

## Floodlight Summary:

Report based on lamp delivering 1000 lumens.

|                                                         |                                                                     |
|---------------------------------------------------------|---------------------------------------------------------------------|
| Maximum Intensity<br>(Luminaire orientation as tested.) | 524.8 cd per klm.<br>0.0 degrees vertical<br>0.0 degrees horizontal |
|---------------------------------------------------------|---------------------------------------------------------------------|

|             |                |                 |
|-------------|----------------|-----------------|
| Beam Spread | At 10% of Imax | 131.4V x 117.1H |
|             | At 50% of Imax | 86.9V x 86.2H   |
|             | At 90% of Imax | 43.4V x 52.5H   |

|           |                |                       |
|-----------|----------------|-----------------------|
| Beam Flux | Total          | 998.8 lumens per klm. |
|           | To 10% of Imax | 979.3 lumens per klm. |
|           | To 50% of Imax | 749.4 lumens per klm. |
|           | To 90% of Imax | 274.1 lumens per klm. |

|              |        |
|--------------|--------|
| Upward LOR   | 0.0 %  |
| Downward LOR | 99.9 % |

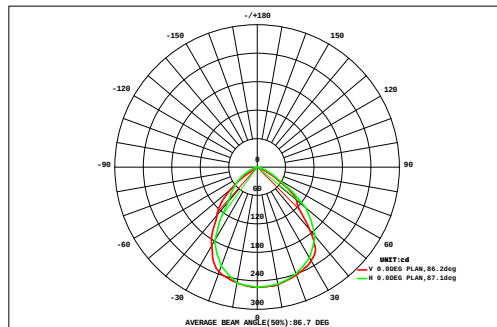
|                                          |         |
|------------------------------------------|---------|
| Luminaire Efficiency(Light Output Ratio) | 100.0 % |
|------------------------------------------|---------|

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:30.3DEG  
Operators:QC1  
Test Date:2023-06-20

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
Humidity:63%  
Test Distance:8.300m [K=1.0000]  
Remarks:

## LUMINAIRE PHOTOMETRIC TEST REPORT

|                                                                  |          |                        |
|------------------------------------------------------------------|----------|------------------------|
| Test:U:24.00V I:0.5721A P:13.73W PF:1.000 Lamp Flux:482.832x1 lm |          |                        |
| NAME: 8.02.019.0022 LLS-OP-W30C-L6-DMX                           | TYPE:LED | WEIGHT:                |
| DIM.:                                                            | SPEC.:   | SERIAL No.:20230600051 |
| MFR.: TPK OPTOELECTRONIC TECH CO., LTD                           | SUR.:    | PROTECTION ANGLE:      |



| DATA OF LAMP             |          | Eff:35.17lm/W   |          |
|--------------------------|----------|-----------------|----------|
| MODEL LLS-OP-W30C-L6-DMX | Imax(cd) | 253.4           |          |
| NOMINAL POWER(W)         | 12       | AVAILABILITY(%) | 98.2     |
| RATED VOLTAGE(V)         | 24       | Avai. FLUX(lm)  | 474.0    |
| NOMINAL FLUX(lm)         | 482.832  | LOR(%)          | 100.0    |
| LAMPS INSIDE             | 1        | TOTAL FLUX(lm)  | 482.8    |
| TEST VOLTAGE(V)          | 24.0     | θ @50%(H,V)     | 86,87DEG |

| AREA FLUX DIAGRAM                                                         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | UNIT:lm | Φ t  | Φ a  |
|---------------------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------|------|------|
| 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 |
| 80                                                                        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | 0.14 | 0.19 | 0.20 | 0.19 | 0.11 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00    | 0.91 | 0.00 |
| 70                                                                        | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.41 | 0.74 | 0.92 | 0.98 | 0.92 | 0.63 | 0.24 | 0.03 | 0.00 | 0.00 | 0.00    | 5.00 | 3.00 |
| 60                                                                        | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | 0.72 | 1.43 | 2.14 | 2.49 | 2.62 | 2.47 | 2.01 | 1.12 | 0.37 | 0.02 | 0.00 | 0.00    | 15.5 | 15.0 |
| 50                                                                        | 0.00 | 0.00 | 0.00 | 0.00 | 0.52 | 1.79 | 3.05 | 4.38 | 4.92 | 5.03 | 4.82 | 4.17 | 2.47 | 1.18 | 0.17 | 0.00 | 0.00    | 32.5 | 32.2 |
| 40                                                                        | 0.00 | 0.00 | 0.00 | 0.05 | 1.24 | 2.78 | 4.50 | 5.76 | 6.23 | 6.30 | 6.00 | 5.37 | 3.66 | 1.81 | 0.52 | 0.00 | 0.00    | 44.2 | 44.0 |
| 30                                                                        | 0.00 | 0.00 | 0.00 | 0.22 | 1.77 | 3.41 | 5.25 | 6.45 | 6.95 | 7.02 | 6.70 | 5.96 | 4.48 | 2.23 | 0.87 | 0.02 | 0.00    | 51.4 | 51.2 |
| 20                                                                        | 0.00 | 0.00 | 0.00 | 0.42 | 2.11 | 3.85 | 5.74 | 6.90 | 7.39 | 7.46 | 7.12 | 6.33 | 4.98 | 2.58 | 1.11 | 0.07 | 0.00    | 56.0 | 55.9 |
| 10                                                                        | 0.00 | 0.00 | 0.00 | 0.53 | 2.26 | 4.02 | 5.93 | 7.11 | 7.61 | 7.67 | 7.28 | 6.49 | 5.21 | 2.82 | 1.28 | 0.11 | 0.00    | 58.3 | 58.2 |
| 0                                                                         | 0.00 | 0.00 | 0.00 | 0.59 | 2.30 | 4.01 | 5.91 | 7.05 | 7.55 | 7.62 | 7.22 | 6.47 | 5.18 | 2.82 | 1.41 | 0.14 | 0.00    | 58.3 | 58.2 |
| -10                                                                       | 0.00 | 0.00 | 0.00 | 0.51 | 2.09 | 3.65 | 5.46 | 6.62 | 7.12 | 7.22 | 6.86 | 6.13 | 4.81 | 2.59 | 1.35 | 0.12 | 0.00    | 54.5 | 54.4 |
| -20                                                                       | 0.00 | 0.00 | 0.00 | 0.30 | 1.63 | 2.96 | 4.58 | 5.65 | 6.10 | 6.16 | 5.86 | 5.24 | 3.94 | 2.14 | 1.03 | 0.06 | 0.00    | 45.6 | 45.5 |
| -30                                                                       | 0.00 | 0.00 | 0.00 | 0.07 | 1.02 | 1.96 | 3.03 | 3.86 | 4.25 | 4.38 | 4.19 | 3.74 | 2.63 | 1.55 | 0.60 | 0.01 | 0.00    | 31.3 | 31.1 |
| -40                                                                       | 0.00 | 0.00 | 0.00 | 0.00 | 0.45 | 1.04 | 1.39 | 1.85 | 2.11 | 2.25 | 2.20 | 1.93 | 1.35 | 0.88 | 0.18 | 0.00 | 0.00    | 15.6 | 15.3 |
| -50                                                                       | 0.00 | 0.00 | 0.00 | 0.00 | 0.16 | 0.58 | 0.93 | 1.25 | 1.43 | 1.47 | 1.39 | 1.15 | 0.92 | 0.41 | 0.02 | 0.00 | 0.00    | 9.70 | 8.90 |
| -60                                                                       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.17 | 0.36 | 0.51 | 0.64 | 0.63 | 0.57 | 0.45 | 0.29 | 0.08 | 0.00 | 0.00 | 0.00    | 3.69 | 0.98 |
| -70                                                                       | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.07 | 0.08 | 0.07 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00    | 0.29 | 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 |
| -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 |
| -90 -80 -70 -60 -50 -40 -30 -20 HORIZONTAL( DEG ) 20 30 40 50 60 70 80 90 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |         |      |      |
| Φ t                                                                       | 0.00 | 0.00 | 0.00 | 2.70 | 15.6 | 31.1 | 48.0 | 60.4 | 66.0 | 67.1 | 63.9 | 56.2 | 41.3 | 21.5 | 8.55 | 0.54 | 0.00    | 0.00 | 483  |
| Φ a                                                                       | 0.00 | 0.00 | 0.00 | 2.22 | 15.0 | 30.3 | 47.3 | 59.7 | 65.1 | 66.1 | 62.9 | 55.5 | 40.7 | 20.9 | 8.05 | 0.24 | 0.00    | 0.00 | 474  |

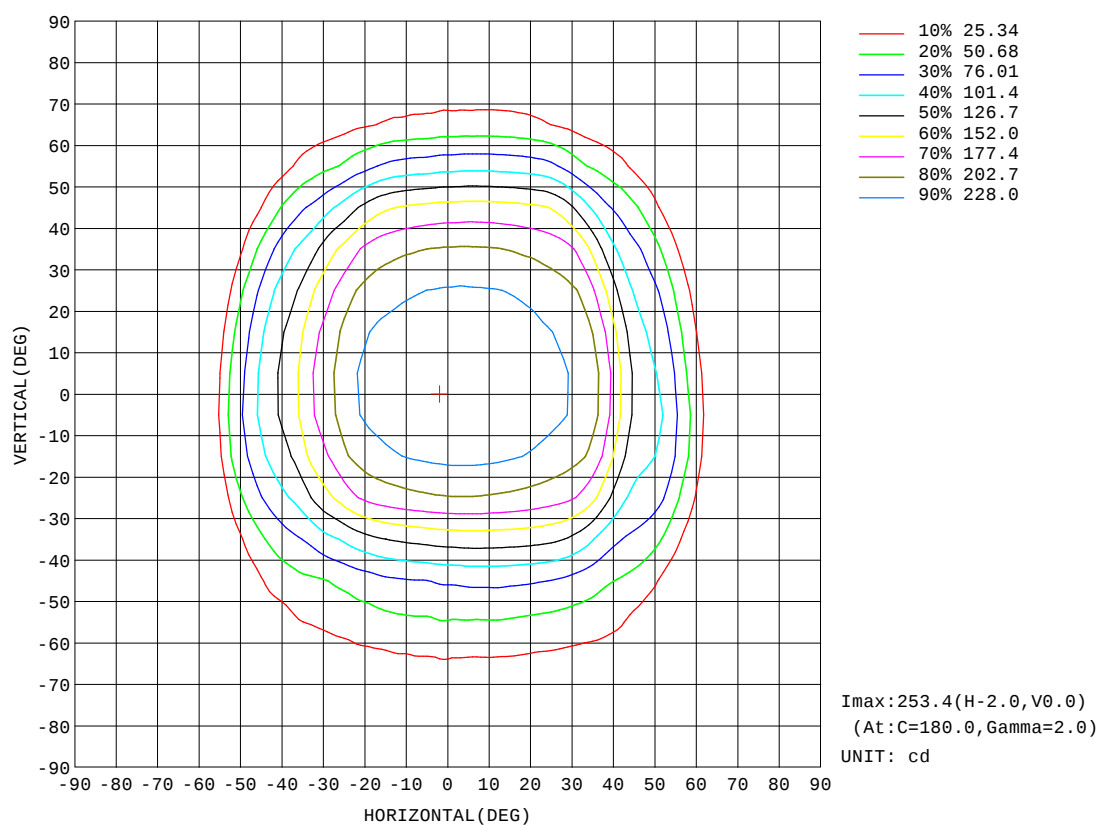
one-half-peak spread: U:36.2,D:51.0 , L:39.8, ~~NEA~~ Beam Type: Type 6 x 7 (H x V)

H(β) Range:-90 - 90DEG  
H(β) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:30.3DEG  
Operators:QC1  
Test Date:2023-06-20

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
Humidity:63%  
Test Distance:8.300m [K=1.0000]  
Remarks:

## ISOCANDELA DIAGRAM

|                                                                  |          |                        |
|------------------------------------------------------------------|----------|------------------------|
| Test:U:24.00V I:0.5721A P:13.73W PF:1.000 Lamp Flux:482.832x1 lm |          |                        |
| NAME: 8.02.019.0022 LLS-OP-W30C-L6-DMX                           | TYPE:LED | WEIGHT:                |
| DIM.:                                                            | SPEC.:   | SERIAL No.:20230600051 |
| MFR.: TPK OPTOELECTRONIC TECH CO., LTD                           | SUR.:    | PROTECTION ANGLE:      |

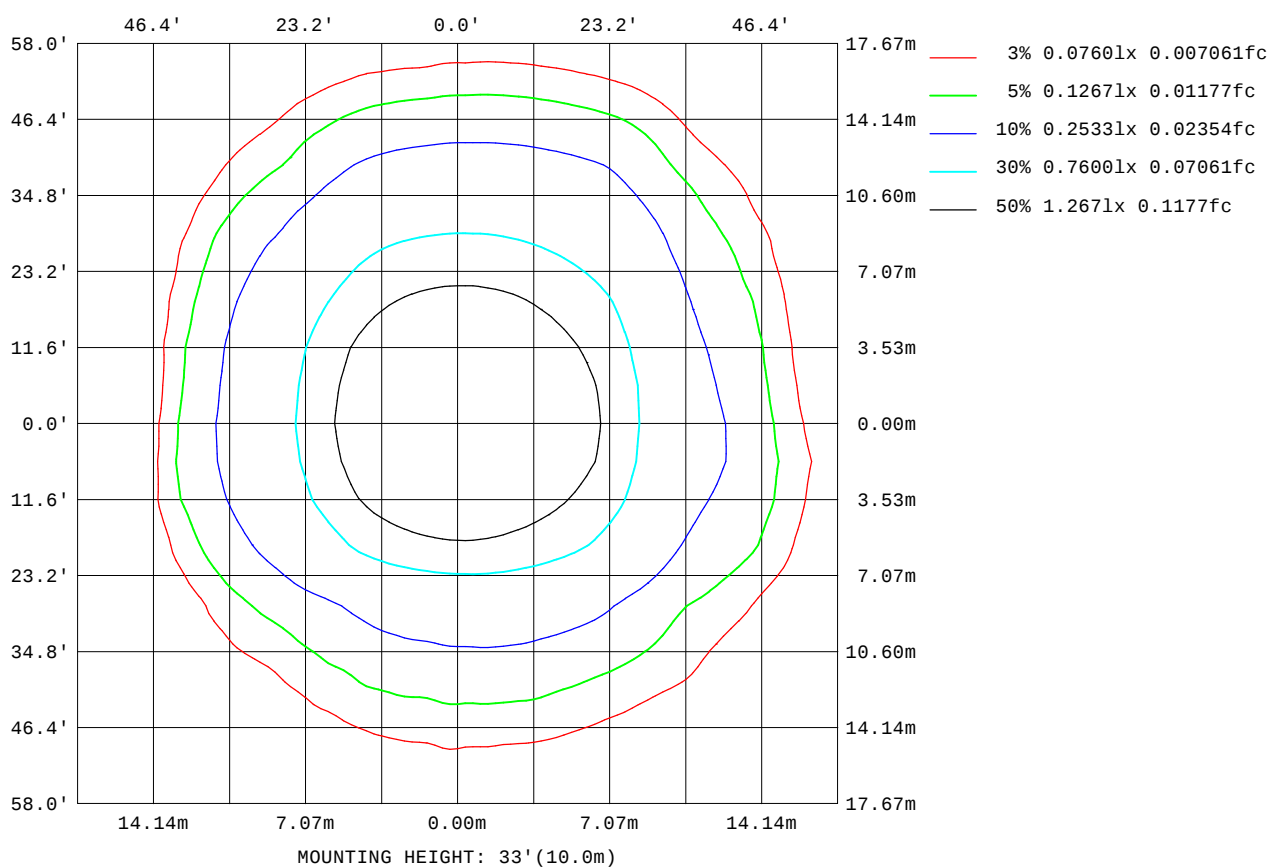


H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:30.3DEG  
Operators:QC1  
Test Date:2023-06-20

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
Humidity:63%  
Test Distance:8.300m [K=1.0000]  
Remarks:

## ISOLUX DIAGRAM

|                                                                  |          |                        |
|------------------------------------------------------------------|----------|------------------------|
| Test:U:24.00V I:0.5721A P:13.73W PF:1.000 Lamp Flux:482.832x1 lm |          |                        |
| NAME: 8.02.019.0022 LLS-OP-W30C-L6-DMX                           | TYPE:LED | WEIGHT:                |
| DIM.:                                                            | SPEC.:   | SERIAL No.:20230600051 |
| MFR.: TPK OPTOELECTRONIC TECH CO., LTD                           | SUR.:    | PROTECTION ANGLE:      |

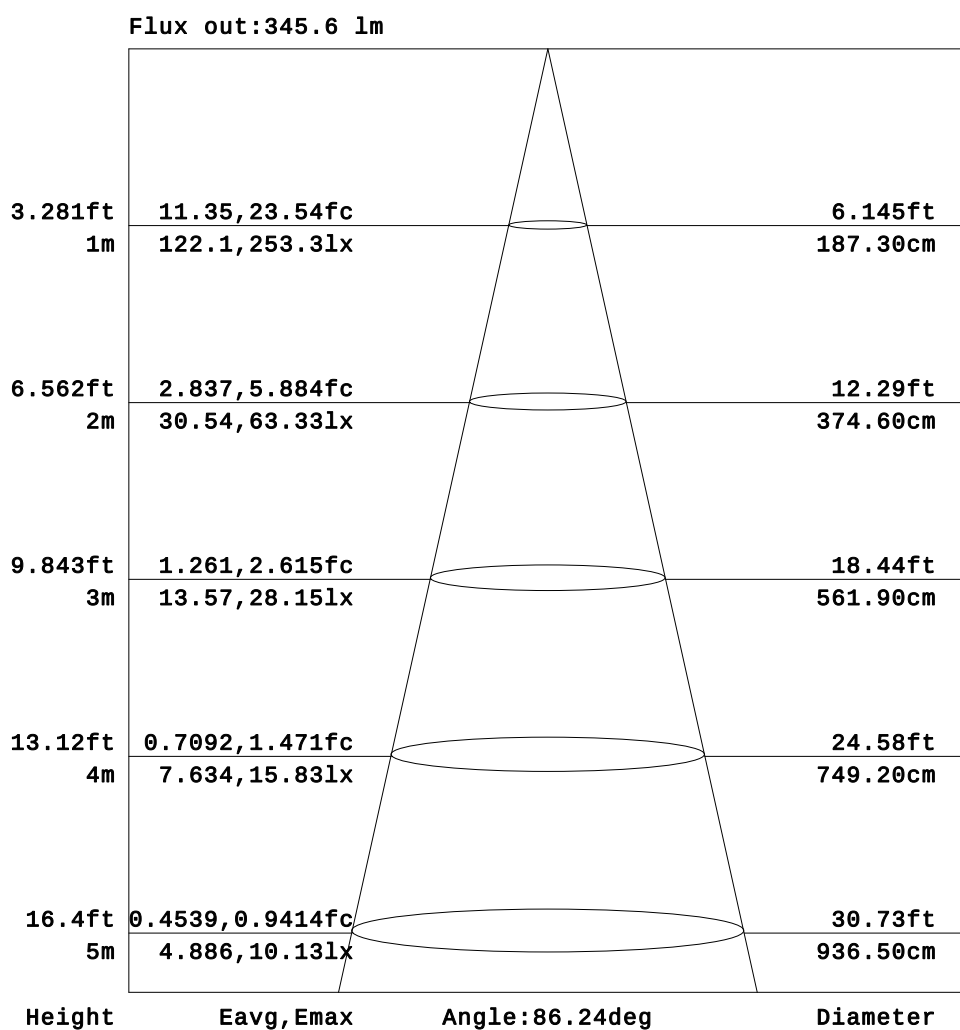


H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:30.3DEG  
Operators:QC1  
Test Date:2023-06-20

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
Humidity:63%  
Test Distance:8.300m [K=1.0000]  
Remarks:

## AAI Figure

|                                                                  |          |                        |
|------------------------------------------------------------------|----------|------------------------|
| Test:U:24.00V I:0.5721A P:13.73W PF:1.000 Lamp Flux:482.832x1 lm |          |                        |
| NAME: 8.02.019.0022 LLS-OP-W30C-L6-DMX                           | TYPE:LED | WEIGHT:                |
| DIM.:                                                            | SPEC.:   | SERIAL No.:20230600051 |
| MFR.: TPK OPTOELECTRONIC TECH CO., LTD                           | SUR.:    | PROTECTION ANGLE:      |

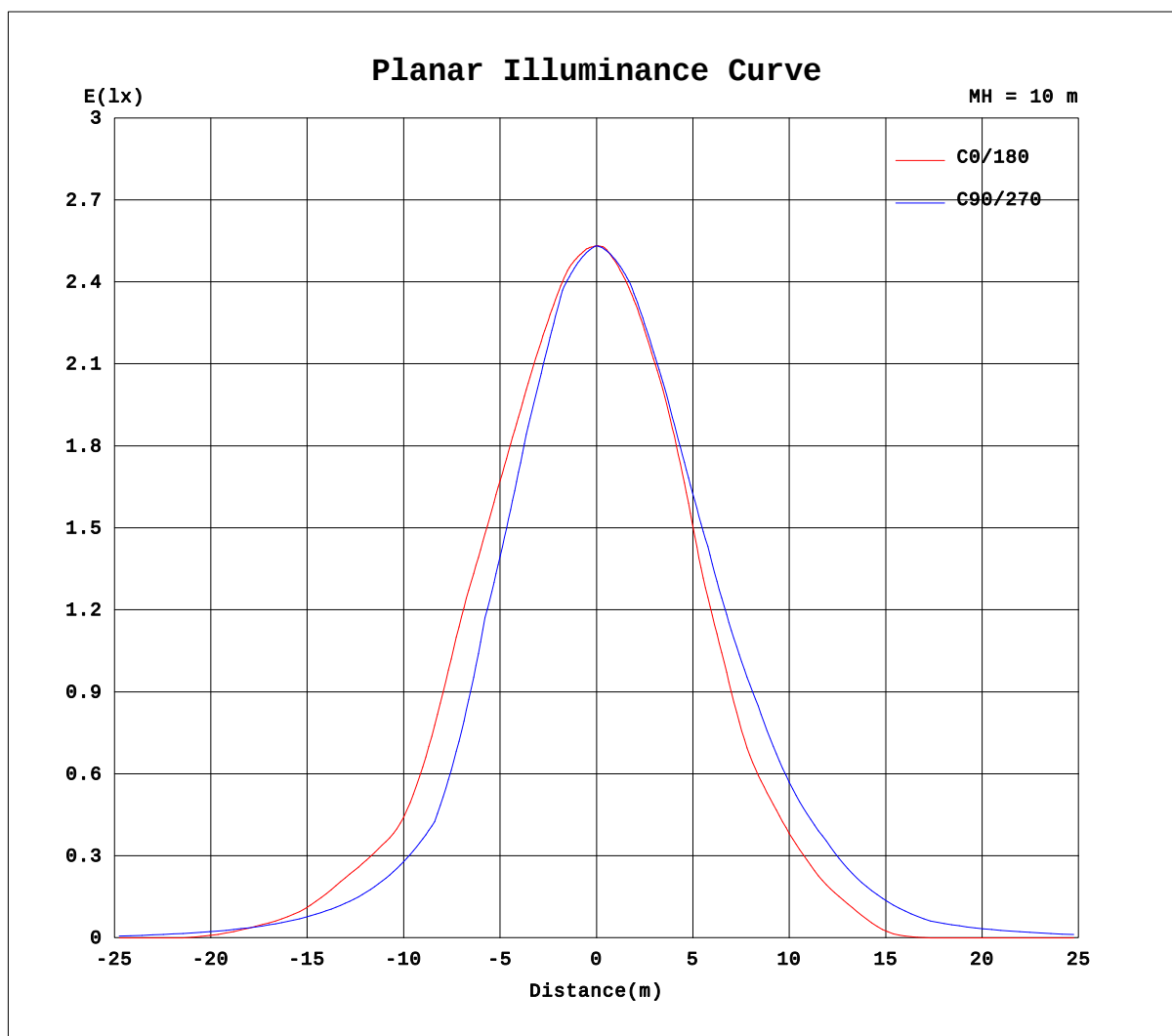


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

H( $\beta$ ) Range:-90 - 90DEG  
H( $\beta$ ) Interval: 1.0DEG  
Test Speed: HIGH  
Temperature:30.3DEG  
Operators:QC1  
Test Date:2023-06-20

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
Humidity:63%  
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:30.3DEG  
Operators:QC1  
Test Date:2023-06-20

V(B) Range:-80 - 80DEG  
V(B) Interval: 5.0DEG  
Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
Humidity:63%  
Test Distance:8.300m [K=1.0000]  
Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

|                                                                  |          |                        |
|------------------------------------------------------------------|----------|------------------------|
| Test:U:24.00V I:0.5721A P:13.73W PF:1.000 Lamp Flux:482.832x1 lm |          |                        |
| NAME: 8.02.019.0022 LLS-OP-W30C-L6-DMX                           | TYPE:LED | WEIGHT:                |
| DIM.:                                                            | SPEC.:   | SERIAL No.:20230600051 |
| 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 | 0.39 | 1.30 | 2.74 | 2.88 | 4.06 | 4.60 |
| -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 | 0.77 | 2.60 | 5.49 | 5.76 | 8.13 | 9.21 |
| -65         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.83 | 8.03 | 10.4 | 12.1 | 15.4 | 17.0 | 19.0 | 20.7 | 22.4 |
| -60         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.65 | 16.1 | 20.7 | 23.4 | 28.2 | 28.4 | 32.3 | 33.3 | 35.5 |
| -55         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.58 | 14.3 | 25.2 | 28.9 | 33.8 | 38.8 | 43.0 | 46.0 | 46.5 | 49.4 |
| -50         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.2 | 26.9 | 34.3 | 37.2 | 44.2 | 49.4 | 57.6 | 59.7 | 59.8 | 63.3 |
| -45         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.52 | 23.3 | 36.9 | 45.4 | 49.2 | 56.2 | 63.3 | 71.0 | 74.2 | 75.9 | 79.1 |
| -40         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 9.03 | 31.5 | 46.9 | 56.4 | 61.2 | 68.2 | 77.3 | 84.4 | 88.8 | 92.0 | 94.8 |
| -35         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.82 | 21.9 | 46.8 | 64.4 | 76.4 | 92.5 | 105  | 119  | 127  | 131  | 135  | 138  |
| -30         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.63 | 34.8 | 62.1 | 81.9 | 96.4 | 124  | 142  | 160  | 169  | 174  | 178  | 181  |
| -25         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 9.01 | 47.8 | 75.0 | 95.6 | 114  | 142  | 164  | 182  | 190  | 196  | 199  | 201  |
| -20         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 16.4 | 60.8 | 87.9 | 109  | 132  | 161  | 187  | 204  | 212  | 217  | 220  | 222  |
| -15         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | 21.7 | 66.9 | 96.2 | 119  | 144  | 172  | 198  | 215  | 224  | 229  | 233  | 235  |
| -10         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.16 | 27.1 | 73.0 | 105  | 128  | 155  | 183  | 209  | 226  | 235  | 241  | 245  | 248  |
| -5          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | 28.1 | 73.2 | 106  | 130  | 159  | 187  | 214  | 231  | 239  | 244  | 248  | 251  |
| 0           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 29.2 | 73.4 | 108  | 133  | 164  | 192  | 219  | 236  | 242  | 248  | 251  | 253  |
| 5           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 25.0 | 69.4 | 106  | 131  | 161  | 189  | 216  | 233  | 241  | 247  | 250  | 252  |
| 10          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 20.7 | 65.3 | 103  | 129  | 158  | 187  | 213  | 231  | 240  | 246  | 249  | 251  |
| 15          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 15.6 | 61.0 | 97.6 | 125  | 152  | 182  | 208  | 225  | 234  | 240  | 243  | 245  |
| 20          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.5 | 56.6 | 92.1 | 121  | 145  | 177  | 203  | 220  | 228  | 234  | 238  | 240  |
| 25          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.28 | 46.3 | 81.0 | 111  | 133  | 165  | 190  | 209  | 219  | 224  | 228  | 230  |
| 30          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 35.9 | 69.8 | 101  | 121  | 153  | 177  | 198  | 209  | 215  | 219  | 220  |
| 35          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 21.3 | 57.0 | 87.0 | 108  | 134  | 159  | 182  | 193  | 199  | 203  | 205  |
| 40          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.66 | 44.2 | 73.3 | 95.4 | 116  | 142  | 165  | 178  | 183  | 187  | 189  |
| 45          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.33 | 25.3 | 52.3 | 73.5 | 90.0 | 111  | 133  | 148  | 155  | 159  | 161  |
| 50          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.33 | 31.4 | 51.6 | 64.4 | 80.3 | 101  | 119  | 127  | 131  | 134  |
| 55          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.17 | 15.7 | 32.8 | 44.0 | 54.3 | 68.1 | 79.7 | 85.7 | 88.3 | 91.7 |
| 60          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 13.9 | 23.7 | 28.2 | 35.0 | 40.7 | 44.7 | 45.6 | 49.6 |
| 65          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.94 | 11.8 | 16.7 | 22.7 | 27.2 | 29.8 | 31.5 | 33.8 |
| 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 | 5.18 | 10.5 | 13.7 | 14.9 | 17.3 | 18.0 |
| 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 | 2.59 | 5.23 | 6.83 | 7.46 | 8.67 | 8.99 |
| 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 |

$H(\beta)$  Range:-90 - 90DEG  
 $H(\beta)$  Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:30.3DEG  
 Operators:QC1  
 Test Date:2023-06-20

$V(\beta)$  Range:-80 - 80DEG  
 $V(\beta)$  Interval: 5.0DEG  
 Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
 Humidity:63%  
 Test Distance:8.300m [K=1.0000]  
 Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

|                                                                  |          |                        |
|------------------------------------------------------------------|----------|------------------------|
| Test:U:24.00V I:0.5721A P:13.73W PF:1.000 Lamp Flux:482.832x1 lm |          |                        |
| NAME: 8.02.019.0022 LLS-OP-W30C-L6-DMX                           | TYPE:LED | WEIGHT:                |
| DIM.:                                                            | SPEC.:   | SERIAL No.:20230600051 |
| 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         | 4.21 | 4.45 | 4.02 | 3.54 | 3.01 | 2.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -70         | 8.41 | 8.89 | 8.04 | 7.07 | 6.02 | 4.06 | 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         | 21.0 | 21.2 | 20.6 | 18.8 | 17.3 | 14.9 | 12.0 | 9.75 | 3.29 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -60         | 33.7 | 33.5 | 33.1 | 30.5 | 28.6 | 25.7 | 23.9 | 19.5 | 6.59 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -55         | 49.2 | 49.1 | 48.0 | 45.3 | 42.8 | 39.4 | 37.0 | 30.4 | 18.4 | 8.63 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -50         | 64.7 | 64.6 | 62.8 | 60.1 | 57.1 | 53.2 | 50.0 | 41.4 | 30.2 | 17.3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -45         | 81.1 | 81.3 | 80.5 | 78.5 | 75.6 | 68.4 | 59.5 | 51.1 | 42.8 | 28.1 | 9.72 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -40         | 97.4 | 98.1 | 98.1 | 97.0 | 94.2 | 83.7 | 69.1 | 60.9 | 55.3 | 39.0 | 19.4 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -35         | 139  | 139  | 138  | 136  | 132  | 122  | 102  | 81.6 | 70.8 | 57.7 | 32.3 | 6.57 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -30         | 181  | 180  | 178  | 175  | 169  | 160  | 136  | 102  | 86.3 | 76.5 | 45.1 | 13.1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -25         | 202  | 200  | 198  | 194  | 189  | 180  | 158  | 121  | 95.5 | 85.7 | 56.8 | 22.8 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -20         | 222  | 221  | 218  | 214  | 208  | 199  | 181  | 139  | 105  | 95.0 | 68.5 | 32.4 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -15         | 236  | 234  | 231  | 226  | 220  | 211  | 194  | 152  | 113  | 101  | 75.0 | 37.7 | 0.93 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -10         | 249  | 248  | 243  | 239  | 232  | 224  | 208  | 164  | 120  | 108  | 81.4 | 43.1 | 1.83 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| -5          | 251  | 250  | 245  | 240  | 234  | 226  | 211  | 169  | 123  | 108  | 80.0 | 41.4 | 1.51 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0           | 253  | 251  | 247  | 242  | 236  | 228  | 214  | 173  | 125  | 108  | 78.5 | 39.7 | 1.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5           | 252  | 251  | 246  | 241  | 235  | 226  | 212  | 171  | 123  | 103  | 73.4 | 34.9 | 0.59 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10          | 252  | 250  | 246  | 241  | 233  | 225  | 210  | 168  | 121  | 97.9 | 68.4 | 30.1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15          | 246  | 244  | 241  | 236  | 228  | 220  | 202  | 158  | 114  | 92.8 | 61.8 | 25.6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20          | 240  | 238  | 236  | 232  | 223  | 215  | 194  | 149  | 107  | 87.7 | 55.3 | 21.1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25          | 230  | 229  | 227  | 222  | 215  | 206  | 180  | 135  | 99.5 | 80.1 | 46.9 | 15.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30          | 221  | 220  | 217  | 213  | 206  | 197  | 167  | 121  | 92.1 | 72.6 | 38.5 | 8.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35          | 205  | 204  | 202  | 198  | 192  | 180  | 145  | 106  | 82.1 | 58.7 | 28.2 | 4.48 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40          | 189  | 189  | 186  | 183  | 178  | 162  | 124  | 90.1 | 72.1 | 44.9 | 17.9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45          | 163  | 162  | 160  | 157  | 151  | 129  | 97.6 | 73.9 | 54.8 | 30.1 | 8.96 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50          | 136  | 135  | 134  | 131  | 123  | 95.4 | 71.1 | 57.7 | 37.5 | 15.3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55          | 93.3 | 93.0 | 91.2 | 88.2 | 81.1 | 63.5 | 47.3 | 35.6 | 20.1 | 7.66 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60          | 51.1 | 50.8 | 48.5 | 45.1 | 38.9 | 31.6 | 23.5 | 13.5 | 2.81 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65          | 34.1 | 34.5 | 33.2 | 30.4 | 25.0 | 18.7 | 11.8 | 6.75 | 1.41 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70          | 17.2 | 18.2 | 17.9 | 15.6 | 11.1 | 5.71 | 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          | 8.58 | 9.08 | 8.95 | 7.81 | 5.56 | 2.86 | 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 |

$H(\beta)$  Range:-90 - 90DEG  
 $H(\beta)$  Interval: 1.0DEG  
 Test Speed: HIGH  
 Temperature:30.3DEG  
 Operators:QC1  
 Test Date:2023-06-20

$V(\beta)$  Range:-80 - 80DEG  
 $V(\beta)$  Interval: 5.0DEG  
 Test System:EVERFINE G0-2000B\_V1 SYSTEM V2.0.275  
 Humidity:63%  
 Test Distance:8.300m [K=1.0000]  
 Remarks: