

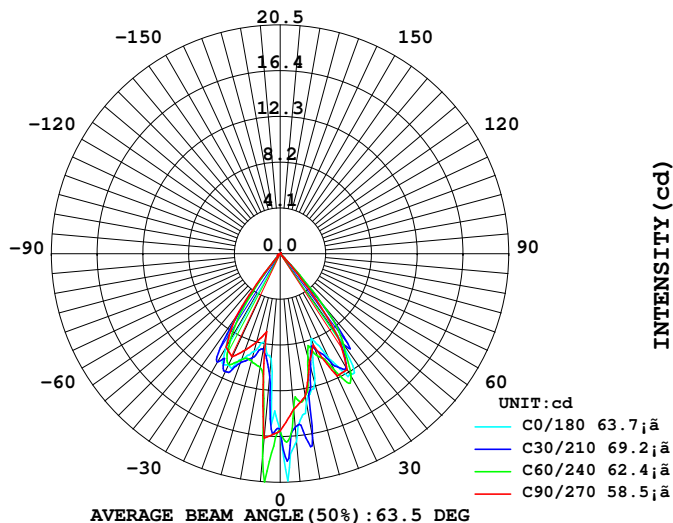
## LUMINAIRE PHOTOMETRIC TEST REPORT

Report number: GO2018-282

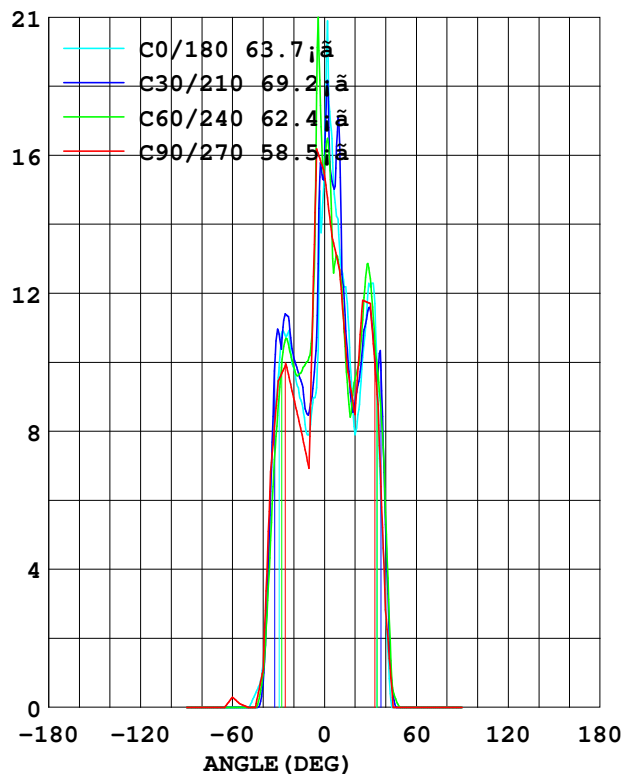
|                             |                                             |             |
|-----------------------------|---------------------------------------------|-------------|
| MANUFACTURER: IDEAL LUX SRL | Address: Via Taglio Destro 32 - Mirano (VE) |             |
| NAME: 092171 - ASTRO AP1    | TYPE: WALL LAMP                             | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 70x80x95                         | SERIAL No.: |

|                   |                    |                     |        |                   |       |
|-------------------|--------------------|---------------------|--------|-------------------|-------|
| DATA OF LAMP      |                    | Imax(cd)            | 22.60  | S/MH (C0/180)     | 0.33  |
| MODEL             | 092171 - ASTRO AP1 | EFFICIENCY (%)      | 100.0  | S/MH (C90/270)    | 0.33  |
| NOMINAL POWER (W) | 28                 | TOTAL FLUX (lm)     | 13.200 | Voltage (V)       | 229.8 |
| RATED VOLTAGE (V) | 230                | EFFICIENCY (lm/W)   | 0.5    | Current (A)       | 0.124 |
| NOMINAL FLUX (lm) | 13.2               | $\eta$ up (%)       | 0.0    | Power (W)         | 28.54 |
| LAMPS QUANTITY    | 1                  | $\eta$ down (%)     | 100.0  | Power Factor (PF) | 0.999 |
| TEST VOLTAGE (V)  | 229.8              | Effective Flux (lm) | 12.8   | EEI               | 8.330 |

### LUMINOUS INTENSITY DISTRIBUTION



### LUMINOUS INTENSITY DISTRIBUTION



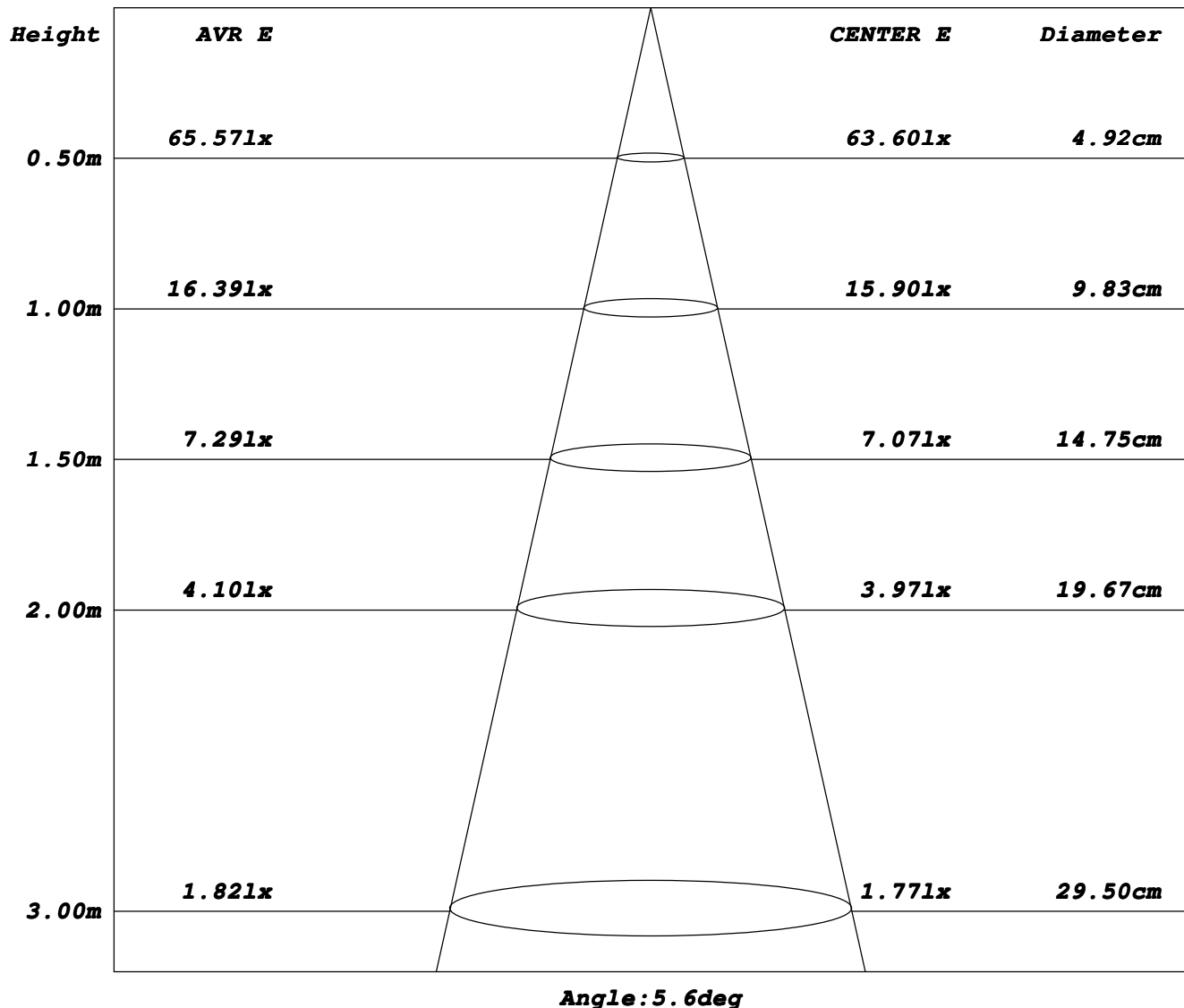
Test System: LSG-1800  
 Temperature: 25.3 DEG  
 Operators: A  
 Test Date: 11-12-2018

Test Set: 5.0 deg/s B-Beta (TYPE B)  
 Humidity: 65.0%  
 Test Distance: 10.000 m  
 Remarks:

# AVERAGE AND CENTER E Figure

Report number: GO2018-282

|                             |                                             |             |
|-----------------------------|---------------------------------------------|-------------|
| MANUFACTURER: IDEAL LUX SRL | Address: Via Taglio Destro 32 - Mirano (VE) |             |
| NAME: 092171 - ASTRO AP1    | TYPE: WALL LAMP                             | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 70x80x95                         | SERIAL No.: |



Test System: LSG-1800  
 Temperature: 25.3DEG  
 Operators: A  
 Test Date: 11-12-2018

Test Set: 5.0deg/s B-Beta (TYPE B)  
 Humidity: 65.0%  
 Test Distance: 10.000 m  
 Remarks:

**ZONAL FLUX DIAGRAM**

Report number: GO2018-282

|                             |                                             |             |
|-----------------------------|---------------------------------------------|-------------|
| MANUFACTURER: IDEAL LUX SRL | Address: Via Taglio Destro 32 - Mirano (VE) |             |
| NAME: 092171 - ASTRO AP1    | TYPE: WALL LAMP                             | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 70x80x95                         | SERIAL No.: |

| $\gamma$ | C0                     | C45   | C90   | C135  | C180  | C225  | C270  | C315  | $\gamma$ | zone     | total |
|----------|------------------------|-------|-------|-------|-------|-------|-------|-------|----------|----------|-------|
| 5.0      | 9.500                  | 13.00 | 16.59 | 12.37 | 16.90 | 14.63 | 14.00 | 14.00 | 0- 5     | 0.371    | 0.371 |
| 10.0     | 8.100                  | 9.690 | 7.100 | 8.069 | 13.60 | 15.21 | 13.00 | 9.957 | 5- 10    | 0.857    | 1.227 |
| 15.0     | 9.099                  | 9.901 | 8.200 | 7.290 | 12.00 | 11.85 | 10.10 | 8.353 | 10- 15   | 1.178    | 2.406 |
| 20.0     | 10.10                  | 10.46 | 9.200 | 6.689 | 8.100 | 10.50 | 8.700 | 6.791 | 15- 20   | 1.469    | 3.876 |
| 25.0     | 11.00                  | 11.82 | 10.20 | 6.099 | 10.40 | 12.49 | 12.10 | 7.197 | 20- 25   | 1.976    | 5.852 |
| 30.0     | 9.800                  | 10.24 | 9.700 | 6.443 | 12.50 | 12.69 | 12.00 | 8.609 | 25- 30   | 2.568    | 8.421 |
| 35.0     | 6.300                  | 6.020 | 7.000 | 5.796 | 9.200 | 10.06 | 9.000 | 5.995 | 30- 35   | 2.688    | 11.10 |
| 40.0     | 1.300                  | 0.760 | 1.100 | 1.369 | 2.900 | 5.216 | 2.900 | 2.163 | 35- 40   | 1.581    | 12.69 |
| 45.0     | 0.400                  | 0     | 0     | 0     | 0     | 0.284 | 0     | 0     | 40- 45   | 0.347    | 13.03 |
| 50.0     | 0                      | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 45- 50   | 0.018    | 13.05 |
| 55.0     | 0                      | 0     | 0.100 | 0     | 0     | 0     | 0     | 0     | 50- 55   | 0.024    | 13.08 |
| 60.0     | 0                      | 0     | 0.300 | 0     | 0     | 0     | 0     | 0     | 55- 60   | 0.050    | 13.13 |
| 65.0     | 0                      | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 60- 65   | 0.050    | 13.18 |
| 70.0     | 0                      | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 65- 70   | 0.020    | 13.20 |
| 75.0     | 0                      | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 70- 75   | 0.000    | 13.20 |
| 80.0     | 0                      | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 75- 80   | 0        | 13.20 |
| 85.0     | 0                      | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 80- 85   | 0        | 13.20 |
| 90.0     | 0                      | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 85- 90   | 0        | 13.20 |
| 95.0     |                        |       |       |       |       |       |       |       | 90- 95   |          |       |
| 100.0    |                        |       |       |       |       |       |       |       | 95-100   |          |       |
| 105.0    |                        |       |       |       |       |       |       |       | 100-105  |          |       |
| 110.0    |                        |       |       |       |       |       |       |       | 105-110  |          |       |
| 115.0    |                        |       |       |       |       |       |       |       | 110-115  |          |       |
| 120.0    |                        |       |       |       |       |       |       |       | 115-120  |          |       |
| 125.0    |                        |       |       |       |       |       |       |       | 120-125  |          |       |
| 130.0    |                        |       |       |       |       |       |       |       | 125-130  |          |       |
| 135.0    |                        |       |       |       |       |       |       |       | 130-135  |          |       |
| 140.0    |                        |       |       |       |       |       |       |       | 135-140  |          |       |
| 145.0    |                        |       |       |       |       |       |       |       | 140-145  |          |       |
| 150.0    |                        |       |       |       |       |       |       |       | 145-150  |          |       |
| 155.0    |                        |       |       |       |       |       |       |       | 150-155  |          |       |
| 160.0    |                        |       |       |       |       |       |       |       | 155-160  |          |       |
| 165.0    |                        |       |       |       |       |       |       |       | 160-165  |          |       |
| 170.0    |                        |       |       |       |       |       |       |       | 165-170  |          |       |
| 175.0    |                        |       |       |       |       |       |       |       | 170-175  |          |       |
| 180.0    |                        |       |       |       |       |       |       |       | 175-180  |          |       |
| DEG      | LUMINOUS INTENSITY: cd |       |       |       |       |       |       |       |          | UNIT: lm |       |

**Test System: LSG-1800**  
**Temperature: 25.3 DEG**  
**Operators: A**  
**Test Date: 11-12-2018**

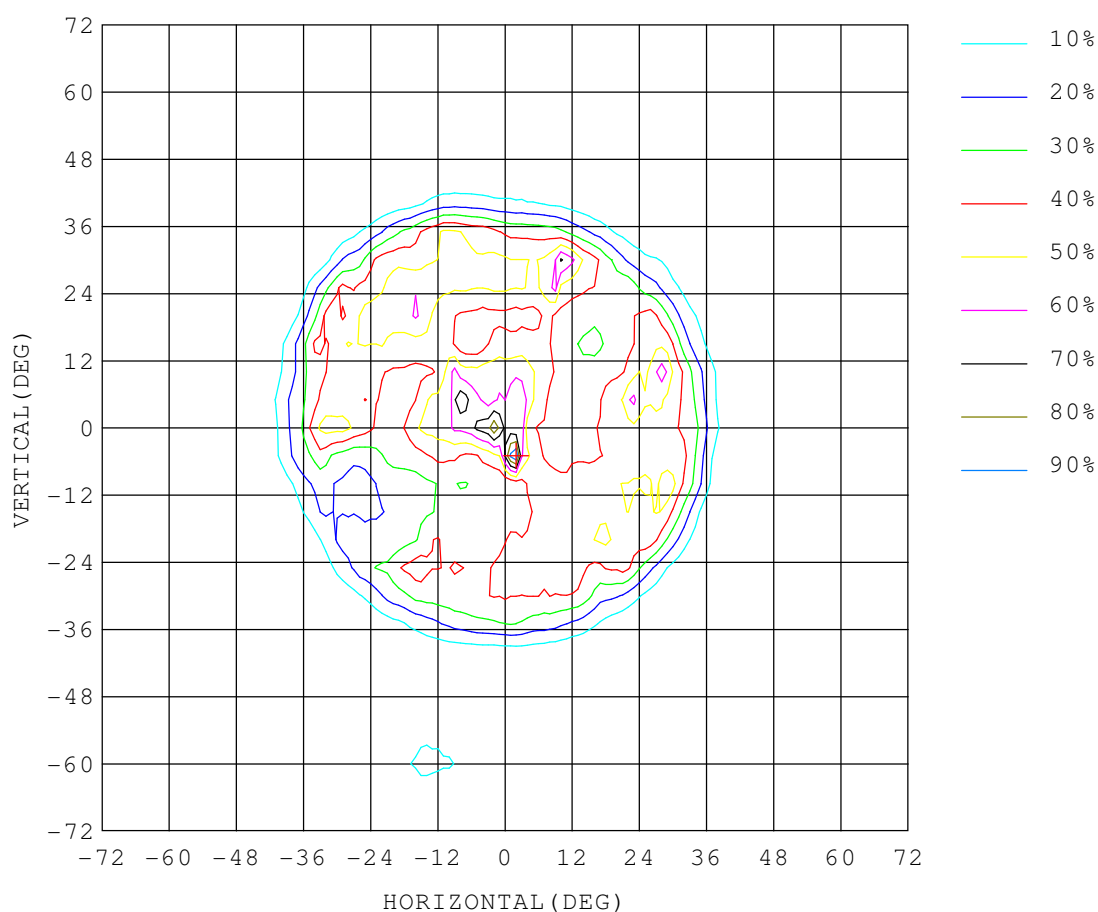
**Test Set: 5.0 deg/s B-Beta (TYPE B)**  
**Humidity: 65.0%**  
**Test Distance: 10.000 m**  
**Remarks:**

## ISOCANDELA DIAGRAM

Report number: GO2018-282

|                             |                                             |             |
|-----------------------------|---------------------------------------------|-------------|
| MANUFACTURER: IDEAL LUX SRL | Address: Via Taglio Destro 32 - Mirano (VE) |             |
| NAME: 092171 - ASTRO AP1    | TYPE: WALL LAMP                             | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 70x80x95                         | SERIAL No.: |

UNIT: cd



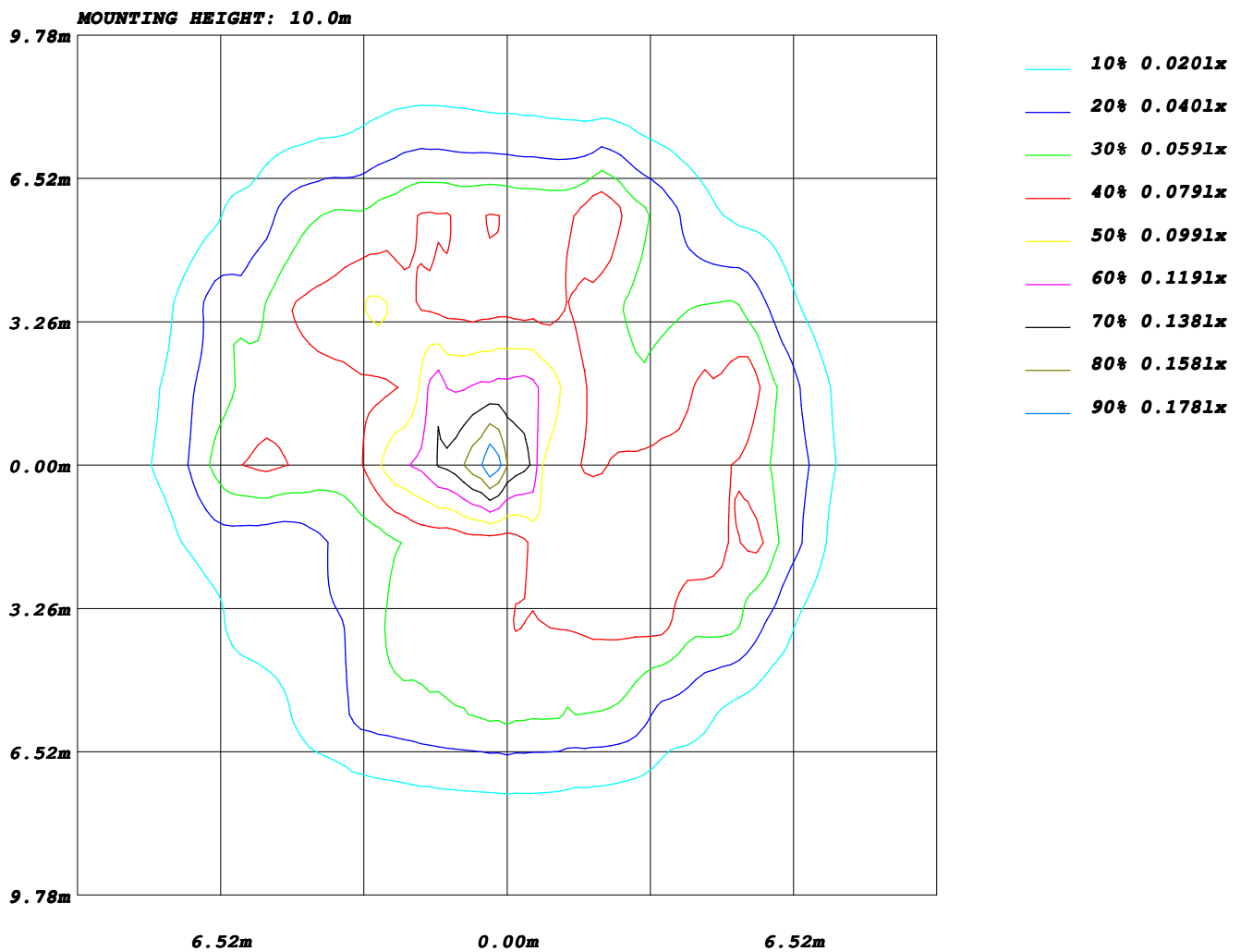
Test System: LSG-1800  
Temperature: 25.3 DEG  
Operators: A  
Test Date: 11-12-2018

Test Set: 5.0 deg/s B-Beta (TYPE B)  
Humidity: 65.0%  
Test Distance: 10.000 m  
Remarks:

**ISOLUX DIAGRAM**

Report number: GO2018-282

|                             |                                             |             |
|-----------------------------|---------------------------------------------|-------------|
| MANUFACTURER: IDEAL LUX SRL | Address: Via Taglio Destro 32 - Mirano (VE) |             |
| NAME: 092171 - ASTRO AP1    | TYPE: WALL LAMP                             | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 70x80x95                         | SERIAL No.: |



Test System: LSG-1800  
 Temperature: 25.3DEG  
 Operators: A  
 Test Date: 11-12-2018

Test Set: 5.0deg/s B-Beta (TYPE B)  
 Humidity: 65.0%  
 Test Distance: 10.000 m  
 Remarks:

**AREA LUMINOUS FLUX**

Report number: GO2018-282

|                             |                                             |             |
|-----------------------------|---------------------------------------------|-------------|
| MANUFACTURER: IDEAL LUX SRL | Address: Via Taglio Destro 32 - Mirano (VE) |             |
| NAME: 092171 - ASTRO AP1    | TYPE: WALL LAMP                             | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 70x80x95                         | SERIAL No.: |

|          | AREA FLUX DIAGRAM |      |      |      |      |      |      |      |                  |      |      |      |      |      |      |      |      |      | UNIT: lm | $\Phi_t$ | $\Phi_a$ |
|----------|-------------------|------|------|------|------|------|------|------|------------------|------|------|------|------|------|------|------|------|------|----------|----------|----------|
|          |                   |      |      |      |      |      |      |      |                  |      |      |      |      |      |      |      |      |      |          |          |          |
| 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     | 0.00     | 0.00     |
| 64       | 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     | 0.00     | 0.00     |
| 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00     | 0.00     | 0.00     |
| 48       | 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     | 0.00     | 0.00     |
| 40       | 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     | 0.00     | 0.00     |
| 32       | 0.00              | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.07 | 0.15 | 0.15             | 0.12 | 0.08 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.60     | 0.57     |          |
| 24       | 0.00              | 0.00 | 0.00 | 0.00 | 0.01 | 0.11 | 0.22 | 0.26 | 0.27             | 0.26 | 0.28 | 0.13 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.57     | 1.55     |          |
|          | 0.00              | 0.00 | 0.00 | 0.00 | 0.07 | 0.20 | 0.25 | 0.23 | 0.19             | 0.19 | 0.16 | 0.17 | 0.13 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 1.59     | 1.57     |          |
|          | 0.00              | 0.00 | 0.00 | 0.01 | 0.11 | 0.19 | 0.19 | 0.20 | 0.18             | 0.21 | 0.14 | 0.15 | 0.20 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 1.62     | 1.61     |          |
|          | 0.00              | 0.00 | 0.00 | 0.01 | 0.11 | 0.17 | 0.15 | 0.24 | 0.30             | 0.26 | 0.16 | 0.22 | 0.20 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 1.91     | 1.89     |          |
|          | 0.00              | 0.00 | 0.00 | 0.01 | 0.12 | 0.16 | 0.15 | 0.22 | 0.28             | 0.25 | 0.17 | 0.18 | 0.18 | 0.08 | 0.01 | 0.00 | 0.00 | 0.00 | 1.79     | 1.77     |          |
|          | 0.00              | 0.00 | 0.00 | 0.00 | 0.05 | 0.05 | 0.09 | 0.12 | 0.11             | 0.19 | 0.20 | 0.21 | 0.20 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 1.26     | 1.24     |          |
| -24      | 0.00              | 0.00 | 0.00 | 0.00 | 0.02 | 0.09 | 0.10 | 0.16 | 0.16             | 0.18 | 0.20 | 0.21 | 0.14 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 1.26     | 1.25     |          |
| -32      | 0.00              | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | 0.15 | 0.18 | 0.19             | 0.21 | 0.19 | 0.14 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.14     | 1.13     |          |
| -40      | 0.00              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.08 | 0.13             | 0.12 | 0.08 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.45     | 0.43     |          |
| -48      | 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     | 0.00     | 0.00     |
| -56      | 0.00              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03     | 0.00     |          |
| -64      | 0.00              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.05 | 0.02             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10     | 0.05     |          |
| -72      | 0.00              | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.01             | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03     | 0.01     |          |
|          | -72               | -64  | -56  | -48  | -40  | -32  | -24  | -16  | HORIZONTAL (DEG) |      |      |      |      | 16   | 24   | 32   | 40   | 48   | 56       | 64       | 72       |
| $\Phi_t$ | 0.00              | 0.00 | 0.00 | 0.03 | 0.48 | 1.03 | 1.43 | 1.92 | 1.99             | 1.99 | 1.64 | 1.42 | 1.12 | 0.29 | 0.02 | 0.00 | 0.00 | 0.00 | 13       |          |          |
| $\Phi_a$ | 0.00              | 0.00 | 0.00 | 0.01 | 0.46 | 1.01 | 1.39 | 1.88 | 1.95             | 1.98 | 1.63 | 1.40 | 1.11 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |          | 13       |          |

**Test System: LSG-1800**  
**Temperature: 25.3 DEG**  
**Operators: A**  
**Test Date: 11-12-2018**

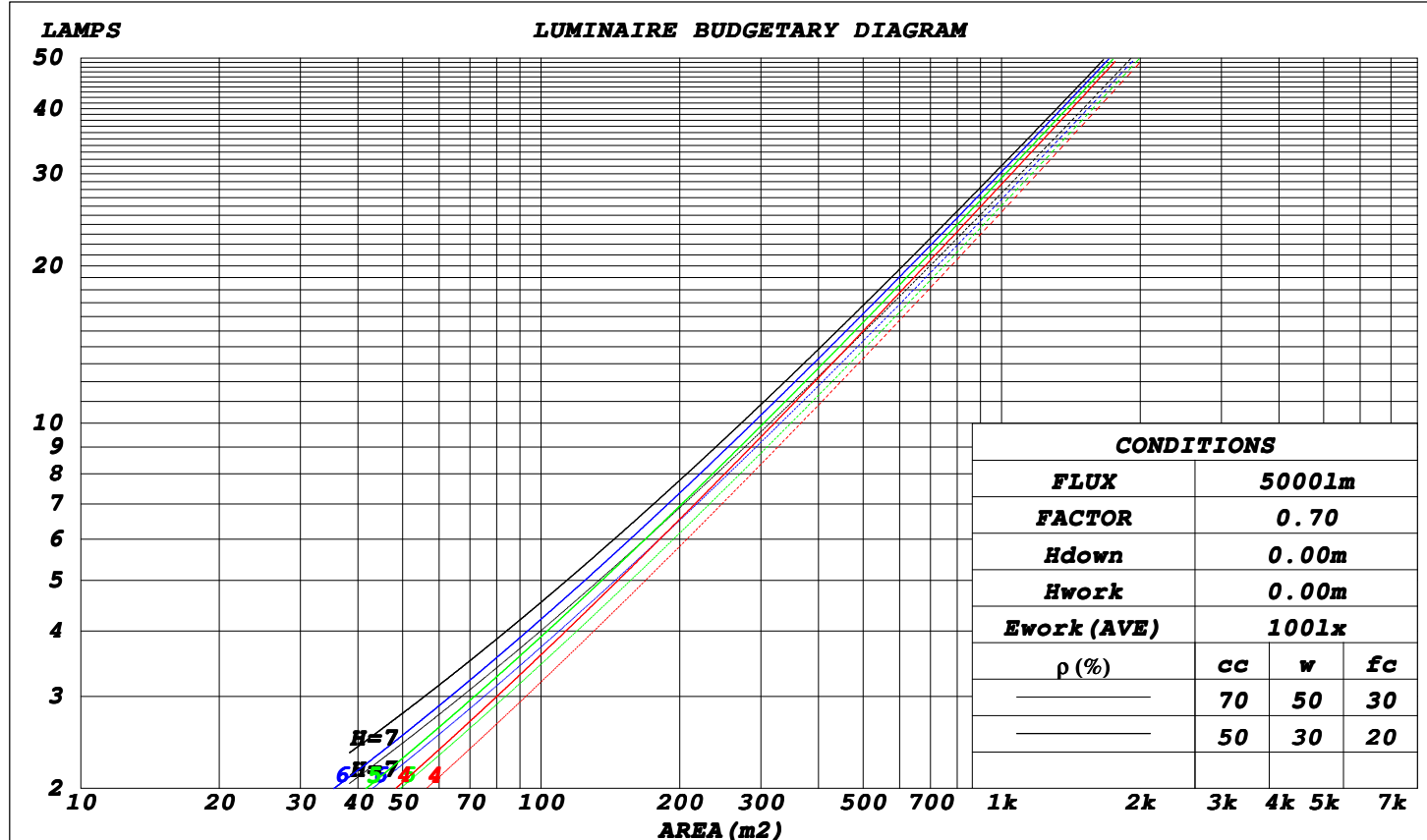
**Test Set: 5.0 deg/s B-Beta (TYPE B)**  
**Humidity: 65.0%**  
**Test Distance: 10.000 m**  
**Remarks:**

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number: GO2018-282

|                             |                                             |  |  |             |  |
|-----------------------------|---------------------------------------------|--|--|-------------|--|
| MANUFACTURER: IDEAL LUX SRL | Address: Via Taglio Destro 32 - Mirano (VE) |  |  |             |  |
| NAME: 092171 - ASTRO AP1    | TYPE: WALL LAMP                             |  |  | WEIGHT:     |  |
| SPECIFICATION:              | DIMENSION: 70x80x95                         |  |  | SERIAL No.: |  |

| $\rho_{cc}$ | 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 |      |      |      |      |      | Coefficients of Utilization (CU) |      |      |      |      |      |      |      |      |      |
| 0.0         | 1.19                  | 1.19 | 1.19 | 1.16 | 1.16 | 1.16 | 1.11                             | 1.11 | 1.11 | 1.06 | 1.06 | 1.06 | 1.02 | 1.02 | 1.02 | 1.00 |
| 1.0         | 1.11                  | 1.08 | 1.06 | 1.08 | 1.06 | 1.04 | 1.04                             | 1.02 | 1.01 | 1.01 | .99  | .98  | .97  | .96  | .95  | .93  |
| 2.0         | 1.03                  | .98  | .95  | 1.01 | .97  | .94  | .98                              | .94  | .92  | .95  | .92  | .90  | .92  | .90  | .88  | .86  |
| 3.0         | .95                   | .90  | .86  | .94  | .89  | .85  | .91                              | .87  | .84  | .89  | .85  | .83  | .86  | .84  | .81  | .80  |
| 4.0         | .89                   | .83  | .79  | .87  | .82  | .78  | .85                              | .81  | .77  | .83  | .79  | .76  | .81  | .78  | .75  | .74  |
| 5.0         | .83                   | .77  | .72  | .82  | .76  | .72  | .80                              | .75  | .71  | .78  | .74  | .70  | .77  | .73  | .70  | .68  |
| 6.0         | .77                   | .71  | .66  | .76  | .70  | .66  | .75                              | .70  | .66  | .73  | .69  | .65  | .72  | .68  | .65  | .63  |
| 7.0         | .72                   | .66  | .61  | .71  | .65  | .61  | .70                              | .65  | .61  | .69  | .64  | .61  | .68  | .63  | .60  | .59  |
| 8.0         | .68                   | .61  | .57  | .67  | .61  | .57  | .66                              | .60  | .57  | .65  | .60  | .56  | .64  | .59  | .56  | .55  |
| 9.0         | .63                   | .57  | .53  | .63  | .57  | .53  | .62                              | .57  | .53  | .61  | .56  | .53  | .60  | .56  | .52  | .51  |
| 10.0        | .60                   | .54  | .49  | .59  | .53  | .49  | .58                              | .53  | .49  | .57  | .53  | .49  | .57  | .52  | .49  | .48  |



Test System: LSG-1800  
 Temperature: 25.3DEG  
 Operators: A  
 Test Date: 11-12-2018

Test Set: 5.0deg/s B-Beta (TYPE B)  
 Humidity: 65.0%  
 Test Distance: 10.000 m  
 Remarks:

**WEC AND CCEC**

Report number: GO2018-282

|                             |                                             |  |  |             |  |
|-----------------------------|---------------------------------------------|--|--|-------------|--|
| MANUFACTURER: IDEAL LUX SRL | Address: Via Taglio Destro 32 - Mirano (VE) |  |  |             |  |
| NAME: 092171 - ASTRO AP1    | TYPE: WALL LAMP                             |  |  | WEIGHT:     |  |
| SPECIFICATION:              | DIMENSION: 70x80x95                         |  |  | SERIAL No.: |  |

| $\rho_{cc}$ | 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         | .182                  | .104 | .033 | .176 | .100 | .032 | .163                            | .093 | .030 | .151 | .087 | .028 | .141 | .081 | .026 |   |
| 2.0         | .176                  | .096 | .030 | .170 | .094 | .029 | .159                            | .089 | .028 | .150 | .084 | .026 | .140 | .079 | .025 |   |
| 3.0         | .168                  | .090 | .027 | .163 | .088 | .026 | .154                            | .084 | .025 | .146 | .080 | .025 | .138 | .076 | .024 |   |
| 4.0         | .161                  | .084 | .025 | .157 | .082 | .024 | .149                            | .079 | .024 | .142 | .076 | .023 | .135 | .073 | .022 |   |
| 5.0         | .154                  | .078 | .023 | .150 | .077 | .022 | .143                            | .075 | .022 | .137 | .072 | .021 | .131 | .070 | .021 |   |
| 6.0         | .147                  | .074 | .021 | .144 | .073 | .021 | .138                            | .071 | .021 | .132 | .069 | .020 | .127 | .067 | .020 |   |
| 7.0         | .141                  | .070 | .020 | .138 | .069 | .020 | .133                            | .067 | .019 | .128 | .065 | .019 | .123 | .064 | .019 |   |
| 8.0         | .135                  | .066 | .019 | .133 | .065 | .018 | .128                            | .064 | .018 | .123 | .062 | .018 | .119 | .061 | .018 |   |
| 9.0         | .130                  | .063 | .018 | .128 | .062 | .017 | .123                            | .061 | .017 | .119 | .060 | .017 | .115 | .058 | .017 |   |
| 10.0        | .125                  | .060 | .017 | .123 | .059 | .017 | .119                            | .058 | .016 | .115 | .057 | .016 | .111 | .056 | .016 |   |

| $\rho_{cc}$ | 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         | .190                  | .190 | .190 | .163 | .163 | .163 | .111                                        | .111 | .111 | .064 | .064 | .064 | .020 | .020 | .020 |   |
| 1.0         | .171                  | .157 | .144 | .147 | .135 | .124 | .100                                        | .093 | .086 | .058 | .054 | .050 | .019 | .017 | .016 |   |
| 2.0         | .157                  | .132 | .112 | .134 | .114 | .097 | .092                                        | .079 | .068 | .053 | .046 | .040 | .017 | .015 | .013 |   |
| 3.0         | .145                  | .114 | .089 | .124 | .098 | .077 | .085                                        | .068 | .054 | .049 | .040 | .032 | .016 | .013 | .010 |   |
| 4.0         | .135                  | .099 | .071 | .116 | .086 | .062 | .080                                        | .060 | .044 | .046 | .035 | .026 | .015 | .011 | .009 |   |
| 5.0         | .127                  | .088 | .059 | .109 | .076 | .051 | .075                                        | .053 | .036 | .043 | .031 | .021 | .014 | .010 | .007 |   |
| 6.0         | .120                  | .078 | .049 | .103 | .068 | .042 | .071                                        | .048 | .030 | .041 | .028 | .018 | .013 | .009 | .006 |   |
| 7.0         | .114                  | .071 | .041 | .098 | .062 | .036 | .068                                        | .043 | .025 | .039 | .025 | .015 | .013 | .008 | .005 |   |
| 8.0         | .108                  | .065 | .035 | .093 | .056 | .031 | .064                                        | .040 | .022 | .037 | .023 | .013 | .012 | .008 | .004 |   |
| 9.0         | .103                  | .060 | .030 | .089 | .052 | .027 | .062                                        | .036 | .019 | .036 | .022 | .011 | .012 | .007 | .004 |   |
| 10.0        | .099                  | .055 | .027 | .085 | .048 | .023 | .059                                        | .034 | .017 | .034 | .020 | .010 | .011 | .007 | .003 |   |

**Test System: LSG-1800**  
**Temperature: 25.3 DEG**  
**Operators: A**  
**Test Date: 11-12-2018**

**Test Set: 5.0 deg/s B-Beta (TYPE B)**  
**Humidity: 65.0%**  
**Test Distance: 10.000 m**  
**Remarks:**

## Uncorrected UGR Table

Report number: GO2018-282

|                             |                                             |  |             |  |
|-----------------------------|---------------------------------------------|--|-------------|--|
| MANUFACTURER: IDEAL LUX SRL | Address: Via Taglio Destro 32 - Mirano (VE) |  |             |  |
| NAME: 092171 - ASTRO AP1    | TYPE: WALL LAMP                             |  | WEIGHT:     |  |
| SPECIFICATION:              | DIMENSION: 70x80x95                         |  | SERIAL No.: |  |

|                                                           |                         |             |             |             |             |                       |             |             |             |             |
|-----------------------------------------------------------|-------------------------|-------------|-------------|-------------|-------------|-----------------------|-------------|-------------|-------------|-------------|
| <b>ceiling/cavity</b>                                     | <b>0.7</b>              | <b>0.7</b>  | <b>0.5</b>  | <b>0.5</b>  | <b>0.3</b>  | <b>0.7</b>            | <b>0.7</b>  | <b>0.5</b>  | <b>0.5</b>  | <b>0.3</b>  |
| <b>walls</b>                                              | <b>0.5</b>              | <b>0.3</b>  | <b>0.5</b>  | <b>0.3</b>  | <b>0.3</b>  | <b>0.5</b>            | <b>0.3</b>  | <b>0.5</b>  | <b>0.3</b>  | <b>0.3</b>  |
| <b>working plane</b>                                      | <b>0.2</b>              | <b>0.2</b>  | <b>0.2</b>  | <b>0.2</b>  | <b>0.2</b>  | <b>0.2</b>            | <b>0.2</b>  | <b>0.2</b>  | <b>0.2</b>  | <b>0.2</b>  |
| <b>Room dimensions</b>                                    | <b>Viewed crosswise</b> |             |             |             |             | <b>Viewed endwise</b> |             |             |             |             |
| <b>x = 2H y = 2H</b>                                      | <b>-4.4</b>             | <b>-3.4</b> | <b>-4.2</b> | <b>-3.3</b> | <b>-3.1</b> | <b>-5.8</b>           | <b>-4.7</b> | <b>-5.5</b> | <b>-4.6</b> | <b>-4.4</b> |
| <b>3H</b>                                                 | <b>-4.6</b>             | <b>-3.7</b> | <b>-4.3</b> | <b>-3.5</b> | <b>-3.3</b> | <b>-5.9</b>           | <b>-5.0</b> | <b>-5.7</b> | <b>-4.8</b> | <b>-4.6</b> |
| <b>4H</b>                                                 | <b>-4.7</b>             | <b>-3.8</b> | <b>-4.4</b> | <b>-3.6</b> | <b>-3.4</b> | <b>-6.0</b>           | <b>-5.2</b> | <b>-5.7</b> | <b>-4.9</b> | <b>-4.7</b> |
| <b>6H</b>                                                 | <b>-4.8</b>             | <b>-4.0</b> | <b>-4.5</b> | <b>-3.7</b> | <b>-3.5</b> | <b>-6.1</b>           | <b>-5.3</b> | <b>-5.8</b> | <b>-5.1</b> | <b>-4.8</b> |
| <b>8H</b>                                                 | <b>-4.8</b>             | <b>-4.1</b> | <b>-4.5</b> | <b>-3.8</b> | <b>-3.5</b> | <b>-6.2</b>           | <b>-5.4</b> | <b>-5.8</b> | <b>-5.1</b> | <b>-4.9</b> |
| <b>12H</b>                                                | <b>-4.9</b>             | <b>-4.1</b> | <b>-4.6</b> | <b>-3.9</b> | <b>-3.6</b> | <b>-6.2</b>           | <b>-5.5</b> | <b>-5.9</b> | <b>-5.2</b> | <b>-4.9</b> |
| <b>4H 2H</b>                                              | <b>-4.7</b>             | <b>-3.8</b> | <b>-4.4</b> | <b>-3.6</b> | <b>-3.4</b> | <b>-6.0</b>           | <b>-5.2</b> | <b>-5.7</b> | <b>-4.9</b> | <b>-4.7</b> |
| <b>3H</b>                                                 | <b>-4.9</b>             | <b>-4.1</b> | <b>-4.6</b> | <b>-3.9</b> | <b>-3.6</b> | <b>-6.2</b>           | <b>-5.5</b> | <b>-5.9</b> | <b>-5.2</b> | <b>-4.9</b> |
| <b>4H</b>                                                 | <b>-5.0</b>             | <b>-4.3</b> | <b>-4.6</b> | <b>-4.0</b> | <b>-3.7</b> | <b>-6.3</b>           | <b>-5.6</b> | <b>-5.9</b> | <b>-5.3</b> | <b>-5.0</b> |
| <b>6H</b>                                                 | <b>-5.1</b>             | <b>-4.5</b> | <b>-4.7</b> | <b>-4.1</b> | <b>-3.8</b> | <b>-6.4</b>           | <b>-5.8</b> | <b>-6.0</b> | <b>-5.5</b> | <b>-5.1</b> |
| <b>8H</b>                                                 | <b>-5.1</b>             | <b>-4.6</b> | <b>-4.7</b> | <b>-4.2</b> | <b>-3.9</b> | <b>-6.4</b>           | <b>-5.9</b> | <b>-6.0</b> | <b>-5.5</b> | <b>-5.2</b> |
| <b>12H</b>                                                | <b>-5.2</b>             | <b>-4.7</b> | <b>-4.8</b> | <b>-4.3</b> | <b>-3.9</b> | <b>-6.5</b>           | <b>-6.0</b> | <b>-6.1</b> | <b>-5.6</b> | <b>-5.2</b> |
| <b>8H 4H</b>                                              | <b>-5.1</b>             | <b>-4.6</b> | <b>-4.7</b> | <b>-4.2</b> | <b>-3.9</b> | <b>-6.4</b>           | <b>-5.9</b> | <b>-6.0</b> | <b>-5.5</b> | <b>-5.2</b> |
| <b>6H</b>                                                 | <b>-5.2</b>             | <b>-4.8</b> | <b>-4.8</b> | <b>-4.4</b> | <b>-4.0</b> | <b>-6.5</b>           | <b>-6.1</b> | <b>-6.1</b> | <b>-5.7</b> | <b>-5.3</b> |
| <b>8H</b>                                                 | <b>-5.3</b>             | <b>-4.9</b> | <b>-4.8</b> | <b>-4.5</b> | <b>-4.0</b> | <b>-6.6</b>           | <b>-6.2</b> | <b>-6.1</b> | <b>-5.8</b> | <b>-5.3</b> |
| <b>12H</b>                                                | <b>-5.3</b>             | <b>-5.0</b> | <b>-4.9</b> | <b>-4.5</b> | <b>-4.1</b> | <b>-6.6</b>           | <b>-6.3</b> | <b>-6.2</b> | <b>-5.9</b> | <b>-5.4</b> |
| <b>12H 4H</b>                                             | <b>-5.2</b>             | <b>-4.7</b> | <b>-4.8</b> | <b>-4.3</b> | <b>-3.9</b> | <b>-6.5</b>           | <b>-6.0</b> | <b>-6.1</b> | <b>-5.6</b> | <b>-5.2</b> |
| <b>6H</b>                                                 | <b>-5.3</b>             | <b>-4.9</b> | <b>-4.8</b> | <b>-4.5</b> | <b>-4.0</b> | <b>-6.6</b>           | <b>-6.2</b> | <b>-6.1</b> | <b>-5.8</b> | <b>-5.3</b> |
| <b>8H</b>                                                 | <b>-5.3</b>             | <b>-5.0</b> | <b>-4.9</b> | <b>-4.5</b> | <b>-4.1</b> | <b>-6.6</b>           | <b>-6.3</b> | <b>-6.2</b> | <b>-5.9</b> | <b>-5.4</b> |
| <b>Variations with the observer position at spacings:</b> |                         |             |             |             |             |                       |             |             |             |             |
| <b>S = 1.0H</b>                                           | <b>+ 6.3 / - 1.5</b>    |             |             |             |             | <b>+ 5.0 / - 1.5</b>  |             |             |             |             |
| <b>1.5H</b>                                               | <b>+ 9.0 / - 1.5</b>    |             |             |             |             | <b>+ 7.8 / - 1.5</b>  |             |             |             |             |
| <b>2.0H</b>                                               | <b>+12.0 / - 1.5</b>    |             |             |             |             | <b>+11.3 / - 1.5</b>  |             |             |             |             |

CIE Pub.117 Corrected 13.20 lm Total Lamp Luminous Flux. (8log(F/F0) = -15.0)

Test System: LSG-1800  
 Temperature: 25.3 DEG  
 Operators: A  
 Test Date: 11-12-2018

Test Set: 5.0 deg/s B-Beta (TYPE B)  
 Humidity: 65.0%  
 Test Distance: 10.000 m  
 Remarks:

## UTILIZATION FACTORS TABLE

Report number: GO2018-282

|                             |                                             |             |
|-----------------------------|---------------------------------------------|-------------|
| MANUFACTURER: IDEAL LUX SRL | Address: Via Taglio Destro 32 - Mirano (VE) |             |
| NAME: 092171 - ASTRO AP1    | TYPE: WALL LAMP                             | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 70x80x95                         | SERIAL No.: |

| 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) $k(RI) \times RCR = 5$ |     |           |     |     |     |     |               |     |        |
| $k = 0.60$                       | 89                                                   | 83  | 80        | 89  | 83  | 79  | 88  | 83            | 79  | 76     |
| 0.80                             | 96                                                   | 91  | 87        | 96  | 91  | 87  | 95  | 90            | 87  | 83     |
| 1.00                             | 100                                                  | 95  | 92        | 100 | 95  | 91  | 98  | 95            | 91  | 87     |
| 1.25                             | 104                                                  | 99  | 96        | 103 | 99  | 96  | 101 | 98            | 95  | 91     |
| 1.50                             | 107                                                  | 102 | 99        | 106 | 102 | 99  | 103 | 100           | 98  | 93     |
| 2.00                             | 109                                                  | 105 | 102       | 108 | 104 | 101 | 105 | 102           | 100 | 95     |
| 2.50                             | 111                                                  | 107 | 104       | 109 | 106 | 103 | 106 | 104           | 102 | 96     |
| 3.00                             | 112                                                  | 109 | 106       | 110 | 108 | 105 | 107 | 105           | 103 | 97     |
| 4.00                             | 114                                                  | 112 | 110       | 112 | 110 | 108 | 109 | 107           | 105 | 98     |
| 5.00                             | 115                                                  | 113 | 112       | 113 | 112 | 110 | 109 | 108           | 107 | 99     |
| ROOM INDEX                       | UF (total)                                           |     |           |     |     |     |     |               |     | Direct |
| According to DIN EN 13032-2 2004 |                                                      |     | Suspended |     |     |     |     | SERNOM = 1.25 |     |        |

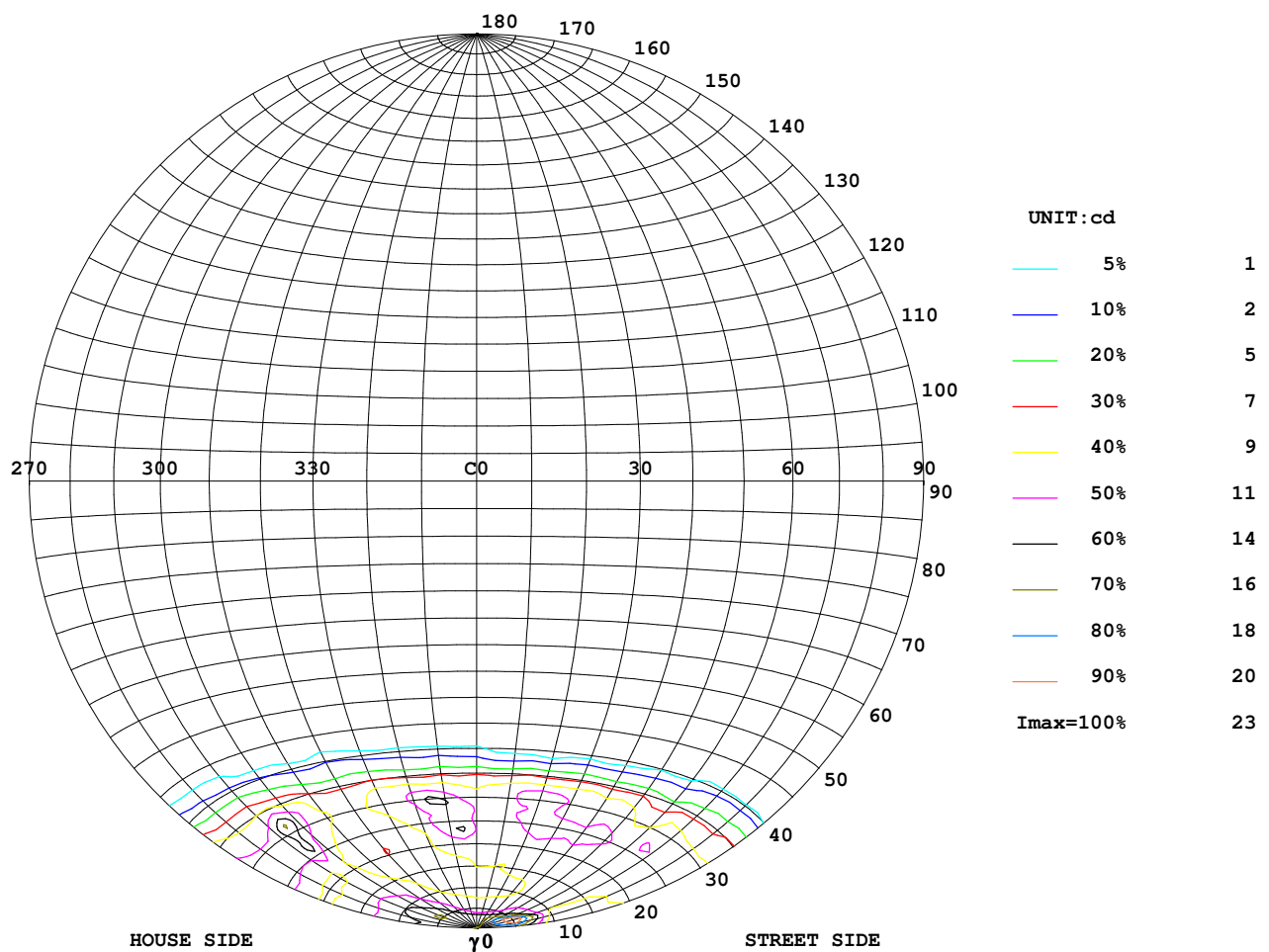
Test System: LSG-1800  
 Temperature: 25.3 DEG  
 Operators: A  
 Test Date: 11-12-2018

Test Set: 5.0 deg/s B-Beta (TYPE B)  
 Humidity: 65.0%  
 Test Distance: 10.000 m  
 Remarks:

**ISOCANDELA DIAGRAM**

Report number: GO2018-282

|                             |                                             |             |
|-----------------------------|---------------------------------------------|-------------|
| MANUFACTURER: IDEAL LUX SRL | Address: Via Taglio Destro 32 - Mirano (VE) |             |
| NAME: 092171 - ASTRO AP1    | TYPE: WALL LAMP                             | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 70x80x95                         | SERIAL No.: |



**Test System: LSG-1800**  
**Temperature: 25.3 DEG**  
**Operators: A**  
**Test Date: 11-12-2018**

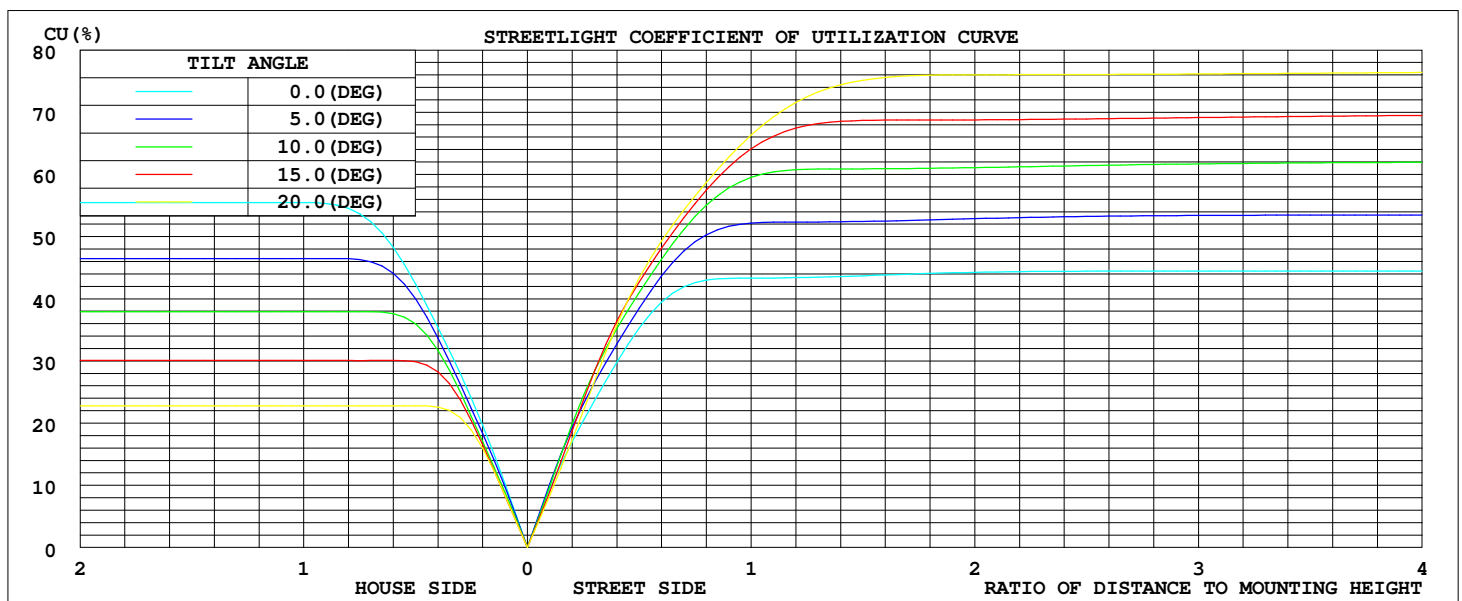
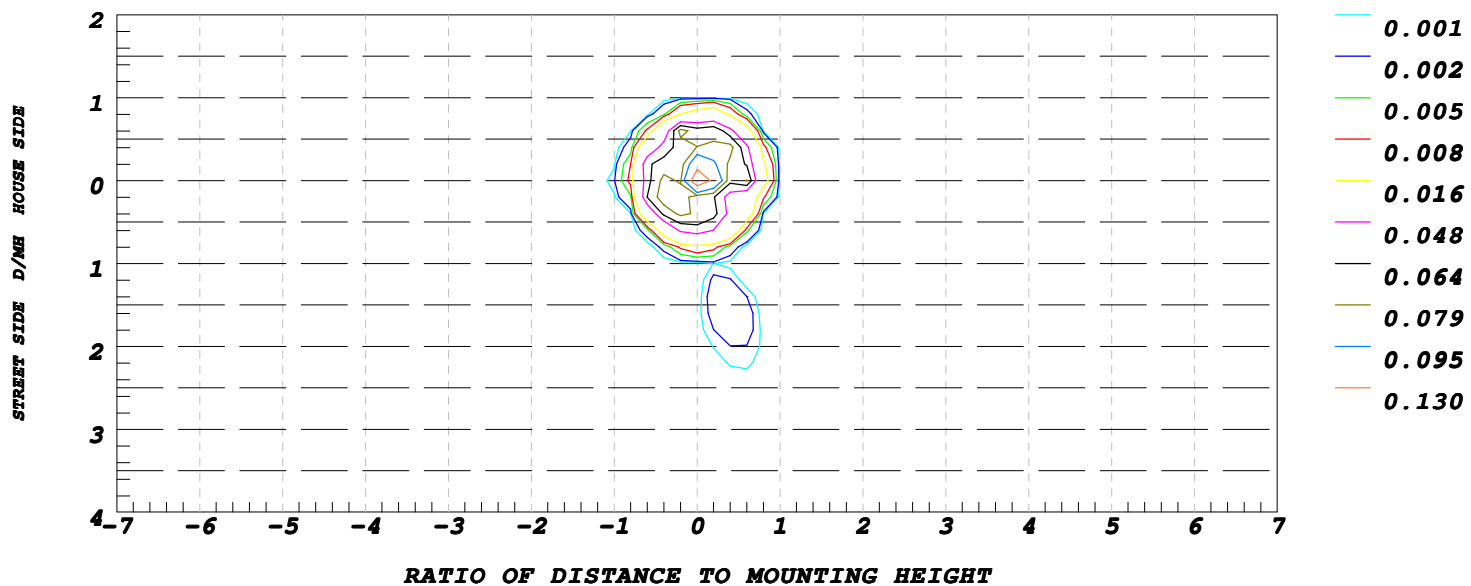
**Test Set: 5.0deg/s B-Beta (TYPE B)**  
**Humidity: 65.0%**  
**Test Distance: 10.000 m**  
**Remarks:**

## ISOLUX DIAGRAM

Report number: GO2018-282

|                             |                                             |             |
|-----------------------------|---------------------------------------------|-------------|
| MANUFACTURER: IDEAL LUX SRL | Address: Via Taglio Destro 32 - Mirano (VE) |             |
| NAME: 092171 - ASTRO AP1    | TYPE: WALL LAMP                             | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 70x80x95                         | SERIAL No.: |

ILLUMINANCE AT MH=10 m, Enadir = 0.16 lx



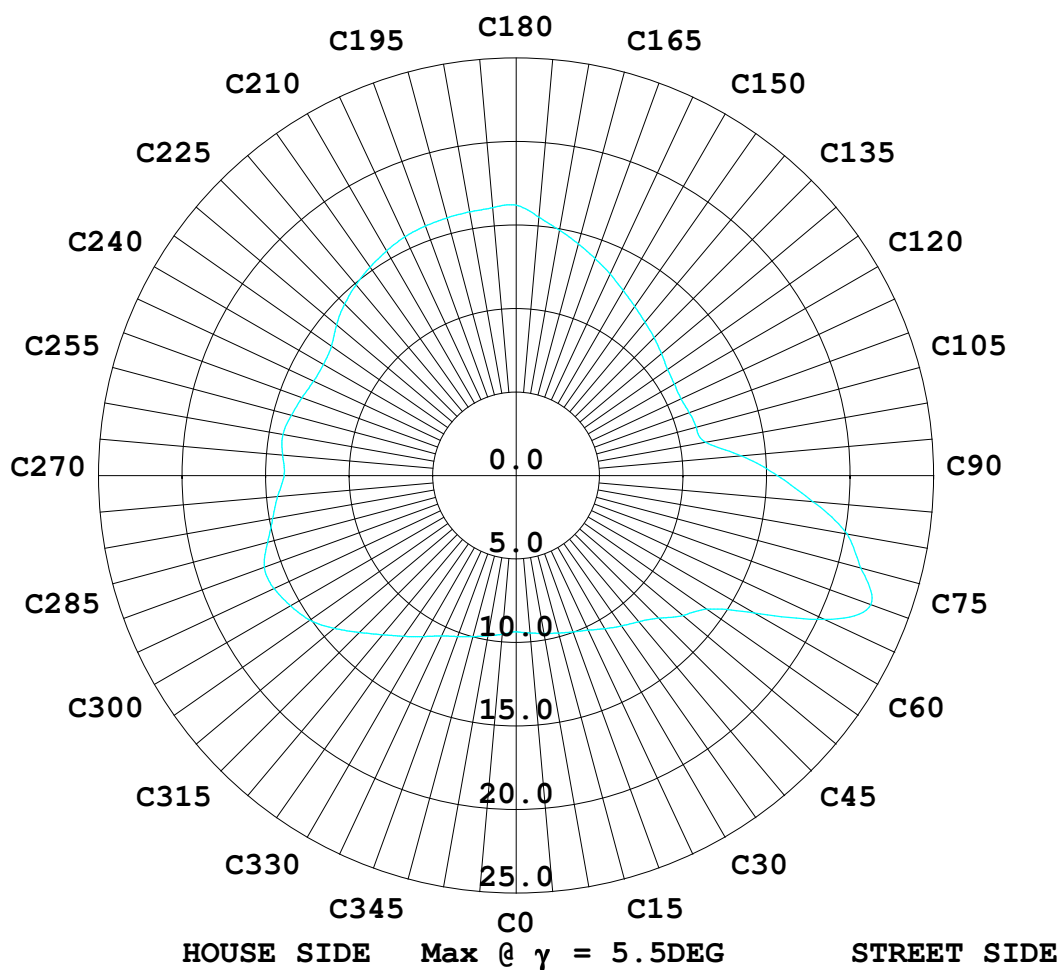
**Test System:** LSG-1800  
**Temperature:** 25.3 DEG  
**Operators:** A  
**Test Date:** 11-12-2018

**Test Set:** 5.0deg/s B-Beta (TYPE B)  
**Humidity:** 65.0%  
**Test Distance:** 10.000 m  
**Remarks:**

## ISOCANDELA DIAGRAM

Report number: GO2018-282

|                             |                                             |             |
|-----------------------------|---------------------------------------------|-------------|
| MANUFACTURER: IDEAL LUX SRL | Address: Via Taglio Destro 32 - Mirano (VE) |             |
| NAME: 092171 - ASTRO AP1    | TYPE: WALL LAMP                             | WEIGHT:     |
| SPECIFICATION:              | DIMENSION: 70x80x95                         | SERIAL No.: |



Test System: LSG-1800  
 Temperature: 25.3DEG  
 Operators: A  
 Test Date: 11-12-2018

Test Set: 5.0deg/s B-Beta (TYPE B)  
 Humidity: 65.0%  
 Test Distance: 10.000 m  
 Remarks:

**LUMINOUS DISTRIBUTION INTENSITY DATA**

Report number: GO2018-282

|                                    |                                                    |                    |
|------------------------------------|----------------------------------------------------|--------------------|
| <b>MANUFACTURER: IDEAL LUX SRL</b> | <b>Address: Via Taglio Destro 32 - Mirano (VE)</b> |                    |
| <b>NAME: 092171 - ASTRO AP1</b>    | <b>TYPE: WALL LAMP</b>                             | <b>WEIGHT:</b>     |
| <b>SPECIFICATION:</b>              | <b>DIMENSION: 70x80x95</b>                         | <b>SERIAL No.:</b> |

UNIT: cd

| <b>C (DEG)</b> | 0    | 5    | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   | 50   | 55   | 60   | 65   | 70   |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| <b>γ (DEG)</b> |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 0.0            | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 |
| 5.0            | 9.50 | 9.65 | 9.84 | 10.0 | 10.3 | 10.6 | 10.9 | 11.3 | 12.0 | 13.0 | 13.8 | 15.3 | 18.2 | 21.5 | 22.3 |
| 10.0           | 8.10 | 8.18 | 8.27 | 8.37 | 8.47 | 8.56 | 8.75 | 9.09 | 9.38 | 9.69 | 10.0 | 10.2 | 10.4 | 10.0 | 9.43 |
| 15.0           | 9.09 | 9.06 | 9.03 | 9.04 | 9.14 | 9.42 | 9.67 | 9.90 | 9.97 | 9.90 | 9.92 | 9.95 | 9.95 | 9.76 | 9.54 |
| 20.0           | 10.1 | 9.93 | 9.74 | 9.67 | 9.99 | 10.2 | 10.4 | 10.5 | 10.4 | 10.4 | 10.4 | 10.2 | 10.1 | 9.99 | 9.82 |
| 25.0           | 11.0 | 10.9 | 10.7 | 11.1 | 11.6 | 11.7 | 11.6 | 11.6 | 11.5 | 11.8 | 11.5 | 10.9 | 10.9 | 11.0 | 10.9 |
| 30.0           | 9.80 | 9.72 | 10.1 | 12.2 | 12.3 | 11.6 | 11.1 | 10.7 | 10.1 | 10.2 | 10.1 | 8.67 | 8.96 | 10.1 | 9.92 |
| 35.0           | 6.30 | 5.85 | 6.07 | 6.66 | 6.19 | 6.25 | 6.41 | 6.28 | 5.88 | 6.02 | 6.19 | 5.28 | 4.95 | 6.07 | 6.12 |
| 40.0           | 1.30 | 0.86 | 0.80 | 0.68 | 0.48 | 0.63 | 0.73 | 0.40 | 0.65 | 0.76 | 1.02 | 0.63 | 0.98 | 1.48 | 1.44 |
| 45.0           | 0.40 | 0.12 | 0.28 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.0           | 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 | 0.00 |
| 55.0           | 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 | 0.00 |
| 60.0           | 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 | 0.00 |
| 65.0           | 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 | 0.00 |
| 70.0           | 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 | 0.00 |
| 75.0           | 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 | 0.00 |
| 80.0           | 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 | 0.00 |
| 85.0           | 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 | 0.00 |
| 90.0           | 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 | 0.00 |

**Test System: LSG-1800**  
**Temperature: 25.3 DEG**  
**Operators: A**  
**Test Date: 11-12-2018**

**Test Set: 5.0 deg/s B-Beta (TYPE B)**  
**Humidity: 65.0%**  
**Test Distance: 10.000 m**  
**Remarks:**

**LUMINOUS DISTRIBUTION INTENSITY DATA**

Report number: GO2018-282

|                                    |                                                    |                    |
|------------------------------------|----------------------------------------------------|--------------------|
| <b>MANUFACTURER: IDEAL LUX SRL</b> | <b>Address: Via Taglio Destro 32 - Mirano (VE)</b> |                    |
| <b>NAME: 092171 - ASTRO AP1</b>    | <b>TYPE: WALL LAMP</b>                             | <b>WEIGHT:</b>     |
| <b>SPECIFICATION:</b>              | <b>DIMENSION: 70x80x95</b>                         | <b>SERIAL No.:</b> |

UNIT: cd

| C (DEG)<br>γ (DEG) | 75   | 80   | 85   | 90   | 95   | 100  | 105  | 110  | 115  | 120  | 125  | 130  | 135  | 140  | 145  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0.0                | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 |
| 5.0                | 21.7 | 20.7 | 18.7 | 16.5 | 14.4 | 12.4 | 11.7 | 11.7 | 11.8 | 11.8 | 11.9 | 12.0 | 12.3 | 12.7 | 13.0 |
| 10.0               | 8.86 | 8.14 | 7.46 | 7.10 | 7.13 | 7.22 | 7.39 | 7.59 | 7.76 | 7.80 | 7.87 | 7.94 | 8.06 | 8.49 | 9.00 |
| 15.0               | 8.99 | 8.63 | 8.44 | 8.20 | 7.82 | 7.86 | 7.83 | 7.70 | 7.54 | 7.33 | 7.21 | 7.25 | 7.29 | 7.33 | 7.74 |
| 20.0               | 9.67 | 9.40 | 9.61 | 9.20 | 8.24 | 7.78 | 7.63 | 7.88 | 8.13 | 8.17 | 7.98 | 7.29 | 6.68 | 6.41 | 5.96 |
| 25.0               | 10.9 | 10.7 | 10.7 | 10.2 | 9.52 | 8.79 | 8.96 | 9.18 | 9.14 | 9.43 | 8.79 | 6.92 | 6.09 | 5.45 | 5.02 |
| 30.0               | 9.43 | 9.52 | 9.37 | 9.70 | 9.39 | 9.07 | 8.98 | 8.78 | 8.80 | 9.56 | 10.0 | 8.46 | 6.44 | 5.57 | 5.04 |
| 35.0               | 6.27 | 6.21 | 6.87 | 7.00 | 6.66 | 6.49 | 6.18 | 5.89 | 5.98 | 6.21 | 6.22 | 5.76 | 5.79 | 5.75 | 4.97 |
| 40.0               | 1.45 | 1.29 | 1.29 | 1.10 | 1.11 | 1.34 | 1.67 | 1.82 | 1.78 | 1.51 | 1.45 | 1.48 | 1.36 | 1.54 | 1.34 |
| 45.0               | 0.08 | 0.07 | 0.03 | 0.00 | 0.12 | 0.26 | 0.37 | 0.31 | 0.01 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.01 |
| 50.0               | 0.00 | 0.00 | 0.00 | 0.00 | 0.38 | 0.72 | 0.74 | 0.44 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.0               | 0.00 | 0.00 | 0.00 | 0.10 | 0.90 | 1.55 | 1.83 | 1.35 | 0.37 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.0               | 0.00 | 0.00 | 0.00 | 0.30 | 1.25 | 2.18 | 2.57 | 2.06 | 0.49 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.0               | 0.00 | 0.00 | 0.00 | 0.00 | 0.62 | 1.46 | 1.84 | 1.25 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.0               | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.08 | 0.22 | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 75.0               | 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 | 0.00 |
| 80.0               | 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 | 0.00 |
| 85.0               | 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 | 0.00 |
| 90.0               | 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 | 0.00 |

**Test System: LSG-1800**  
**Temperature: 25.3 DEG**  
**Operators: A**  
**Test Date: 11-12-2018**

**Test Set: 5.0deg/s B-Beta (TYPE B)**  
**Humidity: 65.0%**  
**Test Distance: 10.000 m**  
**Remarks:**

**LUMINOUS DISTRIBUTION INTENSITY DATA**

Report number: GO2018-282

|                                    |                                                    |                    |
|------------------------------------|----------------------------------------------------|--------------------|
| <b>MANUFACTURER: IDEAL LUX SRL</b> | <b>Address: Via Taglio Destro 32 - Mirano (VE)</b> |                    |
| <b>NAME: 092171 - ASTRO AP1</b>    | <b>TYPE: WALL LAMP</b>                             | <b>WEIGHT:</b>     |
| <b>SPECIFICATION:</b>              | <b>DIMENSION: 70x80x95</b>                         | <b>SERIAL No.:</b> |

UNIT: cd

| C (DEG)<br>γ (DEG) | 150  | 155  | 160  | 165  | 170  | 175  | 180  | 185  | 190  | 195  | 200  | 205  | 210  | 215  | 220  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0.0                | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 |
| 5.0                | 13.4 | 13.9 | 14.4 | 15.0 | 15.6 | 16.2 | 16.9 | 16.6 | 16.5 | 16.3 | 16.1 | 15.8 | 15.6 | 15.3 | 15.0 |
| 10.0               | 9.60 | 10.4 | 11.1 | 11.7 | 12.3 | 12.9 | 13.6 | 13.4 | 13.5 | 13.8 | 14.5 | 15.6 | 16.7 | 16.9 | 16.2 |
| 15.0               | 8.09 | 8.55 | 9.03 | 9.64 | 10.3 | 11.1 | 12.0 | 11.6 | 11.3 | 11.2 | 11.3 | 11.0 | 10.6 | 10.2 | 10.6 |
| 20.0               | 5.88 | 6.42 | 7.08 | 7.75 | 7.92 | 7.98 | 8.10 | 8.29 | 8.39 | 8.31 | 8.54 | 8.89 | 9.05 | 9.47 | 10.0 |
| 25.0               | 4.95 | 4.80 | 4.83 | 5.20 | 5.95 | 8.09 | 10.4 | 9.85 | 9.43 | 9.58 | 9.60 | 10.0 | 10.7 | 10.9 | 11.5 |
| 30.0               | 4.62 | 4.36 | 4.04 | 4.76 | 5.93 | 8.96 | 12.5 | 11.2 | 10.4 | 10.6 | 10.8 | 11.3 | 11.8 | 12.4 | 12.8 |
| 35.0               | 4.95 | 4.44 | 4.94 | 5.05 | 6.30 | 7.61 | 9.20 | 8.31 | 8.20 | 8.60 | 9.35 | 9.73 | 9.96 | 9.58 | 10.1 |
| 40.0               | 1.14 | 0.78 | 1.12 | 1.42 | 2.17 | 2.99 | 2.90 | 3.44 | 3.29 | 3.65 | 4.45 | 4.54 | 5.42 | 6.08 | 6.01 |
| 45.0               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.12 | 0.08 | 0.34 | 0.08 | 0.40 |
| 50.0               | 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 | 0.00 |
| 55.0               | 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 | 0.00 |
| 60.0               | 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 | 0.00 |
| 65.0               | 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 | 0.00 |
| 70.0               | 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 | 0.00 |
| 75.0               | 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 | 0.00 |
| 80.0               | 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 | 0.00 |
| 85.0               | 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 | 0.00 |
| 90.0               | 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 | 0.00 |

**Test System: LSG-1800**  
**Temperature: 25.3 DEG**  
**Operators: A**  
**Test Date: 11-12-2018**

**Test Set: 5.0 deg/s B-Beta (TYPE B)**  
**Humidity: 65.0%**  
**Test Distance: 10.000 m**  
**Remarks:**

**LUMINOUS DISTRIBUTION INTENSITY DATA**

Report number: GO2018-282

|                                    |                                                    |                    |
|------------------------------------|----------------------------------------------------|--------------------|
| <b>MANUFACTURER: IDEAL LUX SRL</b> | <b>Address: Via Taglio Destro 32 - Mirano (VE)</b> |                    |
| <b>NAME: 092171 - ASTRO AP1</b>    | <b>TYPE: WALL LAMP</b>                             | <b>WEIGHT:</b>     |
| <b>SPECIFICATION:</b>              | <b>DIMENSION: 70x80x95</b>                         | <b>SERIAL No.:</b> |

UNIT: cd

| <b>C (DEG)</b> | 225  | 230  | 235  | 240  | 245  | 250  | 255  | 260  | 265  | 270  | 275  | 280  | 285  | 290  | 295  |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| <b>γ (DEG)</b> |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 0.0            | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 |
| 5.0            | 14.6 | 14.2 | 13.9 | 14.0 | 14.1 | 14.1 | 14.2 | 14.3 | 14.1 | 14.0 | 14.4 | 14.8 | 15.3 | 15.8 | 16.0 |
| 10.0           | 15.2 | 14.1 | 13.4 | 12.9 | 13.0 | 12.9 | 12.8 | 12.9 | 13.0 | 13.0 | 13.1 | 13.4 | 13.5 | 13.1 | 12.5 |
| 15.0           | 11.8 | 12.5 | 11.3 | 9.64 | 8.81 | 8.34 | 8.81 | 9.77 | 10.3 | 10.1 | 10.0 | 10.5 | 10.6 | 10.4 | 10.2 |
| 20.0           | 10.5 | 11.2 | 10.8 | 9.75 | 8.85 | 8.57 | 8.55 | 8.49 | 8.65 | 8.70 | 8.38 | 8.62 | 8.65 | 9.57 | 9.42 |
| 25.0           | 12.4 | 13.9 | 13.0 | 11.5 | 11.1 | 11.2 | 11.4 | 11.4 | 12.0 | 12.1 | 11.6 | 11.3 | 11.4 | 12.7 | 9.93 |
| 30.0           | 12.6 | 13.2 | 13.5 | 12.7 | 12.1 | 12.6 | 12.5 | 11.8 | 12.1 | 12.0 | 11.7 | 11.5 | 12.4 | 14.8 | 12.2 |
| 35.0           | 10.0 | 10.9 | 11.1 | 9.92 | 10.7 | 11.9 | 12.0 | 11.0 | 10.4 | 9.00 | 8.67 | 8.69 | 9.04 | 9.53 | 8.45 |
| 40.0           | 5.21 | 5.32 | 5.51 | 5.80 | 5.68 | 5.83 | 5.31 | 4.28 | 3.39 | 2.90 | 2.86 | 2.87 | 2.96 | 2.75 | 2.44 |
| 45.0           | 0.28 | 0.81 | 0.45 | 0.48 | 0.74 | 0.93 | 0.71 | 0.32 | 0.07 | 0.00 | 0.06 | 0.20 | 0.32 | 0.29 | 0.09 |
| 50.0           | 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 | 0.00 |
| 55.0           | 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 | 0.00 |
| 60.0           | 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 | 0.00 |
| 65.0           | 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 | 0.00 |
| 70.0           | 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 | 0.00 |
| 75.0           | 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 | 0.00 |
| 80.0           | 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 | 0.00 |
| 85.0           | 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 | 0.00 |
| 90.0           | 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 | 0.00 |

**Test System: LSG-1800**  
**Temperature: 25.3DEG**  
**Operators: A**  
**Test Date: 11-12-2018**

**Test Set: 5.0deg/s B-Beta (TYPE B)**  
**Humidity: 65.0%**  
**Test Distance: 10.000 m**  
**Remarks:**

**LUMINOUS DISTRIBUTION INTENSITY DATA**

Report number: GO2018-282

|                                    |                                                    |                    |
|------------------------------------|----------------------------------------------------|--------------------|
| <b>MANUFACTURER: IDEAL LUX SRL</b> | <b>Address: Via Taglio Destro 32 - Mirano (VE)</b> |                    |
| <b>NAME: 092171 - ASTRO AP1</b>    | <b>TYPE: WALL LAMP</b>                             | <b>WEIGHT:</b>     |
| <b>SPECIFICATION:</b>              | <b>DIMENSION: 70x80x95</b>                         | <b>SERIAL No.:</b> |

UNIT: cd

| C (DEG)<br>γ (DEG) | 300  | 305  | 310  | 315  | 320  | 325  | 330  | 335  | 340  | 345  | 350  | 355  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0.0                | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 |
| 5.0                | 15.7 | 15.4 | 14.8 | 14.0 | 13.0 | 12.2 | 11.6 | 11.1 | 10.7 | 10.3 | 9.99 | 9.72 |
| 10.0               | 11.8 | 11.2 | 10.6 | 9.95 | 9.45 | 9.00 | 8.61 | 8.39 | 8.33 | 8.27 | 8.20 | 8.14 |
| 15.0               | 9.77 | 9.28 | 8.83 | 8.35 | 7.88 | 7.63 | 7.64 | 7.79 | 7.99 | 8.31 | 8.61 | 8.87 |
| 20.0               | 8.51 | 7.81 | 7.20 | 6.79 | 6.98 | 7.16 | 7.47 | 8.63 | 9.98 | 11.1 | 10.9 | 10.4 |
| 25.0               | 8.91 | 8.13 | 7.20 | 7.19 | 7.56 | 8.08 | 9.01 | 10.0 | 11.7 | 12.2 | 12.0 | 11.4 |
| 30.0               | 10.0 | 9.24 | 8.59 | 8.60 | 9.09 | 9.81 | 10.4 | 11.7 | 14.2 | 13.1 | 10.9 | 10.1 |
| 35.0               | 8.00 | 6.83 | 6.09 | 5.99 | 6.38 | 6.86 | 6.73 | 6.27 | 6.02 | 6.39 | 5.92 | 5.81 |
| 40.0               | 2.10 | 1.75 | 1.72 | 2.16 | 2.03 | 1.67 | 1.49 | 1.48 | 1.33 | 1.43 | 1.31 | 0.99 |
| 45.0               | 0.00 | 0.10 | 0.05 | 0.00 | 0.19 | 0.16 | 0.02 | 0.17 | 0.24 | 0.04 | 0.28 | 0.10 |
| 50.0               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.0               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.0               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.0               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.0               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 75.0               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 80.0               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 85.0               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 90.0               | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

**Test System: LSG-1800**  
**Temperature: 25.3 DEG**  
**Operators: A**  
**Test Date: 11-12-2018**

**Test Set: 5.0 deg/s B-Beta (TYPE B)**  
**Humidity: 65.0%**  
**Test Distance: 10.000 m**  
**Remarks:**