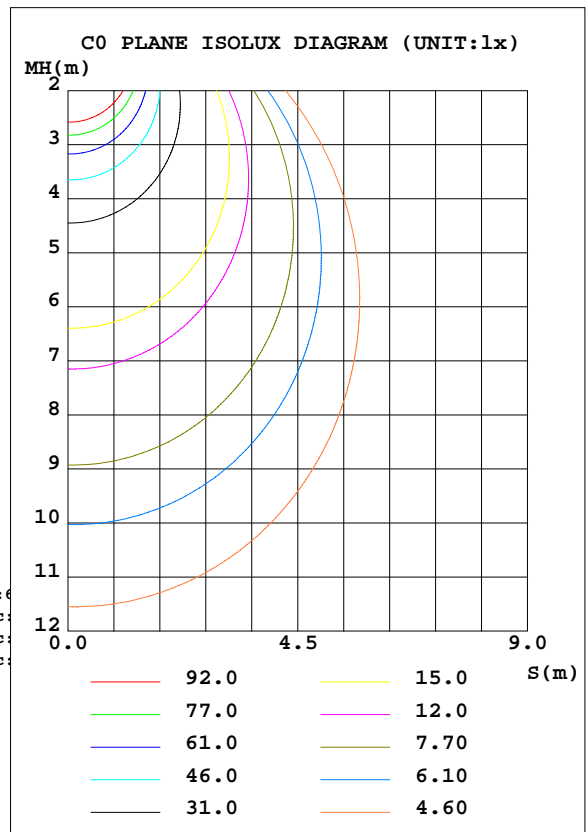
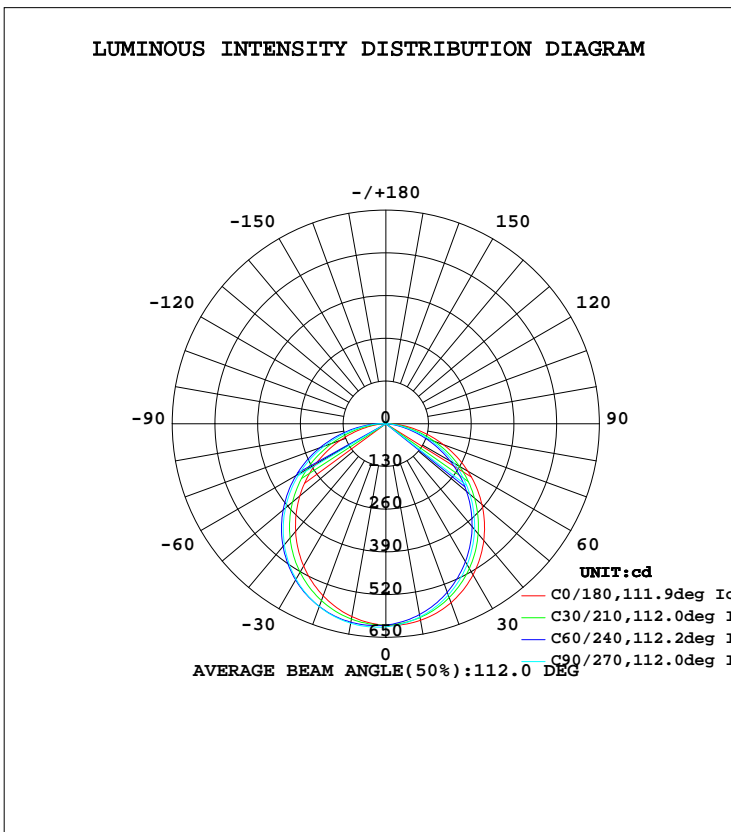


LUMINAIRE PHOTOMETRIC TEST REPORT

| | | |
|--|----------|-------------------|
| Test:U:119.9V I:0.2121A P:23.70W PF:0.9317 Lamp Flux:2218x1 lm | | |
| NAME: ASD-MPR-12D24CC-WH/BK 4000K | TYPE:LED | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: ASD Lighting corp | SUR.: | PROTECTION ANGLE: |

| DATA OF LAMP | | PHOTOMETRIC DATA Eff: 93.59 lm/W | | | |
|------------------|------------------------|----------------------------------|--------|--------------------|----------|
| MODEL | ASD-MPR-121D24CC-WH/BK | I _{max} (cd) | 620.1 | S/MH(C0/180) | 1.22 |
| NOMINAL POWER(W) | 24 | LOR(%) | 100.0 | S/MH(C90/270) | 1.31 |
| RATED VOLTAGE(V) | 120 | TOTAL FLUX(lm) | 2218 | η UP, DN(C0-180) | 1.0,47.8 |
| NOMINAL FLUX(lm) | 2218 | CIE CLASS | DIRECT | η UP, DN(C180-360) | 1.1,50.1 |
| LAMPS INSIDE | 1 | η up(%) | 2.1 | CIBSE SHR NOM | 1.25 |
| TEST VOLTAGE(V) | 120 | η down(%) | 97.9 | CIBSE SHR MAX | 1.35 |



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-04-13

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:7.500m [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 | 607.2 | 593.8 | 596.8 | 609.0 | 595.9 | 608.5 | 616.6 | 604.6 | 0- 10 | 58.21 | 58.21 | 3.24,3.24 |
| 20 | 580.0 | 554.0 | 554.9 | 578.6 | 557.8 | 582.2 | 592.1 | 569.2 | 10- 20 | 166.6 | 224.8 | 12.5,12.5 |
| 30 | 530.8 | 495.8 | 494.9 | 528.5 | 500.5 | 535.7 | 546.4 | 513.1 | 20- 30 | 252.0 | 476.8 | 26.5,26.5 |
| 40 | 463.7 | 422.3 | 420.3 | 461.8 | 427.1 | 470.3 | 480.8 | 439.4 | 30- 40 | 303.4 | 780.2 | 43.4,43.4 |
| 50 | 381.8 | 336.2 | 334.0 | 381.7 | 342.0 | 389.1 | 398.9 | 351.0 | 40- 50 | 314.3 | 1095 | 60.9,60.9 |
| 60 | 287.9 | 241.4 | 239.8 | 291.8 | 247.9 | 296.4 | 304.2 | 251.2 | 50- 60 | 284.2 | 1379 | 76.7,76.7 |
| 70 | 186.8 | 141.2 | 142.0 | 194.2 | 147.3 | 195.1 | 199.1 | 145.1 | 60- 70 | 217.1 | 1596 | 88.7,88.7 |
| 80 | 86.19 | 51.26 | 52.56 | 98.01 | 56.08 | 92.66 | 94.98 | 48.50 | 70- 80 | 125.5 | 1721 | 95.7,95.7 |
| 90 | 11.48 | 4.826 | 4.879 | 21.06 | 5.677 | 14.73 | 14.57 | 5.550 | 80- 90 | 39.15 | 1761 | 97.9,97.9 |
| 100 | 4.879 | 4.984 | 5.095 | 4.965 | 5.769 | 5.734 | 5.696 | 5.750 | 90-100 | 6.515 | 1767 | 98.3,98.3 |
| 110 | 5.072 | 5.176 | 5.349 | 5.219 | 5.923 | 5.877 | 5.900 | 5.977 | 100-110 | 5.781 | 1773 | 98.6,98.6 |
| 120 | 5.272 | 5.388 | 5.592 | 5.484 | 6.074 | 6.035 | 6.112 | 6.185 | 110-120 | 5.631 | 1778 | 98.9,98.9 |
| 130 | 5.515 | 5.642 | 5.900 | 5.750 | 6.228 | 6.166 | 6.301 | 6.393 | 120-130 | 5.277 | 1784 | 99.2,99.2 |
| 140 | 5.834 | 5.993 | 6.293 | 6.120 | 6.432 | 6.358 | 6.520 | 6.620 | 130-140 | 4.751 | 1788 | 99.5,99.5 |
| 150 | 6.223 | 6.405 | 6.697 | 6.544 | 6.644 | 6.574 | 6.736 | 6.867 | 140-150 | 4.043 | 1793 | 99.7,99.7 |
| 160 | 6.651 | 6.829 | 7.090 | 6.967 | 6.902 | 6.836 | 7.006 | 7.125 | 150-160 | 3.131 | 1796 | 99.8,99.8 |
| 170 | 7.044 | 7.179 | 7.394 | 7.329 | 7.183 | 7.125 | 7.283 | 7.383 | 160-170 | 2.011 | 1798 | 100,100 |
| 180 | 7.306 | 7.321 | 7.483 | 7.525 | 7.317 | 7.321 | 7.479 | 7.525 | 170-180 | 0.6997 | 1798 | 100,100 |
| DEG | LUMINOUS INTENSITY:cd | | | | | | | | | UNIT:lm | | |

