

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: P838593

Luminaire Tested: HCSQ640D010-HM63040840-61SQMW

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838593
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: HCSQ640D010-HM63040840-61SQMW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

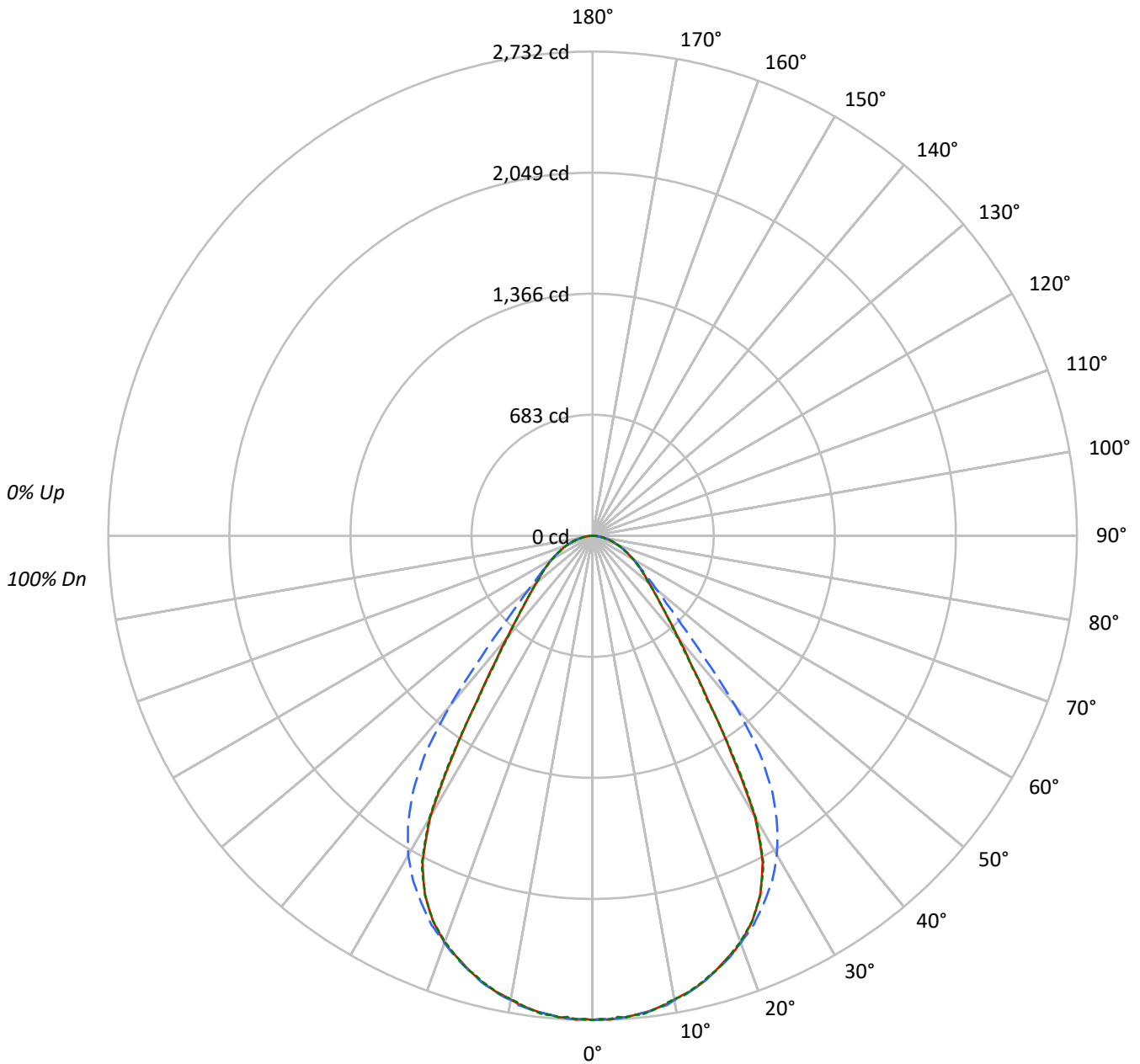
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4030.4 lumens
Efficiency: N/A
Efficacy: 98.3 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): 41
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									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°	117645	117645	117645
5°	117356	117269	117356
10°	116207	116290	116041
15°	114476	114561	114307
20°	111899	111986	111638
25°	106315	108581	106225
30°	91041	103380	91607
35°	59815	92939	58916
40°	42283	70082	41536
45°	32789	43134	33021
50°	27885	31462	27624
55°	25087	25800	25087
60°	22690	22690	22690
65°	20814	20620	20620
70°	18984	18984	19235
75°	17783	17151	17467
80°	15621	15621	15621
85°	13190	13190	13190

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 43134 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	257.6	6.4
10°-20°	723.4	17.9
20°-30°	1030.9	25.6
30°-40°	879.0	21.8
40°-50°	486.3	12.1
50°-60°	306.3	7.6
60°-70°	203.4	5.0
70°-80°	111.7	2.8
80°-90°	31.8	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°	2011.9	49.9
0°-40°	2890.9	71.7
0°-60°	3683.5	91.4
0°-90°	4030.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4030.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2732	2732	2732	2732	2732	
5°	2715	2719	2713	2710	2715	257
15°	2568	2568	2570	2568	2564	723
25°	2238	2265	2286	2263	2236	1011
35°	1138	1342	1768	1344	1121	740
45°	538	590	708	586	542	427
55°	334	340	344	338	334	300
65°	204	206	202	204	202	203
75°	107	105	103	105	105	112
85°	27	27	27	29	27	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2732.4	2732.4	2732.4	2732.4	2732.4
1°	2726.7	2730.5	2730.5	2728.6	2730.5
2°	2732.4	2726.7	2726.7	2726.7	2728.6
3°	2724.8	2728.6	2728.6	2722.9	2719.1
4°	2722.9	2721.0	2721.0	2726.7	2722.9
5°	2715.3	2719.1	2713.3	2709.5	2715.3
6°	2707.6	2709.5	2707.6	2709.5	2715.3
7°	2698.1	2703.8	2701.9	2700.0	2700.0
8°	2686.6	2694.3	2690.4	2690.4	2688.5
9°	2675.2	2677.1	2680.9	2680.9	2669.4
10°	2658.0	2663.7	2659.9	2661.8	2654.2
11°	2642.7	2650.3	2648.4	2644.6	2646.5
12°	2629.3	2633.1	2631.2	2625.5	2627.4
13°	2612.1	2616.0	2614.1	2614.1	2608.3
14°	2593.0	2589.2	2595.0	2591.1	2589.2
15°	2568.2	2568.2	2570.1	2568.2	2564.4
16°	2545.3	2547.2	2547.2	2545.3	2547.2
17°	2518.6	2526.2	2524.3	2520.5	2522.4
18°	2493.8	2499.5	2501.4	2499.5	2493.8
19°	2470.8	2474.7	2472.8	2465.1	2465.1
20°	2442.2	2444.1	2444.1	2440.3	2436.5
22.5°	2352.5	2365.8	2375.4	2367.7	2352.5
25°	2237.9	2264.6	2285.6	2262.7	2236.0
27.5°	2077.5	2131.0	2194.0	2136.7	2087.0
30°	1831.2	1953.4	2079.4	1964.8	1842.6
32.5°	1456.9	1697.5	1938.1	1720.4	1479.8
35°	1138.0	1342.4	1768.2	1344.3	1120.9
37.5°	908.9	1054.0	1550.5	1044.5	899.4
40°	752.3	849.7	1246.9	845.9	739.0
42.5°	628.2	702.7	933.7	695.0	628.2
45°	538.5	590.0	708.4	586.2	542.3
47.5°	471.6	504.1	567.1	502.2	471.6
50°	416.3	435.4	469.7	433.4	412.4
52.5°	372.3	383.8	397.2	380.0	368.5
55°	334.2	339.9	343.7	338.0	334.2
57.5°	297.9	301.7	299.8	297.9	296.0
60°	263.5	265.4	263.5	265.4	263.5
62.5°	233.0	234.9	231.0	233.0	231.0
65°	204.3	206.2	202.4	204.3	202.4
67.5°	177.6	177.6	177.6	177.6	175.7
70°	150.8	152.8	150.8	152.8	152.8
72.5°	127.9	127.9	126.0	127.9	127.9
75°	106.9	105.0	103.1	105.0	105.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	45.8	45.8	43.9	45.8	45.8
85°	26.7	26.7	26.7	28.6	26.7
87.5°	13.4	11.5	11.5	13.4	13.4
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°	84.0	84.0	82.1	84.0	84.0
80°	63.0	64.9	63.0	64.9	63.0

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