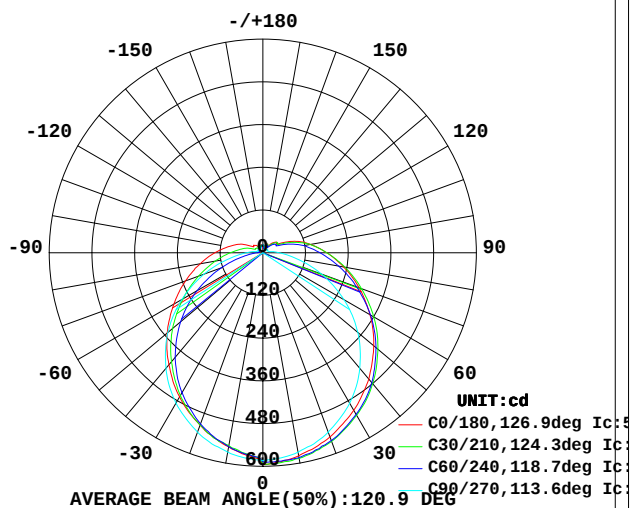


## LUMINAIRE PHOTOMETRIC TEST REPORT

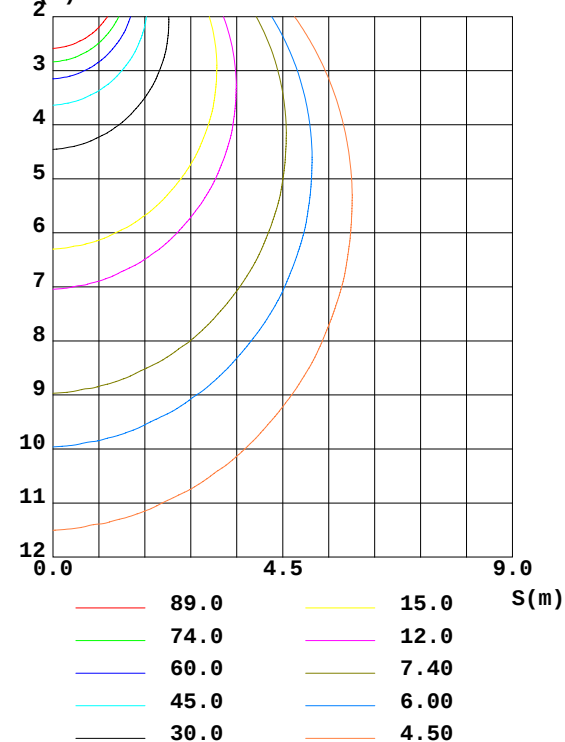
|                                                                   |          |                   |
|-------------------------------------------------------------------|----------|-------------------|
| Test:U:120.2V I:0.2485A P:27.79W PF:0.9305 Lamp Flux:2229.77x1 lm |          |                   |
| NAME: ASD-LVF21-30D28CC-NK                                        | TYPE:LED | WEIGHT:           |
| SPEC.:5000K                                                       | DIM.:    | SERIAL No.:       |
| MFR.: ASD Lighting corp                                           | SUR.:    | PROTECTION ANGLE: |

| DATA OF LAMP     |                      | PHOTOMETRIC DATA Eff: 80.25 lm/W |         |                    |           |
|------------------|----------------------|----------------------------------|---------|--------------------|-----------|
| MODEL            | ASD-LVF21-30D28CC-NK | I <sub>max</sub> (cd)            | 595.4   | S/MH(C0/180)       | 1.21      |
| NOMINAL POWER(W) | 28                   | LOR(%)                           | 100.0   | S/MH(C90/270)      | 1.25      |
| RATED VOLTAGE(V) | 120                  | TOTAL FLUX(lm)                   | 2229.8  | η UP, DN(C0-180)   | 6.5, 43.9 |
| NOMINAL FLUX(lm) | 2229.77              | CIE CLASS                        | SEMI-D. | η UP, DN(C180-360) | 6.3, 43.3 |
| LAMPS INSIDE     | 1                    | η up(%)                          | 12.8    | CIBSE SHR NOM      | 1.25      |
| TEST VOLTAGE(V)  | 120                  | η down(%)                        | 87.2    | CIBSE SHR MAX      | 1.35      |

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2025-11-13

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.291  
Humidity:65.0%  
Test Distance:7.500m [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       | 579.3                 | 589.3 | 568.8 | 547.7 | 553.3 | 547.7 | 568.8 | 589.3 | 0- 10    | 54.90       | 54.90        | 2.46, 2.46 |
| 20       | 550.7                 | 572.8 | 536.4 | 503.7 | 515.5 | 503.7 | 536.4 | 572.8 | 10- 20   | 156.6       | 211.5        | 9.49, 9.49 |
| 30       | 511.0                 | 541.3 | 488.0 | 446.3 | 468.1 | 446.3 | 488.0 | 541.3 | 20- 30   | 237.9       | 449.4        | 20.2, 20.2 |
| 40       | 463.1                 | 499.2 | 423.7 | 375.5 | 410.7 | 375.5 | 423.7 | 499.2 | 30- 40   | 290.5       | 739.9        | 33.2, 33.2 |
| 50       | 407.0                 | 445.6 | 348.5 | 298.8 | 351.1 | 298.8 | 348.5 | 445.6 | 40- 50   | 309.8       | 1050         | 47.1, 47.1 |
| 60       | 347.3                 | 386.4 | 262.9 | 217.1 | 288.8 | 217.1 | 262.9 | 386.4 | 50- 60   | 296.6       | 1346         | 60.4, 60.4 |
| 70       | 287.9                 | 322.7 | 175.5 | 142.7 | 231.1 | 142.7 | 175.5 | 322.7 | 60- 70   | 255.9       | 1602         | 71.9, 71.9 |
| 80       | 230.7                 | 261.9 | 96.09 | 83.91 | 178.2 | 83.91 | 96.09 | 261.9 | 70- 80   | 199.5       | 1802         | 80.8, 80.8 |
| 90       | 180.0                 | 203.5 | 46.22 | 46.35 | 135.1 | 46.35 | 46.22 | 203.5 | 80- 90   | 143.6       | 1945         | 87.2, 87.2 |
| 100      | 136.0                 | 155.4 | 20.27 | 26.30 | 98.63 | 26.30 | 20.27 | 155.4 | 90-100   | 102.0       | 2047         | 91.8, 91.8 |
| 110      | 94.75                 | 106.5 | 15.54 | 15.60 | 70.68 | 15.60 | 15.54 | 106.5 | 100-110  | 68.57       | 2116         | 94.9, 94.9 |
| 120      | 51.94                 | 57.86 | 14.88 | 13.70 | 37.13 | 13.70 | 14.88 | 57.86 | 110-120  | 39.96       | 2156         | 96.7, 96.7 |
| 130      | 46.67                 | 51.06 | 15.00 | 19.16 | 32.92 | 19.16 | 15.00 | 51.06 | 120-130  | 27.26       | 2183         | 97.9, 97.9 |
| 140      | 27.59                 | 31.15 | 12.58 | 15.41 | 26.08 | 15.41 | 12.58 | 31.15 | 130-140  | 19.16       | 2202         | 98.8, 98.8 |
| 150      | 27.40                 | 25.79 | 13.83 | 19.34 | 23.23 | 19.34 | 13.83 | 25.79 | 140-150  | 12.14       | 2214         | 99.3, 99.3 |
| 160      | 20.45                 | 14.72 | 14.34 | 19.06 | 20.31 | 19.06 | 14.34 | 14.72 | 150-160  | 8.764       | 2223         | 99.7, 99.7 |
| 170      | 20.49                 | 11.57 | 20.07 | 20.35 | 21.68 | 20.35 | 20.07 | 11.57 | 160-170  | 4.770       | 2228         | 99.9, 99.9 |
| 180      | 19.28                 | 21.83 | 23.39 | 22.07 | 16.91 | 22.07 | 23.39 | 21.83 | 170-180  | 1.859       | 2230         | 100, 100   |
| DEG      | LUMINOUS INTENSITY:cd |       |       |       |       |       |       |       |          | UNIT:lm     |              |            |

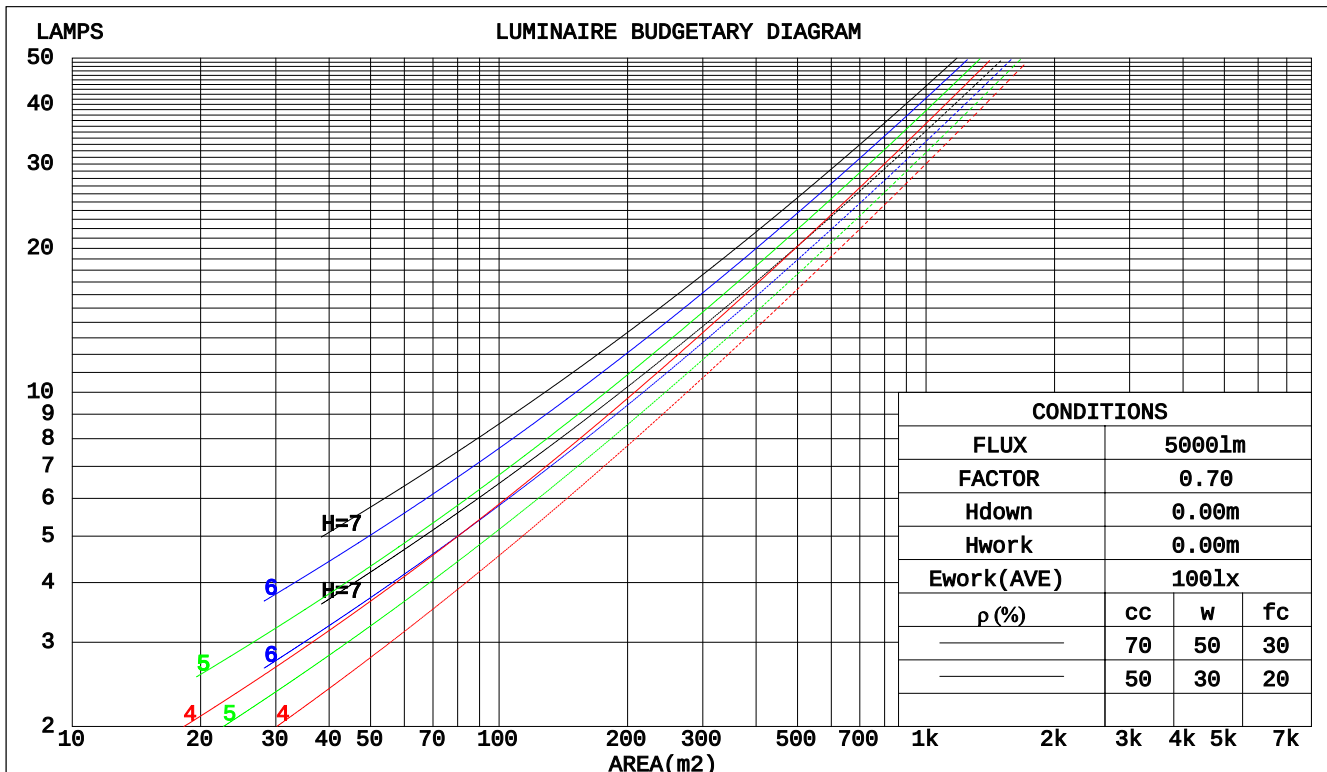
C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2025-11-13

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE G0-2000A\_V1 SYSTEM V2.0.291  
 Humidity: 65.0%  
 Test Distance: 7.500m [K=1.0000]  
 Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

|                                                                   |          |                   |
|-------------------------------------------------------------------|----------|-------------------|
| Test:U:120.2V I:0.2485A P:27.79W PF:0.9305 Lamp Flux:2229.77x1 lm |          |                   |
| NAME: ASD-LVF21-30D28CC-NK                                        | TYPE:LED | WEIGHT:           |
| SPEC.:5000K                                                       | DIM.:    | SERIAL No.:       |
| MFR.: ASD Lighting corp                                           | 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         | 1.16                  | 1.16 | 1.16 | 1.12 | 1.12 | 1.12 | 1.04                            | 1.04 | 1.04 | .97 | .97 | .97 | .90 | .90 | .90 | .87 |
| 1.0         | .98                   | .93  | .88  | .94  | .89  | .85  | .87                             | .84  | .80  | .81 | .78 | .75 | .76 | .73 | .71 | .68 |
| 2.0         | .84                   | .76  | .70  | .81  | .74  | .68  | .75                             | .69  | .65  | .70 | .65 | .61 | .65 | .61 | .58 | .55 |
| 3.0         | .73                   | .64  | .57  | .71  | .62  | .56  | .66                             | .59  | .53  | .61 | .55 | .51 | .57 | .52 | .48 | .45 |
| 4.0         | .64                   | .55  | .48  | .62  | .54  | .47  | .58                             | .51  | .45  | .54 | .48 | .43 | .50 | .45 | .41 | .38 |
| 5.0         | .57                   | .48  | .41  | .55  | .47  | .40  | .52                             | .44  | .38  | .48 | .42 | .37 | .45 | .40 | .35 | .33 |
| 6.0         | .51                   | .42  | .35  | .50  | .41  | .35  | .47                             | .39  | .33  | .44 | .37 | .32 | .41 | .35 | .31 | .28 |
| 7.0         | .46                   | .37  | .31  | .45  | .37  | .31  | .42                             | .35  | .29  | .40 | .33 | .28 | .37 | .32 | .27 | .25 |
| 8.0         | .42                   | .34  | .28  | .41  | .33  | .27  | .39                             | .31  | .26  | .36 | .30 | .25 | .34 | .29 | .24 | .22 |
| 9.0         | .39                   | .30  | .25  | .38  | .30  | .24  | .35                             | .28  | .23  | .33 | .27 | .23 | .32 | .26 | .22 | .20 |
| 10.0        | .36                   | .28  | .22  | .35  | .27  | .22  | .33                             | .26  | .21  | .31 | .25 | .21 | .29 | .24 | .20 | .18 |



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2025-11-13

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.291  
Humidity:65.0%  
Test Distance:7.500m [K=1.0000]  
Remarks:

