

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: P838547

Luminaire Tested: HCSQ635D010-HM63040835-61SQMB

Issue Date: 5/21/2024



**Test Information**

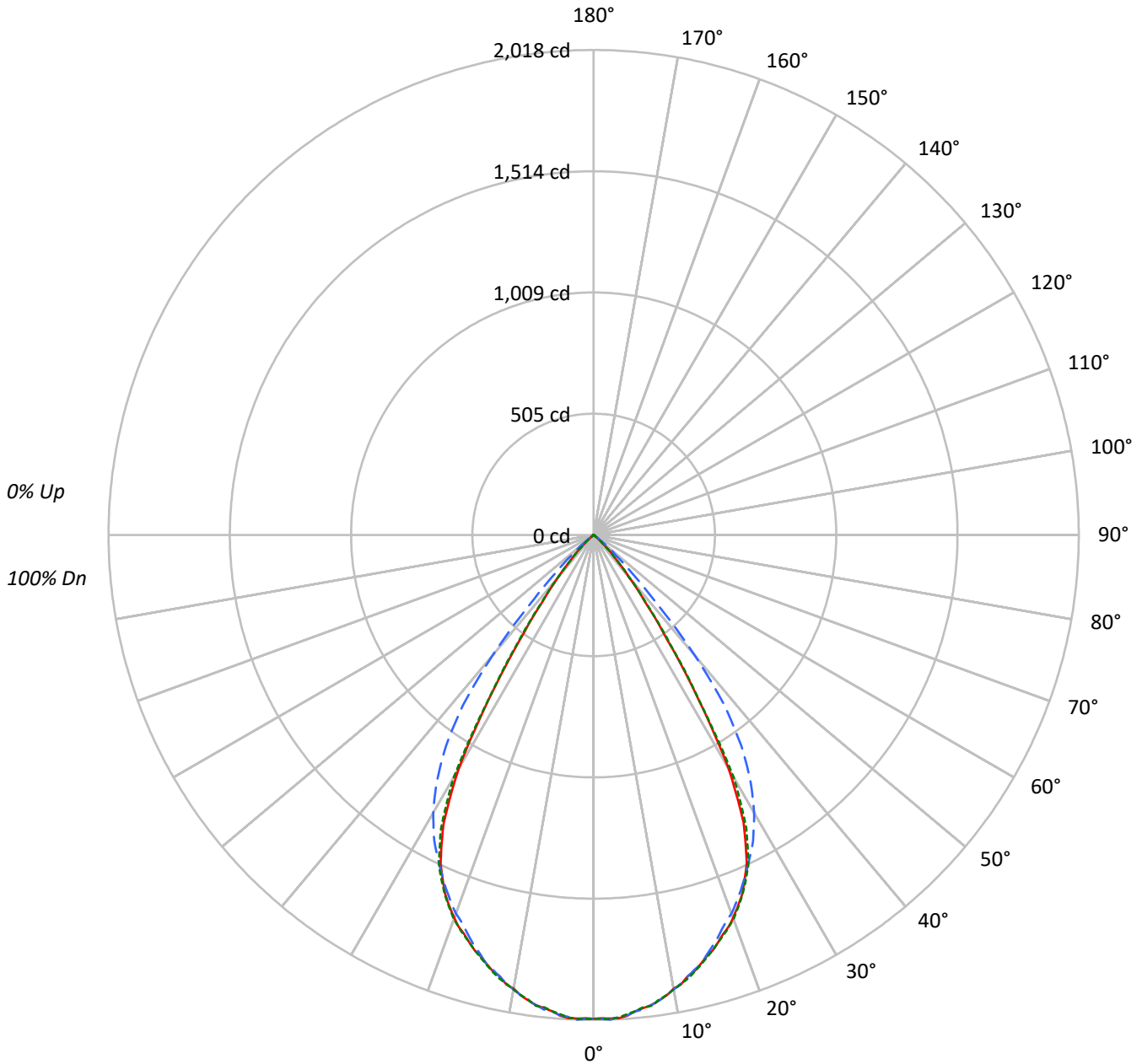
Test Method: LM-79-2019  
Report Number: P838547  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ635D010-HM63040835-61SQMB  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2001.5 lumens  
Efficiency: N/A  
Efficacy: 58.9 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 (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: 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	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°	86693	86693	86693
5°	85965	86034	85965
10°	83811	83955	83955
15°	80929	80711	81148
20°	77718	76820	77942
25°	71569	72110	72267
30°	55787	66356	57900
35°	28283	56225	29319
40°	12871	36775	12871
45°	4981	13846	4877
50°	764	4381	764
55°	248	856	248
60°	138	138	138
65°	163	0	163
70°	0	0	201
75°	0	0	266
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 13846 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	188.0	9.4
10°-20°	509.9	25.5
20°-30°	687.3	34.3
30°-40°	483.3	24.1
40°-50°	123.4	6.2
50°-60°	8.5	0.4
60°-70°	1.0	0.1
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°	1385.2	69.2
0°-40°	1868.5	93.4
0°-60°	2000.4	99.9
0°-90°	2001.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2001.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2014	2014	2014	2014	2014	
5°	1989	1992	1991	1992	1989	188
15°	1816	1812	1811	1816	1820	511
25°	1506	1511	1518	1523	1521	673
35°	538	713	1070	731	558	362
45°	82	123	227	124	80	71
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°	2013.5	2013.5	2013.5	2013.5	2013.5
1°	2011.9	2013.5	2015.2	2015.2	2013.5
2°	2013.5	2008.6	2018.4	2013.5	2015.2
3°	2013.5	2003.7	2008.6	2011.9	2010.3
4°	2005.4	1998.8	2003.7	2002.1	1998.8
5°	1989.0	1992.3	1990.6	1992.3	1989.0
6°	1979.2	1982.5	1985.7	1980.8	1975.9
7°	1971.0	1969.4	1971.0	1974.3	1974.3
8°	1956.3	1959.6	1956.3	1957.9	1953.0
9°	1939.9	1939.9	1939.9	1943.2	1938.3
10°	1917.0	1925.2	1920.3	1923.6	1920.3
11°	1905.6	1902.3	1902.3	1903.9	1902.3
12°	1877.8	1881.0	1879.4	1882.7	1887.6
13°	1863.1	1864.7	1858.1	1866.3	1866.3
14°	1840.2	1838.5	1841.8	1840.2	1843.4
15°	1815.6	1812.3	1810.7	1815.6	1820.5
16°	1797.6	1789.4	1784.5	1791.1	1797.6
17°	1771.5	1763.3	1756.7	1769.8	1771.5
18°	1745.3	1742.0	1725.7	1742.0	1750.2
19°	1724.0	1712.6	1697.8	1715.8	1725.7
20°	1696.2	1686.4	1676.6	1686.4	1701.1
22.5°	1616.1	1607.9	1599.7	1611.2	1619.3
25°	1506.5	1511.4	1517.9	1522.8	1521.2
27.5°	1351.1	1395.2	1436.1	1410.0	1375.6
30°	1122.1	1233.3	1334.7	1251.3	1164.6
32.5°	812.9	1002.7	1213.7	1040.3	821.1
35°	538.1	713.2	1069.7	731.2	557.8
37.5°	350.0	479.3	893.1	480.9	366.4
40°	229.0	312.4	654.3	319.0	229.0
42.5°	140.7	197.9	397.5	206.1	140.7
45°	81.8	122.7	227.4	124.3	80.1
47.5°	37.6	67.1	129.2	65.4	39.3
50°	11.4	29.4	65.4	29.4	11.4
52.5°	4.9	8.2	31.1	8.2	4.9
55°	3.3	3.3	11.4	3.3	3.3
57.5°	3.3	1.6	3.3	3.3	3.3
60°	1.6	1.6	1.6	1.6	1.6
62.5°	1.6	1.6	1.6	1.6	1.6
65°	1.6	1.6	0.0	1.6	1.6
67.5°	1.6	0.0	0.0	0.0	1.6
70°	0.0	0.0	0.0	0.0	1.6
72.5°	0.0	0.0	0.0	0.0	1.6
75°	0.0	0.0	0.0	0.0	1.6



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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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Scaled Data Report



(END OF REPORT)