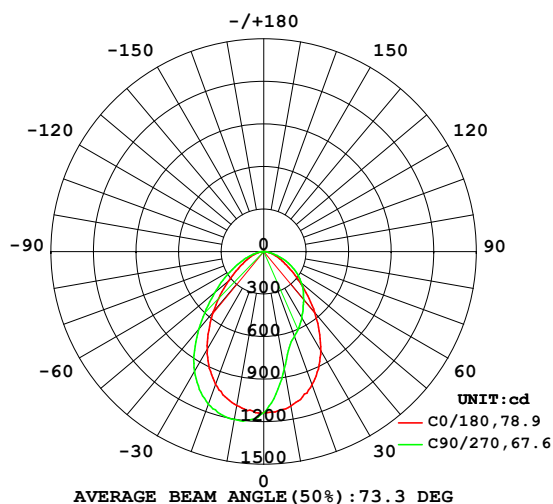


## LUMINAIRE PHOTOMETRIC TEST REPORT

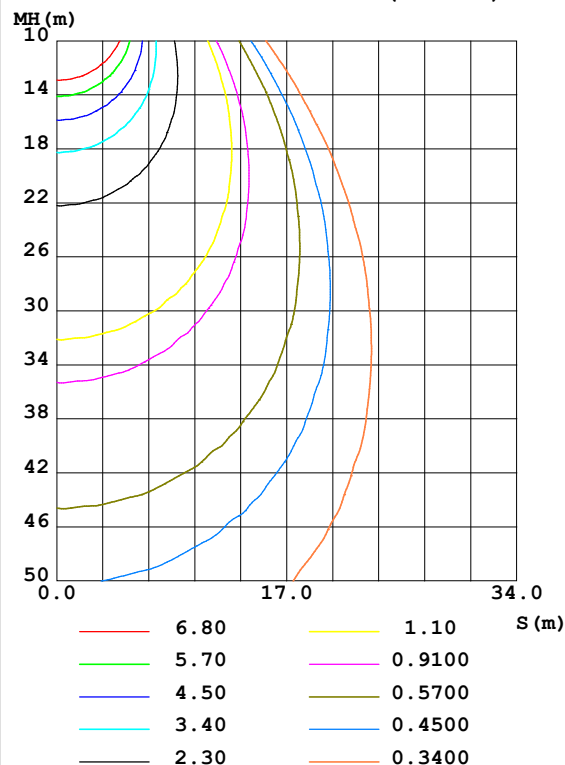
|   |       |                  |
|---|-------|------------------|
| Test:U:239.9V I:0.1090A P:23.12W PF:0.8834 Lamp Flux:2220.85x1 lm |       |                  |
| NAME: HIP_1160_NA_WHT_ASY_HE_150mA_TUNABLE @ 4000K TYPE:LED       |       | WEIGHT:          |
| SPEC.:  | DIM.: | SERIAL No.:1     |
| MFR.: DARKON  | SUR.: | Shielding Angle: |

| DATA OF LAMP                          |         | PHOTOMETRIC DATA Eff: 96.07 lm/W |        |                        |          |
|---------------------------------------|---------|----------------------------------|--------|------------------------|----------|
| LLE 24x560mm E122001m 927-965 LV PRE3 |         | Imax(cd)                         | 1210   | S/MH(C0/180)           | 1.09     |
| NOMINAL POWER(W)                      |         | LOR(%)                           | 100.0  | S/MH(C90/270)          | 1.25     |
| RATED VOLTAGE(V)                      | 230.0   | TOTAL FLUX(lm)                   | 2220.9 | $\eta$ UP,DN(C0-180)   | 0.0,40.3 |
| NOMINAL FLUX(lm)                      | 2220.85 | CIE CLASS                        | DIRECT | $\eta$ UP,DN(C180-360) | 0.0,59.7 |
| LAMPS INSIDE                          | 1       | $\eta$ up(%)                     | 0.0    | CIBSE SHR NOM          | 1.00     |
| TEST VOLTAGE(V)                       | 230     | $\eta$ down(%)                   | 100.0  | CIBSE SHR MAX          | 1.10     |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:13 February 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [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       | 1106                  | 922.7  | 838.7  | 921.9  | 1103   | 1191   | 1202   | 1196   | 0- 10    | 104.8       | 104.8        | 4.72,4.72 |
| 20       | 996.4                 | 670.2  | 636.6  | 668.5  | 996.0  | 1150   | 1145   | 1153   | 10- 20   | 279.3       | 384.1        | 17.3,17.3 |
| 30       | 807.2                 | 574.4  | 537.5  | 568.4  | 798.2  | 1034   | 977.5  | 1037   | 20- 30   | 396.2       | 780.3        | 35.1,35.1 |
| 40       | 560.6                 | 475.2  | 439.4  | 473.5  | 554.5  | 841.2  | 713.8  | 846.0  | 30- 40   | 440.4       | 1221         | 55,55     |
| 50       | 330.3                 | 354.4  | 348.6  | 351.0  | 325.0  | 581.9  | 452.5  | 586.7  | 40- 50   | 402.4       | 1623         | 73.1,73.1 |
| 60       | 176.3                 | 234.4  | 245.3  | 232.3  | 171.6  | 338.2  | 263.0  | 342.7  | 50- 60   | 305.7       | 1929         | 86.8,86.8 |
| 70       | 92.66                 | 123.6  | 132.9  | 122.4  | 89.53  | 161.8  | 126.6  | 164.6  | 60- 70   | 190.9       | 2120         | 95.4,95.4 |
| 80       | 30.54                 | 36.38  | 39.34  | 35.66  | 28.54  | 47.18  | 40.45  | 48.35  | 70- 80   | 85.16       | 2205         | 99.3,99.3 |
| 90       | 0.8784                | 0.7323 | 0.5342 | 0.5204 | 0.3973 | 0.6627 | 0.7995 | 0.9353 | 80- 90   | 15.98       | 2221         | 100,100   |
| 100      |                       |        |        |        |        |        |        |        | 90-100   |             |              |           |
| 110      |                       |        |        |        |        |        |        |        | 100-110  |             |              |           |
| 120      |                       |        |        |        |        |        |        |        | 110-120  |             |              |           |
| 130      |                       |        |        |        |        |        |        |        | 120-130  |             |              |           |
| 140      |                       |        |        |        |        |        |        |        | 130-140  |             |              |           |
| 150      |                       |        |        |        |        |        |        |        | 140-150  |             |              |           |
| 160      |                       |        |        |        |        |        |        |        | 150-160  |             |              |           |
| 170      |                       |        |        |        |        |        |        |        | 160-170  |             |              |           |
| 180      |                       |        |        |        |        |        |        |        | 170-180  |             |              |           |
| DEG      | LUMINOUS INTENSITY:cd |        |        |        |        |        |        |        |          | UNIT:lm     |              |           |

Conical surface Flux(90deg): 1431.3 lm

%lum = 64.4%

%lamp = 64.4%

Conical surface Flux(120deg): 1928.8 lm

%lum = 86.8%

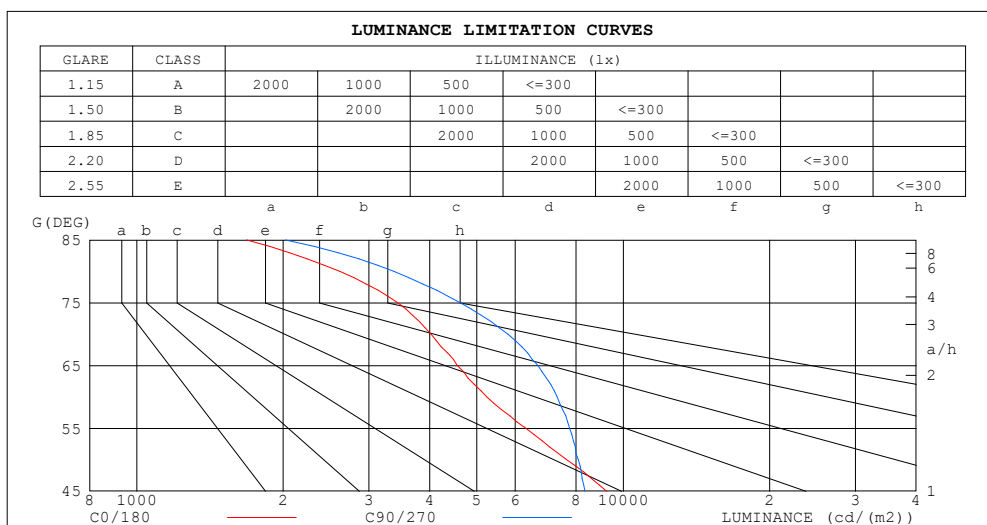
%lamp = 86.8%

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JEFF  
 Test Date:13 February 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:7.995m [K=1.0000]  
 Remarks:

## LUMINANCE LIMITATION CURVES

|   |         |                  |
|---|---------|------------------|
| Test:U:239.9V I:0.1090A P:23.12W PF:0.8834 Lamp Flux:2220.85x1 lm |         |                  |
| NAME: HIP_1160_NA_WHT_ASY_HE_150mA_TUNABLE @ 4000K TYPE:LED       | WEIGHT: |                  |
| SPEC.:  | DIM.:   | SERIAL No.:1     |
| MFR.: DARKON  | SUR.:   | Shielding Angle: |



| LUMINANCE cd/(m2) |        |         |
|-------------------|--------|---------|
| G (DEG)           | C0/180 | C90/270 |
| 85                | 1681   | 2020    |
| 80                | 2614   | 3377    |
| 75                | 3438   | 4622    |
| 70                | 4027   | 5793    |
| 65                | 4556   | 6680    |
| 60                | 5241   | 7313    |
| 55                | 6307   | 7762    |
| 50                | 7638   | 8086    |
| 45                | 9243   | 8344    |

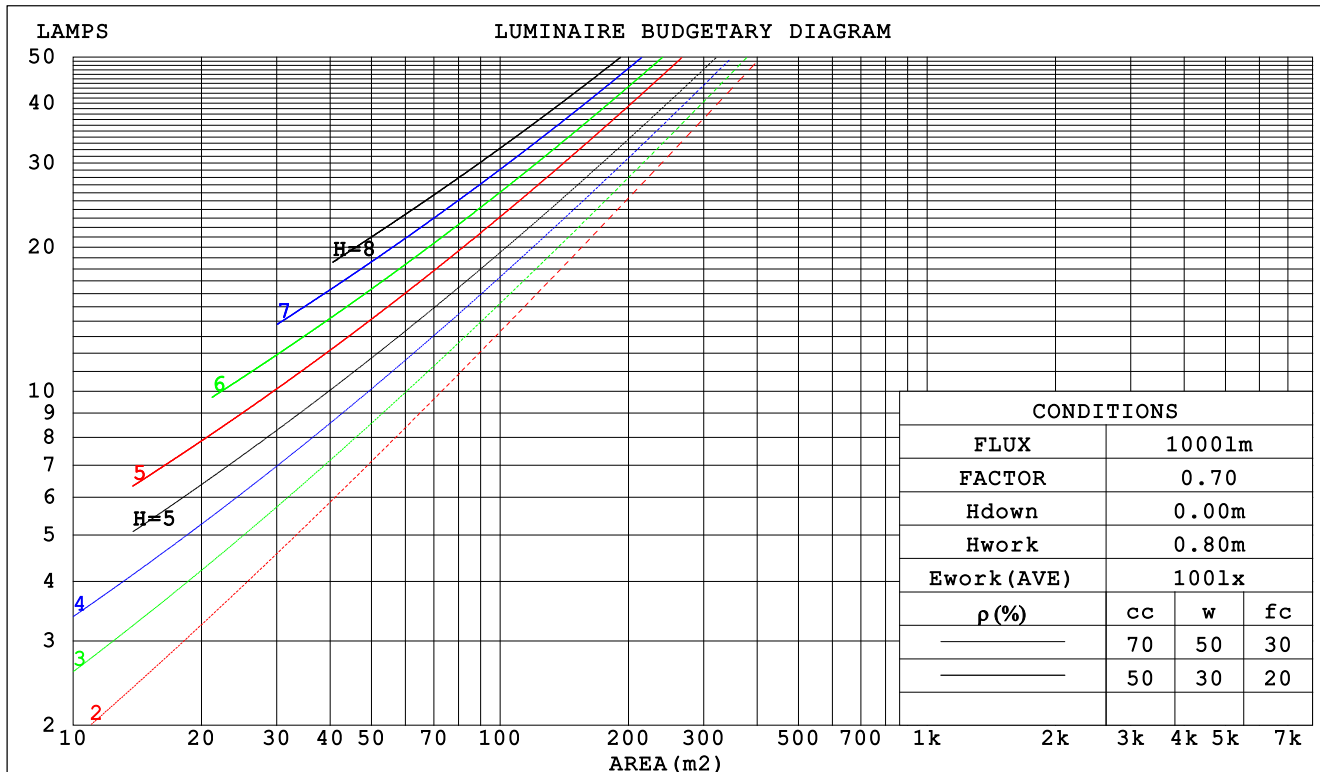
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:13 February 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

|   |       |                  |
|---|-------|------------------|
| Test:U:239.9V I:0.1090A P:23.12W PF:0.8834 Lamp Flux:2220.85x1 lm |       |                  |
| NAME: HIP_1160_NA_WHT_ASY_HE_150mA_TUNABLE @ 4000K TYPE:LED       |       | WEIGHT:          |
| SPEC.:  | DIM.: | SERIAL No.:1     |
| MFR.: DARKON  | SUR.: | Shielding 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 | 1.00 |
| 1.0         | 1.06                  | 1.03 | .99  | 1.04 | 1.01 | .98  | .90                             | .97  | .95  | .96  | .94  | .92  | .92  | .91  | .89  | .87  |
| 2.0         | .94                   | .88  | .83  | .92  | .87  | .82  | .89                             | .84  | .80  | .86  | .82  | .78  | .83  | .80  | .77  | .75  |
| 3.0         | .84                   | .77  | .71  | .82  | .76  | .70  | .80                             | .74  | .69  | .77  | .72  | .68  | .74  | .70  | .67  | .65  |
| 4.0         | .75                   | .67  | .61  | .74  | .67  | .61  | .72                             | .65  | .60  | .69  | .64  | .59  | .67  | .62  | .58  | .56  |
| 5.0         | .68                   | .60  | .54  | .67  | .59  | .53  | .65                             | .58  | .53  | .63  | .57  | .52  | .61  | .56  | .52  | .50  |
| 6.0         | .62                   | .53  | .48  | .61  | .53  | .47  | .59                             | .52  | .47  | .57  | .51  | .47  | .56  | .50  | .46  | .44  |
| 7.0         | .56                   | .48  | .42  | .56  | .48  | .42  | .54                             | .47  | .42  | .53  | .46  | .42  | .51  | .46  | .41  | .40  |
| 8.0         | .52                   | .44  | .38  | .51  | .43  | .38  | .50                             | .43  | .38  | .49  | .42  | .38  | .47  | .42  | .38  | .36  |
| 9.0         | .48                   | .40  | .35  | .47  | .40  | .35  | .46                             | .39  | .35  | .45  | .39  | .34  | .44  | .38  | .34  | .32  |
| 10.0        | .44                   | .37  | .32  | .44  | .37  | .32  | .43                             | .36  | .32  | .42  | .36  | .31  | .41  | .35  | .31  | .30  |



C Range: 0 - 360DEG

C Interval: 22.5DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:JEFF

Test Date:13 February 2023

$\gamma$  Range: 0 - 90DEG

$\gamma$  Interval: 1.0DEG

Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295

Humidity:65.0%

Test Distance:7.995m [K=1.0000]

Remarks:

**WEC AND CCEC**

|   |         |                  |
|---|---------|------------------|
| Test:U:239.9V I:0.1090A P:23.12W PF:0.8834 Lamp Flux:2220.85x1 lm |         |                  |
| NAME: HIP_1160_NA_WHT_ASY_HE_150mA_TUNABLE @ 4000K TYPE:LED       | WEIGHT: |                  |
| SPEC.:  | DIM.:   | SERIAL No.:1     |
| MFR.: DARKON  | SUR.:   | Shielding Angle: |

| pcc  | 80%                   |      |      | 70%  |      |      | 50%                              |      |      | 30%  |      |      | 10%  |      |      | 0 |  |
|------|-----------------------|------|------|------|------|------|----------------------------------|------|------|------|------|------|------|------|------|---|--|
| pw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                              | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |  |
| pfc  | 20%                   |      |      | 20%  |      |      | 20%                              |      |      | 20%  |      |      | 20%  |      |      | 0 |  |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Wall Exitance Coefficients (WEC) |      |      |      |      |      |      |      |      |   |  |
| 0.0  |                       |      |      |      |      |      |                                  |      |      |      |      |      |      |      |      |   |  |
| 1.0  | .265                  | .151 | .048 | .258 | .147 | .047 | .245                             | .141 | .045 | .233 | .135 | .043 | .222 | .129 | .042 |   |  |
| 2.0  | .255                  | .140 | .043 | .249 | .137 | .042 | .238                             | .132 | .041 | .227 | .128 | .040 | .218 | .123 | .039 |   |  |
| 3.0  | .240                  | .128 | .038 | .235 | .126 | .038 | .225                             | .122 | .037 | .216 | .118 | .036 | .207 | .115 | .036 |   |  |
| 4.0  | .225                  | .117 | .034 | .220 | .115 | .034 | .211                             | .112 | .033 | .203 | .109 | .033 | .195 | .106 | .032 |   |  |
| 5.0  | .210                  | .107 | .031 | .206 | .106 | .031 | .198                             | .103 | .030 | .191 | .101 | .030 | .184 | .098 | .030 |   |  |
| 6.0  | .197                  | .099 | .028 | .193 | .097 | .028 | .186                             | .095 | .028 | .180 | .093 | .027 | .173 | .091 | .027 |   |  |
| 7.0  | .184                  | .091 | .026 | .181 | .090 | .026 | .175                             | .088 | .025 | .169 | .087 | .025 | .164 | .085 | .025 |   |  |
| 8.0  | .173                  | .085 | .024 | .170 | .084 | .024 | .165                             | .082 | .024 | .160 | .081 | .023 | .155 | .079 | .023 |   |  |
| 9.0  | .163                  | .079 | .022 | .161 | .078 | .022 | .156                             | .077 | .022 | .151 | .076 | .022 | .147 | .074 | .022 |   |  |
| 10.0 | .154                  | .074 | .021 | .152 | .073 | .020 | .147                             | .072 | .020 | .143 | .071 | .020 | .139 | .070 | .020 |   |  |

| pcc  | 80%                   |      |      | 70%  |      |      | 50%   |      |      | 30%  |      |      | 10%  |      |      | 0 |
|------|-----------------------|------|------|------|------|------|---|------|------|------|------|------|------|------|------|---|
| pw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| pfc  | 20%                   |      |      | 20%  |      |      | 20%   |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Ceiling Cavity Exitance Coefficients (CCEC) |      |      |      |      |      |      |      |      |   |
| 0.0  | .190                  | .190 | .190 | .163 | .163 | .163 | .111  | .111 | .111 | .064 | .064 | .064 | .020 | .020 | .020 |   |
| 1.0  | .177                  | .157 | .138 | .152 | .134 | .119 | .104  | .092 | .082 | .060 | .053 | .048 | .019 | .017 | .015 |   |
| 2.0  | .167                  | .132 | .102 | .143 | .114 | .089 | .098  | .079 | .062 | .057 | .046 | .036 | .018 | .015 | .012 |   |
| 3.0  | .159                  | .114 | .078 | .136 | .098 | .068 | .093  | .068 | .048 | .054 | .040 | .028 | .017 | .013 | .009 |   |
| 4.0  | .151                  | .100 | .062 | .129 | .087 | .054 | .089  | .060 | .038 | .051 | .035 | .022 | .017 | .012 | .007 |   |
| 5.0  | .143                  | .090 | .050 | .123 | .078 | .044 | .085  | .054 | .031 | .049 | .032 | .018 | .016 | .010 | .006 |   |
| 6.0  | .137                  | .081 | .042 | .117 | .070 | .036 | .081  | .049 | .026 | .047 | .029 | .015 | .015 | .009 | .005 |   |
| 7.0  | .130                  | .074 | .035 | .112 | .064 | .031 | .077  | .045 | .022 | .045 | .027 | .013 | .015 | .009 | .004 |   |
| 8.0  | .124                  | .068 | .030 | .107 | .059 | .026 | .074  | .042 | .019 | .043 | .025 | .011 | .014 | .008 | .004 |   |
| 9.0  | .118                  | .063 | .026 | .102 | .055 | .023 | .071  | .039 | .016 | .041 | .023 | .010 | .013 | .007 | .003 |   |
| 10.0 | .113                  | .059 | .023 | .097 | .051 | .020 | .067  | .036 | .015 | .039 | .021 | .009 | .013 | .007 | .003 |   |

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:13 February 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

**UGR(Unified Glare Rating) Table**

|   |                  |      |      |       |      |                |      |                  |      |      |
|---|------------------|------|------|-------|------|----------------|------|------------------|------|------|
| Test:U:239.9V I:0.1090A P:23.12W PF:0.8834 Lamp Flux:2220.85x1 lm |                  |      |      |       |      |                |      |                  |      |      |
| NAME: HIP_1160_NA_WHT_ASY_HE_150mA_TUNABLE @ 4000K TYPE:LED       |                  |      |      |       |      |                |      | WEIGHT:          |      |      |
| SPEC.:  |                  |      |      | DIM.: |      |                |      | SERIAL No.:1     |      |      |
| MFR.: DARKON  |                  |      |      | SUR.: |      |                |      | Shielding Angle: |      |      |
| ceiling/cavity  | 0.7              | 0.7  | 0.5  | 0.5   | 0.3  | 0.7            | 0.7  | 0.5              | 0.5  | 0.3  |
| walls   | 0.5              | 0.3  | 0.5  | 0.3   | 0.3  | 0.5            | 0.3  | 0.5              | 0.3  | 0.3  |
| working plane   | 0.2              | 0.2  | 0.2  | 0.2   | 0.2  | 0.2            | 0.2  | 0.2              | 0.2  | 0.2  |
| Room dimensions   | Viewed crosswise |      |      |       |      | Viewed endwise |      |                  |      |      |
| x = 2H y = 2H   | 18.4             | 19.8 | 18.6 | 20.0  | 20.2 | 18.8           | 20.2 | 19.1             | 20.4 | 20.6 |
| 3H  | 19.2             | 20.5 | 19.5 | 20.7  | 21.0 | 20.0           | 21.3 | 20.3             | 21.5 | 21.8 |
| 4H  | 19.5             | 20.7 | 19.8 | 21.0  | 21.2 | 20.4           | 21.6 | 20.7             | 21.9 | 22.1 |
| 6H  | 19.6             | 20.8 | 20.0 | 21.0  | 21.3 | 20.6           | 21.7 | 20.9             | 22.0 | 22.3 |
| 8H  | 19.6             | 20.7 | 20.0 | 21.0  | 21.3 | 20.6           | 21.7 | 20.9             | 22.0 | 22.3 |
| 12H   | 19.6             | 20.7 | 20.0 | 21.0  | 21.3 | 20.6           | 21.6 | 20.9             | 21.9 | 22.2 |
| 4H 2H   | 18.9             | 20.2 | 19.3 | 20.4  | 20.6 | 19.3           | 20.5 | 19.6             | 20.8 | 21.0 |
| 3H  | 20.0             | 21.0 | 20.3 | 21.3  | 21.6 | 20.7           | 21.7 | 21.0             | 22.0 | 22.3 |
| 4H  | 20.4             | 21.3 | 20.7 | 21.6  | 22.0 | 21.1           | 22.1 | 21.5             | 22.4 | 22.7 |
| 6H  | 20.6             | 21.4 | 21.0 | 21.7  | 22.1 | 21.4           | 22.2 | 21.8             | 22.6 | 22.9 |
| 8H  | 20.6             | 21.4 | 21.0 | 21.7  | 22.1 | 21.4           | 22.2 | 21.8             | 22.6 | 23.0 |
| 12H   | 20.6             | 21.3 | 21.0 | 21.7  | 22.1 | 21.4           | 22.2 | 21.9             | 22.5 | 22.9 |
| 8H 4H   | 20.5             | 21.3 | 20.9 | 21.7  | 22.1 | 21.2           | 22.0 | 21.6             | 22.4 | 22.7 |
| 6H  | 20.8             | 21.5 | 21.3 | 21.9  | 22.3 | 21.6           | 22.2 | 22.0             | 22.6 | 23.0 |
| 8H  | 20.9             | 21.5 | 21.3 | 21.9  | 22.3 | 21.7           | 22.2 | 22.1             | 22.7 | 23.1 |
| 12H   | 20.9             | 21.4 | 21.4 | 21.8  | 22.3 | 21.7           | 22.2 | 22.2             | 22.6 | 23.1 |
| 12H 4H  | 20.5             | 21.2 | 20.9 | 21.6  | 22.0 | 21.2           | 21.9 | 21.6             | 22.3 | 22.7 |
| 6H  | 20.8             | 21.4 | 21.3 | 21.8  | 22.3 | 21.6           | 22.1 | 22.0             | 22.6 | 23.0 |
| 8H  | 20.9             | 21.4 | 21.4 | 21.8  | 22.3 | 21.7           | 22.2 | 22.1             | 22.6 | 23.1 |
| Variations with the observer position at spacings:                |                  |      |      |       |      |                |      |                  |      |      |
| S = 1.0H  | + 0.3 / - 0.5    |      |      |       |      | + 0.2 / - 0.3  |      |                  |      |      |
| 1.5H  | + 0.2 / - 0.4    |      |      |       |      | + 0.2 / - 0.4  |      |                  |      |      |
| 2.0H  | + 0.4 / - 1.1    |      |      |       |      | + 0.4 / - 0.3  |      |                  |      |      |

CIE Pub.117 Corrected 2221 lm Total Lamp Luminous Flux. (8log(F/F0) = 2.8)

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:13 February 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

**UTILIZATION FACTORS TABLE**

|   |         |                  |
|---|---------|------------------|
| Test:U:239.9V I:0.1090A P:23.12W PF:0.8834 Lamp Flux:2220.85x1 lm |         |                  |
| NAME: HIP_1160_NA_WHT_ASY_HE_150mA_TUNABLE @ 4000K TYPE:LED       | WEIGHT: |                  |
| SPEC.:  | DIM.:   | SERIAL No.:1     |
| MFR.: DARKON  | SUR.:   | Shielding Angle: |

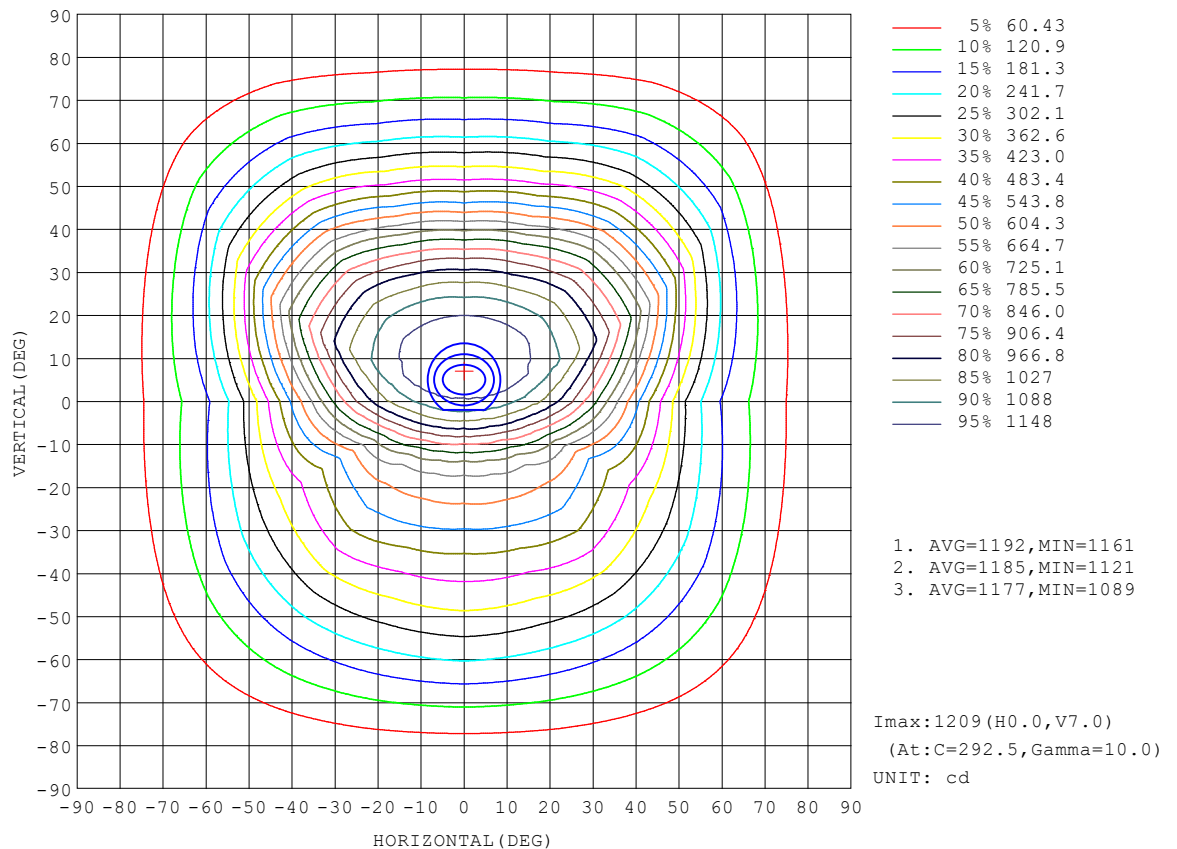
| REFLECTANCE                      |  |     |           |     |     |     |     |               |     |        |
|----------------------------------|--|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| Ceiling                          | 0.8  | 0.8 | 0.8       | 0.7 | 0.7 | 0.7 | 0.5 | 0.5           | 0.5 | 0      |
| Walls                            | 0.7  | 0.5 | 0.3       | 0.7 | 0.5 | 0.3 | 0.7 | 0.5           | 0.3 | 0      |
| Working plane                    | 0.2  | 0.2 | 0.2       | 0.2 | 0.2 | 0.2 | 0.2 | 0.2           | 0.2 | 0      |
| ROOM INDEX                       | UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 63   | 53  | 46        | 63  | 53  | 46  | 62  | 52            | 46  | 40     |
| 0.80                             | 73   | 63  | 56        | 72  | 63  | 56  | 71  | 62            | 56  | 50     |
| 1.00                             | 82   | 72  | 65        | 80  | 71  | 65  | 78  | 72            | 65  | 58     |
| 1.25                             | 88   | 79  | 73        | 87  | 78  | 72  | 84  | 77            | 72  | 65     |
| 1.50                             | 93   | 84  | 78        | 91  | 83  | 78  | 88  | 82            | 77  | 70     |
| 2.00                             | 99   | 92  | 86        | 97  | 90  | 85  | 94  | 88            | 84  | 77     |
| 2.50                             | 102  | 96  | 90        | 100 | 94  | 89  | 97  | 92            | 88  | 80     |
| 3.00                             | 105  | 99  | 95        | 103 | 98  | 93  | 99  | 95            | 91  | 83     |
| 4.00                             | 108  | 104 | 100       | 106 | 102 | 98  | 102 | 99            | 96  | 87     |
| 5.00                             | 110  | 106 | 103       | 108 | 104 | 101 | 104 | 101           | 98  | 90     |
| ROOM INDEX                       | UF (total)   |     |           |     |     |     |     |               |     | Direct |
| According to DIN EN 13032-2 2004 |  |     | Suspended |     |     |     |     | SHRNOM = 1.25 |     |        |

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JEFF  
Test Date: 13 February 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 7.995m [K=1.0000]  
Remarks:

**ISOCANDELA DIAGRAM**

|   |         |                  |
|---|---------|------------------|
| Test:U:239.9V I:0.1090A P:23.12W PF:0.8834 Lamp Flux:2220.85x1 lm |         |                  |
| NAME: HIP_1160_NA_WHT_ASY_HE_150mA_TUNABLE @ 4000K TYPE:LED       | WEIGHT: |                  |
| SPEC.:  | DIM.:   | SERIAL No.:1     |
| MFR.: DARKON  | SUR.:   | Shielding Angle: |



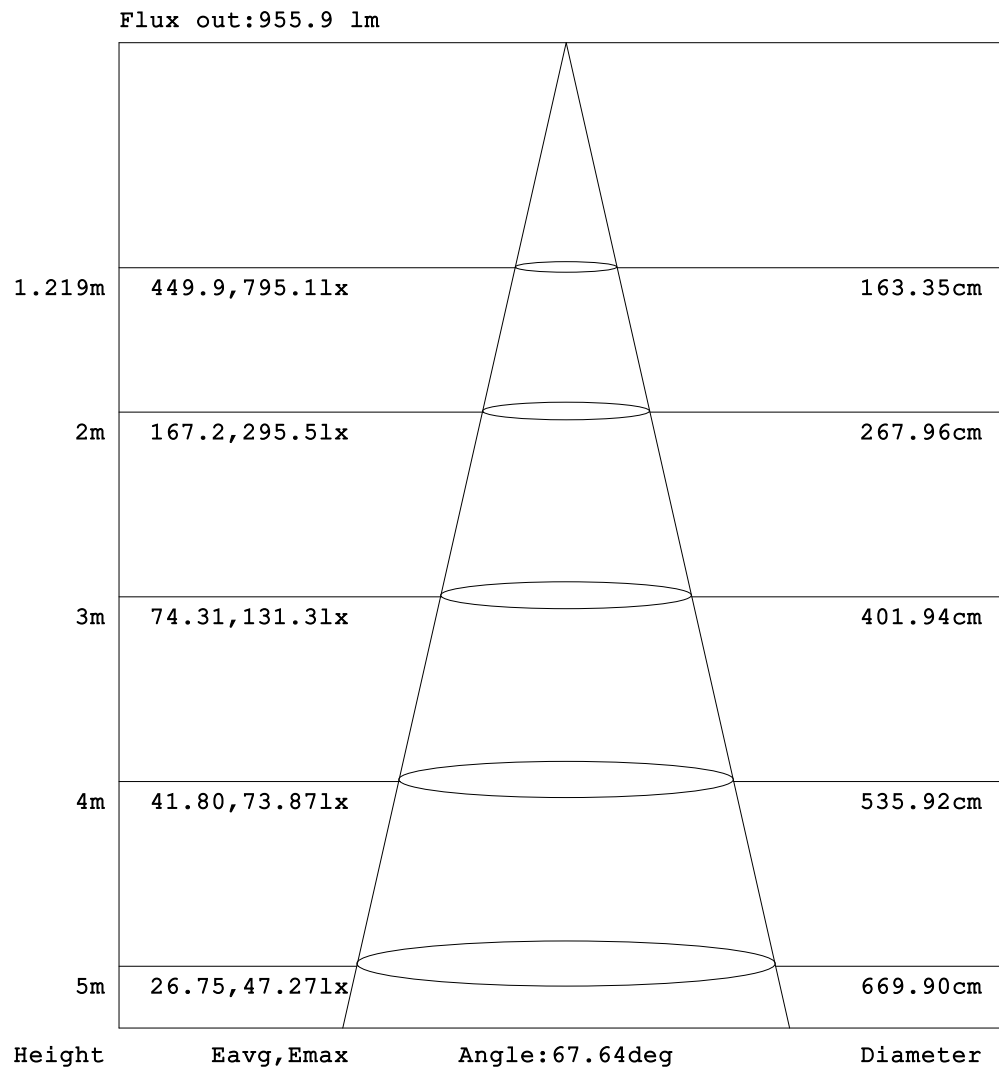
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:13 February 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:



**AAI Figure**

|   |         |                  |
|---|---------|------------------|
| Test:U:239.9V I:0.1090A P:23.12W PF:0.8834 Lamp Flux:2220.85x1 lm |         |                  |
| NAME: HIP_1160_NA_WHT_ASY_HE_150mA_TUNABLE @ 4000K TYPE:LED       | WEIGHT: |                  |
| SPEC.:  | DIM.:   | SERIAL No.:1     |
| MFR.: DARKON  | SUR.:   | Shielding Angle: |



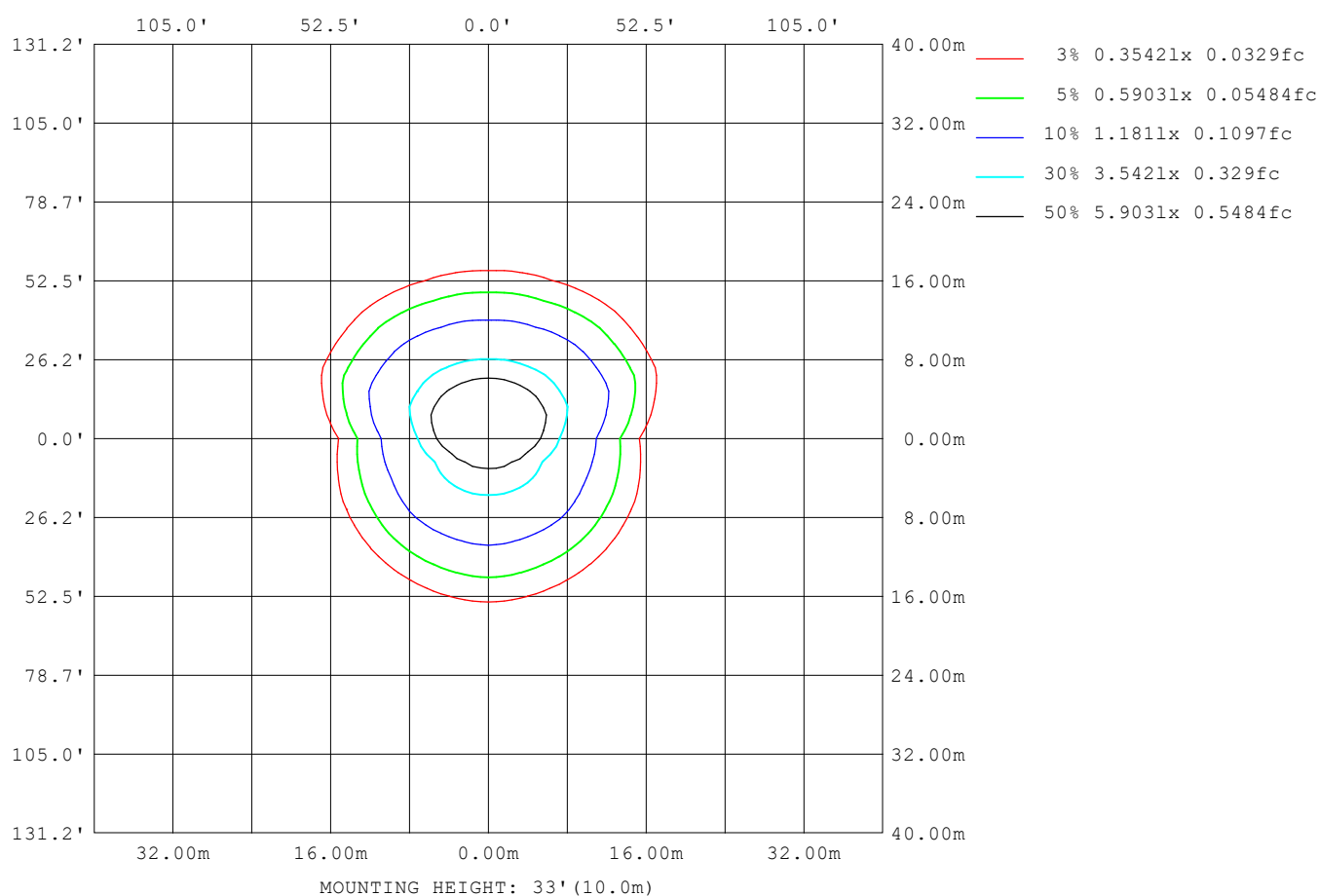
**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JEFF  
Test Date: 13 February 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 7.995m [K=1.0000]  
Remarks:

# ISOLUX DIAGRAM

|   |         |                  |
|---|---------|------------------|
| Test:U:239.9V I:0.1090A P:23.12W PF:0.8834 Lamp Flux:2220.85x1 lm |         |                  |
| NAME: HIP_1160_NA_WHT_ASY_HE_150mA_TUNABLE @ 4000K TYPE:LED       | WEIGHT: |                  |
| SPEC.:  | DIM.:   | SERIAL No.:1     |
| MFR.: DARKON  | SUR.:   | Shielding Angle: |



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:13 February 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

### LED Avg.L Report

|   |         |                  |
|---|---------|------------------|
| Test:U:239.9V I:0.1090A P:23.12W PF:0.8834 Lamp Flux:2220.85x1 lm |         |                  |
| NAME: HIP_1160_NA_WHT_ASY_HE_150mA_TUNABLE @ 4000K TYPE:LED       | WEIGHT: |                  |
| SPEC.:  | DIM.:   | SERIAL No.:1     |
| MFR.: DARKON  | SUR.:   | Shielding Angle: |

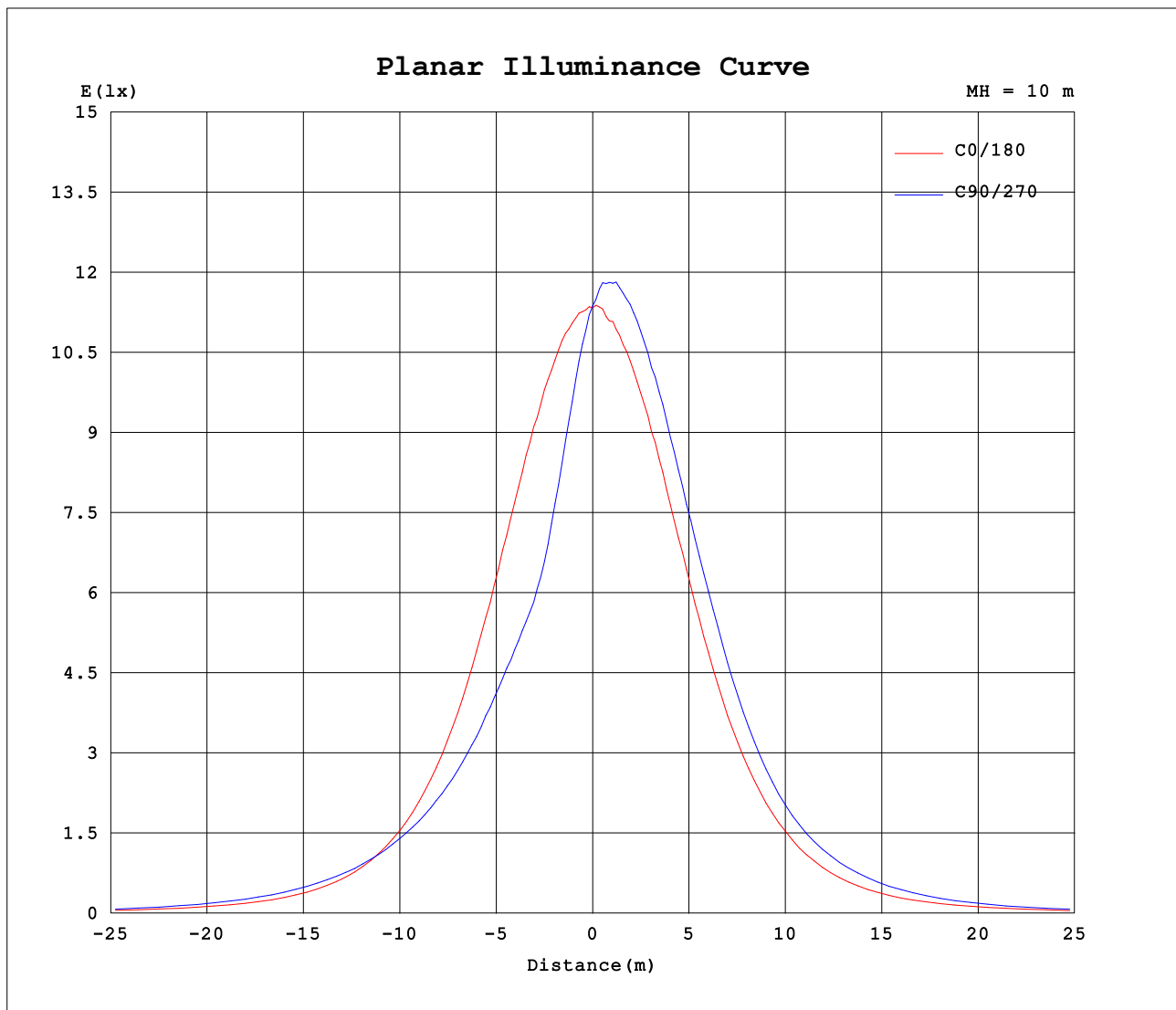
| AvgL             | cd/m2 |
|------------------|-------|
| L_0~180 (65) av  | 4494  |
| L_0~180 (75) av  | 3362  |
| L_0~180 (85) av  | 1577  |
| L_90~270 (65) av | 6630  |
| L_90~270 (75) av | 4538  |
| L_90~270 (85) av | 2201  |
| L_45 (65) av     | 7405  |
| L_45 (75) av     | 4892  |
| L_45 (85) av     | 2270  |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:13 February 2023

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.995m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JEFF  
Test Date: 13 February 2023

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 7.995m [K=1.0000]  
Remarks:

