

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: P838588

Luminaire Tested: HCSQ640D010-HM63040835-61SQMW

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838588
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-HM63040835-61SQMW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

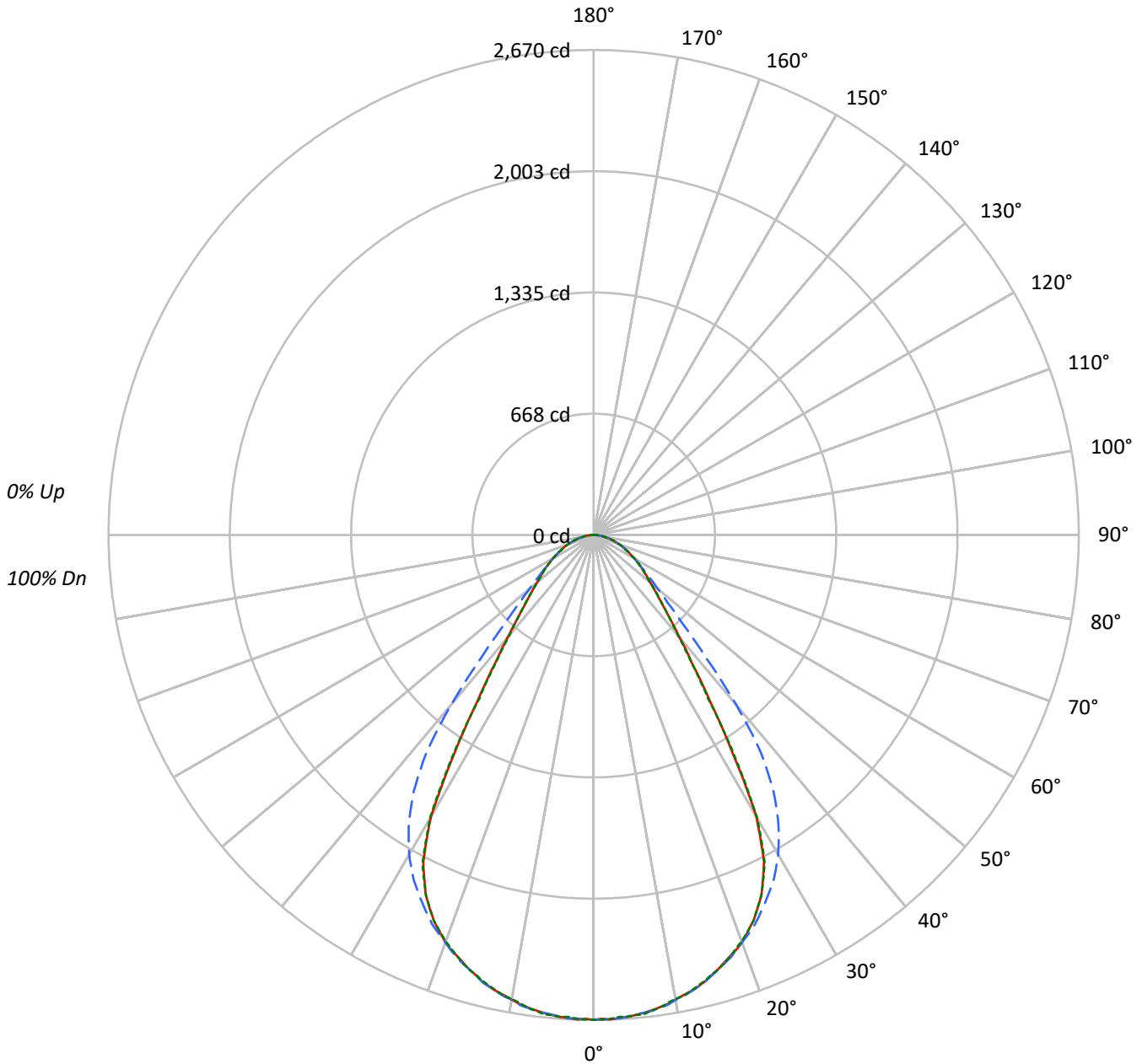
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3938.1 lumens
Efficiency: N/A
Efficacy: 96.1 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					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	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°	114954	114954	114954
5°	114667	114585	114667
10°	113545	113628	113383
15°	111855	111940	111690
20°	109338	109420	109081
25°	103878	106097	103793
30°	88953	101014	89509
35°	58448	90810	57565
40°	41316	68475	40580
45°	32034	42148	32266
50°	27242	30745	26994
55°	24509	25207	24509
60°	22174	22174	22174
65°	20335	20152	20152
70°	18556	18556	18795
75°	17384	16752	17068
80°	15274	15274	15274
85°	12894	12894	12894

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 42148 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	251.7	6.4
10°-20°	706.9	17.9
20°-30°	1007.3	25.6
30°-40°	858.9	21.8
40°-50°	475.1	12.1
50°-60°	299.3	7.6
60°-70°	198.7	5.0
70°-80°	109.2	2.8
80°-90°	31.1	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°	1965.8	49.9
0°-40°	2824.7	71.7
0°-60°	3599.1	91.4
0°-90°	3938.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3938.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2670	2670	2670	2670	2670	
5°	2653	2657	2651	2648	2653	252
15°	2509	2509	2511	2509	2506	706
25°	2187	2213	2233	2211	2185	988
35°	1112	1312	1728	1314	1095	723
45°	526	576	692	573	530	417
55°	326	332	336	330	326	293
65°	200	202	198	200	198	199
75°	104	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°	2669.9	2669.9	2669.9	2669.9	2669.9
1°	2664.3	2668.0	2668.0	2666.1	2668.0
2°	2669.9	2664.3	2664.3	2664.3	2666.1
3°	2662.4	2666.1	2666.1	2660.5	2656.8
4°	2660.5	2658.7	2658.7	2664.3	2660.5
5°	2653.1	2656.8	2651.2	2647.5	2653.1
6°	2645.6	2647.5	2645.6	2647.5	2653.1
7°	2636.3	2641.9	2640.0	2638.1	2638.1
8°	2625.1	2632.6	2628.8	2628.8	2627.0
9°	2613.9	2615.8	2619.5	2619.5	2608.3
10°	2597.1	2602.7	2599.0	2600.8	2593.4
11°	2582.2	2589.6	2587.8	2584.0	2585.9
12°	2569.1	2572.8	2571.0	2565.4	2567.2
13°	2552.3	2556.1	2554.2	2554.2	2548.6
14°	2533.7	2529.9	2535.5	2531.8	2529.9
15°	2509.4	2509.4	2511.3	2509.4	2505.7
16°	2487.0	2488.9	2488.9	2487.0	2488.9
17°	2460.9	2468.4	2466.5	2462.8	2464.6
18°	2436.6	2442.2	2444.1	2442.2	2436.6
19°	2414.3	2418.0	2416.1	2408.7	2408.7
20°	2386.3	2388.1	2388.1	2384.4	2380.7
22.5°	2298.6	2311.6	2321.0	2313.5	2298.6
25°	2186.6	2212.8	2233.3	2210.9	2184.8
27.5°	2029.9	2082.2	2143.7	2087.8	2039.2
30°	1789.2	1908.6	2031.8	1919.8	1800.4
32.5°	1423.6	1658.6	1893.7	1681.0	1445.9
35°	1112.0	1311.6	1727.7	1313.5	1095.2
37.5°	888.1	1029.9	1515.0	1020.6	878.8
40°	735.1	830.3	1218.3	826.5	722.0
42.5°	613.8	686.6	912.3	679.1	613.8
45°	526.1	576.5	692.2	572.8	529.9
47.5°	460.8	492.6	554.1	490.7	460.8
50°	406.7	425.4	459.0	423.5	403.0
52.5°	363.8	375.0	388.1	371.3	360.1
55°	326.5	332.1	335.8	330.2	326.5
57.5°	291.1	294.8	292.9	291.1	289.2
60°	257.5	259.3	257.5	259.3	257.5
62.5°	227.6	229.5	225.8	227.6	225.8
65°	199.6	201.5	197.8	199.6	197.8
67.5°	173.5	173.5	173.5	173.5	171.6
70°	147.4	149.3	147.4	149.3	149.3
72.5°	125.0	125.0	123.1	125.0	125.0
75°	104.5	102.6	100.7	102.6	102.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	<i>44.8</i>	44.8	42.9	44.8	44.8
85°	<i>26.1</i>	26.1	26.1	28.0	26.1
87.5°	<i>13.1</i>	11.2	11.2	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°	82.1	82.1	80.2	82.1	82.1
80°	61.6	63.4	61.6	63.4	61.6

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