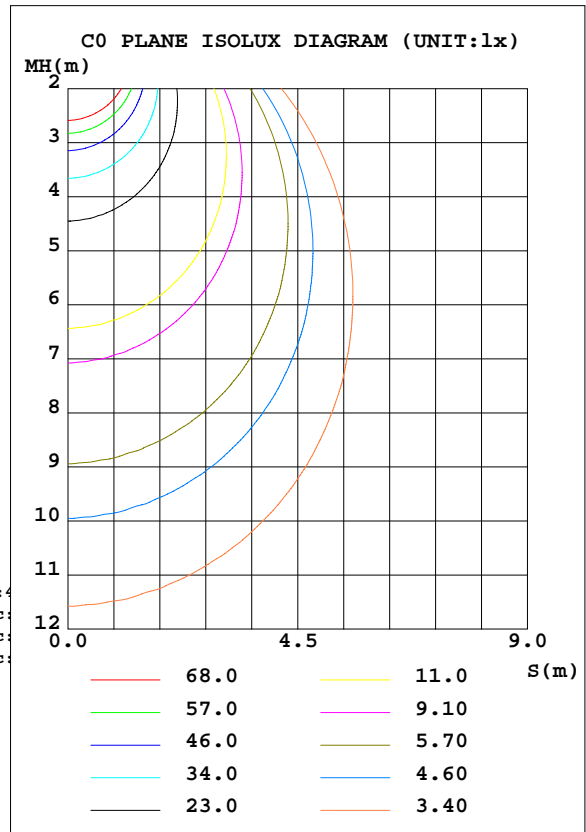
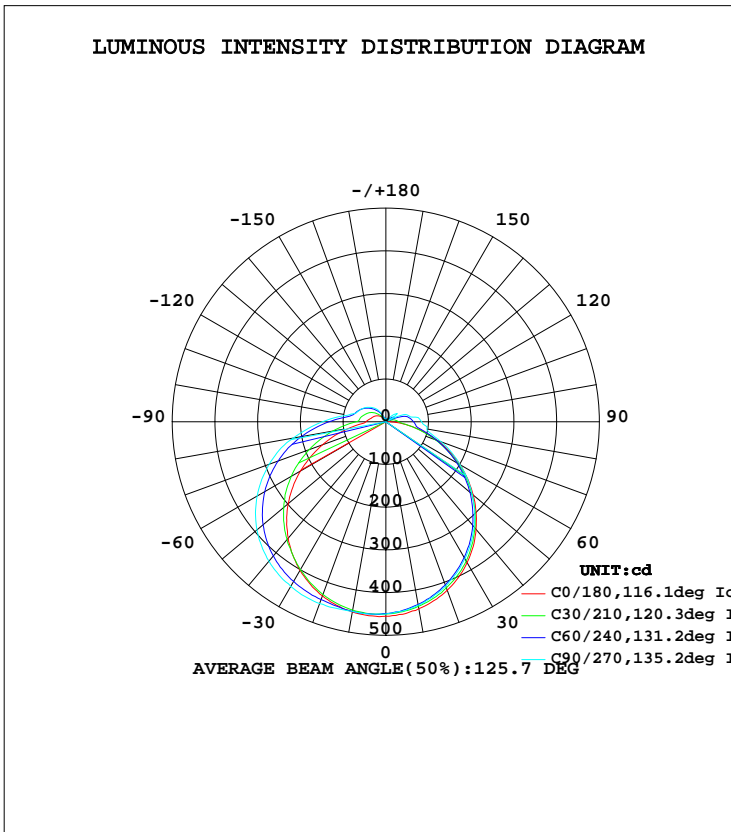


LUMINAIRE PHOTOMETRIC TEST REPORT

| | | |
|---|----------|-------------------|
| Test:U:119.9V I:0.1821A P:21.48W PF:0.9832 Lamp Flux:1758.95x1 lm | | |
| NAME: ASD-OLWS-23-14D20CC-BZ 5000K | TYPE:LED | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: ASD Lighting corp | SUR.: | PROTECTION ANGLE: |

| DATA OF LAMP | | PHOTOMETRIC DATA Eff: 81.88 lm/W | | | |
|------------------|------------------------|----------------------------------|---------|--------------------|----------|
| MODEL | ASD-OLWS-23-14D20CC-BZ | I _{max} (cd) | 456.5 | S/MH(C0/180) | 1.31 |
| NOMINAL POWER(W) | 20 | LOR(%) | 100.0 | S/MH(C90/270) | 1.49 |
| RATED VOLTAGE(V) | 120 | TOTAL FLUX(lm) | 1758.9 | η UP, DN(C0-180) | 4.4,39.1 |
| NOMINAL FLUX(lm) | 1758.95 | CIE CLASS | SEMI-D. | η UP, DN(C180-360) | 7.1,49.4 |
| LAMPS INSIDE | 1 | η up(%) | 11.5 | CIBSE SHR NOM | 1.50 |
| TEST VOLTAGE(V) | 120 | η down(%) | 88.5 | CIBSE SHR MAX | 1.50 |



