

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: P838613

Luminaire Tested: HCSQ640D010-HM63040940-61SQMW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838613
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-HM63040940-61SQMW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

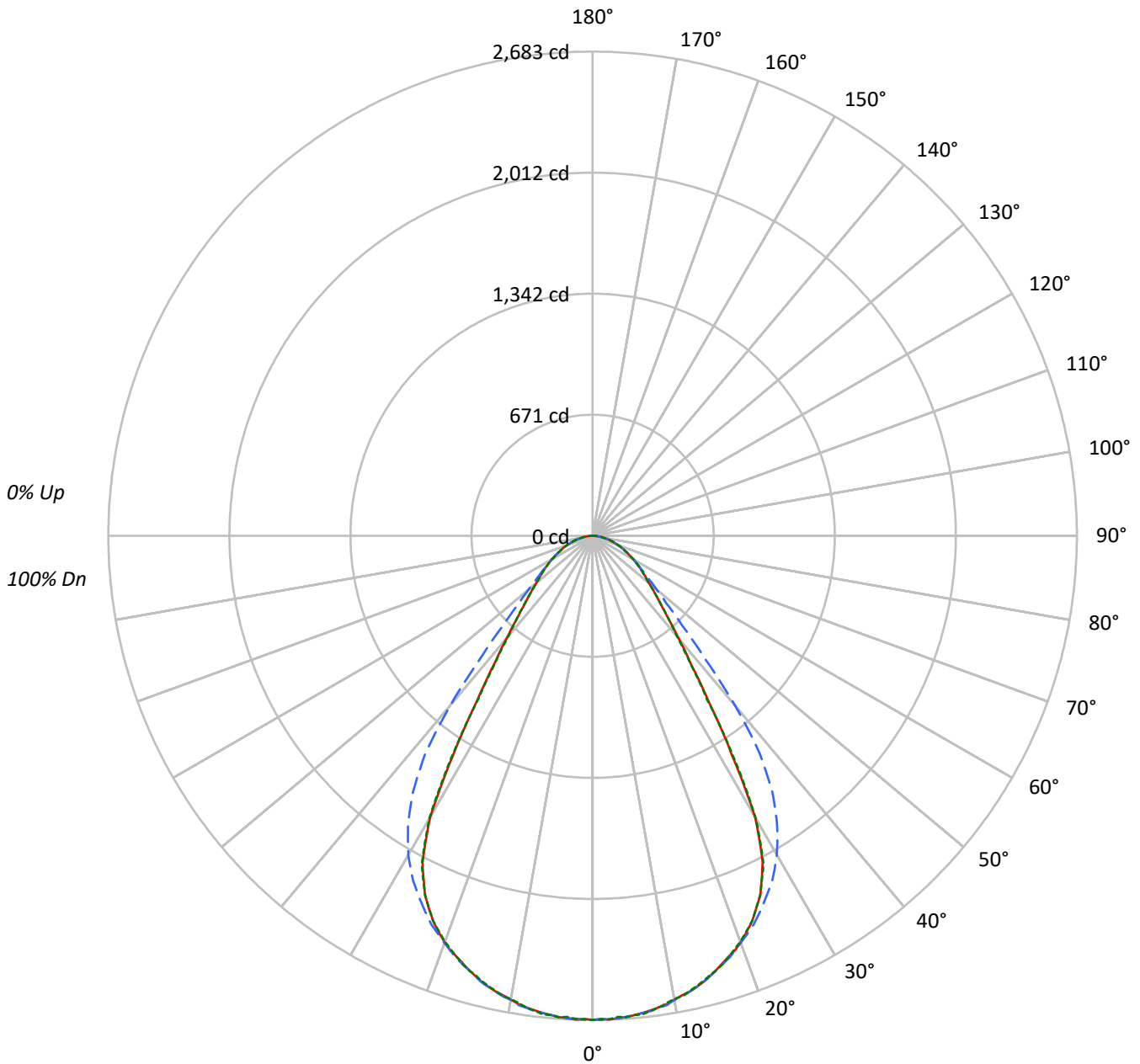
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3957.7 lumens
Efficiency: N/A
Efficacy: 96.5 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 (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									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°	115523	115523	115523
5°	115238	115156	115238
10°	114109	114192	113947
15°	112412	112497	112243
20°	109878	109965	109622
25°	104396	106624	104306
30°	89395	101516	89957
35°	58737	91262	57849
40°	41524	68818	40782
45°	32199	42355	32424
50°	27383	30899	27128
55°	24629	25335	24629
60°	22286	22286	22286
65°	20437	20253	20253
70°	18644	18644	18883
75°	17467	16852	17151
80°	15348	15348	15348
85°	12992	12992	12992

