

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: P838498

Luminaire Tested: HCSQ630D010-HM63040827-61SQMW

Issue Date: 5/21/2024

**Test Information**

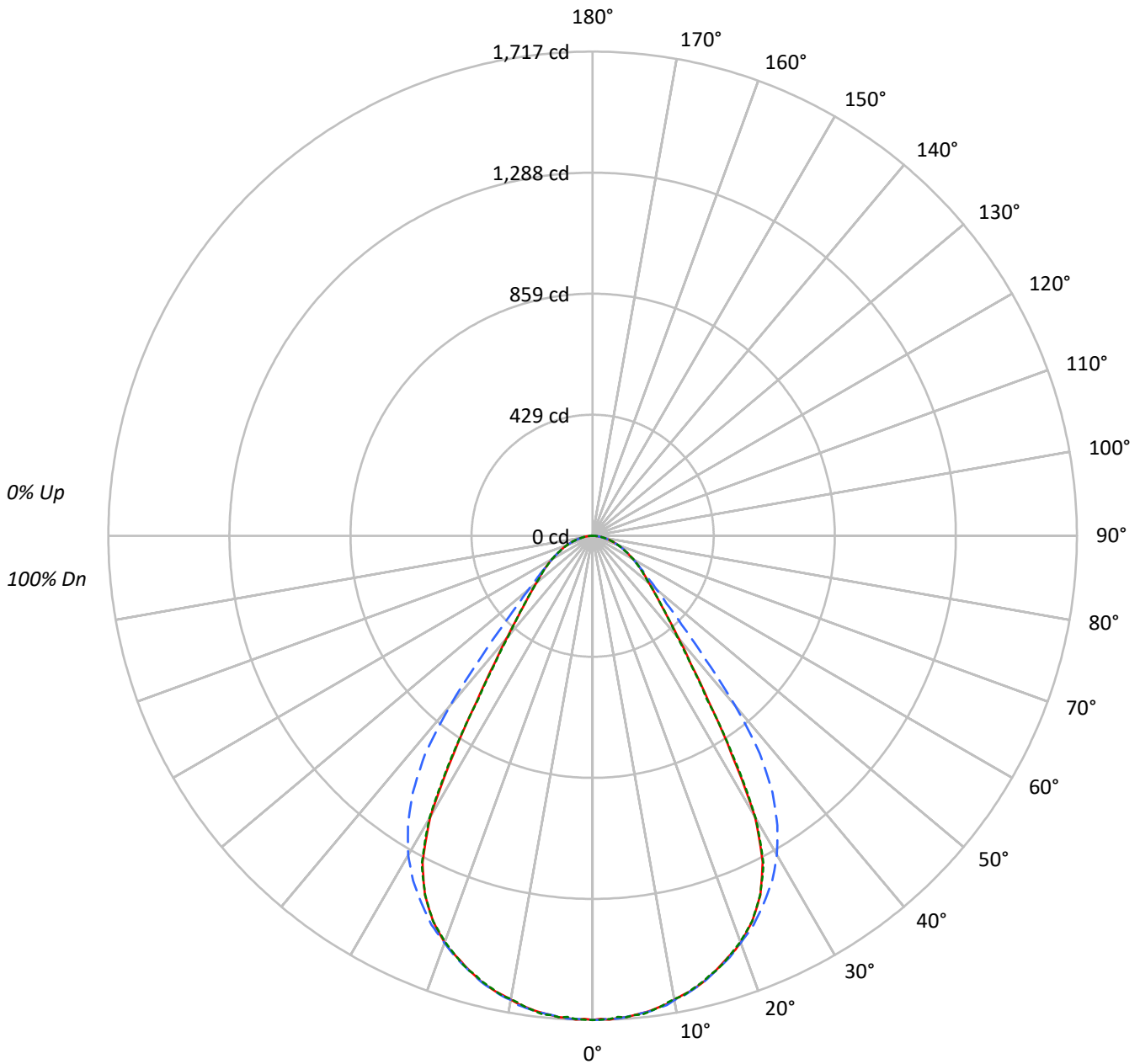
Test Method: LM-79-2019  
Report Number: P838498  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ630D010-HM63040827-61SQMW  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2533.0 lumens  
Efficiency: N/A  
Efficacy: 89.8 lumens/watt  
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.11  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.2  
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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89				
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79				
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71				
4	91	81	74	69	89	80	73	68	77	72	67	75	70	67	73	69	66	64				
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58				
6	80	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53				
7	75	63	56	51	73	63	56	51	61	55	51	60	54	50	59	54	50	48				
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44				
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41				
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38				

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

	0°	45°	90°
0°	73939	73939	73939
5°	73755	73703	73755
10°	73034	73086	72929
15°	71948	72001	71841
20°	70327	70382	70162
25°	66818	68243	66761
30°	57214	64974	57572
35°	37592	58406	37024
40°	26574	44042	26102
45°	20605	27108	20751
50°	17523	19773	17362
55°	15764	16214	15764
60°	14260	14260	14260
65°	13081	12959	12959
70°	11934	11934	12085
75°	11179	10780	10979
80°	9819	9819	9819
85°	8299	8299	8299

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 27108 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	161.9	6.4
10°-20°	454.7	17.9
20°-30°	647.9	25.6
30°-40°	552.4	21.8
40°-50°	305.6	12.1
50°-60°	192.5	7.6
60°-70°	127.8	5.0
70°-80°	70.2	2.8
80°-90°	20.0	0.8
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°	1264.5	49.9
0°-40°	1816.9	71.7
0°-60°	2315.0	91.4
0°-90°	2533.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2533.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1717	1717	1717	1717	1717	
5°	1706	1709	1705	1703	1706	162
15°	1614	1614	1615	1614	1612	454
25°	1406	1423	1436	1422	1405	635
35°	715	844	1111	845	704	465
45°	338	371	445	368	341	268
55°	210	214	216	212	210	189
65°	128	130	127	128	127	128
75°	67	66	65	66	66	71
85°	17	17	17	18	17	20
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1717.3	1717.3	1717.3	1717.3	1717.3
1°	1713.7	1716.1	1716.1	1714.9	1716.1
2°	1717.3	1713.7	1713.7	1713.7	1714.9
3°	1712.5	1714.9	1714.9	1711.3	1708.9
4°	1711.3	1710.1	1710.1	1713.7	1711.3
5°	1706.5	1708.9	1705.3	1702.9	1706.5
6°	1701.7	1702.9	1701.7	1702.9	1706.5
7°	1695.7	1699.3	1698.1	1696.9	1696.9
8°	1688.5	1693.3	1690.9	1690.9	1689.7
9°	1681.3	1682.5	1684.9	1684.9	1677.7
10°	1670.5	1674.1	1671.7	1672.9	1668.1
11°	1660.9	1665.7	1664.5	1662.1	1663.3
12°	1652.5	1654.9	1653.7	1650.1	1651.3
13°	1641.7	1644.1	1642.9	1642.9	1639.3
14°	1629.7	1627.3	1630.9	1628.5	1627.3
15°	1614.1	1614.1	1615.3	1614.1	1611.7
16°	1599.7	1600.9	1600.9	1599.7	1600.9
17°	1582.9	1587.7	1586.5	1584.1	1585.3
18°	1567.3	1570.9	1572.1	1570.9	1567.3
19°	1552.9	1555.3	1554.1	1549.3	1549.3
20°	1534.9	1536.1	1536.1	1533.7	1531.3
22.5°	1478.5	1486.9	1492.9	1488.1	1478.5
25°	1406.5	1423.3	1436.5	1422.1	1405.3
27.5°	1305.7	1339.3	1378.9	1342.9	1311.7
30°	1150.8	1227.7	1306.9	1234.9	1158.0
32.5°	915.6	1066.8	1218.1	1081.2	930.0
35°	715.2	843.6	1111.2	844.8	704.4
37.5°	571.2	662.4	974.4	656.4	565.2
40°	472.8	534.0	783.6	531.6	464.4
42.5°	394.8	441.6	586.8	436.8	394.8
45°	338.4	370.8	445.2	368.4	340.8
47.5°	296.4	316.8	356.4	315.6	296.4
50°	261.6	273.6	295.2	272.4	259.2
52.5°	234.0	241.2	249.6	238.8	231.6
55°	210.0	213.6	216.0	212.4	210.0
57.5°	187.2	189.6	188.4	187.2	186.0
60°	165.6	166.8	165.6	166.8	165.6
62.5°	146.4	147.6	145.2	146.4	145.2
65°	128.4	129.6	127.2	128.4	127.2
67.5°	111.6	111.6	111.6	111.6	110.4
70°	94.8	96.0	94.8	96.0	96.0
72.5°	80.4	80.4	79.2	80.4	80.4
75°	67.2	66.0	64.8	66.0	66.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	28.8	28.8	27.6	28.8	28.8
85°	16.8	16.8	16.8	18.0	16.8
87.5°	8.4	7.2	7.2	8.4	8.4
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°	52.8	52.8	51.6	52.8	52.8
80°	39.6	40.8	39.6	40.8	39.6

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(END OF REPORT)