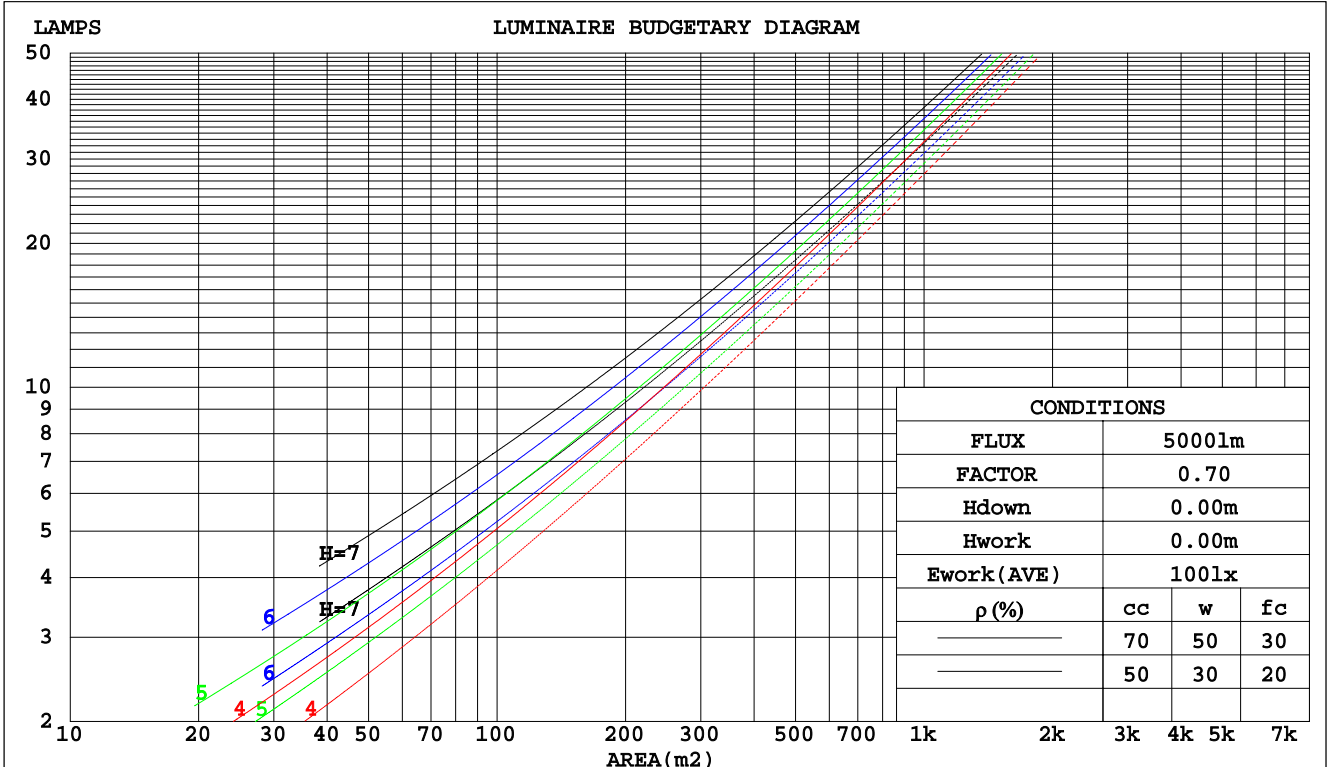
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-04-13

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:7.500m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

| | | |
|--|----------|-------------------|
| Test:U:119.9V I:0.2121A P:23.70W PF:0.9317 Lamp Flux:2218x1 lm | | |
| NAME: ASD-MPR-12D24CC-WH/BK 4000K | TYPE:LED | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: ASD Lighting corp | SUR.: | PROTECTION ANGLE: |

| 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 | | | | | | | | | | | | | | | | 0 |
| RCR | RCR:Room Cavity Ratio Coefficients of Utilization(CU) | | | | | | | | | | | | | | | |
| 0.0 | 1.19 | 1.19 | 1.19 | 1.16 | 1.16 | 1.16 | 1.10 | 1.10 | 1.10 | 1.05 | 1.05 | 1.05 | 1.00 | 1.00 | 1.00 | .98 |
| 1.0 | 1.03 | .99 | .95 | 1.01 | .97 | .93 | .96 | .93 | .90 | .92 | .89 | .87 | .88 | .86 | .84 | .82 |
| 2.0 | .90 | .83 | .77 | .88 | .81 | .76 | .84 | .79 | .74 | .80 | .76 | .72 | .77 | .73 | .70 | .68 |
| 3.0 | .79 | .71 | .64 | .77 | .69 | .63 | .74 | .67 | .62 | .71 | .65 | .61 | .68 | .63 | .59 | .57 |
| 4.0 | .70 | .61 | .54 | .68 | .60 | .54 | .65 | .58 | .53 | .63 | .57 | .52 | .60 | .55 | .51 | .49 |
| 5.0 | .62 | .53 | .47 | .61 | .53 | .46 | .59 | .51 | .45 | .56 | .50 | .45 | .54 | .49 | .44 | .42 |
| 6.0 | .56 | .47 | .41 | .55 | .46 | .40 | .53 | .45 | .40 | .51 | .44 | .39 | .49 | .43 | .39 | .37 |
| 7.0 | .51 | .42 | .36 | .50 | .41 | .36 | .48 | .41 | .35 | .46 | .40 | .35 | .45 | .39 | .34 | .32 |
| 8.0 | .46 | .38 | .32 | .45 | .37 | .32 | .44 | .37 | .31 | .43 | .36 | .31 | .41 | .35 | .31 | .29 |
| 9.0 | .42 | .34 | .29 | .42 | .34 | .29 | .40 | .33 | .28 | .39 | .33 | .28 | .38 | .32 | .28 | .26 |
| 10.0 | .39 | .31 | .26 | .39 | .31 | .26 | .37 | .30 | .26 | .36 | .30 | .25 | .35 | .29 | .25 | .23 |



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2022-04-13

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity: 65.0%
 Test Distance: 7.500m [K=1.0000]
 Remarks:

WEC AND CCEC

| | | |
|--|----------|-------------------|
| Test:U:119.9V I:0.2121A P:23.70W PF:0.9317 Lamp Flux:2218x1 lm | | |
| NAME: ASD-MPR-12D24CC-WH/BK 4000K | TYPE:LED | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: ASD Lighting corp | SUR.: | PROTECTION ANGLE: |

| 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 | .313 | .178 | .056 | .305 | .174 | .055 | .291 | .167 | .053 | .277 | .160 | .051 | .265 | .154 | .050 | |
| 2.0 | .293 | .160 | .049 | .286 | .158 | .049 | .273 | .152 | .047 | .261 | .147 | .046 | .250 | .142 | .045 | |
| 3.0 | .270 | .144 | .043 | .264 | .142 | .043 | .253 | .137 | .042 | .242 | .133 | .041 | .233 | .129 | .040 | |
| 4.0 | .249 | .130 | .038 | .244 | .128 | .038 | .234 | .124 | .037 | .224 | .120 | .036 | .216 | .117 | .036 | |
| 5.0 | .230 | .117 | .034 | .226 | .116 | .034 | .216 | .113 | .033 | .208 | .110 | .033 | .200 | .107 | .032 | |
| 6.0 | .213 | .107 | .031 | .209 | .106 | .030 | .201 | .103 | .030 | .194 | .101 | .030 | .186 | .098 | .029 | |
| 7.0 | .199 | .098 | .028 | .195 | .097 | .028 | .187 | .095 | .027 | .181 | .093 | .027 | .174 | .091 | .027 | |
| 8.0 | .185 | .091 | .025 | .182 | .090 | .025 | .175 | .088 | .025 | .169 | .086 | .025 | .164 | .084 | .024 | |
| 9.0 | .174 | .084 | .023 | .171 | .083 | .023 | .165 | .081 | .023 | .159 | .080 | .023 | .154 | .078 | .023 | |
| 10.0 | .163 | .078 | .022 | .161 | .078 | .022 | .155 | .076 | .021 | .150 | .075 | .021 | .145 | .073 | .021 | |

| 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 | .207 | .207 | .207 | .176 | .176 | .176 | .120 | .120 | .120 | .069 | .069 | .069 | .022 | .022 | .022 | |
| 1.0 | .197 | .172 | .150 | .168 | .148 | .129 | .115 | .102 | .089 | .066 | .059 | .052 | .021 | .019 | .017 | |
| 2.0 | .189 | .148 | .114 | .162 | .128 | .099 | .111 | .088 | .069 | .064 | .051 | .040 | .020 | .017 | .013 | |
| 3.0 | .181 | .131 | .091 | .155 | .113 | .079 | .106 | .078 | .055 | .062 | .046 | .032 | .020 | .015 | .011 | |
| 4.0 | .173 | .117 | .075 | .149 | .101 | .065 | .102 | .071 | .046 | .059 | .041 | .027 | .019 | .013 | .009 | |
| 5.0 | .166 | .107 | .064 | .142 | .093 | .055 | .098 | .065 | .039 | .057 | .038 | .023 | .018 | .012 | .008 | |
| 6.0 | .159 | .099 | .056 | .136 | .086 | .049 | .094 | .060 | .034 | .055 | .035 | .020 | .018 | .012 | .007 | |
| 7.0 | .152 | .092 | .050 | .131 | .080 | .043 | .090 | .056 | .031 | .052 | .033 | .018 | .017 | .011 | .006 | |
| 8.0 | .145 | .086 | .045 | .125 | .075 | .040 | .087 | .052 | .028 | .050 | .031 | .017 | .016 | .010 | .006 | |
| 9.0 | .139 | .081 | .042 | .120 | .070 | .037 | .083 | .050 | .026 | .048 | .029 | .015 | .016 | .010 | .005 | |
| 10.0 | .134 | .077 | .039 | .115 | .067 | .034 | .080 | .047 | .024 | .047 | .028 | .014 | .015 | .009 | .005 | |

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-04-13

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:7.500m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

| | | | | | | | | | | |
|--|------------------|------|------|------|----------|----------------|------|-------------------|------|------|
| Test:U:119.9V I:0.2121A P:23.70W PF:0.9317 Lamp Flux:2218x1 lm | | | | | | | | | | |
| NAME: ASD-MPR-12D24CC-WH/BK 4000K | | | | | TYPE:LED | | | WEIGHT: | | |
| SPEC.: | | | | | 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 | 18.8 | 20.3 | 19.1 | 20.5 | 20.7 | 17.6 | 19.1 | 17.9 | 19.4 | 19.6 |
| 3H | 20.4 | 21.8 | 20.8 | 22.1 | 22.4 | 18.9 | 20.3 | 19.2 | 20.5 | 20.8 |
| 4H | 21.1 | 22.4 | 21.5 | 22.7 | 23.0 | 19.3 | 20.6 | 19.7 | 20.9 | 21.2 |
| 6H | 21.7 | 22.9 | 22.0 | 23.2 | 23.5 | 19.6 | 20.8 | 20.0 | 21.2 | 21.5 |
| 8H | 21.9 | 23.0 | 22.2 | 23.4 | 23.7 | 19.7 | 20.9 | 20.1 | 21.2 | 21.5 |
| 12H | 22.0 | 23.2 | 22.4 | 23.5 | 23.8 | 19.7 | 20.8 | 20.1 | 21.2 | 21.5 |
| 4H 2H | 19.2 | 20.5 | 19.5 | 20.8 | 21.1 | 18.3 | 19.6 | 18.6 | 19.9 | 20.2 |
| 3H | 21.0 | 22.2 | 21.4 | 22.5 | 22.8 | 19.7 | 20.8 | 20.0 | 21.1 | 21.5 |
| 4H | 21.8 | 22.9 | 22.2 | 23.2 | 23.6 | 20.2 | 21.2 | 20.6 | 21.6 | 21.9 |
| 6H | 22.5 | 23.4 | 22.9 | 23.8 | 24.2 | 20.5 | 21.4 | 20.9 | 21.8 | 22.2 |
| 8H | 22.8 | 23.6 | 23.2 | 24.1 | 24.5 | 20.5 | 21.4 | 21.0 | 21.8 | 22.3 |
| 12H | 23.0 | 23.8 | 23.5 | 24.2 | 24.7 | 20.6 | 21.4 | 21.0 | 21.8 | 22.3 |
| 8H 4H | 21.9 | 22.8 | 22.4 | 23.2 | 23.6 | 20.4 | 21.3 | 20.9 | 21.7 | 22.1 |
| 6H | 22.7 | 23.5 | 23.2 | 23.9 | 24.4 | 20.8 | 21.5 | 21.3 | 22.0 | 22.5 |
| 8H | 23.1 | 23.7 | 23.6 | 24.2 | 24.7 | 20.9 | 21.6 | 21.4 | 22.0 | 22.5 |
| 12H | 23.4 | 24.0 | 23.9 | 24.5 | 25.0 | 21.0 | 21.5 | 21.5 | 22.0 | 22.5 |
| 12H 4H | 21.9 | 22.7 | 22.4 | 23.1 | 23.6 | 20.4 | 21.2 | 20.9 | 21.7 | 22.1 |
| 6H | 22.7 | 23.4 | 23.2 | 23.8 | 24.3 | 20.9 | 21.5 | 21.4 | 22.0 | 22.5 |
| 8H | 23.1 | 23.7 | 23.6 | 24.2 | 24.7 | 21.0 | 21.5 | 21.5 | 22.0 | 22.6 |
| Variations with the observer position at spacings: | | | | | | | | | | |
| S = 1.0H | + 0.1 / - 0.2 | | | | | + 0.1 / - 0.2 | | | | |
| 1.5H | + 0.1 / - 0.3 | | | | | + 0.2 / - 0.2 | | | | |
| 2.0H | + 0.2 / - 0.3 | | | | | + 0.4 / - 0.4 | | | | |

