

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: P582350

Luminaire Tested: **HC635D010-HM63040927-61RWWC**

Issue Date: 9/16/2021

Test Information

Test Method: LM-41-14
Report Number: P582350
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/16/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC635D010-HM63040927-61RWWC
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3060.1 lumens
Efficiency: N/A
Efficacy: 90.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.15 / 1.2
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

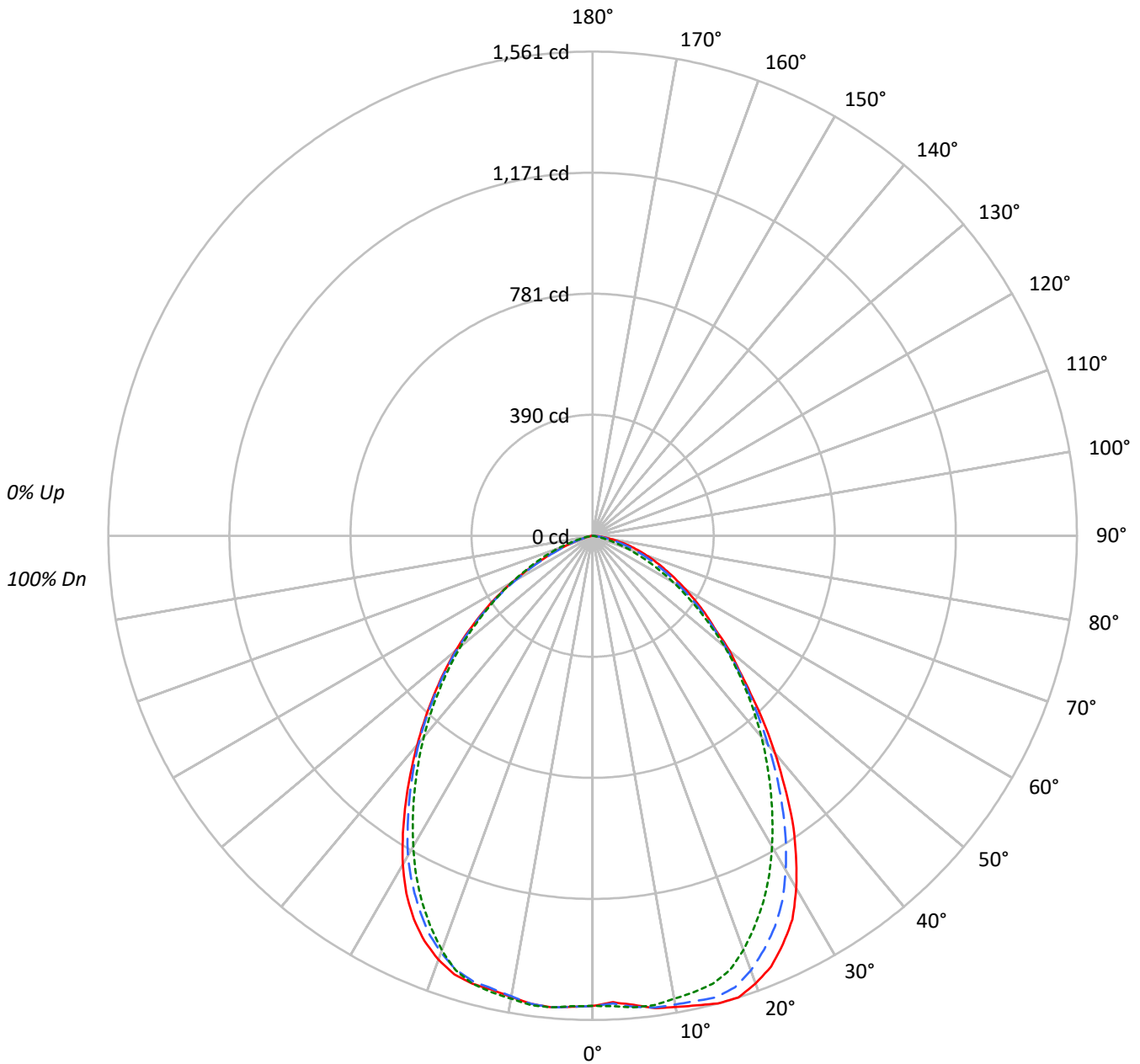
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 94 | 92 | 90 | 88 | | | 88 |
| 2 | 103 | 96 | 90 | 86 | 100 | 94 | 89 | 85 | 91 | 86 | 83 | 88 | 84 | 81 | 85 | 82 | 79 | 77 | | | 77 |
| 3 | 95 | 86 | 79 | 74 | 93 | 85 | 78 | 73 | 82 | 76 | 72 | 79 | 75 | 71 | 77 | 73 | 69 | 68 | | | 68 |
| 4 | 88 | 78 | 70 | 64 | 86 | 76 | 69 | 64 | 74 | 68 | 63 | 72 | 67 | 62 | 70 | 65 | 61 | 60 | | | 60 |
| 5 | 82 | 70 | 62 | 57 | 80 | 69 | 62 | 56 | 67 | 61 | 56 | 65 | 60 | 55 | 64 | 59 | 55 | 53 | | | 53 |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 56 | 50 | 62 | 55 | 50 | 60 | 54 | 49 | 58 | 53 | 49 | 47 | | | 47 |
| 7 | 71 | 59 | 51 | 45 | 69 | 58 | 50 | 45 | 56 | 50 | 45 | 55 | 49 | 45 | 54 | 48 | 44 | 42 | | | 42 |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 41 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | 38 |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | 35 |
| 10 | 59 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 | | | 32 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 83091 | 83091 | 83091 |
| 5° | 83524 | 83975 | 83975 |
| 10° | 85859 | 84373 | 84033 |
| 15° | 88587 | 84859 | 84859 |
| 20° | 89619 | 82916 | 84830 |
| 25° | 87834 | 78761 | 82493 |
| 30° | 83076 | 73195 | 77487 |
| 35° | 75188 | 66936 | 70236 |
| 40° | 65408 | 60556 | 62911 |
| 45° | 55890 | 53975 | 55890 |
| 50° | 49047 | 47299 | 49218 |
| 55° | 42799 | 39855 | 41413 |
| 60° | 37837 | 33100 | 32651 |
| 65° | 33570 | 26112 | 22376 |
| 70° | 29636 | 18449 | 13512 |
| 75° | 25248 | 10421 | 6524 |
| 80° | 18784 | 3252 | 1957 |
| 85° | 10378 | 1321 | 1321 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 145.4 | 4.8 |
| 10°-20° | 425.4 | 13.9 |
| 20°-30° | 621.3 | 20.3 |
| 30°-40° | 651.6 | 21.3 |
| 40°-50° | 548.9 | 17.9 |
| 50°-60° | 384.6 | 12.6 |
| 60°-70° | 206.2 | 6.7 |
| 70°-80° | 69.2 | 2.3 |
| 80°-90° | 7.6 | 0.2 |
| 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° | 1192.1 | 39.0 |
| 0°-40° | 1843.7 | 60.2 |
| 0°-60° | 2777.2 | 90.8 |
| 0°-90° | 3060.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3060.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1516 | 1516 | 1516 | 1516 | 1516 | |
| 5° | 1518 | 1524 | 1526 | 1526 | 1526 | 146 |
| 15° | 1561 | 1540 | 1495 | 1487 | 1495 | 440 |
| 25° | 1452 | 1390 | 1302 | 1325 | 1364 | 665 |
| 35° | 1124 | 1066 | 1000 | 1029 | 1050 | 697 |
| 45° | 721 | 709 | 696 | 715 | 721 | 562 |
| 55° | 448 | 433 | 417 | 425 | 433 | 403 |
| 65° | 259 | 236 | 201 | 166 | 172 | 258 |
| 75° | 119 | 92 | 49 | 31 | 31 | 126 |
| 85° | 16 | 8 | 2 | 2 | 2 | 23 |
| 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° | 1515.7 | 1515.7 | 1515.7 | 1515.7 | 1515.7 | 1515.7 | 1515.7 | 1515.7 | 1515.7 |
| 2.5° | 1505.4 | 1505.4 | 1509.6 | 1513.7 | 1517.8 | 1517.8 | 1519.9 | 1521.9 | 1519.9 |
| 5° | 1517.8 | 1517.8 | 1524.0 | 1526.0 | 1526.0 | 1524.0 | 1526.0 | 1526.0 | 1526.0 |
| 7.5° | 1536.2 | 1532.2 | 1534.3 | 1530.2 | 1526.0 | 1524.0 | 1521.9 | 1521.9 | 1521.9 |
| 10° | 1542.4 | 1538.3 | 1534.3 | 1526.0 | 1515.7 | 1509.6 | 1507.5 | 1509.6 | 1509.6 |
| 12.5° | 1550.6 | 1546.5 | 1536.2 | 1519.9 | 1507.5 | 1497.3 | 1495.2 | 1499.4 | 1499.4 |
| 15° | 1560.9 | 1556.8 | 1540.4 | 1513.7 | 1495.2 | 1484.9 | 1487.0 | 1491.1 | 1495.2 |
| 17.5° | 1560.9 | 1552.7 | 1526.0 | 1491.1 | 1468.6 | 1458.3 | 1466.5 | 1476.7 | 1482.9 |
| 20° | 1536.2 | 1528.1 | 1491.1 | 1448.0 | 1421.3 | 1415.1 | 1429.5 | 1448.0 | 1454.1 |
| 22.5° | 1503.4 | 1487.0 | 1443.8 | 1392.5 | 1363.8 | 1363.8 | 1384.3 | 1406.9 | 1415.1 |
| 25° | 1452.1 | 1439.7 | 1390.5 | 1330.8 | 1302.1 | 1300.0 | 1324.8 | 1355.6 | 1363.8 |
| 27.5° | 1394.6 | 1378.1 | 1324.8 | 1263.2 | 1232.4 | 1234.3 | 1261.1 | 1291.9 | 1300.0 |
| 30° | 1312.4 | 1291.9 | 1244.6 | 1185.1 | 1156.3 | 1164.5 | 1191.3 | 1213.8 | 1224.1 |
| 32.5° | 1220.0 | 1201.5 | 1158.4 | 1102.9 | 1078.3 | 1086.5 | 1109.1 | 1129.7 | 1137.8 |
| 35° | 1123.5 | 1102.9 | 1065.9 | 1016.7 | 1000.2 | 1008.4 | 1028.9 | 1045.4 | 1049.5 |
| 37.5° | 1014.6 | 1000.2 | 973.5 | 934.5 | 922.2 | 932.4 | 948.9 | 959.2 | 963.2 |
| 40° | 914.0 | 901.6 | 879.1 | 850.3 | 846.2 | 854.4 | 870.8 | 877.0 | 879.1 |
| 42.5° | 815.4 | 805.1 | 790.8 | 770.2 | 770.2 | 778.4 | 792.7 | 796.9 | 798.9 |
| 45° | 720.9 | 714.8 | 708.6 | 692.1 | 696.2 | 706.5 | 714.8 | 720.9 | 720.9 |
| 47.5° | 638.7 | 640.8 | 632.6 | 620.3 | 624.3 | 634.6 | 640.8 | 647.0 | 647.0 |
| 50° | 575.1 | 568.9 | 560.7 | 548.4 | 554.6 | 562.7 | 571.0 | 575.1 | 577.1 |
| 52.5° | 501.1 | 499.1 | 492.9 | 478.6 | 482.7 | 486.8 | 494.9 | 501.1 | 503.2 |
| 55° | 447.8 | 441.6 | 433.3 | 417.0 | 417.0 | 421.1 | 425.1 | 429.2 | 433.3 |
| 57.5° | 396.4 | 390.2 | 377.9 | 359.4 | 357.3 | 357.3 | 355.4 | 359.4 | 365.6 |
| 60° | 345.1 | 343.0 | 324.5 | 308.1 | 301.9 | 295.7 | 287.5 | 289.6 | 297.8 |
| 62.5° | 299.9 | 295.7 | 279.4 | 258.8 | 246.5 | 236.2 | 225.9 | 223.8 | 232.1 |
| 65° | 258.8 | 254.6 | 236.2 | 215.7 | 201.3 | 182.8 | 166.4 | 166.4 | 172.5 |
| 67.5° | 221.8 | 213.6 | 197.2 | 174.6 | 156.1 | 133.5 | 117.1 | 121.1 | 123.2 |
| 70° | 184.9 | 178.7 | 160.2 | 137.6 | 115.1 | 92.4 | 82.2 | 84.3 | 84.3 |
| 72.5° | 151.9 | 143.8 | 125.3 | 102.7 | 80.1 | 59.5 | 55.4 | 53.4 | 53.4 |
| 75° | 119.2 | 110.9 | 92.4 | 69.8 | 49.2 | 34.9 | 30.8 | 30.8 | 30.8 |
| 77.5° | 86.2 | 80.1 | 63.7 | 43.2 | 26.7 | 16.5 | 14.4 | 12.4 | 12.4 |
| 80° | 59.5 | 53.4 | 39.0 | 22.6 | 10.3 | 6.2 | 6.2 | 6.2 | 6.2 |
| 82.5° | 34.9 | 28.7 | 18.4 | 10.3 | 4.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| 85° | 16.5 | 12.4 | 8.2 | 4.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| 87.5° | 2.1 | 2.1 | 2.1 | 0.0 | 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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— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)