

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 COMMERCIAL

Report Number: P838567

Luminaire Tested: HCSQ635D010-HM63040935-61SQMB

Issue Date: 5/21/2024

**Test Information**

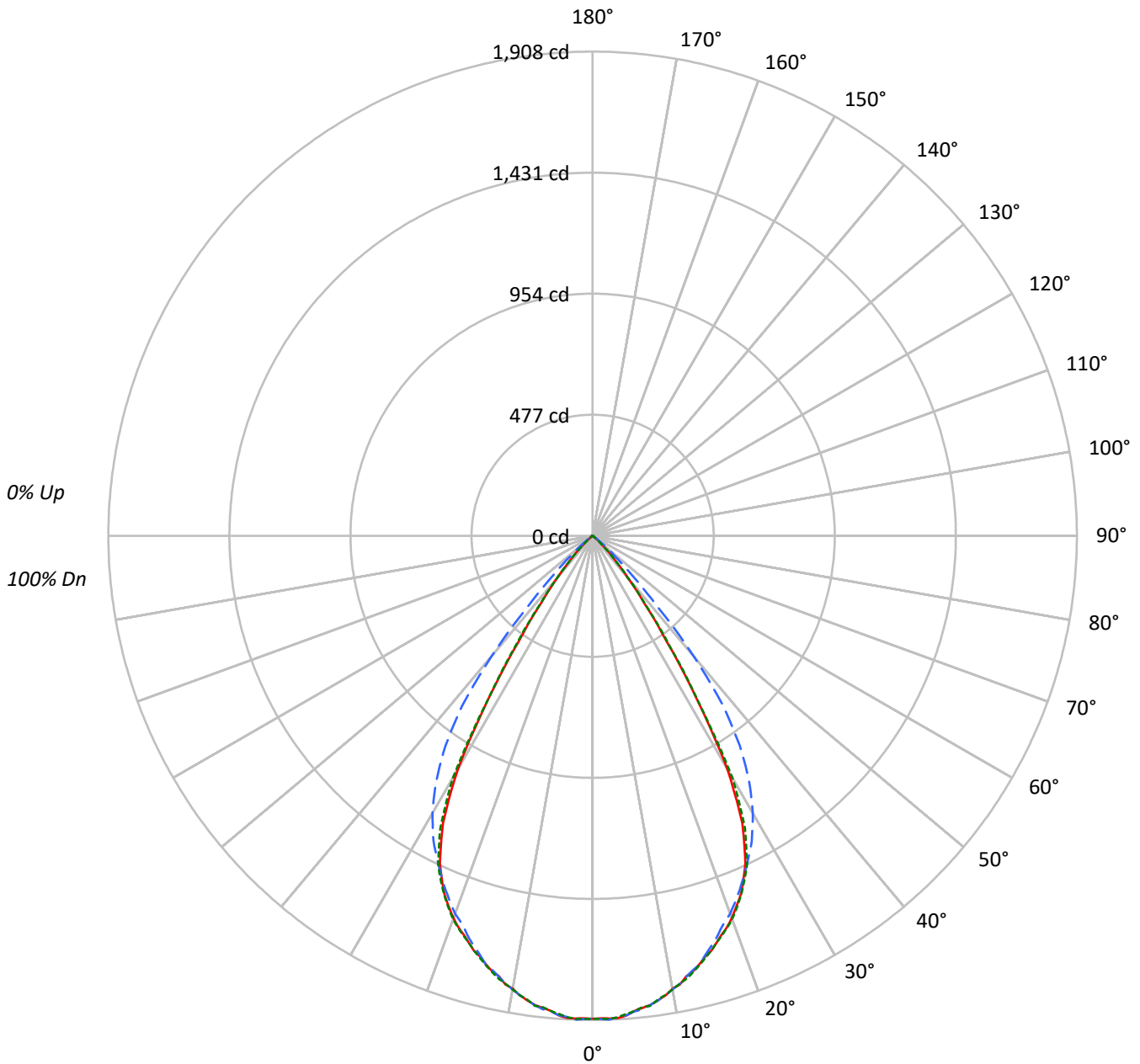
Test Method: LM-79-2019  
Report Number: P838567  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ635D010-HM63040935-61SQMB  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1892.0 lumens  
Efficiency: N/A  
Efficacy: 55.6 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.01 / 1.03  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 34  
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: 24 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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								
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93								
2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87								
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81								
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75								
5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70								
6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65								
7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60								
8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56								
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53								
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50								

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

	0°	45°	90°
0°	81952	81952	81952
5°	81262	81332	81262
10°	79229	79365	79365
15°	76503	76298	76713
20°	73471	72618	73681
25°	67654	68167	68315
30°	52734	62727	54733
35°	26738	53150	27716
40°	12168	34763	12168
45°	4707	13085	4615
50°	723	4140	723
55°	233	811	233
60°	129	129	129
65°	153	0	153
70°	0	0	189
75°	0	0	250
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 13085 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	177.7	9.4
10°-20°	482.0	25.5
20°-30°	649.7	34.3
30°-40°	456.8	24.1
40°-50°	116.6	6.2
50°-60°	8.0	0.4
60°-70°	0.9	0.0
70°-80°	0.1	0.0
80°-90°	0.0	0.0
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°	1309.5	69.2
0°-40°	1766.3	93.4
0°-60°	1891.0	99.9
0°-90°	1892.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1892.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1903	1903	1903	1903	1903	
5°	1880	1883	1882	1883	1880	178
15°	1716	1713	1712	1716	1721	483
25°	1424	1429	1435	1440	1438	636
35°	509	674	1011	691	527	342
45°	77	116	215	118	76	67
55°	3	3	11	3	3	4
65°	2	2	0	2	2	1
75°	0	0	0	0	2	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1903.4	1903.4	1903.4	1903.4	1903.4
1°	1901.9	1903.4	1905.0	1905.0	1903.4
2°	1903.4	1898.8	1908.1	1903.4	1905.0
3°	1903.4	1894.1	1898.8	1901.9	1900.3
4°	1895.7	1889.5	1894.1	1892.6	1889.5
5°	1880.2	1883.3	1881.8	1883.3	1880.2
6°	1870.9	1874.0	1877.1	1872.5	1867.9
7°	1863.2	1861.7	1863.2	1866.3	1866.3
8°	1849.3	1852.4	1849.3	1850.8	1846.2
9°	1833.8	1833.8	1833.8	1836.9	1832.3
10°	1812.2	1819.9	1815.3	1818.4	1815.3
11°	1801.4	1798.3	1798.3	1799.8	1798.3
12°	1775.1	1778.2	1776.6	1779.7	1784.4
13°	1761.2	1762.7	1756.5	1764.3	1764.3
14°	1739.5	1738.0	1741.1	1739.5	1742.6
15°	1716.3	1713.2	1711.7	1716.3	1721.0
16°	1699.3	1691.6	1686.9	1693.1	1699.3
17°	1674.6	1666.8	1660.7	1673.0	1674.6
18°	1649.8	1646.7	1631.3	1646.7	1654.5
19°	1629.7	1618.9	1605.0	1622.0	1631.3
20°	1603.5	1594.2	1584.9	1594.2	1608.1
22.5°	1527.7	1520.0	1512.2	1523.0	1530.8
25°	1424.1	1428.7	1434.9	1439.5	1438.0
27.5°	1277.2	1318.9	1357.6	1332.9	1300.4
30°	1060.7	1165.9	1261.7	1182.9	1100.9
32.5°	768.5	947.8	1147.3	983.4	776.2
35°	508.7	674.2	1011.2	691.2	527.3
37.5°	330.9	453.0	844.2	454.6	346.4
40°	216.5	295.3	618.5	301.5	216.5
42.5°	133.0	187.1	375.7	194.8	133.0
45°	77.3	116.0	214.9	117.5	75.8
47.5°	35.6	63.4	122.2	61.8	37.1
50°	10.8	27.8	61.8	27.8	10.8
52.5°	4.6	7.7	29.4	7.7	4.6
55°	3.1	3.1	10.8	3.1	3.1
57.5°	3.1	1.5	3.1	3.1	3.1
60°	1.5	1.5	1.5	1.5	1.5
62.5°	1.5	1.5	1.5	1.5	1.5
65°	1.5	1.5	0.0	1.5	1.5
67.5°	1.5	0.0	0.0	0.0	1.5
70°	0.0	0.0	0.0	0.0	1.5
72.5°	0.0	0.0	0.0	0.0	1.5
75°	0.0	0.0	0.0	0.0	1.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

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

Scaled Data Report



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Scaled Data Report





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

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77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0

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