

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: io LED

Report Number: NT90542-GONIOPHOTOMETRY

Luminaire Tested: **MRI-R6DNLT/RPS-xx-18-C**

Issue Date: 06/12/18

**Test Information**

Test Method: LM-79-08  
Report Number: NT90542-GONIOPHOTOMETRY  
Test Lab: ITL  
Issue Date: 06/12/18  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: MRI-R6DNLT/RPS-xx-18-C  
Description: FABRICATED METAL HOUSING, CAST DIFFUSE FINNED METAL HEAT SINK, FABRICATED SEMI-SPECULAR METAL REFLECTOR MOUNT, MOLDED PLASTIC MULTI-FACETED REFLECTOR WITH SPECULAR FINISH, ONE WHITE CIRCUIT BOARD WITH ONE LED, FORMED WHITE PAINTED METAL LOWER REFLECTOR AND TRIM WITH TRANSLUCENT WHITE FROSTED PLASTIC LENS OVER UPPER APERTURE. LENS FROSTED SIDE OUT.  
Light Source: ONE WHITE MULTI-CHIP LIGHT EMITTING DIODE (LED), VERTICAL BASE-UP POSITION.  
Ballast/Driver: -

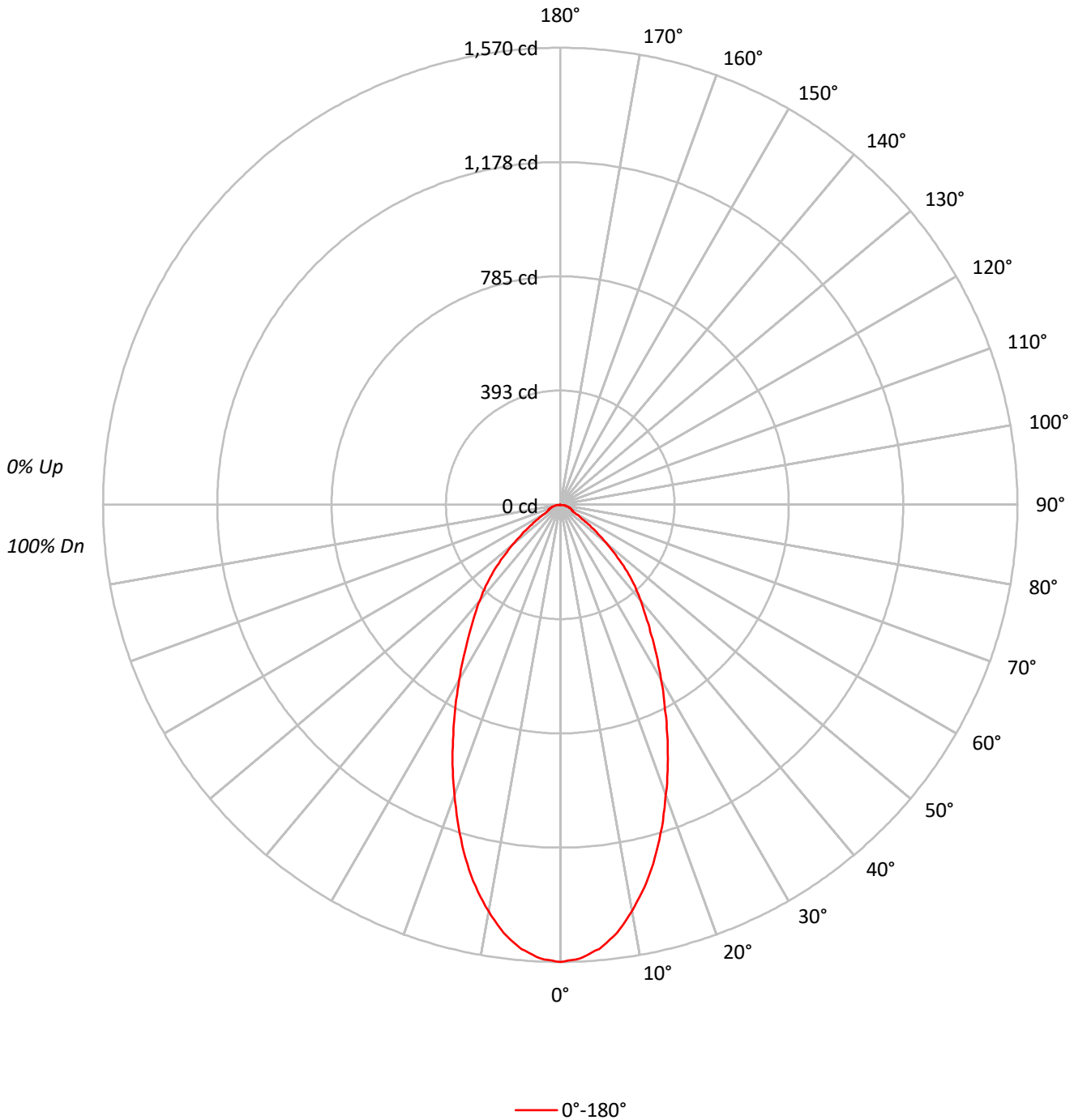
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1685.1 lumens  
Efficiency: N/A  
Efficacy: 56.5 lumens/watt  
Spacing Criteria (0/90/45): 0.81 / 0.81 / 0.88  
Luminous Opening: Circular (Dia: 0.46' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 29.8  
Input Voltage (V): 120.0  
Input Current (A<sub>in</sub>): 0.254  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: NT90542-GONIOPHOTOMETRY  
CATALOG NUMBER: MRI-R6DNL/RPS-xx-18-C

### Luminous Intensity Polar Plot





TEST NUMBER: NT90542-GONIOPHOTOMETRY  
 CATALOG NUMBER: MRI-R6DNLT/RPS-xx-18-C

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |    |    | 20 |     |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |     | 30  |     |     |     | 10  |     |    |    | 0  |     |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 | 0  |     |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |    | 100 |
| 1   | 112 | 109 | 106 | 103 | 109 | 106 | 104 | 101 | 102 | 100 | 98  | 98  | 97  | 95  | 95  | 94  | 92  | 90  |    |    |    | 90  |
| 2   | 105 | 99  | 94  | 90  | 103 | 97  | 93  | 89  | 94  | 90  | 87  | 91  | 88  | 85  | 88  | 85  | 83  | 81  |    |    |    | 81  |
| 3   | 98  | 91  | 85  | 80  | 96  | 89  | 84  | 79  | 86  | 82  | 78  | 84  | 80  | 76  | 81  | 78  | 75  | 73  |    |    |    | 73  |
| 4   | 92  | 83  | 76  | 71  | 90  | 82  | 76  | 71  | 80  | 74  | 70  | 78  | 73  | 69  | 76  | 72  | 68  | 67  |    |    |    | 67  |
| 5   | 87  | 77  | 70  | 65  | 85  | 76  | 69  | 64  | 74  | 68  | 64  | 72  | 67  | 63  | 70  | 66  | 62  | 61  |    |    |    | 61  |
| 6   | 81  | 71  | 64  | 59  | 80  | 70  | 63  | 59  | 68  | 63  | 58  | 67  | 62  | 58  | 66  | 61  | 57  | 56  |    |    |    | 56  |
| 7   | 77  | 66  | 59  | 54  | 75  | 65  | 59  | 54  | 64  | 58  | 53  | 63  | 57  | 53  | 61  | 57  | 53  | 51  |    |    |    | 51  |
| 8   | 72  | 61  | 55  | 50  | 71  | 61  | 54  | 50  | 60  | 54  | 49  | 59  | 53  | 49  | 57  | 53  | 49  | 47  |    |    |    | 47  |
| 9   | 69  | 57  | 51  | 46  | 67  | 57  | 50  | 46  | 56  | 50  | 46  | 55  | 50  | 46  | 54  | 49  | 46  | 44  |    |    |    | 44  |
| 10  | 65  | 54  | 47  | 43  | 64  | 53  | 47  | 43  | 53  | 47  | 43  | 52  | 46  | 43  | 51  | 46  | 42  | 41  |    |    |    | 41  |

**AVERAGE LUMINANCE (cd/sqm):**

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 102428 |
| 5°  | 100265 |
| 10° | 93938  |
| 15° | 84833  |
| 20° | 73663  |
| 25° | 62555  |
| 30° | 52206  |
| 35° | 43406  |
| 40° | 36621  |
| 45° | 29986  |
| 50° | 21619  |
| 55° | 14104  |
| 60° | 8481   |
| 65° | 6947   |
| 70° | 7249   |
| 75° | 7310   |
| 80° | 7514   |
| 85° | 7486   |



TEST NUMBER: NT90542-GONIOPHOTOMETRY  
 CATALOG NUMBER: MRI-R6DNLT/RPS-xx-18-C

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 142.6  | 8.5       |
| 10°-20°   | 349.1  | 20.7      |
| 20°-30°   | 398.7  | 23.7      |
| 30°-40°   | 343.3  | 20.4      |
| 40°-50°   | 247.9  | 14.7      |
| 50°-60°   | 114.9  | 6.8       |
| 60°-70°   | 46.9   | 2.8       |
| 70°-80°   | 30.9   | 1.8       |
| 80°-90°   | 10.9   | 0.6       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 890.4  | 52.8      |
| 0°-40°    | 1233.7 | 73.2      |
| 0°-60°    | 1596.5 | 94.7      |
| 0°-90°    | 1685.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1685.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1570 |      |
| 5°  | 1531 | 143  |
| 15° | 1256 | 349  |
| 25° | 869  | 399  |
| 35° | 545  | 343  |
| 45° | 325  | 248  |
| 55° | 124  | 115  |
| 65° | 45   | 47   |
| 75° | 29   | 31   |
| 85° | 10   | 11   |
| 90° | 0    |      |



TEST NUMBER: NT90542-GONIOPHOTOMETRY  
CATALOG NUMBER: MRI-R6DNLT/RPS-xx-18-C

**CANDELA DISTRIBUTION (FULL):**

|       | 0°   |
|-------|------|
| 0°    | 1570 |
| 2.5°  | 1560 |
| 5°    | 1531 |
| 7.5°  | 1484 |
| 10°   | 1418 |
| 12.5° | 1343 |
| 15°   | 1256 |
| 17.5° | 1161 |
| 20°   | 1061 |
| 22.5° | 966  |
| 25°   | 869  |
| 27.5° | 777  |
| 30°   | 693  |
| 32.5° | 616  |
| 35°   | 545  |
| 37.5° | 484  |
| 40°   | 430  |
| 42.5° | 379  |
| 45°   | 325  |
| 47.5° | 267  |
| 50°   | 213  |
| 52.5° | 165  |
| 55°   | 124  |
| 57.5° | 90   |
| 60°   | 65   |
| 62.5° | 51   |
| 65°   | 45   |
| 67.5° | 42   |
| 70°   | 38   |
| 72.5° | 34   |
| 75°   | 29   |
| 77.5° | 25   |
| 80°   | 20   |
| 82.5° | 15   |
| 85°   | 10   |
| 87.5° | 5    |
| 90°   | 0    |

(END OF REPORT)