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 42355 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	253.0	6.4
10°-20°	710.4	17.9
20°-30°	1012.3	25.6
30°-40°	863.1	21.8
40°-50°	477.5	12.1
50°-60°	300.8	7.6
60°-70°	199.7	5.0
70°-80°	109.7	2.8
80°-90°	31.3	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°	1975.6	49.9
0°-40°	2838.7	71.7
0°-60°	3617.0	91.4
0°-90°	3957.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3957.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2683	2683	2683	2683	2683	
5°	2666	2670	2664	2661	2666	253
15°	2522	2522	2524	2522	2518	710
25°	2198	2224	2244	2222	2196	993
35°	1118	1318	1736	1320	1101	726
45°	529	579	696	576	532	419
55°	328	334	338	332	328	295
65°	201	202	199	201	199	200
75°	105	103	101	103	103	110
85°	26	26	26	28	26	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2683.1	2683.1	2683.1	2683.1	2683.1
1°	2677.5	2681.3	2681.3	2679.4	2681.3
2°	2683.1	2677.5	2677.5	2677.5	2679.4
3°	2675.6	2679.4	2679.4	2673.8	2670.0
4°	2673.8	2671.9	2671.9	2677.5	2673.8
5°	2666.3	2670.0	2664.4	2660.6	2666.3
6°	2658.8	2660.6	2658.8	2660.6	2666.3
7°	2649.4	2655.0	2653.1	2651.3	2651.3
8°	2638.1	2645.6	2641.9	2641.9	2640.0
9°	2626.9	2628.8	2632.5	2632.5	2621.3
10°	2610.0	2615.6	2611.9	2613.8	2606.3
11°	2595.0	2602.5	2600.6	2596.9	2598.8
12°	2581.9	2585.6	2583.8	2578.1	2580.0
13°	2565.0	2568.8	2566.9	2566.9	2561.3
14°	2546.3	2542.5	2548.1	2544.4	2542.5
15°	2521.9	2521.9	2523.8	2521.9	2518.1
16°	2499.4	2501.3	2501.3	2499.4	2501.3
17°	2473.1	2480.6	2478.8	2475.0	2476.9
18°	2448.8	2454.4	2456.3	2454.4	2448.8
19°	2426.3	2430.0	2428.1	2420.6	2420.6
20°	2398.1	2400.0	2400.0	2396.3	2392.5
22.5°	2310.0	2323.1	2332.5	2325.0	2310.0
25°	2197.5	2223.8	2244.4	2221.9	2195.6
27.5°	2040.0	2092.5	2154.4	2098.1	2049.4
30°	1798.1	1918.1	2041.9	1929.4	1809.4
32.5°	1430.6	1666.9	1903.1	1689.4	1453.1
35°	1117.5	1318.1	1736.3	1320.0	1100.6
37.5°	892.5	1035.0	1522.5	1025.6	883.1
40°	738.8	834.4	1224.4	830.6	725.6
42.5°	616.9	690.0	916.9	682.5	616.9
45°	528.8	579.4	695.6	575.6	532.5
47.5°	463.1	495.0	556.9	493.1	463.1
50°	408.8	427.5	461.3	425.6	405.0
52.5°	365.6	376.9	390.0	373.1	361.9
55°	328.1	333.8	337.5	331.9	328.1
57.5°	292.5	296.3	294.4	292.5	290.6
60°	258.8	260.6	258.8	260.6	258.8
62.5°	228.8	230.6	226.9	228.8	226.9
65°	200.6	202.5	198.8	200.6	198.8
67.5°	174.4	174.4	174.4	174.4	172.5
70°	148.1	150.0	148.1	150.0	150.0
72.5°	125.6	125.6	123.8	125.6	125.6
75°	105.0	103.1	101.3	103.1	103.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	<i>45.0</i>	45.0	43.1	45.0	45.0
85°	<i>26.3</i>	26.3	26.3	28.1	26.3
87.5°	<i>13.1</i>	11.3	11.3	13.1	13.1
90°	<i>0.0</i>	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°	82.5	82.5	80.6	82.5	82.5
80°	61.9	63.8	61.9	63.8	61.9

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