

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: HALO COMMERCIAL

Report Number: P345358

Luminaire Tested: **PR4FS12D010 PR4M12WD8FSBZ 1000Lm3000K**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P345358
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1908-453-6)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PR4FS12D010 PR4M12WD8FSBZ 1000Lm3000K
Description: PR4 WIDE LENS WITH, BRONZE FINISH
Light Source: ARRAY OF HIGH LUMEN LEDs 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 752.6 lumens
Efficiency: N/A
Efficacy: 72.4 lumens/watt
Spacing Criteria (0/90/45): 1.62 / 1.62 / 1.57
Luminous Opening: Circular (Dia: 0.4' x H: 0')
CIE Type: Direct

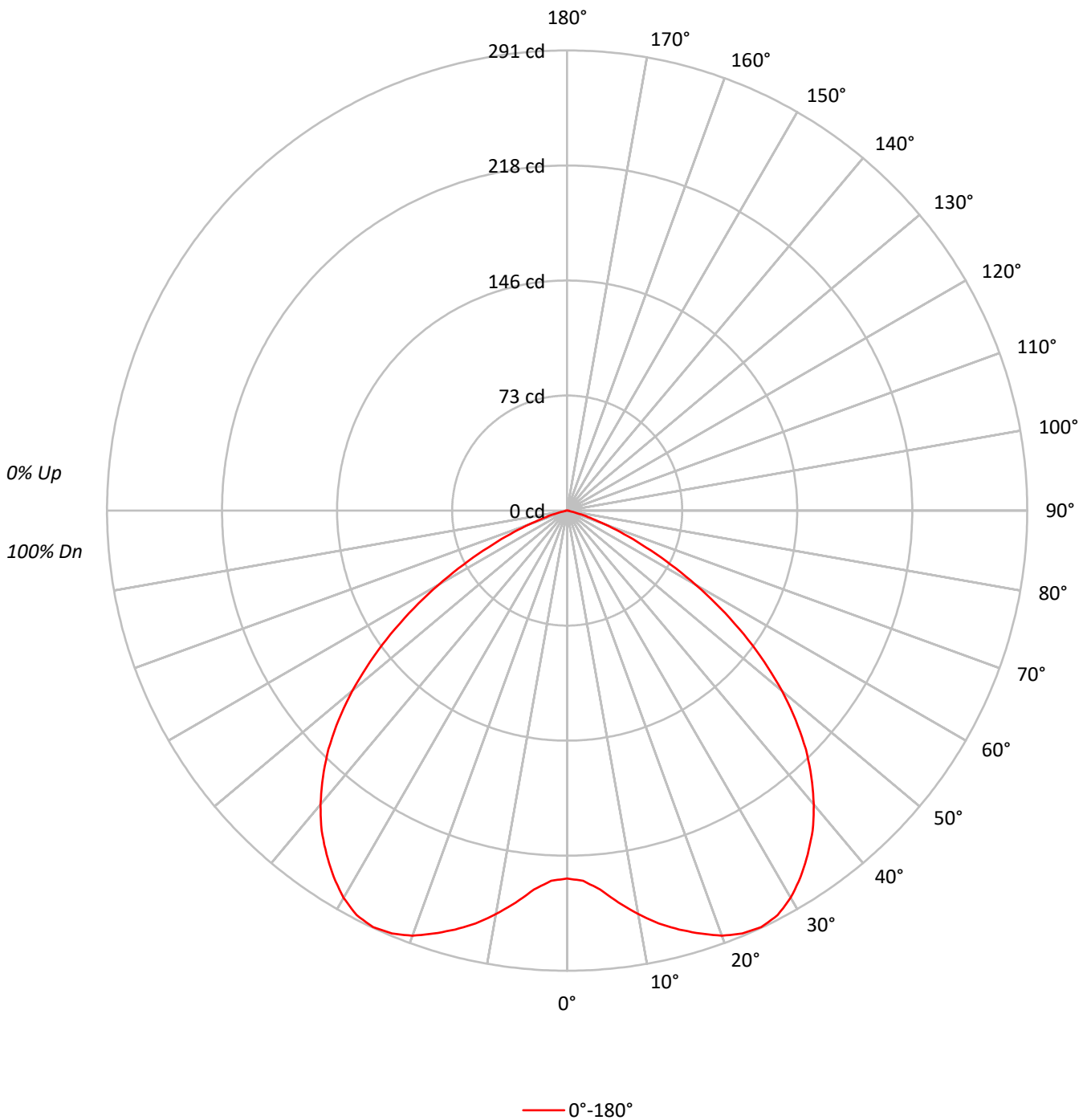
Input Watts (W): 10.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF | 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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 111 | 107 | 103 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 91 | 90 | 88 |
| 2 | 102 | 95 | 89 | 84 | 100 | 93 | 88 | 83 | 90 | 85 | 81 | 87 | 83 | 80 | 84 | 81 | 78 | 76 |
| 3 | 94 | 85 | 77 | 72 | 91 | 83 | 76 | 71 | 80 | 74 | 70 | 77 | 73 | 69 | 75 | 71 | 67 | 65 |
| 4 | 86 | 75 | 67 | 61 | 84 | 74 | 67 | 61 | 72 | 65 | 60 | 69 | 64 | 59 | 67 | 63 | 59 | 57 |
| 5 | 80 | 68 | 59 | 53 | 78 | 67 | 59 | 53 | 65 | 58 | 52 | 63 | 57 | 52 | 61 | 56 | 51 | 49 |
| 6 | 74 | 61 | 53 | 47 | 72 | 60 | 52 | 46 | 58 | 51 | 46 | 57 | 50 | 46 | 55 | 50 | 45 | 43 |
| 7 | 68 | 55 | 47 | 41 | 67 | 55 | 47 | 41 | 53 | 46 | 41 | 52 | 45 | 41 | 50 | 45 | 40 | 38 |
| 8 | 63 | 51 | 42 | 37 | 62 | 50 | 42 | 37 | 49 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 34 |
| 9 | 59 | 46 | 38 | 33 | 58 | 46 | 38 | 33 | 45 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 32 | 31 |
| 10 | 55 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 30 | 39 | 34 | 29 | 28 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|-------|
| | 0° |
| 0° | 20345 |
| 5° | 21117 |
| 10° | 23013 |
| 15° | 24839 |
| 20° | 26631 |
| 25° | 28046 |
| 30° | 28553 |
| 35° | 28329 |
| 40° | 27712 |
| 45° | 26410 |
| 50° | 24140 |
| 55° | 20786 |
| 60° | 16462 |
| 65° | 11425 |
| 70° | 6470 |
| 75° | 2670 |
| 80° | 554 |
| 85° | 1104 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 23.6 | 3.1 |
| 10°-20° | 78.0 | 10.4 |
| 20°-30° | 133.4 | 17.7 |
| 30°-40° | 165.7 | 22.0 |
| 40°-50° | 163.5 | 21.7 |
| 50°-60° | 121.3 | 16.1 |
| 60°-70° | 56.0 | 7.4 |
| 70°-80° | 10.2 | 1.4 |
| 80°-90° | 0.9 | 0.1 |
| 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° | 234.9 | 31.2 |
| 0°-40° | 400.6 | 53.2 |
| 0°-60° | 685.4 | 91.1 |
| 0°-90° | 752.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 752.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 233 | |
| 5° | 240 | 24 |
| 15° | 274 | 78 |
| 25° | 291 | 133 |
| 35° | 265 | 166 |
| 45° | 214 | 164 |
| 55° | 136 | 121 |
| 65° | 55 | 56 |
| 75° | 8 | 10 |
| 85° | 1 | 1 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|-------|
| 0° | 232.6 |
| 2.5° | 234.3 |
| 5° | 240.5 |
| 7.5° | 250.1 |
| 10° | 259.1 |
| 12.5° | 267.5 |
| 15° | 274.3 |
| 17.5° | 280.5 |
| 20° | 286.1 |
| 22.5° | 289.5 |
| 25° | 290.6 |
| 27.5° | 288.4 |
| 30° | 282.7 |
| 32.5° | 274.8 |
| 35° | 265.3 |
| 37.5° | 255.1 |
| 40° | 242.7 |
| 42.5° | 228.7 |
| 45° | 213.5 |
| 47.5° | 196.0 |
| 50° | 177.4 |
| 52.5° | 157.1 |
| 55° | 136.3 |
| 57.5° | 114.9 |
| 60° | 94.1 |
| 62.5° | 73.8 |
| 65° | 55.2 |
| 67.5° | 38.9 |
| 70° | 25.3 |
| 72.5° | 15.2 |
| 75° | 7.9 |
| 77.5° | 2.8 |
| 80° | 1.1 |
| 82.5° | 1.1 |
| 85° | 1.1 |
| 87.5° | 0.6 |
| 90° | 0.0 |

(END OF REPORT)