

Classified
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P580504

Luminaire Tested: **HCC4S35D010SL-HM43040930-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580504
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HCC4S35D010SL-HM43040930-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT CYLINDER
Ballast/Driver: ELECTRONIC DRIVER

Summary

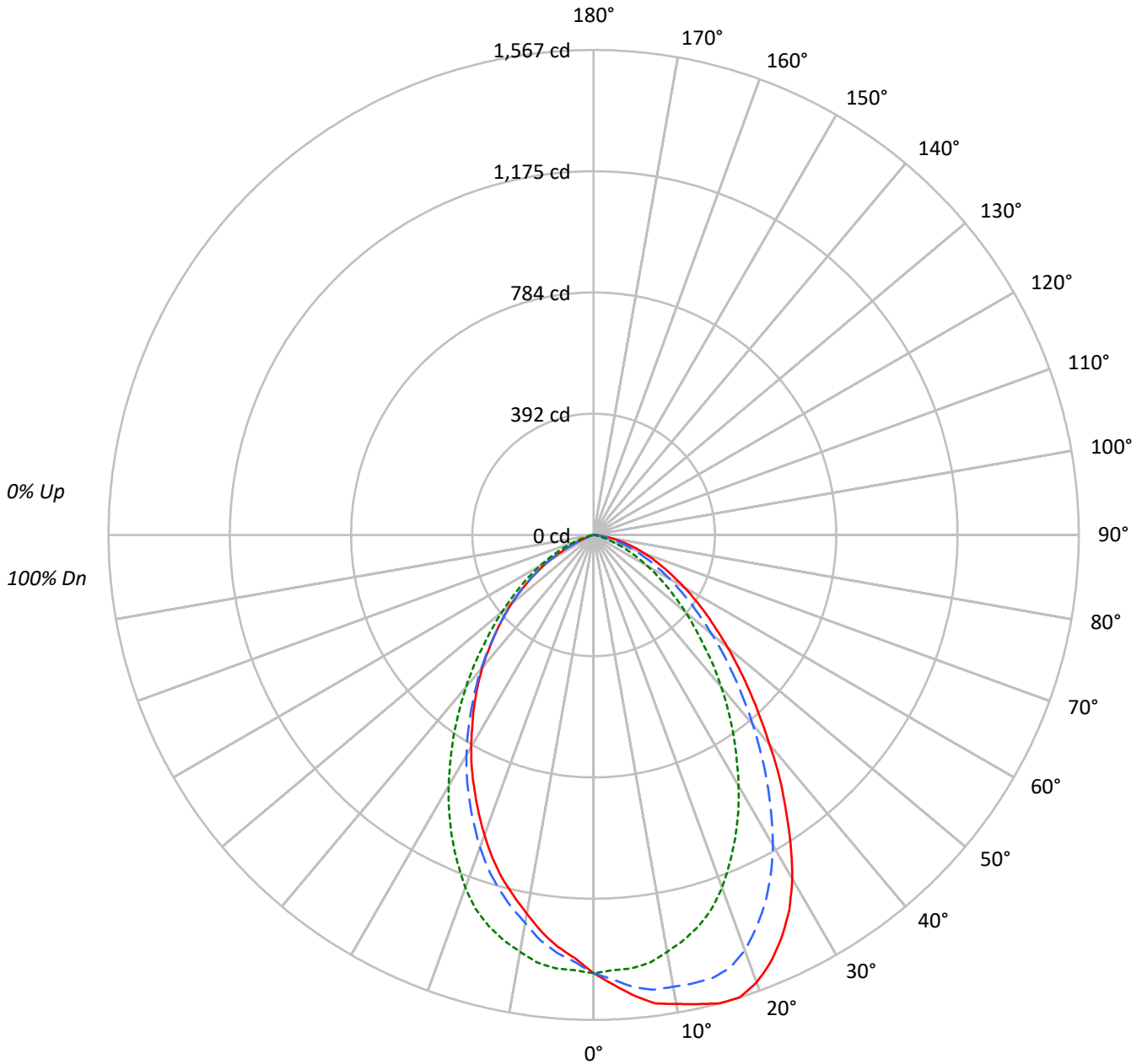
Lumens per Lamp: N/A
Luminaire Lumens: 2445.7 lumens
Efficiency: N/A
Efficacy: 72.6 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (A_{in}): 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 | 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 | 111 | 108 | 104 | 101 | 109 | 105 | 102 | 100 | 101 | 99 | 97 | 97 | 95 | 94 | 94 | 92 | 91 | 89 | | | | | 89 | | | |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 92 | 87 | 84 | 88 | 85 | 82 | 85 | 83 | 80 | 78 | | | | | 78 | | | |
| 3 | 96 | 87 | 80 | 75 | 94 | 86 | 79 | 74 | 83 | 78 | 73 | 80 | 76 | 72 | 78 | 74 | 71 | 69 | | | | | 69 | | | |
| 4 | 89 | 79 | 72 | 66 | 87 | 78 | 71 | 65 | 75 | 69 | 65 | 73 | 68 | 64 | 71 | 67 | 63 | 61 | | | | | 61 | | | |
| 5 | 83 | 72 | 64 | 58 | 81 | 71 | 64 | 58 | 69 | 62 | 58 | 67 | 61 | 57 | 65 | 60 | 56 | 55 | | | | | 55 | | | |
| 6 | 77 | 66 | 58 | 52 | 75 | 65 | 57 | 52 | 63 | 57 | 52 | 61 | 56 | 51 | 60 | 55 | 51 | 49 | | | | | 49 | | | |
| 7 | 72 | 60 | 53 | 47 | 71 | 59 | 52 | 47 | 58 | 51 | 47 | 57 | 51 | 46 | 55 | 50 | 46 | 44 | | | | | 44 | | | |
| 8 | 68 | 56 | 48 | 43 | 66 | 55 | 48 | 43 | 54 | 47 | 42 | 53 | 47 | 42 | 51 | 46 | 42 | 40 | | | | | 40 | | | |
| 9 | 64 | 52 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 37 | | | | | 37 | | | |
| 10 | 60 | 48 | 41 | 36 | 59 | 47 | 41 | 36 | 46 | 40 | 36 | 46 | 40 | 36 | 45 | 39 | 36 | 34 | | | | | 34 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 174645 | 174645 | 174645 |
| 5° | 185044 | 174062 | 165333 |
| 10° | 192732 | 171290 | 155646 |
| 15° | 200101 | 167168 | 146341 |
| 20° | 201985 | 159155 | 135357 |
| 25° | 195435 | 147189 | 123889 |
| 30° | 182720 | 133383 | 112731 |
| 35° | 162849 | 118580 | 101293 |
| 40° | 142354 | 103131 | 90153 |
| 45° | 124007 | 87480 | 77991 |
| 50° | 108208 | 74205 | 66855 |
| 55° | 94857 | 61482 | 54149 |
| 60° | 82962 | 49684 | 39767 |
| 65° | 72294 | 37037 | 22327 |
| 70° | 63184 | 23946 | 7249 |
| 75° | 51851 | 12486 | 1906 |
| 80° | 38641 | 5754 | 1421 |
| 85° | 22785 | 2830 | 2830 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 133.6 | 5.5 |
| 10°-20° | 374.0 | 15.3 |
| 20°-30° | 517.1 | 21.1 |
| 30°-40° | 520.0 | 21.3 |
| 40°-50° | 419.6 | 17.2 |
| 50°-60° | 283.7 | 11.6 |
| 60°-70° | 144.4 | 5.9 |
| 70°-80° | 46.2 | 1.9 |
| 80°-90° | 7.1 | 0.3 |
| 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° | 1024.7 | 41.9 |
| 0°-40° | 1544.7 | 63.2 |
| 0°-60° | 2248.0 | 91.9 |
| 0°-90° | 2445.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2445.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1416 | 1416 | 1416 | 1416 | 1416 | |
| 5° | 1494 | 1466 | 1406 | 1355 | 1335 | 144 |
| 15° | 1567 | 1482 | 1309 | 1184 | 1146 | 441 |
| 25° | 1436 | 1311 | 1082 | 949 | 910 | 657 |
| 35° | 1082 | 977 | 788 | 689 | 673 | 676 |
| 45° | 711 | 636 | 502 | 447 | 447 | 551 |
| 55° | 441 | 381 | 286 | 250 | 252 | 396 |
| 65° | 248 | 201 | 127 | 83 | 76 | 248 |
| 75° | 109 | 76 | 26 | 6 | 4 | 117 |
| 85° | 16 | 8 | 2 | 2 | 2 | 22 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1415.9 | 1415.9 | 1415.9 | 1415.9 | 1415.9 | 1415.9 | 1415.9 | 1415.9 | 1415.9 |
| 2.5° | 1454.1 | 1446.1 | 1438.0 | 1424.0 | 1407.8 | 1391.7 | 1381.6 | 1373.6 | 1369.6 |
| 5° | 1494.5 | 1484.4 | 1466.3 | 1436.0 | 1405.8 | 1377.7 | 1355.4 | 1341.4 | 1335.3 |
| 7.5° | 1526.7 | 1512.6 | 1482.3 | 1440.1 | 1393.8 | 1349.5 | 1321.3 | 1301.1 | 1293.0 |
| 10° | 1538.8 | 1522.7 | 1482.3 | 1426.0 | 1367.6 | 1313.2 | 1272.9 | 1252.8 | 1242.7 |
| 12.5° | 1552.8 | 1534.7 | 1484.4 | 1413.9 | 1341.4 | 1277.0 | 1230.6 | 1204.5 | 1194.4 |
| 15° | 1567.0 | 1542.8 | 1482.3 | 1395.8 | 1309.1 | 1234.6 | 1184.2 | 1158.1 | 1146.0 |
| 17.5° | 1567.0 | 1538.8 | 1466.3 | 1365.5 | 1266.9 | 1188.3 | 1131.9 | 1101.7 | 1091.6 |
| 20° | 1538.8 | 1506.5 | 1428.0 | 1317.2 | 1212.5 | 1127.9 | 1073.5 | 1043.3 | 1031.2 |
| 22.5° | 1494.5 | 1458.2 | 1373.6 | 1258.8 | 1148.1 | 1065.4 | 1011.0 | 982.8 | 970.8 |
| 25° | 1436.0 | 1399.8 | 1311.1 | 1192.3 | 1081.5 | 999.0 | 948.7 | 922.5 | 910.3 |
| 27.5° | 1367.6 | 1327.3 | 1238.6 | 1119.8 | 1011.0 | 932.5 | 886.2 | 862.0 | 852.0 |
| 30° | 1282.9 | 1244.7 | 1158.1 | 1041.3 | 936.5 | 864.0 | 821.8 | 799.6 | 791.5 |
| 32.5° | 1184.2 | 1152.1 | 1067.5 | 958.7 | 860.0 | 793.5 | 755.3 | 737.1 | 729.1 |
| 35° | 1081.5 | 1051.4 | 976.9 | 876.2 | 787.5 | 725.1 | 688.8 | 676.8 | 672.7 |
| 37.5° | 984.8 | 958.7 | 886.2 | 793.5 | 713.0 | 658.6 | 626.4 | 618.3 | 614.3 |
| 40° | 884.1 | 866.0 | 799.6 | 715.0 | 640.5 | 592.1 | 565.9 | 559.9 | 559.9 |
| 42.5° | 793.5 | 773.4 | 715.0 | 638.4 | 572.0 | 523.7 | 505.6 | 499.5 | 501.5 |
| 45° | 710.9 | 690.8 | 636.4 | 565.9 | 501.5 | 461.2 | 447.1 | 447.1 | 447.1 |
| 47.5° | 634.4 | 616.3 | 565.9 | 493.4 | 441.1 | 408.9 | 394.7 | 394.7 | 396.8 |
| 50° | 563.9 | 551.9 | 495.5 | 433.1 | 386.7 | 356.5 | 346.4 | 344.4 | 348.4 |
| 52.5° | 497.5 | 483.4 | 433.1 | 376.7 | 332.4 | 308.2 | 298.1 | 296.1 | 298.1 |
| 55° | 441.1 | 425.0 | 380.7 | 326.3 | 285.9 | 261.8 | 249.8 | 247.7 | 251.8 |
| 57.5° | 386.7 | 374.6 | 328.3 | 280.0 | 241.7 | 217.5 | 207.5 | 203.4 | 205.5 |
| 60° | 336.3 | 324.3 | 282.0 | 235.7 | 201.4 | 177.3 | 163.1 | 159.2 | 161.2 |
| 62.5° | 290.0 | 280.0 | 239.6 | 195.4 | 161.2 | 138.9 | 124.9 | 114.8 | 118.8 |
| 65° | 247.7 | 237.6 | 201.4 | 157.1 | 126.9 | 102.7 | 82.6 | 74.5 | 76.5 |
| 67.5° | 211.4 | 199.4 | 165.1 | 124.9 | 94.6 | 68.5 | 46.3 | 42.3 | 42.3 |
| 70° | 175.2 | 163.1 | 133.0 | 96.7 | 66.4 | 36.3 | 20.1 | 20.1 | 20.1 |
| 72.5° | 140.9 | 130.9 | 102.7 | 72.5 | 42.3 | 16.1 | 8.1 | 8.1 | 8.1 |
| 75° | 108.8 | 100.7 | 76.5 | 50.4 | 26.2 | 8.1 | 6.1 | 4.0 | 4.0 |
| 77.5° | 80.6 | 72.5 | 54.4 | 34.3 | 16.1 | 4.0 | 4.0 | 4.0 | 4.0 |
| 80° | 54.4 | 48.3 | 36.3 | 20.1 | 8.1 | 2.0 | 2.0 | 2.0 | 2.0 |
| 82.5° | 32.3 | 28.2 | 20.1 | 10.1 | 4.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 85° | 16.1 | 12.1 | 8.1 | 4.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 87.5° | 4.0 | 2.0 | 2.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report



— 0°-180° - - 45°-225° - - - - 90°-270°

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