

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: P838692

Luminaire Tested: HCSQ650D010-HM64560940-61SQMB

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838692
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-HM64560940-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

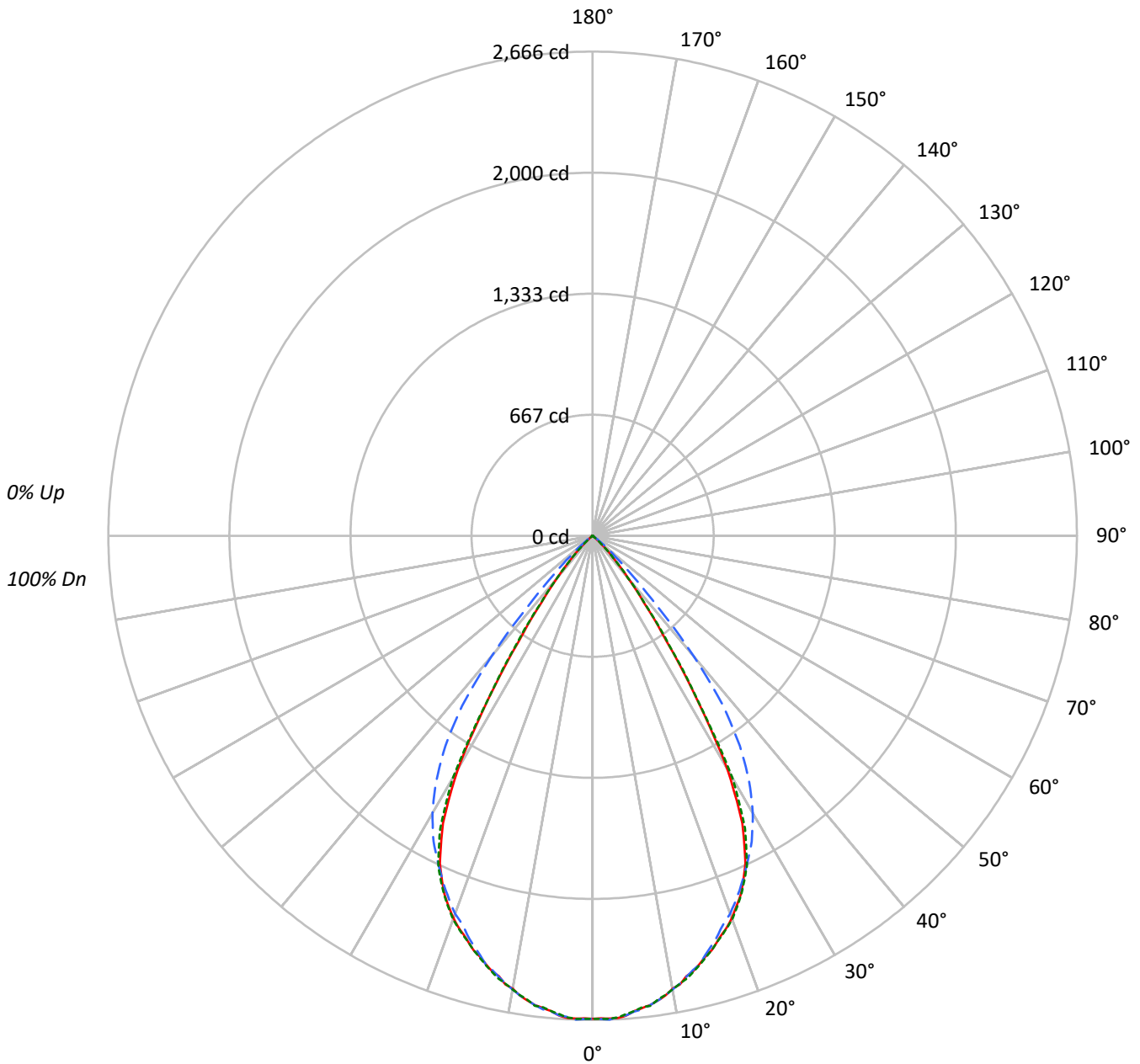
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2643.9 lumens
Efficiency: N/A
Efficacy: 53.2 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): 49.7
Input Voltage (V): NR
Input Current (Ain): 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°	114515	114515	114515
5°	113552	113643	113552
10°	110707	110895	110895
15°	106903	106613	107188
20°	102657	101470	102955
25°	94534	95251	95455
30°	73690	87650	76479
35°	37361	74269	38727
40°	17002	48573	17002
45°	6576	18285	6448
50°	1011	5787	1011
55°	323	1133	323
60°	189	189	189
65°	224	0	224
70°	0	0	277
75°	0	0	366
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 18285 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	248.3	9.4
10°-20°	673.5	25.5
20°-30°	907.9	34.3
30°-40°	638.3	24.1
40°-50°	163.0	6.2
50°-60°	11.3	0.4
60°-70°	1.4	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°	1829.8	69.2
0°-40°	2468.1	93.4
0°-60°	2642.3	99.9
0°-90°	2643.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2643.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2660	2660	2660	2660	2660	
5°	2627	2632	2629	2632	2627	248
15°	2398	2394	2392	2398	2405	675
25°	1990	1996	2005	2012	2009	889
35°	711	942	1413	966	737	478
45°	108	162	300	164	106	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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2659.7	2659.7	2659.7	2659.7	2659.7
1°	2657.5	2659.7	2661.8	2661.8	2659.7
2°	2659.7	2653.2	2666.2	2659.7	2661.8
3°	2659.7	2646.7	2653.2	2657.5	2655.4
4°	2648.9	2640.2	2646.7	2644.6	2640.2
5°	2627.3	2631.6	2629.4	2631.6	2627.3
6°	2614.3	2618.6	2623.0	2616.5	2610.0
7°	2603.5	2601.3	2603.5	2607.8	2607.8
8°	2584.1	2588.4	2584.1	2586.2	2579.7
9°	2562.5	2562.5	2562.5	2566.8	2560.3
10°	2532.2	2543.0	2536.5	2540.9	2536.5
11°	2517.1	2512.8	2512.8	2514.9	2512.8
12°	2480.4	2484.7	2482.5	2486.8	2493.3
13°	2460.9	2463.1	2454.4	2465.2	2465.2
14°	2430.7	2428.5	2432.8	2430.7	2435.0
15°	2398.3	2393.9	2391.8	2398.3	2404.7
16°	2374.5	2363.7	2357.2	2365.8	2374.5
17°	2339.9	2329.1	2320.5	2337.8	2339.9
18°	2305.3	2301.0	2279.4	2301.0	2311.8
19°	2277.3	2262.1	2242.7	2266.5	2279.4
20°	2240.5	2227.6	2214.6	2227.6	2247.0
22.5°	2134.7	2123.9	2113.1	2128.2	2139.0
25°	1989.9	1996.4	2005.0	2011.5	2009.3
27.5°	1784.6	1843.0	1897.0	1862.4	1817.1
30°	1482.2	1629.1	1763.0	1652.9	1538.3
32.5°	1073.8	1324.4	1603.2	1374.1	1084.6
35°	710.8	942.0	1413.0	965.8	736.8
37.5°	462.4	633.1	1179.7	635.2	484.0
40°	302.5	412.7	864.2	421.3	302.5
42.5°	185.8	261.4	525.0	272.2	185.8
45°	108.0	162.0	300.3	164.2	105.9
47.5°	49.7	88.6	170.7	86.4	51.9
50°	15.1	38.9	86.4	38.9	15.1
52.5°	6.5	10.8	41.1	10.8	6.5
55°	4.3	4.3	15.1	4.3	4.3
57.5°	4.3	2.2	4.3	4.3	4.3
60°	2.2	2.2	2.2	2.2	2.2
62.5°	2.2	2.2	2.2	2.2	2.2
65°	2.2	2.2	0.0	2.2	2.2
67.5°	2.2	0.0	0.0	0.0	2.2
70°	0.0	0.0	0.0	0.0	2.2
72.5°	0.0	0.0	0.0	0.0	2.2
75°	0.0	0.0	0.0	0.0	2.2



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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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