

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: P838667

Luminaire Tested: HCSQ650D010-HM64560835-61SQMB

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838667
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: HCSQ650D010-HM64560835-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

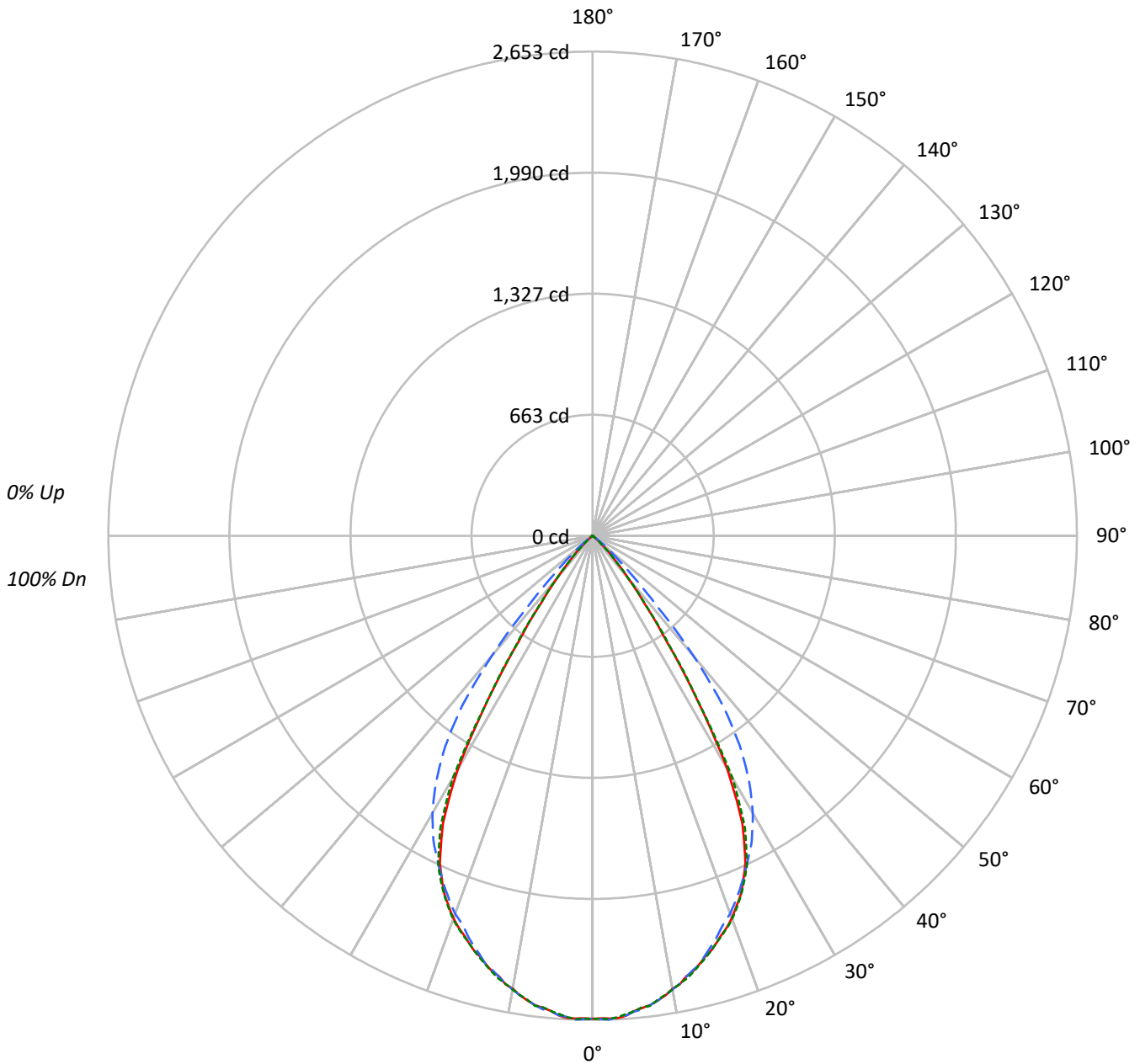
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2630.7 lumens
Efficiency: N/A
Efficacy: 52.9 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): 49.7
Input Voltage (V): NR
Input Current (A_{in}): 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°	113947	113947	113947
5°	112990	113081	112990
10°	110161	110349	110349
15°	106373	106083	106658
20°	102149	100966	102446
25°	94068	94781	94985
30°	73322	87217	76101
35°	37177	73901	38533
40°	16918	48336	16918
45°	6546	18194	6412
50°	1005	5761	1005
55°	323	1126	323
60°	181	181	181
65°	214	0	214
70°	0	0	264
75°	0	0	349
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 18194 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	247.1	9.4
10°-20°	670.2	25.5
20°-30°	903.4	34.3
30°-40°	635.2	24.1
40°-50°	162.2	6.2
50°-60°	11.2	0.4
60°-70°	1.3	0.1
70°-80°	0.2	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°	1820.7	69.2
0°-40°	2455.9	93.4
0°-60°	2629.2	99.9
0°-90°	2630.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2630.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2646	2646	2646	2646	2646	
5°	2614	2619	2616	2619	2614	247
15°	2386	2382	2380	2386	2393	672
25°	1980	1986	1995	2002	1999	885
35°	707	937	1406	961	733	476
45°	108	161	299	163	105	94
55°	4	4	15	4	4	5
65°	2	2	0	2	2	2
75°	0	0	0	0	2	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2646.5	2646.5	2646.5	2646.5	2646.5
1°	2644.4	2646.5	2648.7	2648.7	2646.5
2°	2646.5	2640.1	2653.0	2646.5	2648.7
3°	2646.5	2633.6	2640.1	2644.4	2642.2
4°	2635.8	2627.2	2633.6	2631.5	2627.2
5°	2614.3	2618.6	2616.4	2618.6	2614.3
6°	2601.4	2605.7	2610.0	2603.5	2597.1
7°	2590.6	2588.5	2590.6	2594.9	2594.9
8°	2571.3	2575.6	2571.3	2573.4	2567.0
9°	2549.8	2549.8	2549.8	2554.1	2547.6
10°	2519.7	2530.4	2524.0	2528.3	2524.0
11°	2504.6	2500.3	2500.3	2502.5	2500.3
12°	2468.1	2472.4	2470.2	2474.5	2481.0
13°	2448.7	2450.9	2442.3	2453.0	2453.0
14°	2418.6	2416.5	2420.8	2418.6	2422.9
15°	2386.4	2382.1	2379.9	2386.4	2392.8
16°	2362.7	2352.0	2345.5	2354.1	2362.7
17°	2328.3	2317.6	2309.0	2326.2	2328.3
18°	2293.9	2289.6	2268.1	2289.6	2300.4
19°	2266.0	2250.9	2231.6	2255.2	2268.1
20°	2229.4	2216.5	2203.6	2216.5	2235.9
22.5°	2124.1	2113.4	2102.6	2117.7	2128.4
25°	1980.1	1986.5	1995.1	2001.6	1999.4
27.5°	1775.8	1833.9	1887.6	1853.2	1808.1
30°	1474.8	1621.0	1754.3	1644.7	1530.7
32.5°	1068.5	1317.9	1595.2	1367.3	1079.2
35°	707.3	937.4	1406.0	961.0	733.1
37.5°	460.1	629.9	1173.8	632.1	481.6
40°	301.0	410.6	860.0	419.2	301.0
42.5°	184.9	260.1	522.4	270.9	184.9
45°	107.5	161.2	298.8	163.4	105.3
47.5°	49.4	88.1	169.8	86.0	51.6
50°	15.0	38.7	86.0	38.7	15.0
52.5°	6.4	10.7	40.8	10.7	6.4
55°	4.3	4.3	15.0	4.3	4.3
57.5°	4.3	2.1	4.3	4.3	4.3
60°	2.1	2.1	2.1	2.1	2.1
62.5°	2.1	2.1	2.1	2.1	2.1
65°	2.1	2.1	0.0	2.1	2.1
67.5°	2.1	0.0	0.0	0.0	2.1
70°	0.0	0.0	0.0	0.0	2.1
72.5°	0.0	0.0	0.0	0.0	2.1
75°	0.0	0.0	0.0	0.0	2.1



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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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