CIE Pub.117 Corrected 1798 lm Total Lamp Luminous Flux.(8log(F/F0) = 2.0)

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-04-13

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:7.500m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

| | | |
|--|----------|-------------------|
| Test:U:119.9V I:0.2121A P:23.70W PF:0.9317 Lamp Flux:2218x1 lm | | |
| NAME: ASD-MPR-12D24CC-WH/BK 4000K | TYPE:LED | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: ASD Lighting corp | SUR.: | PROTECTION ANGLE: |

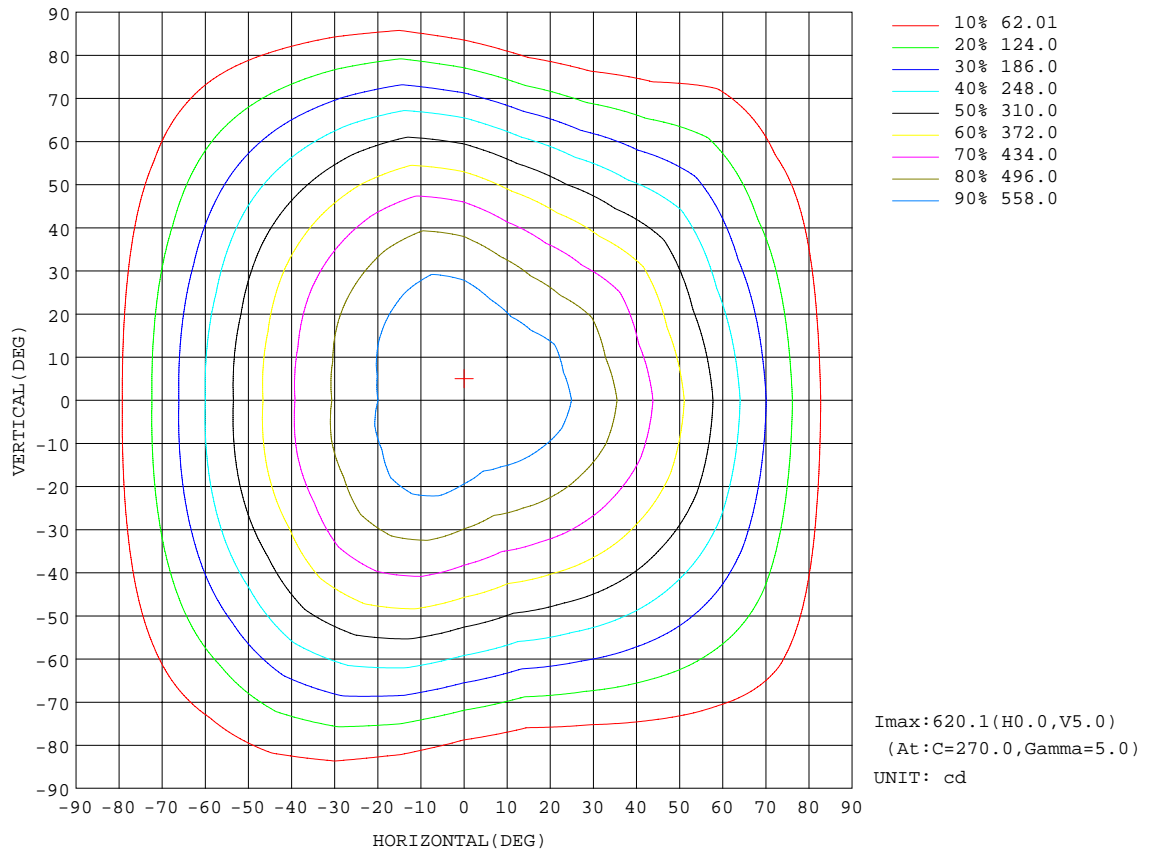
| REFLECTANCE | | | | | | | | | | |
|----------------------------------|---|-----|-----------|-----|-----|-----|---------------|-----|-----|--------|
| Ceiling | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0 |
| Walls | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0 |
| Working plane | 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 | 57 | 45 | 38 | 56 | 45 | 38 | 55 | 44 | 38 | 31 |
| 0.80 | 67 | 55 | 48 | 66 | 55 | 47 | 64 | 54 | 47 | 40 |
| 1.00 | 75 | 64 | 57 | 74 | 63 | 56 | 71 | 64 | 56 | 48 |
| 1.25 | 82 | 72 | 64 | 81 | 71 | 64 | 78 | 69 | 63 | 55 |
| 1.50 | 87 | 77 | 70 | 85 | 76 | 69 | 82 | 74 | 68 | 60 |
| 2.00 | 94 | 85 | 79 | 92 | 84 | 78 | 88 | 82 | 76 | 68 |
| 2.50 | 98 | 90 | 84 | 96 | 89 | 83 | 92 | 86 | 81 | 72 |
| 3.00 | 101 | 94 | 89 | 99 | 93 | 88 | 95 | 89 | 85 | 76 |
| 4.00 | 105 | 100 | 95 | 103 | 98 | 93 | 98 | 94 | 90 | 81 |
| 5.00 | 108 | 103 | 99 | 105 | 101 | 97 | 100 | 97 | 94 | 84 |
| 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:2022-04-13

