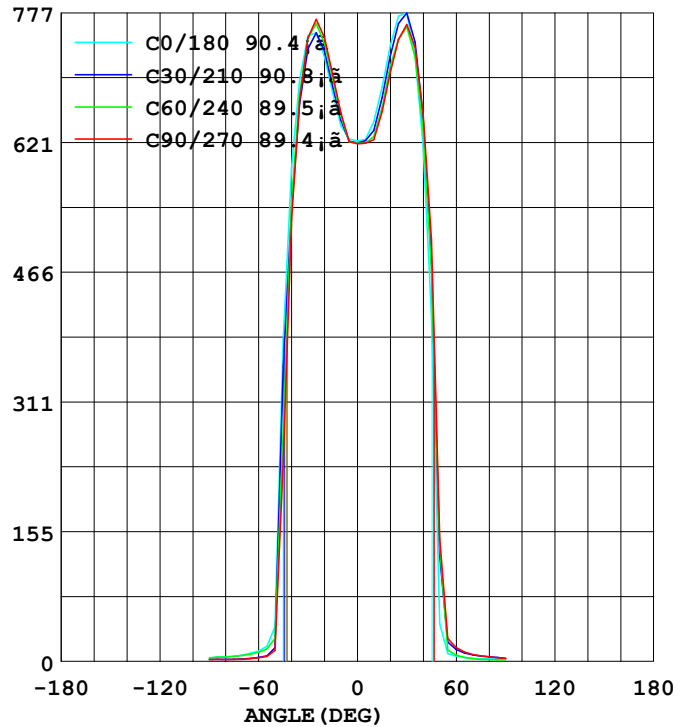
|                                                                      |                                   |             |
|----------------------------------------------------------------------|-----------------------------------|-------------|
| MANUFACTURER:                                                        |                                   |             |
| Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi,301019 |                                   |             |
| NAME: AMANDEEP                                                       | TYPE: 3000K CRI-90                | WEIGHT:     |
| SPECIFICATION: OSRAM 350 MA                                          | DIMENSION: D-83 CUTOUT-67 H-53 MM | SERIAL No.: |

|                   |          |                     |        |                   |       |
|-------------------|----------|---------------------|--------|-------------------|-------|
| DATA OF LAMP      |          | Imax (cd)           | 783.5  | S/MH (C0/180)     | 1.38  |
| MODEL             | AMANDEEP | EFFICIENCY (%)      | 100.0  | S/MH (C90/270)    | 1.30  |
| NOMINAL POWER (W) | 15       | TOTAL FLUX (lm)     | 1353.3 | Voltage (V)       | 219.6 |
| RATED VOLTAGE (V) | 220      | EFFICIENCY (lm/W)   | 86.5   | Current (A)       | 0.072 |
| NOMINAL FLUX (lm) | 1353.4   | $\eta$ up (%)       | 0.0    | Power (W)         | 15.65 |
| LAMPS QUANTITY    | 1        | $\eta$ down (%)     | 100.0  | Power Factor (PF) | 0.976 |
| TEST VOLTAGE (V)  | 219.6    | Effective Flux (lm) | 1316.4 | EEI               | 0.162 |

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



Test System: HOPOO HPG1800  
Temperature: 25.3 DEG  
Operators:  
Test Date: 09-15-2025

Test Set: 5.0 deg/s C-Gamma (TYPE C)  
Humidity: 65.0%  
Test Distance: 8.500 m  
Remarks: 3000K

Color Temperature Data List

Report number:

|                                                                      |                                   |             |
|----------------------------------------------------------------------|-----------------------------------|-------------|
| MANUFACTURER:                                                        |                                   |             |
| Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi,301019 |                                   |             |
| NAME: AMANDEEP                                                       | TYPE: 3000K CRI-90                | WEIGHT:     |
| SPECIFICATION: OSRAM 350 MA                                          | DIMENSION: D-83 CUTOUT-67 H-53 MM | SERIAL No.: |

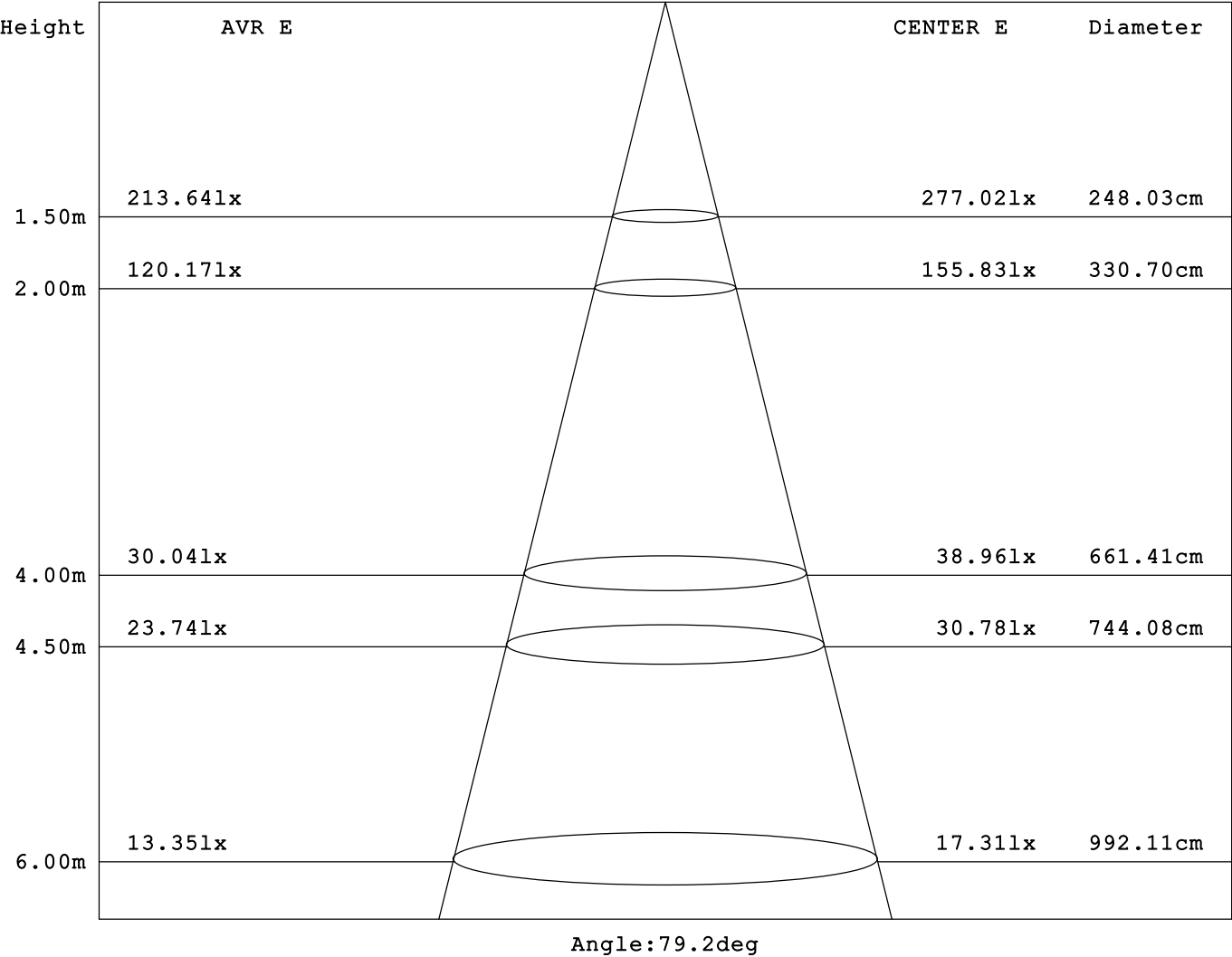
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:09-15-2025

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.500 m  
Remarks: 3000K

AVERAGE AND CENTER E Figure

Report number:

|                                                                      |                                   |             |
|----------------------------------------------------------------------|-----------------------------------|-------------|
| MANUFACTURER:                                                        |                                   |             |
| Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi,301019 |                                   |             |
| NAME: AMANDEEP                                                       | TYPE: 3000K CRI-90                | WEIGHT:     |
| SPECIFICATION: OSRAM 350 MA                                          | DIMENSION: D-83 CUTOUT-67 H-53 MM | SERIAL No.: |



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:09-15-2025

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.500 m  
Remarks: 3000K

## ZONAL FLUX DIAGRAM

Report number:

MANUFACTURER:

Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi, 301019

NAME: AMANDEEP

TYPE: 3000K CRI-90

WEIGHT:

