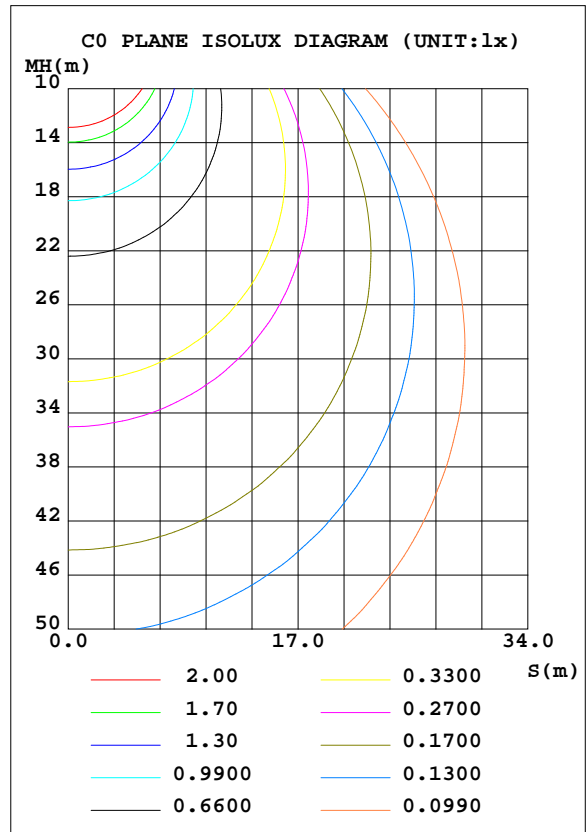
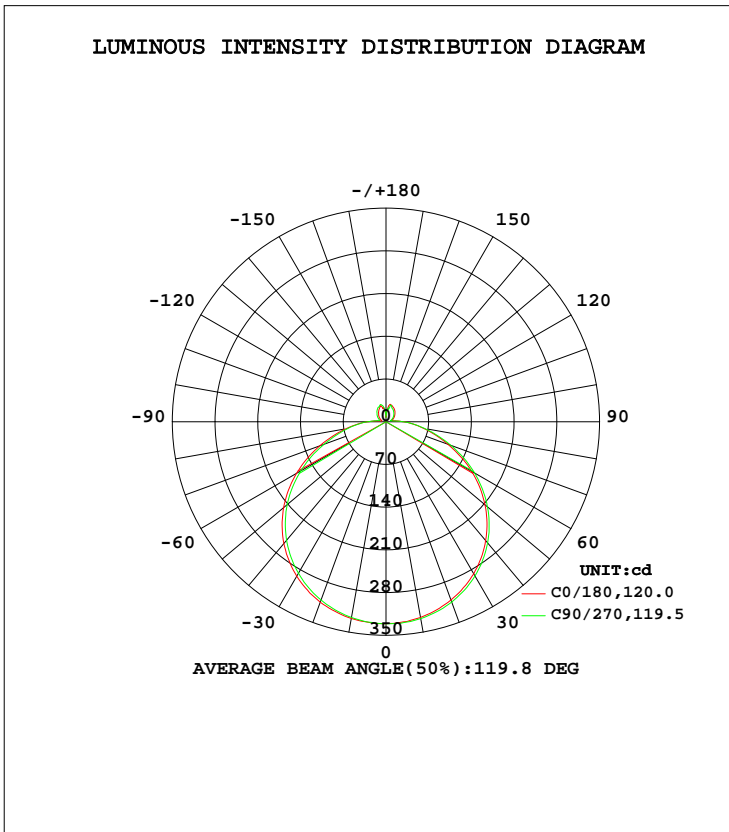


LUMINAIRE PHOTOMETRIC TEST REPORT

|   |           |                     |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1390A P:15.80W PF:0.9478 Lamp Flux:1172.29x1 lm |           |                     |
| NAME: ASD-LFMMR-11D16CC-NK 4000K                                  | TYPE:N/A  | WEIGHT:N/A          |
| SPEC.:N/A   | DIM.: N/A | SERIAL No.:N/A      |
| MFR.: ASD Lighting corp   | SUR.:N/A  | Shielding Angle:N/A |

| DATA OF LAMP     |                   | PHOTOMETRIC DATA Eff: 74.20 lm/W |        |                    |          |
|------------------|-------------------|----------------------------------|--------|--------------------|----------|
| MODEL            | PSZ2S220516006-10 | I <sub>max</sub> (cd)            | 331.5  | S/MH(C0/180)       | 1.29     |
| NOMINAL POWER(W) |                   | LOR(%)                           | 100.0  | S/MH(C90/270)      | 1.31     |
| RATED VOLTAGE(V) | 120               | TOTAL FLUX(lm)                   | 1172.3 | η UP, DN(C0-180)   | 4.7,45.3 |
| NOMINAL FLUX(lm) | 1172.29           | CIE CLASS                        | DIRECT | η UP, DN(C180-360) | 4.5,45.5 |
| LAMPS INSIDE     | 1                 | η up(%)                          | 9.2    | CIBSE SHR NOM      | 1.50     |
| TEST VOLTAGE(V)  | 120               | η down(%)                        | 90.8   | CIBSE SHR MAX      | 1.50     |



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.6DEG  
 Operators:Carl  
 Test Date:2022-05-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.351  
 Humidity:51%  
 Test Distance:2.526m [K=1.0000]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

| γ   | C0                    | C45   | C90   | C135  | C180  | C225  | C270  | C315  | γ       | Φ zone  | Φ total | %lum, lamp |
|-----|-----------------------|-------|-------|-------|-------|-------|-------|-------|---------|---------|---------|------------|
| 10  | 327.4                 | 326.5 | 325.8 | 325.4 | 325.8 | 326.7 | 327.5 | 327.4 | 0- 10   | 31.39   | 31.39   | 2.68,2.68  |
| 20  | 314.8                 | 312.6 | 311.0 | 310.8 | 311.0 | 313.2 | 314.5 | 314.5 | 10- 20  | 90.63   | 122.0   | 10.4,10.4  |
| 30  | 292.5                 | 289.4 | 286.8 | 287.2 | 287.7 | 289.8 | 291.7 | 291.9 | 20- 30  | 139.5   | 261.5   | 22.3,22.3  |
| 40  | 260.5                 | 257.0 | 253.6 | 253.8 | 254.1 | 257.2 | 259.0 | 259.3 | 30- 40  | 171.7   | 433.2   | 37,37      |
| 50  | 219.1                 | 215.2 | 211.2 | 211.4 | 211.8 | 215.1 | 217.0 | 217.1 | 40- 50  | 182.7   | 615.9   | 52.5,52.5  |
| 60  | 169.3                 | 165.4 | 161.3 | 161.7 | 161.8 | 165.1 | 167.4 | 167.3 | 50- 60  | 170.3   | 786.2   | 67.1,67.1  |
| 70  | 115.5                 | 112.0 | 108.2 | 108.8 | 107.9 | 111.0 | 112.9 | 112.8 | 60- 70  | 136.7   | 922.9   | 78.7,78.7  |
| 80  | 67.04                 | 64.74 | 63.49 | 64.46 | 62.53 | 63.53 | 64.68 | 64.82 | 70- 80  | 91.48   | 1014    | 86.5,86.5  |
| 90  | 30.16                 | 29.91 | 30.49 | 31.23 | 29.20 | 28.77 | 28.88 | 28.48 | 80- 90  | 50.29   | 1065    | 90.8,90.8  |
| 100 | 8.778                 | 9.781 | 11.73 | 12.74 | 10.96 | 9.730 | 9.087 | 8.820 | 90-100  | 19.86   | 1085    | 92.5,92.5  |
| 110 | 8.616                 | 9.965 | 12.42 | 12.97 | 12.00 | 10.14 | 9.715 | 9.814 | 100-110 | 9.955   | 1094    | 93.4,93.4  |
| 120 | 12.09                 | 13.92 | 15.93 | 15.86 | 15.61 | 13.77 | 13.30 | 13.70 | 110-120 | 12.39   | 1107    | 94.4,94.4  |
| 130 | 15.58                 | 17.81 | 19.42 | 18.78 | 19.11 | 17.25 | 16.65 | 17.19 | 120-130 | 14.35   | 1121    | 95.6,95.6  |
| 140 | 19.19                 | 21.89 | 23.20 | 22.00 | 22.85 | 20.57 | 20.01 | 20.66 | 130-140 | 15.06   | 1136    | 96.9,96.9  |
| 150 | 23.07                 | 25.61 | 26.67 | 24.85 | 25.88 | 24.54 | 23.32 | 24.53 | 140-150 | 14.47   | 1151    | 98.2,98.2  |
| 160 | 27.35                 | 28.91 | 29.29 | 27.61 | 28.38 | 27.26 | 27.07 | 27.49 | 150-160 | 12.00   | 1163    | 99.2,99.2  |
| 170 | 23.55                 | 24.95 | 25.05 | 24.07 | 26.97 | 25.76 | 23.22 | 25.94 | 160-170 | 7.606   | 1170    | 99.8,99.8  |
| 180 | 7.264                 | 6.149 | 6.608 | 7.537 | 8.775 | 9.498 | 9.841 | 9.690 | 170-180 | 1.951   | 1172    | 100,100    |
| DEG | LUMINOUS INTENSITY:cd |       |       |       |       |       |       |       |         | UNIT:lm |         |            |

Conical surface Flux(90deg): 524.6 lm

%lum = 44.7%  
%lamp = 44.7%

Conical surface Flux(120deg): 786.22 lm

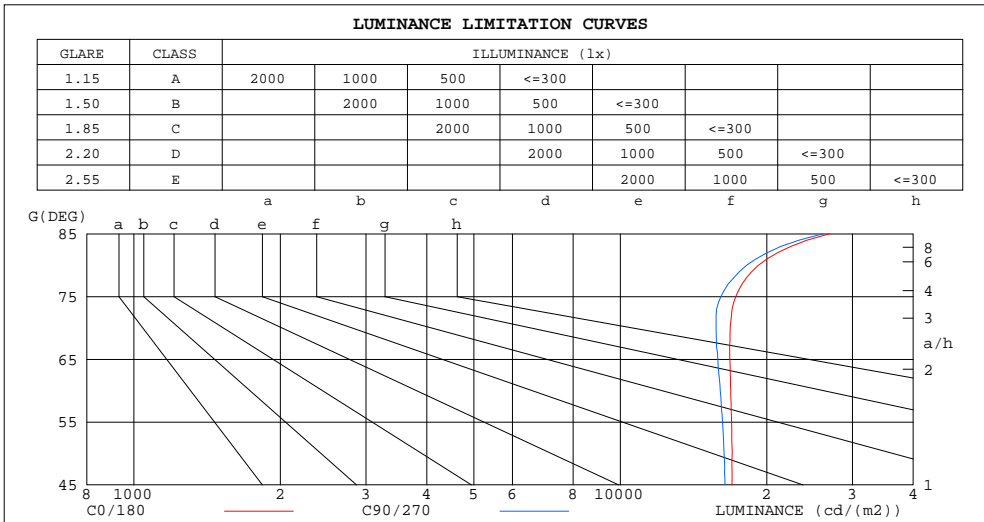
%lum = 67.1%  
%lamp = 67.1%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.6DEG  
Operators:Carl  
Test Date:2022-05-22

γ Range: 0 - 180DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.351  
Humidity:51%  
Test Distance:2.526m [K=1.0000]  
Remarks:

LUMINANCE LIMITATION CURVES

|   |           |                     |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1390A P:15.80W PF:0.9478 Lamp Flux:1172.29x1 lm |           |                     |
| NAME: ASD-LFMMR-11D16CC-NK 4000K                                  | TYPE:N/A  | WEIGHT:N/A          |
| SPEC.:N/A   | DIM.: N/A | SERIAL No.:N/A      |
| MFR.: ASD Lighting corp   | SUR.:N/A  | Shielding Angle:N/A |



| LUMINANCE cd/(m2) |        |         |
|-------------------|--------|---------|
| G(DEG)            | C0/180 | C90/270 |
| 85                | 26875  | 26083   |
| 80                | 19231  | 18187   |
| 75                | 17268  | 16089   |
| 70                | 16821  | 15732   |
| 65                | 16791  | 15868   |
| 60                | 16869  | 16051   |
| 55                | 16936  | 16221   |
| 50                | 16980  | 16343   |
| 45                | 16959  | 16417   |

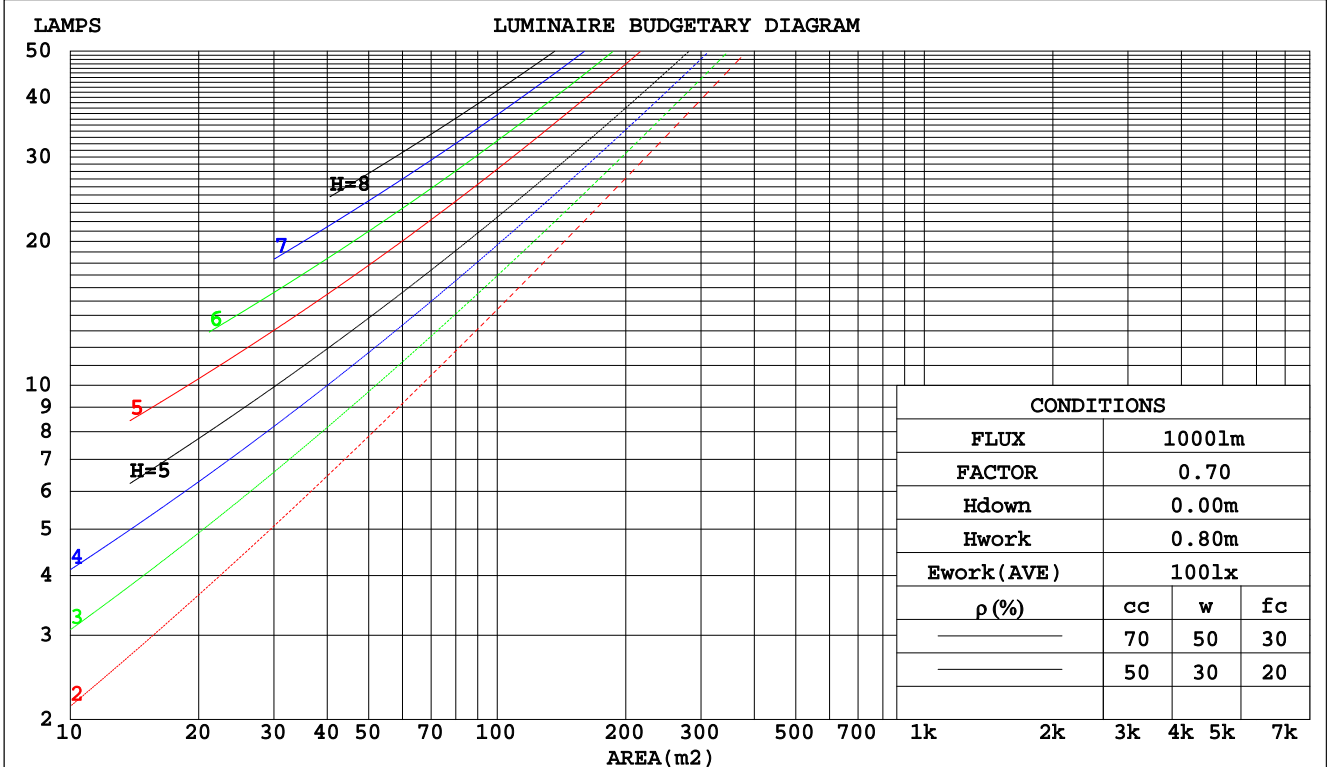
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.6DEG  
 Operators:Carl  
 Test Date:2022-05-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.351  
 Humidity:51%  
 Test Distance:2.526m [K=1.0000]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

