

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: IRiS

Report Number: H21215

Luminaire Tested: **PN3MR-E3AAC2**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: H21215
Test Lab:
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: IRiS
Catalog Number: PN3MR-E3AAC2
Description: IRIS 3.5 IN RECESSED ADJUSTABLE DOWNLIGHT
WITH BEAM AT 0 DEGREES AND CLEAR LENS
Light Source: Q42MR16C/VNSP9 42 WATTS 575 LUMENS
Ballast/Driver: -

Summary

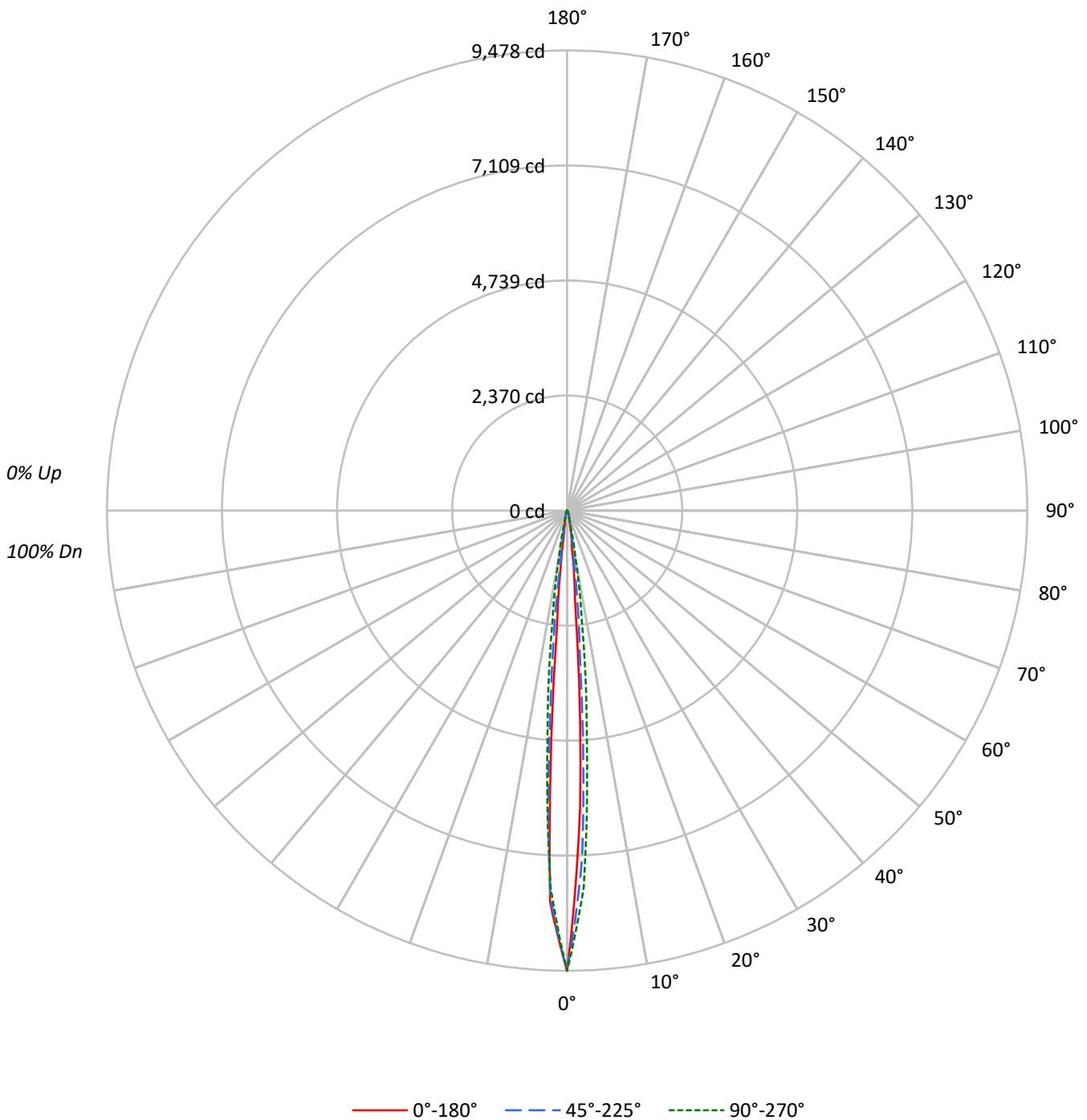
Lumens per Lamp: 575 (1 lamp)
Luminaire Lumens: 333.9 lumens
Efficiency: 58.1%
Efficacy: 7.3 lumens/watt
Spacing Criteria (0/90/45): 0.13 / 0.17 / 0.15
Luminous Opening: (L: 0 ' x W: -0.29 ' x H: 0 '
CIE Type: Direct

Input Watts (W): 46
Input Voltage (V): NR
Input Current (Ain): NR
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: H21215
CATALOG NUMBER: PN3MR-E3AAC2

Luminous Intensity Polar Plot





TEST NUMBER: H21215

CATALOG NUMBER: PN3MR-E3AAC2

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | | | | |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| RC | 80 | | | | 70 | | | | 50 | | | | 30 | | | | 10 | | | | |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 69 | 69 | 69 | 69 | 68 | 68 | 68 | 68 | 65 | 65 | 65 | 62 | 62 | 62 | 59 | 59 | 59 | 58 | 58 | 58 | 58 |
| 1 | 67 | 66 | 66 | 65 | 66 | 65 | 64 | 64 | 63 | 62 | 62 | 61 | 60 | 60 | 59 | 59 | 58 | 57 | 57 | 57 | 57 |
| 2 | 66 | 64 | 63 | 62 | 65 | 63 | 62 | 61 | 62 | 61 | 60 | 60 | 59 | 59 | 58 | 58 | 57 | 57 | 57 | 57 | 57 |
| 3 | 65 | 62 | 61 | 60 | 64 | 62 | 60 | 59 | 60 | 59 | 58 | 59 | 58 | 57 | 58 | 57 | 57 | 57 | 57 | 57 | 57 |
| 4 | 63 | 61 | 59 | 58 | 63 | 60 | 59 | 58 | 59 | 58 | 57 | 58 | 57 | 56 | 57 | 57 | 56 | 56 | 56 | 56 | 56 |
| 5 | 62 | 60 | 58 | 57 | 62 | 59 | 58 | 57 | 58 | 57 | 56 | 58 | 57 | 56 | 57 | 56 | 55 | 56 | 56 | 56 | 56 |
| 6 | 61 | 59 | 57 | 56 | 61 | 58 | 57 | 56 | 58 | 56 | 55 | 57 | 56 | 55 | 56 | 55 | 55 | 55 | 55 | 55 | 55 |
| 7 | 60 | 58 | 56 | 55 | 60 | 58 | 56 | 55 | 57 | 56 | 55 | 56 | 55 | 54 | 56 | 55 | 54 | 55 | 55 | 54 | 54 |
| 8 | 60 | 57 | 55 | 54 | 59 | 57 | 55 | 54 | 56 | 55 | 54 | 56 | 55 | 54 | 55 | 54 | 54 | 54 | 54 | 54 | 54 |
| 9 | 59 | 56 | 55 | 54 | 58 | 56 | 55 | 54 | 56 | 54 | 53 | 55 | 54 | 53 | 55 | 54 | 53 | 54 | 54 | 53 | 53 |
| 10 | 58 | 56 | 54 | 53 | 58 | 55 | 54 | 53 | 55 | 54 | 53 | 55 | 54 | 53 | 55 | 53 | 53 | 53 | 53 | 53 | 52 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--|-----|------|
| 0° | Luminous shape not found, | | |
| 5° | reference photometric report, or contact | | |
| 10° | the photometric lab for calculations. | | |
| 15° | | | |
| 20° | | | |
| 25° | | | |
| 30° | | | |
| 35° | | | |
| 40° | | | |
| 45° | | | |
| 50° | | | |
| 55° | | | |
| 60° | | | |
| 65° | | | |
| 70° | | | |
| 75° | | | |
| 80° | | | |
| 85° | | | |



TEST NUMBER: H21215

CATALOG NUMBER: PN3MR-E3AAC2

ZONAL LUMENS:

CANDELA DISTRIBUTION:

| Zone | Lumens | % Fixture | % Lamp | | 0° | 45° | 90° | 135° | 180° | Flux |
|-----------|--------|-----------|--------|------|------|------|------|------|------|------|
| 0°-10° | 255.1 | 76.4 | 44.4 | 0° | 9478 | 9478 | 9478 | 9478 | 9478 | |
| 10°-20° | 51.2 | 15.3 | 8.9 | 5° | 1833 | 3016 | 4620 | 3864 | 2386 | 181 |
| 20°-30° | 20.6 | 6.2 | 3.6 | 15° | 173 | 155 | 156 | 127 | 116 | 54 |
| 30°-40° | 5.0 | 1.5 | 0.9 | 25° | 59 | 56 | 46 | 39 | 26 | 29 |
| 40°-50° | 2.0 | 0.6 | 0.3 | 35° | 9 | 10 | 5 | 5 | 7 | 8 |
| 50°-60° | 0.0 | 0.0 | 0.0 | 45° | 7 | 2 | 1 | 2 | 3 | 5 |
| 60°-70° | 0.0 | 0.0 | 0.0 | 55° | 0 | 0 | 0 | 0 | 0 | 0 |
| 70°-80° | 0.0 | 0.0 | 0.0 | 65° | 0 | 0 | 0 | 0 | 0 | 0 |
| 80°-90° | 0.0 | 0.0 | 0.0 | 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90°-100° | 0.0 | 0.0 | 0.0 | 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 100°-110° | 0.0 | 0.0 | 0.0 | 90° | 0 | 0 | 0 | 0 | 0 | 0 |
| 110°-120° | 0.0 | 0.0 | 0.0 | 95° | 0 | 0 | 0 | 0 | 0 | 0 |
| 120°-130° | 0.0 | 0.0 | 0.0 | 105° | 0 | 0 | 0 | 0 | 0 | 0 |
| 130°-140° | 0.0 | 0.0 | 0.0 | 115° | 0 | 0 | 0 | 0 | 0 | 0 |
| 140°-150° | 0.0 | 0.0 | 0.0 | 125° | 0 | 0 | 0 | 0 | 0 | 0 |
| 150°-160° | 0.0 | 0.0 | 0.0 | 135° | 0 | 0 | 0 | 0 | 0 | 0 |
| 160°-170° | 0.0 | 0.0 | 0.0 | 145° | 0 | 0 | 0 | 0 | 0 | 0 |
| 170°-180° | 0.0 | 0.0 | 0.0 | 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-30° | 326.9 | 97.9 | 56.9 | 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-40° | 331.9 | 99.4 | 57.7 | 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-60° | 333.9 | 100.0 | 58.1 | 180° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-90° | 333.9 | 100.0 | 58.1 | | | | | | | |
| 90°-120° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 90°-150° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 90°-180° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 0°-180° | 333.9 | 100.0 | 58.1 | | | | | | | |



TEST NUMBER: H21215

CATALOG NUMBER: PN3MR-E3AAC2

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|------|-------|------|-------|------|--------|------|--------|------|
| 0° | 9478 | 9478 | 9478 | 9478 | 9478 | 9478 | 9478 | 9478 | 9478 |
| 2.5° | 6106 | 6327 | 7136 | 7628 | 7771 | 7897 | 7961 | 8048 | 8059 |
| 5° | 1833 | 1949 | 3016 | 4188 | 4620 | 4634 | 3864 | 2715 | 2386 |
| 7.5° | 731 | 758 | 1067 | 1949 | 2328 | 1740 | 1030 | 580 | 495 |
| 10° | 443 | 458 | 476 | 822 | 998 | 634 | 354 | 282 | 266 |
| 12.5° | 258 | 263 | 239 | 312 | 337 | 272 | 194 | 175 | 176 |
| 15° | 173 | 155 | 155 | 143 | 156 | 140 | 127 | 118 | 116 |
| 17.5° | 122 | 109 | 106 | 94 | 92 | 97 | 95 | 88 | 92 |
| 20° | 102 | 90 | 80 | 74 | 72 | 76 | 73 | 75 | 76 |
| 22.5° | 85 | 78 | 66 | 58 | 57 | 62 | 62 | 58 | 61 |
| 25° | 59 | 57 | 56 | 47 | 46 | 44 | 39 | 26 | 26 |
| 27.5° | 47 | 46 | 47 | 36 | 25 | 18 | 15 | 14 | 16 |
| 30° | 37 | 33 | 25 | 15 | 10 | 9 | 9 | 9 | 10 |
| 32.5° | 14 | 13 | 14 | 9 | 7 | 7 | 6 | 7 | 7 |
| 35° | 9 | 9 | 10 | 8 | 5 | 5 | 5 | 6 | 7 |
| 37.5° | 9 | 7 | 6 | 7 | 5 | 4 | 4 | 4 | 4 |
| 40° | 10 | 7 | 6 | 7 | 5 | 5 | 5 | 2 | 3 |
| 42.5° | 11 | 7 | 5 | 5 | 2 | 3 | 2 | 2 | 4 |
| 45° | 7 | 5 | 2 | 1 | 1 | 2 | 2 | 5 | 3 |
| 47.5° | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50° | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 52.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 57.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 62.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 67.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 77.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 80° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 82.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 87.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 92.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 95° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 97.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 102.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 105° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 107.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 110° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



TEST NUMBER: H21215

CATALOG NUMBER: PN3MR-E3AAC2

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|----|-------|-----|-------|-----|--------|------|--------|------|
| 112.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 115° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 117.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 122.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 125° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 127.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 130° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 132.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 135° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 137.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 140° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 142.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 147.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 150° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 152.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 157.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 160° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 162.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 167.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 170° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 172.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 177.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)