SPECIFICATION: OSRAM 350 MA

DIMENSION: D-83 CUTOUT-67 H-53 MM

SERIAL No.:

| $\gamma$ | C0                    | C45   | C90   | C135  | C180  | C225  | C270  | C315  | $\gamma$ | Zone    | total |
|----------|-----------------------|-------|-------|-------|-------|-------|-------|-------|----------|---------|-------|
| 10.0     | 641.4                 | 650.6 | 656.9 | 654.7 | 646.5 | 632.0 | 624.7 | 624.3 | 0- 10    | 60.05   | 60.05 |
| 20.0     | 723.6                 | 735.1 | 746.5 | 747.8 | 736.7 | 718.4 | 704.5 | 704.0 | 10- 20   | 194.5   | 254.5 |
| 30.0     | 749.2                 | 739.9 | 746.5 | 767.3 | 776.3 | 768.0 | 762.7 | 747.3 | 20- 30   | 347.4   | 602.0 |
| 40.0     | 591.9                 | 546.1 | 529.2 | 575.5 | 617.3 | 643.4 | 655.8 | 626.8 | 30- 40   | 432.9   | 1035  |
| 50.0     | 41.61                 | 21.78 | 13.07 | 25.82 | 44.93 | 131.4 | 146.4 | 127.5 | 40- 50   | 278.2   | 1313  |
| 60.0     | 12.57                 | 7.839 | 4.335 | 8.019 | 6.213 | 10.90 | 16.54 | 10.94 | 50- 60   | 24.42   | 1338  |
| 70.0     | 7.658                 | 4.949 | 2.673 | 4.876 | 3.757 | 5.491 | 8.381 | 5.599 | 60- 70   | 7.127   | 1345  |
| 80.0     | 5.563                 | 3.793 | 2.167 | 3.720 | 3.106 | 3.793 | 5.491 | 3.648 | 70- 80   | 4.772   | 1350  |
| 90.0     | 4.479                 | 3.142 | 2.167 | 3.106 | 3.395 | 2.637 | 3.540 | 2.564 | 80- 90   | 3.778   | 1353  |
| 100.0    |                       |       |       |       |       |       |       |       | 90-100   |         |       |
| 110.0    |                       |       |       |       |       |       |       |       | 100-110  |         |       |
| 120.0    |                       |       |       |       |       |       |       |       | 110-120  |         |       |
| 130.0    |                       |       |       |       |       |       |       |       | 120-130  |         |       |
| 140.0    |                       |       |       |       |       |       |       |       | 130-140  |         |       |
| 150.0    |                       |       |       |       |       |       |       |       | 140-150  |         |       |
| 160.0    |                       |       |       |       |       |       |       |       | 150-160  |         |       |
| 170.0    |                       |       |       |       |       |       |       |       | 160-170  |         |       |
| 180.0    |                       |       |       |       |       |       |       |       | 170-180  |         |       |
| DEG      | LUMINOUS INTENSITY:cd |       |       |       |       |       |       |       |          | UNIT:lm |       |

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:09-15-2025

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.500 m  
 Remarks: 3000K

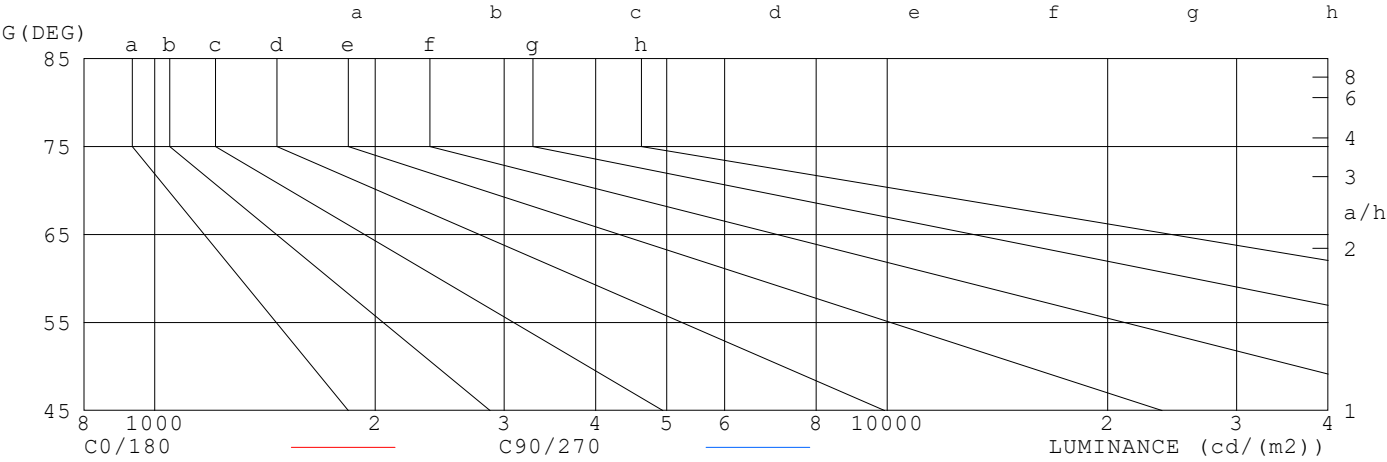
LUMINANCE LIMITATION CURVES

Report number:

|                                                                      |                                   |             |
|----------------------------------------------------------------------|-----------------------------------|-------------|
| MANUFACTURER:                                                        |                                   |             |
| Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi,301019 |                                   |             |
| NAME: AMANDEEP                                                       | TYPE: 3000K CRI-90                | WEIGHT:     |
| SPECIFICATION: OSRAM 350 MA                                          | DIMENSION: D-83 CUTOUT-67 H-53 MM | SERIAL No.: |

LUMINANCE LIMITATION CURVES

| GLARE | CLASS | ILLUMINANCE (lx) |      |      |       |       |       |       |       |
|-------|-------|------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A     | 2000             | 1000 | 500  | <=300 |       |       |       |       |
| 1.50  | B     |                  | 2000 | 1000 | 500   | <=300 |       |       |       |
| 1.85  | C     |                  |      | 2000 | 1000  | 500   | <=300 |       |       |
| 2.20  | D     |                  |      |      | 2000  | 1000  | 500   | <=300 |       |
| 2.55  | E     |                  |      |      |       | 2000  | 1000  | 500   | <=300 |



LUMINANCE cd/m2

| G (DEG) | C0/180 | C90/270 |
|---------|--------|---------|
| 85      | 580    | 274     |
| 80      | 320    | 125     |
| 75      | 246    | 89      |
| 70      | 224    | 78      |
| 65      | 227    | 77      |
| 60      | 251    | 87      |
| 55      | 316    | 106     |
| 50      | 647    | 203     |
| 45      | 5454   | 3410    |

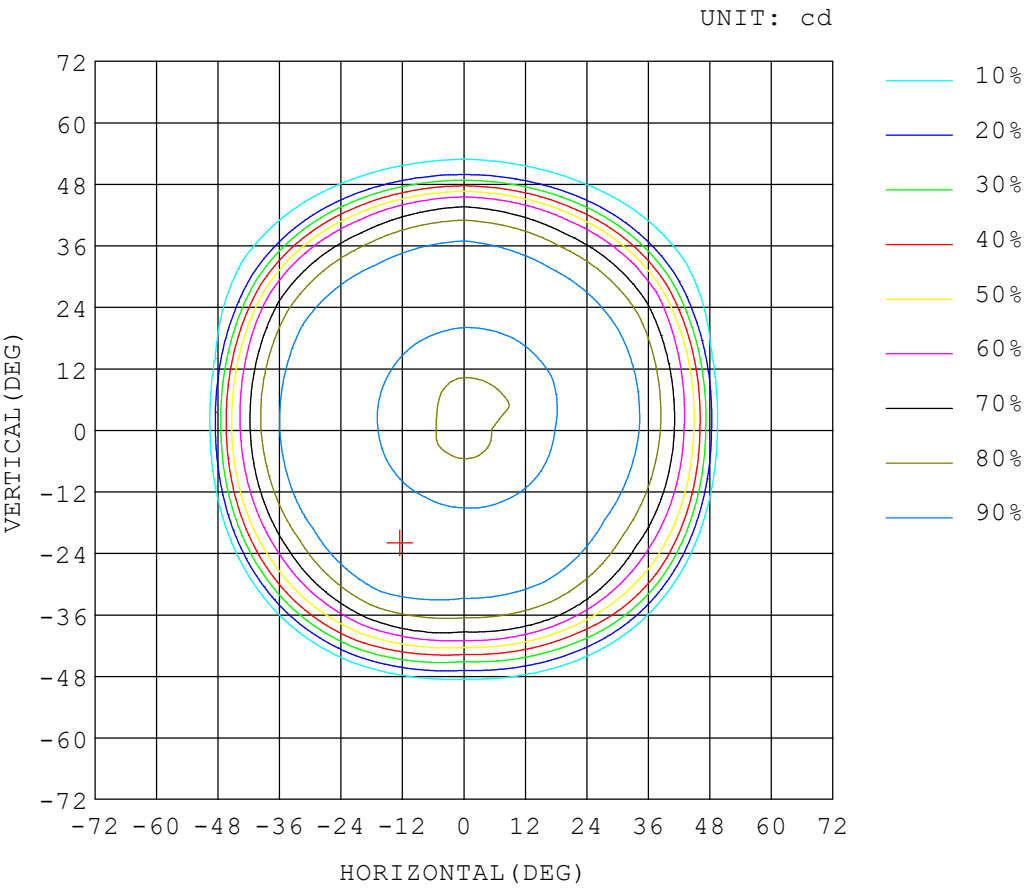
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:09-15-2025

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.500 m  
Remarks: 3000K

ISOCANDELA DIAGRAM

Report number:

|                                                                      |                                   |             |
|----------------------------------------------------------------------|-----------------------------------|-------------|
| MANUFACTURER:                                                        |                                   |             |
| Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi,301019 |                                   |             |
| NAME: AMANDEEP                                                       | TYPE: 3000K CRI-90                | WEIGHT:     |
| SPECIFICATION: OSRAM 350 MA                                          | DIMENSION: D-83 CUTOUT-67 H-53 MM | SERIAL No.: |



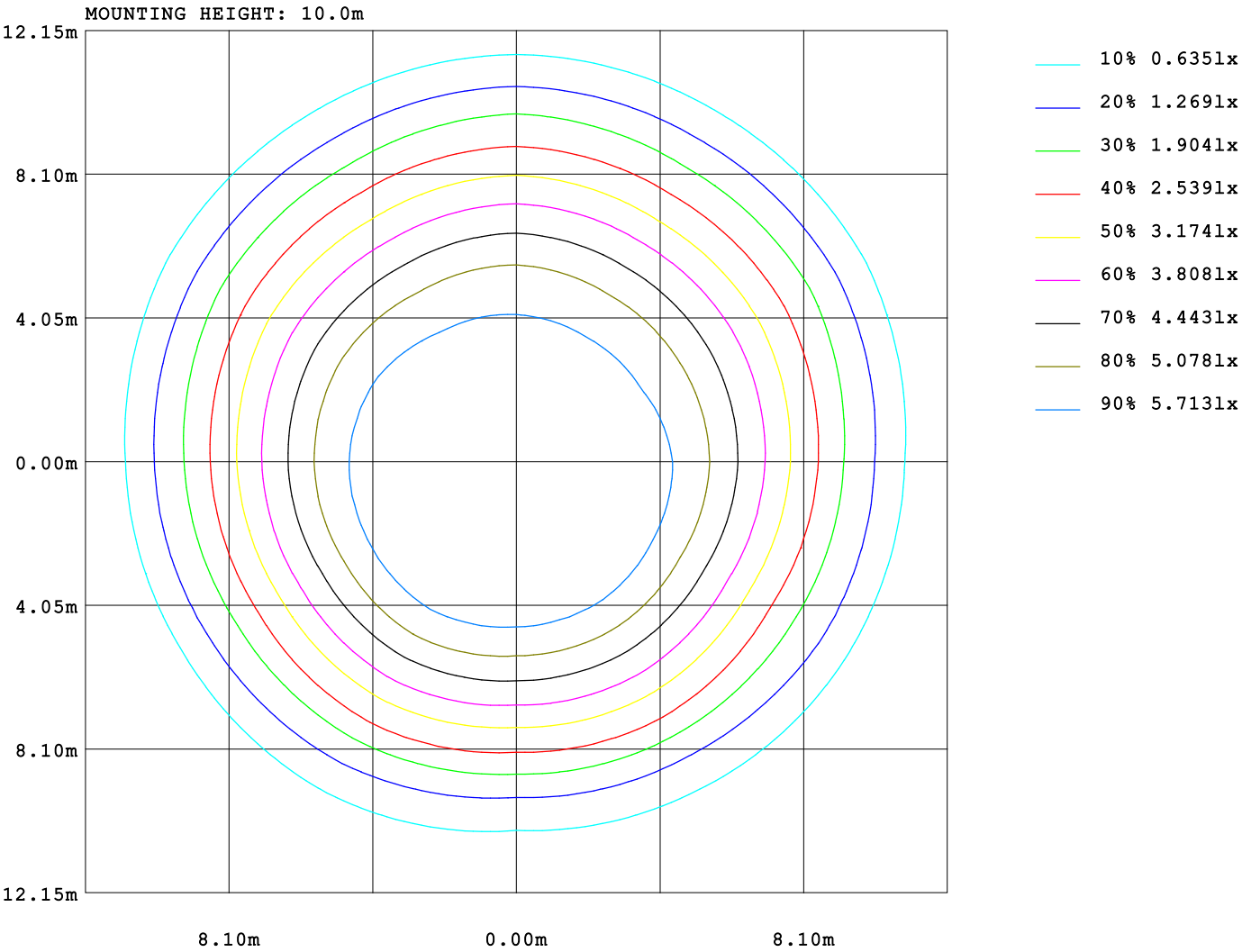
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:09-15-2025

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.500 m  
Remarks: 3000K

ISOLUX DIAGRAM

Report number:

|                                                                      |                                   |             |
|----------------------------------------------------------------------|-----------------------------------|-------------|
| MANUFACTURER:                                                        |                                   |             |
| Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi,301019 |                                   |             |
| NAME: AMANDEEP                                                       | TYPE: 3000K CRI-90                | WEIGHT:     |
| SPECIFICATION: OSRAM 350 MA                                          | DIMENSION: D-83 CUTOUT-67 H-53 MM | SERIAL No.: |



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:09-15-2025

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.500 m  
Remarks: 3000K

## AREA LUMINOUS FLUX

Report number:

|                                                                      |  |  |  |  |  |  |  |  |  |                                   |  |  |  |  |             |  |  |  |  |
|----------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|-----------------------------------|--|--|--|--|-------------|--|--|--|--|
| MANUFACTURER:                                                        |  |  |  |  |  |  |  |  |  |                                   |  |  |  |  |             |  |  |  |  |
| Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi,301019 |  |  |  |  |  |  |  |  |  |                                   |  |  |  |  |             |  |  |  |  |
| NAME: AMANDEEP                                                       |  |  |  |  |  |  |  |  |  | TYPE: 3000K CRI-90                |  |  |  |  | WEIGHT:     |  |  |  |  |
| SPECIFICATION: OSRAM 350 MA                                          |  |  |  |  |  |  |  |  |  | DIMENSION: D-83 CUTOUT-67 H-53 MM |  |  |  |  | SERIAL No.: |  |  |  |  |

| VERTICAL (DEG) | AREA FLUX DIAGRAM |      |      |      |      |      |      |      |                  |      |      |      |      |      |      |      |      |      | UNIT:lm |      | Φ t | Φ a |
|----------------|-------------------|------|------|------|------|------|------|------|------------------|------|------|------|------|------|------|------|------|------|---------|------|-----|-----|
|                | 0.03              | 0.05 | 0.06 | 0.07 | 0.06 | 0.06 | 0.09 | 0.13 | 0.17             | 0.17 | 0.13 | 0.09 | 0.06 | 0.06 | 0.07 | 0.06 | 0.05 | 0.04 | 1.46    | 0.00 |     |     |
| 72             | 0.03              | 0.05 | 0.06 | 0.07 | 0.06 | 0.06 | 0.09 | 0.13 | 0.17             | 0.17 | 0.13 | 0.09 | 0.06 | 0.06 | 0.07 | 0.06 | 0.05 | 0.04 | 1.46    | 0.00 |     |     |
| 64             | 0.03              | 0.06 | 0.08 | 0.09 | 0.10 | 0.10 | 0.15 | 0.23 | 0.31             | 0.31 | 0.23 | 0.15 | 0.10 | 0.10 | 0.09 | 0.08 | 0.06 | 0.04 | 2.33    | 0.00 |     |     |
| 56             | 0.04              | 0.06 | 0.10 | 0.13 | 0.17 | 0.27 | 0.76 | 1.45 | 2.04             | 2.03 | 1.42 | 0.74 | 0.26 | 0.17 | 0.14 | 0.10 | 0.07 | 0.04 | 10.0    | 6.22 |     |     |
| 48             | 0.04              | 0.07 | 0.13 | 0.21 | 0.68 | 2.52 | 5.59 | 8.25 | 9.68             | 9.65 | 8.18 | 5.51 | 2.45 | 0.66 | 0.21 | 0.14 | 0.08 | 0.05 | 54.1    | 51.9 |     |     |
| 40             | 0.04              | 0.08 | 0.16 | 0.63 | 3.33 | 8.10 | 11.1 | 12.9 | 13.7             | 13.6 | 12.7 | 10.9 | 7.97 | 3.27 | 0.62 | 0.18 | 0.09 | 0.05 | 99.7    | 98.1 |     |     |
| 32             | 0.04              | 0.08 | 0.22 | 1.92 | 7.49 | 11.3 | 13.3 | 14.2 | 14.6             | 14.5 | 14.1 | 13.0 | 11.0 | 7.33 | 1.89 | 0.25 | 0.11 | 0.06 | 126     | 125  |     |     |
| 24             | 0.04              | 0.08 | 0.38 | 3.96 | 9.69 | 12.7 | 13.9 | 13.9 | 13.7             | 13.7 | 13.7 | 13.5 | 12.2 | 9.37 | 3.83 | 0.41 | 0.12 | 0.06 | 136     | 135  |     |     |
|                | 0.04              | 0.08 | 0.52 | 5.51 | 10.6 | 13.1 | 13.6 | 13.1 | 12.5             | 12.5 | 12.9 | 13.2 | 12.6 | 10.2 | 5.27 | 0.54 | 0.13 | 0.06 | 137     | 136  |     |     |
|                | 0.03              | 0.07 | 0.62 | 6.14 | 10.9 | 13.2 | 13.4 | 12.6 | 12.1             | 12.0 | 12.4 | 13.1 | 12.8 | 10.5 | 5.82 | 0.62 | 0.13 | 0.06 | 137     | 136  |     |     |
|                | 0.03              | 0.06 | 0.53 | 5.94 | 10.8 | 13.2 | 13.5 | 12.8 | 12.2             | 12.2 | 12.7 | 13.2 | 12.8 | 10.4 | 5.61 | 0.54 | 0.12 | 0.06 | 137     | 136  |     |     |
|                | 0.03              | 0.06 | 0.30 | 4.88 | 10.1 | 12.9 | 13.9 | 13.7 | 13.2             | 13.2 | 13.5 | 13.6 | 12.4 | 9.69 | 4.64 | 0.32 | 0.10 | 0.05 | 137     | 136  |     |     |
| -24            | 0.03              | 0.05 | 0.16 | 2.94 | 8.60 | 12.1 | 14.0 | 14.6 | 14.5             | 14.4 | 14.3 | 13.6 | 11.6 | 8.20 | 2.82 | 0.19 | 0.09 | 0.05 | 133     | 132  |     |     |
| -32            | 0.02              | 0.04 | 0.09 | 0.87 | 5.76 | 10.2 | 13.0 | 14.3 | 14.6             | 14.5 | 13.9 | 12.5 | 9.76 | 5.55 | 0.82 | 0.11 | 0.07 | 0.04 | 117     | 116  |     |     |
| -40            | 0.02              | 0.04 | 0.06 | 0.15 | 1.70 | 6.10 | 9.73 | 11.7 | 12.4             | 12.2 | 11.3 | 9.17 | 5.66 | 1.59 | 0.13 | 0.07 | 0.05 | 0.04 | 82.3    | 81.2 |     |     |
| -48            | 0.02              | 0.03 | 0.05 | 0.09 | 0.22 | 1.05 | 3.25 | 5.17 | 5.97             | 5.84 | 4.81 | 2.85 | 0.94 | 0.20 | 0.09 | 0.05 | 0.04 | 0.03 | 30.7    | 28.7 |     |     |
| -56            | 0.02              | 0.03 | 0.04 | 0.08 | 0.14 | 0.23 | 0.30 | 0.35 | 0.43             | 0.42 | 0.33 | 0.28 | 0.22 | 0.13 | 0.08 | 0.04 | 0.03 | 0.03 | 3.18    | 0.27 |     |     |
| -64            | 0.02              | 0.02 | 0.04 | 0.07 | 0.11 | 0.16 | 0.16 | 0.14 | 0.11             | 0.11 | 0.14 | 0.16 | 0.15 | 0.11 | 0.07 | 0.04 | 0.03 | 0.03 | 1.64    | 0.00 |     |     |
| -72            | 0.02              | 0.02 | 0.04 | 0.06 | 0.09 | 0.12 | 0.11 | 0.09 | 0.07             | 0.07 | 0.09 | 0.11 | 0.11 | 0.09 | 0.06 | 0.04 | 0.03 | 0.02 | 1.23    | 0.00 |     |     |
|                | -72               | -64  | -56  | -48  | -40  | -32  | -24  | -16  | HORIZONTAL (DEG) |      |      |      | 16   | 24   | 32   | 40   | 48   | 56   | 64      | 72   |     |     |
| Φ t            | 0.53              | 0.99 | 3.58 | 33.7 | 80.8 | 118  | 140  | 150  | 153              | 152  | 147  | 136  | 113  | 77.7 | 32.3 | 3.78 | 1.41 | 0.82 | 1353    |      |     |     |
| Φ a            | 0.00              | 0.00 | 0.78 | 31.7 | 79.2 | 116  | 139  | 149  | 152              | 151  | 146  | 135  | 112  | 76.1 | 30.3 | 0.66 | 0.00 | 0.00 |         | 1316 |     |     |

Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:09-15-2025

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.500 m  
Remarks: 3000K

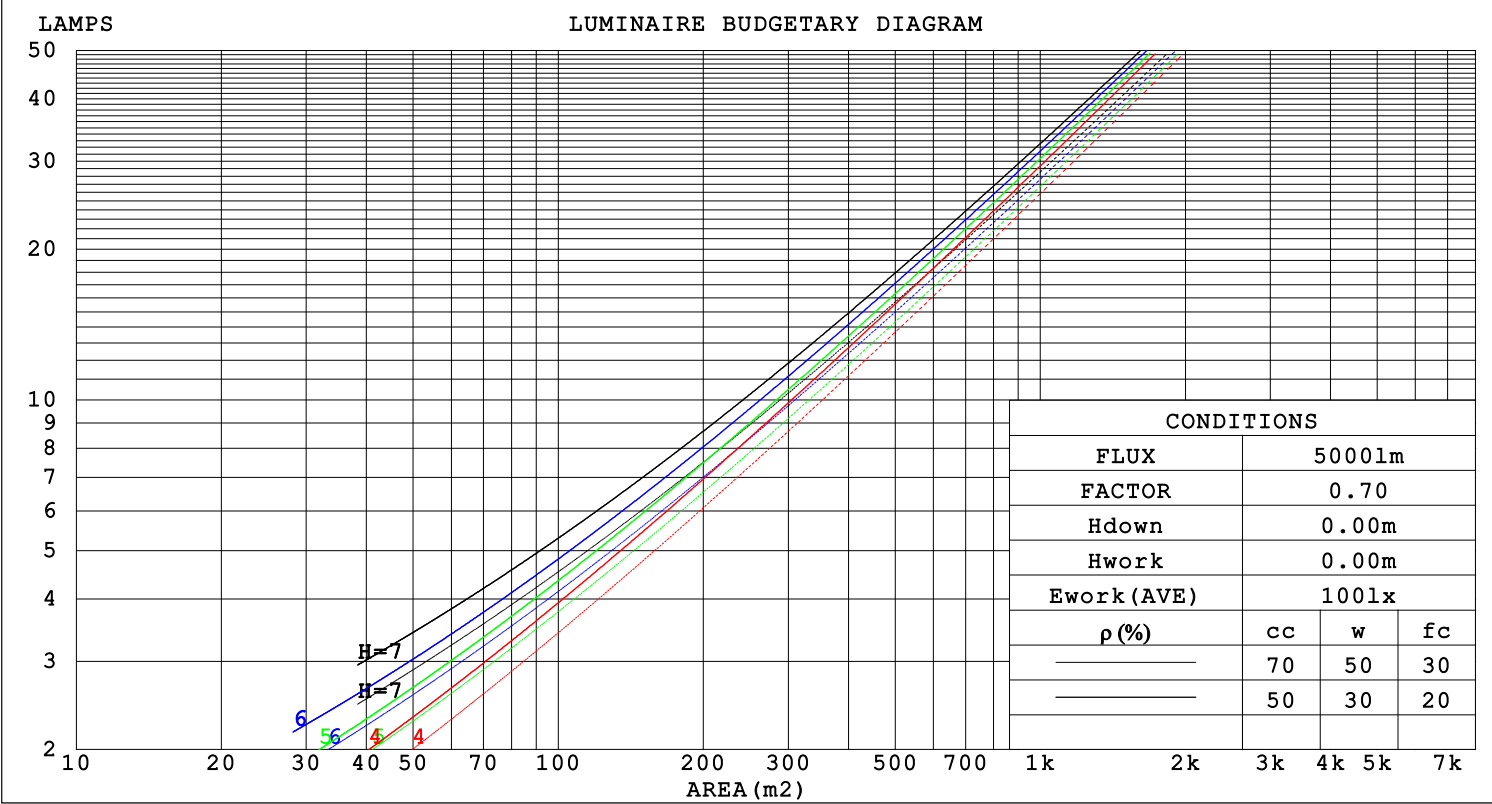


CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

|                                                                      |  |  |  |  |  |  |  |                                   |  |  |  |             |  |  |  |
|----------------------------------------------------------------------|--|--|--|--|--|--|--|-----------------------------------|--|--|--|-------------|--|--|--|
| MANUFACTURER:                                                        |  |  |  |  |  |  |  |                                   |  |  |  |             |  |  |  |
| Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi,301019 |  |  |  |  |  |  |  |                                   |  |  |  |             |  |  |  |
| NAME: AMANDEEP                                                       |  |  |  |  |  |  |  | TYPE: 3000K CRI-90                |  |  |  | WEIGHT:     |  |  |  |
| SPECIFICATION: OSRAM 350 MA                                          |  |  |  |  |  |  |  | DIMENSION: D-83 CUTOUT-67 H-53 MM |  |  |  | SERIAL No.: |  |  |  |

|                 |                                                                            |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------------|----------------------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| pcc             | 80%                                                                        |      |      | 70%  |      |      | 50%  |      |      | 30%  |      |      | 10%  |      |      | 0    |
| pw              | 50%                                                                        | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0    |
| pf <sub>c</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 | 1.02 | 1.02 | 1.02 | 1.00 |
| 1.0             | 1.09                                                                       | 1.06 | 1.04 | 1.07 | 1.04 | 1.02 | 1.03 | 1.01 | .99  | .99  | .97  | .96  | .96  | .94  | .93  | .91  |
| 2.0             | .00                                                                        | .95  | .91  | .98  | .94  | .90  | .95  | .91  | .88  | .92  | .89  | .86  | .89  | .86  | .84  | .82  |
| 3.0             | .91                                                                        | .85  | .80  | .90  | .84  | .80  | .87  | .82  | .78  | .84  | .80  | .77  | .82  | .79  | .76  | .74  |
| 4.0             | .83                                                                        | .77  | .72  | .82  | .76  | .71  | .80  | .74  | .70  | .78  | .73  | .69  | .76  | .72  | .69  | .67  |
| 5.0             | .76                                                                        | .69  | .64  | .75  | .69  | .64  | .73  | .68  | .63  | .72  | .67  | .63  | .70  | .65  | .62  | .60  |
| 6.0             | .70                                                                        | .63  | .58  | .69  | .62  | .57  | .67  | .61  | .57  | .66  | .61  | .57  | .65  | .60  | .56  | .54  |
| 7.0             | .64                                                                        | .57  | .52  | .64  | .57  | .52  | .62  | .56  | .52  | .61  | .55  | .51  | .60  | .55  | .51  | .49  |
| 8.0             | .59                                                                        | .52  | .47  | .59  | .52  | .47  | .57  | .51  | .47  | .56  | .51  | .47  | .55  | .50  | .46  | .45  |
| 9.0             | .55                                                                        | .48  | .43  | .54  | .48  | .43  | .53  | .47  | .43  | .52  | .47  | .43  | .51  | .46  | .42  | .41  |
| 10.0            | .51                                                                        | .44  | .39  | .50  | .44  | .39  | .49  | .43  | .39  | .49  | .43  | .39  | .48  | .43  | .39  | .37  |



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:09-15-2025

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.500 m  
Remarks: 3000K

## WEC AND CCEC

Report number:

|                                                                      |  |  |  |  |  |  |  |                                   |  |  |  |             |  |  |
|----------------------------------------------------------------------|--|--|--|--|--|--|--|-----------------------------------|--|--|--|-------------|--|--|
| MANUFACTURER:                                                        |  |  |  |  |  |  |  |                                   |  |  |  |             |  |  |
| Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi,301019 |  |  |  |  |  |  |  |                                   |  |  |  |             |  |  |
| NAME: AMANDEEP                                                       |  |  |  |  |  |  |  | TYPE: 3000K CRI-90                |  |  |  | WEIGHT:     |  |  |
| SPECIFICATION: OSRAM 350 MA                                          |  |  |  |  |  |  |  | DIMENSION: D-83 CUTOUT-67 H-53 MM |  |  |  | SERIAL No.: |  |  |

| $\rho_{cc}$ | 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         | .209                  | .119 | .038 | .202 | .115 | .037 | .190                            | .109 | .035 | .178 | .103 | .033 | .167 | .097 | .031 |   |
| 2.0         | .203                  | .111 | .034 | .197 | .109 | .033 | .186                            | .104 | .032 | .176 | .099 | .031 | .167 | .095 | .030 |   |
| 3.0         | .195                  | .104 | .031 | .190 | .102 | .031 | .181                            | .098 | .030 | .172 | .094 | .029 | .164 | .091 | .028 |   |
| 4.0         | .187                  | .097 | .029 | .182 | .095 | .028 | .174                            | .092 | .028 | .166 | .089 | .027 | .159 | .086 | .026 |   |
| 5.0         | .178                  | .091 | .026 | .174 | .090 | .026 | .167                            | .087 | .026 | .160 | .085 | .025 | .154 | .082 | .025 |   |
| 6.0         | .170                  | .085 | .024 | .167 | .084 | .024 | .160                            | .082 | .024 | .154 | .080 | .024 | .148 | .078 | .023 |   |
| 7.0         | .162                  | .080 | .023 | .159 | .079 | .023 | .154                            | .078 | .022 | .148 | .076 | .022 | .143 | .074 | .022 |   |
| 8.0         | .155                  | .076 | .021 | .152 | .075 | .021 | .147                            | .074 | .021 | .142 | .072 | .021 | .138 | .071 | .021 |   |
| 9.0         | .148                  | .072 | .020 | .146 | .071 | .020 | .141                            | .070 | .020 | .137 | .068 | .020 | .132 | .067 | .019 |   |
| 10.0        | .142                  | .068 | .019 | .139 | .067 | .019 | .135                            | .066 | .019 | .131 | .065 | .019 | .127 | .064 | .018 |   |

| $\rho_{cc}$ | 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 |      |      |      |      |      | Ceiling Cavity Exitance Coefficients(CCEC) |      |      |      |      |      |      |      |      |   |
| 0.0         | .190                  | .190 | .190 | .163 | .163 | .163 | .111                                       | .111 | .111 | .064 | .064 | .064 | .020 | .020 | .020 |   |
| 1.0         | .173                  | .157 | .142 | .148 | .135 | .122 | .101                                       | .093 | .085 | .058 | .054 | .049 | .019 | .017 | .016 |   |
| 2.0         | .160                  | .132 | .109 | .137 | .114 | .094 | .094                                       | .079 | .066 | .054 | .046 | .038 | .017 | .015 | .013 |   |
| 3.0         | .150                  | .114 | .085 | .129 | .098 | .074 | .088                                       | .068 | .052 | .051 | .040 | .030 | .016 | .013 | .010 |   |
| 4.0         | .141                  | .100 | .068 | .121 | .086 | .059 | .083                                       | .060 | .041 | .048 | .035 | .024 | .016 | .011 | .008 |   |
| 5.0         | .134                  | .089 | .055 | .115 | .077 | .048 | .079                                       | .054 | .034 | .046 | .031 | .020 | .015 | .010 | .007 |   |
| 6.0         | .128                  | .080 | .045 | .110 | .069 | .040 | .076                                       | .048 | .028 | .044 | .028 | .017 | .014 | .009 | .005 |   |
| 7.0         | .122                  | .073 | .038 | .105 | .063 | .033 | .072                                       | .044 | .024 | .042 | .026 | .014 | .014 | .009 | .005 |   |
| 8.0         | .116                  | .067 | .033 | .100 | .058 | .028 | .069                                       | .041 | .020 | .040 | .024 | .012 | .013 | .008 | .004 |   |
| 9.0         | .111                  | .062 | .028 | .096 | .054 | .025 | .067                                       | .038 | .017 | .039 | .022 | .010 | .013 | .007 | .003 |   |
| 10.0        | .107                  | .058 | .025 | .092 | .050 | .022 | .064                                       | .035 | .015 | .037 | .021 | .009 | .012 | .007 | .003 |   |

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:09-15-2025

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.500 m  
 Remarks: 3000K

Uncorrected UGR Table

Report number:

|                                                                      |     |                  |      |      |                                   |      |                |             |      |      |      |
|----------------------------------------------------------------------|-----|------------------|------|------|-----------------------------------|------|----------------|-------------|------|------|------|
| MANUFACTURER:                                                        |     |                  |      |      |                                   |      |                |             |      |      |      |
| Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi,301019 |     |                  |      |      |                                   |      |                |             |      |      |      |
| NAME: AMANDEEP                                                       |     |                  |      |      | TYPE: 3000K CRI-90                |      |                | WEIGHT:     |      |      |      |
| SPECIFICATION: OSRAM 350 MA                                          |     |                  |      |      | DIMENSION: D-83 CUTOUT-67 H-53 MM |      |                | SERIAL No.: |      |      |      |
| 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                                                        |     | 14.5             | 15.7 | 14.8 | 15.9                              | 16.0 | 13.6           | 14.8        | 13.8 | 14.9 | 15.1 |
|                                                                      | 3H  | 14.3             | 15.4 | 14.6 | 15.6                              | 15.8 | 13.4           | 14.5        | 13.7 | 14.7 | 14.9 |
|                                                                      | 4H  | 14.2             | 15.3 | 14.5 | 15.5                              | 15.7 | 13.3           | 14.3        | 13.6 | 14.6 | 14.8 |
|                                                                      | 6H  | 14.2             | 15.1 | 14.5 | 15.4                              | 15.6 | 13.2           | 14.2        | 13.5 | 14.4 | 14.7 |
|                                                                      | 8H  | 14.1             | 15.0 | 14.5 | 15.3                              | 15.6 | 13.2           | 14.1        | 13.5 | 14.4 | 14.6 |
|                                                                      | 12H | 14.1             | 15.0 | 14.5 | 15.3                              | 15.5 | 13.2           | 14.0        | 13.5 | 14.3 | 14.6 |
| 4H                                                                   | 2H  | 14.2             | 15.2 | 14.5 | 15.5                              | 15.7 | 13.3           | 14.3        | 13.6 | 14.5 | 14.8 |
|                                                                      | 3H  | 14.1             | 14.9 | 14.4 | 15.2                              | 15.5 | 13.1           | 14.0        | 13.5 | 14.3 | 14.6 |
|                                                                      | 4H  | 14.0             | 14.7 | 14.3 | 15.1                              | 15.4 | 13.1           | 13.8        | 13.4 | 14.1 | 14.5 |
|                                                                      | 6H  | 13.9             | 14.6 | 14.3 | 14.9                              | 15.3 | 13.0           | 13.7        | 13.4 | 14.0 | 14.4 |
|                                                                      | 8H  | 13.9             | 14.5 | 14.3 | 14.9                              | 15.2 | 13.0           | 13.6        | 13.4 | 13.9 | 14.3 |
|                                                                      | 12H | 13.9             | 14.5 | 14.3 | 14.8                              | 15.2 | 12.9           | 13.5        | 13.4 | 13.9 | 14.3 |
| 8H                                                                   | 4H  | 13.8             | 14.5 | 14.2 | 14.8                              | 15.2 | 12.9           | 13.6        | 13.3 | 13.9 | 14.3 |
|                                                                      | 6H  | 13.8             | 14.3 | 14.2 | 14.7                              | 15.1 | 12.9           | 13.4        | 13.3 | 13.8 | 14.2 |
|                                                                      | 8H  | 13.8             | 14.2 | 14.2 | 14.6                              | 15.1 | 12.9           | 13.3        | 13.3 | 13.8 | 14.2 |
|                                                                      | 12H | 13.8             | 14.2 | 14.3 | 14.6                              | 15.1 | 12.9           | 13.3        | 13.4 | 13.7 | 14.2 |
| 12H                                                                  | 4H  | 13.8             | 14.4 | 14.2 | 14.7                              | 15.1 | 12.9           | 13.5        | 13.3 | 13.8 | 14.2 |
|                                                                      | 6H  | 13.7             | 14.2 | 14.2 | 14.6                              | 15.1 | 12.8           | 13.3        | 13.3 | 13.7 | 14.2 |
|                                                                      | 8H  | 13.7             | 14.1 | 14.2 | 14.6                              | 15.0 | 12.9           | 13.2        | 13.3 | 13.7 | 14.2 |
| Variations with the observer position at spacings:                   |     |                  |      |      |                                   |      |                |             |      |      |      |
| S = 1.0H                                                             |     | + 3.1 / -11.6    |      |      |                                   |      | + 2.6 / -11.4  |             |      |      |      |
| 1.5H                                                                 |     | + 4.6 / -12.3    |      |      |                                   |      | + 5.1 / -11.8  |             |      |      |      |
| 2.0H                                                                 |     | +11.1 / - 6.0    |      |      |                                   |      | +10.2 / - 4.0  |             |      |      |      |

CIE Pub.117 Corrected 1353 lm Total Lamp Luminous Flux.(8log(F/F0) = 1.1)

Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:09-15-2025

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.500 m  
Remarks: 3000K

## UTILIZATION FACTORS TABLE

Report number:

|                                                                       |                                   |             |
|-----------------------------------------------------------------------|-----------------------------------|-------------|
| MANUFACTURER:                                                         |                                   |             |
| Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi, 301019 |                                   |             |
| NAME: AMANDEEP                                                        | TYPE: 3000K CRI-90                | WEIGHT:     |
| SPECIFICATION: OSRAM 350 MA                                           | DIMENSION: D-83 CUTOUT-67 H-53 MM | SERIAL No.: |

| 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) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 77                                                   | 68  | 64        | 76  | 68  | 63  | 75  | 68            | 63  | 59     |
| 0.80                             | 86                                                   | 78  | 73        | 85  | 78  | 73  | 84  | 77            | 73  | 68     |
| 1.00                             | 93                                                   | 86  | 81        | 92  | 85  | 81  | 90  | 85            | 80  | 75     |
| 1.25                             | 98                                                   | 91  | 87        | 97  | 91  | 87  | 95  | 90            | 86  | 81     |
| 1.50                             | 102                                                  | 96  | 91        | 100 | 95  | 91  | 98  | 93            | 90  | 85     |
| 2.00                             | 106                                                  | 100 | 97        | 104 | 99  | 96  | 101 | 97            | 94  | 88     |
| 2.50                             | 108                                                  | 103 | 99        | 106 | 102 | 98  | 103 | 99            | 96  | 90     |
| 3.00                             | 110                                                  | 105 | 102       | 108 | 104 | 101 | 104 | 101           | 99  | 92     |
| 4.00                             | 112                                                  | 108 | 106       | 110 | 107 | 104 | 106 | 104           | 102 | 94     |
| 5.00                             | 113                                                  | 110 | 108       | 111 | 108 | 106 | 107 | 105           | 103 | 95     |
| ROOM INDEX                       | UF (total)                                           |     |           |     |     |     |     |               |     | Direct |
| According to DIN EN 13032-2 2004 |                                                      |     | Suspended |     |     |     |     | SHRNOM = 1.25 |     |        |

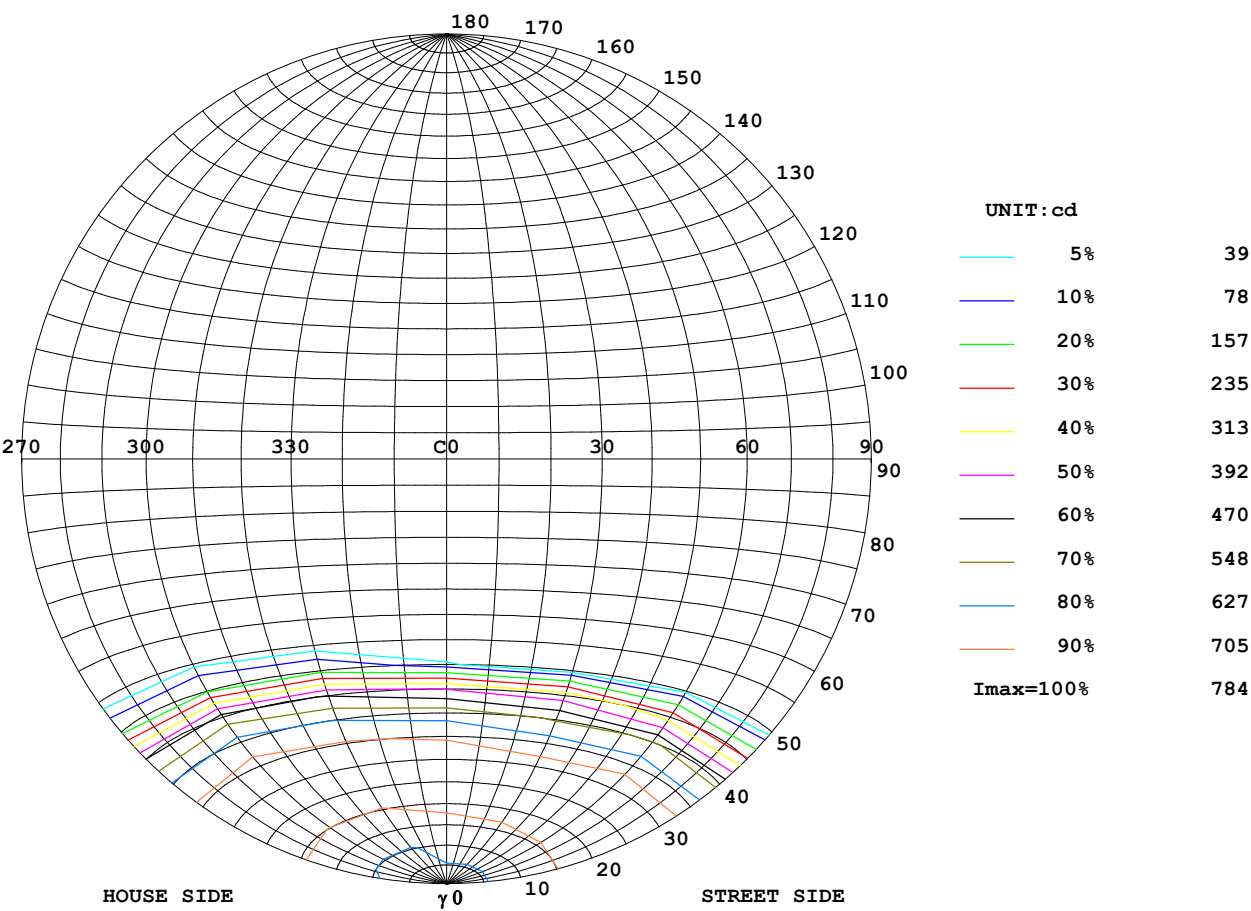
Test System: HOPOO HPG1800  
 Temperature: 25.3 DEG  
 Operators:  
 Test Date: 09-15-2025

Test Set: 5.0 deg/s C-Gamma (TYPE C)  
 Humidity: 65.0%  
 Test Distance: 8.500 m  
 Remarks: 3000K

ISOCANDELA DIAGRAM

Report number:

|                                                                      |                                   |             |
|----------------------------------------------------------------------|-----------------------------------|-------------|
| MANUFACTURER:                                                        |                                   |             |
| Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi,301019 |                                   |             |
| NAME: AMANDEEP                                                       | TYPE: 3000K CRI-90                | WEIGHT:     |
| SPECIFICATION: OSRAM 350 MA                                          | DIMENSION: D-83 CUTOUT-67 H-53 MM | SERIAL No.: |



Test System:HOP00 HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:09-15-2025

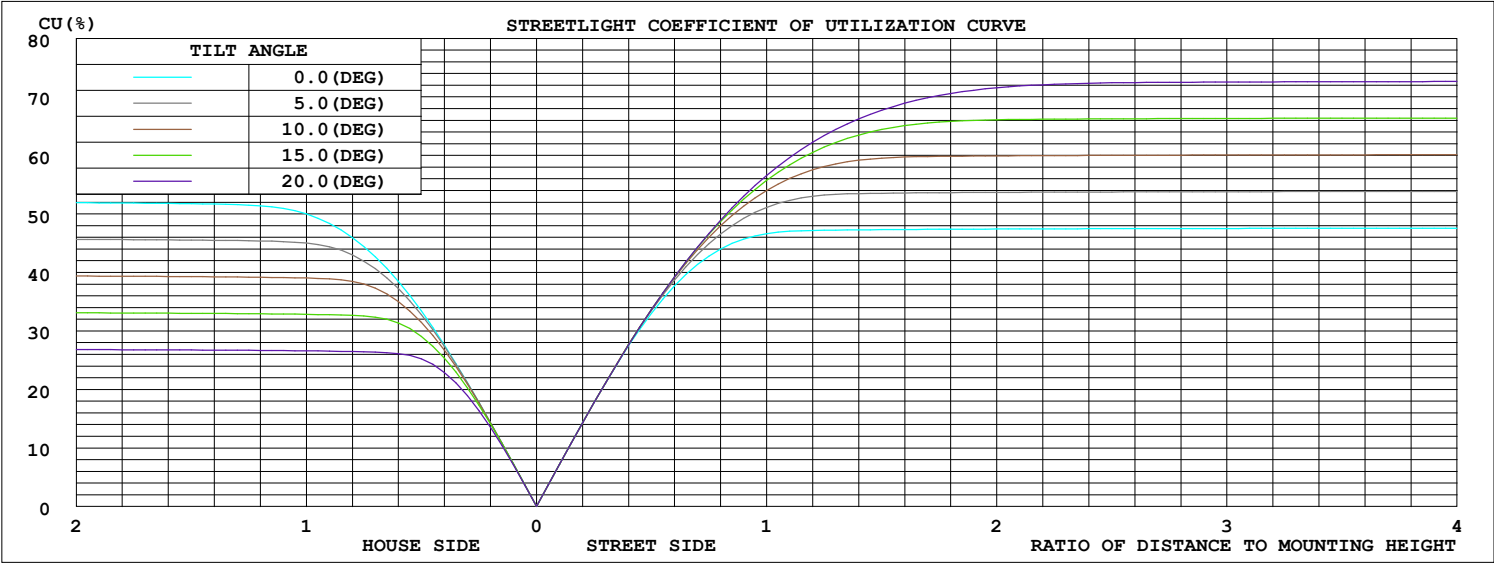
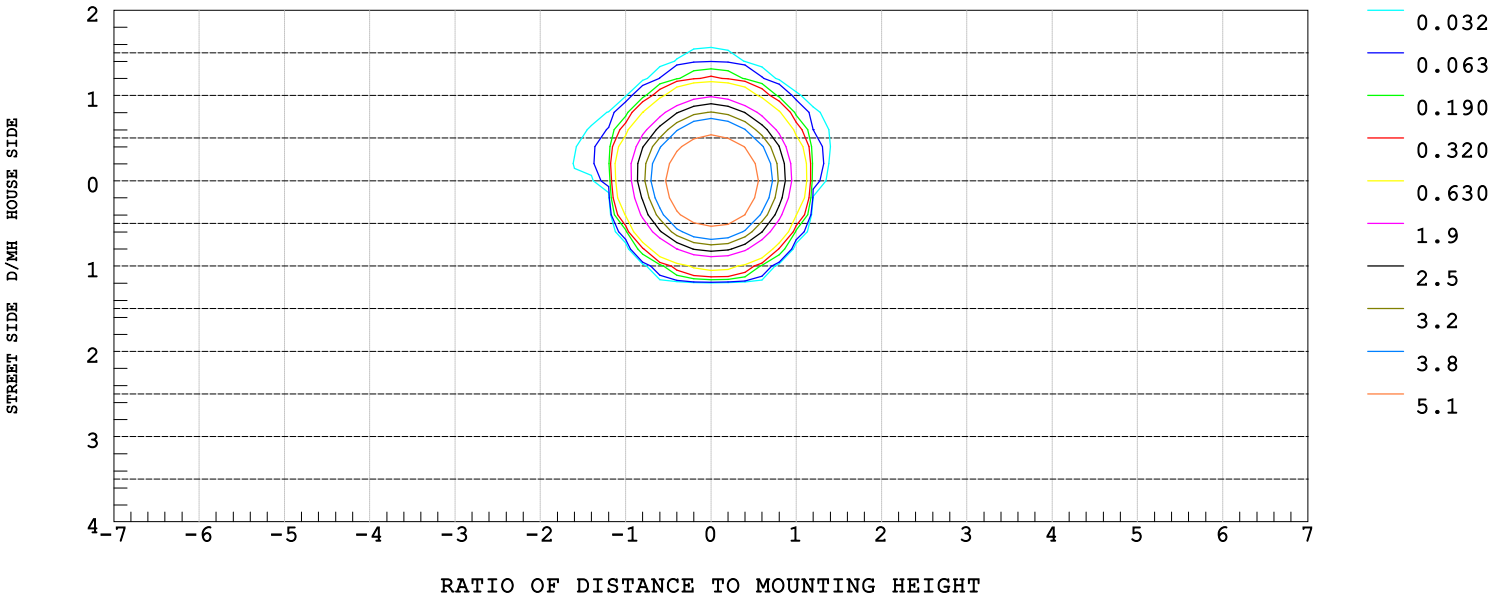
Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.500 m  
Remarks: 3000K

ISOLUX DIAGRAM

Report number:

|                                                                      |                                   |             |
|----------------------------------------------------------------------|-----------------------------------|-------------|
| MANUFACTURER:                                                        |                                   |             |
| Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi,301019 |                                   |             |
| NAME: AMANDEEP                                                       | TYPE: 3000K CRI-90                | WEIGHT:     |
| SPECIFICATION: OSRAM 350 MA                                          | DIMENSION: D-83 CUTOUT-67 H-53 MM | SERIAL No.: |

ILLUMINANCE AT MH=10 m,Enadir = 6.23 lx



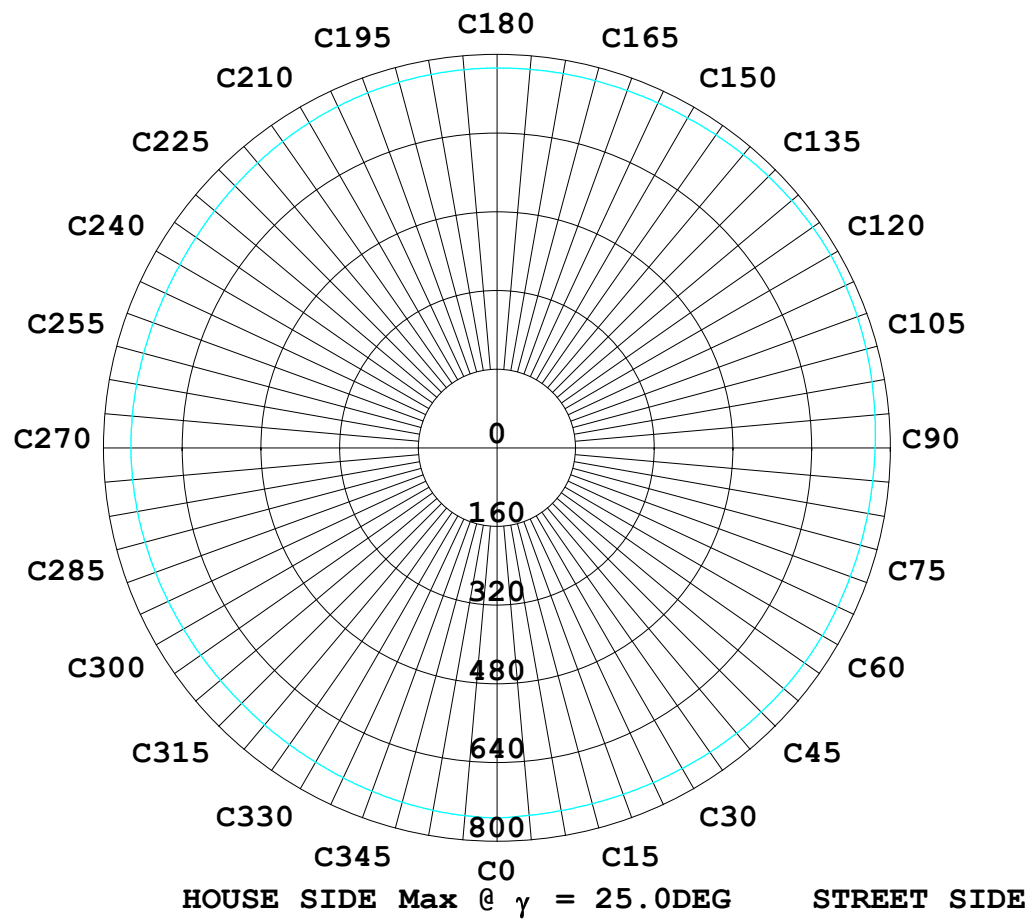
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:09-15-2025

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.500 m  
Remarks: 3000K

ISOCANDELA DIAGRAM

Report number:

|                                                                      |                                   |             |
|----------------------------------------------------------------------|-----------------------------------|-------------|
| MANUFACTURER:                                                        |                                   |             |
| Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi,301019 |                                   |             |
| NAME: AMANDEEP                                                       | TYPE: 3000K CRI-90                | WEIGHT:     |
| SPECIFICATION: OSRAM 350 MA                                          | DIMENSION: D-83 CUTOUT-67 H-53 MM | SERIAL No.: |



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:09-15-2025

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.500 m  
Remarks: 3000K

LUMINOUS DISTRIBUTION INTENSITY DATA

Report number:

|                                                                      |                                   |             |
|----------------------------------------------------------------------|-----------------------------------|-------------|
| MANUFACTURER:                                                        |                                   |             |
| Address: Plot No-A-89, RIICO Industrial Area, Karoli, Bhiwadi,301019 |                                   |             |
| NAME: AMANDEEP                                                       | TYPE: 3000K CRI-90                | WEIGHT:     |
| SPECIFICATION: OSRAM 350 MA                                          | DIMENSION: D-83 CUTOUT-67 H-53 MM | SERIAL No.: |

UNIT: cd

| C (DEG)<br>γ (DEG) | 0    | 30   | 60   | 90   | 120  | 150  | 180  | 210  | 240  | 270  | 300  | 330  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0.0                | 623  | 621  | 620  | 620  | 620  | 618  | 623  | 621  | 620  | 620  | 620  | 618  |
| 5.0                | 625  | 623  | 622  | 623  | 623  | 622  | 625  | 624  | 620  | 621  | 620  | 619  |
| 10.0               | 641  | 648  | 653  | 657  | 657  | 653  | 647  | 636  | 628  | 625  | 624  | 625  |
| 15.0               | 682  | 689  | 698  | 703  | 704  | 697  | 688  | 675  | 663  | 658  | 659  | 662  |
| 20.0               | 724  | 731  | 740  | 747  | 752  | 743  | 737  | 724  | 712  | 705  | 703  | 705  |
| 25.0               | 752  | 753  | 764  | 769  | 784  | 775  | 773  | 764  | 745  | 745  | 736  | 738  |
| 30.0               | 749  | 734  | 746  | 747  | 771  | 764  | 776  | 777  | 760  | 763  | 747  | 748  |
| 35.0               | 696  | 668  | 680  | 672  | 706  | 701  | 724  | 741  | 723  | 735  | 712  | 712  |
| 40.0               | 592  | 542  | 551  | 529  | 577  | 574  | 617  | 651  | 636  | 656  | 624  | 630  |
| 45.0               | 386  | 353  | 278  | 241  | 324  | 356  | 414  | 479  | 470  | 505  | 466  | 471  |
| 50.0               | 41.6 | 16.1 | 27.4 | 13.0 | 31.0 | 20.5 | 44.9 | 126  | 137  | 146  | 131  | 124  |
| 55.0               | 18.1 | 6.64 | 15.1 | 6.06 | 15.8 | 6.93 | 9.32 | 23.0 | 13.5 | 27.3 | 13.0 | 22.3 |
| 60.0               | 12.5 | 4.62 | 11.0 | 4.33 | 11.4 | 4.62 | 6.21 | 14.4 | 7.36 | 16.5 | 7.29 | 14.5 |
| 65.0               | 9.60 | 3.54 | 8.59 | 3.25 | 8.81 | 3.39 | 4.69 | 10.2 | 4.62 | 11.3 | 4.62 | 10.4 |
| 70.0               | 7.65 | 2.89 | 7.00 | 2.67 | 7.08 | 2.67 | 3.75 | 7.87 | 3.10 | 8.38 | 3.25 | 7.94 |
| 75.0               | 6.35 | 2.60 | 5.99 | 2.31 | 5.99 | 2.38 | 3.25 | 6.43 | 2.38 | 6.57 | 2.38 | 6.43 |
| 80.0               | 5.56 | 2.31 | 5.27 | 2.16 | 5.20 | 2.23 | 3.10 | 5.41 | 2.16 | 5.49 | 2.02 | 5.27 |
| 85.0               | 5.05 | 2.60 | 4.98 | 2.38 | 4.91 | 2.31 | 2.81 | 4.62 | 1.73 | 4.47 | 1.51 | 4.33 |
| 90.0               | 4.47 | 2.31 | 3.97 | 2.16 | 4.04 | 2.16 | 3.39 | 3.61 | 1.66 | 3.54 | 1.66 | 3.46 |

Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:09-15-2025

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.500 m  
Remarks: 3000K