

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: HALO

Report Number: P626457

Luminaire Tested: HLBC6099FSD2W1EMW-4000K

Issue Date: 11/17/2022

Test Information

Test Method: LM-79-2019
Report Number: P626457
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2210273B001)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 11/17/2022
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: HLBC6099FSD2W1EMW-4000K
Description: 6IN CANLESS LED DOWNLIGHT WITH SELECTABLE CCT
Light Source: (1) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

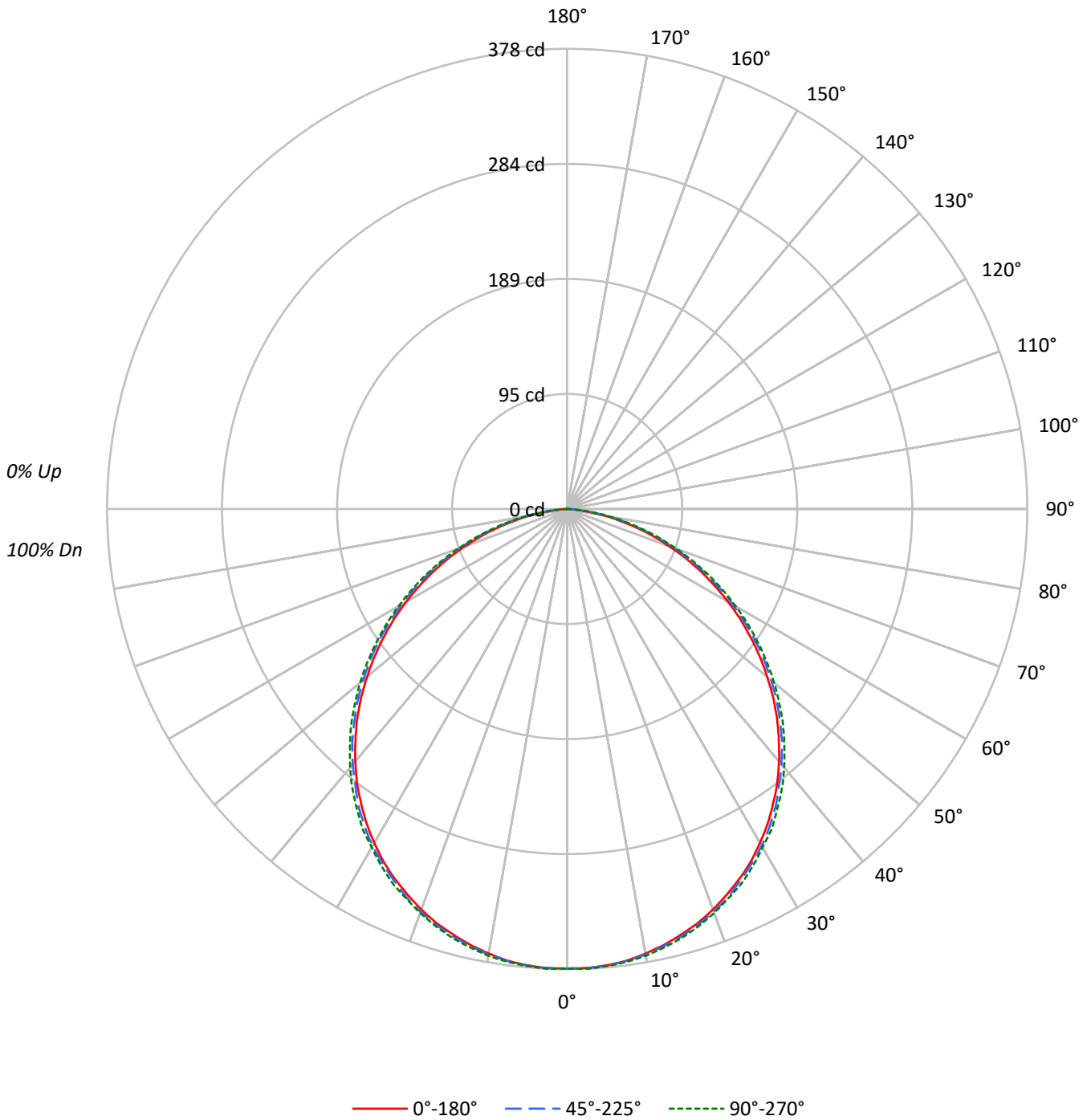
Lumens per Lamp: N/A
Luminaire Lumens: 1040.0 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.36
Luminous Opening: Circular (Dia: 0.5m x H: 0m)
CIE Type: Direct

Input Watts (W): 12.3
Input Voltage (V): 120
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 | 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 | 109 | 104 | 100 | 97 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 92 | 89 | 91 | 88 | 87 | 85 | | | | | 85 | | | |
| 2 | 99 | 91 | 85 | 79 | 97 | 89 | 83 | 78 | 86 | 81 | 76 | 83 | 78 | 74 | 80 | 76 | 73 | 71 | | | | | 71 | | | |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | 73 | 68 | 63 | 70 | 66 | 62 | 60 | | | | | 60 | | | |
| 4 | 83 | 71 | 62 | 56 | 81 | 70 | 62 | 55 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 53 | 51 | | | | | 51 | | | |
| 5 | 76 | 64 | 55 | 48 | 74 | 63 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 47 | 57 | 51 | 46 | 44 | | | | | 44 | | | |
| 6 | 71 | 57 | 48 | 42 | 69 | 56 | 48 | 42 | 55 | 47 | 41 | 53 | 46 | 41 | 51 | 45 | 41 | 39 | | | | | 39 | | | |
| 7 | 65 | 52 | 43 | 37 | 64 | 51 | 43 | 37 | 50 | 42 | 37 | 48 | 41 | 36 | 47 | 41 | 36 | 34 | | | | | 34 | | | |
| 8 | 61 | 47 | 39 | 33 | 59 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 37 | 33 | 43 | 37 | 32 | 31 | | | | | 31 | | | |
| 9 | 57 | 44 | 35 | 30 | 55 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 29 | 40 | 34 | 29 | 27 | | | | | 27 | | | |
| 10 | 53 | 40 | 32 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 27 | 25 | | | | | 25 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1923 | 1923 | 1923 |
| 5° | 1924 | 1925 | 1926 |
| 10° | 1918 | 1922 | 1927 |
| 15° | 1908 | 1916 | 1923 |
| 20° | 1898 | 1908 | 1914 |
| 25° | 1883 | 1892 | 1907 |
| 30° | 1863 | 1880 | 1888 |
| 35° | 1835 | 1856 | 1871 |
| 40° | 1800 | 1821 | 1844 |
| 45° | 1757 | 1781 | 1807 |
| 50° | 1700 | 1731 | 1759 |
| 55° | 1635 | 1675 | 1699 |
| 60° | 1556 | 1601 | 1630 |
| 65° | 1457 | 1510 | 1541 |
| 70° | 1322 | 1388 | 1419 |
| 75° | 1143 | 1224 | 1263 |
| 80° | 889 | 974 | 1035 |
| 85° | 356 | 503 | 643 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 1807 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 35.8 | 3.4 |
| 10°-20° | 102.5 | 9.9 |
| 20°-30° | 155.3 | 14.9 |
| 30°-40° | 186.4 | 17.9 |
| 40°-50° | 190.5 | 18.3 |
| 50°-60° | 168.1 | 16.2 |
| 60°-70° | 123.3 | 11.9 |
| 70°-80° | 65.3 | 6.3 |
| 80°-90° | 12.9 | 1.2 |
| 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° | 293.5 | 28.2 |
| 0°-40° | 479.9 | 46.1 |
| 0°-60° | 838.5 | 80.6 |
| 0°-90° | 1040.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1040.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 378 | 378 | 378 | 378 | 378 | |
| 5° | 376 | 376 | 376 | 376 | 377 | 36 |
| 15° | 362 | 362 | 363 | 363 | 365 | 102 |
| 25° | 335 | 336 | 337 | 338 | 339 | 154 |
| 35° | 295 | 297 | 298 | 300 | 301 | 185 |
| 45° | 244 | 246 | 247 | 248 | 251 | 188 |
| 55° | 184 | 187 | 189 | 190 | 191 | 165 |
| 65° | 121 | 123 | 125 | 126 | 128 | 120 |
| 75° | 58 | 60 | 62 | 62 | 64 | 62 |
| 85° | 6 | 7 | 9 | 9 | 11 | 11 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P626457

CATALOG NUMBER: HLBC6099FSD2W1EMW-4000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 377.5 | 377.5 | 377.5 | 377.5 | 377.5 |
| 2.5° | 377.4 | 376.8 | 377.5 | 376.8 | 378.1 |
| 5° | 376.3 | 375.8 | 376.5 | 375.9 | 376.8 |
| 7.5° | 374.2 | 373.8 | 374.5 | 374.1 | 375.3 |
| 10° | 370.8 | 371.0 | 371.6 | 371.1 | 372.7 |
| 12.5° | 366.8 | 367.0 | 367.7 | 367.7 | 368.9 |
| 15° | 361.9 | 362.4 | 363.3 | 363.4 | 364.7 |
| 17.5° | 356.7 | 357.2 | 358.1 | 357.8 | 359.3 |
| 20° | 350.2 | 350.6 | 352.1 | 352.5 | 353.1 |
| 22.5° | 342.8 | 344.5 | 345.2 | 345.2 | 346.1 |
| 25° | 335.1 | 335.6 | 336.7 | 337.9 | 339.3 |
| 27.5° | 326.7 | 327.4 | 328.3 | 329.4 | 330.6 |
| 30° | 316.8 | 317.7 | 319.6 | 320.1 | 321.0 |
| 32.5° | 306.6 | 308.2 | 309.5 | 310.0 | 312.3 |
| 35° | 295.1 | 297.1 | 298.5 | 299.6 | 301.0 |
| 37.5° | 283.6 | 285.2 | 286.0 | 287.5 | 289.8 |
| 40° | 270.8 | 271.9 | 273.9 | 274.6 | 277.3 |
| 42.5° | 257.4 | 259.1 | 261.2 | 262.3 | 264.1 |
| 45° | 243.9 | 245.5 | 247.3 | 248.5 | 250.9 |
| 47.5° | 229.6 | 231.3 | 233.5 | 234.5 | 236.4 |
| 50° | 214.6 | 216.6 | 218.5 | 219.6 | 222.0 |
| 52.5° | 199.7 | 201.8 | 203.9 | 204.8 | 206.8 |
| 55° | 184.1 | 186.7 | 188.6 | 189.9 | 191.4 |
| 57.5° | 168.7 | 170.7 | 172.8 | 174.4 | 176.0 |
| 60° | 152.8 | 155.0 | 157.2 | 158.4 | 160.0 |
| 62.5° | 136.7 | 139.4 | 141.3 | 142.4 | 144.0 |
| 65° | 120.9 | 122.8 | 125.3 | 126.2 | 127.9 |
| 67.5° | 104.9 | 107.1 | 108.9 | 110.0 | 111.5 |
| 70° | 88.8 | 91.0 | 93.2 | 93.5 | 95.3 |
| 72.5° | 73.3 | 75.3 | 77.5 | 77.9 | 79.6 |
| 75° | 58.1 | 60.2 | 62.2 | 62.5 | 64.2 |
| 77.5° | 43.6 | 45.5 | 47.3 | 47.7 | 49.3 |
| 80° | 30.3 | 31.8 | 33.2 | 33.8 | 35.3 |
| 82.5° | 17.3 | 18.8 | 20.3 | 20.9 | 22.2 |
| 85° | 6.1 | 7.4 | 8.6 | 9.3 | 11.0 |
| 87.5° | 2.1 | 2.4 | 2.7 | 2.9 | 3.2 |
| 90° | 0.1 | 0.1 | 0.1 | 0.2 | 0.5 |

(END OF REPORT)