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-04-12

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 | Φ lum, lamp |
|----------|-----------------------|-------|-------|-------|-------|-------|-------|-------|----------|-------------|--------------|------------------|
| 10 | 444.5 | 435.7 | 436.1 | 443.6 | 452.1 | 449.6 | 450.5 | 444.4 | 0- 10 | 42.67 | 42.67 | 2.43,2.43 |
| 20 | 419.7 | 409.6 | 409.4 | 424.7 | 434.0 | 436.0 | 453.1 | 433.5 | 10- 20 | 123.4 | 166.0 | 9.44,9.44 |
| 30 | 380.6 | 369.8 | 370.1 | 392.4 | 401.6 | 414.5 | 445.3 | 409.6 | 20- 30 | 190.8 | 356.8 | 20.3,20.3 |
| 40 | 328.5 | 318.3 | 321.7 | 348.6 | 355.7 | 386.7 | 425.9 | 373.9 | 30- 40 | 236.9 | 593.7 | 33.8,33.8 |
| 50 | 267.3 | 257.4 | 264.0 | 294.9 | 298.3 | 346.9 | 393.9 | 324.9 | 40- 50 | 256.1 | 849.8 | 48.3,48.3 |
| 60 | 200.0 | 189.1 | 200.6 | 231.5 | 230.7 | 295.9 | 347.8 | 264.3 | 50- 60 | 246.1 | 1096 | 62.3,62.3 |
| 70 | 128.5 | 121.6 | 137.7 | 164.8 | 157.9 | 235.2 | 290.8 | 198.6 | 60- 70 | 209.2 | 1305 | 74.2,74.2 |
| 80 | 58.02 | 66.13 | 98.01 | 101.9 | 88.59 | 168.6 | 220.3 | 128.0 | 70- 80 | 153.6 | 1459 | 82.9,82.9 |
| 90 | 10.59 | 48.79 | 83.78 | 76.36 | 46.88 | 105.2 | 148.8 | 69.17 | 80- 90 | 98.78 | 1557 | 88.5,88.5 |
| 100 | 9.209 | 39.55 | 64.32 | 67.11 | 38.48 | 75.77 | 90.57 | 50.28 | 90-100 | 67.66 | 1625 | 92.4,92.4 |
| 110 | 7.224 | 15.24 | 49.95 | 38.69 | 32.85 | 64.20 | 70.36 | 38.49 | 100-110 | 48.88 | 1674 | 95.2,95.2 |
| 120 | 6.075 | 13.05 | 9.909 | 32.64 | 27.63 | 55.17 | 62.66 | 29.32 | 110-120 | 32.86 | 1707 | 97,97 |
| 130 | 5.419 | 5.752 | 28.17 | 18.86 | 21.40 | 43.78 | 52.91 | 14.17 | 120-130 | 24.14 | 1731 | 98.4,98.4 |
| 140 | 5.600 | 6.160 | 8.100 | 7.582 | 14.18 | 28.15 | 41.94 | 7.423 | 130-140 | 14.49 | 1746 | 99.2,99.2 |
| 150 | 5.827 | 5.893 | 6.385 | 6.158 | 7.303 | 14.28 | 25.08 | 7.086 | 140-150 | 7.216 | 1753 | 99.6,99.6 |
| 160 | 6.096 | 6.235 | 6.566 | 6.359 | 6.266 | 8.073 | 6.462 | 6.270 | 150-160 | 3.720 | 1756 | 99.9,99.9 |
| 170 | 6.389 | 6.455 | 6.709 | 6.528 | 6.459 | 6.505 | 6.617 | 6.597 | 160-170 | 1.872 | 1758 | 100,100 |
| 180 | 6.586 | 6.620 | 6.728 | 6.582 | 6.613 | 6.613 | 6.736 | 6.574 | 170-180 | 0.6270 | 1759 | 100,100 |
| DEG | LUMINOUS INTENSITY:cd | | | | | | | | | UNIT:lm | | |

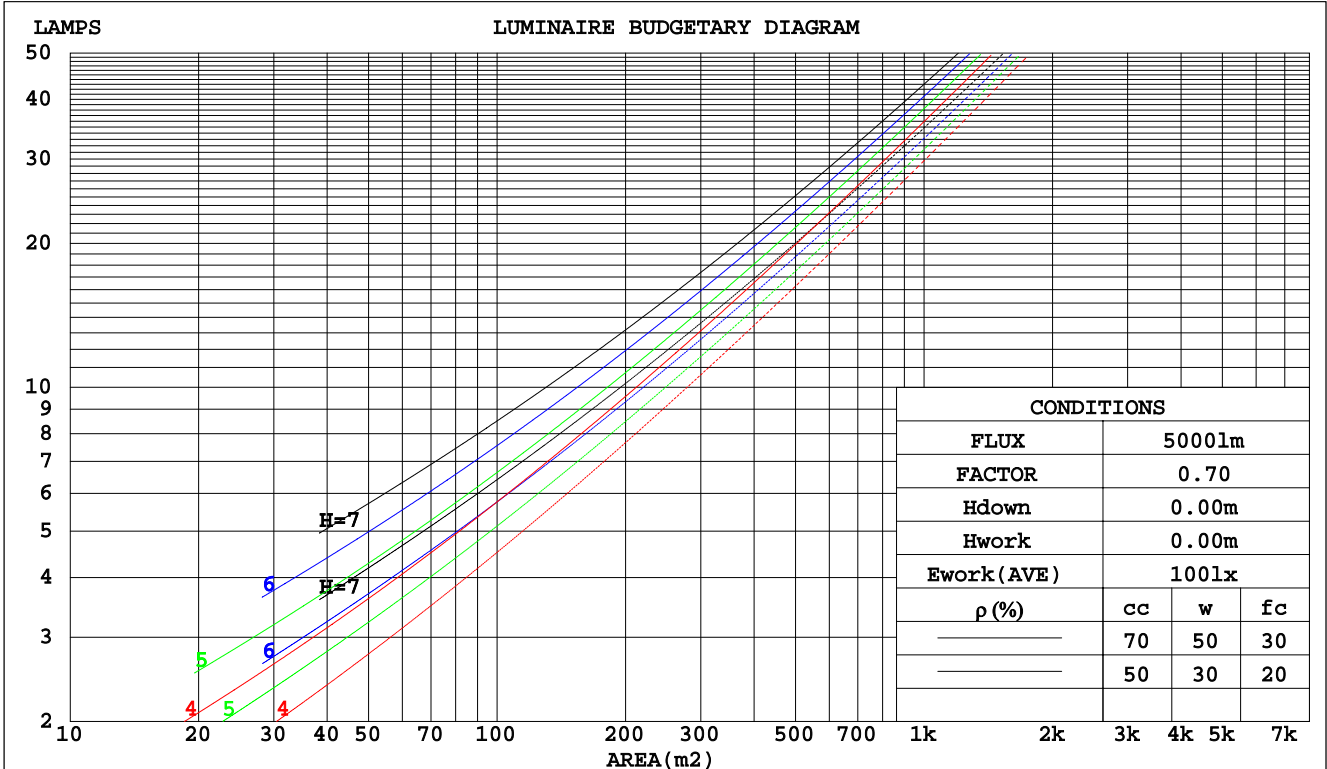
C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2022-04-12