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:7.500m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

| | | |
|--|----------|-------------------|
| Test:U:119.9V I:0.2121A P:23.70W PF:0.9317 Lamp Flux:2218x1 lm | | |
| NAME: ASD-MPR-12D24CC-WH/BK 4000K | TYPE:LED | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: ASD Lighting corp | SUR.: | PROTECTION ANGLE: |

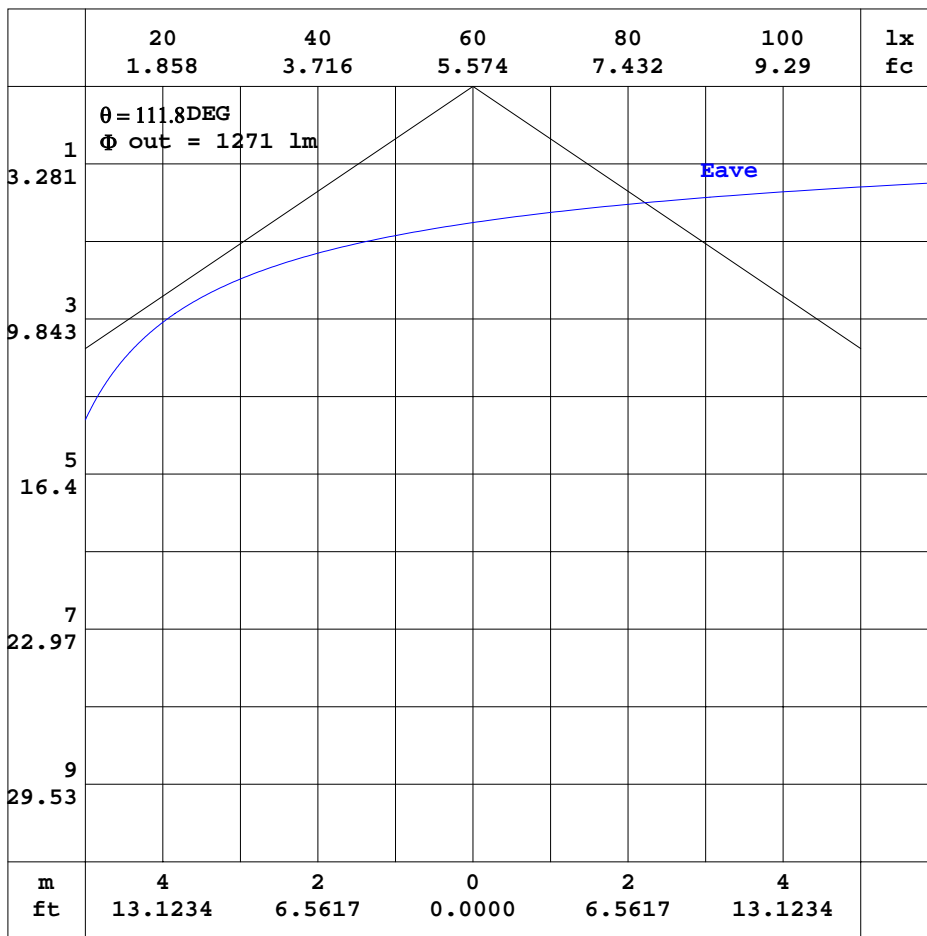


C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2022-04-13

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity: 65.0%
 Test Distance: 7.500m [K=1.0000]
 Remarks:

AAI CURVES

| | | |
|--|----------|-------------------|
| Test:U:119.9V I:0.2121A P:23.70W PF:0.9317 Lamp Flux:2218x1 lm | | |
| NAME: ASD-MPR-12D24CC-WH/BK 4000K | TYPE:LED | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: ASD Lighting corp | SUR.: | PROTECTION ANGLE: |



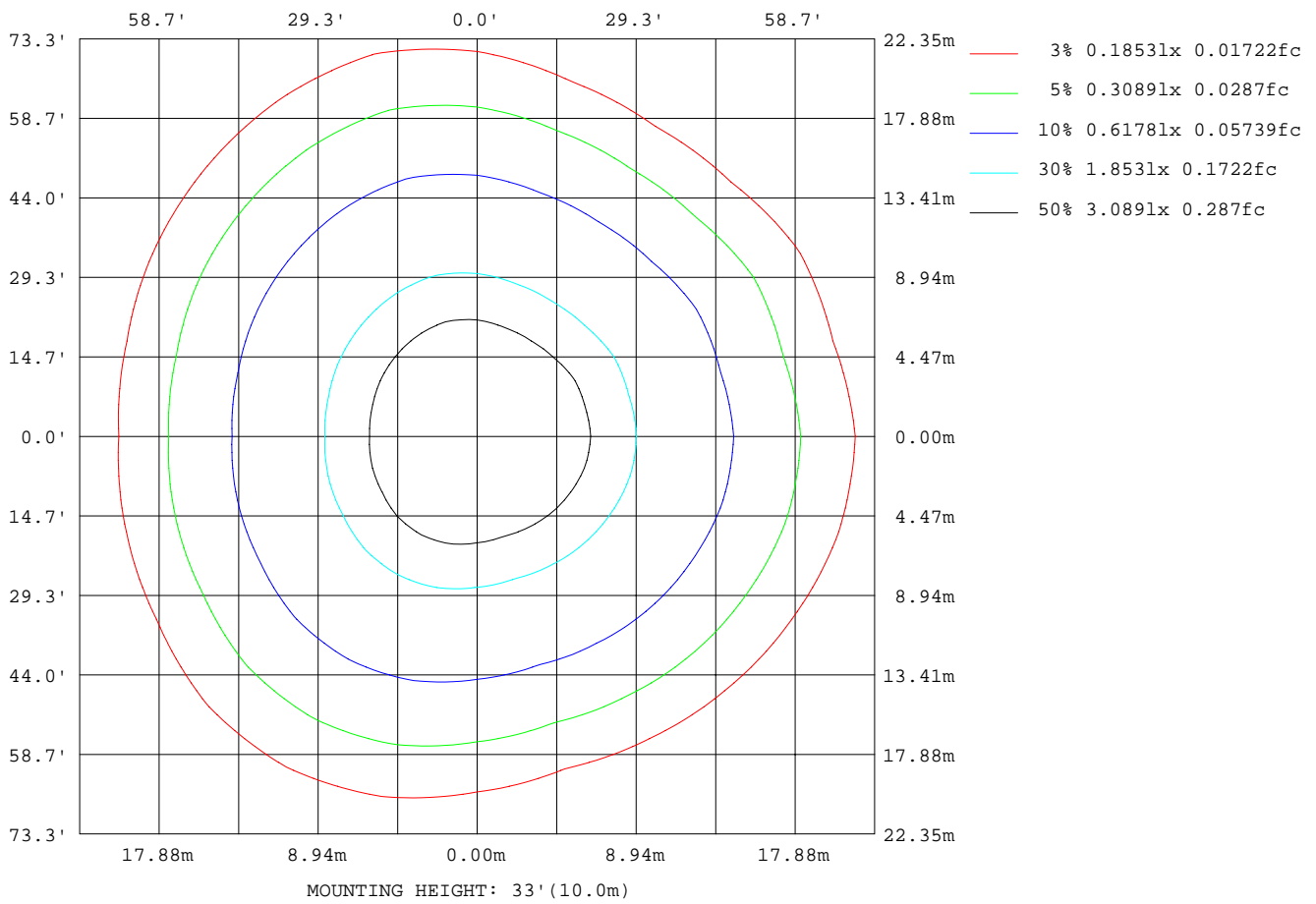
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-04-13

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:7.500m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

| | | |
|--|----------|-------------------|
| Test:U:119.9V I:0.2121A P:23.70W PF:0.9317 Lamp Flux:2218x1 lm | | |
| NAME: ASD-MPR-12D24CC-WH/BK 4000K | TYPE:LED | WEIGHT: |
| SPEC.: | 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: 2022-04-13

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity: 65.0%
 Test Distance: 7.500m [K=1.0000]
 Remarks:

LED Avg.L Report

| | | |
|--|----------|-------------------|
| Test:U:119.9V I:0.2121A P:23.70W PF:0.9317 Lamp Flux:2218x1 lm | | |
| NAME: ASD-MPR-12D24CC-WH/BK 4000K | TYPE:LED | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: ASD Lighting corp | SUR.: | PROTECTION ANGLE: |

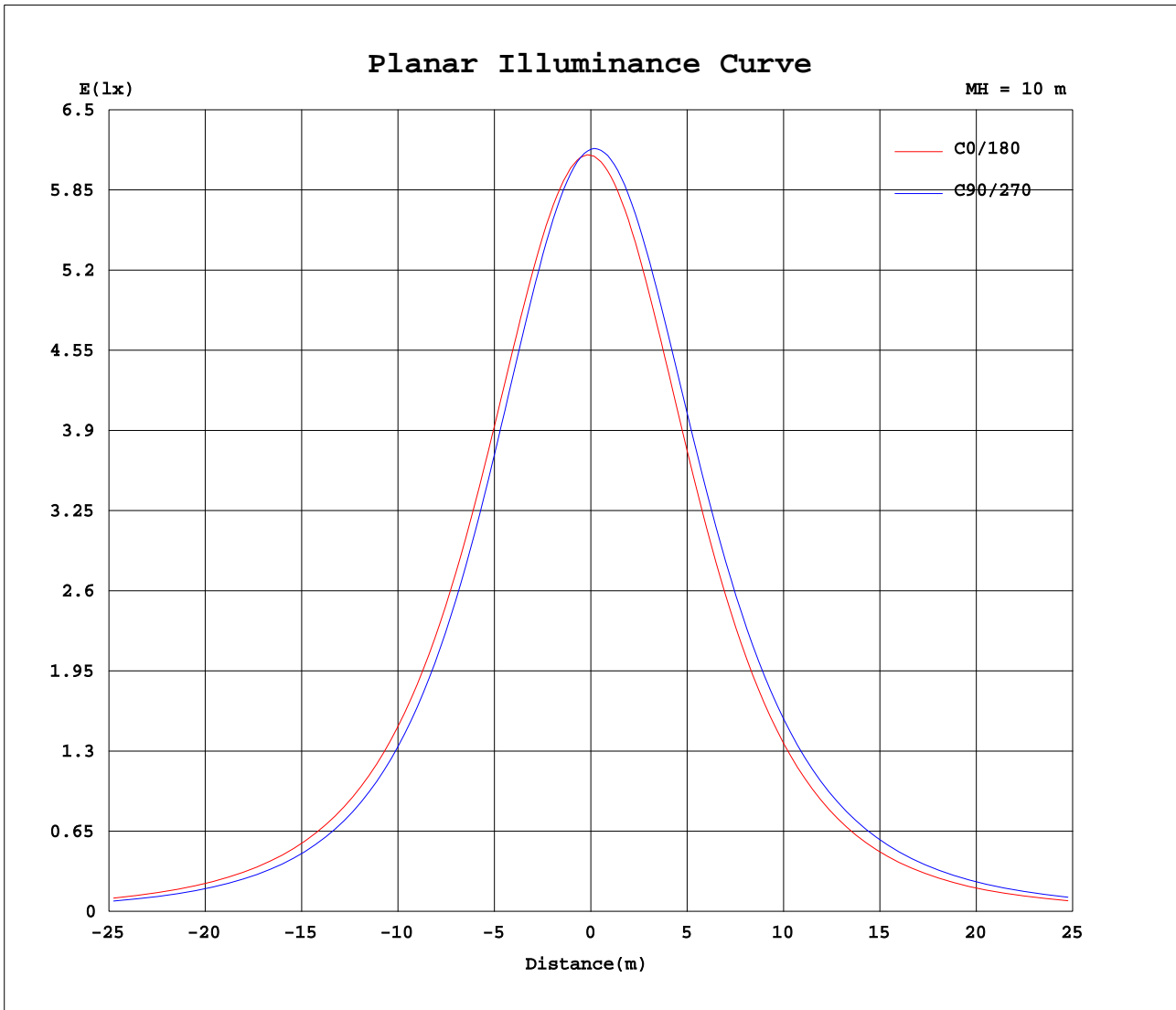
| AvgL | cd/m2 |
|----------------|-------|
| L_0~180(65)av | 5154 |
| L_0~180(75)av | 4536 |
| L_0~180(85)av | 3732 |
| L_90~270(65)av | 5258 |
| L_90~270(75)av | 4649 |
| L_90~270(85)av | 3936 |
| L_45(65)av | 5206 |
| L_45(75)av | 4589 |
| L_45(85)av | 3893 |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2022-04-13

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_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: 2022-04-13

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity: 65.0%
 Test Distance: 7.500m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

| | | |
|--|----------|-------------------|
| Test:U:119.9V I:0.2121A P:23.70W PF:0.9317 Lamp Flux:2218x1 lm | | |
| NAME: ASD-MPR-12D24CC-WH/BK 4000K | TYPE:LED | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: ASD Lighting corp | SUR.: | PROTECTION ANGLE: |

Table--1

UNIT: cd

| C(DEG) γ (DEG) | 0 | 15 | 30 | 45 | 60 | 75 | 90 | 105 | 120 | 135 | 150 | 165 | 180 | 195 | 210 | 225 | 240 | 255 | 270 |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0 | 613 | 613 | 613 | 613 | 613 | 614 | 618 | 619 | 618 | 618 | 617 | 618 | 613 | 613 | 613 | 613 | 613 | 614 | 618 |
| 5 | 613 | 611 | 609 | 606 | 604 | 603 | 610 | 615 | 617 | 616 | 613 | 613 | 607 | 608 | 611 | 613 | 616 | 618 | 620 |
| 10 | 607 | 604 | 599 | 594 | 590 | 588 | 597 | 606 | 610 | 609 | 603 | 602 | 596 | 598 | 603 | 608 | 614 | 617 | 617 |
| 15 | 596 | 592 | 583 | 577 | 570 | 567 | 578 | 592 | 597 | 596 | 588 | 586 | 579 | 583 | 591 | 598 | 605 | 611 | 607 |
| 20 | 580 | 574 | 563 | 554 | 546 | 542 | 555 | 572 | 579 | 579 | 568 | 565 | 558 | 562 | 573 | 582 | 592 | 599 | 592 |
| 25 | 558 | 551 | 538 | 527 | 517 | 513 | 527 | 547 | 556 | 556 | 543 | 540 | 531 | 537 | 550 | 562 | 573 | 581 | 572 |
| 30 | 531 | 523 | 508 | 496 | 485 | 479 | 495 | 518 | 529 | 529 | 514 | 509 | 500 | 507 | 522 | 536 | 549 | 558 | 546 |
| 35 | 499 | 491 | 475 | 461 | 448 | 442 | 459 | 485 | 498 | 497 | 480 | 474 | 466 | 473 | 490 | 505 | 520 | 530 | 516 |
| 40 | 464 | 455 | 437 | 422 | 409 | 402 | 420 | 449 | 463 | 462 | 444 | 437 | 427 | 435 | 454 | 470 | 487 | 498 | 481 |
| 45 | 424 | 415 | 396 | 380 | 366 | 359 | 378 | 409 | 425 | 423 | 404 | 396 | 386 | 394 | 414 | 431 | 449 | 461 | 442 |
| 50 | 382 | 373 | 353 | 336 | 321 | 313 | 334 | 367 | 383 | 382 | 361 | 352 | 342 | 351 | 371 | 389 | 408 | 420 | 399 |
| 55 | 336 | 327 | 306 | 290 | 274 | 266 | 288 | 322 | 339 | 338 | 316 | 306 | 296 | 304 | 325 | 344 | 363 | 376 | 353 |
| 60 | 288 | 279 | 258 | 241 | 225 | 216 | 240 | 275 | 294 | 292 | 268 | 258 | 248 | 256 | 277 | 296 | 316 | 328 | 304 |
| 65 | 238 | 229 | 209 | 191 | 176 | 167 | 191 | 226 | 246 | 244 | 220 | 207 | 197 | 206 | 227 | 247 | 266 | 278 | 253 |
| 70 | 187 | 178 | 158 | 141 | 127 | 119 | 142 | 177 | 198 | 194 | 170 | 158 | 147 | 156 | 175 | 195 | 213 | 226 | 199 |
| 75 | 135 | 127 | 109 | 93.6 | 80.1 | 73.5 | 94.3 | 129 | 149 | 145 | 122 | 109 | 99.4 | 106 | 125 | 143 | 161 | 172 | 146 |
| 80 | 86.2 | 80.1 | 63.6 | 51.3 | 40.4 | 35.0 | 52.6 | 82.9 | 101 | 98.0 | 75.7 | 64.4 | 56.1 | 60.9 | 77.6 | 92.7 | 109 | 119 | 95.0 |
| 85 | 44.0 | 39.4 | 26.8 | 17.6 | 9.90 | 6.58 | 19.1 | 42.7 | 58.2 | 55.6 | 36.9 | 27.6 | 21.1 | 24.5 | 37.0 | 48.9 | 62.2 | 70.0 | 49.5 |
| 90 | 11.5 | 8.75 | 4.81 | 4.83 | 4.86 | 4.89 | 4.88 | 11.8 | 23.2 | 21.1 | 7.63 | 4.81 | 5.68 | 5.68 | 7.46 | 14.7 | 24.0 | 29.4 | 14.6 |
| 95 | 4.81 | 4.82 | 4.86 | 4.90 | 4.95 | 4.98 | 4.98 | 4.90 | 4.86 | 4.86 | 4.90 | 4.91 | 5.72 | 5.72 | 5.69 | 5.68 | 5.64 | 5.61 | 5.60 |
| 100 | 4.88 | 4.90 | 4.93 | 4.98 | 5.05 | 5.10 | 5.09 | 5.01 | 4.97 | 4.96 | 5.02 | 5.03 | 5.77 | 5.77 | 5.74 | 5.73 | 5.70 | 5.68 | 5.70 |
| 105 | 4.97 | 4.98 | 5.03 | 5.08 | 5.16 | 5.21 | 5.22 | 5.14 | 5.09 | 5.09 | 5.14 | 5.16 | 5.84 | 5.83 | 5.80 | 5.80 | 5.78 | 5.77 | 5.79 |
| 110 | 5.07 | 5.08 | 5.13 | 5.18 | 5.26 | 5.33 | 5.35 | 5.27 | 5.23 | 5.22 | 5.26 | 5.28 | 5.92 | 5.91 | 5.87 | 5.88 | 5.86 | 5.86 | 5.90 |
| 115 | 5.17 | 5.18 | 5.22 | 5.28 | 5.37 | 5.45 | 5.47 | 5.40 | 5.35 | 5.35 | 5.40 | 5.42 | 5.99 | 5.98 | 5.95 | 5.95 | 5.95 | 5.95 | 6.01 |
| 120 | 5.27 | 5.27 | 5.32 | 5.39 | 5.47 | 5.56 | 5.59 | 5.53 | 5.48 | 5.48 | 5.52 | 5.54 | 6.07 | 6.05 | 6.03 | 6.03 | 6.03 | 6.05 | 6.11 |
| 125 | 5.39 | 5.38 | 5.44 | 5.50 | 5.61 | 5.70 | 5.73 | 5.66 | 5.61 | 5.61 | 5.65 | 5.68 | 6.15 | 6.12 | 6.09 | 6.09 | 6.10 | 6.14 | 6.20 |
| 130 | 5.51 | 5.50 | 5.58 | 5.64 | 5.77 | 5.88 | 5.90 | 5.81 | 5.75 | 5.75 | 5.80 | 5.84 | 6.23 | 6.19 | 6.16 | 6.17 | 6.18 | 6.22 | 6.30 |
| 135 | 5.66 | 5.65 | 5.73 | 5.81 | 5.95 | 6.07 | 6.09 | 5.99 | 5.92 | 5.92 | 5.98 | 6.02 | 6.32 | 6.28 | 6.25 | 6.25 | 6.27 | 6.31 | 6.41 |
| 140 | 5.83 | 5.82 | 5.90 | 5.99 | 6.13 | 6.26 | 6.29 | 6.19 | 6.12 | 6.12 | 6.18 | 6.22 | 6.43 | 6.39 | 6.35 | 6.36 | 6.37 | 6.41 | 6.52 |
| 145 | 6.02 | 6.01 | 6.10 | 6.19 | 6.33 | 6.46 | 6.49 | 6.39 | 6.32 | 6.33 | 6.39 | 6.44 | 6.54 | 6.50 | 6.46 | 6.46 | 6.47 | 6.52 | 6.63 |
| 150 | 6.22 | 6.23 | 6.31 | 6.41 | 6.54 | 6.66 | 6.70 | 6.61 | 6.54 | 6.54 | 6.61 | 6.65 | 6.64 | 6.61 | 6.57 | 6.57 | 6.58 | 6.63 | 6.74 |
| 155 | 6.44 | 6.44 | 6.53 | 6.62 | 6.74 | 6.86 | 6.90 | 6.82 | 6.75 | 6.76 | 6.82 | 6.86 | 6.76 | 6.73 | 6.69 | 6.70 | 6.71 | 6.76 | 6.87 |
| 160 | 6.65 | 6.67 | 6.75 | 6.83 | 6.95 | 7.06 | 7.09 | 7.03 | 6.97 | 6.97 | 7.03 | 7.06 | 6.90 | 6.86 | 6.82 | 6.84 | 6.84 | 6.91 | 7.01 |
| 165 | 6.85 | 6.89 | 6.95 | 7.02 | 7.13 | 7.21 | 7.26 | 7.23 | 7.18 | 7.17 | 7.21 | 7.23 | 7.05 | 7.01 | 6.97 | 6.98 | 6.99 | 7.05 | 7.14 |
| 170 | 7.04 | 7.07 | 7.13 | 7.18 | 7.27 | 7.34 | 7.39 | 7.37 | 7.33 | 7.33 | 7.36 | 7.38 | 7.18 | 7.14 | 7.13 | 7.12 | 7.14 | 7.19 | 7.28 |
| 175 | 7.20 | 7.23 | 7.26 | 7.29 | 7.35 | 7.40 | 7.47 | 7.46 | 7.45 | 7.45 | 7.46 | 7.47 | 7.29 | 7.25 | 7.24 | 7.25 | 7.26 | 7.31 | 7.39 |
| 180 | 7.31 | 7.28 | 7.30 | 7.32 | 7.35 | 7.39 | 7.48 | 7.52 | 7.52 | 7.53 | 7.51 | 7.54 | 7.32 | 7.29 | 7.31 | 7.32 | 7.35 | 7.40 | 7.48 |

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-04-13

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:7.500m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

| | | |
|--|----------|-------------------|
| Test:U:119.9V I:0.2121A P:23.70W PF:0.9317 Lamp Flux:2218x1 lm | | |
| NAME: ASD-MPR-12D24CC-WH/BK 4000K | TYPE:LED | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: ASD Lighting corp | SUR.: | PROTECTION ANGLE: |

Table--2

UNIT: cd

| C(DEG) γ (DEG) | 285 | 300 | 315 | 330 | 345 | | | | | | | | | | | | | | |
|-------------------|------|------|------|------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 0 | 619 | 618 | 618 | 617 | 618 | | | | | | | | | | | | | | |
| 5 | 617 | 614 | 614 | 616 | 617 | | | | | | | | | | | | | | |
| 10 | 609 | 604 | 605 | 609 | 610 | | | | | | | | | | | | | | |
| 15 | 596 | 589 | 590 | 596 | 598 | | | | | | | | | | | | | | |
| 20 | 578 | 568 | 569 | 579 | 576 | | | | | | | | | | | | | | |
| 25 | 554 | 543 | 544 | 556 | 552 | | | | | | | | | | | | | | |
| 30 | 524 | 512 | 513 | 528 | 523 | | | | | | | | | | | | | | |
| 35 | 491 | 477 | 478 | 495 | 490 | | | | | | | | | | | | | | |
| 40 | 453 | 438 | 439 | 458 | 452 | | | | | | | | | | | | | | |
| 45 | 411 | 395 | 397 | 417 | 411 | | | | | | | | | | | | | | |
| 50 | 365 | 348 | 351 | 373 | 366 | | | | | | | | | | | | | | |
| 55 | 318 | 300 | 302 | 326 | 319 | | | | | | | | | | | | | | |
| 60 | 267 | 248 | 251 | 276 | 269 | | | | | | | | | | | | | | |
| 65 | 215 | 195 | 198 | 224 | 217 | | | | | | | | | | | | | | |
| 70 | 161 | 141 | 145 | 170 | 165 | | | | | | | | | | | | | | |
| 75 | 109 | 90.6 | 93.2 | 119 | 113 | | | | | | | | | | | | | | |
| 80 | 60.7 | 46.1 | 48.5 | 70.4 | 65.1 | | | | | | | | | | | | | | |
| 85 | 22.4 | 11.8 | 13.7 | 30.0 | 26.8 | | | | | | | | | | | | | | |
| 90 | 5.53 | 5.55 | 5.55 | 5.53 | 5.60 | | | | | | | | | | | | | | |
| 95 | 5.63 | 5.65 | 5.65 | 5.61 | 5.67 | | | | | | | | | | | | | | |
| 100 | 5.74 | 5.76 | 5.75 | 5.70 | 5.76 | | | | | | | | | | | | | | |
| 105 | 5.85 | 5.87 | 5.87 | 5.81 | 5.86 | | | | | | | | | | | | | | |
| 110 | 5.97 | 5.99 | 5.98 | 5.92 | 5.96 | | | | | | | | | | | | | | |
| 115 | 6.07 | 6.10 | 6.09 | 6.02 | 6.06 | | | | | | | | | | | | | | |
| 120 | 6.18 | 6.20 | 6.19 | 6.12 | 6.15 | | | | | | | | | | | | | | |
| 125 | 6.27 | 6.30 | 6.29 | 6.22 | 6.24 | | | | | | | | | | | | | | |
| 130 | 6.37 | 6.40 | 6.39 | 6.33 | 6.34 | | | | | | | | | | | | | | |
| 135 | 6.49 | 6.51 | 6.51 | 6.44 | 6.45 | | | | | | | | | | | | | | |
| 140 | 6.60 | 6.64 | 6.62 | 6.55 | 6.56 | | | | | | | | | | | | | | |
| 145 | 6.71 | 6.75 | 6.74 | 6.67 | 6.67 | | | | | | | | | | | | | | |
| 150 | 6.84 | 6.87 | 6.87 | 6.79 | 6.80 | | | | | | | | | | | | | | |
| 155 | 6.97 | 7.01 | 7.00 | 6.94 | 6.93 | | | | | | | | | | | | | | |
| 160 | 7.10 | 7.13 | 7.12 | 7.08 | 7.07 | | | | | | | | | | | | | | |
| 165 | 7.23 | 7.26 | 7.26 | 7.21 | 7.21 | | | | | | | | | | | | | | |
| 170 | 7.37 | 7.39 | 7.38 | 7.34 | 7.34 | | | | | | | | | | | | | | |
| 175 | 7.46 | 7.49 | 7.48 | 7.44 | 7.43 | | | | | | | | | | | | | | |
| 180 | 7.52 | 7.52 | 7.53 | 7.52 | 7.48 | | | | | | | | | | | | | | |

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-04-13

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.291
 Humidity:65.0%
 Test Distance:7.500m [K=1.0000]
 Remarks: