

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: P345294

Luminaire Tested: **PR4FS12D010 PR4M12WD8FSMW 1500Lm4000K**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P345294
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1908-453-4)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PR4FS12D010 PR4M12WD8FSMW 1500Lm4000K
Description: PR4 WIDE LENS WITH, MATTE WHITE FINISH
Light Source: ARRAY OF HIGH LUMEN LEDs 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1311.3 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): 1.61 / 1.61 / 1.58
Luminous Opening: Circular (Dia: 0.4' x H: 0')
CIE Type: Direct

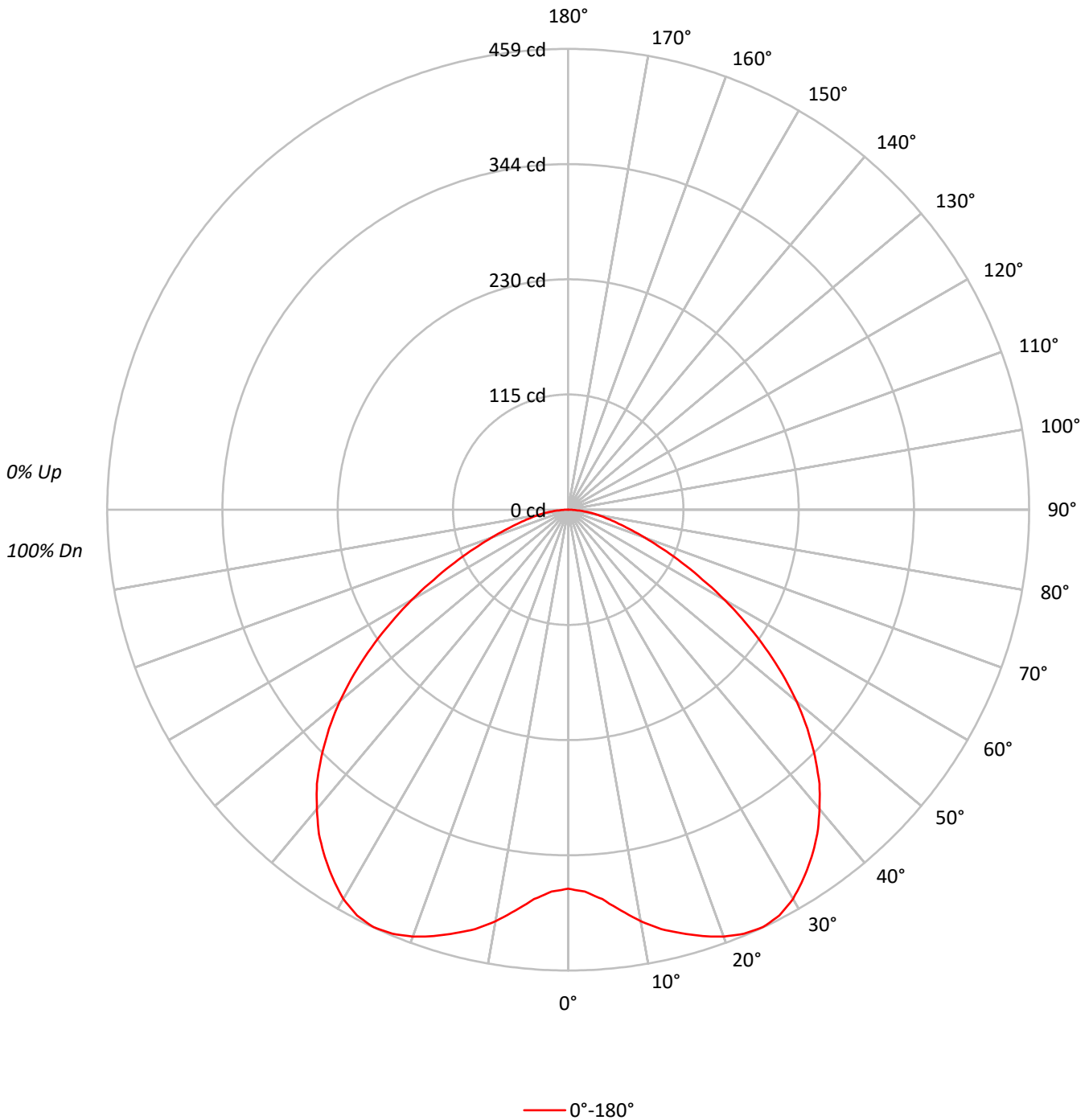
Input Watts (W): 13.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 110 | 105 | 101 | 98 | 107 | 103 | 100 | 96 | 99 | 96 | 93 | | 95 | 93 | 90 | | 91 | 90 | 88 | 86 |
| 2 | 100 | 93 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | | 84 | 80 | 76 | | 81 | 78 | 75 | 73 |
| 3 | 92 | 82 | 74 | 68 | 89 | 80 | 73 | 67 | 77 | 71 | 66 | | 75 | 69 | 65 | | 72 | 68 | 64 | 62 |
| 4 | 84 | 73 | 64 | 58 | 82 | 71 | 63 | 57 | 69 | 62 | 57 | | 67 | 61 | 56 | | 64 | 59 | 55 | 53 |
| 5 | 77 | 65 | 56 | 50 | 75 | 64 | 56 | 50 | 62 | 55 | 49 | | 60 | 54 | 49 | | 58 | 52 | 48 | 46 |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 49 | 43 | 56 | 48 | 43 | | 54 | 48 | 43 | | 53 | 47 | 42 | 40 |
| 7 | 66 | 53 | 44 | 38 | 65 | 52 | 44 | 38 | 51 | 43 | 38 | | 49 | 43 | 38 | | 48 | 42 | 37 | 35 |
| 8 | 62 | 48 | 40 | 34 | 60 | 48 | 40 | 34 | 46 | 39 | 34 | | 45 | 38 | 34 | | 44 | 38 | 33 | 32 |
| 9 | 57 | 44 | 36 | 31 | 56 | 44 | 36 | 31 | 42 | 35 | 30 | | 41 | 35 | 30 | | 40 | 34 | 30 | 28 |
| 10 | 54 | 41 | 33 | 28 | 52 | 40 | 33 | 28 | 39 | 32 | 27 | | 38 | 32 | 27 | | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|-------|
| | 0° |
| 0° | 33020 |
| 5° | 34182 |
| 10° | 36958 |
| 15° | 39545 |
| 20° | 42120 |
| 25° | 44280 |
| 30° | 45218 |
| 35° | 45115 |
| 40° | 44452 |
| 45° | 42974 |
| 50° | 40402 |
| 55° | 36493 |
| 60° | 31489 |
| 65° | 25830 |
| 70° | 20587 |
| 75° | 16796 |
| 80° | 15111 |
| 85° | 12645 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 38.1 | 2.9 |
| 10°-20° | 124.1 | 9.5 |
| 20°-30° | 210.7 | 16.1 |
| 30°-40° | 263.8 | 20.1 |
| 40°-50° | 266.9 | 20.4 |
| 50°-60° | 213.3 | 16.3 |
| 60°-70° | 125.2 | 9.5 |
| 70°-80° | 54.5 | 4.2 |
| 80°-90° | 14.6 | 1.1 |
| 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° | 372.9 | 28.4 |
| 0°-40° | 636.8 | 48.6 |
| 0°-60° | 1117.0 | 85.2 |
| 0°-90° | 1311.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1311.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 378 | |
| 5° | 389 | 38 |
| 15° | 437 | 124 |
| 25° | 459 | 211 |
| 35° | 422 | 264 |
| 45° | 347 | 267 |
| 55° | 239 | 213 |
| 65° | 125 | 125 |
| 75° | 50 | 55 |
| 85° | 13 | 15 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|-------|
| 0° | 377.5 |
| 2.5° | 380.6 |
| 5° | 389.3 |
| 7.5° | 402.7 |
| 10° | 416.1 |
| 12.5° | 428.0 |
| 15° | 436.7 |
| 17.5° | 445.4 |
| 20° | 452.5 |
| 22.5° | 457.2 |
| 25° | 458.8 |
| 27.5° | 455.6 |
| 30° | 447.7 |
| 32.5° | 435.9 |
| 35° | 422.5 |
| 37.5° | 407.5 |
| 40° | 389.3 |
| 42.5° | 370.3 |
| 45° | 347.4 |
| 47.5° | 323.0 |
| 50° | 296.9 |
| 52.5° | 268.5 |
| 55° | 239.3 |
| 57.5° | 209.3 |
| 60° | 180.0 |
| 62.5° | 150.8 |
| 65° | 124.8 |
| 67.5° | 101.1 |
| 70° | 80.5 |
| 72.5° | 63.2 |
| 75° | 49.7 |
| 77.5° | 38.7 |
| 80° | 30.0 |
| 82.5° | 21.3 |
| 85° | 12.6 |
| 87.5° | 4.7 |
| 90° | 0.0 |

(END OF REPORT)