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:0.1821A P:21.48W PF:0.9832 Lamp Flux:1758.95x1 lm | | |
| NAME: ASD-OLWS-23-14D20CC-BZ 5000K | 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 | 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 | 1.05 | 1.05 | 1.05 | .98 | .98 | .98 | .92 | .92 | .92 | .89 |
| 1.0 | .98 | .93 | .89 | .95 | .90 | .86 | .89 | .85 | .82 | .83 | .80 | .77 | .77 | .75 | .73 | .70 |
| 2.0 | .85 | .77 | .71 | .82 | .75 | .69 | .76 | .71 | .66 | .71 | .67 | .62 | .67 | .63 | .59 | .56 |
| 3.0 | .74 | .65 | .58 | .71 | .63 | .57 | .66 | .60 | .54 | .62 | .56 | .52 | .58 | .53 | .49 | .47 |
| 4.0 | .65 | .56 | .48 | .63 | .54 | .47 | .59 | .51 | .46 | .55 | .49 | .44 | .51 | .46 | .42 | .39 |
| 5.0 | .58 | .48 | .41 | .56 | .47 | .40 | .52 | .45 | .39 | .49 | .43 | .38 | .46 | .41 | .36 | .34 |
| 6.0 | .52 | .42 | .36 | .50 | .41 | .35 | .47 | .39 | .34 | .44 | .38 | .33 | .42 | .36 | .31 | .29 |
| 7.0 | .47 | .38 | .31 | .45 | .37 | .31 | .43 | .35 | .30 | .40 | .34 | .29 | .38 | .32 | .28 | .26 |
| 8.0 | .42 | .34 | .28 | .41 | .33 | .27 | .39 | .32 | .26 | .37 | .30 | .26 | .35 | .29 | .25 | .23 |
| 9.0 | .39 | .30 | .25 | .38 | .30 | .24 | .36 | .29 | .24 | .34 | .28 | .23 | .32 | .26 | .22 | .20 |
| 10.0 | .36 | .28 | .22 | .35 | .27 | .22 | .33 | .26 | .21 | .31 | .25 | .21 | .30 | .24 | .20 | .18 |



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2022-04-12

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:0.1821A P:21.48W PF:0.9832 Lamp Flux:1758.95x1 lm | | |
| NAME: ASD-OLWS-23-14D20CC-BZ 5000K | 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 | .361 | .205 | .065 | .351 | .200 | .064 | .331 | .190 | .061 | .312 | .180 | .058 | .295 | .171 | .055 | |
| 2.0 | .321 | .176 | .054 | .311 | .171 | .053 | .293 | .163 | .051 | .277 | .155 | .049 | .261 | .148 | .047 | |
| 3.0 | .289 | .154 | .046 | .280 | .150 | .045 | .264 | .143 | .043 | .249 | .136 | .042 | .235 | .130 | .040 | |
| 4.0 | .262 | .136 | .040 | .254 | .133 | .039 | .240 | .127 | .038 | .226 | .121 | .037 | .213 | .116 | .035 | |
| 5.0 | .239 | .122 | .035 | .232 | .119 | .035 | .219 | .114 | .034 | .207 | .109 | .032 | .195 | .104 | .031 | |
| 6.0 | .220 | .110 | .032 | .214 | .108 | .031 | .202 | .103 | .030 | .191 | .099 | .029 | .180 | .095 | .028 | |
| 7.0 | .204 | .101 | .029 | .198 | .099 | .028 | .187 | .095 | .027 | .177 | .091 | .026 | .167 | .087 | .026 | |
| 8.0 | .189 | .092 | .026 | .184 | .091 | .026 | .174 | .087 | .025 | .165 | .083 | .024 | .156 | .080 | .023 | |
| 9.0 | .177 | .085 | .024 | .172 | .084 | .024 | .163 | .080 | .023 | .154 | .077 | .022 | .146 | .074 | .021 | |
| 10.0 | .166 | .079 | .022 | .161 | .078 | .022 | .153 | .075 | .021 | .145 | .072 | .020 | .137 | .069 | .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 | .278 | .278 | .278 | .237 | .237 | .237 | .162 | .162 | .162 | .093 | .093 | .093 | .030 | .030 | .030 | |
| 1.0 | .272 | .244 | .218 | .233 | .209 | .188 | .159 | .144 | .130 | .092 | .083 | .076 | .029 | .027 | .024 | |
| 2.0 | .265 | .220 | .183 | .227 | .190 | .158 | .155 | .131 | .110 | .090 | .076 | .065 | .029 | .025 | .021 | |
| 3.0 | .257 | .203 | .161 | .220 | .176 | .139 | .151 | .122 | .098 | .087 | .071 | .058 | .028 | .023 | .019 | |
| 4.0 | .249 | .191 | .146 | .214 | .165 | .127 | .147 | .115 | .089 | .085 | .067 | .053 | .027 | .022 | .017 | |
| 5.0 | .242 | .181 | .136 | .208 | .156 | .118 | .143 | .109 | .083 | .083 | .064 | .049 | .027 | .021 | .016 | |
| 6.0 | .234 | .173 | .128 | .202 | .149 | .112 | .139 | .105 | .079 | .081 | .062 | .047 | .026 | .020 | .016 | |
| 7.0 | .227 | .166 | .123 | .196 | .144 | .107 | .135 | .101 | .076 | .079 | .059 | .045 | .025 | .019 | .015 | |
| 8.0 | .221 | .160 | .119 | .190 | .139 | .103 | .132 | .098 | .073 | .077 | .058 | .044 | .025 | .019 | .014 | |
| 9.0 | .215 | .155 | .115 | .185 | .135 | .101 | .128 | .095 | .072 | .075 | .056 | .043 | .024 | .018 | .014 | |
| 10.0 | .209 | .151 | .113 | .180 | .131 | .099 | .125 | .092 | .070 | .073 | .055 | .042 | .024 | .018 | .014 | |

