

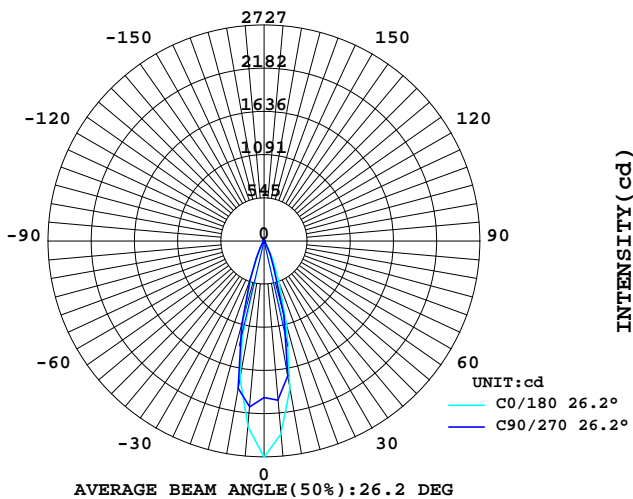
## LUMINAIRE PHOTOMETRIC TEST REPORT

Report number: EL-RP20210721-4

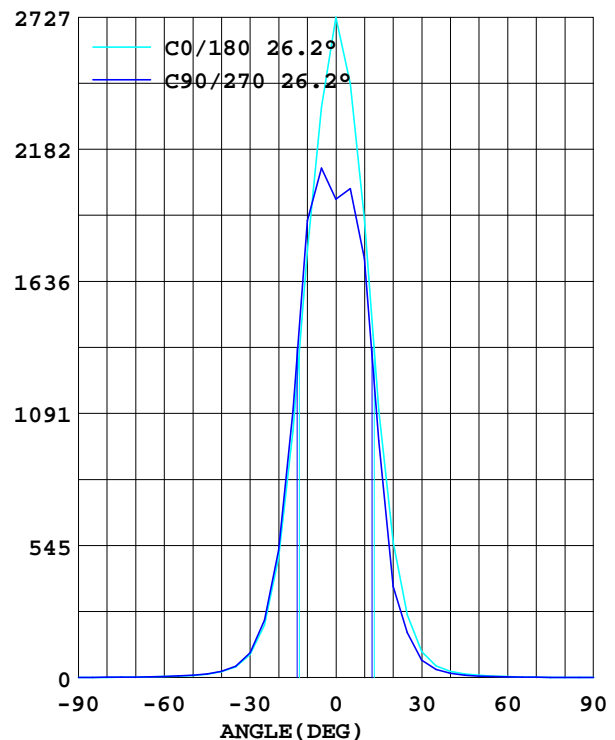
|   |                    |                |
|---|--------------------|----------------|
| MANUFACTURER: Environmental Lights                              |                    |                |
| Address: 11235 West Bernardo Court Suite 102 San Diego CA U.S.A |                    |                |
| NAME: 5PCS 18W 6 IN 1   | TYPE: 18W RGBWA/UV | WEIGHT:        |
| SPECIFICATION: 5PCS 18W 6 IN 1 ONLY RGB ON                      | DIMENSION:         | SERIAL No.: 01 |

|                  |            |                    |        |                  |       |
|------------------|------------|--------------------|--------|------------------|-------|
| DATA OF LAMP     |            | Imax(cd)           | 2753   | S/MH(C0/180)     | 0.43  |
| MODEL            | 18W 6 IN 1 | EFFICIENCY(%)      | 100.0  | S/MH(C90/270)    | 0.50  |
| NOMINAL POWER(W) | 0          | TOTAL FLUX(lm)     | 698.65 | Voltage(V)       | 0     |
| RATED VOLTAGE(V) | AC110      | EFFICIENCY(lm/W)   |        | Current(A)       | 0     |
| NOMINAL FLUX(lm) | 698.7      | $\eta$ up(%)       | 3.8    | Power(W)         | 0     |
| LAMPS QUANTITY   | 1          | $\eta$ down(%)     | 96.2   | Power Factor(PF) | 0     |
| TEST VOLTAGE(V)  | 0.0        | Effective Flux(lm) | 570.1  | EEI              | 0.000 |

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



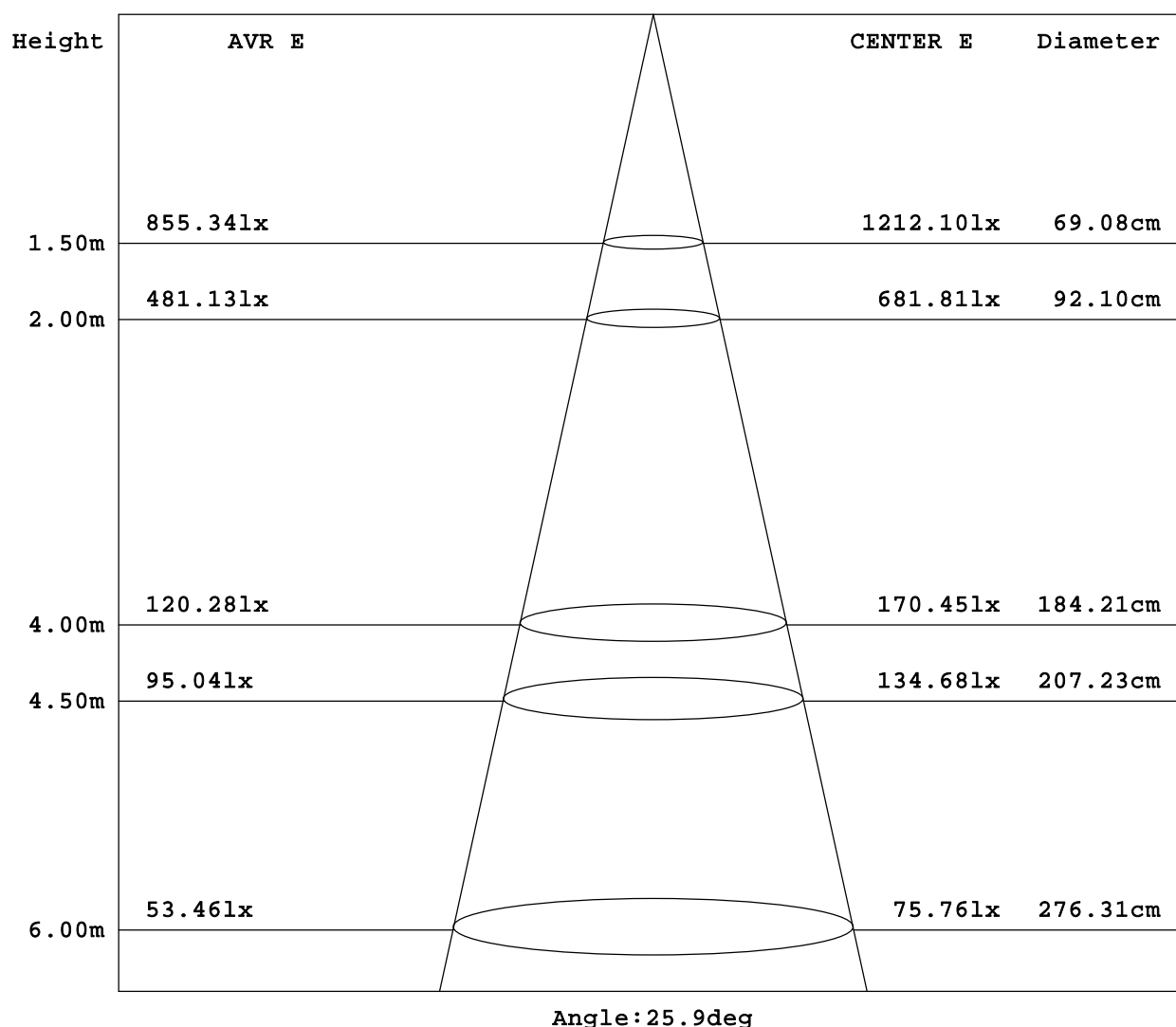
Test System:HOP00 HPG1800  
Temperature:25.3DEG  
Operators:RD  
Test Date:07-21-2021

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.000 m  
Remarks: 5PCS 18W 6 IN 1 ONLY RGB ON

# AVERAGE AND CENTER E Figure

Report number: EL-RP20210721-4

|   |                    |                |
|---|--------------------|----------------|
| MANUFACTURER: Environmental Lights                              |                    |                |
| Address: 11235 West Bernardo Court Suite 102 San Diego CA U.S.A |                    |                |
| NAME: 5PCS 18W 6 IN 1   | TYPE: 18W RGBWA/UV | WEIGHT:        |
| SPECIFICATION: 5PCS 18W 6 IN 1 ONLY RGB ON                      | DIMENSION:         | SERIAL No.: 01 |



Test System:HOP00 HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:07-21-2021

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 5PCS 18W 6 IN 1 ONLY RGB ON

## ZONAL FLUX DIAGRAM

Report number: EL-RP20210721-4

|   |                    |                |
|---|--------------------|----------------|
| MANUFACTURER: Environmental Lights                              |                    |                |
| Address: 11235 West Bernardo Court Suite 102 San Diego CA U.S.A |                    |                |
| NAME: 5PCS 18W 6 IN 1   | TYPE: 18W RGBWA/UV | WEIGHT:        |
| SPECIFICATION: 5PCS 18W 6 IN 1 ONLY RGB ON                      | DIMENSION:         | SERIAL No.: 01 |

| $\gamma$ | C0                    | C45   | C90   | C135  | C180  | C225  | C270  | C315  | $\gamma$ | zone    | total |
|----------|-----------------------|-------|-------|-------|-------|-------|-------|-------|----------|---------|-------|
| 10.0     | 1763                  | 1711  | 1888  | 2054  | 1895  | 1953  | 1731  | 1415  | 0- 10    | 203.8   | 203.8 |
| 20.0     | 493.8                 | 440.5 | 526.0 | 701.5 | 560.3 | 495.0 | 376.5 | 336.1 | 10- 20   | 297.1   | 501.0 |
| 30.0     | 95.80                 | 93.24 | 101.9 | 146.8 | 107.9 | 105.3 | 72.63 | 59.13 | 20- 30   | 116.4   | 617.4 |
| 40.0     | 23.93                 | 21.31 | 26.17 | 31.23 | 25.66 | 23.87 | 17.34 | 18.55 | 30- 40   | 32.26   | 649.7 |
| 50.0     | 8.704                 | 7.360 | 10.04 | 10.56 | 9.344 | 8.256 | 6.016 | 7.744 | 40- 50   | 11.31   | 661.0 |
| 60.0     | 4.800                 | 3.840 | 4.928 | 5.504 | 4.224 | 4.288 | 2.944 | 3.904 | 50- 60   | 5.538   | 666.6 |
| 70.0     | 2.496                 | 1.600 | 2.496 | 2.880 | 1.536 | 1.920 | 1.408 | 1.792 | 60- 70   | 3.061   | 669.6 |
| 80.0     | 1.216                 | 0.768 | 1.344 | 1.664 | 0.512 | 0.960 | 0.512 | 0.832 | 70- 80   | 1.507   | 671.1 |
| 90.0     | 1.024                 | 0.704 | 1.216 | 1.216 | 0.448 | 0.704 | 0.384 | 0.640 | 80- 90   | 0.910   | 672.0 |
| 100.0    | 0.960                 | 0.832 | 1.152 | 2.112 | 0.512 | 0.704 | 0.384 | 0.640 | 90-100   | 0.919   | 673.0 |
| 110.0    | 1.216                 | 1.216 | 1.344 | 11.20 | 0.512 | 0.576 | 0.512 | 0.704 | 100-110  | 1.396   | 674.4 |
| 120.0    | 3.072                 | 3.264 | 2.752 | 1.728 | 0.640 | 0.896 | 0.896 | 1.024 | 110-120  | 2.814   | 677.2 |
| 130.0    | 8.896                 | 7.296 | 8.192 | 1.472 | 0.768 | 1.600 | 1.856 | 2.240 | 120-130  | 2.568   | 679.7 |
| 140.0    | 15.80                 | 10.04 | 29.69 | 14.78 | 1.344 | 3.520 | 3.968 | 4.544 | 130-140  | 5.727   | 685.5 |
| 150.0    | 15.48                 | 15.87 | 15.36 | 3.456 | 1.984 | 6.016 | 6.272 | 6.656 | 140-150  | 6.077   | 691.6 |
| 160.0    | 10.62                 | 10.49 | 8.896 | 23.29 | 2.304 | 7.232 | 7.168 | 7.168 | 150-160  | 4.091   | 695.6 |
| 170.0    | 7.680                 | 4.480 | 7.488 | 14.27 | 2.176 | 6.720 | 6.720 | 6.272 | 160-170  | 2.334   | 698.0 |
| 180.0    | 6.592                 | 6.208 | 8.384 | 7.872 | 2.112 | 6.208 | 6.528 | 6.208 | 170-180  | 0.630   | 698.6 |
| DEG      | LUMINOUS INTENSITY:cd |       |       |       |       |       |       |       |          | UNIT:lm |       |

Test System:HOP00 HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:07-21-2021

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 5PCS 18W 6 IN 1 ONLY RGB ON

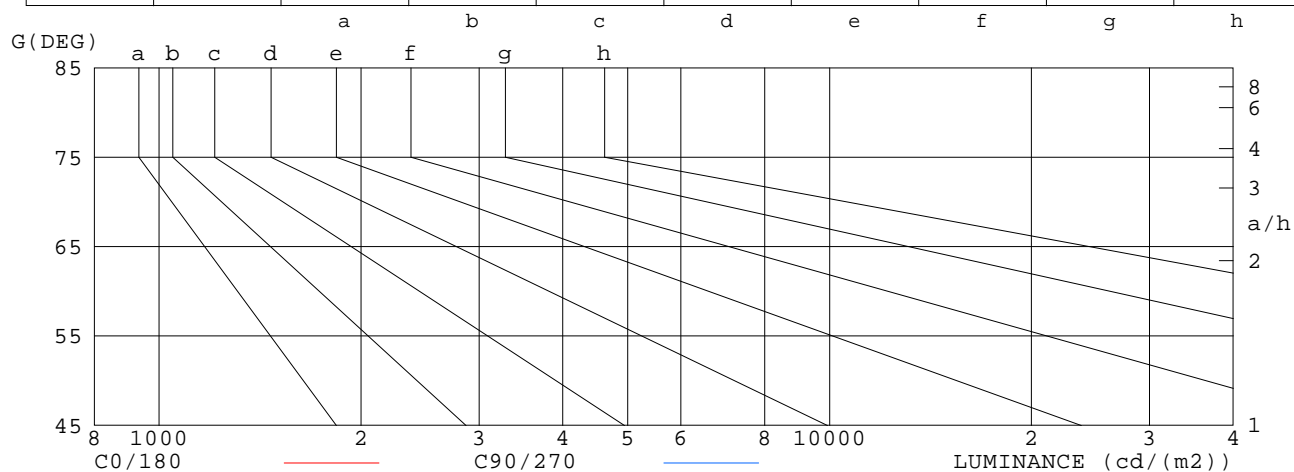
## LUMINANCE LIMITATION CURVES

Report number: EL-RP20210721-4

|   |                    |                |
|---|--------------------|----------------|
| MANUFACTURER: Environmental Lights                              |                    |                |
| Address: 11235 West Bernardo Court Suite 102 San Diego CA U.S.A |                    |                |
| NAME: 5PCS 18W 6 IN 1   | TYPE: 18W RGBWA/UV | WEIGHT:        |
| SPECIFICATION: 5PCS 18W 6 IN 1 ONLY RGB ON                      | DIMENSION:         | SERIAL No.: 01 |

## LUMINANCE LIMITATION CURVES

| GLARE | CLASS | ILLUMINANCE (lx) |      |      |       |       |       |       |       |
|-------|-------|------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A     | 2000             | 1000 | 500  | <=300 |       |       |       |       |
| 1.50  | B     |                  | 2000 | 1000 | 500   | <=300 |       |       |       |
| 1.85  | C     |                  |      | 2000 | 1000  | 500   | <=300 |       |       |
| 2.20  | D     |                  |      |      | 2000  | 1000  | 500   | <=300 |       |
| 2.55  | E     |                  |      |      |       | 2000  | 1000  | 500   | <=300 |



| LUMINANCE cd/m2 |        |         |
|-----------------|--------|---------|
| G (DEG)         | C0/180 | C90/270 |
| 85              | 125    | 140     |
| 80              | 70     | 77      |
| 75              | 64     | 67      |
| 70              | 73     | 73      |
| 65              | 85     | 82      |
| 60              | 96     | 99      |
| 55              | 109    | 125     |
| 50              | 135    | 156     |
| 45              | 196    | 223     |

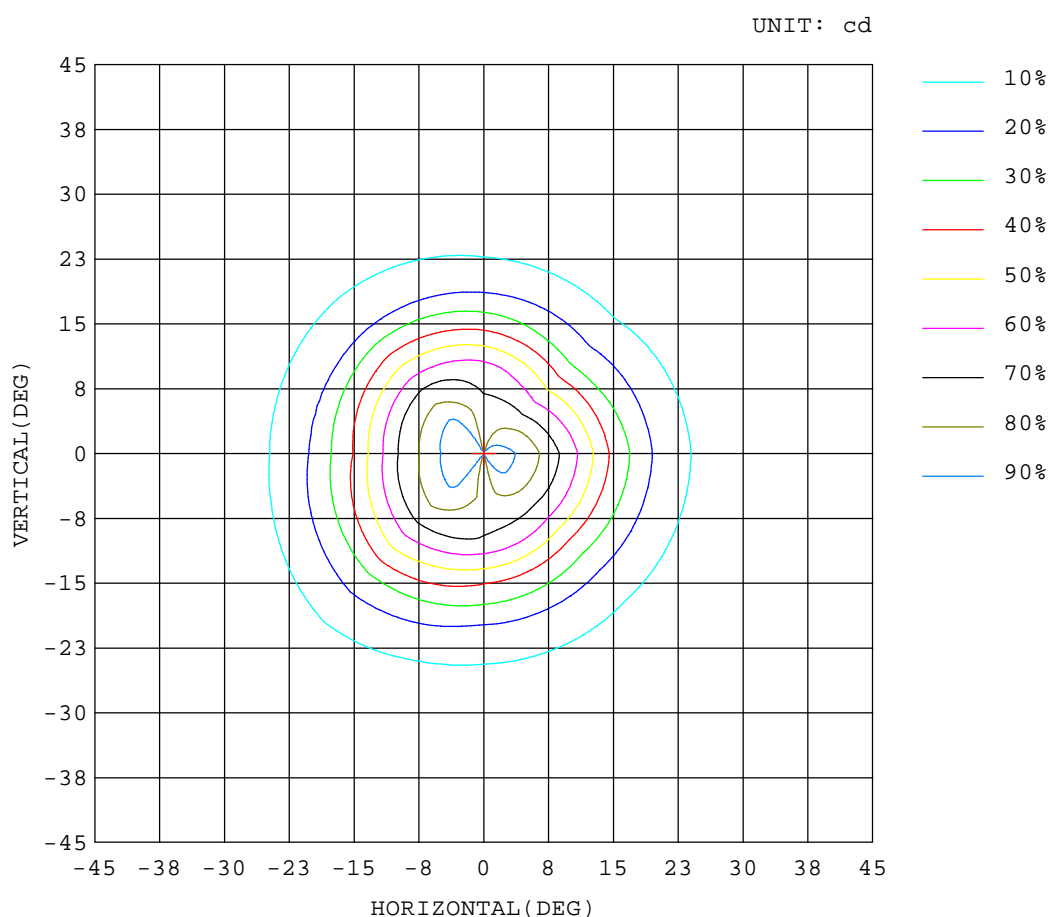
Test System:HOP00 HPG1800  
Temperature:25.3DEG  
Operators:RD  
Test Date:07-21-2021

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.000 m  
Remarks: 5PCS 18W 6 IN 1 ONLY RGB ON

# ISOCANDELA DIAGRAM

Report number: EL-RP20210721-4

|   |                    |                |
|---|--------------------|----------------|
| MANUFACTURER: Environmental Lights                              |                    |                |
| Address: 11235 West Bernardo Court Suite 102 San Diego CA U.S.A |                    |                |
| NAME: 5PCS 18W 6 IN 1   | TYPE: 18W RGBWA/UV | WEIGHT:        |
| SPECIFICATION: 5PCS 18W 6 IN 1 ONLY RGB ON                      | DIMENSION:         | SERIAL No.: 01 |



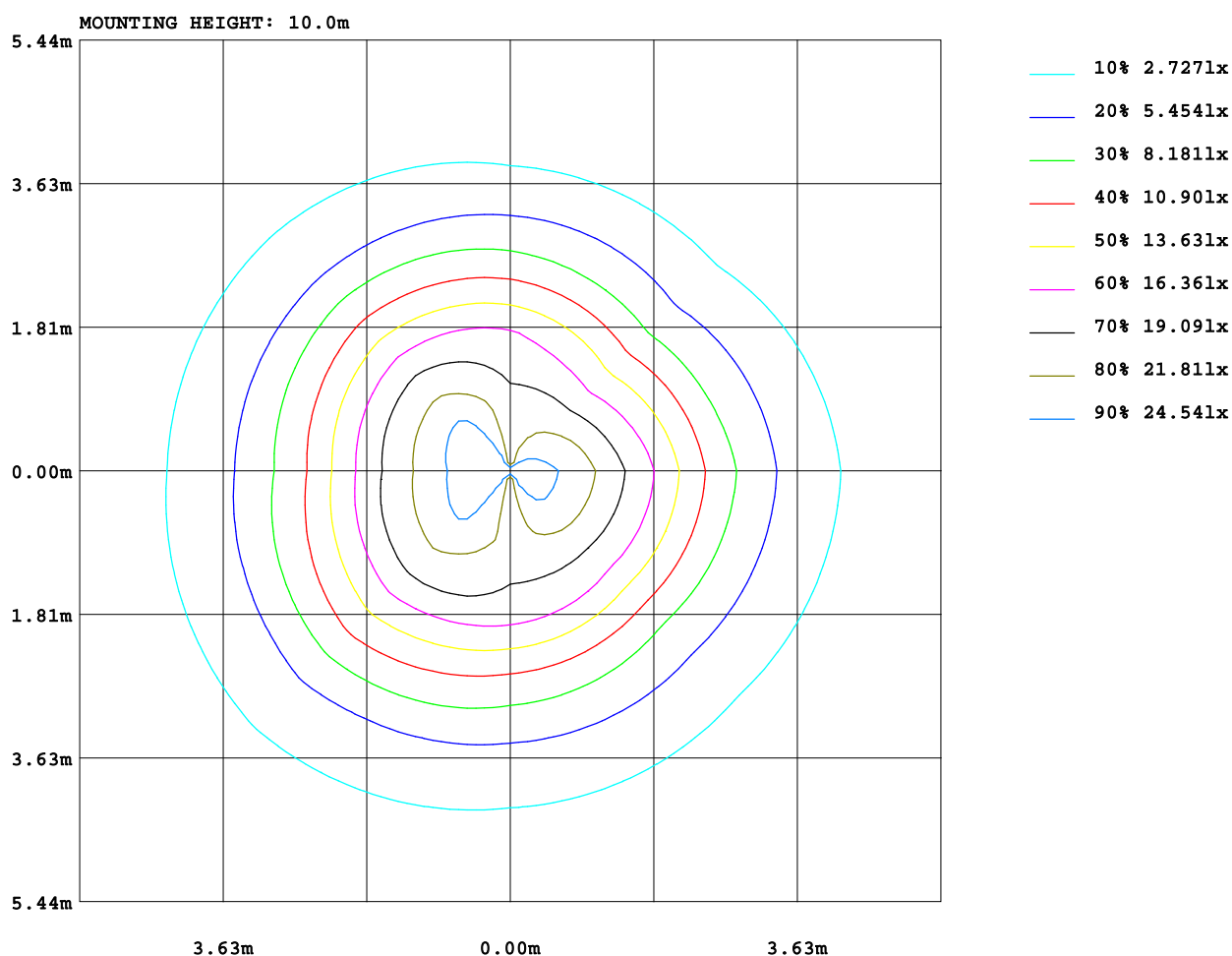
Test System:HOP00 HPG1800  
Temperature:25.3DEG  
Operators:RD  
Test Date:07-21-2021

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.000 m  
Remarks: 5PCS 18W 6 IN 1 ONLY RGB ON

# ISOLUX DIAGRAM

Report number: EL-RP20210721-4

|   |                    |                |
|---|--------------------|----------------|
| MANUFACTURER: Environmental Lights                              |                    |                |
| Address: 11235 West Bernardo Court Suite 102 San Diego CA U.S.A |                    |                |
| NAME: 5PCS 18W 6 IN 1   | TYPE: 18W RGBWA/UV | WEIGHT:        |
| SPECIFICATION: 5PCS 18W 6 IN 1 ONLY RGB ON                      | DIMENSION:         | SERIAL No.: 01 |



Test System:HOP00 HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:07-21-2021

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 5PCS 18W 6 IN 1 ONLY RGB ON

## AREA LUMINOUS FLUX

Report number: EL-RP20210721-4

|   |                    |                |
|---|--------------------|----------------|
| MANUFACTURER: Environmental Lights                              |                    |                |
| Address: 11235 West Bernardo Court Suite 102 San Diego CA U.S.A |                    |                |
| NAME: 5PCS 18W 6 IN 1   | TYPE: 18W RGBWA/UV | WEIGHT:        |
| SPECIFICATION: 5PCS 18W 6 IN 1 ONLY RGB ON                      | DIMENSION:         | SERIAL No.: 01 |

| VERTICAL (DEG) | AREA FLUX DIAGRAM |      |      |      |      |      |      |      |                  |      |      |      |      |      |      |      |      |      | UNIT:lm |      | Φ t | Φ a |
|----------------|-------------------|------|------|------|------|------|------|------|------------------|------|------|------|------|------|------|------|------|------|---------|------|-----|-----|
|                | 0.03              | 0.04 | 0.05 | 0.06 | 0.07 | 0.09 | 0.10 | 0.10 | 0.11             | 0.10 | 0.10 | 0.09 | 0.08 | 0.07 | 0.05 | 0.05 | 0.04 | 0.03 | 1.23    | 0.00 |     |     |
| 45             |                   |      |      |      |      |      |      |      |                  |      |      |      |      |      |      |      |      |      |         |      |     |     |
| 40             | 0.04              | 0.05 | 0.07 | 0.09 | 0.12 | 0.15 | 0.18 | 0.20 | 0.20             | 0.19 | 0.18 | 0.15 | 0.12 | 0.10 | 0.08 | 0.06 | 0.05 | 0.03 | 2.03    | 0.00 |     |     |
| 35             | 0.04              | 0.06 | 0.09 | 0.14 | 0.20 | 0.27 | 0.35 | 0.40 | 0.42             | 0.39 | 0.35 | 0.28 | 0.21 | 0.15 | 0.11 | 0.08 | 0.06 | 0.04 | 3.64    | 0.00 |     |     |
| 30             | 0.05              | 0.08 | 0.14 | 0.22 | 0.35 | 0.54 | 0.74 | 0.93 | 1.00             | 0.93 | 0.76 | 0.54 | 0.36 | 0.24 | 0.17 | 0.11 | 0.07 | 0.05 | 7.27    | 0.00 |     |     |
| 25             | 0.07              | 0.11 | 0.19 | 0.35 | 0.64 | 1.08 | 1.59 | 2.03 | 2.18             | 2.04 | 1.65 | 1.12 | 0.66 | 0.38 | 0.25 | 0.16 | 0.10 | 0.06 | 14.6    | 4.60 |     |     |
| 20             | 0.08              | 0.14 | 0.27 | 0.54 | 1.09 | 1.98 | 3.07 | 4.39 | 5.17             | 4.75 | 3.49 | 2.18 | 1.24 | 0.69 | 0.38 | 0.21 | 0.12 | 0.07 | 29.9    | 23.2 |     |     |
| 15             | 0.09              | 0.18 | 0.36 | 0.79 | 1.69 | 3.22 | 6.08 | 9.01 | 10.3             | 9.40 | 6.64 | 3.99 | 2.29 | 1.17 | 0.57 | 0.29 | 0.15 | 0.09 | 56.4    | 51.1 |     |     |
|                | 0.11              | 0.20 | 0.44 | 1.04 | 2.32 | 4.81 | 9.18 | 13.7 | 15.0             | 13.5 | 10.2 | 6.69 | 3.72 | 1.79 | 0.81 | 0.37 | 0.18 | 0.10 | 84.3    | 79.7 |     |     |
|                | 0.11              | 0.22 | 0.49 | 1.20 | 2.77 | 5.88 | 10.9 | 16.1 | 18.5             | 16.7 | 14.0 | 9.41 | 5.05 | 2.33 | 1.00 | 0.43 | 0.20 | 0.10 | 106     | 101  |     |     |
|                | 0.11              | 0.23 | 0.51 | 1.25 | 2.91 | 6.13 | 11.2 | 16.3 | 18.4             | 17.8 | 14.9 | 9.87 | 5.24 | 2.40 | 1.03 | 0.44 | 0.20 | 0.10 | 109     | 105  |     |     |
|                | 0.11              | 0.22 | 0.48 | 1.16 | 2.66 | 5.53 | 10.0 | 14.5 | 15.8             | 14.9 | 12.1 | 7.76 | 4.18 | 1.99 | 0.89 | 0.40 | 0.19 | 0.10 | 93.1    | 88.5 |     |     |
| -15            | 0.10              | 0.20 | 0.41 | 0.93 | 2.07 | 4.17 | 7.47 | 10.2 | 11.4             | 10.6 | 8.06 | 5.07 | 2.81 | 1.41 | 0.68 | 0.32 | 0.16 | 0.09 | 66.3    | 61.3 |     |     |
| -20            | 0.09              | 0.16 | 0.31 | 0.68 | 1.42 | 2.69 | 4.26 | 5.68 | 6.30             | 5.82 | 4.49 | 2.90 | 1.67 | 0.93 | 0.48 | 0.24 | 0.13 | 0.07 | 38.3    | 32.5 |     |     |
| -25            | 0.08              | 0.13 | 0.23 | 0.44 | 0.86 | 1.49 | 2.16 | 2.76 | 2.97             | 2.76 | 2.22 | 1.53 | 0.97 | 0.56 | 0.30 | 0.17 | 0.10 | 0.06 | 19.8    | 10.7 |     |     |
| -30            | 0.06              | 0.10 | 0.17 | 0.28 | 0.47 | 0.74 | 1.02 | 1.25 | 1.32             | 1.24 | 1.04 | 0.77 | 0.52 | 0.31 | 0.19 | 0.12 | 0.08 | 0.05 | 9.75    | 0.00 |     |     |
| -35            | 0.05              | 0.08 | 0.12 | 0.18 | 0.26 | 0.36 | 0.47 | 0.56 | 0.58             | 0.55 | 0.48 | 0.37 | 0.27 | 0.19 | 0.13 | 0.08 | 0.06 | 0.04 | 4.83    | 0.00 |     |     |
| -40            | 0.04              | 0.06 | 0.09 | 0.12 | 0.16 | 0.20 | 0.24 | 0.27 | 0.28             | 0.27 | 0.24 | 0.20 | 0.16 | 0.12 | 0.08 | 0.06 | 0.04 | 0.03 | 2.68    | 0.00 |     |     |
| -45            | 0.04              | 0.05 | 0.06 | 0.08 | 0.10 | 0.12 | 0.14 | 0.16 | 0.16             | 0.16 | 0.14 | 0.12 | 0.10 | 0.08 | 0.06 | 0.04 | 0.03 | 0.03 | 1.66    | 0.00 |     |     |
|                | -45               | -40  | -35  | -30  | -25  | -20  | -15  | -10  | HORIZONTAL (DEG) |      |      |      | 10   | 15   | 20   | 25   | 30   | 35   | 40      | 45   |     |     |
| Φ t            | 1.31              | 2.31 | 4.48 | 9.56 | 20.2 | 39.4 | 69.2 | 98.7 | 110              | 102  | 81.3 | 53.0 | 29.6 | 14.9 | 7.24 | 3.62 | 1.96 | 1.14 | 699     |      |     |     |
| Φ a            | 0.00              | 0.00 | 0.00 | 0.00 | 11.8 | 33.3 | 63.9 | 93.6 | 105              | 97.1 | 76.1 | 47.3 | 23.4 | 6.21 | 0.00 | 0.00 | 0.00 | 0.00 |         | 570  |     |     |

Test System:HOP00 HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:07-21-2021

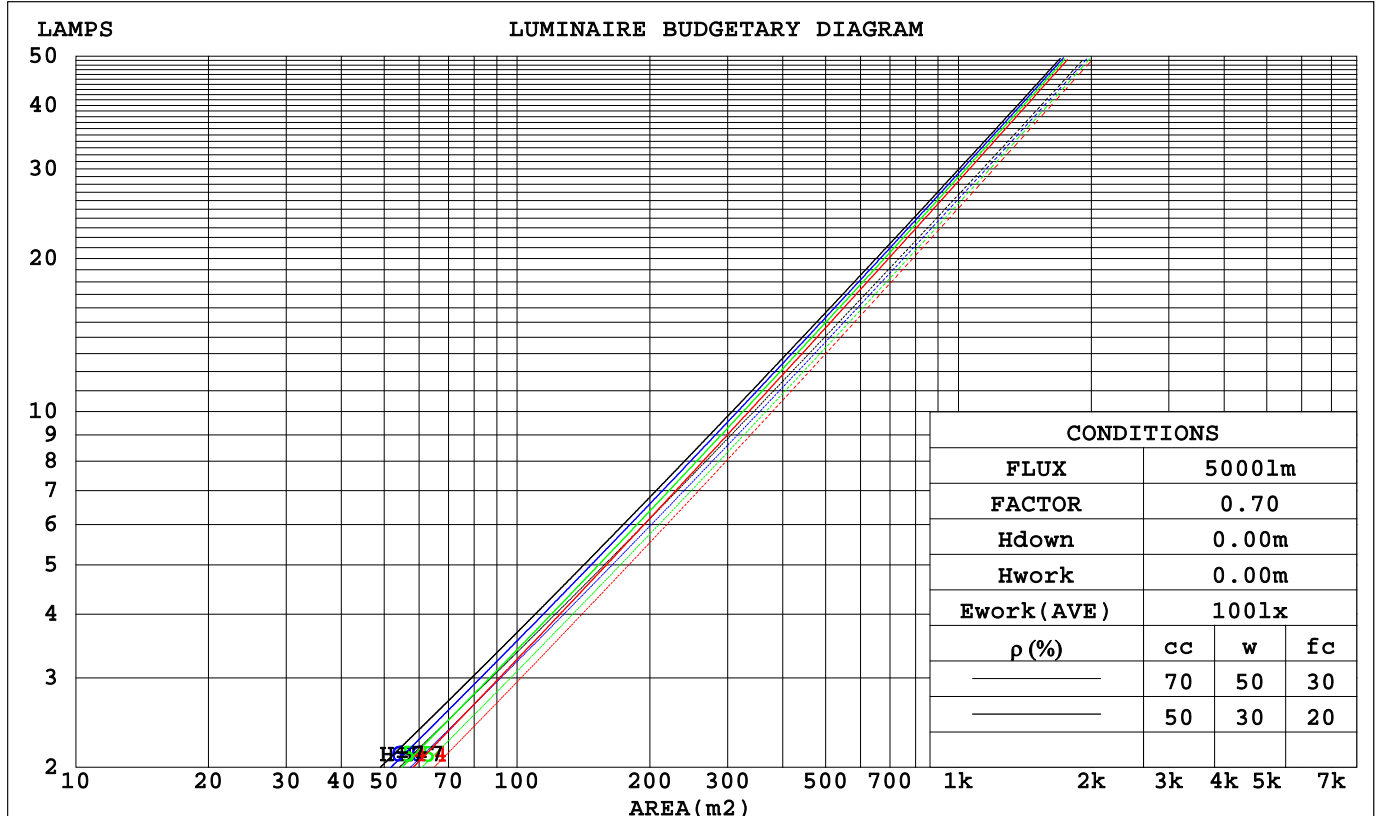
Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 5PCS 18W 6 IN 1 ONLY RGB ON

# CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number: EL-RP20210721-4

|   |                    |                |
|---|--------------------|----------------|
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| Address: 11235 West Bernardo Court Suite 102 San Diego CA U.S.A |                    |                |
| NAME: 5PCS 18W 6 IN 1   | TYPE: 18W RGBWA/UV | WEIGHT:        |
| SPECIFICATION: 5PCS 18W 6 IN 1 ONLY RGB ON                      | DIMENSION:         | SERIAL No.: 01 |

| 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 |      |      | Coefficients of Utilization(CU) |      |      |      |      |      |      |      |      |     |     |     |     |
| 0.0  | 1.18                  | 1.18 | 1.18 | 1.15                            | 1.15 | 1.15 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | .99 | .99 | .99 | .96 |
| 1.0  | 1.11                  | 1.09 | 1.07 | 1.09                            | 1.07 | 1.05 | 1.04 | 1.03 | 1.01 | .90  | .99  | .98  | .96 | .95 | .94 | .92 |
| 2.0  | 1.05                  | 1.02 | .99  | 1.03                            | 1.00 | .98  | .90  | .97  | .95  | .96  | .94  | .93  | .93 | .91 | .90 | .89 |
| 3.0  | 1.00                  | .96  | .93  | .99                             | .95  | .92  | .96  | .93  | .90  | .93  | .90  | .88  | .90 | .88 | .87 | .85 |
| 4.0  | .96                   | .91  | .88  | .94                             | .90  | .87  | .92  | .89  | .86  | .90  | .87  | .85  | .87 | .85 | .83 | .82 |
| 5.0  | .92                   | .87  | .84  | .91                             | .86  | .83  | .88  | .85  | .82  | .87  | .84  | .81  | .85 | .82 | .80 | .79 |
| 6.0  | .88                   | .83  | .80  | .87                             | .83  | .80  | .85  | .82  | .79  | .84  | .81  | .78  | .82 | .80 | .77 | .76 |
| 7.0  | .85                   | .80  | .77  | .84                             | .80  | .77  | .82  | .79  | .76  | .81  | .78  | .75  | .80 | .77 | .75 | .74 |
| 8.0  | .82                   | .77  | .74  | .81                             | .77  | .74  | .80  | .76  | .73  | .79  | .75  | .73  | .78 | .75 | .72 | .71 |
| 9.0  | .79                   | .75  | .72  | .78                             | .74  | .71  | .77  | .74  | .71  | .76  | .73  | .71  | .75 | .72 | .70 | .69 |
| 10.0 | .76                   | .72  | .69  | .76                             | .72  | .69  | .75  | .71  | .69  | .74  | .71  | .68  | .73 | .70 | .68 | .67 |



Test System:HOP00 HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:07-21-2021

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 5PCS 18W 6 IN 1 ONLY RGB ON



## WEC AND CCEC

Report number: EL-RP20210721-4

|   |                    |                |
|---|--------------------|----------------|
| MANUFACTURER: Environmental Lights                              |                    |                |
| Address: 11235 West Bernardo Court Suite 102 San Diego CA U.S.A |                    |                |
| NAME: 5PCS 18W 6 IN 1   | TYPE: 18W RGBWA/UV | WEIGHT:        |
| SPECIFICATION: 5PCS 18W 6 IN 1 ONLY RGB ON                      | DIMENSION:         | SERIAL No.: 01 |

| $\rho_{cc}$ | 80%                   |      |      | 70%  |      |      | 50%  |      |      | 30%  |      |      | 10%  |      |      | 0                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| $\rho_w$    | 50%                   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\rho_{fc}$ | 20%                   |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 0                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RCR         | RCR:Room Cavity Ratio |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Wall Exitance Coefficients(WEC) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0.0         |                       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.0         | .151                  | .086 | .027 | .143 | .081 | .026 | .128 | .074 | .023 | .115 | .066 | .021 | .102 | .059 | .019 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.0         | .140                  | .077 | .024 | .133 | .073 | .023 | .121 | .067 | .021 | .110 | .061 | .019 | .099 | .056 | .018 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.0         | .130                  | .069 | .021 | .125 | .067 | .020 | .114 | .062 | .019 | .105 | .057 | .018 | .096 | .053 | .016 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.0         | .122                  | .064 | .019 | .118 | .061 | .018 | .108 | .057 | .017 | .100 | .054 | .016 | .092 | .050 | .015 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5.0         | .115                  | .059 | .017 | .111 | .057 | .017 | .103 | .054 | .016 | .096 | .051 | .015 | .089 | .047 | .014 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.0         | .109                  | .055 | .016 | .105 | .053 | .015 | .098 | .050 | .015 | .092 | .048 | .014 | .086 | .045 | .013 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.0         | .103                  | .051 | .014 | .100 | .050 | .014 | .094 | .048 | .014 | .088 | .045 | .013 | .083 | .043 | .013 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8.0         | .098                  | .048 | .014 | .096 | .047 | .013 | .090 | .045 | .013 | .085 | .043 | .012 | .080 | .041 | .012 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 9.0         | .094                  | .045 | .013 | .091 | .045 | .013 | .086 | .043 | .012 | .082 | .041 | .012 | .077 | .039 | .011 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10.0        | .090                  | .043 | .012 | .088 | .042 | .012 | .083 | .041 | .011 | .079 | .039 | .011 | .075 | .038 | .011 |                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

| $\rho_{cc}$ | 80%   |      |      | 70%  |      |      | 50%  |      |      | 30%  |      |      | 10%  |      |      | 0 |
|-------------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
| $\rho_w$    | 50%   | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 50%  | 30%  | 10%  | 0 |
| $\rho_{fc}$ | 20%   |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 20%  |      |      | 0 |
| RCR         | RCR:Room Cavity Ratio                      Ceiling Cavity Exitance Coefficients(CCEC) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |
| 0.0         | .219  | .219 | .219 | .188 | .188 | .188 | .128 | .128 | .128 | .074 | .074 | .074 | .024 | .024 | .024 |   |
| 1.0         | .198  | .187 | .176 | .170 | .160 | .152 | .116 | .110 | .105 | .067 | .064 | .061 | .021 | .021 | .020 |   |
| 2.0         | .181  | .162 | .146 | .155 | .139 | .126 | .106 | .097 | .088 | .061 | .056 | .052 | .020 | .018 | .017 |   |
| 3.0         | .167  | .143 | .124 | .143 | .123 | .107 | .098 | .086 | .075 | .057 | .050 | .044 | .018 | .016 | .015 |   |
| 4.0         | .155  | .128 | .107 | .133 | .110 | .093 | .092 | .077 | .065 | .053 | .045 | .039 | .017 | .015 | .013 |   |
| 5.0         | .145  | .116 | .094 | .125 | .100 | .082 | .086 | .070 | .058 | .050 | .041 | .034 | .016 | .013 | .011 |   |
| 6.0         | .137  | .106 | .084 | .117 | .092 | .073 | .081 | .064 | .052 | .047 | .038 | .031 | .015 | .012 | .010 |   |
| 7.0         | .129  | .098 | .076 | .111 | .085 | .066 | .077 | .060 | .047 | .045 | .035 | .028 | .014 | .011 | .009 |   |
| 8.0         | .123  | .091 | .070 | .106 | .079 | .061 | .073 | .056 | .043 | .043 | .033 | .026 | .014 | .011 | .009 |   |
| 9.0         | .117  | .086 | .065 | .101 | .075 | .056 | .070 | .052 | .040 | .041 | .031 | .024 | .013 | .010 | .008 |   |
| 10.0        | .113  | .081 | .061 | .097 | .071 | .053 | .067 | .050 | .038 | .039 | .029 | .022 | .013 | .010 | .007 |   |

Test System:HOP00 HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:07-21-2021

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 5PCS 18W 6 IN 1 ONLY RGB ON

## Uncorrected UGR Table

Report number: EL-RP20210721-4

|   |                  |      |      |      |                    |                |      |                |      |      |
|---|------------------|------|------|------|--------------------|----------------|------|----------------|------|------|
| MANUFACTURER: Environmental Lights                              |                  |      |      |      |                    |                |      |                |      |      |
| Address: 11235 West Bernardo Court Suite 102 San Diego CA U.S.A |                  |      |      |      |                    |                |      |                |      |      |
| NAME: 5PCS 18W 6 IN 1   |                  |      |      |      | TYPE: 18W RGBWA/UV |                |      | WEIGHT:        |      |      |
| SPECIFICATION: 5PCS 18W 6 IN 1 ONLY RGB ON                      |                  |      |      |      | DIMENSION:         |                |      | SERIAL No.: 01 |      |      |
| 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   | -3.2             | -2.5 | -3.0 | -2.3 | -2.1               | -2.9           | -2.2 | -2.7           | -2.0 | -1.8 |
| 3H  | -2.9             | -2.2 | -2.6 | -2.0 | -1.7               | -2.6           | -1.9 | -2.3           | -1.7 | -1.4 |
| 4H  | -2.7             | -2.1 | -2.4 | -1.8 | -1.5               | -2.4           | -1.8 | -2.1           | -1.6 | -1.3 |
| 6H  | -2.5             | -2.0 | -2.2 | -1.7 | -1.3               | -2.3           | -1.7 | -1.9           | -1.4 | -1.1 |
| 8H  | -2.4             | -1.8 | -2.0 | -1.5 | -1.2               | -2.1           | -1.5 | -1.7           | -1.2 | -0.9 |
| 12H   | -2.2             | -1.6 | -1.8 | -1.3 | -1.0               | -1.8           | -1.3 | -1.5           | -1.0 | -0.6 |
| 4H 2H   | -3.2             | -2.6 | -2.9 | -2.3 | -2.1               | -2.9           | -2.3 | -2.6           | -2.0 | -1.8 |
| 3H  | -2.8             | -2.2 | -2.4 | -1.9 | -1.6               | -2.5           | -2.0 | -2.2           | -1.7 | -1.3 |
| 4H  | -2.6             | -2.1 | -2.2 | -1.7 | -1.3               | -2.3           | -1.8 | -1.9           | -1.5 | -1.1 |
| 6H  | -2.3             | -1.9 | -1.9 | -1.5 | -1.0               | -2.0           | -1.6 | -1.6           | -1.2 | -0.8 |
| 8H  | -2.1             | -1.7 | -1.6 | -1.3 | -0.8               | -1.8           | -1.4 | -1.3           | -1.0 | -0.5 |
| 12H   | -1.7             | -1.3 | -1.2 | -0.9 | -0.4               | -1.4           | -1.0 | -0.9           | -0.6 | -0.1 |
| 8H 4H   | -2.6             | -2.2 | -2.2 | -1.8 | -1.4               | -2.4           | -2.0 | -1.9           | -1.6 | -1.1 |
| 6H  | -2.3             | -1.9 | -1.8 | -1.5 | -1.0               | -2.0           | -1.7 | -1.5           | -1.2 | -0.7 |
| 8H  | -1.9             | -1.6 | -1.4 | -1.2 | -0.6               | -1.7           | -1.4 | -1.1           | -0.9 | -0.4 |
| 12H   | -1.4             | -1.1 | -0.8 | -0.6 | -0.1               | -1.0           | -0.8 | -0.5           | -0.3 | 0.3  |
| 12H 4H  | -2.6             | -2.3 | -2.2 | -1.8 | -1.4               | -2.4           | -2.1 | -2.0           | -1.6 | -1.2 |
| 6H  | -2.3             | -2.0 | -1.8 | -1.5 | -1.0               | -2.0           | -1.7 | -1.5           | -1.2 | -0.7 |
| 8H  | -1.9             | -1.6 | -1.4 | -1.1 | -0.6               | -1.6           | -1.4 | -1.1           | -0.9 | -0.3 |
| Variations with the observer position at spacings:              |                  |      |      |      |                    |                |      |                |      |      |
| S = 1.0H  | + 1.2 / - 1.1    |      |      |      |                    | + 1.2 / - 1.2  |      |                |      |      |
| 1.5H  | + 2.3 / - 1.1    |      |      |      |                    | + 2.4 / - 1.4  |      |                |      |      |
| 2.0H  | + 2.1 / - 0.9    |      |      |      |                    | + 2.4 / - 1.0  |      |                |      |      |

CIE Pub.117 Corrected 698.6 lm Total Lamp Luminous Flux.(8log(F/F0) = -1.2)

Test System:HOP00 HPG1800  
Temperature:25.3DEG  
Operators:RD  
Test Date:07-21-2021

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.000 m  
Remarks: 5PCS 18W 6 IN 1 ONLY RGB ON

## UTILIZATION FACTORS TABLE

Report number: EL-RP20210721-4

|   |                    |                |
|---|--------------------|----------------|
| MANUFACTURER: Environmental Lights                              |                    |                |
| Address: 11235 West Bernardo Court Suite 102 San Diego CA U.S.A |                    |                |
| NAME: 5PCS 18W 6 IN 1   | TYPE: 18W RGBWA/UV | WEIGHT:        |
| SPECIFICATION: 5PCS 18W 6 IN 1 ONLY RGB ON                      | DIMENSION:         | SERIAL No.: 01 |

| 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) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 87  | 81  | 77        | 87  | 81  | 77  | 86  | 80            | 77  | 74     |
| 0.80                             | 94  | 89  | 85        | 94  | 88  | 85  | 92  | 87            | 84  | 81     |
| 1.00                             | 99  | 93  | 89        | 97  | 92  | 89  | 96  | 92            | 88  | 84     |
| 1.25                             | 102   | 97  | 94        | 101 | 96  | 93  | 99  | 95            | 92  | 88     |
| 1.50                             | 105   | 100 | 97        | 104 | 99  | 96  | 101 | 97            | 95  | 90     |
| 2.00                             | 108   | 103 | 100       | 106 | 102 | 99  | 103 | 100           | 97  | 91     |
| 2.50                             | 109   | 105 | 102       | 107 | 104 | 101 | 104 | 101           | 99  | 92     |
| 3.00                             | 111   | 107 | 105       | 109 | 106 | 103 | 105 | 102           | 101 | 93     |
| 4.00                             | 113   | 110 | 108       | 110 | 108 | 106 | 106 | 104           | 103 | 95     |
| 5.00                             | 114   | 112 | 110       | 112 | 110 | 108 | 107 | 106           | 104 | 96     |
| ROOM INDEX                       | UF(total)   |     |           |     |     |     |     |               |     | Direct |
| According to DIN EN 13032-2 2004 |   |     | Suspended |     |     |     |     | SHRNOM = 1.25 |     |        |

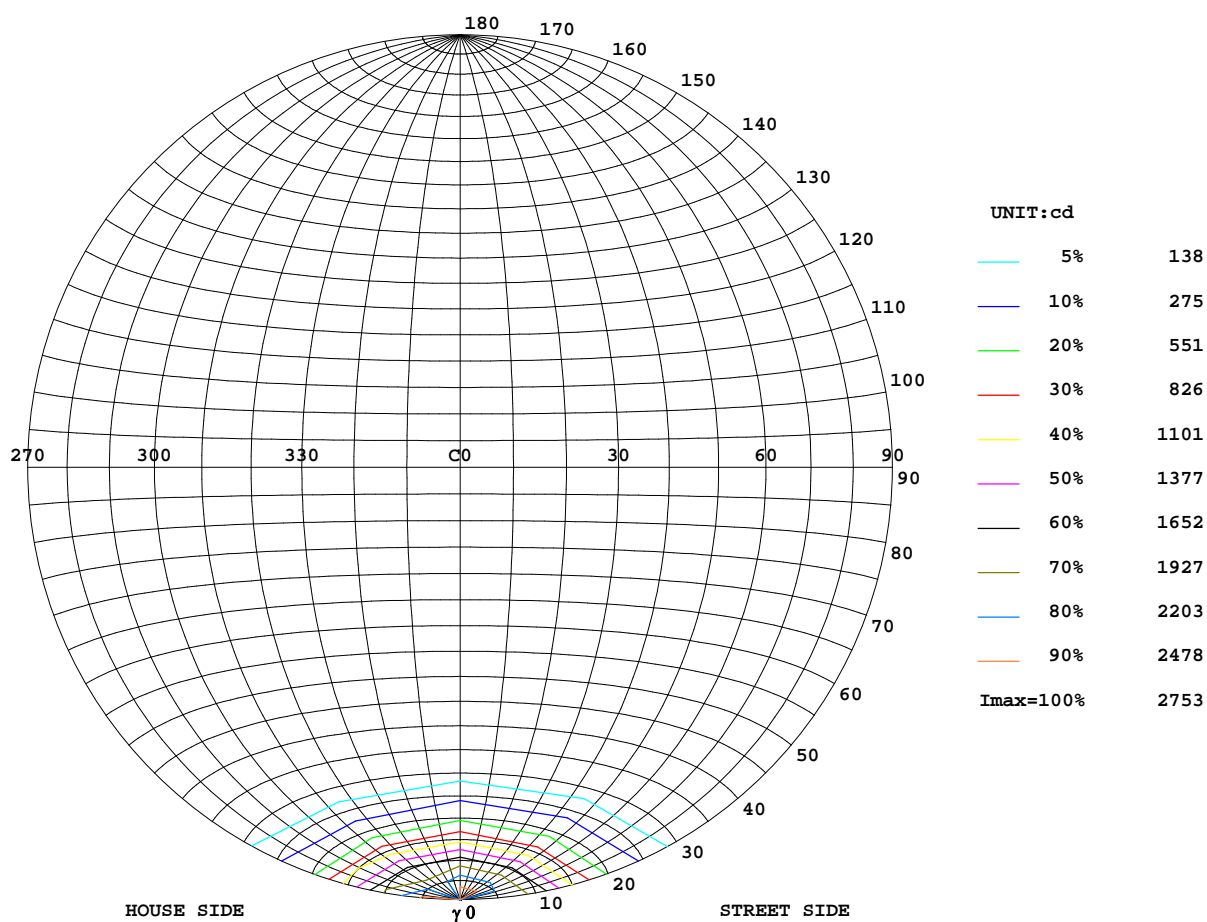
Test System:HOP00 HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:07-21-2021

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 5PCS 18W 6 IN 1 ONLY RGB ON

# ISOCANDELA DIAGRAM

Report number: EL-RP20210721-4

|   |                    |                |
|---|--------------------|----------------|
| MANUFACTURER: Environmental Lights                              |                    |                |
| Address: 11235 West Bernardo Court Suite 102 San Diego CA U.S.A |                    |                |
| NAME: 5PCS 18W 6 IN 1   | TYPE: 18W RGBWA/UV | WEIGHT:        |
| SPECIFICATION: 5PCS 18W 6 IN 1 ONLY RGB ON                      | DIMENSION:         | SERIAL No.: 01 |



Test System:HOP00 HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:07-21-2021

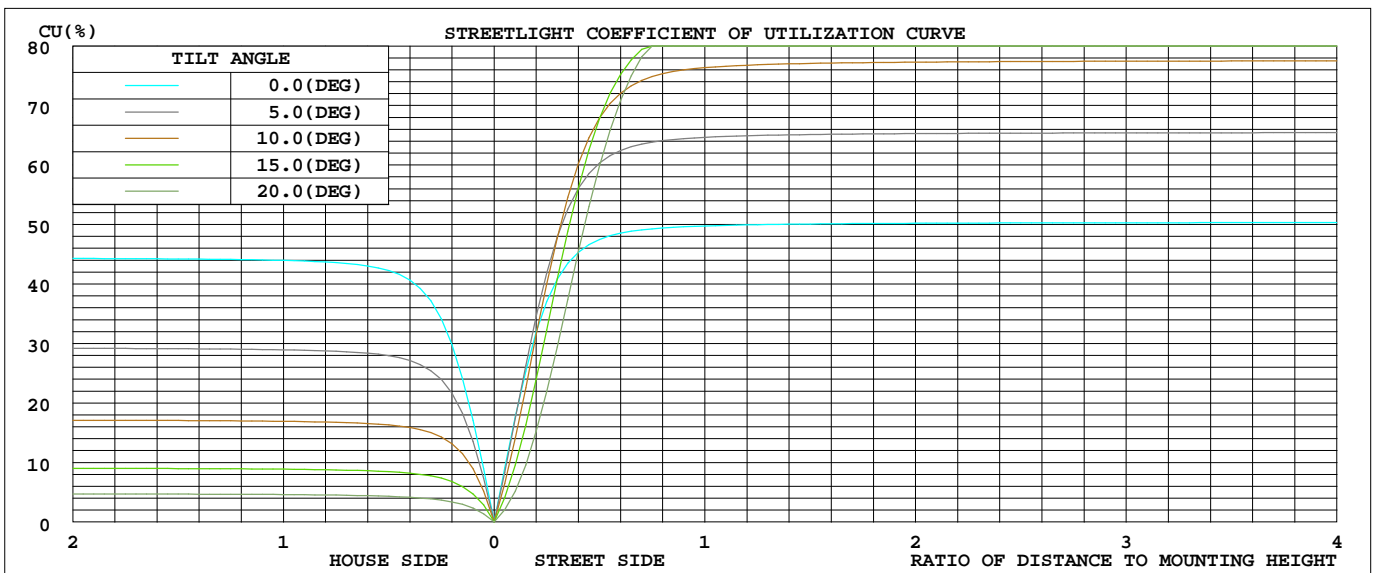
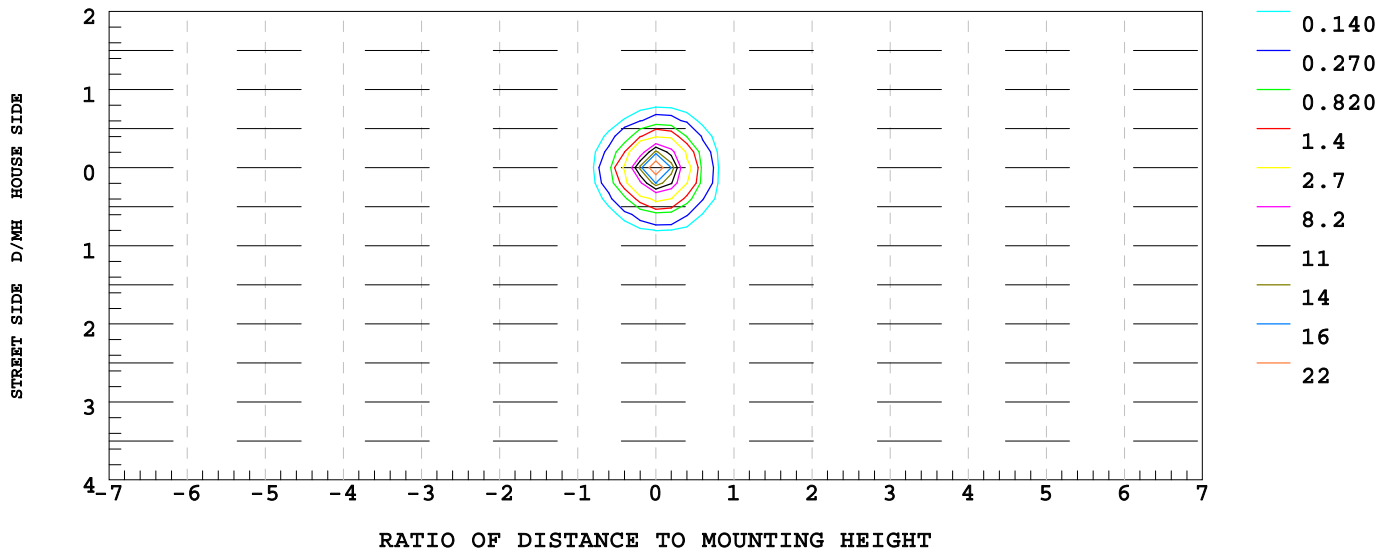
Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 5PCS 18W 6 IN 1 ONLY RGB ON

# ISOLUX DIAGRAM

Report number: EL-RP20210721-4

|   |                    |                |
|---|--------------------|----------------|
| MANUFACTURER: Environmental Lights                              |                    |                |
| Address: 11235 West Bernardo Court Suite 102 San Diego CA U.S.A |                    |                |
| NAME: 5PCS 18W 6 IN 1   | TYPE: 18W RGBWA/UV | WEIGHT:        |
| SPECIFICATION: 5PCS 18W 6 IN 1 ONLY RGB ON                      | DIMENSION:         | SERIAL No.: 01 |

ILLUMINANCE AT MH=10 m,Enadir = 27.27 lx



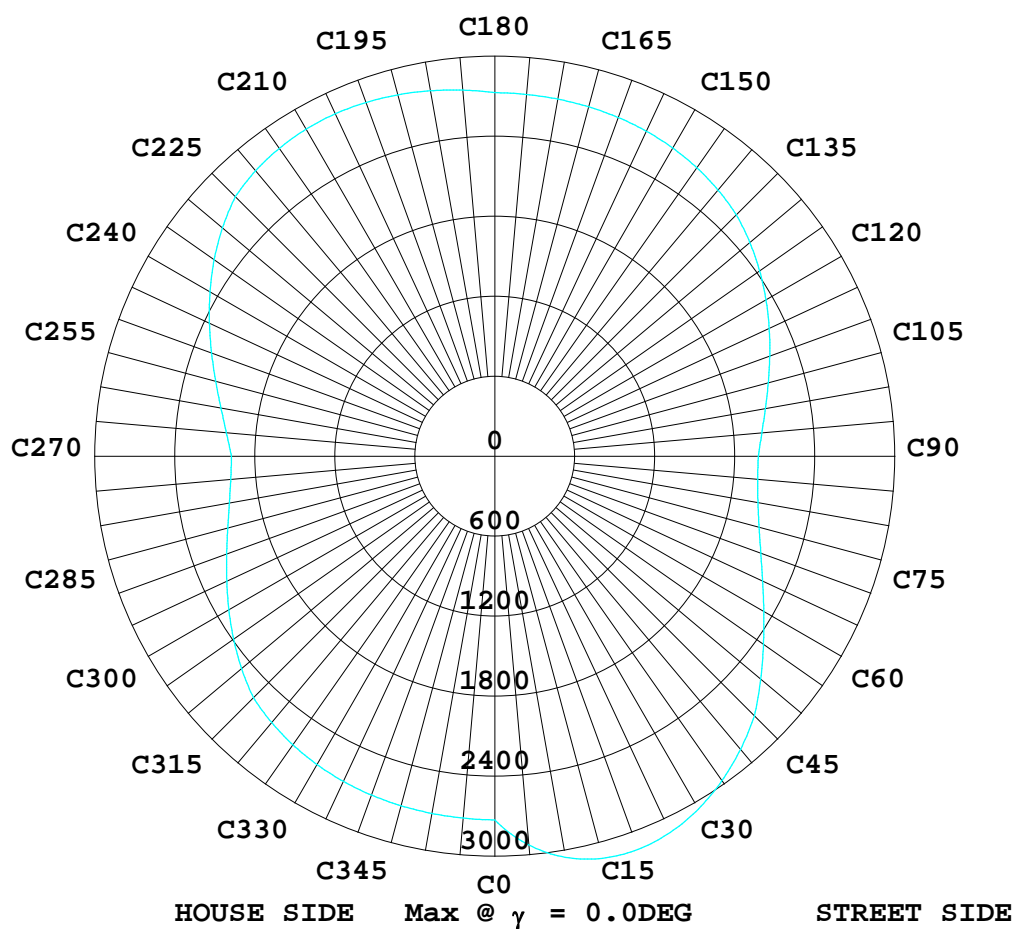
Test System:HOP00 HPG1800  
Temperature:25.3DEG  
Operators:RD  
Test Date:07-21-2021

Test Set: 5.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:8.000 m  
Remarks: 5PCS 18W 6 IN 1 ONLY RGB ON

# ISOCANDELA DIAGRAM

Report number: EL-RP20210721-4

|   |                    |                |
|---|--------------------|----------------|
| MANUFACTURER: Environmental Lights                              |                    |                |
| Address: 11235 West Bernardo Court Suite 102 San Diego CA U.S.A |                    |                |
| NAME: 5PCS 18W 6 IN 1   | TYPE: 18W RGBWA/UV | WEIGHT:        |
| SPECIFICATION: 5PCS 18W 6 IN 1 ONLY RGB ON                      | DIMENSION:         | SERIAL No.: 01 |



Test System:HOP00 HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:07-21-2021

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 5PCS 18W 6 IN 1 ONLY RGB ON

## LUMINOUS DISTRIBUTION INTENSITY DATA

Report number: EL-RP20210721-4

|   |                    |                |
|---|--------------------|----------------|
| MANUFACTURER: Environmental Lights                              |                    |                |
| Address: 11235 West Bernardo Court Suite 102 San Diego CA U.S.A |                    |                |
| NAME: 5PCS 18W 6 IN 1   | TYPE: 18W RGBWA/UV | WEIGHT:        |
| SPECIFICATION: 5PCS 18W 6 IN 1 ONLY RGB ON                      | DIMENSION:         | SERIAL No.: 01 |

UNIT: cd

| C(DEG)<br>γ (DEG) | 0    | 45   | 90   | 135  | 180  | 225  | 270  | 315  |
|-------------------|------|------|------|------|------|------|------|------|
| 0.0               | 2727 | 2753 | 1976 | 2562 | 2727 | 2753 | 1976 | 2562 |
| 5.0               | 2355 | 2307 | 2104 | 2508 | 2454 | 2521 | 2019 | 2090 |
| 10.0              | 1763 | 1711 | 1888 | 2054 | 1895 | 1953 | 1731 | 1415 |
| 15.0              | 1020 | 938  | 1102 | 1387 | 1104 | 1196 | 977  | 731  |
| 20.0              | 494  | 441  | 526  | 702  | 560  | 495  | 377  | 336  |
| 25.0              | 218  | 199  | 238  | 333  | 259  | 244  | 185  | 141  |
| 30.0              | 95.8 | 93.2 | 102  | 147  | 108  | 105  | 72.6 | 59.1 |
| 35.0              | 44.7 | 39.2 | 46.9 | 61.8 | 48.3 | 46.9 | 34.1 | 32.6 |
| 40.0              | 23.9 | 21.3 | 26.1 | 31.2 | 25.6 | 23.8 | 17.3 | 18.5 |
| 45.0              | 13.8 | 11.7 | 15.7 | 18.1 | 14.7 | 13.5 | 9.66 | 11.1 |
| 50.0              | 8.70 | 7.36 | 10.0 | 10.5 | 9.34 | 8.25 | 6.01 | 7.74 |
| 55.0              | 6.27 | 5.18 | 7.16 | 7.29 | 6.59 | 5.76 | 4.09 | 5.69 |
| 60.0              | 4.80 | 3.84 | 4.92 | 5.50 | 4.22 | 4.28 | 2.94 | 3.90 |
| 65.0              | 3.58 | 2.68 | 3.45 | 3.96 | 2.49 | 3.07 | 2.43 | 2.56 |
| 70.0              | 2.49 | 1.60 | 2.49 | 2.88 | 1.53 | 1.92 | 1.40 | 1.79 |
| 75.0              | 1.66 | 1.02 | 1.72 | 2.04 | 0.96 | 1.40 | 0.83 | 1.21 |
| 80.0              | 1.21 | 0.77 | 1.34 | 1.66 | 0.51 | 0.96 | 0.51 | 0.83 |
| 85.0              | 1.08 | 0.70 | 1.21 | 0.96 | 0.38 | 0.77 | 0.45 | 0.70 |
| 90.0              | 1.02 | 0.70 | 1.21 | 1.21 | 0.45 | 0.70 | 0.38 | 0.64 |
| 95.0              | 0.96 | 0.77 | 1.21 | 1.47 | 0.51 | 0.64 | 0.45 | 0.64 |
| 100.0             | 0.96 | 0.83 | 1.15 | 2.11 | 0.51 | 0.70 | 0.38 | 0.64 |
| 105.0             | 1.02 | 0.96 | 1.21 | 3.58 | 0.38 | 0.64 | 0.45 | 0.64 |
| 110.0             | 1.21 | 1.21 | 1.34 | 11.2 | 0.51 | 0.58 | 0.51 | 0.70 |
| 115.0             | 1.79 | 1.85 | 1.92 | 21.1 | 0.58 | 0.70 | 0.77 | 0.83 |
| 120.0             | 3.07 | 3.26 | 2.75 | 1.72 | 0.64 | 0.90 | 0.90 | 1.02 |
| 125.0             | 5.37 | 7.23 | 4.67 | 1.02 | 0.64 | 1.15 | 1.21 | 1.47 |
| 130.0             | 8.89 | 7.29 | 8.19 | 1.47 | 0.77 | 1.60 | 1.85 | 2.24 |
| 135.0             | 12.8 | 7.29 | 22.2 | 9.72 | 0.96 | 2.36 | 2.75 | 3.32 |
| 140.0             | 15.8 | 10.0 | 29.6 | 14.7 | 1.34 | 3.52 | 3.96 | 4.54 |
| 145.0             | 16.7 | 6.33 | 19.9 | 16.4 | 1.72 | 4.80 | 5.24 | 5.76 |
| 150.0             | 15.4 | 15.8 | 15.3 | 3.45 | 1.98 | 6.01 | 6.27 | 6.65 |
| 155.0             | 13.1 | 13.7 | 12.2 | 5.37 | 2.24 | 6.84 | 6.84 | 7.16 |
| 160.0             | 10.6 | 10.4 | 8.89 | 23.2 | 2.30 | 7.23 | 7.16 | 7.16 |
| 165.0             | 8.89 | 4.86 | 7.87 | 18.6 | 2.30 | 7.10 | 7.10 | 6.78 |
| 170.0             | 7.68 | 4.48 | 7.48 | 14.2 | 2.17 | 6.72 | 6.72 | 6.27 |
| 175.0             | 6.97 | 5.37 | 8.25 | 9.72 | 2.11 | 6.27 | 6.46 | 5.95 |
| 180.0             | 6.59 | 6.20 | 8.38 | 7.87 | 2.11 | 6.20 | 6.52 | 6.20 |

Test System:HOP00 HPG1800  
 Temperature:25.3DEG  
 Operators:RD  
 Test Date:07-21-2021

Test Set: 5.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:8.000 m  
 Remarks: 5PCS 18W 6 IN 1 ONLY RGB ON