|   |           |                     |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1390A P:15.80W PF:0.9478 Lamp Flux:1172.29x1 lm |           |                     |
| NAME: ASD-LFMMR-11D16CC-NK 4000K                                  | TYPE:N/A  | WEIGHT:N/A          |
| SPEC.:N/A   | DIM.: N/A | SERIAL No.:N/A      |
| MFR.: ASD Lighting corp   | SUR.:N/A  | Shielding Angle:N/A |

| pcc  | 80%                   |      |      | 70%  |      |      | 50%                             |      |      | 30% |     |     | 10% |     |     | 0   |
|------|-----------------------|------|------|------|------|------|---------------------------------|------|------|-----|-----|-----|-----|-----|-----|-----|
|      | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                             | 30%  | 10%  | 50% | 30% | 10% | 50% | 30% | 10% | 0   |
| pw   |                       |      |      |      |      |      |                                 |      |      |     |     |     |     |     |     | 0   |
| pfc  | 20%                   |      |      | 20%  |      |      | 20%                             |      |      | 20% |     |     | 20% |     |     | 0   |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Coefficients of Utilization(CU) |      |      |     |     |     |     |     |     |     |
| 0.0  | 1.17                  | 1.17 | 1.17 | 1.13 | 1.13 | 1.13 | 1.06                            | 1.06 | 1.06 | .00 | .00 | .00 | .94 | .94 | .94 | .91 |
| 1.0  | 1.00                  | .95  | .91  | .97  | .93  | .89  | .91                             | .87  | .84  | .85 | .83 | .80 | .80 | .78 | .76 | .73 |
| 2.0  | .86                   | .79  | .73  | .84  | .77  | .71  | .79                             | .73  | .68  | .74 | .69 | .65 | .70 | .66 | .63 | .60 |
| 3.0  | .76                   | .67  | .60  | .73  | .65  | .59  | .69                             | .62  | .57  | .65 | .59 | .55 | .61 | .57 | .53 | .50 |
| 4.0  | .67                   | .58  | .51  | .65  | .56  | .50  | .61                             | .54  | .48  | .57 | .51 | .46 | .54 | .49 | .45 | .42 |
| 5.0  | .59                   | .50  | .43  | .58  | .49  | .43  | .54                             | .47  | .41  | .51 | .45 | .40 | .49 | .43 | .39 | .36 |
| 6.0  | .53                   | .44  | .38  | .52  | .43  | .37  | .49                             | .42  | .36  | .46 | .40 | .35 | .44 | .38 | .34 | .32 |
| 7.0  | .48                   | .39  | .33  | .47  | .38  | .33  | .44                             | .37  | .32  | .42 | .36 | .31 | .40 | .34 | .30 | .28 |
| 8.0  | .44                   | .35  | .29  | .43  | .35  | .29  | .41                             | .33  | .28  | .39 | .32 | .27 | .37 | .31 | .27 | .25 |
| 9.0  | .40                   | .32  | .26  | .39  | .31  | .26  | .37                             | .30  | .25  | .36 | .29 | .25 | .34 | .28 | .24 | .22 |
| 10.0 | .37                   | .29  | .24  | .36  | .28  | .23  | .34                             | .28  | .23  | .33 | .27 | .22 | .31 | .26 | .22 | .20 |



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.6DEG  
 Operators: Carl  
 Test Date: 2022-05-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.0.351  
 Humidity: 51%  
 Test Distance: 2.526m [K=1.0000]  
 Remarks:

WEC AND CCEC

|   |           |                     |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1390A P:15.80W PF:0.9478 Lamp Flux:1172.29x1 lm |           |                     |
| NAME: ASD-LFMMR-11D16CC-NK 4000K                                  | TYPE:N/A  | WEIGHT:N/A          |
| SPEC.:N/A   | DIM.: N/A | SERIAL No.:N/A      |
| MFR.: ASD Lighting corp   | SUR.:N/A  | Shielding Angle:N/A |

| ρcc  | 80%                   |      |      | 70%  |      |      | 50%                             |      |      | 30%  |      |      | 10%  |      |      | 0 |
|------|-----------------------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------|---|
| ρw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%                             | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| ρfc  | 20%                   |      |      | 20%  |      |      | 20%                             |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Wall Exitance Coefficients(WEC) |      |      |      |      |      |      |      |      |   |
| 0.0  |                       |      |      |      |      |      |                                 |      |      |      |      |      |      |      |      |   |
| 1.0  | .341                  | .194 | .061 | .331 | .189 | .060 | .313                            | .179 | .057 | .296 | .170 | .055 | .280 | .162 | .052 |   |
| 2.0  | .309                  | .169 | .052 | .300 | .165 | .051 | .283                            | .157 | .049 | .268 | .150 | .047 | .253 | .143 | .045 |   |
| 3.0  | .280                  | .149 | .045 | .272 | .146 | .044 | .258                            | .140 | .042 | .244 | .134 | .041 | .231 | .128 | .040 |   |
| 4.0  | .256                  | .133 | .039 | .249 | .130 | .038 | .235                            | .125 | .037 | .223 | .120 | .036 | .211 | .115 | .035 |   |
| 5.0  | .235                  | .120 | .035 | .229 | .117 | .034 | .216                            | .113 | .033 | .205 | .108 | .032 | .195 | .104 | .031 |   |
| 6.0  | .217                  | .109 | .031 | .211 | .107 | .031 | .200                            | .103 | .030 | .190 | .099 | .029 | .180 | .095 | .028 |   |
| 7.0  | .201                  | .099 | .028 | .196 | .098 | .028 | .186                            | .094 | .027 | .176 | .090 | .026 | .168 | .087 | .026 |   |
| 8.0  | .187                  | .091 | .026 | .182 | .090 | .025 | .173                            | .087 | .025 | .165 | .084 | .024 | .157 | .081 | .023 |   |
| 9.0  | .175                  | .085 | .024 | .171 | .083 | .023 | .162                            | .080 | .023 | .155 | .077 | .022 | .147 | .075 | .022 |   |
| 10.0 | .164                  | .079 | .022 | .160 | .077 | .022 | .153                            | .075 | .021 | .145 | .072 | .021 | .139 | .070 | .020 |   |

| ρcc  | 80%                   |      |      | 70%  |      |      | 50%  |      |      | 30%  |      |      | 10%  |      |      | 0 |
|------|-----------------------|------|------|------|------|------|--|------|------|------|------|------|------|------|------|---|
| ρw   | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| ρfc  | 20%                   |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR  | RCR:Room Cavity Ratio |      |      |      |      |      | Ceiling Cavity Exitance Coefficients(CCEC) |      |      |      |      |      |      |      |      |   |
| 0.0  | .260                  | .260 | .260 | .223 | .223 | .223 | .152                                       | .152 | .152 | .087 | .087 | .087 | .028 | .028 | .028 |   |
| 1.0  | .253                  | .226 | .202 | .216 | .194 | .174 | .148                                       | .134 | .120 | .085 | .077 | .070 | .027 | .025 | .023 |   |
| 2.0  | .245                  | .203 | .167 | .210 | .175 | .144 | .144                                       | .121 | .101 | .083 | .070 | .059 | .027 | .023 | .019 |   |
| 3.0  | .238                  | .186 | .144 | .204 | .160 | .125 | .140                                       | .111 | .088 | .081 | .065 | .052 | .026 | .021 | .017 |   |
| 4.0  | .230                  | .173 | .129 | .198 | .149 | .112 | .136                                       | .104 | .079 | .079 | .061 | .047 | .025 | .020 | .015 |   |
| 5.0  | .223                  | .163 | .118 | .191 | .141 | .103 | .132                                       | .098 | .073 | .076 | .058 | .043 | .025 | .019 | .014 |   |
| 6.0  | .216                  | .155 | .111 | .185 | .134 | .097 | .128                                       | .094 | .068 | .074 | .055 | .041 | .024 | .018 | .013 |   |
| 7.0  | .209                  | .148 | .105 | .179 | .128 | .092 | .124                                       | .090 | .065 | .072 | .053 | .039 | .023 | .017 | .013 |   |
| 8.0  | .202                  | .142 | .101 | .174 | .123 | .088 | .120                                       | .087 | .062 | .070 | .051 | .037 | .023 | .017 | .012 |   |
| 9.0  | .196                  | .137 | .098 | .169 | .119 | .085 | .117                                       | .084 | .061 | .068 | .049 | .036 | .022 | .016 | .012 |   |
| 10.0 | .190                  | .133 | .095 | .164 | .116 | .083 | .114                                       | .081 | .059 | .066 | .048 | .035 | .022 | .016 | .012 |   |

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.6DEG  
 Operators:Carl  
 Test Date:2022-05-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.351  
 Humidity:51%  
 Test Distance:2.526m [K=1.0000]  
 Remarks:

UGR(Unified Glare Rating) Table

|   |                  |      |      |      |           |                |      |                     |      |      |
|---|------------------|------|------|------|-----------|----------------|------|---------------------|------|------|
| Test:U:120.0V I:0.1390A P:15.80W PF:0.9478 Lamp Flux:1172.29x1 lm |                  |      |      |      |           |                |      |                     |      |      |
| NAME: ASD-LFMMR-11D16CC-NK 4000K                                  |                  |      |      |      | TYPE:N/A  |                |      | WEIGHT:N/A          |      |      |
| SPEC.:N/A   |                  |      |      |      | DIM.: N/A |                |      | SERIAL No.:N/A      |      |      |
| MFR.: ASD Lighting corp   |                  |      |      |      | SUR.:N/A  |                |      | Shielding Angle:N/A |      |      |
| 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   | 22.2             | 23.6 | 22.6 | 24.0 | 24.4      | 22.0           | 23.4 | 22.4                | 23.8 | 24.2 |
| 3H  | 24.0             | 25.3 | 24.4 | 25.7 | 26.1      | 23.7           | 25.0 | 24.1                | 25.4 | 25.8 |
| 4H  | 24.8             | 26.0 | 25.2 | 26.4 | 26.9      | 24.5           | 25.7 | 24.9                | 26.1 | 26.6 |
| 6H  | 25.5             | 26.7 | 26.0 | 27.2 | 27.6      | 25.2           | 26.4 | 25.7                | 26.8 | 27.3 |
| 8H  | 25.9             | 27.1 | 26.4 | 27.5 | 28.0      | 25.6           | 26.7 | 26.1                | 27.2 | 27.7 |
| 12H   | 26.3             | 27.4 | 26.8 | 27.9 | 28.4      | 26.0           | 27.1 | 26.5                | 27.6 | 28.0 |
| 4H 2H   | 22.8             | 24.1 | 23.3 | 24.5 | 24.9      | 22.7           | 23.9 | 23.1                | 24.3 | 24.8 |
| 3H  | 24.8             | 25.9 | 25.3 | 26.3 | 26.8      | 24.5           | 25.6 | 25.0                | 26.1 | 26.6 |
| 4H  | 25.7             | 26.7 | 26.2 | 27.2 | 27.7      | 25.5           | 26.5 | 26.0                | 26.9 | 27.5 |
| 6H  | 26.7             | 27.6 | 27.2 | 28.1 | 28.6      | 26.4           | 27.3 | 26.9                | 27.8 | 28.3 |
| 8H  | 27.1             | 28.0 | 27.7 | 28.5 | 29.1      | 26.8           | 27.7 | 27.4                | 28.2 | 28.8 |
| 12H   | 27.6             | 28.4 | 28.2 | 28.9 | 29.5      | 27.3           | 28.1 | 27.9                | 28.7 | 29.3 |
| 8H 4H   | 26.1             | 26.9 | 26.6 | 27.4 | 28.0      | 25.8           | 26.7 | 26.4                | 27.2 | 27.8 |
| 6H  | 27.2             | 27.9 | 27.8 | 28.5 | 29.1      | 27.0           | 27.7 | 27.6                | 28.2 | 28.9 |
| 8H  | 27.8             | 28.5 | 28.4 | 29.0 | 29.7      | 27.6           | 28.2 | 28.2                | 28.8 | 29.4 |
| 12H   | 28.5             | 29.1 | 29.1 | 29.7 | 30.3      | 28.3           | 28.8 | 28.9                | 29.4 | 30.1 |
| 12H 4H  | 26.1             | 26.9 | 26.7 | 27.4 | 28.0      | 25.9           | 26.7 | 26.4                | 27.2 | 27.8 |
| 6H  | 27.3             | 28.0 | 27.9 | 28.5 | 29.2      | 27.1           | 27.7 | 27.7                | 28.3 | 29.0 |
| 8H  | 28.0             | 28.6 | 28.7 | 29.2 | 29.9      | 27.8           | 28.4 | 28.4                | 29.0 | 29.6 |
| Variations with the observer position at spacings:                |                  |      |      |      |           |                |      |                     |      |      |
| S = 1.0H  | + 0.1 / - 0.2    |      |      |      |           | + 0.1 / - 0.2  |      |                     |      |      |
| 1.5H  | + 0.2 / - 0.3    |      |      |      |           | + 0.2 / - 0.3  |      |                     |      |      |
| 2.0H  | + 0.1 / - 0.3    |      |      |      |           | + 0.1 / - 0.3  |      |                     |      |      |

CIE Pub.117 Corrected 1172 lm Total Lamp Luminous Flux.(8log(F/F0) = 0.6)

