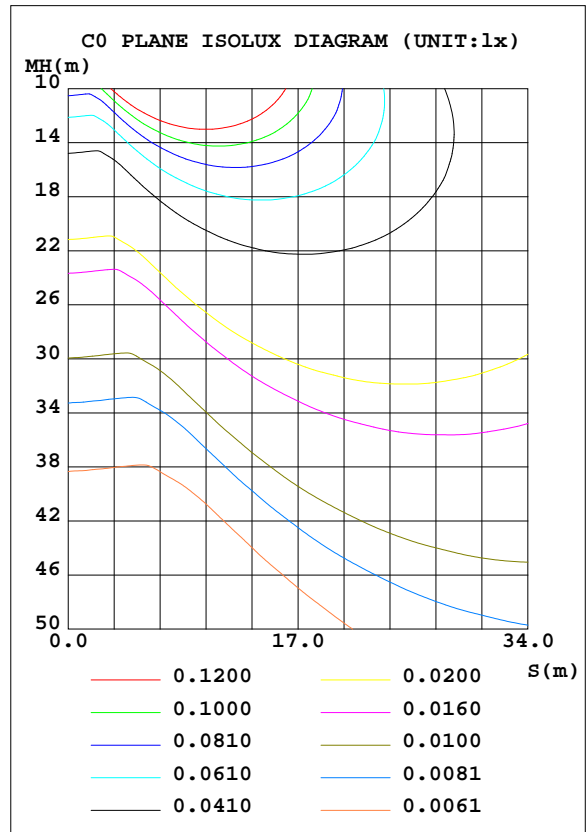
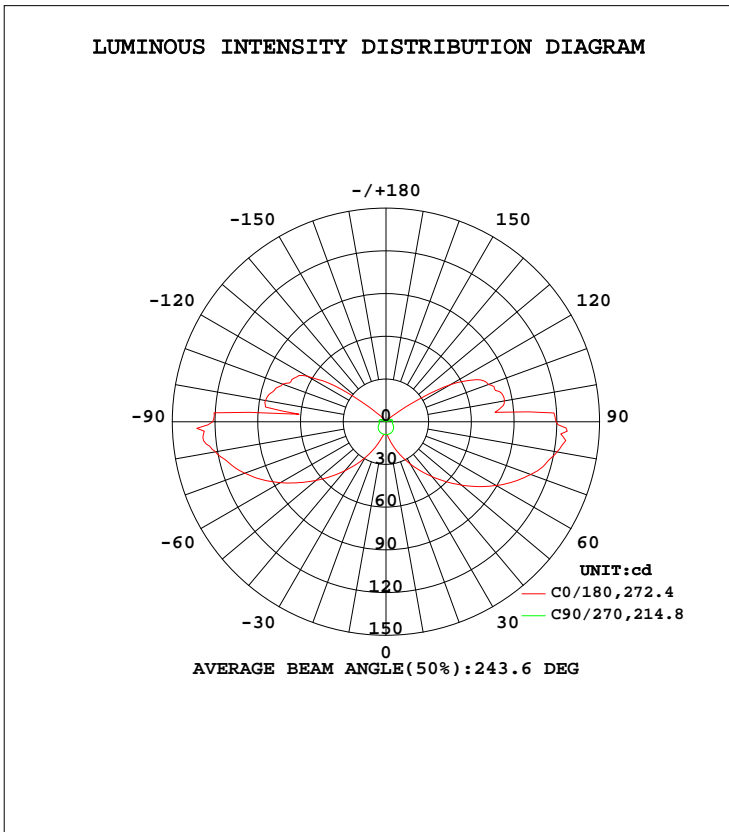


LUMINAIRE PHOTOMETRIC TEST REPORT

| | | |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1827A P:21.59W PF:0.9850 Lamp Flux:453.567x1 lm | | |
| NAME: LED Luminaire | TYPE:N/A | WEIGHT:N/A |
| SPEC.:ASD-LWS28S-12D22CC-BK 5000K | DIM.: N/A | SERIAL No.:N/A |
| MFR.: ASD Lighting corp | SUR.:N/A | Shielding Angle:N/A |

| DATA OF LAMP | | PHOTOMETRIC DATA Eff: 21.00 lm/W | | | |
|------------------|-------------------|----------------------------------|---------|--------------------|------------|
| MODEL | PSZ2S221013001-10 | I _{max} (cd) | 132.9 | S/MH(C0/180) | 5.06 |
| NOMINAL POWER(W) | | LOR(%) | 100.0 | S/MH(C90/270) | 1.40 |
| RATED VOLTAGE(V) | 120 | TOTAL FLUX(lm) | 453.57 | η UP, DN(C0-180) | 19.8, 30.5 |
| NOMINAL FLUX(lm) | 453.567 | CIE CLASS | SEMI-D. | η UP, DN(C180-360) | 18.9, 30.8 |
| LAMPS INSIDE | 1 | η up(%) | 38.7 | CIBSE SHR NOM | 1.50 |
| TEST VOLTAGE(V) | 120 | η down(%) | 61.3 | CIBSE SHR MAX | 1.55 |



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Evan
 Test Date:2022-10-14

Evan Chen

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.351
 Humidity:39%
 Test Distance:2.532m [K=1.0000]
 Remarks:

Reviewed by : *Mexy He*

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

| γ | C0 | C45 | C90 | C135 | C180 | C225 | C270 | C315 | γ | Φ zone | Φ total | %lum, lamp |
|-----|-----------------------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|------------|
| 10 | 9.372 | 8.967 | 8.954 | 9.905 | 11.90 | 9.983 | 8.978 | 8.963 | 0- 10 | 0.8776 | 0.8776 | 0.19,0.19 |
| 20 | 16.27 | 11.12 | 8.795 | 15.08 | 21.43 | 15.22 | 8.811 | 11.51 | 10- 20 | 3.251 | 4.128 | 0.91,0.91 |
| 30 | 28.91 | 17.69 | 8.412 | 22.42 | 34.33 | 22.43 | 8.416 | 18.50 | 20- 30 | 7.742 | 11.87 | 2.62,2.62 |
| 40 | 44.94 | 26.51 | 7.905 | 31.30 | 50.35 | 30.95 | 7.745 | 27.70 | 30- 40 | 15.17 | 27.04 | 5.96,5.96 |
| 50 | 64.07 | 36.33 | 7.176 | 40.87 | 69.26 | 40.07 | 7.035 | 37.84 | 40- 50 | 25.63 | 52.67 | 11.6,11.6 |
| 60 | 85.59 | 46.17 | 6.336 | 50.20 | 89.57 | 48.82 | 6.098 | 48.06 | 50- 60 | 38.52 | 91.19 | 20.1,20.1 |
| 70 | 105.6 | 55.06 | 5.325 | 58.10 | 108.2 | 55.99 | 5.131 | 57.05 | 60- 70 | 52.16 | 143.3 | 31.6,31.6 |
| 80 | 121.5 | 61.65 | 4.698 | 63.49 | 121.9 | 60.97 | 4.627 | 64.05 | 70- 80 | 63.65 | 207.0 | 45.6,45.6 |
| 90 | 121.7 | 65.22 | 4.897 | 66.32 | 119.5 | 63.19 | 4.653 | 67.37 | 80- 90 | 70.95 | 277.9 | 61.3,61.3 |
| 100 | 85.95 | 64.09 | 4.966 | 64.37 | 84.41 | 60.98 | 4.764 | 65.71 | 90-100 | 67.22 | 345.2 | 76.1,76.1 |
| 110 | 77.32 | 58.25 | 4.321 | 54.22 | 76.65 | 49.85 | 4.326 | 59.48 | 100-110 | 57.91 | 403.1 | 88.9,88.9 |
| 120 | 64.37 | 23.78 | 2.908 | 12.99 | 51.98 | 10.87 | 2.936 | 21.07 | 110-120 | 37.10 | 440.2 | 97,97 |
| 130 | 19.18 | 2.077 | 1.489 | 0.6571 | 8.903 | 0.6353 | 1.583 | 0.8939 | 120-130 | 11.71 | 451.9 | 99.6,99.6 |
| 140 | 2.072 | 0.1343 | 0.6351 | 0.1280 | 0.0404 | 0.0962 | 0.5349 | 0.1014 | 130-140 | 1.534 | 453.4 | 100,100 |
| 150 | 0.0457 | 0.1068 | 0.1398 | 0.1000 | 0.0210 | 0.0629 | 0.0938 | 0.0783 | 140-150 | 0.0929 | 453.5 | 100,100 |
| 160 | 0.0338 | 0.0827 | 0.1089 | 0.0720 | 0.0173 | 0.0391 | 0.0711 | 0.0672 | 150-160 | 0.0336 | 453.5 | 100,100 |
| 170 | 0.0281 | 0.0587 | 0.0745 | 0.0408 | 0.0195 | 0.0240 | 0.0466 | 0.0525 | 160-170 | 0.0151 | 453.6 | 100,100 |
| 180 | 0.0277 | 0.0350 | 0.0362 | 0.0362 | 0.0260 | 0.0303 | 0.0403 | 0.0371 | 170-180 | 0.0038 | 453.6 | 100,100 |
| DEG | LUMINOUS INTENSITY:cd | | | | | | | | | UNIT:lm | | |

Conical surface Flux(90deg): 38.366 lm

%lum = 8.5%

%lamp = 8.5%

Conical surface Flux(120deg): 91.188 lm

%lum = 20.1%

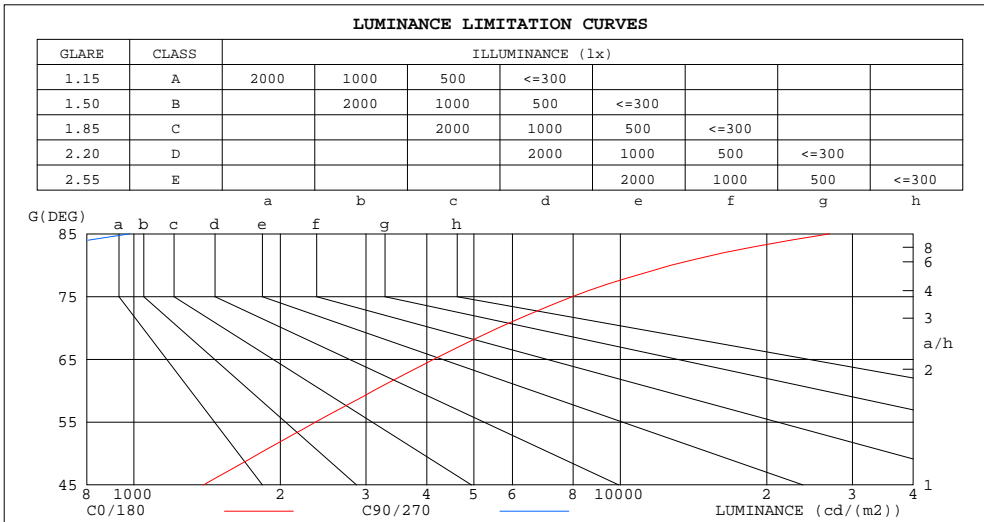
%lamp = 20.1%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Evan
 Test Date:2022-10-14

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.351
 Humidity:39%
 Test Distance:2.532m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

| | | |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1827A P:21.59W PF:0.9850 Lamp Flux:453.567x1 lm | | |
| NAME: LED Luminaire | TYPE:N/A | WEIGHT:N/A |
| SPEC.:ASD-LWS28S-12D22CC-BK 5000K | 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 | 26917 | 981 |
| 80 | 12715 | 489 |
| 75 | 7977 | 346 |
| 70 | 5610 | 281 |
| 65 | 4134 | 249 |
| 60 | 3110 | 229 |
| 55 | 2363 | 213 |
| 50 | 1811 | 202 |
| 45 | 1390 | 193 |

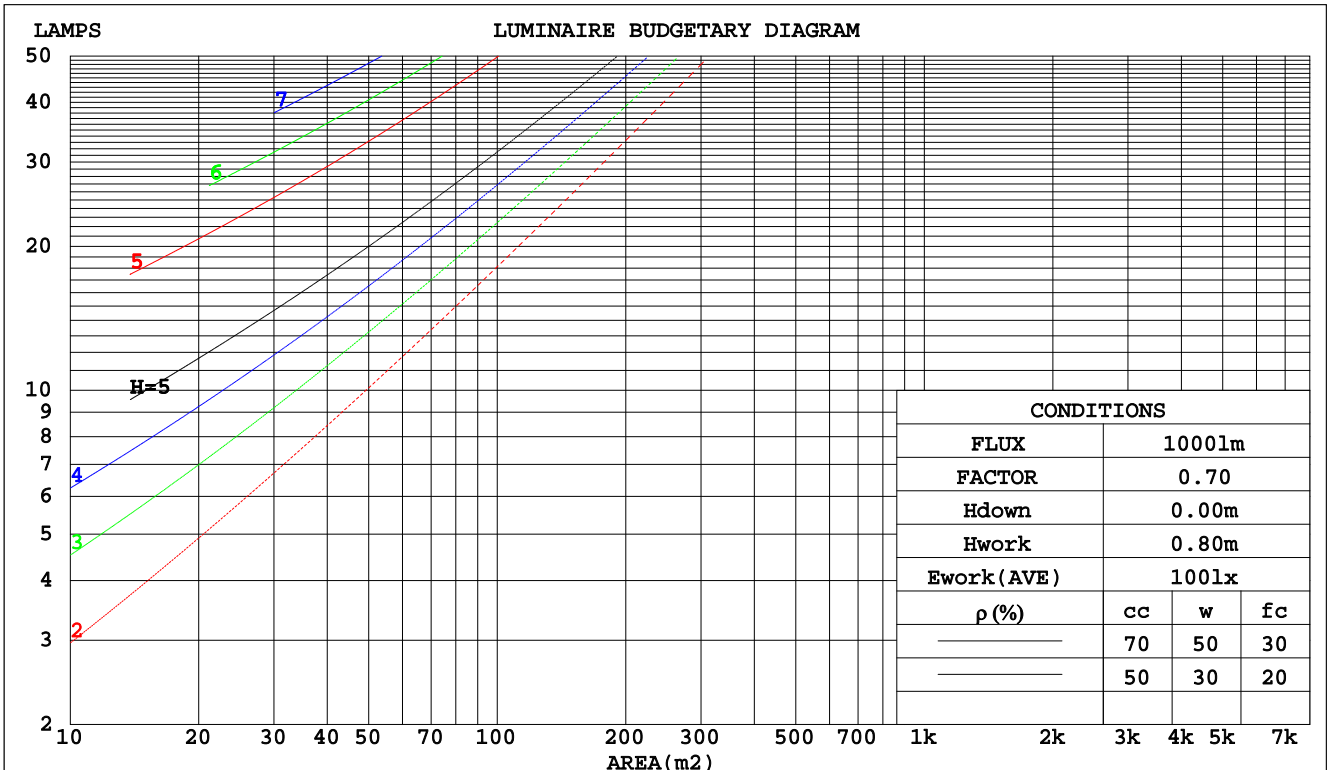
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Evan
 Test Date:2022-10-14

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.351
 Humidity:39%
 Test Distance:2.532m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

| | | |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1827A P:21.59W PF:0.9850 Lamp Flux:453.567x1 lm | | |
| NAME: LED Luminaire | TYPE:N/A | WEIGHT:N/A |
| SPEC.:ASD-LWS28S-12D22CC-BK 5000K | 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 | 1.10 | 1.10 | 1.10 | 1.03 | 1.03 | 1.03 | .90 | .90 | .90 | .78 | .78 | .78 | .66 | .66 | .66 | .61 |
| 1.0 | .84 | .77 | .71 | .78 | .72 | .66 | .67 | .62 | .57 | .56 | .52 | .48 | .46 | .43 | .40 | .35 |
| 2.0 | .70 | .60 | .52 | .64 | .56 | .48 | .54 | .47 | .41 | .45 | .39 | .35 | .36 | .32 | .28 | .23 |
| 3.0 | .59 | .48 | .40 | .54 | .45 | .37 | .45 | .38 | .31 | .37 | .31 | .26 | .30 | .25 | .21 | .17 |
| 4.0 | .51 | .40 | .32 | .47 | .37 | .30 | .39 | .31 | .25 | .32 | .26 | .20 | .25 | .20 | .16 | .12 |
| 5.0 | .44 | .34 | .26 | .41 | .31 | .24 | .34 | .26 | .20 | .28 | .21 | .16 | .22 | .17 | .13 | .09 |
| 6.0 | .39 | .29 | .22 | .36 | .27 | .20 | .30 | .22 | .17 | .25 | .18 | .14 | .20 | .14 | .10 | .07 |
| 7.0 | .35 | .25 | .18 | .32 | .23 | .17 | .27 | .20 | .14 | .22 | .16 | .11 | .18 | .13 | .09 | .06 |
| 8.0 | .31 | .22 | .16 | .29 | .20 | .15 | .24 | .17 | .12 | .20 | .14 | .10 | .16 | .11 | .07 | .05 |
| 9.0 | .28 | .20 | .14 | .26 | .18 | .13 | .22 | .15 | .11 | .18 | .13 | .08 | .15 | .10 | .06 | .04 |
| 10.0 | .26 | .17 | .12 | .24 | .16 | .11 | .20 | .14 | .09 | .17 | .11 | .07 | .14 | .09 | .06 | .03 |



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Evan
 Test Date:2022-10-14

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.351
 Humidity:39%
 Test Distance:2.532m [K=1.0000]
 Remarks:

WEC AND CCEC

| | | |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1827A P:21.59W PF:0.9850 Lamp Flux:453.567x1 lm | | |
| NAME: LED Luminaire | TYPE:N/A | WEIGHT:N/A |
| SPEC.:ASD-LWS28S-12D22CC-BK 5000K | 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 | .503 | .286 | .091 | .484 | .276 | .088 | .448 | .257 | .082 | .415 | .239 | .077 | .384 | .223 | .072 | |
| 2.0 | .403 | .221 | .068 | .385 | .212 | .065 | .352 | .196 | .061 | .321 | .180 | .056 | .293 | .166 | .052 | |
| 3.0 | .342 | .182 | .054 | .326 | .175 | .053 | .296 | .160 | .049 | .268 | .147 | .045 | .242 | .134 | .041 | |
| 4.0 | .299 | .155 | .046 | .284 | .149 | .044 | .256 | .136 | .041 | .231 | .124 | .037 | .207 | .112 | .034 | |
| 5.0 | .265 | .135 | .039 | .252 | .129 | .038 | .227 | .118 | .035 | .203 | .107 | .032 | .181 | .097 | .029 | |
| 6.0 | .239 | .120 | .034 | .227 | .115 | .033 | .204 | .104 | .030 | .182 | .095 | .028 | .162 | .085 | .025 | |
| 7.0 | .218 | .108 | .031 | .207 | .103 | .029 | .185 | .094 | .027 | .165 | .085 | .025 | .146 | .076 | .022 | |
| 8.0 | .200 | .098 | .027 | .190 | .093 | .026 | .170 | .085 | .024 | .151 | .077 | .022 | .134 | .069 | .020 | |
| 9.0 | .185 | .089 | .025 | .175 | .085 | .024 | .157 | .077 | .022 | .139 | .070 | .020 | .123 | .062 | .018 | |
| 10.0 | .172 | .082 | .023 | .163 | .079 | .022 | .146 | .071 | .020 | .129 | .064 | .018 | .114 | .057 | .016 | |

| 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 | .485 | .485 | .485 | .415 | .415 | .415 | .283 | .283 | .283 | .163 | .163 | .163 | .052 | .052 | .052 | |
| 1.0 | .491 | .452 | .417 | .420 | .388 | .358 | .287 | .267 | .248 | .165 | .154 | .144 | .053 | .050 | .047 | |
| 2.0 | .486 | .431 | .384 | .417 | .371 | .332 | .286 | .257 | .232 | .165 | .149 | .136 | .053 | .048 | .044 | |
| 3.0 | .479 | .416 | .365 | .411 | .359 | .317 | .282 | .249 | .222 | .163 | .146 | .131 | .052 | .047 | .043 | |
| 4.0 | .471 | .404 | .353 | .404 | .349 | .307 | .278 | .244 | .216 | .161 | .143 | .128 | .052 | .046 | .042 | |
| 5.0 | .463 | .395 | .345 | .398 | .342 | .300 | .274 | .239 | .212 | .159 | .140 | .126 | .051 | .046 | .041 | |
| 6.0 | .455 | .388 | .340 | .391 | .336 | .296 | .270 | .235 | .209 | .157 | .138 | .124 | .051 | .045 | .041 | |
| 7.0 | .448 | .382 | .336 | .385 | .331 | .293 | .266 | .232 | .207 | .155 | .137 | .123 | .050 | .045 | .041 | |
| 8.0 | .441 | .377 | .333 | .379 | .327 | .290 | .262 | .229 | .206 | .153 | .135 | .123 | .049 | .044 | .041 | |
| 9.0 | .434 | .372 | .330 | .374 | .323 | .288 | .259 | .227 | .204 | .151 | .134 | .122 | .049 | .044 | .040 | |
| 10.0 | .428 | .368 | .328 | .369 | .319 | .286 | .256 | .225 | .203 | .149 | .133 | .121 | .048 | .044 | .040 | |

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Evan
 Test Date:2022-10-14

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.351
 Humidity:39%
 Test Distance:2.532m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

| | | | | | | | | | | |
|---|------------------|------|------|------|-----------|----------------|------|---------------------|------|------|
| Test:U:120.0V I:0.1827A P:21.59W PF:0.9850 Lamp Flux:453.567x1 lm | | | | | | | | | | |
| NAME: LED Luminaire | | | | | TYPE:N/A | | | WEIGHT:N/A | | |
| SPEC.:ASD-LWS28S-12D22CC-BK 5000K | | | | | 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 | 14.9 | 16.2 | 15.7 | 17.0 | 18.0 | 5.6 | 6.9 | 6.3 | 7.7 | 8.7 |
| 3H | 19.5 | 20.7 | 20.3 | 21.6 | 22.6 | 7.6 | 8.8 | 8.4 | 9.6 | 10.7 |
| 4H | 22.0 | 23.1 | 22.8 | 24.0 | 25.0 | 8.7 | 9.8 | 9.5 | 10.7 | 11.7 |
| 6H | 24.6 | 25.7 | 25.4 | 26.6 | 27.6 | 9.8 | 10.9 | 10.6 | 11.7 | 12.8 |
| 8H | 26.1 | 27.1 | 26.9 | 28.0 | 29.1 | 10.3 | 11.4 | 11.1 | 12.2 | 13.3 |
| 12H | 27.7 | 28.7 | 28.5 | 29.6 | 30.7 | 10.9 | 11.9 | 11.7 | 12.8 | 13.8 |
| 4H 2H | 15.4 | 16.5 | 16.1 | 17.3 | 18.4 | 10.5 | 11.6 | 11.3 | 12.5 | 13.5 |
| 3H | 20.2 | 21.2 | 21.0 | 22.1 | 23.2 | 12.5 | 13.5 | 13.4 | 14.4 | 15.5 |
| 4H | 22.9 | 23.8 | 23.7 | 24.7 | 25.8 | 13.5 | 14.4 | 14.4 | 15.3 | 16.4 |
| 6H | 25.8 | 26.6 | 26.6 | 27.5 | 28.7 | 14.4 | 15.3 | 15.3 | 16.2 | 17.3 |
| 8H | 27.3 | 28.1 | 28.2 | 29.1 | 30.2 | 14.9 | 15.7 | 15.8 | 16.6 | 17.8 |
| 12H | 29.1 | 29.9 | 30.0 | 30.8 | 31.9 | 15.4 | 16.1 | 16.3 | 17.0 | 18.2 |
| 8H 4H | 23.1 | 23.9 | 24.0 | 24.8 | 26.0 | 17.1 | 17.9 | 18.0 | 18.8 | 20.0 |
| 6H | 26.3 | 27.0 | 27.2 | 28.0 | 29.1 | 18.5 | 19.2 | 19.4 | 20.1 | 21.3 |
| 8H | 28.2 | 28.8 | 29.1 | 29.7 | 30.9 | 19.1 | 19.7 | 20.0 | 20.6 | 21.8 |
| 12H | 30.2 | 30.8 | 31.2 | 31.7 | 32.9 | 19.6 | 20.1 | 20.5 | 21.1 | 22.3 |
| 12H 4H | 23.1 | 23.9 | 24.0 | 24.8 | 25.9 | 18.4 | 19.2 | 19.3 | 20.1 | 21.3 |
| 6H | 26.4 | 27.0 | 27.3 | 28.0 | 29.2 | 20.1 | 20.7 | 21.0 | 21.7 | 22.9 |
| 8H | 28.4 | 28.9 | 29.3 | 29.9 | 31.1 | 20.9 | 21.5 | 21.9 | 22.4 | 23.7 |
| 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 / - 0.1 | | | | |
| 2.0H | + 0.3 / - 0.4 | | | | | + 0.3 / - 0.3 | | | | |

CIE Pub.117 Corrected 453.6 lm Total Lamp Luminous Flux. (8log(F/F0) = -2.7)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Evan
 Test Date:2022-10-14

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.351
 Humidity:39%
 Test Distance:2.532m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

| | | |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1827A P:21.59W PF:0.9850 Lamp Flux:453.567x1 lm | | |
| NAME: LED Luminaire | TYPE:N/A | WEIGHT:N/A |
| SPEC.:ASD-LWS28S-12D22CC-BK 5000K | DIM.: N/A | SERIAL No.:N/A |
| MFR.: ASD Lighting corp | SUR.:N/A | Shielding Angle:N/A |

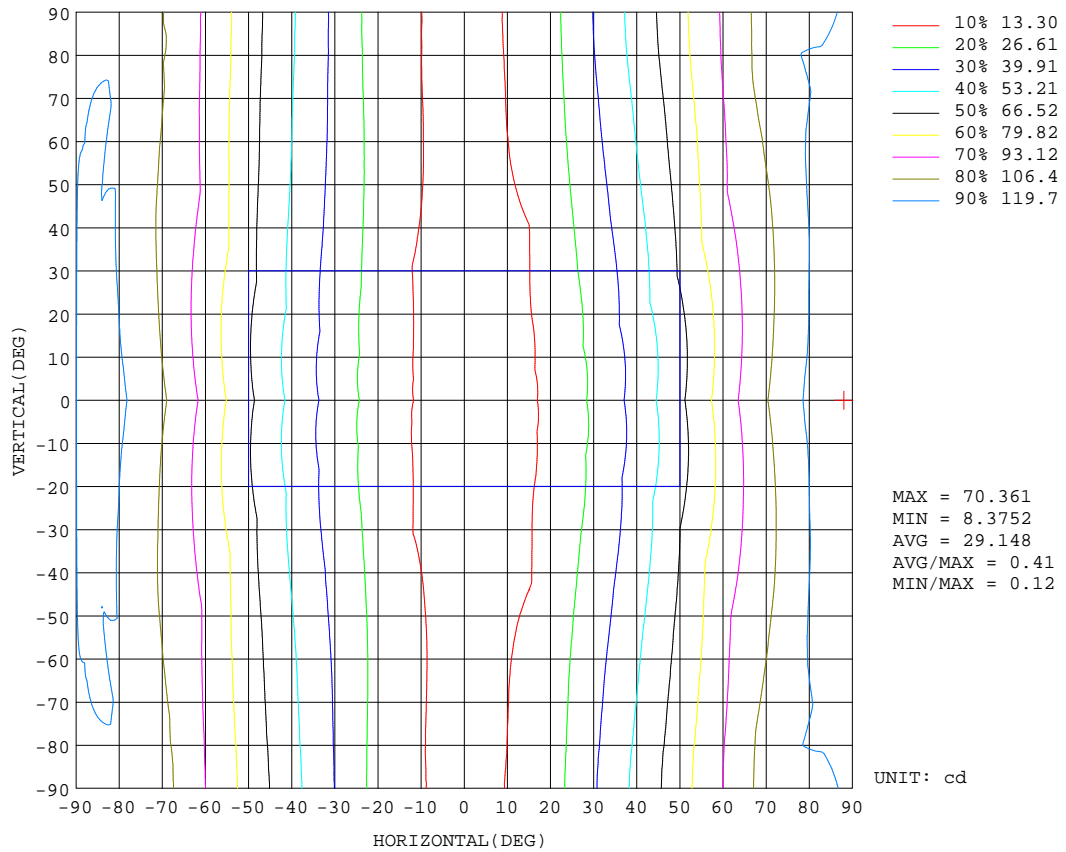
| REFLECTANCE | | | | | | | | | | |
|----------------------------------|---|-----|-----------|-----|-----|-----|---------------|-----|-----|--------|
| Ceiling | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0 |
| Walls | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0 |
| Working plane | 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 | 34 | 20 | 12 | 32 | 19 | 11 | 30 | 18 | 11 | 4 |
| 0.80 | 42 | 26 | 17 | 40 | 25 | 16 | 36 | 23 | 15 | 7 |
| 1.00 | 48 | 32 | 22 | 46 | 31 | 21 | 41 | 31 | 20 | 10 |
| 1.25 | 55 | 39 | 28 | 52 | 37 | 27 | 46 | 34 | 25 | 13 |
| 1.50 | 61 | 45 | 33 | 57 | 42 | 32 | 50 | 38 | 29 | 16 |
| 2.00 | 69 | 54 | 42 | 64 | 51 | 40 | 56 | 45 | 36 | 21 |
| 2.50 | 74 | 60 | 49 | 69 | 57 | 47 | 60 | 50 | 42 | 24 |
| 3.00 | 78 | 65 | 55 | 73 | 62 | 52 | 64 | 54 | 46 | 28 |
| 4.00 | 84 | 73 | 63 | 79 | 68 | 60 | 68 | 60 | 53 | 32 |
| 5.00 | 88 | 78 | 69 | 82 | 73 | 65 | 71 | 64 | 58 | 36 |
| 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:25.1DEG
 Operators:Evan
 Test Date:2022-10-14

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.351
 Humidity:39%
 Test Distance:2.532m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

| | | |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1827A P:21.59W PF:0.9850 Lamp Flux:453.567x1 lm | | |
| NAME: LED Luminaire | TYPE:N/A | WEIGHT:N/A |
| SPEC.:ASD-LWS28S-12D22CC-BK 5000K | DIM.: N/A | SERIAL No.:N/A |
| MFR.: ASD Lighting corp | SUR.:N/A | Shielding Angle:N/A |

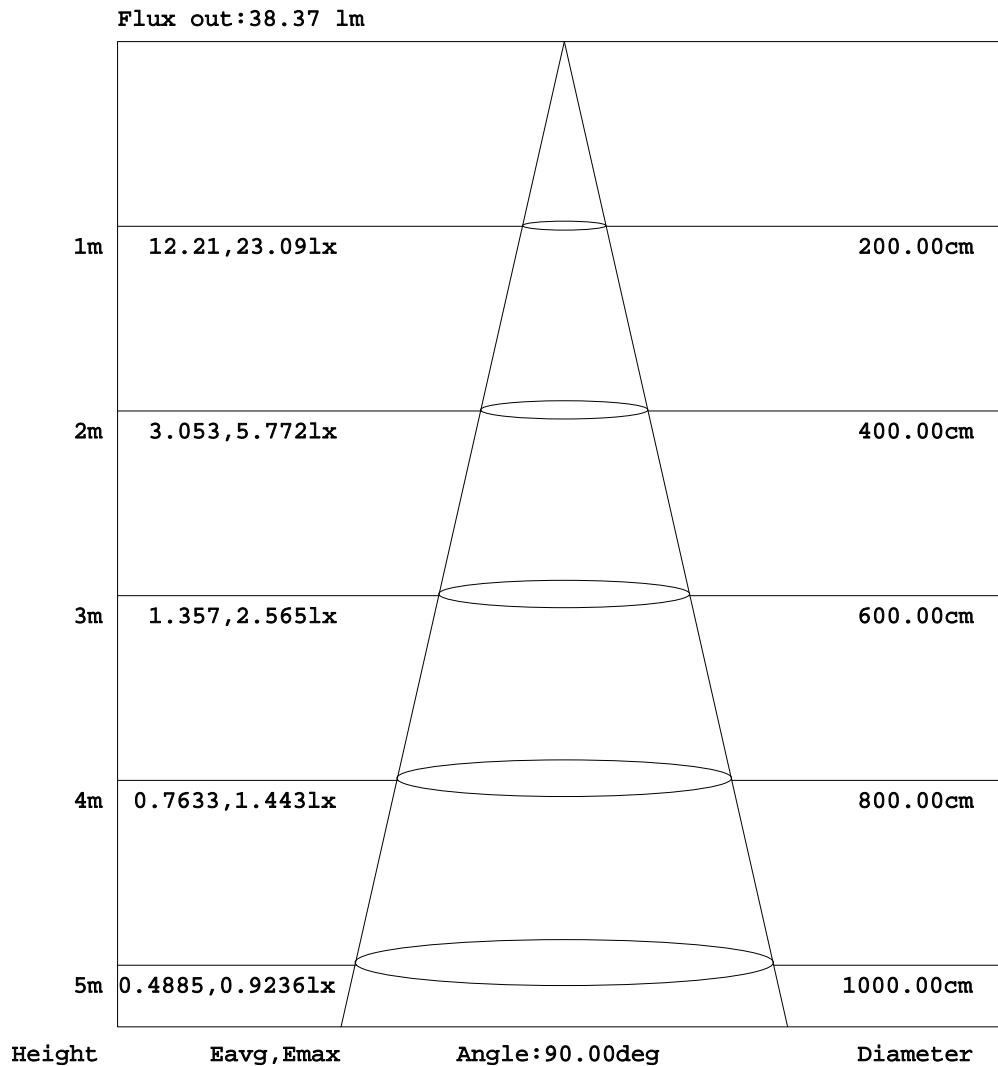


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Evan
 Test Date:2022-10-14

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.351
 Humidity:39%
 Test Distance:2.532m [K=1.0000]
 Remarks:

AAI Figure

| | | |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1827A P:21.59W PF:0.9850 Lamp Flux:453.567x1 lm | | |
| NAME: LED Luminaire | TYPE:N/A | WEIGHT:N/A |
| SPEC.:ASD-LWS28S-12D22CC-BK 5000K | DIM.: N/A | SERIAL No.:N/A |
| MFR.: ASD Lighting corp | SUR.:N/A | Shielding Angle:N/A |



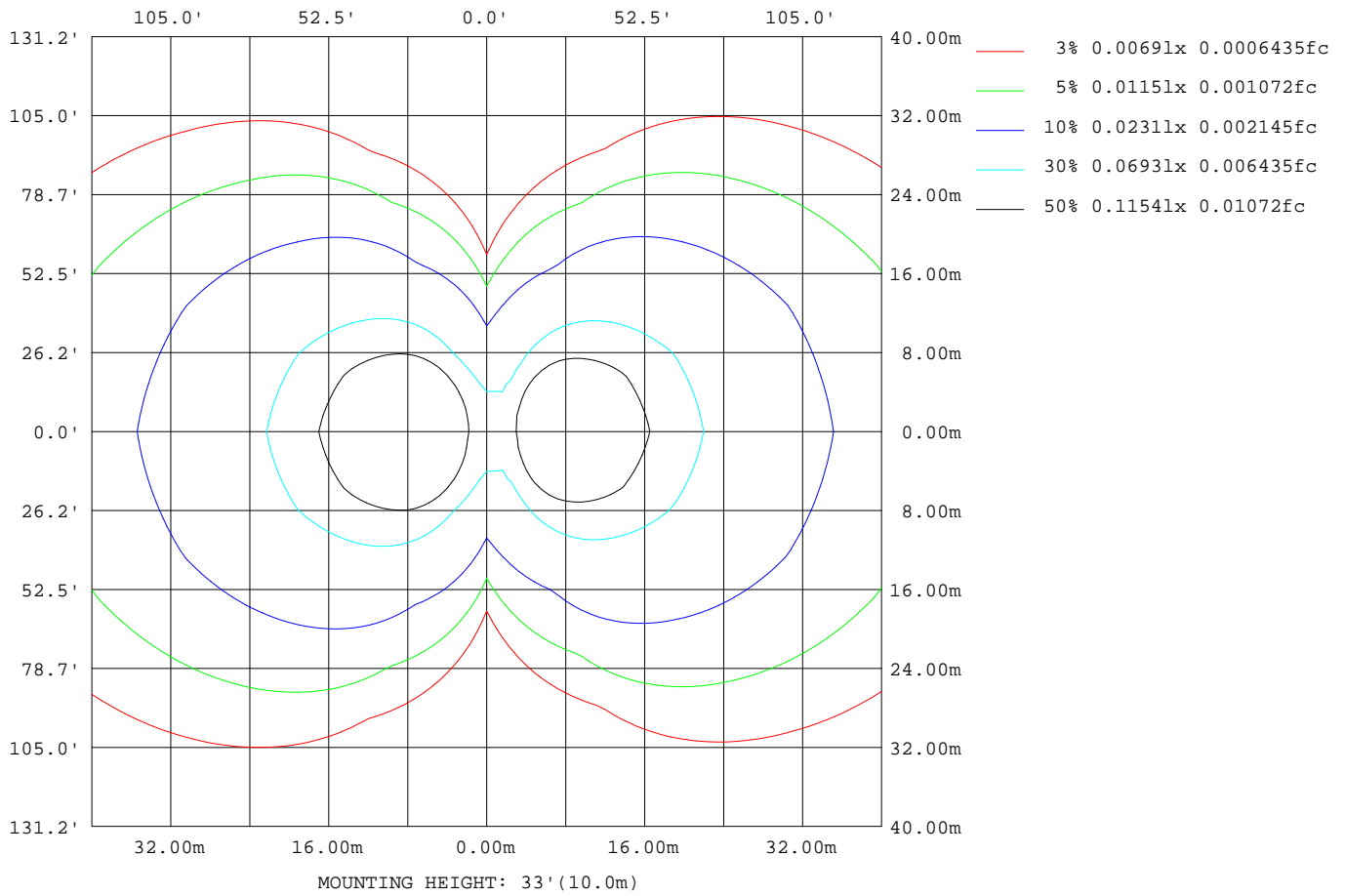
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Evan
 Test Date:2022-10-14

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.351
 Humidity:39%
 Test Distance:2.532m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

| | | |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1827A P:21.59W PF:0.9850 Lamp Flux:453.567x1 lm | | |
| NAME: LED Luminaire | TYPE:N/A | WEIGHT:N/A |
| SPEC.:ASD-LWS28S-12D22CC-BK 5000K | 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:25.1DEG
 Operators:Evan
 Test Date:2022-10-14

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.351
 Humidity:39%
 Test Distance:2.532m [K=1.0000]
 Remarks:

LED Avg.L Report

| | | |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1827A P:21.59W PF:0.9850 Lamp Flux:453.567x1 lm | | |
| NAME: LED Luminaire | TYPE:N/A | WEIGHT:N/A |
| SPEC.:ASD-LWS28S-12D22CC-BK 5000K | DIM.: N/A | SERIAL No.:N/A |
| MFR.: ASD Lighting corp | SUR.:N/A | Shielding Angle:N/A |

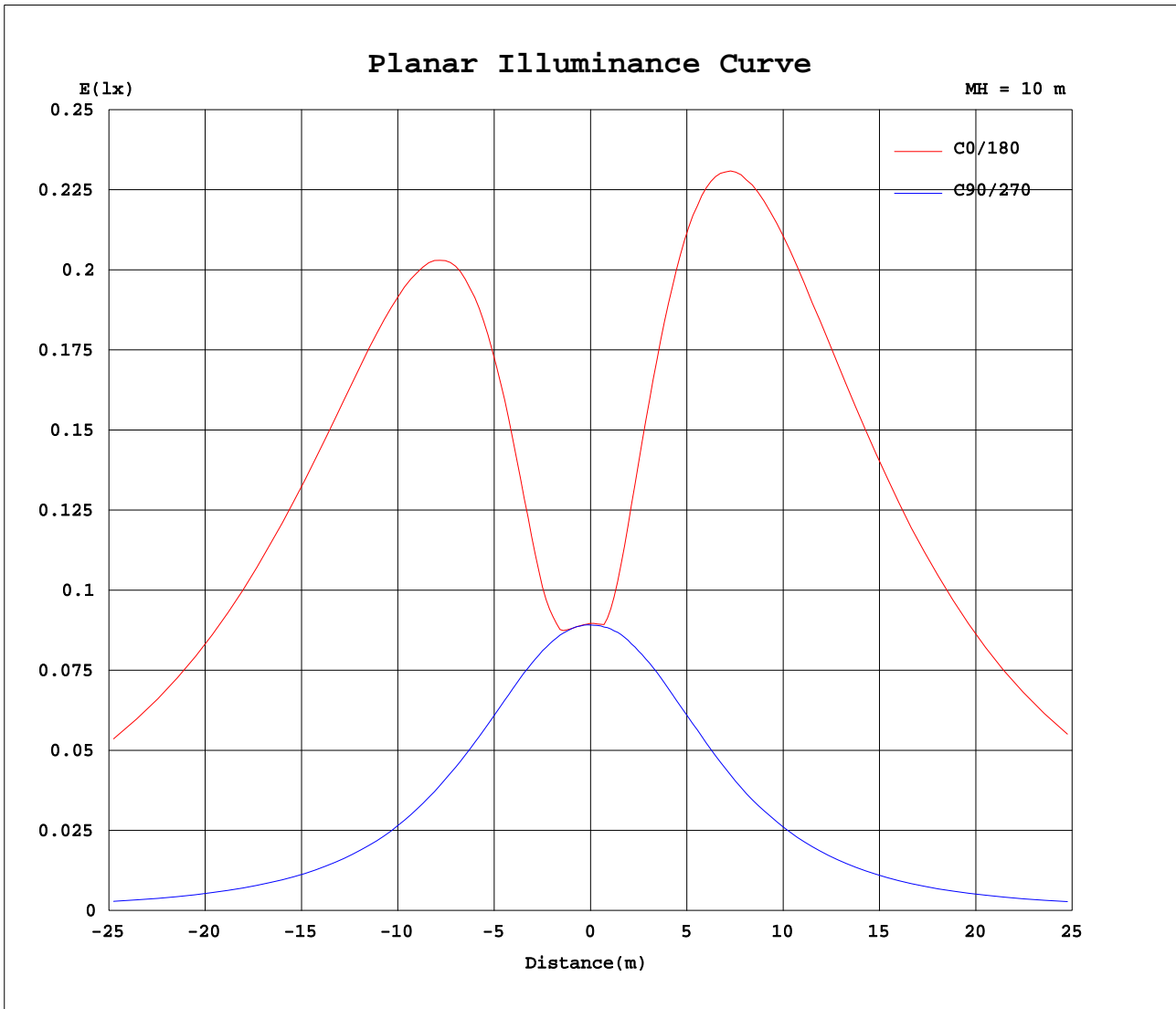
| AvgL | cd/m2 |
|----------------|-------|
| L_0~180(65)av | 4195 |
| L_0~180(75)av | 8039 |
| L_0~180(85)av | 26469 |
| L_90~270(65)av | 246 |
| L_90~270(75)av | 340 |
| L_90~270(85)av | 974 |
| L_45(65)av | 2264 |
| L_45(75)av | 4193 |
| L_45(85)av | 13448 |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Evan
 Test Date:2022-10-14

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.351
 Humidity:39%
 Test Distance:2.532m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.1DEG
 Operators: Evan
 Test Date: 2022-10-14

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.351
 Humidity: 39%
 Test Distance: 2.532m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

| | | |
|---|-----------|---------------------|
| Test:U:120.0V I:0.1827A P:21.59W PF:0.9850 Lamp Flux:453.567x1 lm | | |
| NAME: LED Luminaire | TYPE:N/A | WEIGHT:N/A |
| SPEC.:ASD-LWS28S-12D22CC-BK 5000K | DIM.: N/A | SERIAL No.:N/A |
| MFR.: ASD Lighting corp | SUR.:N/A | Shielding Angle:N/A |

Table--1

UNIT: cd

| C(DEG) 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 | 8.96 | 8.96 | 8.96 | 8.96 | 8.96 | 8.96 | 8.96 | 8.96 | 8.96 | 8.96 | 8.96 | 8.96 | 8.96 | 8.96 | 8.96 | 8.96 | | | |
| 5 | 8.92 | 8.93 | 8.94 | 8.96 | 8.98 | 8.99 | 8.98 | 9.04 | 9.22 | 9.13 | 8.99 | 8.98 | 8.98 | 8.97 | 8.95 | 8.94 | | | |
| 10 | 9.37 | 9.13 | 8.97 | 8.93 | 8.95 | 8.99 | 9.91 | 11.1 | 11.9 | 11.4 | 9.98 | 8.98 | 8.98 | 8.96 | 8.96 | 9.26 | | | |
| 15 | 11.7 | 11.0 | 9.52 | 8.86 | 8.90 | 9.31 | 12.1 | 14.8 | 16.2 | 15.1 | 12.3 | 9.30 | 8.91 | 8.89 | 9.71 | 11.3 | | | |
| 20 | 16.3 | 14.7 | 11.1 | 8.79 | 8.80 | 10.1 | 15.1 | 19.3 | 21.4 | 19.7 | 15.2 | 10.1 | 8.81 | 8.86 | 11.5 | 15.3 | | | |
| 25 | 22.1 | 19.8 | 14.0 | 8.93 | 8.62 | 11.2 | 18.6 | 24.6 | 27.5 | 25.0 | 18.7 | 11.1 | 8.62 | 9.12 | 14.6 | 20.5 | | | |
| 30 | 28.9 | 25.7 | 17.7 | 9.44 | 8.41 | 12.5 | 22.4 | 30.6 | 34.3 | 31.0 | 22.4 | 12.4 | 8.42 | 9.71 | 18.5 | 26.5 | | | |
| 35 | 36.6 | 32.4 | 21.9 | 10.4 | 8.18 | 14.0 | 26.7 | 37.3 | 41.9 | 37.6 | 26.6 | 13.8 | 8.11 | 10.8 | 22.9 | 33.4 | | | |
| 40 | 44.9 | 39.6 | 26.5 | 11.7 | 7.91 | 15.6 | 31.3 | 44.5 | 50.3 | 44.7 | 30.9 | 15.2 | 7.75 | 12.3 | 27.7 | 40.8 | | | |
| 45 | 54.1 | 47.5 | 31.4 | 13.3 | 7.54 | 17.3 | 36.1 | 52.3 | 59.5 | 52.3 | 35.5 | 16.7 | 7.42 | 14.1 | 32.7 | 48.8 | | | |
| 50 | 64.1 | 55.8 | 36.3 | 15.1 | 7.18 | 18.9 | 40.9 | 60.4 | 69.3 | 60.4 | 40.1 | 18.2 | 7.04 | 16.0 | 37.8 | 57.3 | | | |
| 55 | 74.6 | 64.6 | 41.3 | 16.8 | 6.75 | 20.6 | 45.6 | 68.8 | 79.4 | 68.6 | 44.6 | 19.6 | 6.60 | 18.0 | 43.0 | 66.2 | | | |
| 60 | 85.6 | 73.5 | 46.2 | 18.6 | 6.34 | 22.1 | 50.2 | 77.3 | 89.6 | 76.8 | 48.8 | 20.9 | 6.10 | 19.8 | 48.1 | 75.3 | | | |
| 65 | 96.2 | 82.2 | 50.9 | 20.3 | 5.83 | 23.4 | 54.5 | 85.4 | 99.2 | 84.7 | 52.7 | 22.1 | 5.62 | 21.6 | 52.8 | 83.8 | | | |
| 70 | 106 | 89.6 | 55.1 | 21.7 | 5.33 | 24.5 | 58.1 | 91.9 | 108 | 91.3 | 56.0 | 23.0 | 5.13 | 23.2 | 57.1 | 91.6 | | | |
| 75 | 114 | 96.3 | 58.6 | 22.9 | 4.95 | 25.4 | 61.1 | 97.6 | 116 | 96.6 | 58.7 | 23.6 | 4.75 | 24.6 | 60.8 | 97.8 | | | |
| 80 | 122 | 102 | 61.7 | 23.9 | 4.70 | 25.9 | 63.5 | 102 | 122 | 101 | 61.0 | 24.1 | 4.63 | 25.7 | 64.1 | 103 | | | |
| 85 | 129 | 106 | 64.1 | 24.7 | 4.73 | 26.3 | 65.3 | 105 | 125 | 104 | 62.5 | 24.3 | 4.62 | 26.5 | 66.4 | 107 | | | |
| 90 | 122 | 107 | 65.2 | 25.1 | 4.90 | 26.4 | 66.3 | 107 | 119 | 105 | 63.2 | 24.3 | 4.65 | 26.8 | 67.4 | 108 | | | |
| 95 | 61.3 | 107 | 65.3 | 25.4 | 4.95 | 26.2 | 65.7 | 105 | 76.9 | 104 | 62.5 | 24.1 | 4.65 | 26.7 | 66.8 | 107 | | | |
| 100 | 86.0 | 104 | 64.1 | 24.9 | 4.97 | 25.4 | 64.4 | 103 | 84.4 | 101 | 61.0 | 22.5 | 4.76 | 26.4 | 65.7 | 105 | | | |
| 105 | 82.1 | 99.7 | 61.8 | 20.3 | 4.78 | 16.8 | 61.8 | 97.8 | 82.4 | 95.4 | 58.5 | 13.4 | 4.57 | 19.4 | 63.1 | 99.6 | | | |
| 110 | 77.3 | 92.8 | 58.3 | 9.24 | 4.32 | 6.87 | 54.2 | 91.2 | 76.7 | 87.6 | 49.8 | 5.87 | 4.33 | 8.42 | 59.5 | 84.8 | | | |
| 115 | 71.9 | 76.9 | 46.1 | 4.17 | 3.77 | 4.03 | 35.3 | 70.5 | 70.0 | 65.0 | 30.2 | 3.97 | 3.74 | 4.11 | 44.7 | 67.2 | | | |
| 120 | 64.4 | 57.0 | 23.8 | 2.72 | 2.91 | 2.76 | 13.0 | 42.9 | 52.0 | 38.7 | 10.9 | 2.78 | 2.94 | 2.81 | 21.1 | 48.1 | | | |
| 125 | 44.3 | 32.0 | 8.63 | 1.88 | 2.09 | 1.87 | 4.43 | 16.7 | 25.1 | 15.8 | 3.61 | 1.93 | 2.19 | 1.96 | 7.39 | 23.3 | | | |
| 130 | 19.2 | 11.6 | 2.08 | 1.30 | 1.49 | 1.29 | 0.66 | 5.89 | 8.90 | 5.46 | 0.64 | 1.33 | 1.58 | 1.30 | 0.89 | 8.90 | | | |
| 135 | 7.39 | 4.69 | 0.35 | 0.85 | 1.01 | 0.82 | 0.32 | 0.23 | 3.60 | 0.14 | 0.23 | 0.78 | 0.99 | 0.77 | 0.25 | 4.01 | | | |
| 140 | 2.07 | 0.13 | 0.13 | 0.50 | 0.64 | 0.48 | 0.13 | 0.09 | 0.04 | 0.07 | 0.10 | 0.41 | 0.53 | 0.41 | 0.10 | 0.09 | | | |
| 145 | 0.05 | 0.08 | 0.12 | 0.21 | 0.33 | 0.20 | 0.11 | 0.07 | 0.03 | 0.05 | 0.07 | 0.10 | 0.18 | 0.11 | 0.09 | 0.07 | | | |
| 150 | 0.05 | 0.07 | 0.11 | 0.13 | 0.14 | 0.13 | 0.10 | 0.06 | 0.02 | 0.04 | 0.06 | 0.08 | 0.09 | 0.09 | 0.08 | 0.06 | | | |
| 155 | 0.04 | 0.06 | 0.09 | 0.12 | 0.12 | 0.11 | 0.09 | 0.05 | 0.02 | 0.03 | 0.05 | 0.07 | 0.08 | 0.08 | 0.07 | 0.06 | | | |
| 160 | 0.03 | 0.06 | 0.08 | 0.10 | 0.11 | 0.10 | 0.07 | 0.05 | 0.02 | 0.02 | 0.04 | 0.05 | 0.07 | 0.07 | 0.07 | 0.05 | | | |
| 165 | 0.03 | 0.04 | 0.07 | 0.09 | 0.09 | 0.08 | 0.05 | 0.03 | 0.02 | 0.02 | 0.03 | 0.04 | 0.06 | 0.06 | 0.06 | 0.05 | | | |
| 170 | 0.03 | 0.04 | 0.06 | 0.07 | 0.07 | 0.06 | 0.04 | 0.03 | 0.02 | 0.02 | 0.02 | 0.03 | 0.05 | 0.05 | 0.05 | 0.04 | | | |
| 175 | 0.03 | 0.03 | 0.05 | 0.06 | 0.06 | 0.04 | 0.04 | 0.03 | 0.02 | 0.02 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | | | |
| 180 | 0.03 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | 0.03 | 0.03 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | | | |

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