## WEC AND CCEC

|                                                                   |  |  |          |  |                   |
|-------------------------------------------------------------------|--|--|----------|--|-------------------|
| Test:U:120.2V I:0.2485A P:27.79W PF:0.9305 Lamp Flux:2229.77x1 lm |  |  |          |  |                   |
| NAME: ASD-LVF21-30D28CC-NK                                        |  |  | TYPE:LED |  | WEIGHT:           |
| SPEC.:5000K                                                       |  |  | DIM.:    |  | SERIAL No.:       |
| MFR.: ASD Lighting corp                                           |  |  | SUR.:    |  | PROTECTION ANGLE: |

| 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 |      |      |      |      |      | Wall Exitance Coefficients(WEC) |      |      |      |      |      |      |      |      |   |  |
| 0.0             |                       |      |      |      |      |      |                                 |      |      |      |      |      |      |      |      |   |  |
| 1.0             | .370                  | .210 | .067 | .358 | .204 | .065 | .338                            | .194 | .062 | .319 | .184 | .059 | .301 | .174 | .056 |   |  |
| 2.0             | .324                  | .178 | .055 | .314 | .173 | .053 | .296                            | .164 | .051 | .278 | .156 | .049 | .263 | .148 | .047 |   |  |
| 3.0             | .290                  | .155 | .046 | .281 | .151 | .045 | .265                            | .143 | .044 | .249 | .136 | .042 | .234 | .130 | .040 |   |  |
| 4.0             | .263                  | .136 | .040 | .255 | .133 | .039 | .239                            | .127 | .038 | .225 | .121 | .036 | .212 | .115 | .035 |   |  |
| 5.0             | .240                  | .122 | .035 | .232 | .119 | .035 | .218                            | .114 | .033 | .206 | .109 | .032 | .194 | .104 | .031 |   |  |
| 6.0             | .220                  | .110 | .032 | .213 | .108 | .031 | .201                            | .103 | .030 | .189 | .098 | .029 | .178 | .094 | .028 |   |  |
| 7.0             | .203                  | .101 | .028 | .197 | .098 | .028 | .186                            | .094 | .027 | .175 | .090 | .026 | .165 | .086 | .025 |   |  |
| 8.0             | .189                  | .092 | .026 | .183 | .090 | .026 | .173                            | .086 | .025 | .163 | .083 | .024 | .154 | .079 | .023 |   |  |
| 9.0             | .176                  | .085 | .024 | .171 | .083 | .023 | .162                            | .080 | .023 | .153 | .077 | .022 | .144 | .073 | .021 |   |  |
| 10.0            | .165                  | .079 | .022 | .161 | .078 | .022 | .152                            | .074 | .021 | .143 | .071 | .020 | .136 | .068 | .020 |   |  |

| 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             | .288                  | .288 | .288 | .246 | .246 | .246 | .168                                       | .168 | .168 | .096 | .096 | .096 | .031 | .031 | .031 |   |
| 1.0             | .282                  | .254 | .228 | .242 | .218 | .196 | .165                                       | .150 | .135 | .095 | .087 | .079 | .030 | .028 | .025 |   |
| 2.0             | .275                  | .230 | .193 | .236 | .198 | .167 | .162                                       | .137 | .116 | .093 | .080 | .068 | .030 | .026 | .022 |   |
| 3.0             | .268                  | .214 | .171 | .229 | .184 | .148 | .157                                       | .128 | .104 | .091 | .075 | .061 | .029 | .024 | .020 |   |
| 4.0             | .260                  | .201 | .156 | .223 | .174 | .135 | .153                                       | .121 | .095 | .089 | .071 | .056 | .029 | .023 | .019 |   |
| 5.0             | .252                  | .191 | .146 | .217 | .165 | .127 | .149                                       | .115 | .090 | .086 | .068 | .053 | .028 | .022 | .018 |   |
| 6.0             | .245                  | .183 | .138 | .210 | .158 | .121 | .145                                       | .111 | .085 | .084 | .065 | .051 | .027 | .021 | .017 |   |
| 7.0             | .238                  | .176 | .133 | .204 | .153 | .116 | .141                                       | .107 | .082 | .082 | .063 | .049 | .027 | .021 | .016 |   |
| 8.0             | .231                  | .171 | .129 | .199 | .148 | .112 | .138                                       | .104 | .080 | .080 | .061 | .048 | .026 | .020 | .016 |   |
| 9.0             | .225                  | .166 | .126 | .194 | .144 | .110 | .134                                       | .101 | .078 | .078 | .060 | .046 | .025 | .020 | .015 |   |
| 10.0            | .219                  | .161 | .123 | .189 | .140 | .108 | .131                                       | .099 | .076 | .076 | .058 | .046 | .025 | .019 | .015 |   |

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2025-11-13

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:7.500m [K=1.0000]  
 Remarks:

## UGR(Unified Glare Rating) Table

|                                                                   |     |                  |      |      |          |      |                |                   |      |      |      |
|-------------------------------------------------------------------|-----|------------------|------|------|----------|------|----------------|-------------------|------|------|------|
| Test:U:120.2V I:0.2485A P:27.79W PF:0.9305 Lamp Flux:2229.77x1 lm |     |                  |      |      |          |      |                |                   |      |      |      |
| NAME: ASD-LVF21-30D28CC-NK                                        |     |                  |      |      | TYPE:LED |      |                | WEIGHT:           |      |      |      |
| SPEC.:5000K                                                       |     |                  |      |      | DIM.:    |      |                | SERIAL No.:       |      |      |      |
| MFR.: ASD Lighting corp                                           |     |                  |      |      | 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                                                     |     | 19.3             | 20.7 | 19.8 | 21.2     | 21.6 | 18.6           | 20.0              | 19.0 | 20.4 | 20.9 |
| 3H                                                                |     | 21.7             | 23.0 | 22.1 | 23.4     | 23.9 | 20.4           | 21.7              | 20.8 | 22.1 | 22.6 |
| 4H                                                                |     | 22.9             | 24.2 | 23.4 | 24.7     | 25.2 | 21.2           | 22.4              | 21.6 | 22.9 | 23.4 |
| 6H                                                                |     | 24.3             | 25.5 | 24.9 | 26.0     | 26.6 | 21.9           | 23.0              | 22.4 | 23.5 | 24.1 |
| 8H                                                                |     | 25.1             | 26.3 | 25.6 | 26.8     | 27.3 | 22.2           | 23.3              | 22.7 | 23.8 | 24.4 |
| 12H                                                               |     | 26.0             | 27.1 | 26.5 | 27.6     | 28.2 | 22.5           | 23.6              | 23.0 | 24.1 | 24.7 |
| 4H 2H                                                             |     | 20.2             | 21.5 | 20.7 | 21.9     | 22.5 | 19.7           | 21.0              | 20.2 | 21.4 | 22.0 |
| 3H                                                                |     | 22.8             | 23.8 | 23.3 | 24.4     | 24.9 | 21.8           | 22.9              | 22.4 | 23.4 | 24.0 |
| 4H                                                                |     | 24.2             | 25.2 | 24.7 | 25.7     | 26.3 | 22.9           | 23.9              | 23.4 | 24.4 | 25.0 |
| 6H                                                                |     | 25.8             | 26.7 | 26.3 | 27.2     | 27.9 | 23.8           | 24.7              | 24.4 | 25.3 | 25.9 |
| 8H                                                                |     | 26.6             | 27.5 | 27.2 | 28.1     | 28.7 | 24.3           | 25.1              | 24.8 | 25.7 | 26.3 |
| 12H                                                               |     | 27.6             | 28.4 | 28.2 | 29.0     | 29.7 | 24.7           | 25.4              | 25.3 | 26.0 | 26.7 |
| 8H 4H                                                             |     | 24.8             | 25.6 | 25.4 | 26.2     | 26.9 | 23.8           | 24.6              | 24.4 | 25.2 | 25.9 |
| 6H                                                                |     | 26.7             | 27.4 | 27.3 | 28.0     | 28.7 | 25.2           | 25.9              | 25.8 | 26.5 | 27.2 |
| 8H                                                                |     | 27.7             | 28.4 | 28.4 | 29.0     | 29.7 | 25.9           | 26.5              | 26.5 | 27.2 | 27.9 |
| 12H                                                               |     | 28.9             | 29.5 | 29.6 | 30.1     | 30.9 | 26.6           | 27.1              | 27.2 | 27.8 | 28.5 |
| 12H 4H                                                            |     | 24.9             | 25.7 | 25.5 | 26.3     | 27.0 | 24.0           | 24.8              | 24.6 | 25.4 | 26.1 |
| 6H                                                                |     | 26.9             | 27.6 | 27.6 | 28.2     | 28.9 | 25.6           | 26.3              | 26.3 | 26.9 | 27.6 |
| 8H                                                                |     | 28.1             | 28.7 | 28.8 | 29.3     | 30.1 | 26.5           | 27.1              | 27.2 | 27.7 | 28.5 |
| Variations with the observer position at spacings:                |     |                  |      |      |          |      |                |                   |      |      |      |
| S = 1.0H                                                          |     | + 0.1 / - 0.1    |      |      |          |      | + 0.1 / - 0.1  |                   |      |      |      |
| 1.5H                                                              |     | + 0.2 / - 0.3    |      |      |          |      | + 0.2 / - 0.3  |                   |      |      |      |
| 2.0H                                                              |     | + 0.2 / - 0.4    |      |      |          |      | + 0.3 / - 0.5  |                   |      |      |      |

CIE Pub.117 Corrected 2230 lm Total Lamp Luminous Flux.(8log(F/F0) = 2.8)

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2025-11-13

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:7.500m [K=1.0000]  
 Remarks:

## UTILIZATION FACTORS TABLE

|                                                                   |          |                   |
|-------------------------------------------------------------------|----------|-------------------|
| Test:U:120.2V I:0.2485A P:27.79W PF:0.9305 Lamp Flux:2229.77x1 lm |          |                   |
| NAME: ASD-LVF21-30D28CC-NK                                        | TYPE:LED | WEIGHT:           |
| SPEC.:5000K                                                       | DIM.:    | SERIAL No.:       |
| MFR.: ASD Lighting corp                                           | SUR.:    | PROTECTION ANGLE: |

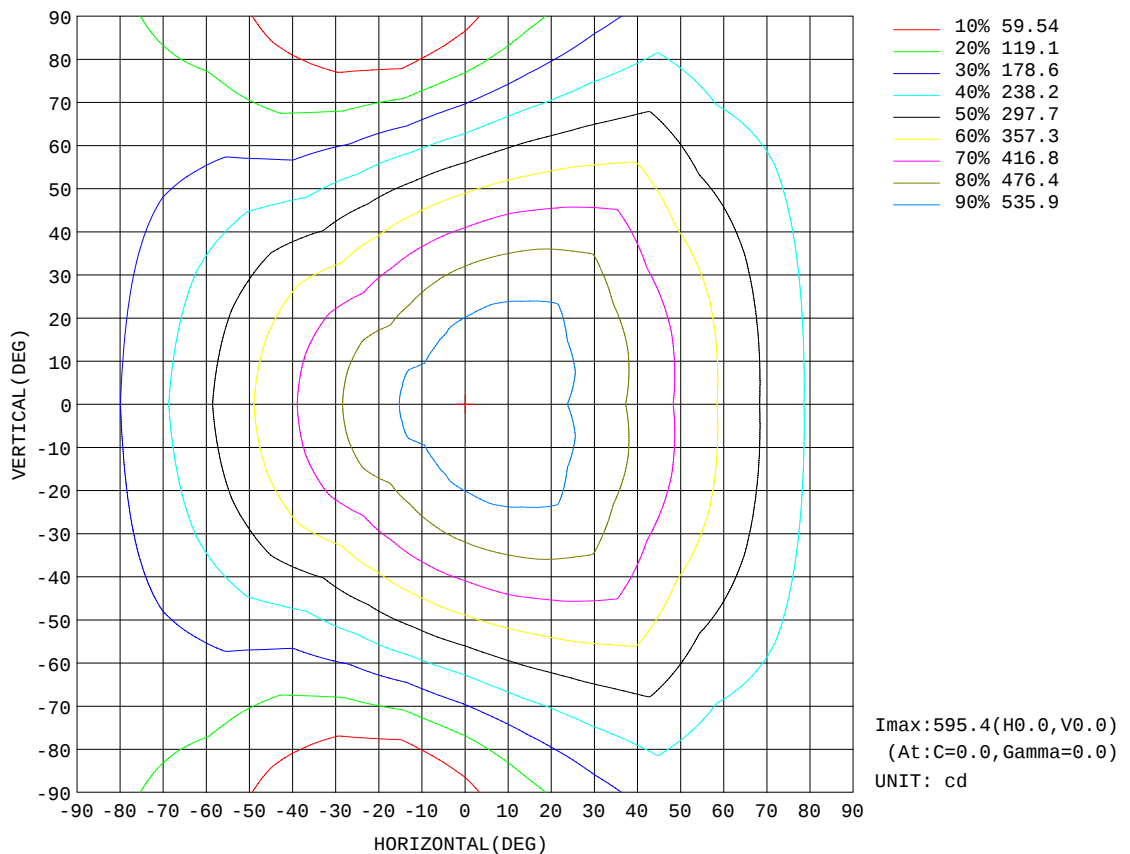
| REFLECTANCE                      |                                                     |     |           |     |     |     |     |               |     |        |
|----------------------------------|-----------------------------------------------------|-----|-----------|-----|-----|-----|-----|---------------|-----|--------|
| 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) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 51                                                  | 38  | 31        | 50  | 38  | 31  | 48  | 37            | 31  | 24     |
| 0.80                             | 60                                                  | 47  | 39        | 58  | 47  | 39  | 56  | 45            | 38  | 31     |
| 1.00                             | 68                                                  | 55  | 47        | 66  | 54  | 47  | 63  | 55            | 46  | 37     |
| 1.25                             | 75                                                  | 63  | 54        | 73  | 61  | 54  | 69  | 59            | 52  | 43     |
| 1.50                             | 80                                                  | 68  | 60        | 77  | 67  | 59  | 73  | 64            | 57  | 48     |
| 2.00                             | 87                                                  | 76  | 68        | 84  | 75  | 67  | 79  | 71            | 65  | 54     |
| 2.50                             | 91                                                  | 81  | 74        | 88  | 79  | 73  | 83  | 75            | 70  | 58     |
| 3.00                             | 95                                                  | 86  | 79        | 92  | 84  | 77  | 86  | 79            | 74  | 62     |
| 4.00                             | 99                                                  | 92  | 86        | 96  | 89  | 84  | 90  | 84            | 79  | 67     |
| 5.00                             | 102                                                 | 96  | 90        | 99  | 93  | 88  | 92  | 87            | 83  | 70     |
| ROOM INDEX                       | UF(total)                                           |     |           |     |     |     |     |               |     | Direct |
| According to DIN EN 13032-2 2004 |                                                     |     | Suspended |     |     |     |     | SHRNOM = 1.25 |     |        |

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2025-11-13

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:7.500m [K=1.0000]  
 Remarks:

## ISOCANDELA DIAGRAM

|                                                                   |          |                   |
|-------------------------------------------------------------------|----------|-------------------|
| Test:U:120.2V I:0.2485A P:27.79W PF:0.9305 Lamp Flux:2229.77x1 lm |          |                   |
| NAME: ASD-LVF21-30D28CC-NK                                        | TYPE:LED | WEIGHT:           |
| SPEC.:5000K                                                       | DIM.:    | SERIAL No.:       |
| MFR.: ASD Lighting corp                                           | SUR.:    | PROTECTION ANGLE: |

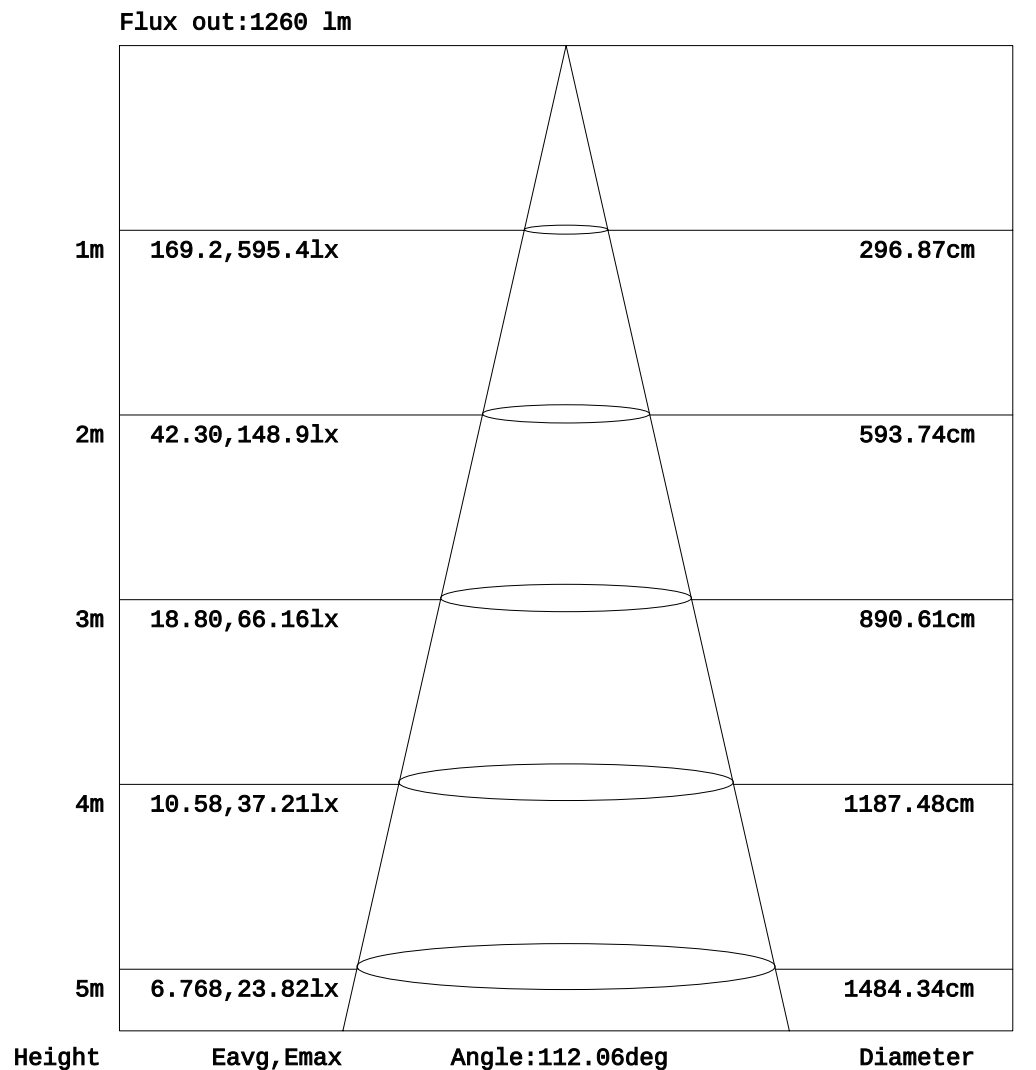


C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators:  
Test Date: 2025-11-13

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System: EVERFINE G0-2000A\_V1 SYSTEM V2.0.291  
Humidity: 65.0%  
Test Distance: 7.500m [K=1.0000]  
Remarks:

## AAI Figure

|                                                                   |          |                   |
|-------------------------------------------------------------------|----------|-------------------|
| Test:U:120.2V I:0.2485A P:27.79W PF:0.9305 Lamp Flux:2229.77x1 lm |          |                   |
| NAME: ASD-LVF21-30D28CC-NK                                        | TYPE:LED | WEIGHT:           |
| SPEC.:5000K                                                       | DIM.:    | SERIAL No.:       |
| MFR.: ASD Lighting corp                                           | SUR.:    | PROTECTION ANGLE: |



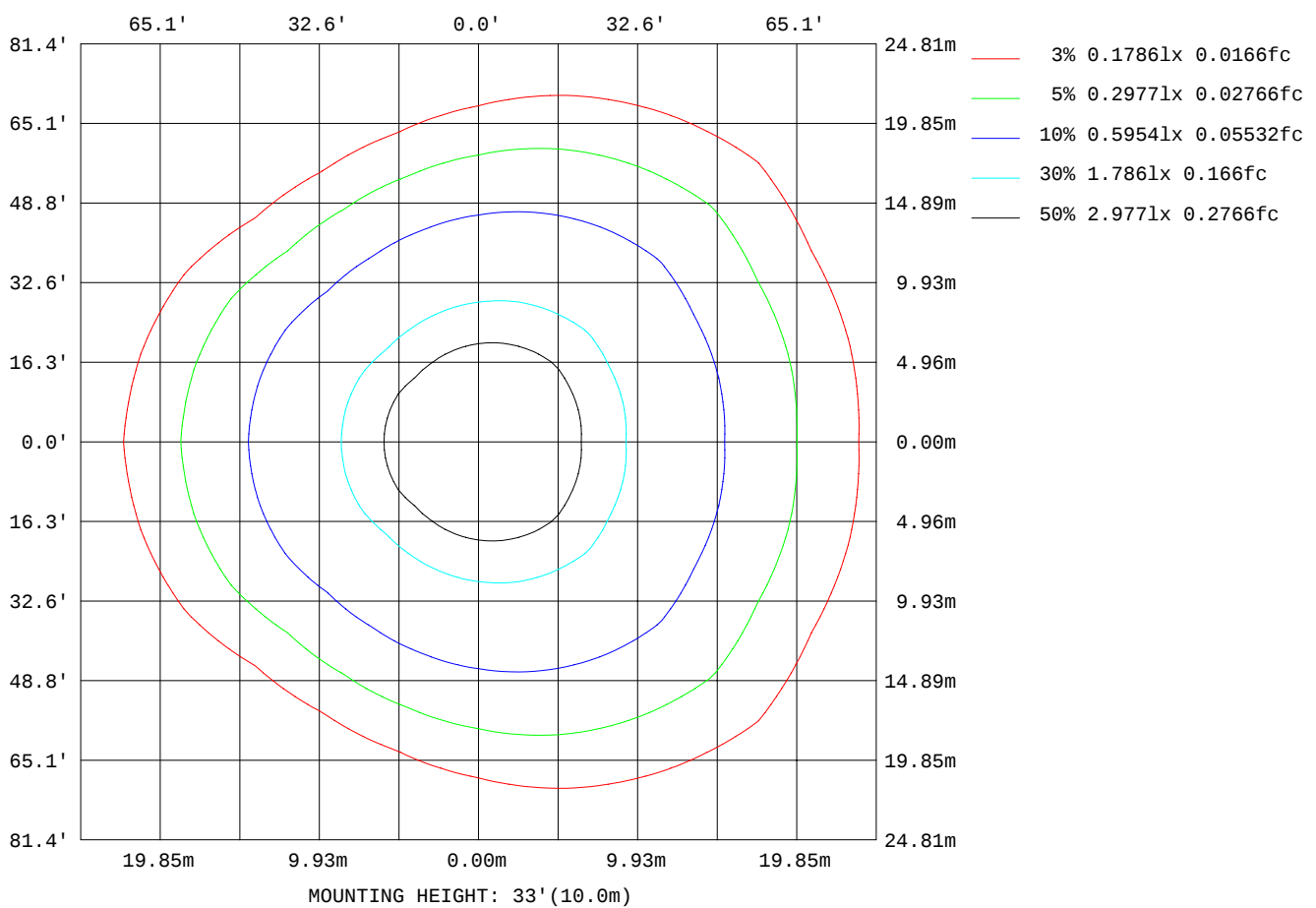
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2025-11-13

