

Scaled data based on original data using  
LM-46-04 Photometric Testing of Indoor Luminaires Using High Intensity Discharge or  
Incandescent Filament Lamps (Reaffirmed 2012)

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: H35027

Luminaire Tested: **H800-801P**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-46-04  
Report Number: H35027  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: H800-801P  
Description: HALO PL RECESSED DOWNLIGHT  
SPECULAR REFLECTOR WITH DROP OPAL GLASS LENS  
HORIZONTAL LAMP SETTING  
Light Source: (2) 13W/TT 13 WATTS 900 LUMENS EACH  
10mm TWIN TUBE COMPACT FLUORESCENT  
GX23 D-2 BASE  
Ballast/Driver: -

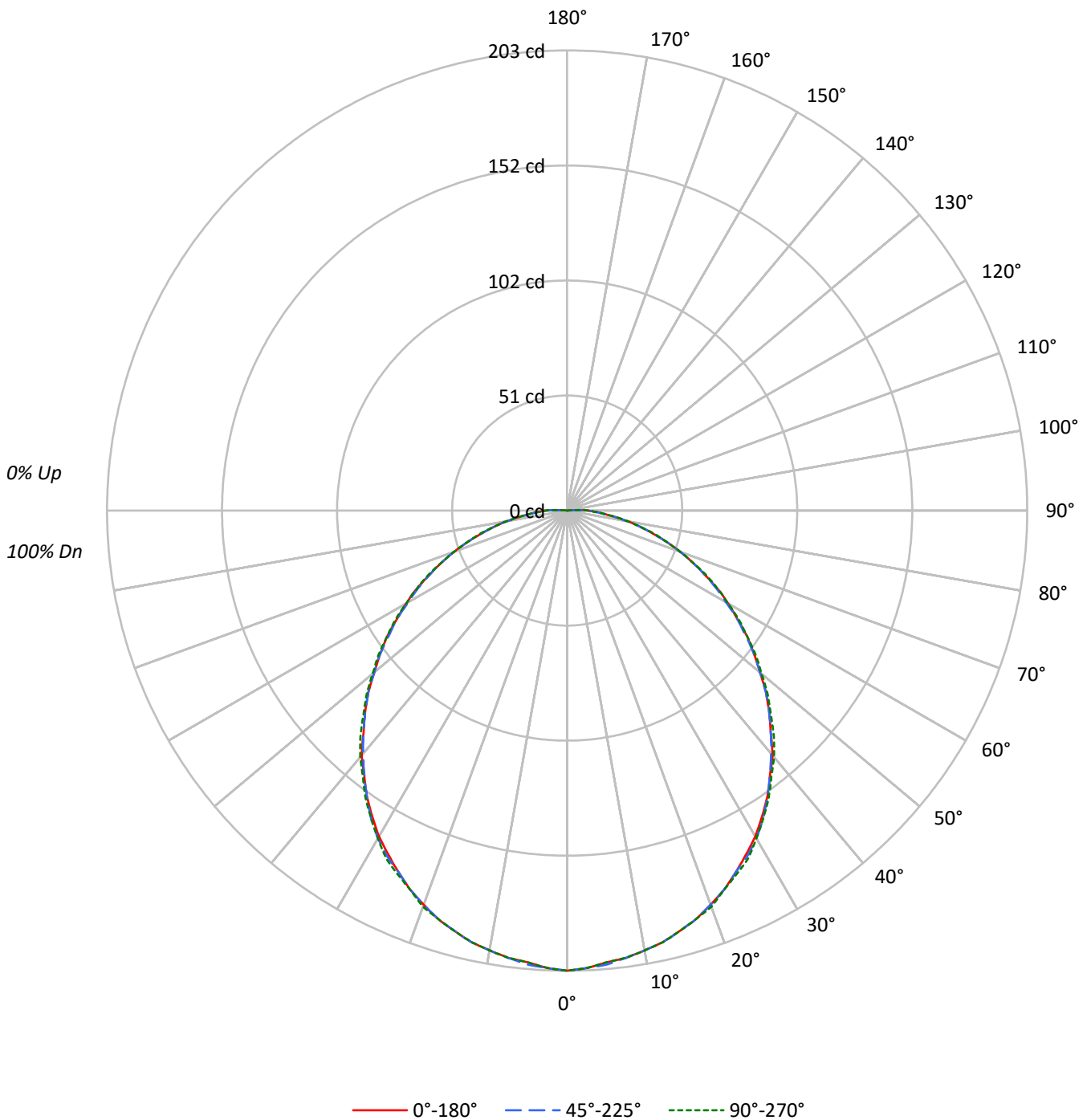
**Summary**

Lumens per Lamp: 900 (2 lamps)  
Luminaire Lumens: 564.2 lumens  
Efficiency: 31.3%  
Efficacy: 15.7 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.22 / 1.33  
Luminous Opening: (L: 0' x W: -0.46' x H: 0.04'  
CIE Type: Direct

Input Watts (W): 36  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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 |    |    |    |    |
| RW  | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 |    |
| RCR |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 37 | 37 | 37 | 37 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 33 | 33 | 33 | 32 | 32 | 32 | 31 | 31 | 31 | 31 |
| 1   | 34 | 32 | 31 | 30 | 33 | 32 | 30 | 29 | 30 | 29 | 28 | 29 | 28 | 27 | 28 | 27 | 26 | 26 | 26 | 26 | 26 |
| 2   | 31 | 28 | 26 | 24 | 30 | 28 | 25 | 24 | 26 | 25 | 23 | 25 | 24 | 23 | 24 | 23 | 22 | 21 | 21 | 21 | 21 |
| 3   | 28 | 25 | 22 | 20 | 27 | 24 | 22 | 20 | 23 | 21 | 19 | 22 | 21 | 19 | 21 | 20 | 19 | 18 | 18 | 18 | 18 |
| 4   | 26 | 22 | 19 | 17 | 25 | 21 | 19 | 17 | 21 | 18 | 17 | 20 | 18 | 16 | 19 | 17 | 16 | 15 | 15 | 15 | 15 |
| 5   | 24 | 20 | 17 | 15 | 23 | 19 | 17 | 15 | 19 | 16 | 14 | 18 | 16 | 14 | 17 | 15 | 14 | 13 | 13 | 13 | 13 |
| 6   | 22 | 18 | 15 | 13 | 21 | 17 | 15 | 13 | 17 | 14 | 13 | 16 | 14 | 12 | 16 | 14 | 12 | 12 | 12 | 12 | 12 |
| 7   | 20 | 16 | 13 | 11 | 20 | 16 | 13 | 11 | 15 | 13 | 11 | 15 | 13 | 11 | 14 | 12 | 11 | 10 | 10 | 10 | 10 |
| 8   | 19 | 15 | 12 | 10 | 18 | 14 | 12 | 10 | 14 | 12 | 10 | 14 | 11 | 10 | 13 | 11 | 10 | 9  | 9  | 9  | 9  |
| 9   | 18 | 13 | 11 | 9  | 17 | 13 | 11 | 9  | 13 | 11 | 9  | 12 | 10 | 9  | 12 | 10 | 9  | 8  | 8  | 8  | 8  |
| 10  | 17 | 12 | 10 | 8  | 16 | 12 | 10 | 8  | 12 | 10 | 8  | 12 | 10 | 8  | 11 | 9  | 8  | 8  | 8  | 8  | 8  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°                                       | 45° | 90° |
|-----|--|-----|-----|
| 0°  | Luminous shape not found,                |     |     |
| 5°  | reference photometric report, or contact |     |     |
| 10° | the photometric lab for calculations.    |     |     |
| 15° |  |     |     |
| 20° |  |     |     |
| 25° |  |     |     |
| 30° |  |     |     |
| 35° |  |     |     |
| 40° |  |     |     |
| 45° |  |     |     |
| 50° |  |     |     |
| 55° |  |     |     |
| 60° |  |     |     |
| 65° |  |     |     |
| 70° |  |     |     |
| 75° |  |     |     |
| 80° |  |     |     |
| 85° |  |     |     |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture | % Lamp |
|-----------|--------|-----------|--------|
| 0°-10°    | 19.0   | 3.4       | 1.1    |
| 10°-20°   | 54.2   | 9.6       | 3.0    |
| 20°-30°   | 81.4   | 14.4      | 4.5    |
| 30°-40°   | 96.5   | 17.1      | 5.4    |
| 40°-50°   | 97.6   | 17.3      | 5.4    |
| 50°-60°   | 86.5   | 15.3      | 4.8    |
| 60°-70°   | 66.6   | 11.8      | 3.7    |
| 70°-80°   | 41.9   | 7.4       | 2.3    |
| 80°-90°   | 18.4   | 3.3       | 1.0    |
| 90°-100°  | 2.1    | 0.4       | 0.1    |
| 100°-110° | 0.0    | 0.0       | 0.0    |
| 110°-120° | 0.0    | 0.0       | 0.0    |
| 120°-130° | 0.0    | 0.0       | 0.0    |
| 130°-140° | 0.0    | 0.0       | 0.0    |
| 140°-150° | 0.0    | 0.0       | 0.0    |
| 150°-160° | 0.0    | 0.0       | 0.0    |
| 160°-170° | 0.0    | 0.0       | 0.0    |
| 170°-180° | 0.0    | 0.0       | 0.0    |
| 0°-30°    | 154.6  | 27.4      | 8.6    |
| 0°-40°    | 251.1  | 44.5      | 13.9   |
| 0°-60°    | 435.2  | 77.1      | 24.2   |
| 0°-90°    | 562.0  | 99.6      | 31.2   |
| 90°-120°  | 2.1    | 0.4       | 0.1    |
| 90°-150°  | 2.1    | 0.4       | 0.1    |
| 90°-180°  | 2.0    | 0.4       | 0.1    |
| 0°-180°   | 564.2  | 100.0     | 31.3   |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 203 | 203   | 203 | 203   | 203 |      |
| 5°   | 200 | 201   | 201 | 201   | 200 | 19   |
| 15°  | 192 | 192   | 192 | 192   | 192 | 54   |
| 25°  | 176 | 176   | 176 | 177   | 177 | 81   |
| 35°  | 154 | 154   | 154 | 155   | 155 | 96   |
| 45°  | 126 | 127   | 126 | 127   | 127 | 97   |
| 55°  | 97  | 97    | 96  | 97    | 97  | 86   |
| 65°  | 67  | 67    | 67  | 67    | 68  | 67   |
| 75°  | 39  | 40    | 39  | 40    | 40  | 42   |
| 85°  | 16  | 16    | 16  | 16    | 16  | 16   |
| 90°  | 9   | 9     | 9   | 9     | 10  | 5    |
| 95°  | 0   | 0     | 0   | 0     | 1   | 1    |
| 105° | 0   | 0     | 0   | 0     | 0   | 0    |
| 115° | 0   | 0     | 0   | 0     | 0   | 0    |
| 125° | 0   | 0     | 0   | 0     | 0   | 0    |
| 135° | 0   | 0     | 0   | 0     | 0   | 0    |
| 145° | 0   | 0     | 0   | 0     | 0   | 0    |
| 155° | 0   | 0     | 0   | 0     | 0   | 0    |
| 165° | 0   | 0     | 0   | 0     | 0   | 0    |
| 175° | 0   | 0     | 0   | 0     | 0   | 0    |
| 180° | 0   | 0     | 0   | 0     | 0   | 0    |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°  | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 0°     | 203 | 203   | 203 | 203   | 203 |
| 2.5°   | 202 | 202   | 202 | 202   | 202 |
| 5°     | 200 | 201   | 201 | 201   | 200 |
| 7.5°   | 199 | 199   | 199 | 199   | 199 |
| 10°    | 197 | 197   | 197 | 197   | 197 |
| 12.5°  | 195 | 195   | 195 | 195   | 195 |
| 15°    | 192 | 192   | 192 | 192   | 192 |
| 17.5°  | 189 | 189   | 189 | 189   | 189 |
| 20°    | 185 | 185   | 185 | 185   | 186 |
| 22.5°  | 181 | 181   | 181 | 181   | 181 |
| 25°    | 176 | 176   | 176 | 177   | 177 |
| 27.5°  | 171 | 172   | 172 | 172   | 173 |
| 30°    | 166 | 166   | 167 | 167   | 167 |
| 32.5°  | 160 | 161   | 161 | 161   | 161 |
| 35°    | 154 | 154   | 154 | 155   | 155 |
| 37.5°  | 147 | 147   | 147 | 148   | 148 |
| 40°    | 141 | 141   | 140 | 141   | 142 |
| 42.5°  | 133 | 134   | 133 | 134   | 135 |
| 45°    | 126 | 127   | 126 | 127   | 127 |
| 47.5°  | 119 | 119   | 119 | 119   | 120 |
| 50°    | 111 | 112   | 111 | 112   | 112 |
| 52.5°  | 104 | 104   | 104 | 104   | 105 |
| 55°    | 97  | 97    | 96  | 97    | 97  |
| 57.5°  | 89  | 89    | 89  | 89    | 90  |
| 60°    | 82  | 82    | 81  | 82    | 82  |
| 62.5°  | 75  | 75    | 74  | 75    | 75  |
| 65°    | 67  | 67    | 67  | 67    | 68  |
| 67.5°  | 60  | 60    | 60  | 60    | 60  |
| 70°    | 53  | 53    | 53  | 53    | 53  |
| 72.5°  | 46  | 46    | 46  | 46    | 46  |
| 75°    | 39  | 40    | 39  | 40    | 40  |
| 77.5°  | 33  | 33    | 33  | 33    | 33  |
| 80°    | 27  | 27    | 27  | 27    | 27  |
| 82.5°  | 21  | 21    | 21  | 21    | 21  |
| 85°    | 16  | 16    | 16  | 16    | 16  |
| 87.5°  | 13  | 13    | 12  | 12    | 12  |
| 90°    | 9   | 9     | 9   | 9     | 10  |
| 92.5°  | 5   | 3     | 1   | 3     | 6   |
| 95°    | 0   | 0     | 0   | 0     | 1   |
| 97.5°  | 0   | 0     | 0   | 0     | 0   |
| 100°   | 0   | 0     | 0   | 0     | 0   |
| 102.5° | 0   | 0     | 0   | 0     | 0   |
| 105°   | 0   | 0     | 0   | 0     | 0   |
| 107.5° | 0   | 0     | 0   | 0     | 0   |
| 110°   | 0   | 0     | 0   | 0     | 0   |



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**CANDELA DISTRIBUTION (continued):**

|        | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|----|-------|-----|-------|-----|
| 112.5° | 0  | 0     | 0   | 0     | 0   |
| 115°   | 0  | 0     | 0   | 0     | 0   |
| 117.5° | 0  | 0     | 0   | 0     | 0   |
| 120°   | 0  | 0     | 0   | 0     | 0   |
| 122.5° | 0  | 0     | 0   | 0     | 0   |
| 125°   | 0  | 0     | 0   | 0     | 0   |
| 127.5° | 0  | 0     | 0   | 0     | 0   |
| 130°   | 0  | 0     | 0   | 0     | 0   |
| 132.5° | 0  | 0     | 0   | 0     | 0   |
| 135°   | 0  | 0     | 0   | 0     | 0   |
| 137.5° | 0  | 0     | 0   | 0     | 0   |
| 140°   | 0  | 0     | 0   | 0     | 0   |
| 142.5° | 0  | 0     | 0   | 0     | 0   |
| 145°   | 0  | 0     | 0   | 0     | 0   |
| 147.5° | 0  | 0     | 0   | 0     | 0   |
| 150°   | 0  | 0     | 0   | 0     | 0   |
| 152.5° | 0  | 0     | 0   | 0     | 0   |
| 155°   | 0  | 0     | 0   | 0     | 0   |
| 157.5° | 0  | 0     | 0   | 0     | 0   |
| 160°   | 0  | 0     | 0   | 0     | 0   |
| 162.5° | 0  | 0     | 0   | 0     | 0   |
| 165°   | 0  | 0     | 0   | 0     | 0   |
| 167.5° | 0  | 0     | 0   | 0     | 0   |
| 170°   | 0  | 0     | 0   | 0     | 0   |
| 172.5° | 0  | 0     | 0   | 0     | 0   |
| 175°   | 0  | 0     | 0   | 0     | 0   |
| 177.5° | 0  | 0     | 0   | 0     | 0   |
| 180°   | 0  | 0     | 0   | 0     | 0   |

(END OF REPORT)