

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: P838552

Luminaire Tested: HCSQ635D010-HM63040840-61SQMB

Issue Date: 5/21/2024

**Test Information**

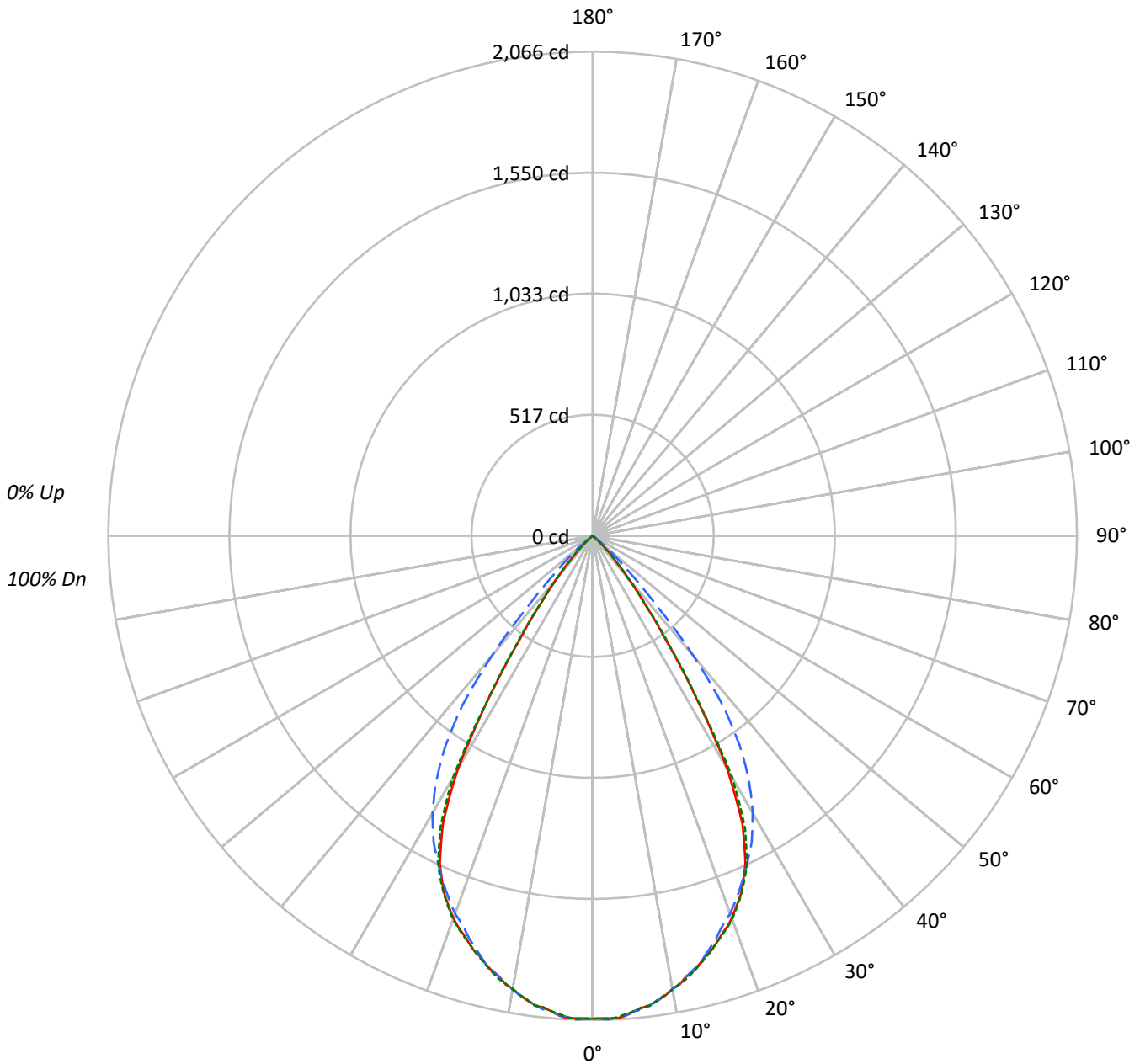
Test Method: LM-79-2019  
Report Number: P838552  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ635D010-HM63040840-61SQMB  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2048.5 lumens  
Efficiency: N/A  
Efficacy: 60.2 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					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	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93					93			
2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87					87			
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81					81			
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75					75			
5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70					70			
6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65					65			
7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60					60			
8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56					56			
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53					53			
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50					50			

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

	0°	45°	90°
0°	88725	88725	88725
5°	87979	88052	87979
10°	85778	85923	85923
15°	82828	82601	83051
20°	79542	78621	79771
25°	73246	73802	73958
30°	57094	67913	59257
35°	28951	57544	30002
40°	13174	37635	13174
45°	5096	14169	4993
50°	784	4488	784
55°	248	878	248
60°	146	146	146
65°	173	0	173
70°	0	0	214
75°	0	0	283
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 14169 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	192.4	9.4
10°-20°	521.8	25.5
20°-30°	703.4	34.3
30°-40°	494.6	24.1
40°-50°	126.3	6.2
50°-60°	8.7	0.4
60°-70°	1.1	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°	1417.7	69.2
0°-40°	1912.3	93.4
0°-60°	2047.3	99.9
0°-90°	2048.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2048.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2061	2061	2061	2061	2061	
5°	2036	2039	2037	2039	2036	192
15°	1858	1855	1853	1858	1863	523
25°	1542	1547	1554	1558	1557	689
35°	551	730	1095	748	571	371
45°	84	126	233	127	82	73
55°	3	3	12	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°	2060.7	2060.7	2060.7	2060.7	2060.7
1°	2059.1	2060.7	2062.4	2062.4	2060.7
2°	2060.7	2055.7	2065.8	2060.7	2062.4
3°	2060.7	2050.7	2055.7	2059.1	2057.4
4°	2052.4	2045.7	2050.7	2049.0	2045.7
5°	2035.6	2039.0	2037.3	2039.0	2035.6
6°	2025.6	2028.9	2032.3	2027.2	2022.2
7°	2017.2	2015.5	2017.2	2020.6	2020.6
8°	2002.1	2005.5	2002.1	2003.8	1998.8
9°	1985.4	1985.4	1985.4	1988.7	1983.7
10°	1962.0	1970.3	1965.3	1968.7	1965.3
11°	1950.2	1946.9	1946.9	1948.6	1946.9
12°	1921.8	1925.1	1923.5	1926.8	1931.8
13°	1906.7	1908.4	1901.7	1910.1	1910.1
14°	1883.3	1881.6	1885.0	1883.3	1886.6
15°	1858.2	1854.8	1853.1	1858.2	1863.2
16°	1839.8	1831.4	1826.4	1833.1	1839.8
17°	1813.0	1804.6	1797.9	1811.3	1813.0
18°	1786.2	1782.8	1766.1	1782.8	1791.2
19°	1764.4	1752.7	1737.6	1756.1	1766.1
20°	1736.0	1725.9	1715.9	1725.9	1741.0
22.5°	1653.9	1645.6	1637.2	1648.9	1657.3
25°	1541.8	1546.8	1553.5	1558.5	1556.8
27.5°	1382.7	1427.9	1469.8	1443.0	1407.9
30°	1148.4	1262.2	1366.0	1280.6	1191.9
32.5°	832.0	1026.2	1242.1	1064.7	840.4
35°	550.8	729.9	1094.8	748.3	570.8
37.5°	358.2	490.5	914.0	492.2	375.0
40°	234.4	319.7	669.6	326.4	234.4
42.5°	144.0	202.6	406.8	210.9	144.0
45°	83.7	125.6	232.7	127.2	82.0
47.5°	38.5	68.6	132.2	67.0	40.2
50°	11.7	30.1	67.0	30.1	11.7
52.5°	5.0	8.4	31.8	8.4	5.0
55°	3.3	3.3	11.7	3.3	3.3
57.5°	3.3	1.7	3.3	3.3	3.3
60°	1.7	1.7	1.7	1.7	1.7
62.5°	1.7	1.7	1.7	1.7	1.7
65°	1.7	1.7	0.0	1.7	1.7
67.5°	1.7	0.0	0.0	0.0	1.7
70°	0.0	0.0	0.0	0.0	1.7
72.5°	0.0	0.0	0.0	0.0	1.7
75°	0.0	0.0	0.0	0.0	1.7



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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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