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-04-12

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:0.1821A P:21.48W PF:0.9832 Lamp Flux:1758.95x1 lm | | | | | | | | | | |
| NAME: ASD-OLWS-23-14D20CC-BZ 5000K | | | | | 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 | 16.3 | 17.8 | 16.8 | 18.2 | 18.6 | 16.2 | 17.7 | 16.6 | 18.1 | 18.5 |
| 3H | 17.9 | 19.2 | 18.3 | 19.6 | 20.1 | 17.9 | 19.2 | 18.4 | 19.7 | 20.1 |
| 4H | 18.5 | 19.7 | 18.9 | 20.2 | 20.7 | 18.7 | 20.0 | 19.2 | 20.4 | 20.9 |
| 6H | 18.9 | 20.1 | 19.4 | 20.6 | 21.1 | 19.7 | 20.9 | 20.2 | 21.4 | 21.9 |
| 8H | 19.1 | 20.2 | 19.6 | 20.7 | 21.3 | 20.4 | 21.5 | 20.9 | 22.0 | 22.6 |
| 12H | 19.2 | 20.3 | 19.7 | 20.8 | 21.4 | 21.2 | 22.3 | 21.8 | 22.8 | 23.4 |
| 4H 2H | 16.9 | 18.1 | 17.3 | 18.6 | 19.1 | 16.8 | 18.0 | 17.3 | 18.5 | 19.0 |
| 3H | 18.6 | 19.7 | 19.1 | 20.2 | 20.7 | 18.6 | 19.8 | 19.2 | 20.2 | 20.8 |
| 4H | 19.3 | 20.3 | 19.8 | 20.8 | 21.4 | 19.6 | 20.6 | 20.1 | 21.1 | 21.7 |
| 6H | 19.9 | 20.8 | 20.4 | 21.3 | 21.9 | 20.7 | 21.7 | 21.3 | 22.2 | 22.8 |
| 8H | 20.1 | 20.9 | 20.6 | 21.5 | 22.1 | 21.6 | 22.4 | 22.1 | 23.0 | 23.6 |
| 12H | 20.2 | 21.0 | 20.8 | 21.6 | 22.2 | 22.6 | 23.3 | 23.2 | 23.9 | 24.6 |
| 8H 4H | 19.6 | 20.4 | 20.2 | 21.0 | 21.6 | 19.9 | 20.7 | 20.4 | 21.3 | 21.9 |
| 6H | 20.3 | 21.0 | 20.9 | 21.6 | 22.3 | 21.2 | 21.9 | 21.8 | 22.5 | 23.2 |
| 8H | 20.6 | 21.3 | 21.2 | 21.9 | 22.6 | 22.2 | 22.9 | 22.8 | 23.5 | 24.2 |
| 12H | 20.8 | 21.4 | 21.5 | 22.0 | 22.7 | 23.5 | 24.0 | 24.1 | 24.7 | 25.4 |
| 12H 4H | 19.6 | 20.4 | 20.2 | 21.0 | 21.6 | 19.9 | 20.6 | 20.5 | 21.2 | 21.9 |
| 6H | 20.5 | 21.1 | 21.1 | 21.7 | 22.4 | 21.3 | 21.9 | 21.9 | 22.6 | 23.2 |
| 8H | 20.8 | 21.4 | 21.5 | 22.0 | 22.7 | 22.4 | 22.9 | 23.0 | 23.6 | 24.3 |
| Variations with the observer position at spacings: | | | | | | | | | | |
| S = 1.0H | + 0.1 / - 0.2 | | | | | + 0.1 / - 0.1 | | | | |
| 1.5H | + 0.1 / - 0.2 | | | | | + 0.2 / - 0.2 | | | | |
| 2.0H | + 0.2 / - 0.3 | | | | | + 0.2 / - 0.3 | | | | |

CIE Pub.117 Corrected 1759 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:2022-04-12

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:0.1821A P:21.48W PF:0.9832 Lamp Flux:1758.95x1 lm | | |
| NAME: ASD-OLWS-23-14D20CC-BZ 5000K | TYPE:LED | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: ASD Lighting corp | SUR.: | PROTECTION ANGLE: |

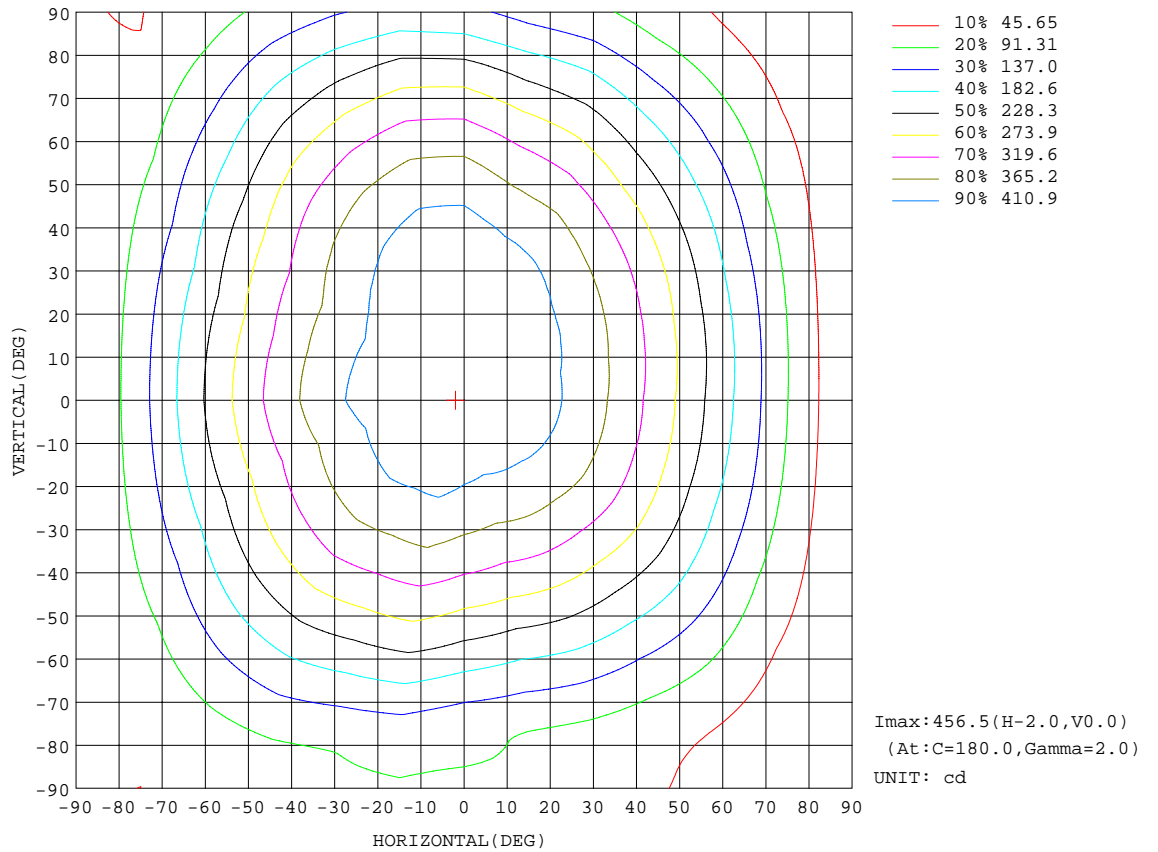
| REFLECTANCE | | | | | | | | | | |
|----------------------------------|--|-----|-----------|-----|-----|-----|---------------|-----|-----|--------|
| Ceiling | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0 |
| Walls | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0 |
| Working plane | 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) x RCR = 5 | | | | | | | | | |
| k = 0.60 | 51 | 39 | 31 | 50 | 38 | 31 | 48 | 38 | 31 | 24 |
| 0.80 | 60 | 48 | 40 | 59 | 47 | 40 | 57 | 46 | 39 | 31 |
| 1.00 | 68 | 56 | 48 | 67 | 55 | 47 | 64 | 56 | 47 | 38 |
| 1.25 | 75 | 63 | 55 | 73 | 62 | 55 | 70 | 60 | 53 | 44 |
| 1.50 | 80 | 69 | 61 | 78 | 68 | 60 | 74 | 65 | 58 | 49 |
| 2.00 | 88 | 77 | 70 | 85 | 76 | 68 | 80 | 72 | 66 | 56 |
| 2.50 | 92 | 83 | 75 | 89 | 80 | 74 | 84 | 77 | 71 | 60 |
| 3.00 | 96 | 87 | 80 | 93 | 85 | 79 | 87 | 81 | 75 | 64 |
| 4.00 | 100 | 93 | 87 | 97 | 90 | 85 | 91 | 85 | 81 | 68 |
| 5.00 | 103 | 97 | 91 | 99 | 94 | 89 | 93 | 89 | 85 | 72 |
| 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:2022-04-12

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:0.1821A P:21.48W PF:0.9832 Lamp Flux:1758.95x1 lm | | |
| NAME: ASD-OLWS-23-14D20CC-BZ 5000K | TYPE:LED | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: ASD Lighting corp | SUR.: | PROTECTION ANGLE: |

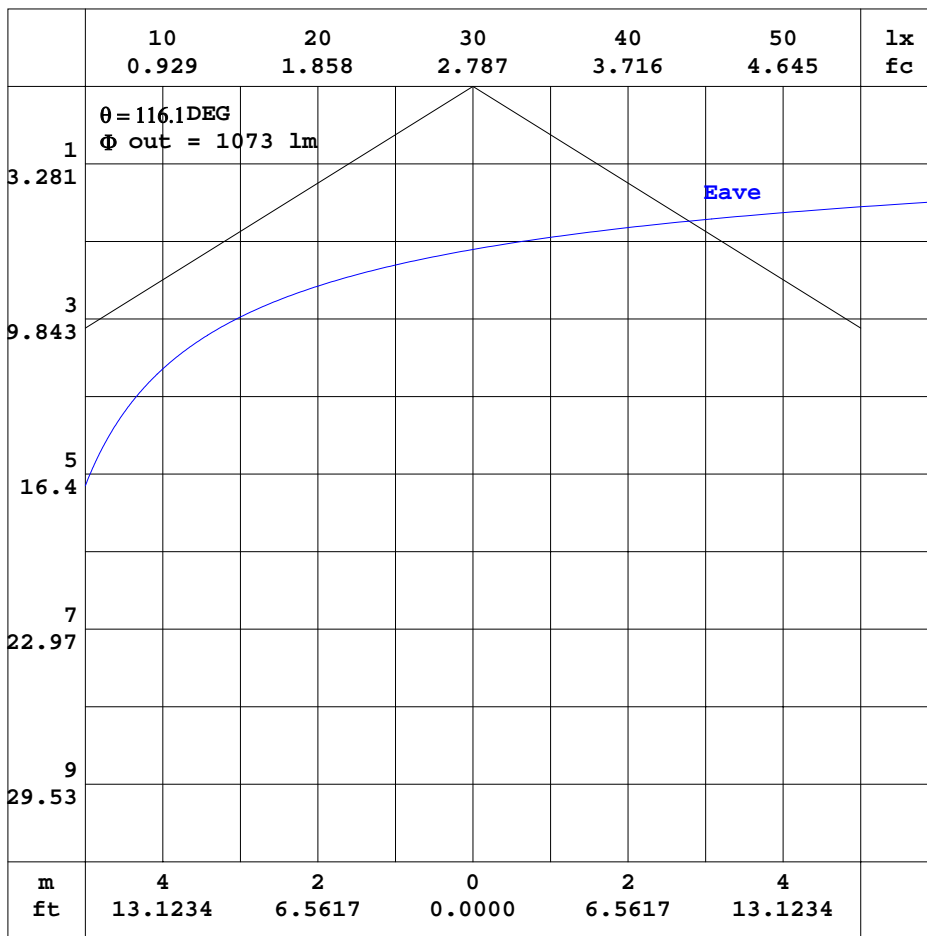


C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2022-04-12

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:0.1821A P:21.48W PF:0.9832 Lamp Flux:1758.95x1 lm | | |
| NAME: ASD-OLWS-23-14D20CC-BZ 5000K | TYPE:LED | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: ASD Lighting corp | SUR.: | PROTECTION ANGLE: |



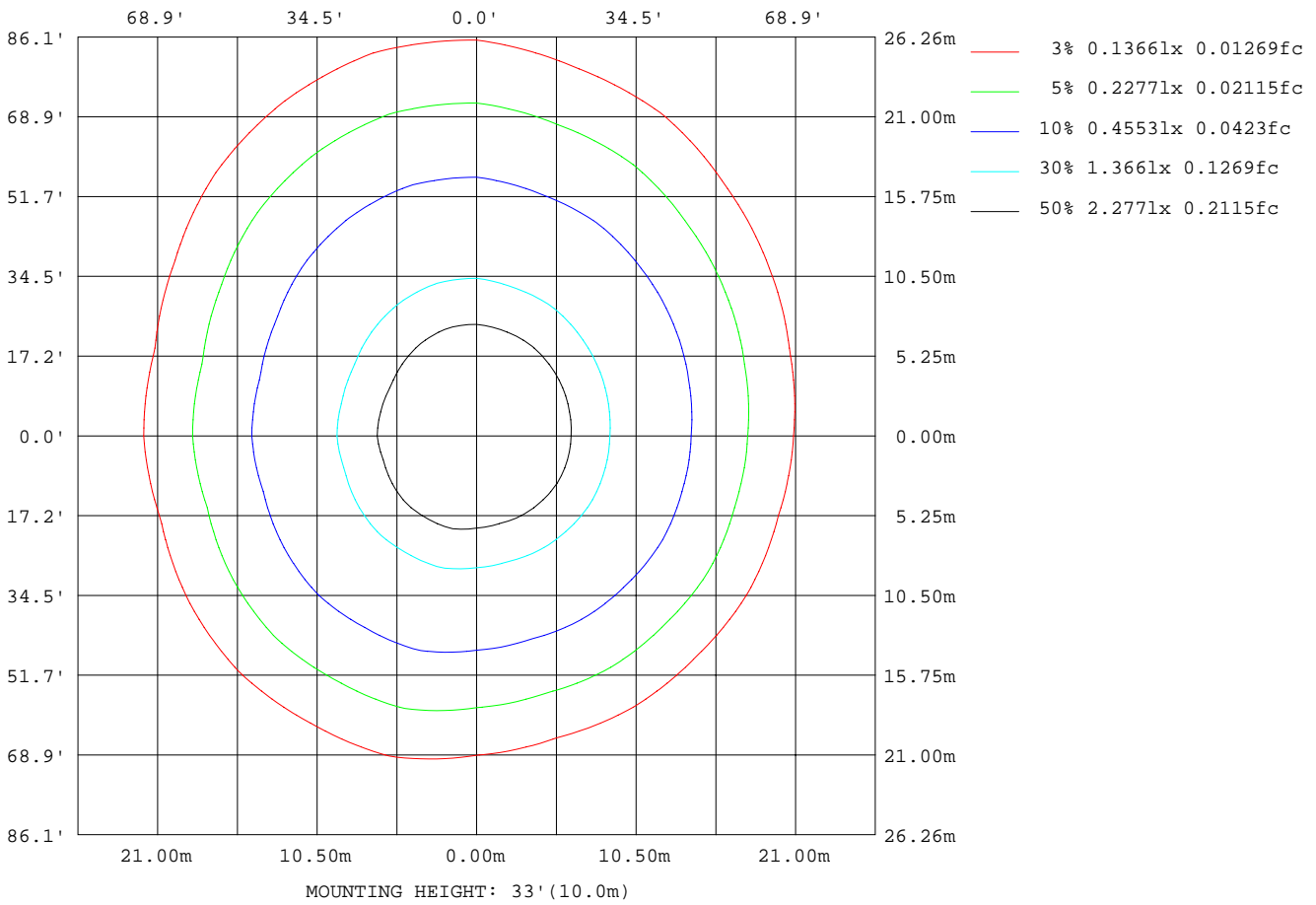
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2022-04-12

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:0.1821A P:21.48W PF:0.9832 Lamp Flux:1758.95x1 lm | | |
| NAME: ASD-OLWS-23-14D20CC-BZ 5000K | 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:2022-04-12

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:0.1821A P:21.48W PF:0.9832 Lamp Flux:1758.95x1 lm | | |
| NAME: ASD-OLWS-23-14D20CC-BZ 5000K | TYPE:LED | WEIGHT: |
| SPEC.: | DIM.: | SERIAL No.: |
| MFR.: ASD Lighting corp | SUR.: | PROTECTION ANGLE: |

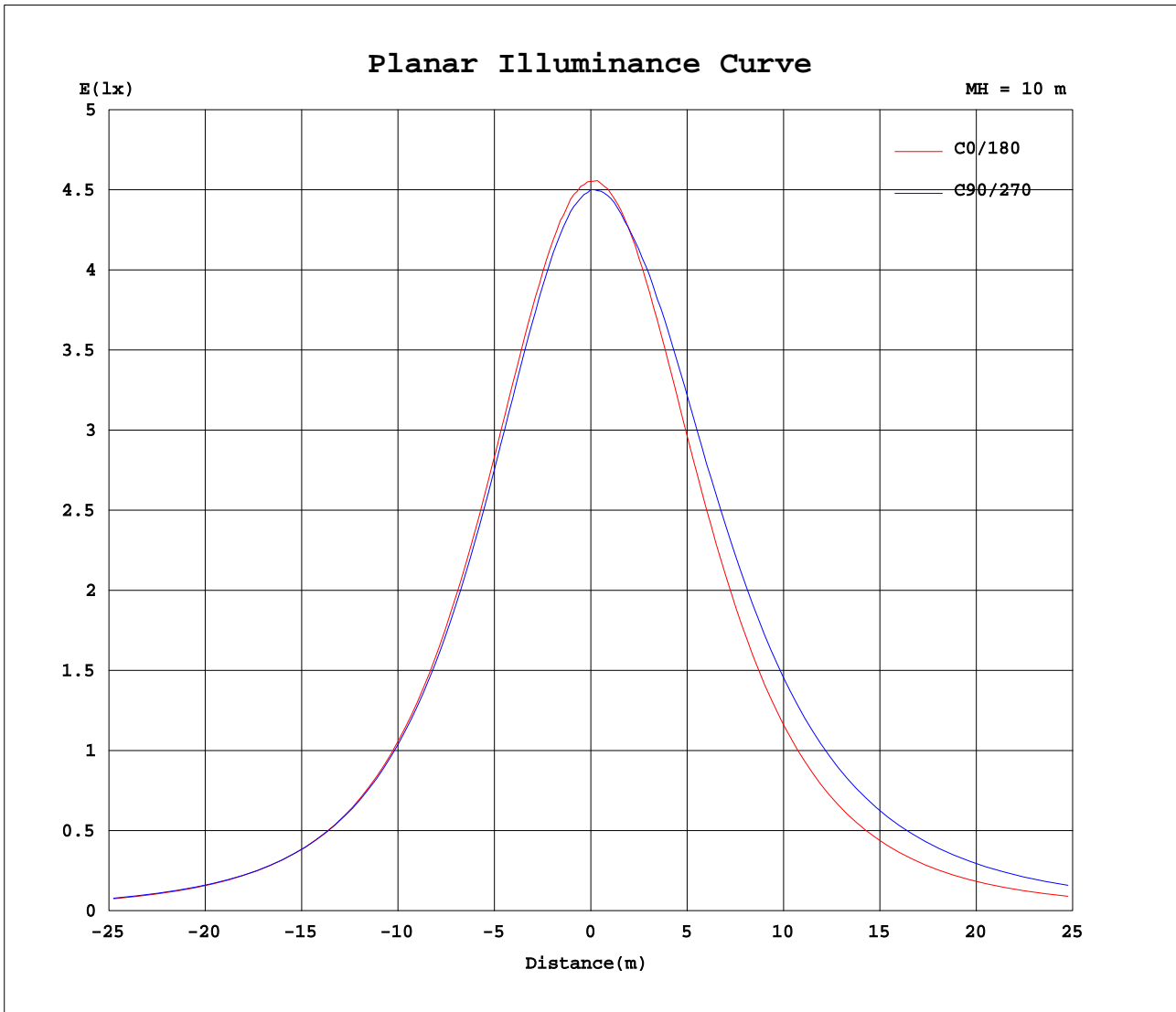
| AvgL | cd/m2 |
|----------------|-------|
| L_0~180(65)av | 4250 |
| L_0~180(75)av | 4146 |
| L_0~180(85)av | 5037 |
| L_90~270(65)av | 5803 |
| L_90~270(75)av | 7122 |
| L_90~270(85)av | 15706 |
| L_45(65)av | 5037 |
| L_45(75)av | 5689 |
| L_45(85)av | 10456 |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2022-04-12

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: 2022-04-12

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:0.1821A P:21.48W PF:0.9832 Lamp Flux:1758.95x1 lm | | |
| NAME: ASD-OLWS-23-14D20CC-BZ 5000K | 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 | 455 | 453 | 450 | 449 | 449 | 449 | 450 | 450 | 449 | 449 | 448 | 448 | 455 | 453 | 450 | 449 | 449 | 449 | 450 |
| 5 | 452 | 449 | 446 | 444 | 443 | 442 | 445 | 448 | 448 | 448 | 448 | 446 | 456 | 453 | 451 | 451 | 451 | 452 | 452 |
| 10 | 445 | 442 | 439 | 436 | 434 | 432 | 436 | 443 | 442 | 444 | 443 | 442 | 452 | 450 | 448 | 450 | 451 | 452 | 450 |
| 15 | 434 | 431 | 428 | 424 | 422 | 420 | 425 | 433 | 433 | 436 | 435 | 433 | 445 | 443 | 441 | 445 | 447 | 450 | 452 |
| 20 | 420 | 418 | 414 | 410 | 407 | 403 | 409 | 421 | 421 | 425 | 424 | 421 | 434 | 432 | 430 | 436 | 443 | 450 | 453 |
| 25 | 402 | 400 | 397 | 391 | 388 | 384 | 391 | 405 | 406 | 410 | 408 | 406 | 419 | 417 | 417 | 426 | 439 | 448 | 451 |
| 30 | 381 | 378 | 376 | 370 | 367 | 362 | 370 | 387 | 387 | 392 | 390 | 388 | 402 | 399 | 400 | 415 | 432 | 444 | 445 |
| 35 | 357 | 353 | 352 | 345 | 343 | 338 | 347 | 366 | 366 | 372 | 370 | 366 | 380 | 378 | 381 | 402 | 422 | 436 | 437 |
| 40 | 328 | 326 | 325 | 318 | 316 | 312 | 322 | 341 | 341 | 349 | 346 | 341 | 356 | 354 | 360 | 387 | 410 | 426 | 426 |
| 45 | 299 | 296 | 295 | 289 | 287 | 284 | 294 | 315 | 315 | 323 | 318 | 314 | 328 | 326 | 337 | 368 | 394 | 412 | 411 |
| 50 | 267 | 264 | 263 | 257 | 257 | 254 | 264 | 287 | 287 | 295 | 290 | 284 | 298 | 296 | 312 | 347 | 375 | 394 | 394 |
| 55 | 234 | 228 | 229 | 223 | 225 | 221 | 233 | 257 | 256 | 264 | 258 | 252 | 266 | 264 | 285 | 323 | 353 | 373 | 373 |
| 60 | 200 | 192 | 194 | 189 | 192 | 189 | 201 | 224 | 224 | 231 | 226 | 217 | 231 | 230 | 256 | 296 | 327 | 350 | 348 |
| 65 | 165 | 156 | 159 | 155 | 159 | 157 | 170 | 192 | 192 | 198 | 192 | 183 | 194 | 195 | 224 | 267 | 299 | 323 | 321 |
| 70 | 129 | 121 | 123 | 122 | 127 | 127 | 138 | 159 | 159 | 165 | 158 | 148 | 158 | 159 | 191 | 235 | 269 | 293 | 291 |
| 75 | 92.1 | 82.3 | 88.4 | 90.4 | 97.6 | 99.6 | 110 | 129 | 127 | 133 | 125 | 114 | 123 | 125 | 158 | 202 | 237 | 261 | 259 |
| 80 | 58.0 | 50.3 | 58.9 | 66.1 | 74.9 | 88.2 | 98.0 | 105 | 99.8 | 102 | 93.5 | 81.5 | 88.6 | 91.7 | 126 | 169 | 201 | 226 | 220 |
| 85 | 29.5 | 18.6 | 37.4 | 53.1 | 69.4 | 81.6 | 91.3 | 96.9 | 88.8 | 80.6 | 68.0 | 53.9 | 58.3 | 62.0 | 95.7 | 136 | 166 | 188 | 182 |
| 90 | 10.6 | 9.46 | 30.4 | 48.8 | 65.1 | 76.0 | 83.8 | 88.6 | 84.2 | 76.4 | 62.3 | 45.6 | 46.9 | 44.4 | 69.7 | 105 | 133 | 154 | 149 |
| 95 | 10.2 | 7.62 | 26.4 | 44.3 | 60.5 | 71.2 | 79.0 | 83.4 | 79.5 | 71.9 | 58.3 | 42.4 | 42.8 | 42.5 | 62.4 | 81.6 | 104 | 122 | 118 |
| 100 | 9.21 | 6.29 | 22.7 | 39.5 | 55.5 | 64.5 | 64.3 | 66.3 | 72.3 | 67.1 | 52.8 | 38.5 | 38.5 | 40.8 | 59.7 | 75.8 | 83.5 | 91.7 | 90.6 |
| 105 | 7.54 | 6.61 | 17.4 | 31.9 | 49.2 | 49.6 | 55.5 | 59.9 | 60.0 | 57.9 | 43.7 | 34.1 | 35.0 | 38.2 | 55.8 | 69.3 | 75.4 | 77.6 | 76.1 |
| 110 | 7.22 | 6.07 | 13.3 | 15.2 | 30.9 | 40.3 | 49.9 | 52.0 | 48.5 | 38.7 | 38.9 | 31.1 | 32.9 | 35.1 | 51.5 | 64.2 | 71.4 | 73.7 | 70.4 |
| 115 | 6.51 | 5.93 | 8.68 | 17.1 | 10.6 | 11.6 | 26.8 | 32.0 | 25.8 | 32.4 | 34.7 | 28.6 | 30.4 | 31.7 | 47.7 | 60.0 | 66.9 | 69.2 | 66.8 |
| 120 | 6.07 | 5.74 | 5.57 | 13.0 | 22.1 | 15.7 | 9.91 | 12.7 | 22.8 | 32.6 | 28.1 | 25.9 | 27.6 | 28.7 | 43.2 | 55.2 | 61.7 | 63.8 | 62.7 |
| 125 | 5.57 | 5.67 | 5.97 | 8.22 | 18.2 | 25.6 | 32.8 | 22.0 | 27.2 | 27.1 | 22.0 | 23.0 | 24.7 | 25.5 | 37.8 | 49.9 | 55.7 | 58.1 | 58.0 |
| 130 | 5.42 | 5.39 | 5.55 | 5.75 | 11.3 | 20.1 | 28.2 | 27.7 | 21.3 | 18.9 | 17.2 | 19.7 | 21.4 | 22.0 | 31.5 | 43.8 | 49.4 | 52.5 | 52.9 |
| 135 | 5.57 | 5.46 | 5.61 | 5.73 | 6.19 | 11.4 | 20.8 | 21.1 | 13.1 | 11.9 | 13.8 | 16.2 | 17.9 | 18.2 | 24.7 | 36.5 | 42.7 | 47.5 | 47.7 |
| 140 | 5.60 | 5.55 | 5.52 | 6.16 | 5.92 | 7.50 | 8.10 | 11.6 | 8.17 | 7.58 | 10.6 | 12.7 | 14.2 | 14.4 | 18.5 | 28.2 | 35.7 | 42.1 | 41.9 |
| 145 | 5.75 | 5.65 | 5.56 | 5.77 | 5.98 | 6.16 | 7.14 | 7.72 | 6.24 | 6.12 | 7.62 | 9.32 | 10.6 | 10.6 | 12.8 | 19.8 | 29.0 | 35.9 | 35.0 |
| 150 | 5.83 | 5.77 | 5.71 | 5.89 | 6.05 | 6.27 | 6.39 | 6.41 | 6.32 | 6.16 | 6.05 | 6.30 | 7.30 | 7.28 | 7.94 | 14.3 | 21.5 | 28.1 | 25.1 |
| 155 | 5.95 | 5.94 | 5.87 | 6.06 | 6.18 | 6.38 | 6.47 | 6.45 | 6.40 | 6.27 | 6.14 | 6.04 | 6.17 | 6.12 | 6.37 | 11.1 | 14.4 | 18.8 | 13.5 |
| 160 | 6.10 | 6.07 | 6.04 | 6.24 | 6.31 | 6.49 | 6.57 | 6.55 | 6.45 | 6.36 | 6.23 | 6.16 | 6.27 | 6.20 | 6.29 | 8.07 | 10.2 | 11.8 | 6.46 |
| 165 | 6.30 | 6.24 | 6.20 | 6.32 | 6.44 | 6.61 | 6.65 | 6.65 | 6.55 | 6.45 | 6.34 | 6.27 | 6.35 | 6.30 | 6.37 | 6.45 | 7.19 | 8.33 | 6.54 |
| 170 | 6.39 | 6.37 | 6.33 | 6.45 | 6.55 | 6.67 | 6.71 | 6.68 | 6.60 | 6.53 | 6.44 | 6.41 | 6.46 | 6.41 | 6.45 | 6.50 | 6.60 | 6.63 | 6.62 |
| 175 | 6.50 | 6.49 | 6.43 | 6.54 | 6.62 | 6.70 | 6.72 | 6.70 | 6.63 | 6.57 | 6.51 | 6.47 | 6.55 | 6.49 | 6.51 | 6.55 | 6.65 | 6.66 | 6.69 |
| 180 | 6.59 | 6.59 | 6.52 | 6.62 | 6.66 | 6.72 | 6.73 | 6.69 | 6.64 | 6.58 | 6.52 | 6.50 | 6.61 | 6.57 | 6.54 | 6.61 | 6.68 | 6.71 | 6.74 |

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-04-12

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:0.1821A P:21.48W PF:0.9832 Lamp Flux:1758.95x1 lm | | |
| NAME: ASD-OLWS-23-14D20CC-BZ 5000K | 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 | 450 | 449 | 449 | 448 | 448 | | | | | | | | | | | | | | |
| 5 | 451 | 449 | 448 | 446 | 446 | | | | | | | | | | | | | | |
| 10 | 449 | 446 | 444 | 442 | 440 | | | | | | | | | | | | | | |
| 15 | 450 | 445 | 440 | 436 | 433 | | | | | | | | | | | | | | |
| 20 | 448 | 442 | 434 | 427 | 420 | | | | | | | | | | | | | | |
| 25 | 442 | 435 | 423 | 414 | 406 | | | | | | | | | | | | | | |
| 30 | 435 | 425 | 410 | 399 | 386 | | | | | | | | | | | | | | |
| 35 | 423 | 412 | 394 | 379 | 364 | | | | | | | | | | | | | | |
| 40 | 408 | 395 | 374 | 355 | 339 | | | | | | | | | | | | | | |
| 45 | 389 | 376 | 350 | 329 | 311 | | | | | | | | | | | | | | |
| 50 | 368 | 352 | 325 | 302 | 281 | | | | | | | | | | | | | | |
| 55 | 344 | 326 | 295 | 271 | 249 | | | | | | | | | | | | | | |
| 60 | 318 | 299 | 264 | 238 | 214 | | | | | | | | | | | | | | |
| 65 | 290 | 269 | 232 | 203 | 178 | | | | | | | | | | | | | | |
| 70 | 259 | 238 | 199 | 167 | 141 | | | | | | | | | | | | | | |
| 75 | 226 | 203 | 164 | 132 | 104 | | | | | | | | | | | | | | |
| 80 | 191 | 168 | 128 | 96.6 | 68.0 | | | | | | | | | | | | | | |
| 85 | 153 | 132 | 95.0 | 64.5 | 37.6 | | | | | | | | | | | | | | |
| 90 | 121 | 102 | 69.2 | 40.5 | 13.9 | | | | | | | | | | | | | | |
| 95 | 93.8 | 77.8 | 52.9 | 32.2 | 12.4 | | | | | | | | | | | | | | |
| 100 | 77.8 | 67.1 | 50.3 | 30.1 | 11.5 | | | | | | | | | | | | | | |
| 105 | 63.6 | 56.1 | 45.8 | 27.8 | 8.85 | | | | | | | | | | | | | | |
| 110 | 60.9 | 50.3 | 38.5 | 24.7 | 7.45 | | | | | | | | | | | | | | |
| 115 | 57.4 | 47.1 | 33.2 | 19.5 | 6.44 | | | | | | | | | | | | | | |
| 120 | 53.4 | 43.7 | 29.3 | 11.3 | 6.24 | | | | | | | | | | | | | | |
| 125 | 48.8 | 39.5 | 23.3 | 6.42 | 6.13 | | | | | | | | | | | | | | |
| 130 | 42.1 | 31.9 | 14.2 | 6.81 | 6.08 | | | | | | | | | | | | | | |
| 135 | 31.0 | 21.0 | 6.98 | 6.78 | 6.48 | | | | | | | | | | | | | | |
| 140 | 17.4 | 11.4 | 7.42 | 6.03 | 6.09 | | | | | | | | | | | | | | |
| 145 | 9.09 | 7.66 | 8.12 | 6.11 | 6.06 | | | | | | | | | | | | | | |
| 150 | 9.63 | 10.4 | 7.09 | 6.12 | 6.09 | | | | | | | | | | | | | | |
| 155 | 10.9 | 9.28 | 6.18 | 6.19 | 6.14 | | | | | | | | | | | | | | |
| 160 | 8.71 | 6.52 | 6.27 | 6.26 | 6.20 | | | | | | | | | | | | | | |
| 165 | 6.53 | 6.50 | 6.45 | 6.42 | 6.38 | | | | | | | | | | | | | | |
| 170 | 6.56 | 6.65 | 6.60 | 6.60 | 6.59 | | | | | | | | | | | | | | |
| 175 | 6.63 | 6.60 | 6.59 | 6.56 | 6.56 | | | | | | | | | | | | | | |
| 180 | 6.69 | 6.64 | 6.57 | 6.52 | 6.49 | | | | | | | | | | | | | | |

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2022-04-12

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: