

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: P838523

Luminaire Tested: HCSQ630D010-HM63040930-61SQMW

Issue Date: 5/21/2024

**Test Information**

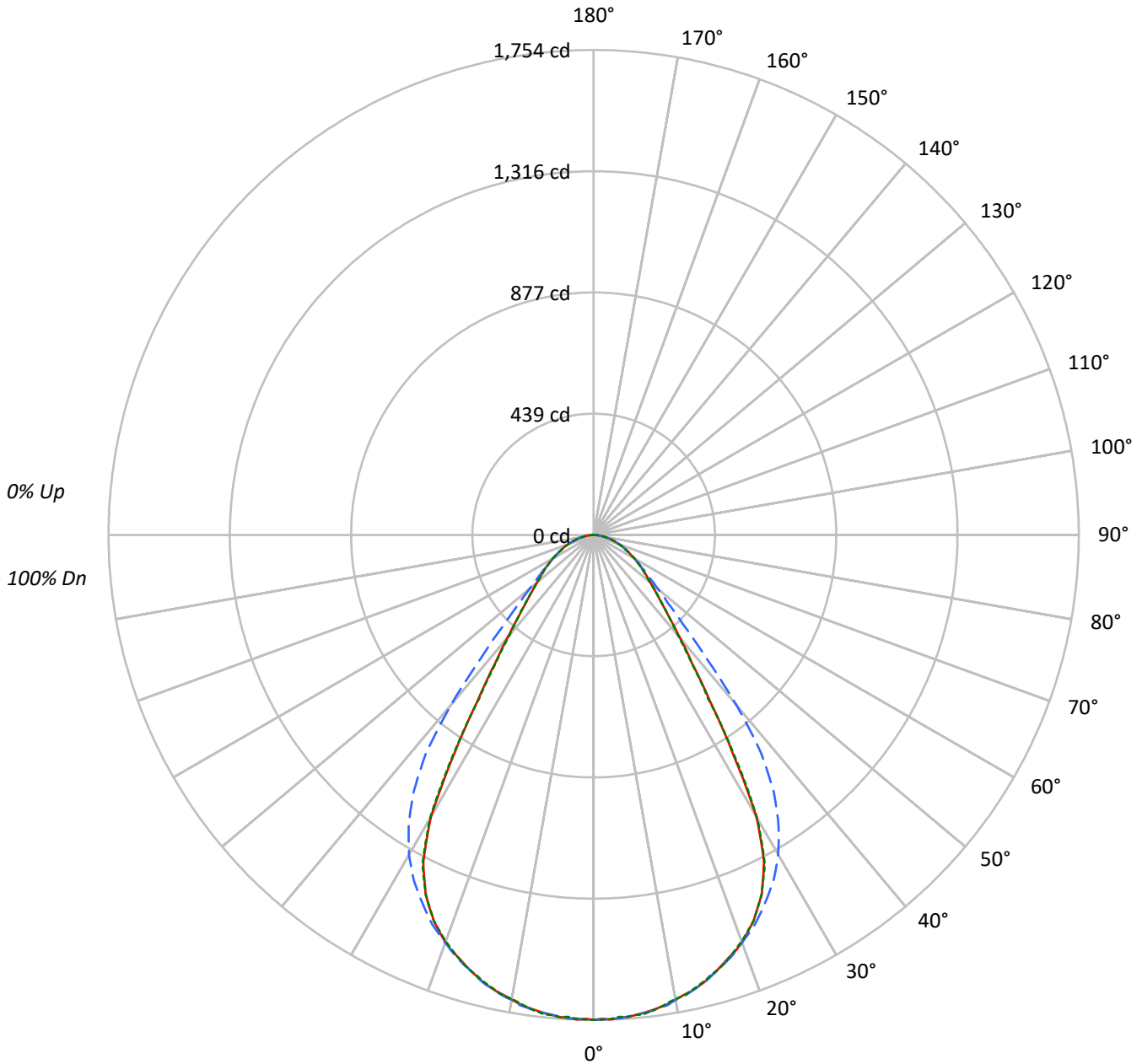
Test Method: LM-79-2019  
Report Number: P838523  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ630D010-HM63040930-61SQMW  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2587.4 lumens  
Efficiency: N/A  
Efficacy: 91.8 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									
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	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°	75524	75524	75524
5°	75337	75285	75337
10°	74599	74652	74494
15°	73490	73543	73383
20°	71835	71890	71665
25°	68248	69707	68191
30°	58442	66366	58810
35°	38401	59662	37818
40°	27147	44992	26664
45°	21050	27693	21196
50°	17898	20195	17737
55°	16101	16559	16101
60°	14570	14570	14570
65°	13366	13234	13234
70°	12186	12186	12349
75°	11412	11013	11212
80°	10042	10042	10042
85°	8497	8497	8497

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 27693 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	165.4	6.4
10°-20°	464.4	17.9
20°-30°	661.8	25.6
30°-40°	564.3	21.8
40°-50°	312.2	12.1
50°-60°	196.6	7.6
60°-70°	130.6	5.0
70°-80°	71.7	2.8
80°-90°	20.4	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°	1291.6	49.9
0°-40°	1855.9	71.7
0°-60°	2364.7	91.4
0°-90°	2587.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2587.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1754	1754	1754	1754	1754	
5°	1743	1746	1742	1739	1743	165
15°	1649	1649	1650	1649	1646	464
25°	1437	1454	1467	1453	1435	649
35°	731	862	1135	863	720	475
45°	346	379	455	376	348	274
55°	214	218	221	217	214	193
65°	131	132	130	131	130	130
75°	69	67	66	67	67	72
85°	17	17	17	18	17	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1754.1	1754.1	1754.1	1754.1	1754.1
1°	1750.5	1752.9	1752.9	1751.7	1752.9
2°	1754.1	1750.5	1750.5	1750.5	1751.7
3°	1749.2	1751.7	1751.7	1748.0	1745.5
4°	1748.0	1746.8	1746.8	1750.5	1748.0
5°	1743.1	1745.5	1741.9	1739.4	1743.1
6°	1738.2	1739.4	1738.2	1739.4	1743.1
7°	1732.1	1735.7	1734.5	1733.3	1733.3
8°	1724.7	1729.6	1727.2	1727.2	1725.9
9°	1717.4	1718.6	1721.0	1721.0	1713.7
10°	1706.3	1710.0	1707.5	1708.8	1703.9
11°	1696.5	1701.4	1700.2	1697.7	1699.0
12°	1687.9	1690.4	1689.2	1685.5	1686.7
13°	1676.9	1679.4	1678.1	1678.1	1674.5
14°	1664.6	1662.2	1665.9	1663.4	1662.2
15°	1648.7	1648.7	1649.9	1648.7	1646.3
16°	1634.0	1635.2	1635.2	1634.0	1635.2
17°	1616.8	1621.7	1620.5	1618.1	1619.3
18°	1600.9	1604.6	1605.8	1604.6	1600.9
19°	1586.2	1588.6	1587.4	1582.5	1582.5
20°	1567.8	1569.0	1569.0	1566.6	1564.1
22.5°	1510.2	1518.8	1524.9	1520.0	1510.2
25°	1436.6	1453.8	1467.3	1452.6	1435.4
27.5°	1333.7	1368.0	1408.5	1371.7	1339.8
30°	1175.5	1254.0	1334.9	1261.4	1182.9
32.5°	935.3	1089.7	1244.2	1104.5	950.0
35°	730.6	861.7	1135.1	863.0	719.5
37.5°	583.5	676.6	995.4	670.5	577.4
40°	483.0	545.5	800.5	543.0	474.4
42.5°	403.3	451.1	599.4	446.2	403.3
45°	345.7	378.8	454.8	376.3	348.1
47.5°	302.8	323.6	364.1	322.4	302.8
50°	267.2	279.5	301.5	278.3	264.8
52.5°	239.0	246.4	255.0	243.9	236.6
55°	214.5	218.2	220.6	217.0	214.5
57.5°	191.2	193.7	192.5	191.2	190.0
60°	169.2	170.4	169.2	170.4	169.2
62.5°	149.5	150.8	148.3	149.5	148.3
65°	131.2	132.4	129.9	131.2	129.9
67.5°	114.0	114.0	114.0	114.0	112.8
70°	96.8	98.1	96.8	98.1	98.1
72.5°	82.1	82.1	80.9	82.1	82.1
75°	68.6	67.4	66.2	67.4	67.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	29.4	29.4	28.2	29.4	29.4
85°	17.2	17.2	17.2	18.4	17.2
87.5°	8.6	7.4	7.4	8.6	8.6
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°	53.9	53.9	52.7	53.9	53.9
80°	40.5	41.7	40.5	41.7	40.5

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