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.6DEG  
 Operators:Carl  
 Test Date:2022-05-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.351  
 Humidity:51%  
 Test Distance:2.526m [K=1.0000]  
 Remarks:

UTILIZATION FACTORS TABLE

|   |           |                     |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1390A P:15.80W PF:0.9478 Lamp Flux:1172.29x1 lm |           |                     |
| NAME: ASD-LFMMR-11D16CC-NK 4000K                                  | TYPE:N/A  | WEIGHT:N/A          |
| SPEC.:N/A   | DIM.: N/A | SERIAL No.:N/A      |
| MFR.: ASD Lighting corp   | SUR.:N/A  | Shielding Angle:N/A |

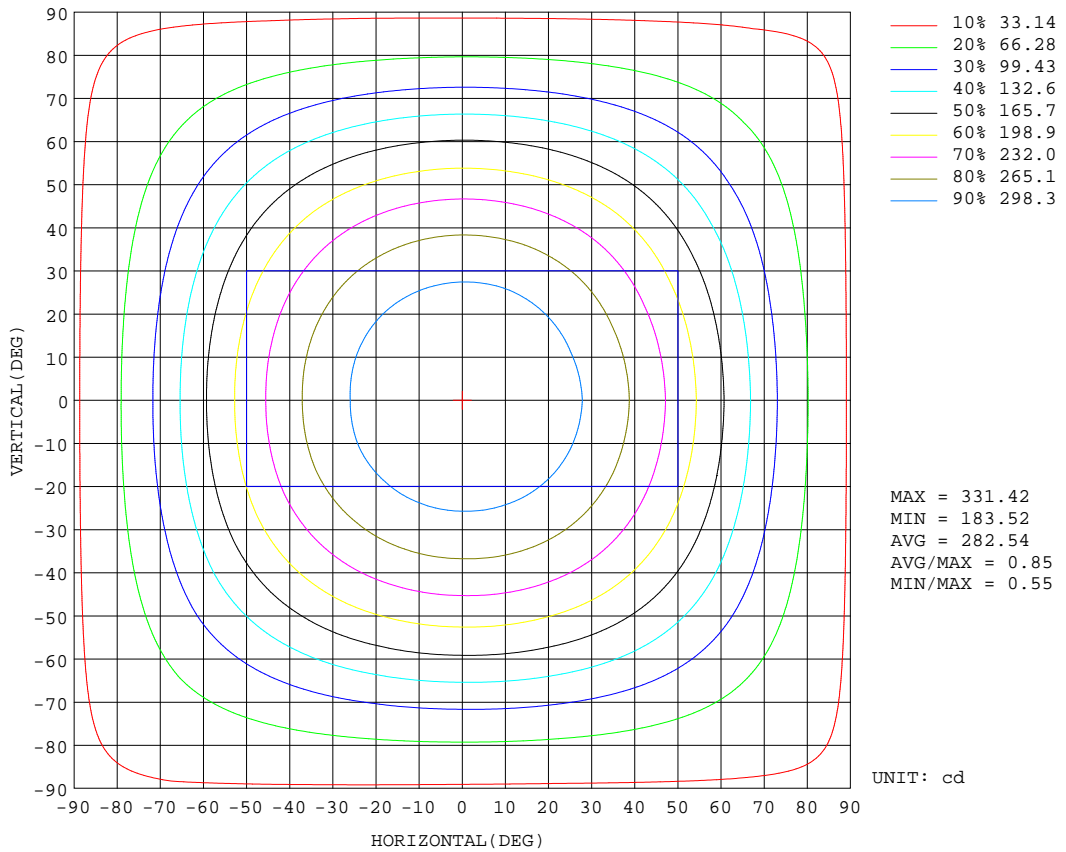
| REFLECTANCE                      |   |     |           |     |     |     |               |     |     |        |
|----------------------------------|---|-----|-----------|-----|-----|-----|---------------|-----|-----|--------|
| Ceiling                          | 0.8   | 0.8 | 0.8       | 0.7 | 0.7 | 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                         | 53  | 41  | 34        | 52  | 41  | 34  | 50            | 40  | 33  | 27     |
| 0.80                             | 63  | 51  | 43        | 61  | 50  | 43  | 59            | 49  | 42  | 34     |
| 1.00                             | 71  | 59  | 51        | 69  | 58  | 51  | 66            | 59  | 50  | 42     |
| 1.25                             | 78  | 67  | 59        | 76  | 65  | 58  | 72            | 63  | 57  | 48     |
| 1.50                             | 83  | 72  | 65        | 81  | 71  | 64  | 77            | 68  | 62  | 53     |
| 2.00                             | 90  | 80  | 73        | 87  | 79  | 72  | 83            | 75  | 70  | 60     |
| 2.50                             | 94  | 85  | 79        | 91  | 83  | 77  | 86            | 80  | 74  | 64     |
| 3.00                             | 98  | 90  | 84        | 95  | 88  | 82  | 89            | 83  | 79  | 68     |
| 4.00                             | 102   | 95  | 90        | 99  | 93  | 88  | 93            | 88  | 84  | 72     |
| 5.00                             | 105   | 99  | 94        | 101 | 96  | 92  | 95            | 91  | 88  | 75     |
| 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:25.6DEG  
 Operators:Carl  
 Test Date:2022-05-22

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.351  
 Humidity:51%  
 Test Distance:2.526m [K=1.0000]  
 Remarks:

**ISOCANDELA DIAGRAM**

|   |           |                     |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1390A P:15.80W PF:0.9478 Lamp Flux:1172.29x1 lm |           |                     |
| NAME: ASD-LFMMR-11D16CC-NK 4000K                                  | TYPE:N/A  | WEIGHT:N/A          |
| SPEC.:N/A   | DIM.: N/A | SERIAL No.:N/A      |
| MFR.: ASD Lighting corp   | SUR.:N/A  | Shielding Angle:N/A |



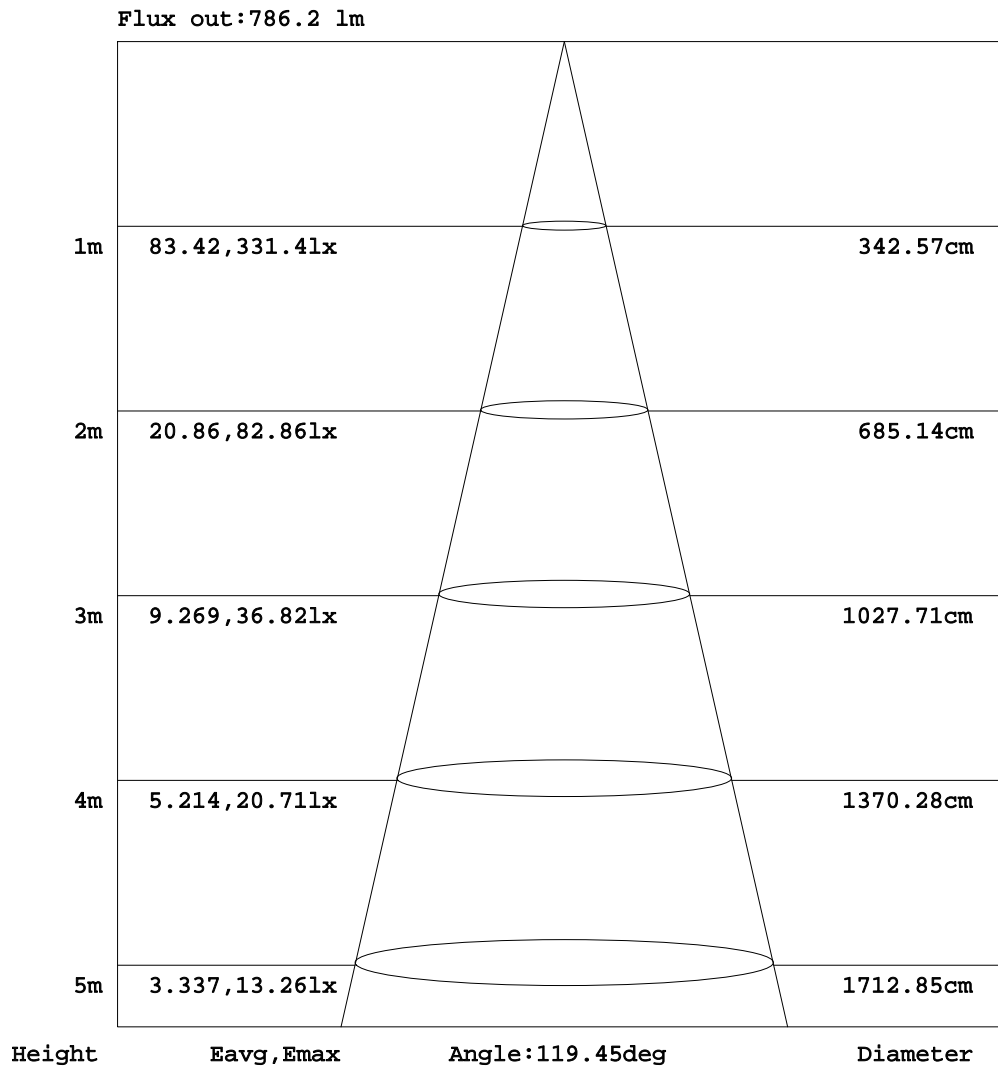
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.6DEG  
 Operators:Carl  
 Test Date:2022-05-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.351  
 Humidity:51%  
 Test Distance:2.526m [K=1.0000]  
 Remarks:



AAI Figure

|   |           |                     |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1390A P:15.80W PF:0.9478 Lamp Flux:1172.29x1 lm |           |                     |
| NAME: ASD-LFMMR-11D16CC-NK 4000K                                  | TYPE:N/A  | WEIGHT:N/A          |
| SPEC.:N/A   | DIM.: N/A | SERIAL No.:N/A      |
| MFR.: ASD Lighting corp   | SUR.:N/A  | Shielding Angle:N/A |



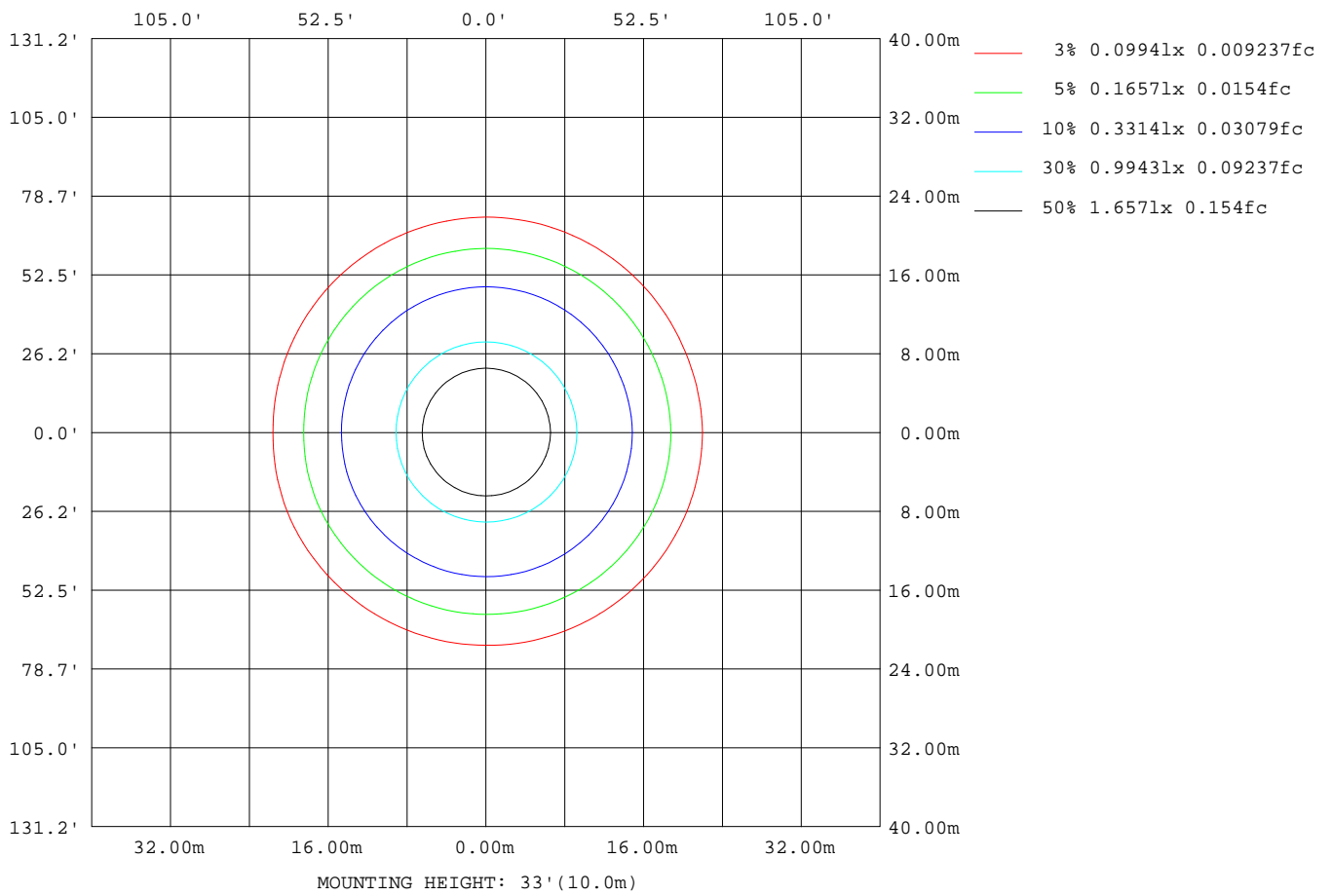
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.6DEG  
 Operators:Carl  
 Test Date:2022-05-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.351  
 Humidity:51%  
 Test Distance:2.526m [K=1.0000]  
 Remarks:

**ISOLUX DIAGRAM**

|   |           |                     |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1390A P:15.80W PF:0.9478 Lamp Flux:1172.29x1 lm |           |                     |
| NAME: ASD-LFMMR-11D16CC-NK 4000K                                  | TYPE:N/A  | WEIGHT:N/A          |
| SPEC.:N/A   | DIM.: N/A | SERIAL No.:N/A      |
| MFR.: ASD Lighting corp   | SUR.:N/A  | Shielding Angle:N/A |



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.6DEG  
 Operators:Carl  
 Test Date:2022-05-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.351  
 Humidity:51%  
 Test Distance:2.526m [K=1.0000]  
 Remarks:

**LED Avg.L Report**

|   |           |                     |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1390A P:15.80W PF:0.9478 Lamp Flux:1172.29x1 lm |           |                     |
| NAME: ASD-LFMMR-11D16CC-NK 4000K                                  | TYPE:N/A  | WEIGHT:N/A          |
| SPEC.:N/A   | DIM.: N/A | SERIAL No.:N/A      |
| MFR.: ASD Lighting corp   | SUR.:N/A  | Shielding Angle:N/A |

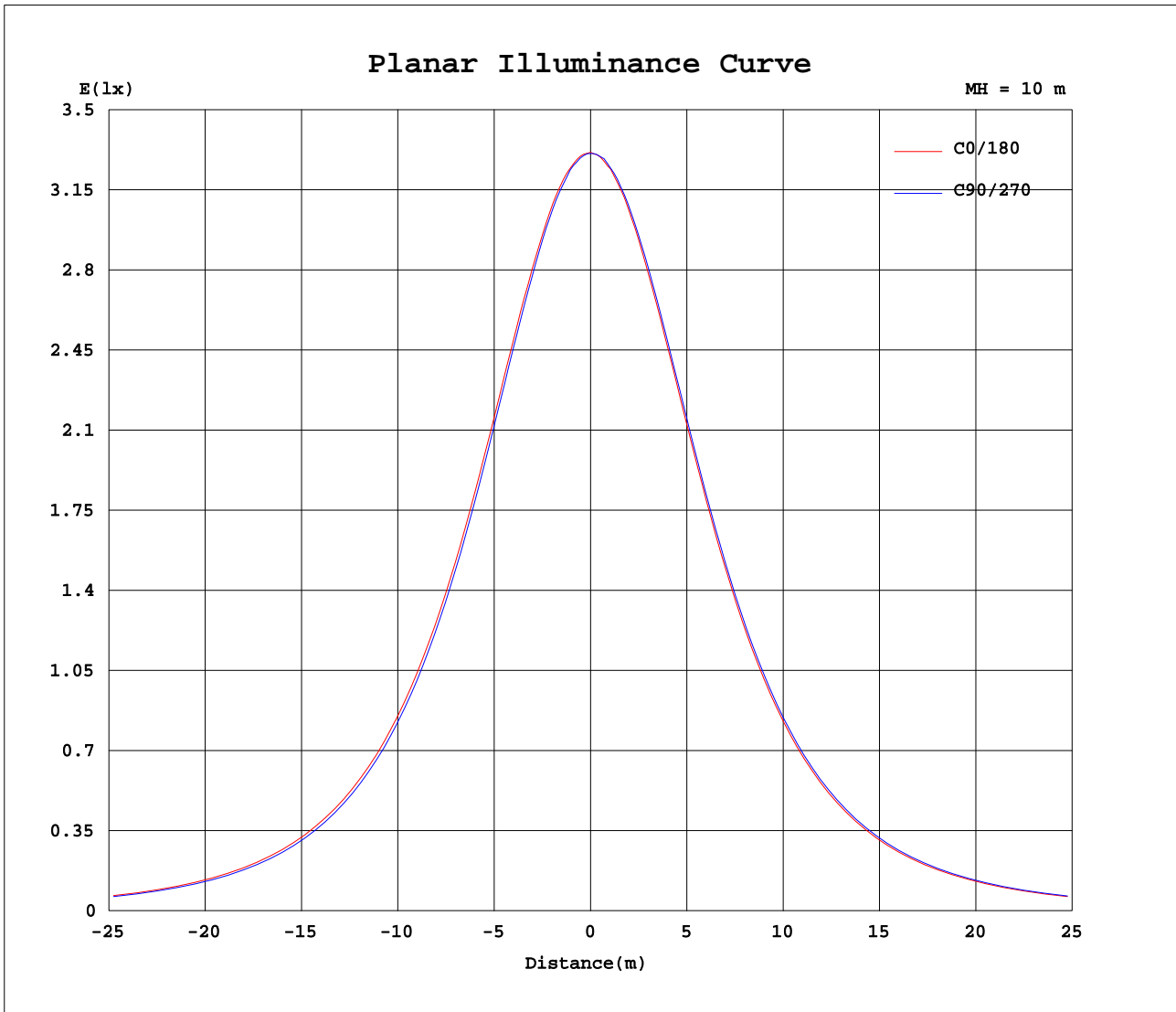
| AvgL           | cd/m2 |
|----------------|-------|
| L_0~180(65)av  | 16319 |
| L_0~180(75)av  | 16673 |
| L_0~180(85)av  | 26212 |
| L_90~270(65)av | 16209 |
| L_90~270(75)av | 16446 |
| L_90~270(85)av | 25976 |
| L_45(65)av     | 16255 |
| L_45(75)av     | 16541 |
| L_45(85)av     | 26062 |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.6DEG  
 Operators:Carl  
 Test Date:2022-05-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.351  
 Humidity:51%  
 Test Distance:2.526m [K=1.0000]  
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 25.6DEG  
 Operators: Carl  
 Test Date: 2022-05-22

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.0.351  
 Humidity: 51%  
 Test Distance: 2.526m [K=1.0000]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

|   |           |                     |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1390A P:15.80W PF:0.9478 Lamp Flux:1172.29x1 lm |           |                     |
| NAME: ASD-LFMMR-11D16CC-NK 4000K                                  | TYPE:N/A  | WEIGHT:N/A          |
| SPEC.:N/A   | DIM.: N/A | SERIAL No.:N/A      |
| MFR.: ASD Lighting corp   | SUR.:N/A  | Shielding Angle:N/A |

Table--1

UNIT: cd

| C(DEG)\<br>γ (DEG) | 0    | 22.5 | 45   | 67.5 | 90   | 112.5 | 135  | 157.5 | 180  | 202.5 | 225  | 247.5 | 270  | 292.5 | 315  | 337.5 |  |  |  |
|--------------------|------|------|------|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|--|--|--|
| 0                  | 331  | 331  | 331  | 331  | 331  | 331   | 331  | 331   | 331  | 331   | 331  | 331   | 331  | 331   | 331  | 331   |  |  |  |
| 5                  | 330  | 330  | 330  | 330  | 330  | 329   | 330  | 330   | 329  | 330   | 330  | 330   | 330  | 330   | 331  | 330   |  |  |  |
| 10                 | 327  | 327  | 326  | 326  | 326  | 325   | 325  | 326   | 326  | 326   | 327  | 327   | 328  | 327   | 327  | 327   |  |  |  |
| 15                 | 322  | 321  | 321  | 320  | 320  | 319   | 320  | 320   | 319  | 321   | 321  | 322   | 322  | 322   | 322  | 322   |  |  |  |
| 20                 | 315  | 314  | 313  | 312  | 311  | 311   | 311  | 312   | 311  | 312   | 313  | 314   | 314  | 314   | 314  | 314   |  |  |  |
| 25                 | 305  | 304  | 302  | 301  | 300  | 300   | 300  | 301   | 300  | 302   | 303  | 304   | 304  | 305   | 305  | 304   |  |  |  |
| 30                 | 292  | 291  | 289  | 288  | 287  | 287   | 287  | 288   | 288  | 289   | 290  | 291   | 292  | 292   | 292  | 291   |  |  |  |
| 35                 | 277  | 276  | 274  | 273  | 271  | 271   | 272  | 273   | 272  | 273   | 275  | 276   | 277  | 277   | 277  | 276   |  |  |  |
| 40                 | 261  | 259  | 257  | 255  | 254  | 253   | 254  | 255   | 254  | 256   | 257  | 258   | 259  | 259   | 259  | 259   |  |  |  |
| 45                 | 241  | 240  | 237  | 235  | 233  | 233   | 234  | 235   | 234  | 236   | 237  | 238   | 239  | 239   | 239  | 239   |  |  |  |
| 50                 | 219  | 218  | 215  | 213  | 211  | 211   | 211  | 213   | 212  | 214   | 215  | 216   | 217  | 217   | 217  | 217   |  |  |  |
| 55                 | 195  | 194  | 191  | 189  | 187  | 187   | 188  | 189   | 188  | 189   | 191  | 192   | 193  | 193   | 193  | 193   |  |  |  |
| 60                 | 169  | 168  | 165  | 163  | 161  | 161   | 162  | 163   | 162  | 164   | 165  | 166   | 167  | 167   | 167  | 167   |  |  |  |
| 65                 | 142  | 141  | 139  | 136  | 135  | 134   | 135  | 137   | 135  | 136   | 138  | 139   | 140  | 140   | 140  | 140   |  |  |  |
| 70                 | 115  | 114  | 112  | 110  | 108  | 108   | 109  | 110   | 108  | 110   | 111  | 112   | 113  | 113   | 113  | 112   |  |  |  |
| 75                 | 89.7 | 88.3 | 86.4 | 84.5 | 83.7 | 83.6  | 84.6 | 85.9  | 83.7 | 84.6  | 85.7 | 86.5  | 87.4 | 87.6  | 87.5 | 87.0  |  |  |  |
| 80                 | 67.0 | 65.9 | 64.7 | 63.8 | 63.5 | 63.6  | 64.5 | 65.0  | 62.5 | 63.1  | 63.5 | 64.2  | 64.7 | 64.9  | 64.8 | 64.5  |  |  |  |
| 85                 | 47.0 | 46.4 | 45.9 | 45.6 | 45.7 | 46.1  | 46.6 | 46.8  | 44.8 | 44.8  | 44.8 | 45.2  | 45.3 | 45.3  | 45.2 | 45.1  |  |  |  |
| 90                 | 30.2 | 29.9 | 29.9 | 29.9 | 30.5 | 31.0  | 31.2 | 31.3  | 29.2 | 29.0  | 28.8 | 29.0  | 28.9 | 28.7  | 28.5 | 28.5  |  |  |  |
| 95                 | 16.7 | 16.8 | 17.1 | 17.6 | 18.4 | 19.2  | 19.3 | 19.1  | 17.5 | 17.1  | 16.7 | 16.6  | 16.3 | 16.0  | 15.9 | 15.7  |  |  |  |
| 100                | 8.78 | 8.97 | 9.78 | 10.6 | 11.7 | 12.6  | 12.7 | 12.3  | 11.0 | 10.4  | 9.73 | 9.39  | 9.09 | 8.95  | 8.82 | 8.49  |  |  |  |
| 105                | 6.88 | 7.15 | 7.99 | 9.28 | 10.7 | 11.2  | 11.5 | 11.2  | 10.2 | 9.18  | 8.34 | 7.96  | 7.90 | 7.88  | 7.88 | 7.59  |  |  |  |
| 110                | 8.62 | 9.16 | 9.97 | 11.2 | 12.4 | 12.6  | 13.0 | 12.9  | 12.0 | 11.0  | 10.1 | 9.64  | 9.72 | 9.75  | 9.81 | 9.58  |  |  |  |
| 115                | 10.4 | 11.1 | 12.0 | 13.0 | 14.1 | 14.0  | 14.4 | 14.6  | 13.8 | 12.8  | 12.0 | 11.4  | 11.5 | 11.6  | 11.8 | 11.6  |  |  |  |
| 120                | 12.1 | 13.0 | 13.9 | 14.9 | 15.9 | 15.5  | 15.9 | 16.3  | 15.6 | 14.6  | 13.8 | 13.1  | 13.3 | 13.4  | 13.7 | 13.6  |  |  |  |
| 125                | 13.9 | 14.8 | 15.8 | 16.7 | 17.7 | 17.0  | 17.3 | 18.1  | 17.4 | 16.4  | 15.6 | 14.8  | 15.0 | 15.2  | 15.4 | 15.6  |  |  |  |
| 130                | 15.6 | 16.5 | 17.8 | 18.5 | 19.4 | 18.4  | 18.8 | 19.8  | 19.1 | 18.2  | 17.3 | 16.4  | 16.6 | 17.0  | 17.2 | 17.4  |  |  |  |
| 135                | 17.3 | 18.3 | 19.8 | 20.4 | 21.1 | 20.0  | 20.3 | 21.5  | 20.9 | 19.9  | 18.9 | 18.2  | 18.4 | 18.7  | 18.9 | 19.0  |  |  |  |
| 140                | 19.2 | 20.2 | 21.9 | 22.3 | 23.2 | 21.7  | 22.0 | 23.5  | 22.8 | 21.9  | 20.6 | 20.1  | 20.0 | 20.5  | 20.7 | 20.5  |  |  |  |
| 145                | 21.1 | 22.0 | 23.8 | 24.4 | 24.9 | 23.3  | 23.7 | 25.3  | 24.5 | 23.8  | 22.5 | 21.9  | 21.7 | 22.5  | 22.5 | 22.3  |  |  |  |
| 150                | 23.1 | 23.4 | 25.6 | 26.0 | 26.7 | 24.7  | 24.9 | 26.8  | 25.9 | 24.5  | 24.5 | 23.5  | 23.3 | 24.4  | 24.5 | 24.0  |  |  |  |
| 155                | 25.2 | 24.9 | 25.8 | 27.7 | 26.8 | 26.6  | 26.4 | 27.6  | 27.2 | 26.5  | 25.4 | 25.0  | 24.3 | 24.7  | 26.5 | 25.6  |  |  |  |
| 160                | 27.3 | 26.5 | 28.9 | 28.9 | 29.3 | 27.6  | 27.6 | 25.8  | 28.4 | 27.8  | 27.3 | 25.5  | 27.1 | 23.6  | 27.5 | 27.9  |  |  |  |
| 165                | 25.2 | 22.3 | 28.3 | 29.9 | 28.8 | 25.0  | 25.7 | 28.6  | 29.6 | 29.3  | 28.6 | 22.4  | 27.2 | 25.0  | 28.8 | 28.8  |  |  |  |
| 170                | 23.5 | 23.9 | 24.9 | 26.7 | 25.1 | 24.8  | 24.1 | 26.5  | 27.0 | 27.0  | 25.8 | 23.2  | 23.2 | 23.8  | 25.9 | 26.1  |  |  |  |
| 175                | 17.4 | 17.3 | 18.7 | 19.4 | 19.0 | 17.9  | 18.2 | 19.8  | 18.5 | 18.6  | 18.5 | 18.1  | 17.1 | 17.5  | 18.8 | 18.9  |  |  |  |
| 180                | 7.26 | 6.21 | 6.15 | 6.70 | 6.61 | 6.90  | 7.54 | 7.12  | 8.77 | 9.04  | 9.50 | 9.69  | 9.84 | 9.76  | 9.69 | 9.22  |  |  |  |

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.6DEG  
 Operators:Carl  
 Test Date:2022-05-22

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.351  
 Humidity:51%  
 Test Distance:2.526m [K=1.0000]  
 Remarks: