

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

Report Number: P130266

Luminaire Tested: **HL612ICAT - HLM6927 - HL6WFL - 73PS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P130266
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33493)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HL612ICAT - HLM6927 - HL6WFL - 73PS
Description: HALO ALLSLOPE 6" 21W, Fresnel Glass Lens, White Polymer Trim Ring
"Dead Front", Wet Location - Showerlight using 55 Degree Optic at a 6-12
Pitch
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1143.0 lumens
Efficiency: N/A
Efficacy: 59.8 lumens/watt
Spacing Criteria (0/90/45): 1.45 / 0.91 / 1.12
Luminous Opening: Vertical Cylinder (Dia: 0.48' x H: 0.1')
CIE Type: Direct

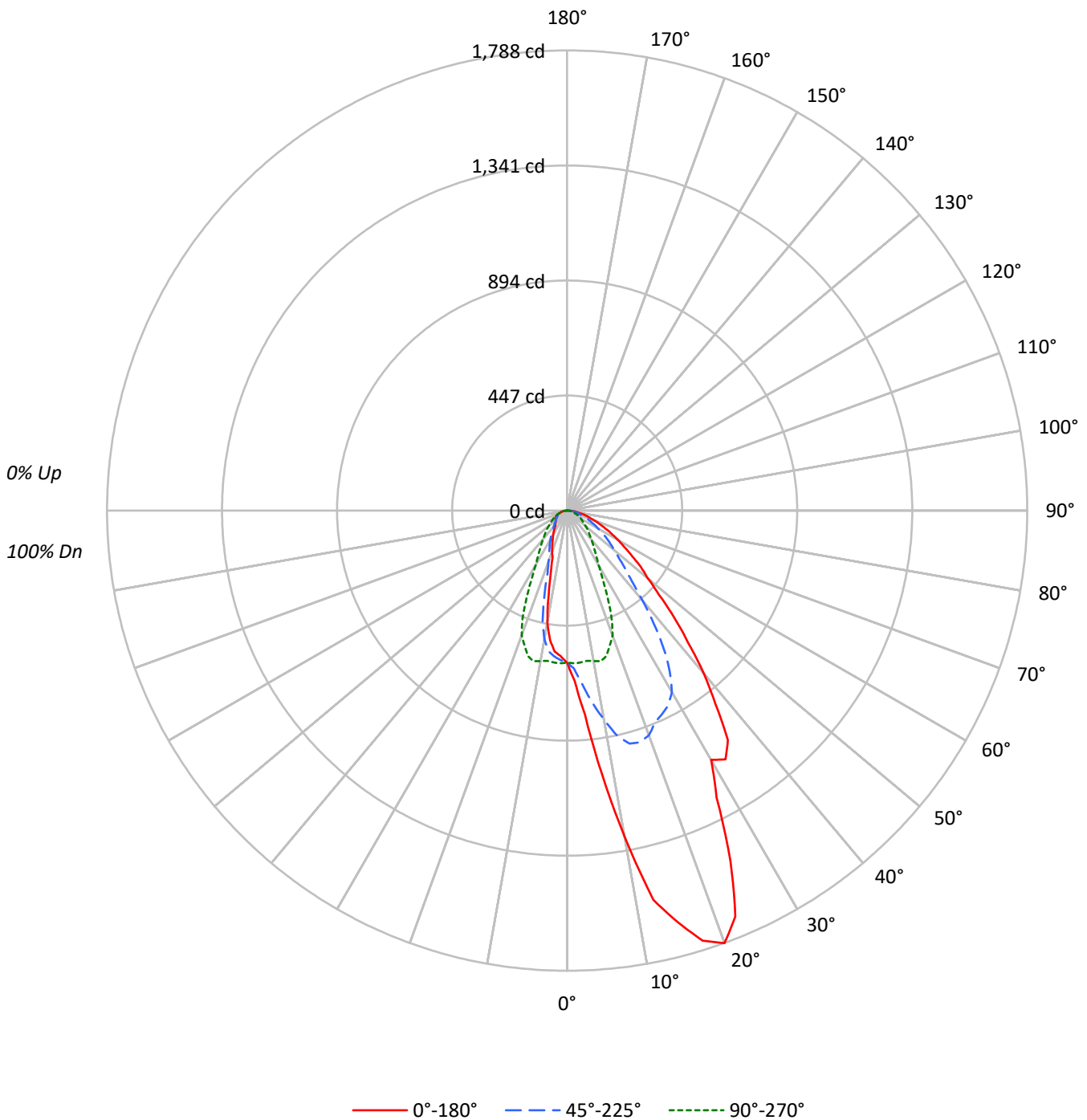
Input Watts (W): 19.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 92 | 90 | 88 |
| 2 | 103 | 96 | 90 | 86 | 100 | 94 | 89 | 85 | 91 | 87 | 83 | 88 | 84 | 81 | 85 | 82 | 79 | 77 |
| 3 | 95 | 87 | 80 | 75 | 93 | 85 | 79 | 74 | 82 | 77 | 73 | 80 | 75 | 71 | 77 | 74 | 70 | 68 |
| 4 | 89 | 79 | 71 | 66 | 87 | 78 | 71 | 65 | 75 | 69 | 64 | 73 | 68 | 64 | 71 | 66 | 63 | 61 |
| 5 | 83 | 72 | 64 | 59 | 81 | 71 | 64 | 58 | 69 | 63 | 58 | 67 | 61 | 57 | 65 | 60 | 57 | 55 |
| 6 | 77 | 66 | 58 | 53 | 76 | 65 | 58 | 53 | 63 | 57 | 52 | 62 | 56 | 52 | 60 | 55 | 51 | 49 |
| 7 | 73 | 61 | 53 | 48 | 71 | 60 | 53 | 48 | 59 | 52 | 47 | 57 | 51 | 47 | 56 | 51 | 47 | 45 |
| 8 | 68 | 56 | 49 | 44 | 67 | 56 | 49 | 44 | 54 | 48 | 43 | 53 | 47 | 43 | 52 | 47 | 43 | 41 |
| 9 | 64 | 52 | 45 | 40 | 63 | 52 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 40 | 49 | 43 | 40 | 38 |
| 10 | 61 | 49 | 42 | 37 | 59 | 48 | 42 | 37 | 47 | 41 | 37 | 47 | 41 | 37 | 46 | 40 | 37 | 35 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|-------|-------|
| 0° | 35283 | 35283 | 35283 |
| 5° | 46618 | 34707 | 32195 |
| 10° | 74475 | 34363 | 25580 |
| 15° | 95475 | 33829 | 13799 |
| 20° | 103590 | 29910 | 9939 |
| 25° | 88000 | 21741 | 7917 |
| 30° | 66851 | 14527 | 6460 |
| 35° | 66875 | 11421 | 5321 |
| 40° | 52596 | 9264 | 4607 |
| 45° | 39216 | 7897 | 4242 |
| 50° | 28860 | 6559 | 4034 |
| 55° | 23198 | 5635 | 4013 |
| 60° | 18575 | 5003 | 4031 |
| 65° | 14656 | 4220 | 4076 |
| 70° | 11379 | 3531 | 3450 |
| 75° | 8835 | 3034 | 3034 |
| 80° | 5992 | 2400 | 2619 |
| 85° | 4309 | 1476 | 1747 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 62.0 | 5.4 |
| 10°-20° | 197.6 | 17.3 |
| 20°-30° | 254.1 | 22.2 |
| 30°-40° | 232.3 | 20.3 |
| 40°-50° | 161.6 | 14.1 |
| 50°-60° | 110.3 | 9.6 |
| 60°-70° | 72.4 | 6.3 |
| 70°-80° | 39.2 | 3.4 |
| 80°-90° | 13.4 | 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° | 513.8 | 45.0 |
| 0°-40° | 746.1 | 65.3 |
| 0°-60° | 1018.0 | 89.1 |
| 0°-90° | 1143.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1143.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|-----|-----|------|------|------|
| 0° | 591 | 591 | 591 | 591 | 591 | |
| 5° | 796 | 678 | 593 | 569 | 550 | 92 |
| 15° | 1655 | 938 | 586 | 342 | 239 | 467 |
| 25° | 1502 | 872 | 371 | 163 | 135 | 675 |
| 35° | 1088 | 654 | 186 | 100 | 87 | 648 |
| 45° | 588 | 317 | 118 | 67 | 64 | 458 |
| 55° | 308 | 188 | 75 | 50 | 53 | 279 |
| 65° | 163 | 101 | 47 | 38 | 45 | 164 |
| 75° | 76 | 48 | 26 | 24 | 26 | 81 |
| 85° | 25 | 15 | 9 | 9 | 10 | 26 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P130266

CATALOG NUMBER: HL612ICAT - HLM6927 - HL6WFL - 73PS

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|-------|-------|-------|--------|-------|--------|-------|
| 0° | 591.1 | 591.1 | 591.1 | 591.1 | 591.1 | 591.1 | 591.1 | 591.1 | 591.1 |
| 2.5° | 661.0 | 631.7 | 614.2 | 606.2 | 593.5 | 578.4 | 581.6 | 565.7 | 566.5 |
| 5° | 796.1 | 741.3 | 678.5 | 624.5 | 592.7 | 566.5 | 568.9 | 549.8 | 549.8 |
| 7.5° | 1028.9 | 912.9 | 753.2 | 650.7 | 588.7 | 559.3 | 552.2 | 513.3 | 507.7 |
| 10° | 1286.3 | 1108.4 | 825.5 | 666.6 | 593.5 | 549.0 | 506.9 | 453.7 | 441.8 |
| 12.5° | 1549.3 | 1312.6 | 895.4 | 678.5 | 599.9 | 516.4 | 441.0 | 357.5 | 331.3 |
| 15° | 1655.0 | 1453.2 | 937.5 | 689.7 | 586.4 | 472.0 | 341.6 | 249.5 | 239.2 |
| 17.5° | 1751.9 | 1507.2 | 943.9 | 703.2 | 549.8 | 397.3 | 250.3 | 206.6 | 187.5 |
| 20° | 1788.5 | 1475.4 | 928.8 | 700.8 | 516.4 | 304.3 | 210.6 | 180.4 | 171.6 |
| 22.5° | 1707.4 | 1371.4 | 891.5 | 676.1 | 451.3 | 240.7 | 182.7 | 158.1 | 152.5 |
| 25° | 1501.7 | 1222.0 | 872.4 | 640.4 | 371.0 | 206.6 | 162.9 | 139.8 | 135.1 |
| 27.5° | 1257.7 | 1104.4 | 851.7 | 580.8 | 297.2 | 182.7 | 145.4 | 126.3 | 120.0 |
| 30° | 1118.7 | 1047.2 | 813.6 | 502.9 | 243.1 | 161.3 | 128.7 | 111.2 | 108.1 |
| 32.5° | 1145.7 | 1039.2 | 742.9 | 422.7 | 211.3 | 143.0 | 115.2 | 98.5 | 96.9 |
| 35° | 1088.5 | 950.3 | 653.9 | 333.7 | 185.9 | 125.5 | 100.1 | 87.4 | 86.6 |
| 37.5° | 945.5 | 820.8 | 552.2 | 274.9 | 164.5 | 111.2 | 89.0 | 78.7 | 73.9 |
| 40° | 825.5 | 702.4 | 452.9 | 237.6 | 145.4 | 99.3 | 80.2 | 72.3 | 72.3 |
| 42.5° | 696.0 | 593.5 | 371.0 | 210.6 | 131.1 | 89.8 | 73.9 | 67.5 | 67.5 |
| 45° | 588.0 | 488.6 | 317.0 | 187.5 | 118.4 | 81.0 | 66.7 | 62.0 | 63.6 |
| 47.5° | 484.7 | 410.0 | 273.3 | 168.4 | 105.7 | 73.1 | 62.0 | 58.0 | 59.6 |
| 50° | 409.2 | 351.2 | 239.9 | 148.6 | 93.0 | 65.9 | 57.2 | 55.6 | 57.2 |
| 52.5° | 361.5 | 305.9 | 211.3 | 130.3 | 83.4 | 60.4 | 53.2 | 54.0 | 55.6 |
| 55° | 307.5 | 265.4 | 187.5 | 114.4 | 74.7 | 55.6 | 50.1 | 50.8 | 53.2 |
| 57.5° | 263.0 | 229.6 | 160.5 | 100.9 | 66.7 | 50.8 | 46.9 | 49.3 | 51.6 |
| 60° | 227.2 | 199.4 | 139.0 | 89.0 | 61.2 | 46.1 | 43.7 | 47.7 | 49.3 |
| 62.5° | 194.7 | 171.6 | 120.0 | 76.3 | 53.2 | 42.1 | 42.1 | 45.3 | 48.5 |
| 65° | 162.9 | 143.8 | 100.9 | 65.2 | 46.9 | 38.1 | 38.1 | 42.9 | 45.3 |
| 67.5° | 135.9 | 120.8 | 85.0 | 57.2 | 41.3 | 34.2 | 34.2 | 37.3 | 41.3 |
| 70° | 112.8 | 99.3 | 70.7 | 47.7 | 35.0 | 30.2 | 30.2 | 31.8 | 34.2 |
| 72.5° | 91.4 | 80.2 | 59.6 | 39.7 | 30.2 | 25.4 | 27.0 | 28.6 | 29.4 |
| 75° | 76.3 | 65.9 | 48.5 | 32.6 | 26.2 | 22.2 | 23.8 | 24.6 | 26.2 |
| 77.5° | 59.6 | 51.6 | 38.1 | 27.0 | 22.2 | 19.1 | 19.9 | 21.5 | 22.2 |
| 80° | 43.7 | 38.1 | 28.6 | 20.7 | 17.5 | 15.9 | 16.7 | 19.1 | 19.1 |
| 82.5° | 33.4 | 30.2 | 20.7 | 15.9 | 13.5 | 11.9 | 12.7 | 13.5 | 14.3 |
| 85° | 25.4 | 19.9 | 15.1 | 10.3 | 8.7 | 7.9 | 8.7 | 9.5 | 10.3 |
| 87.5° | 15.1 | 12.7 | 9.5 | 6.4 | 5.6 | 4.8 | 4.8 | 5.6 | 5.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)