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:7.500m [K=1.0000]  
 Remarks:

## ISOLUX DIAGRAM

|                                                                   |          |                   |
|-------------------------------------------------------------------|----------|-------------------|
| Test:U:120.2V I:0.2485A P:27.79W PF:0.9305 Lamp Flux:2229.77x1 lm |          |                   |
| NAME: ASD-LVF21-30D28CC-NK                                        | TYPE:LED | WEIGHT:           |
| SPEC.:5000K                                                       | DIM.:    | SERIAL No.:       |
| MFR.: ASD Lighting corp                                           | SUR.:    | PROTECTION ANGLE: |



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:  
Test Date:2025-11-13

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.291  
Humidity:65.0%  
Test Distance:7.500m [K=1.0000]  
Remarks:

## LED Avg.L Report

|                                                                   |          |                   |
|-------------------------------------------------------------------|----------|-------------------|
| Test:U:120.2V I:0.2485A P:27.79W PF:0.9305 Lamp Flux:2229.77x1 lm |          |                   |
| NAME: ASD-LVF21-30D28CC-NK                                        | TYPE:LED | WEIGHT:           |
| SPEC.:5000K                                                       | DIM.:    | SERIAL No.:       |
| MFR.: ASD Lighting corp                                           | SUR.:    | PROTECTION ANGLE: |

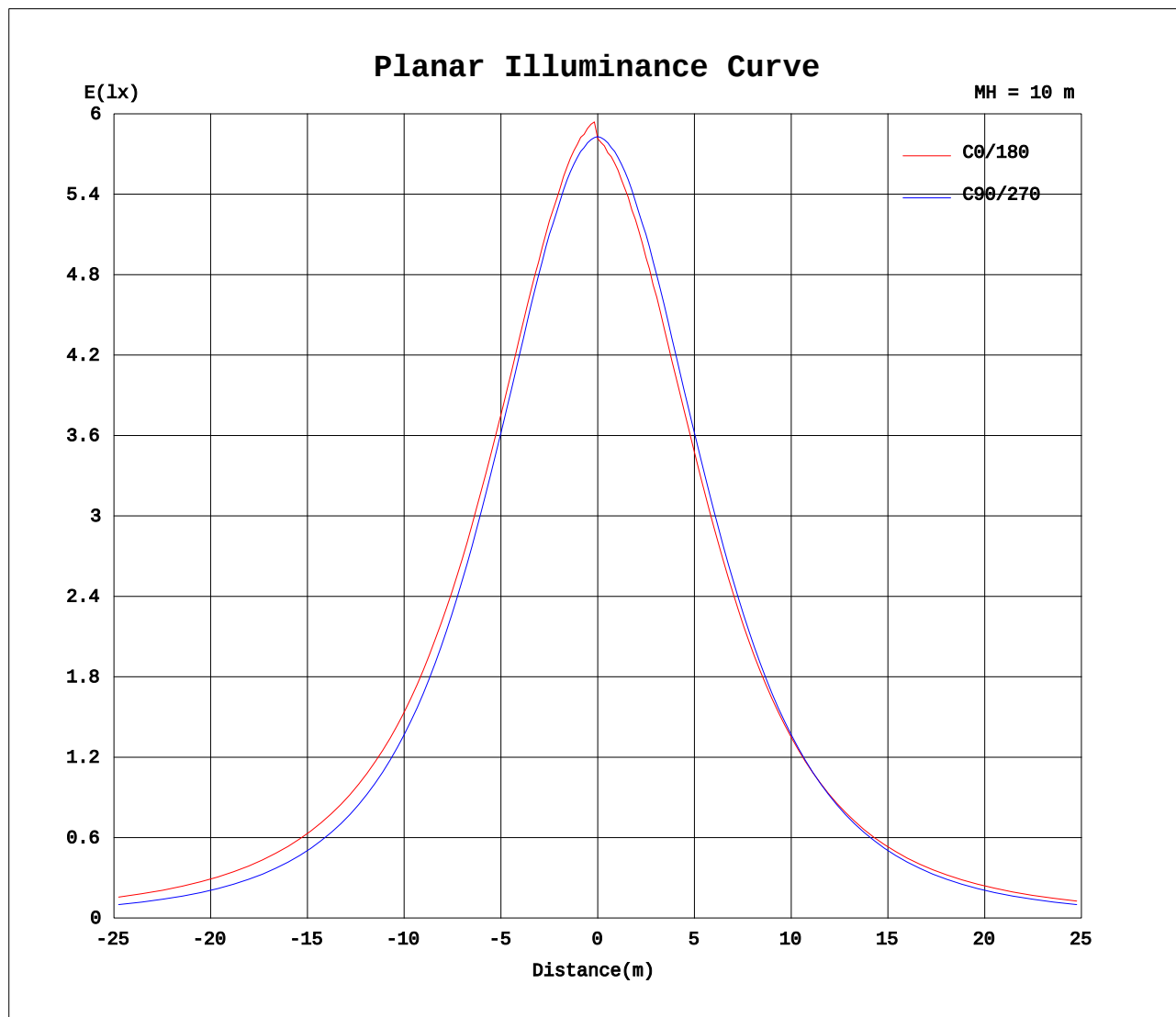
| AvgL           | cd/m2 |
|----------------|-------|
| L_0~180(65)av  | 6825  |
| L_0~180(75)av  | 8943  |
| L_0~180(85)av  | 20682 |
| L_90~270(65)av | 5183  |
| L_90~270(75)av | 5163  |
| L_90~270(85)av | 7666  |
| L_45(65)av     | 6308  |
| L_45(75)av     | 7779  |
| L_45(85)av     | 16941 |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2025-11-13

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:7.500m [K=1.0000]  
 Remarks:

## Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 15.0DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators:  
Test Date: 2025-11-13

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE G0-2000A\_V1 SYSTEM V2.0.291  
Humidity: 65.0%  
Test Distance: 7.500m [K=1.0000]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

|                                                                   |  |  |  |  |  |  |  |  |  |          |  |  |  |  |                   |  |  |  |  |
|-------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|----------|--|--|--|--|-------------------|--|--|--|--|
| Test:U:120.2V I:0.2485A P:27.79W PF:0.9305 Lamp Flux:2229.77x1 lm |  |  |  |  |  |  |  |  |  |          |  |  |  |  |                   |  |  |  |  |
| NAME: ASD-LVF21-30D28CC-NK                                        |  |  |  |  |  |  |  |  |  | TYPE:LED |  |  |  |  | WEIGHT:           |  |  |  |  |
| SPEC.:5000K                                                       |  |  |  |  |  |  |  |  |  | DIM.:    |  |  |  |  | SERIAL No.:       |  |  |  |  |
| MFR.: ASD Lighting corp                                           |  |  |  |  |  |  |  |  |  | SUR.:    |  |  |  |  | PROTECTION ANGLE: |  |  |  |  |

Table--1

UNIT: cd

| C(DEG)<br>γ (DEG) | 0    | 15   | 30   | 45   | 60   | 75   | 90   | 105  | 120  | 135  | 150  | 165  | 180  | 195  | 210  | 225  | 240  | 255  | 270  |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0                 | 595  | 595  | 591  | 588  | 587  | 583  | 583  | 578  | 577  | 576  | 578  | 580  | 581  | 580  | 578  | 576  | 577  | 578  | 583  |
| 5                 | 589  | 591  | 592  | 591  | 588  | 581  | 579  | 572  | 568  | 565  | 566  | 570  | 570  | 570  | 566  | 565  | 568  | 572  | 579  |
| 10                | 579  | 585  | 587  | 589  | 585  | 577  | 569  | 559  | 554  | 548  | 550  | 554  | 553  | 554  | 550  | 548  | 554  | 559  | 569  |
| 15                | 567  | 574  | 576  | 583  | 573  | 566  | 556  | 543  | 535  | 527  | 538  | 536  | 537  | 536  | 538  | 527  | 535  | 543  | 556  |
| 20                | 551  | 559  | 564  | 573  | 562  | 550  | 536  | 524  | 512  | 504  | 515  | 517  | 516  | 517  | 515  | 504  | 512  | 524  | 536  |
| 25                | 531  | 542  | 546  | 559  | 544  | 531  | 513  | 498  | 484  | 476  | 491  | 492  | 493  | 492  | 491  | 476  | 484  | 498  | 513  |
| 30                | 511  | 521  | 527  | 541  | 524  | 507  | 488  | 470  | 454  | 446  | 463  | 467  | 468  | 467  | 463  | 446  | 454  | 470  | 488  |
| 35                | 487  | 498  | 506  | 521  | 502  | 480  | 458  | 438  | 420  | 412  | 432  | 439  | 441  | 439  | 432  | 412  | 420  | 438  | 458  |
| 40                | 463  | 474  | 480  | 499  | 476  | 451  | 424  | 401  | 383  | 376  | 400  | 408  | 411  | 408  | 400  | 376  | 383  | 401  | 424  |
| 45                | 434  | 446  | 452  | 474  | 445  | 418  | 387  | 362  | 343  | 338  | 366  | 376  | 382  | 376  | 366  | 338  | 343  | 362  | 387  |
| 50                | 407  | 417  | 422  | 446  | 415  | 383  | 349  | 321  | 302  | 299  | 331  | 344  | 351  | 344  | 331  | 299  | 302  | 321  | 349  |
| 55                | 378  | 386  | 392  | 416  | 383  | 345  | 307  | 277  | 258  | 259  | 295  | 311  | 319  | 311  | 295  | 259  | 258  | 277  | 307  |
| 60                | 347  | 357  | 359  | 386  | 349  | 308  | 263  | 229  | 213  | 217  | 259  | 278  | 289  | 278  | 259  | 217  | 213  | 229  | 263  |
| 65                | 317  | 326  | 327  | 355  | 314  | 269  | 219  | 181  | 168  | 179  | 225  | 247  | 260  | 247  | 225  | 179  | 168  | 181  | 219  |
| 70                | 288  | 295  | 295  | 323  | 280  | 230  | 176  | 133  | 125  | 143  | 192  | 216  | 231  | 216  | 192  | 143  | 125  | 133  | 176  |
| 75                | 259  | 265  | 264  | 292  | 247  | 193  | 134  | 87.0 | 84.4 | 111  | 162  | 188  | 204  | 188  | 162  | 111  | 84.4 | 87.0 | 134  |
| 80                | 231  | 237  | 234  | 262  | 216  | 160  | 96.1 | 45.8 | 51.4 | 83.9 | 136  | 163  | 178  | 163  | 136  | 83.9 | 51.4 | 45.8 | 96.1 |
| 85                | 204  | 208  | 206  | 233  | 187  | 131  | 66.8 | 15.7 | 29.1 | 62.6 | 112  | 139  | 156  | 139  | 112  | 62.6 | 29.1 | 15.7 | 66.8 |
| 90                | 180  | 183  | 180  | 204  | 161  | 106  | 46.2 | 7.00 | 17.0 | 46.4 | 91.5 | 119  | 135  | 119  | 91.5 | 46.4 | 17.0 | 7.00 | 46.2 |
| 95                | 157  | 160  | 157  | 178  | 138  | 85.9 | 32.9 | 7.31 | 12.3 | 35.2 | 74.8 | 100  | 116  | 100  | 74.8 | 35.2 | 12.3 | 7.31 | 32.9 |
| 100               | 136  | 138  | 135  | 155  | 117  | 67.3 | 20.3 | 7.97 | 10.2 | 26.3 | 61.3 | 84.6 | 98.6 | 84.6 | 61.3 | 26.3 | 10.2 | 7.97 | 20.3 |
| 105               | 116  | 118  | 111  | 132  | 93.5 | 47.2 | 16.8 | 8.78 | 10.3 | 16.4 | 50.0 | 71.0 | 84.1 | 71.0 | 50.0 | 16.4 | 10.3 | 8.78 | 16.8 |
| 110               | 94.8 | 94.5 | 85.9 | 107  | 70.7 | 30.1 | 15.5 | 10.3 | 11.3 | 15.6 | 35.7 | 58.2 | 70.7 | 58.2 | 35.7 | 15.6 | 11.3 | 10.3 | 15.5 |
| 115               | 71.6 | 71.3 | 61.6 | 81.6 | 48.7 | 30.6 | 12.8 | 11.5 | 13.0 | 15.4 | 23.5 | 40.9 | 53.6 | 40.9 | 23.5 | 15.4 | 13.0 | 11.5 | 12.8 |
| 120               | 51.9 | 50.6 | 47.6 | 57.9 | 43.0 | 27.6 | 14.9 | 12.8 | 14.9 | 13.7 | 24.7 | 27.9 | 37.1 | 27.9 | 24.7 | 13.7 | 14.9 | 12.8 | 14.9 |
| 125               | 47.7 | 48.6 | 50.3 | 52.0 | 41.9 | 22.8 | 16.8 | 13.4 | 15.0 | 13.5 | 22.4 | 30.0 | 31.1 | 30.0 | 22.4 | 13.5 | 15.0 | 13.4 | 16.8 |
| 130               | 46.7 | 45.9 | 43.0 | 51.1 | 36.6 | 16.4 | 15.0 | 14.8 | 16.1 | 19.2 | 21.5 | 27.4 | 32.9 | 27.4 | 21.5 | 19.2 | 16.1 | 14.8 | 15.0 |
| 135               | 40.0 | 39.2 | 33.1 | 43.6 | 26.8 | 18.9 | 12.9 | 14.3 | 14.8 | 19.9 | 15.2 | 25.5 | 29.6 | 25.5 | 15.2 | 19.9 | 14.8 | 14.3 | 12.9 |
| 140               | 27.6 | 26.6 | 20.1 | 31.2 | 18.9 | 21.8 | 12.6 | 13.4 | 14.5 | 15.4 | 17.9 | 18.0 | 26.1 | 18.0 | 17.9 | 15.4 | 14.5 | 13.4 | 12.6 |
| 145               | 19.9 | 19.4 | 22.9 | 20.5 | 23.1 | 18.2 | 13.2 | 14.4 | 14.7 | 17.6 | 23.5 | 17.6 | 17.7 | 17.6 | 23.5 | 17.6 | 14.7 | 14.4 | 13.2 |
| 150               | 27.4 | 26.4 | 27.8 | 25.8 | 24.2 | 12.9 | 13.8 | 14.9 | 14.9 | 19.3 | 20.5 | 25.6 | 23.2 | 25.6 | 20.5 | 19.3 | 14.9 | 14.9 | 13.8 |
| 155               | 27.4 | 25.3 | 18.8 | 27.9 | 13.8 | 12.1 | 13.9 | 13.7 | 14.8 | 18.6 | 18.7 | 22.5 | 27.8 | 22.5 | 18.7 | 18.6 | 14.8 | 13.7 | 13.9 |
| 160               | 20.5 | 17.5 | 12.4 | 14.7 | 11.2 | 12.9 | 14.3 | 14.0 | 15.7 | 19.1 | 21.7 | 20.4 | 20.3 | 20.4 | 21.7 | 19.1 | 15.7 | 14.0 | 14.3 |
| 165               | 18.4 | 15.3 | 11.2 | 11.5 | 12.0 | 14.8 | 16.7 | 17.3 | 18.1 | 19.1 | 21.6 | 23.6 | 23.4 | 23.6 | 21.6 | 19.1 | 18.1 | 17.3 | 16.7 |
| 170               | 20.5 | 14.2 | 14.7 | 11.6 | 14.9 | 18.6 | 20.1 | 20.5 | 20.8 | 20.3 | 20.3 | 21.8 | 21.7 | 21.8 | 20.3 | 20.3 | 20.8 | 20.5 | 20.1 |
| 175               | 16.8 | 17.7 | 19.2 | 17.1 | 20.4 | 22.2 | 22.0 | 21.8 | 21.4 | 21.0 | 20.5 | 20.9 | 16.8 | 20.9 | 20.5 | 21.0 | 21.4 | 21.8 | 22.0 |
| 180               | 19.3 | 19.8 | 22.8 | 21.8 | 23.5 | 23.2 | 23.4 | 23.3 | 22.8 | 22.1 | 21.3 | 19.1 | 16.9 | 19.1 | 21.3 | 22.1 | 22.8 | 23.3 | 23.4 |

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2025-11-13

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:7.500m [K=1.0000]  
 Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

|                                                                   |          |                   |
|-------------------------------------------------------------------|----------|-------------------|
| Test:U:120.2V I:0.2485A P:27.79W PF:0.9305 Lamp Flux:2229.77x1 lm |          |                   |
| NAME: ASD-LVF21-30D28CC-NK                                        | TYPE:LED | WEIGHT:           |
| SPEC.:5000K                                                       | DIM.:    | SERIAL No.:       |
| MFR.: ASD Lighting corp                                           | SUR.:    | PROTECTION ANGLE: |

Table--2

UNIT: cd

| C (DEG)<br>γ (DEG) | 285  | 300  | 315  | 330  | 345  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------|------|------|------|------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 0                  | 583  | 587  | 588  | 591  | 595  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5                  | 581  | 588  | 591  | 592  | 591  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10                 | 577  | 585  | 589  | 587  | 585  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15                 | 566  | 573  | 583  | 576  | 574  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 20                 | 550  | 562  | 573  | 564  | 559  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 25                 | 531  | 544  | 559  | 546  | 542  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 30                 | 507  | 524  | 541  | 527  | 521  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 35                 | 480  | 502  | 521  | 506  | 498  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40                 | 451  | 476  | 499  | 480  | 474  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 45                 | 418  | 445  | 474  | 452  | 446  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 50                 | 383  | 415  | 446  | 422  | 417  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 55                 | 345  | 383  | 416  | 392  | 386  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 60                 | 308  | 349  | 386  | 359  | 357  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 65                 | 269  | 314  | 355  | 327  | 326  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 70                 | 230  | 280  | 323  | 295  | 295  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 75                 | 193  | 247  | 292  | 264  | 265  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 80                 | 160  | 216  | 262  | 234  | 237  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 85                 | 131  | 187  | 233  | 206  | 208  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 90                 | 106  | 161  | 204  | 180  | 183  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 95                 | 85.9 | 138  | 178  | 157  | 160  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 100                | 67.3 | 117  | 155  | 135  | 138  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 105                | 47.2 | 93.5 | 132  | 111  | 118  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 110                | 30.1 | 70.7 | 107  | 85.9 | 94.5 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 115                | 30.6 | 48.7 | 81.6 | 61.6 | 71.3 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 120                | 27.6 | 43.0 | 57.9 | 47.6 | 50.6 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 125                | 22.8 | 41.9 | 52.0 | 50.3 | 48.6 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 130                | 16.4 | 36.6 | 51.1 | 43.0 | 45.9 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 135                | 18.9 | 26.8 | 43.6 | 33.1 | 39.2 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 140                | 21.8 | 18.9 | 31.2 | 20.1 | 26.6 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 145                | 18.2 | 23.1 | 20.5 | 22.9 | 19.4 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 150                | 12.9 | 24.2 | 25.8 | 27.8 | 26.4 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 155                | 12.1 | 13.8 | 27.9 | 18.8 | 25.3 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 160                | 12.9 | 11.2 | 14.7 | 12.4 | 17.5 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 165                | 14.8 | 12.0 | 11.5 | 11.2 | 15.3 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 170                | 18.6 | 14.9 | 11.6 | 14.7 | 14.2 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 175                | 22.2 | 20.4 | 17.1 | 19.2 | 17.7 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 180                | 23.2 | 23.5 | 21.8 | 22.8 | 19.8 |  |  |  |  |  |  |  |  |  |  |  |  |  |

C Range: 0 - 360DEG  
 C Interval: 15.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2025-11-13

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE G0-2000A\_V1 SYSTEM V2.0.291  
 Humidity:65.0%  
 Test Distance:7.500m [K=1.0000]  
 Remarks: