

## Floodlight Summary:

Report based on lamp delivering 1000 lumens.

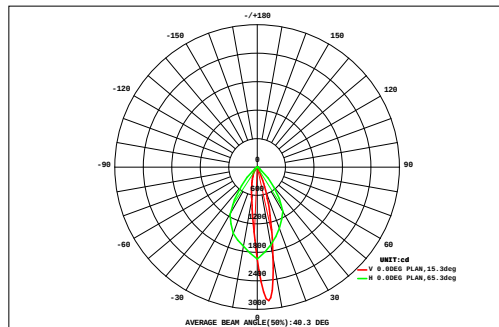
|                                                         |                |                                                                      |
|---------------------------------------------------------|----------------|----------------------------------------------------------------------|
| Maximum Intensity<br>(Luminaire orientation as tested.) |                | 2637.4 cd per klm.<br>0.0 degrees vertical<br>0.0 degrees horizontal |
| Beam Spread                                             | At 10% of Imax | 93.3V x 45.3H                                                        |
|                                                         | At 50% of Imax | 61.2V x 15.3H                                                        |
|                                                         | At 90% of Imax | 12.7V x 4.8H                                                         |
| Beam Flux                                               | Total          | 998.8 lumens per klm.                                                |
|                                                         | To 10% of Imax | 842.4 lumens per klm.                                                |
|                                                         | To 50% of Imax | 356.1 lumens per klm.                                                |
|                                                         | To 90% of Imax | 30.3 lumens per klm.                                                 |
| Upward LOR                                              |                | 0.0 %                                                                |
| Downward LOR                                            |                | 99.9 %                                                               |
| Luminaire Efficiency(Light Output Ratio)                |                | 100.0 %                                                              |

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:28.0DEG  
Operators:QC1  
Test Date:2024-09-06

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
Humidity:83%  
Test Distance:8.300m [K=1.0000]  
Remarks:

## LUMINAIRE PHOTOMETRIC TEST REPORT

|                                                                   |          |                       |
|-------------------------------------------------------------------|----------|-----------------------|
| Test:U:221.1V I:0.1686A P:21.77W PF:0.5842 Lamp Flux:1072.06x1 lm |          |                       |
| NAME: 8.02.019.0094 20x60° LLS-OP-W30B-L12-S                      | TYPE:LED | WEIGHT:               |
| DIM.:                                                             | SPEC.:   | SERIAL No.:2024090040 |
| MFR.: TPK OPTOELECTRONIC TECH CO., LTD                            | SUR.:    | PROTECTION ANGLE:     |



| DATA OF LAMP     |                   | Eff:49.24lm/W   |          |
|------------------|-------------------|-----------------|----------|
| MODEL            | LLS-OP-W30B-L12-S | Imax(cd)        | 2827     |
| NOMINAL POWER(W) | 22                | AVAILABILITY(%) | 84.8     |
| RATED VOLTAGE(V) | 222               | Avai. FLUX(lm)  | 908.8    |
| NOMINAL FLUX(lm) | 1072.06           | LOR(%)          | 100.0    |
| LAMPS INSIDE     | 1                 | TOTAL FLUX(lm)  | 1072     |
| TEST VOLTAGE(V)  | 221.1             | θ @50%(H,V)     | 15,61DEG |

| AREA FLUX DIAGRAM |      |      |      |      |      |      |      |      |                   |      |      |      |      |      |      |      | UNIT:lm | Φ t  | Φ a  |
|-------------------|------|------|------|------|------|------|------|------|-------------------|------|------|------|------|------|------|------|---------|------|------|
| 72                | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.03 | 0.15 | 0.25 | 0.25              | 0.27 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 1.01 | 0.00 |
| 64                | 0.00 | 0.00 | 0.00 | 0.01 | 0.14 | 0.34 | 0.57 | 0.69 | 0.79              | 0.85 | 0.52 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 3.91 | 0.00 |
| 56                | 0.00 | 0.00 | 0.02 | 0.16 | 0.41 | 0.74 | 1.07 | 1.34 | 1.74              | 2.14 | 1.72 | 0.37 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 9.71 | 0.00 |
| 48                | 0.00 | 0.01 | 0.10 | 0.37 | 0.74 | 1.24 | 1.82 | 2.66 | 4.65              | 7.58 | 5.23 | 1.41 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00    | 25.8 | 12.3 |
| 40                | 0.00 | 0.03 | 0.24 | 0.58 | 1.09 | 1.81 | 2.84 | 4.72 | 9.72              | 17.9 | 11.6 | 3.31 | 0.17 | 0.00 | 0.00 | 0.00 | 0.00    | 54.0 | 41.5 |
| 32                | 0.00 | 0.07 | 0.34 | 0.76 | 1.39 | 2.34 | 3.95 | 7.00 | 15.1              | 29.2 | 19.2 | 5.86 | 0.46 | 0.00 | 0.00 | 0.00 | 0.00    | 85.7 | 74.4 |
| 24                | 0.00 | 0.12 | 0.43 | 0.91 | 1.65 | 2.81 | 4.89 | 8.99 | 18.3              | 33.8 | 23.1 | 8.04 | 0.88 | 0.00 | 0.00 | 0.00 | 0.00    | 104  | 93.6 |
|                   | 0.00 | 0.15 | 0.49 | 1.01 | 1.82 | 3.13 | 5.57 | 10.3 | 21.1              | 41.4 | 27.6 | 9.68 | 1.22 | 0.00 | 0.00 | 0.00 | 0.00    | 124  | 113  |
|                   | 0.01 | 0.18 | 0.53 | 1.08 | 1.93 | 3.34 | 6.01 | 11.2 | 23.5              | 47.9 | 30.1 | 10.2 | 1.31 | 0.00 | 0.00 | 0.00 | 0.00    | 137  | 127  |
|                   | 0.01 | 0.18 | 0.54 | 1.10 | 1.96 | 3.40 | 6.13 | 11.5 | 24.5              | 49.0 | 29.1 | 9.59 | 1.12 | 0.00 | 0.00 | 0.00 | 0.00    | 138  | 128  |
|                   | 0.01 | 0.17 | 0.51 | 1.05 | 1.88 | 3.26 | 5.79 | 10.7 | 22.0              | 39.6 | 24.8 | 8.41 | 0.88 | 0.00 | 0.00 | 0.00 | 0.00    | 119  | 109  |
|                   | 0.00 | 0.14 | 0.45 | 0.94 | 1.71 | 2.93 | 5.12 | 9.37 | 19.8              | 33.9 | 20.6 | 6.43 | 0.49 | 0.00 | 0.00 | 0.00 | 0.00    | 102  | 91.5 |
| -24               | 0.00 | 0.09 | 0.35 | 0.78 | 1.44 | 2.44 | 4.13 | 7.34 | 16.1              | 27.8 | 16.0 | 4.38 | 0.22 | 0.00 | 0.00 | 0.00 | 0.00    | 81.0 | 69.8 |
| -32               | 0.00 | 0.04 | 0.24 | 0.59 | 1.11 | 1.87 | 2.98 | 4.99 | 10.7              | 18.1 | 10.1 | 2.36 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00    | 53.1 | 40.8 |
| -40               | 0.00 | 0.01 | 0.12 | 0.38 | 0.76 | 1.27 | 1.82 | 2.67 | 4.64              | 6.47 | 3.94 | 0.72 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 22.8 | 7.35 |
| -48               | 0.00 | 0.00 | 0.02 | 0.16 | 0.41 | 0.72 | 0.95 | 1.04 | 1.07              | 1.16 | 0.90 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 6.53 | 0.00 |
| -56               | 0.00 | 0.00 | 0.00 | 0.02 | 0.14 | 0.33 | 0.52 | 0.61 | 0.70              | 0.75 | 0.35 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 3.45 | 0.00 |
| -64               | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.06 | 0.15 | 0.22 | 0.23              | 0.22 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.95 | 0.00 |
| -72               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.00 | 0.00 |
|                   | -72  | -64  | -56  | -48  | -40  | -32  | -24  | -16  | HORIZONTAL( DEG ) | 16   | 24   | 32   | 40   | 48   | 56   | 64   | 72      |      |      |
| Φ t               | 0.03 | 1.17 | 4.39 | 9.90 | 18.6 | 32.1 | 54.5 | 95.7 | 195               | 358  | 225  | 70.9 | 6.84 | 0.00 | 0.00 | 0.00 | 0.00    | 1072 | ---  |
| Φ a               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 23.0 | 79.1 | 185               | 349  | 216  | 56.2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | ---  | 909  |

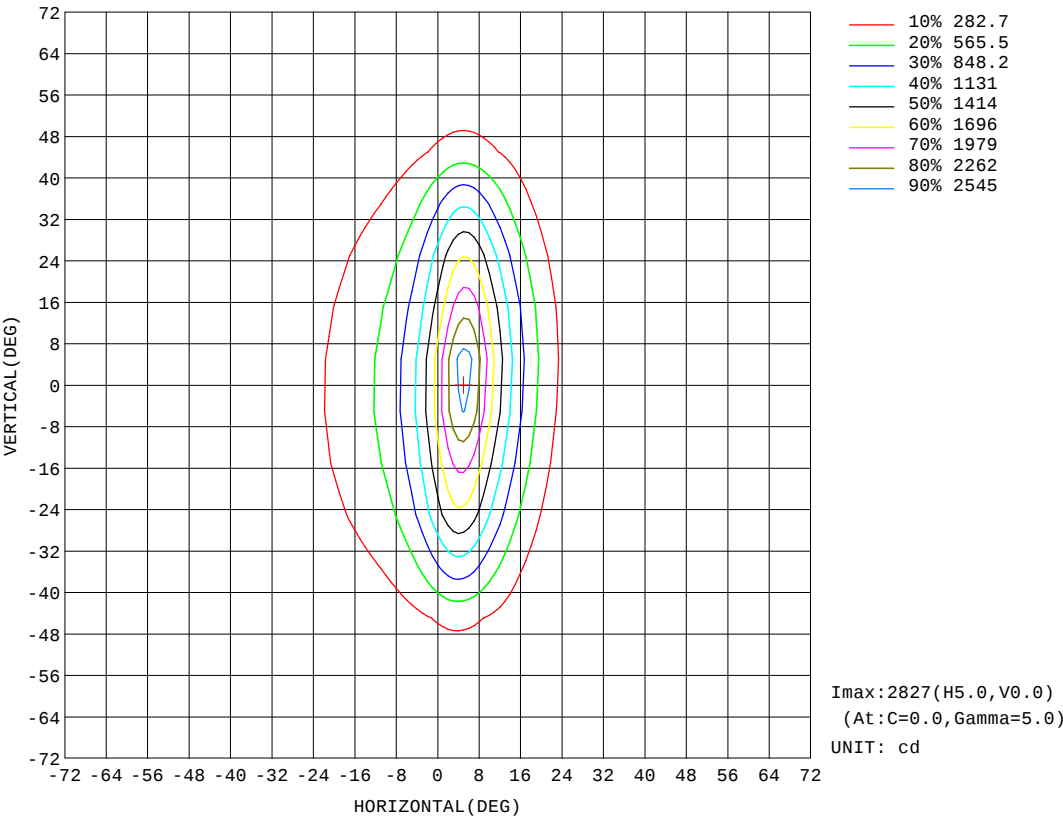
one-half-peak spread: U:30.3,D:31.4 , L:7.8,RNEMA Beam Type: Type 3 x 5 (H x V)

H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:28.0DEG  
Operators:QC1  
Test Date:2024-09-06

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
Humidity:83%  
Test Distance:8.300m [K=1.0000]  
Remarks:

ISOCANDELA DIAGRAM

|                                                                   |          |                       |
|-------------------------------------------------------------------|----------|-----------------------|
| Test:U:221.1V I:0.1686A P:21.77W PF:0.5842 Lamp Flux:1072.06x1 lm |          |                       |
| NAME: 8.02.019.0094 20x60° LLS-OP-W30B-L12-S                      | TYPE:LED | WEIGHT:               |
| DIM.:                                                             | SPEC.:   | SERIAL No.:2024090040 |
| MFR.: TPK OPTOELECTRONIC TECH CO., LTD                            | SUR.:    | PROTECTION ANGLE:     |

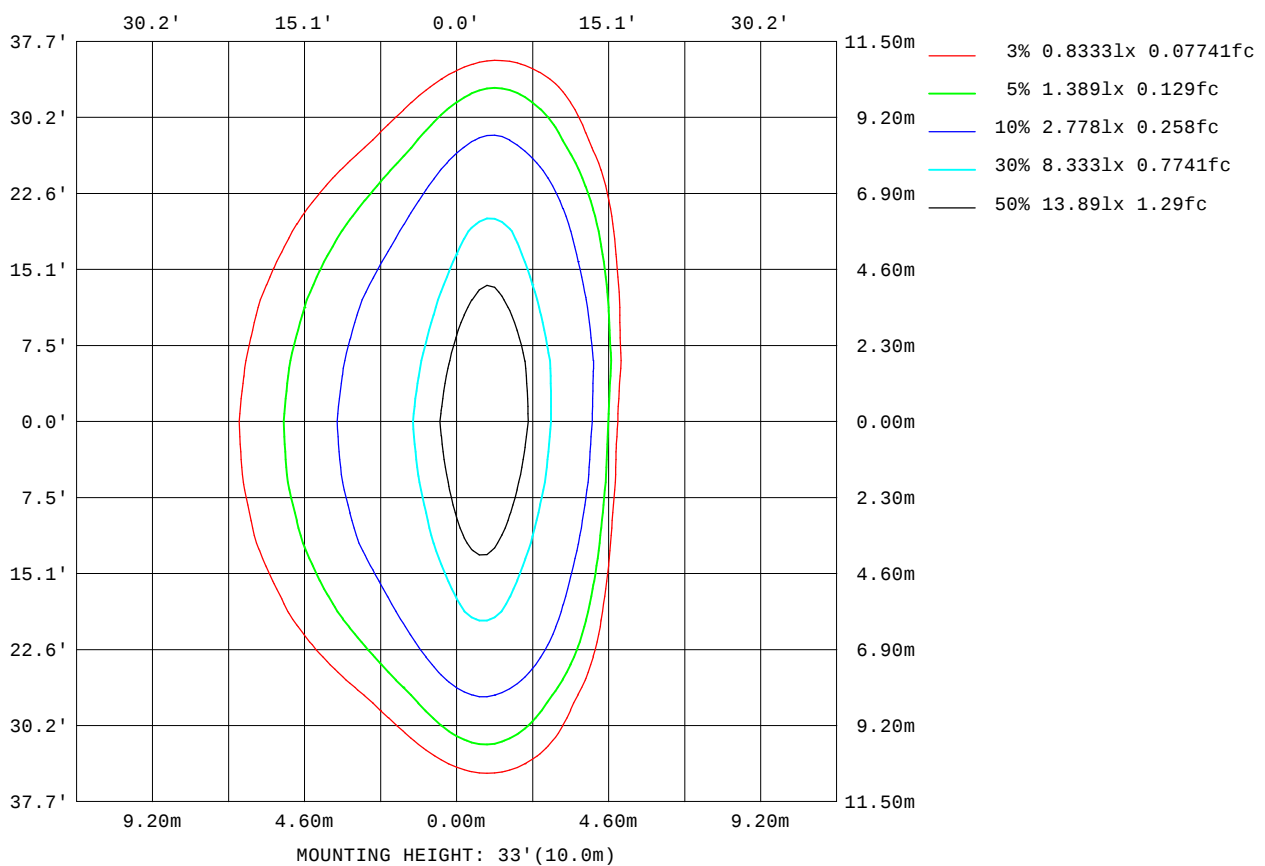


H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:28.0DEG  
Operators:QC1  
Test Date:2024-09-06

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
Humidity:83%  
Test Distance:8.300m [K=1.0000]  
Remarks:

## ISOLUX DIAGRAM

|                                                                   |          |                       |
|-------------------------------------------------------------------|----------|-----------------------|
| Test:U:221.1V I:0.1686A P:21.77W PF:0.5842 Lamp Flux:1072.06x1 lm |          |                       |
| NAME: 8.02.019.0094 20x60° LLS-OP-W30B-L12-S                      | TYPE:LED | WEIGHT:               |
| DIM.:                                                             | SPEC.:   | SERIAL No.:2024090040 |
| MFR.: TPK OPTOELECTRONIC TECH CO., LTD                            | SUR.:    | PROTECTION ANGLE:     |

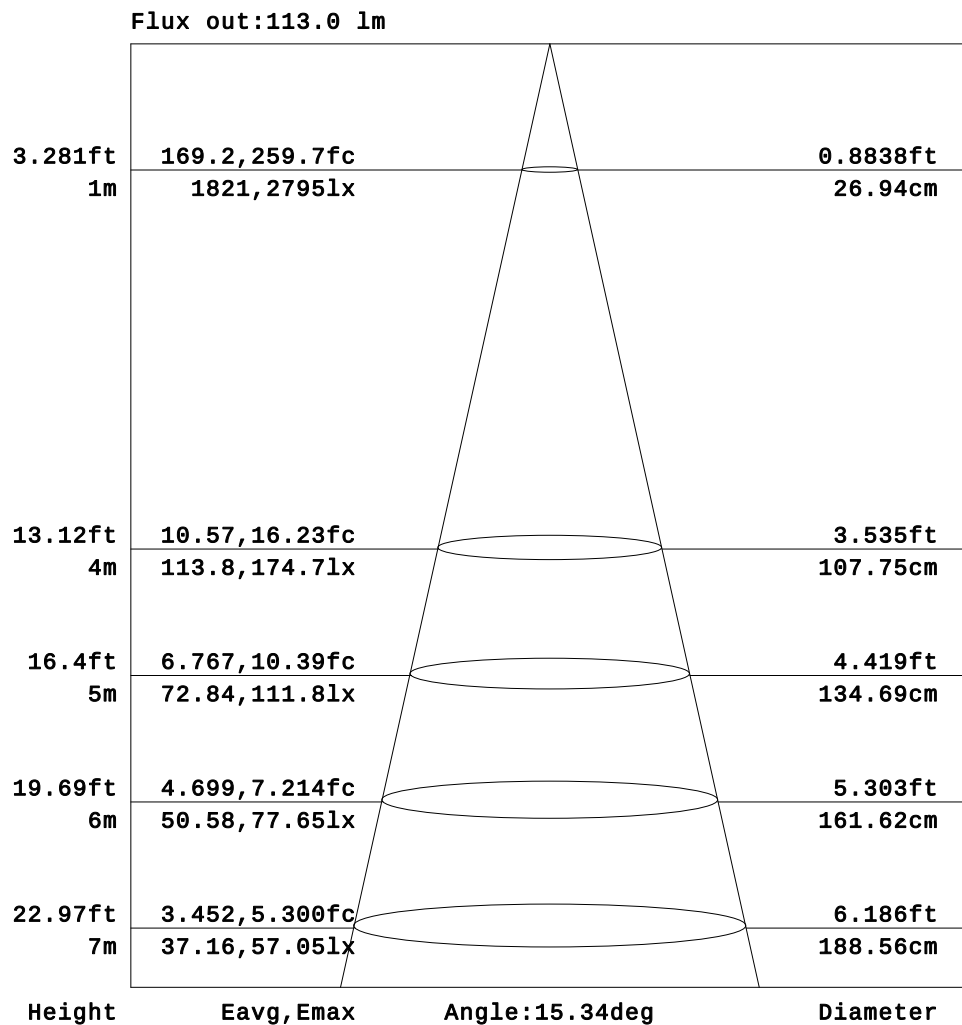


H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:28.0DEG  
Operators:QC1  
Test Date:2024-09-06

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
Humidity:83%  
Test Distance:8.300m [K=1.0000]  
Remarks:

## AAI Figure

|                                                                   |          |                       |
|-------------------------------------------------------------------|----------|-----------------------|
| Test:U:221.1V I:0.1686A P:21.77W PF:0.5842 Lamp Flux:1072.06x1 lm |          |                       |
| NAME: 8.02.019.0094 20x60° LLS-OP-W30B-L12-S                      | TYPE:LED | WEIGHT:               |
| DIM.:                                                             | SPEC.:   | SERIAL No.:2024090040 |
| MFR.: TPK OPTOELECTRONIC TECH CO., LTD                            | SUR.:    | PROTECTION ANGLE:     |

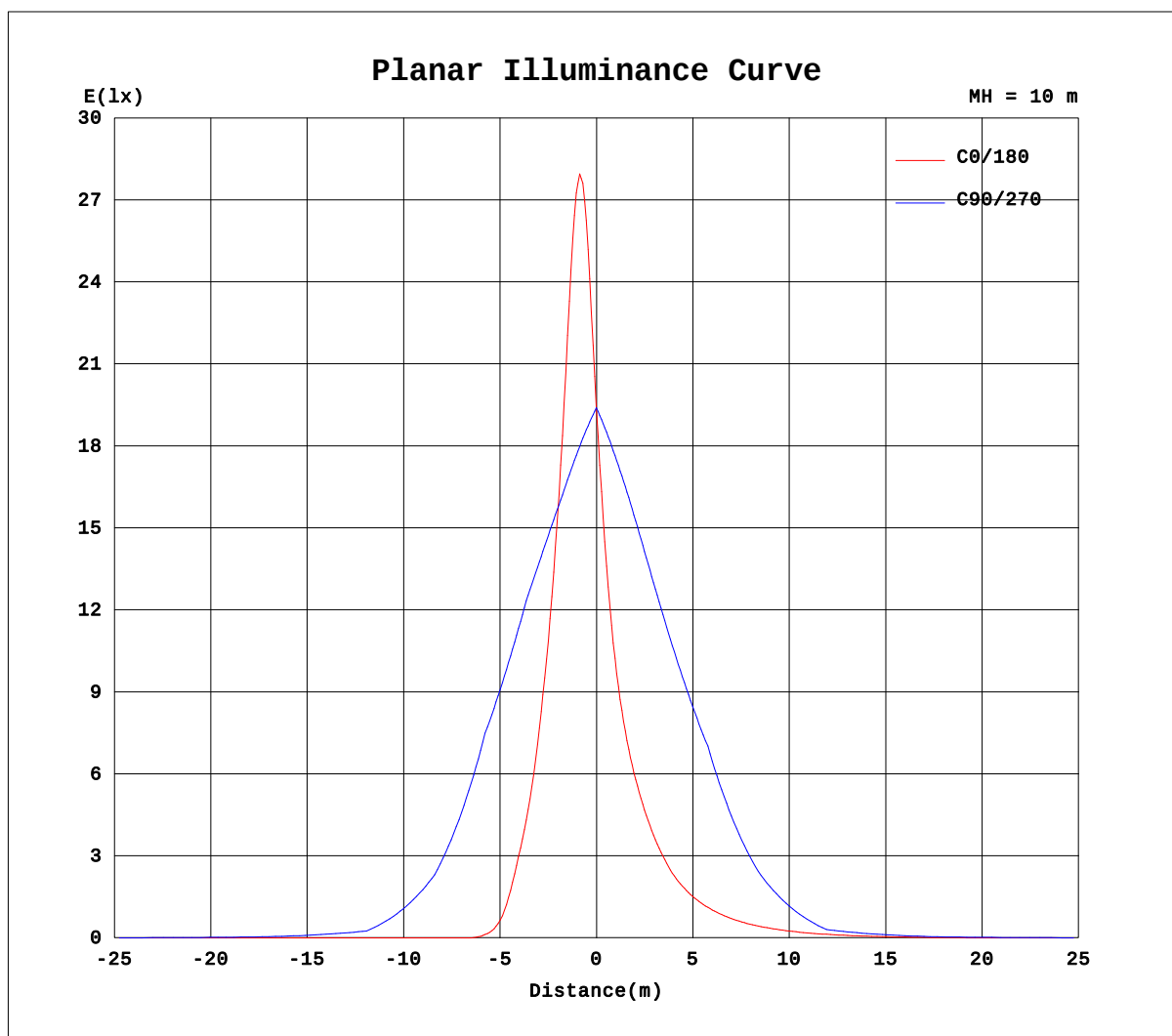


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:28.0DEG  
Operators:QC1  
Test Date:2024-09-06

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
Humidity:83%  
Test Distance:8.300m [K=1.0000]  
Remarks:

## Planar Illuminance Curve



H( $\beta$ ) Range: -90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature: 28.0DEG  
Operators: QC1  
Test Date: 2024-09-06

V( $\beta$ ) Range: -80 - 80DEG  
V( $\beta$ ) Interval: 5.0DEG  
Test System: EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
Humidity: 83%  
Test Distance: 8.300m [K=1.0000]  
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

|                                                                   |  |  |  |  |  |  |  |  |          |  |  |  |  |  |                       |  |  |
|-------------------------------------------------------------------|--|--|--|--|--|--|--|--|----------|--|--|--|--|--|-----------------------|--|--|
| Test:U:221.1V I:0.1686A P:21.77W PF:0.5842 Lamp Flux:1972.06x1 lm |  |  |  |  |  |  |  |  |          |  |  |  |  |  |                       |  |  |
| NAME: 8.02.019.0094 20x60° LLS-OP-W30B-L12-S                      |  |  |  |  |  |  |  |  | TYPE:LED |  |  |  |  |  | WEIGHT:               |  |  |
| DIM.:                                                             |  |  |  |  |  |  |  |  | SPEC.:   |  |  |  |  |  | SERIAL No.:2024090040 |  |  |
| MFR.: TPK OPTOELECTRONIC TECH CO., LTD                            |  |  |  |  |  |  |  |  | SUR.:    |  |  |  |  |  | PROTECTION ANGLE:     |  |  |

| Table--1  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | UNIT: cd |      |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|
| H(°)\V(°) | -90  | -85  | -80  | -75  | -70  | -65  | -60  | -55  | -50  | -45  | -40  | -35  | -30  | -25  | -20  | -15  | -10  | -5       | 0    |
| -90       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     | 0.00 |
| -85       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     | 0.00 |
| -80       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     | 0.00 |
| -75       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.84 | 3.64 | 3.60 | 3.46     | 4.16 |
| -70       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.69 | 7.29 | 7.20 | 6.92     | 8.32 |
| -65       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.69 | 4.84 | 8.10 | 11.5 | 16.3 | 19.3 | 19.9 | 21.3     | 23.3 |
| -60       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.39 | 9.68 | 16.2 | 23.0 | 28.9 | 31.2 | 32.6 | 35.7     | 38.3 |
| -55       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.35 | 6.31 | 12.9 | 21.3 | 30.6 | 39.4 | 45.8 | 49.9 | 54.5 | 61.2     | 68.2 |
| -50       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.71 | 12.6 | 22.4 | 33.0 | 45.1 | 55.9 | 62.8 | 68.6 | 76.4 | 86.7     | 98.1 |
| -45       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.29 | 12.1 | 22.1 | 34.2 | 47.7 | 63.5 | 79.6 | 95.0 | 115  | 147  | 209      | 307  |
| -40       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.59 | 19.4 | 31.6 | 46.0 | 62.4 | 81.9 | 103  | 127  | 162  | 218  | 331      | 515  |
| -35       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.43 | 13.3 | 26.1 | 40.0 | 56.6 | 76.3 | 101  | 129  | 168  | 222  | 312  | 498      | 835  |
| -30       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.85 | 18.0 | 32.9 | 48.4 | 67.1 | 90.3 | 119  | 155  | 208  | 283  | 405  | 666      | 1155 |
| -25       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.30 | 9.99 | 22.7 | 38.2 | 55.3 | 76.0 | 102  | 135  | 178  | 242  | 336  | 484  | 780      | 1321 |
| -20       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.60 | 13.1 | 27.5 | 43.4 | 62.2 | 84.9 | 114  | 151  | 201  | 276  | 390  | 562  | 894      | 1488 |
| -15       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.23 | 15.1 | 29.8 | 46.6 | 66.2 | 90.1 | 120  | 160  | 214  | 296  | 421  | 608  | 954      | 1592 |
| -10       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.85 | 17.0 | 32.2 | 49.7 | 70.3 | 95.4 | 126  | 169  | 227  | 316  | 453  | 654  | 1014     | 1697 |
| -5        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.21 | 17.6 | 33.0 | 50.7 | 71.6 | 96.7 | 128  | 171  | 231  | 323  | 465  | 673  | 1053     | 1819 |
| 0         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.57 | 18.1 | 33.7 | 51.7 | 72.8 | 98.0 | 130  | 173  | 234  | 330  | 477  | 692  | 1092     | 1940 |
| 5         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.58 | 16.9 | 32.2 | 49.9 | 70.5 | 95.3 | 126  | 168  | 227  | 318  | 459  | 665  | 1035     | 1803 |
| 10        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.59 | 15.7 | 30.8 | 48.1 | 68.2 | 92.6 | 123  | 164  | 221  | 307  | 440  | 637  | 979      | 1666 |
| 15        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.29 | 13.8 | 28.4 | 45.0 | 64.2 | 87.4 | 116  | 154  | 206  | 285  | 408  | 588  | 904      | 1519 |
| 20        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.0 | 26.0 | 41.8 | 60.2 | 82.2 | 110  | 145  | 192  | 263  | 375  | 539  | 830      | 1371 |
| 25        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.82 | 22.0 | 36.8 | 53.7 | 73.8 | 98.6 | 130  | 171  | 231  | 323  | 463  | 724      | 1226 |
| 30        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.69 | 18.0 | 31.8 | 47.3 | 65.5 | 87.6 | 115  | 149  | 199  | 271  | 387  | 618      | 1081 |
| 35        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.84 | 13.0 | 25.5 | 39.4 | 55.5 | 74.7 | 97.9 | 126  | 163  | 216  | 302  | 475      | 812  |
| 40        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 8.09 | 19.1 | 31.5 | 45.5 | 61.8 | 80.8 | 102  | 127  | 161  | 218  | 332      | 542  |
| 45        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.04 | 11.8 | 22.2 | 34.0 | 47.4 | 62.8 | 79.4 | 96.4 | 118  | 151  | 216      | 331  |
| 50        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.58 | 13.0 | 22.5 | 33.1 | 44.9 | 56.5 | 66.0 | 74.0 | 84.8 | 99.7     | 119  |
| 55        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.29 | 6.49 | 13.1 | 21.6 | 30.9 | 40.4 | 48.6 | 54.5 | 60.8 | 69.9     | 81.1 |
| 60        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.71 | 10.0 | 16.9 | 24.3 | 31.1 | 35.0 | 36.9 | 40.0     | 42.9 |
| 65        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.86 | 5.01 | 8.46 | 12.7 | 18.4 | 22.3 | 23.5 | 24.7     | 26.6 |
| 70        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.09 | 5.66 | 9.61 | 10.2 | 9.28     | 10.3 |
| 75        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.54 | 2.83 | 4.80 | 5.09 | 4.64     | 5.16 |
| 80        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     | 0.00 |
| 85        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     | 0.00 |
| 90        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     | 0.00 |

H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:28.0DEG  
Operators:QC1  
Test Date:2024-09-06

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
Humidity:83%  
Test Distance:8.300m [K=1.0000]  
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

|                                                                   |          |                       |
|-------------------------------------------------------------------|----------|-----------------------|
| Test:U:221.1V I:0.1686A P:21.77W PF:0.5842 Lamp Flux:1072.06x1 lm |          |                       |
| NAME: 8.02.019.0094 20x60° LLS-OP-W30B-L12-S                      | TYPE:LED | WEIGHT:               |
| DIM.:                                                             | SPEC.:   | SERIAL No.:2024090040 |
| MFR.: TPK OPTOELECTRONIC TECH CO., LTD                            | SUR.:    | PROTECTION ANGLE:     |

| Table--2    |      |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      | UNIT: cd |  |
|-------------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|--|
| H(°) \ V(°) | 5    | 10   | 15   | 20    | 25   | 30   | 35   | 40   | 45   | 50   | 55   | 60   | 65   | 70   | 75   | 80   | 85   | 90       |  |
| -90         | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -85         | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -80         | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -75         | 3.41 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -70         | 6.83 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -65         | 23.3 | 13.6 | 0.01 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -60         | 39.7 | 27.2 | 0.03 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -55         | 72.0 | 60.5 | 27.6 | 2.32  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -50         | 104  | 93.8 | 55.2 | 4.63  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -45         | 345  | 256  | 137  | 34.0  | 0.37 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -40         | 586  | 419  | 219  | 63.4  | 0.75 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -35         | 1002 | 694  | 359  | 132   | 15.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -30         | 1417 | 968  | 498  | 201   | 30.2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -25         | 1628 | 1139 | 620  | 273   | 51.8 | 1.56 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -20         | 1840 | 1309 | 742  | 344   | 73.3 | 3.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -15         | 2060 | 1468 | 841  | 403   | 103  | 8.72 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -10         | 2280 | 1627 | 941  | 462   | 133  | 14.3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| -5          | 2554 | 1776 | 999  | 491   | 149  | 16.9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 0           | 2827 | 1925 | 1057 | 520   | 165  | 19.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 5           | 2641 | 1880 | 1053 | 522   | 171  | 20.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 10          | 2454 | 1835 | 1049 | 525   | 178  | 21.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 15          | 2163 | 1642 | 955  | 474   | 153  | 16.6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 20          | 1871 | 1450 | 861  | 423   | 128  | 11.6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 25          | 1682 | 1290 | 742  | 351   | 94.8 | 6.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 30          | 1492 | 1131 | 622  | 278   | 61.3 | 0.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 35          | 1097 | 832  | 459  | 200   | 38.8 | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 40          | 702  | 533  | 296  | 122   | 16.3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 45          | 418  | 329  | 191  | 71.0  | 8.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 50          | 134  | 124  | 85.4 | 20.0  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 55          | 89.1 | 81.1 | 48.0 | 10.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 60          | 44.3 | 37.8 | 10.5 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 65          | 27.5 | 18.9 | 5.26 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 70          | 10.7 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 75          | 5.35 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 80          | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 85          | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |
| 90          | 0.00 | 0.00 | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     |  |

H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:28.0DEG  
Operators:QC1  
Test Date:2024-09-06

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
Humidity:83%  
Test Distance:8.300m [K=1.0000]  
Remarks: