

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: P838557

Luminaire Tested: HCSQ635D010-HM63040927-61SQMB

Issue Date: 5/21/2024

**Test Information**

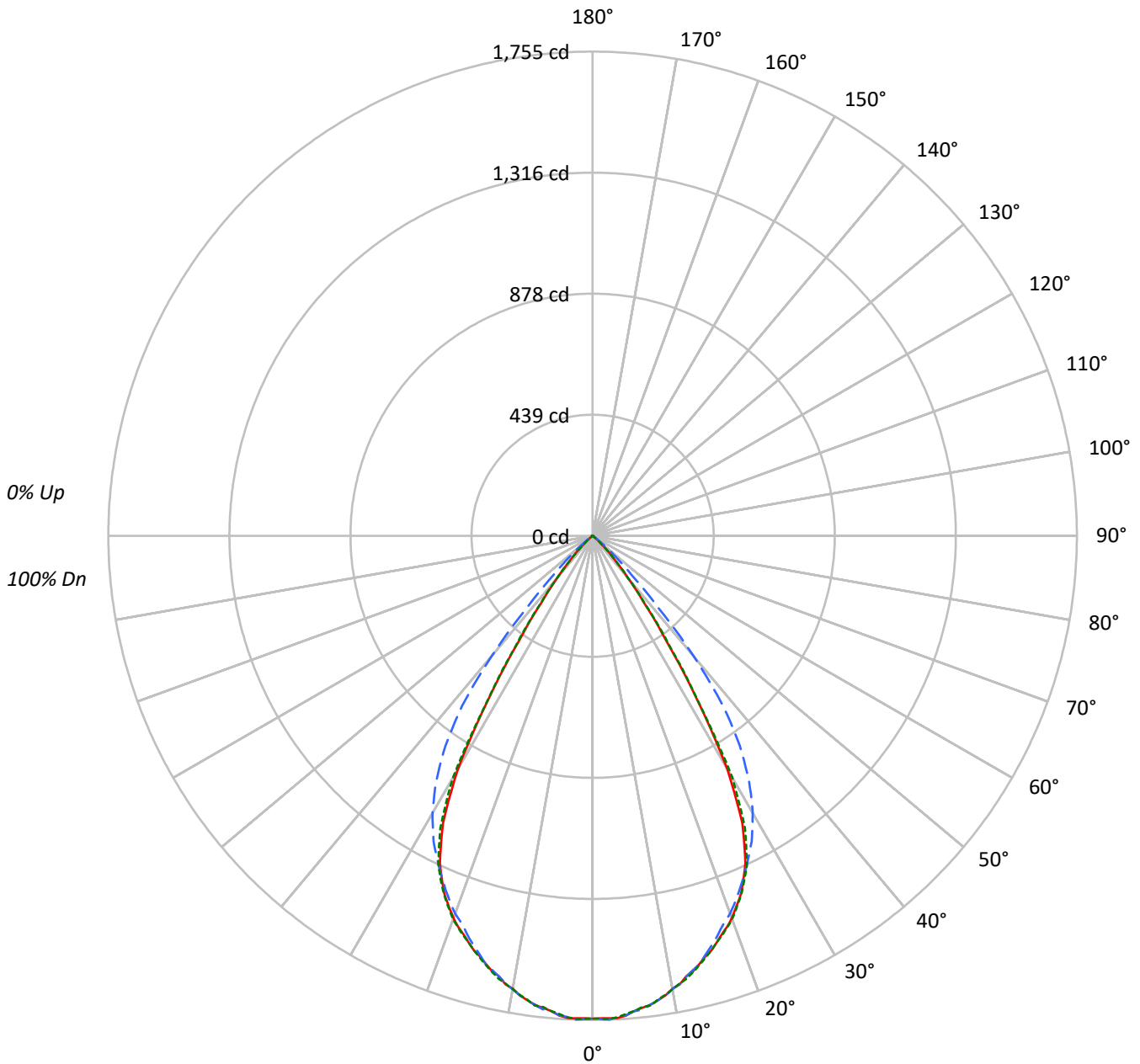
Test Method: LM-79-2019  
Report Number: P838557  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ635D010-HM63040927-61SQMB  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1740.0 lumens  
Efficiency: N/A  
Efficacy: 51.2 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

TEST NUMBER: P838557  
CATALOG NUMBER: HCSQ635D010-HM63040927-61SQMB

### Luminous Intensity Polar Plot





TEST NUMBER: P838557

CATALOG NUMBER: HCSQ635D010-HM63040927-61SQMB

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

RF	20									20									20									20									
RC	80									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°	75365	75365	75365
5°	74732	74792	74732
10°	72859	72986	72986
15°	70352	70165	70544
20°	67560	66781	67757
25°	62215	62690	62823
30°	48493	57686	50333
35°	24588	48877	25487
40°	11190	31970	11190
45°	4329	12032	4244
50°	670	3811	670
55°	210	751	210
60°	121	121	121
65°	143	0	143
70°	0	0	176
75°	0	0	233
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 12032 cd/sqm



TEST NUMBER: P838557  
 CATALOG NUMBER: HCSQ635D010-HM63040927-61SQMB

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	163.4	9.4
10°-20°	443.3	25.5
20°-30°	597.5	34.3
30°-40°	420.1	24.1
40°-50°	107.3	6.2
50°-60°	7.4	0.4
60°-70°	0.9	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°	1204.2	69.2
0°-40°	1624.3	93.4
0°-60°	1739.0	99.9
0°-90°	1740.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1740.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1750	1750	1750	1750	1750	
5°	1729	1732	1730	1732	1729	163
15°	1578	1576	1574	1578	1583	444
25°	1310	1314	1320	1324	1322	585
35°	468	620	930	636	485	315
45°	71	107	198	108	70	62
55°	3	3	10	3	3	3
65°	1	1	0	1	1	1
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P838557

CATALOG NUMBER: HCSQ635D010-HM63040927-61SQMB

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1750.4	1750.4	1750.4	1750.4	1750.4
1°	1749.0	1750.4	1751.8	1751.8	1750.4
2°	1750.4	1746.1	1754.7	1750.4	1751.8
3°	1750.4	1741.9	1746.1	1749.0	1747.6
4°	1743.3	1737.6	1741.9	1740.5	1737.6
5°	1729.1	1731.9	1730.5	1731.9	1729.1
6°	1720.5	1723.4	1726.2	1722.0	1717.7
7°	1713.4	1712.0	1713.4	1716.3	1716.3
8°	1700.6	1703.5	1700.6	1702.1	1697.8
9°	1686.4	1686.4	1686.4	1689.3	1685.0
10°	1666.5	1673.6	1669.4	1672.2	1669.4
11°	1656.6	1653.7	1653.7	1655.1	1653.7
12°	1632.4	1635.2	1633.8	1636.6	1640.9
13°	1619.6	1621.0	1615.3	1622.4	1622.4
14°	1599.7	1598.3	1601.1	1599.7	1602.5
15°	1578.3	1575.5	1574.1	1578.3	1582.6
16°	1562.7	1555.6	1551.3	1557.0	1562.7
17°	1540.0	1532.8	1527.2	1538.5	1540.0
18°	1517.2	1514.4	1500.1	1514.4	1521.5
19°	1498.7	1488.8	1476.0	1491.6	1500.1
20°	1474.5	1466.0	1457.5	1466.0	1478.8
22.5°	1404.9	1397.8	1390.7	1400.6	1407.7
25°	1309.6	1313.9	1319.6	1323.8	1322.4
27.5°	1174.5	1212.9	1248.5	1225.7	1195.8
30°	975.4	1072.1	1160.3	1087.8	1012.4
32.5°	706.7	871.6	1055.1	904.4	713.8
35°	467.8	620.0	929.9	635.6	484.9
37.5°	304.3	416.6	776.4	418.0	318.5
40°	199.1	271.6	568.8	277.3	199.1
42.5°	122.3	172.1	345.5	179.2	122.3
45°	71.1	106.6	197.6	108.1	69.7
47.5°	32.7	58.3	112.3	56.9	34.1
50°	10.0	25.6	56.9	25.6	10.0
52.5°	4.3	7.1	27.0	7.1	4.3
55°	2.8	2.8	10.0	2.8	2.8
57.5°	2.8	1.4	2.8	2.8	2.8
60°	1.4	1.4	1.4	1.4	1.4
62.5°	1.4	1.4	1.4	1.4	1.4
65°	1.4	1.4	0.0	1.4	1.4
67.5°	1.4	0.0	0.0	0.0	1.4
70°	0.0	0.0	0.0	0.0	1.4
72.5°	0.0	0.0	0.0	0.0	1.4
75°	0.0	0.0	0.0	0.0	1.4



TEST NUMBER: P838557

CATALOG NUMBER: HCSQ635D010-HM63040927-61SQMB

**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



Report Generated By 670245859 / DESKTOP-T8S5UU9



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

Scaled Data Report





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

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

Scaled Data Report



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

Scaled Data Report



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

Scaled Data Report



77.5°	0.0	0.0	0.0	0.0	0.0
80°	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



(END OF REPORT)