

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: P838753

Luminaire Tested: HCSQ660D010-HM64560840-61SQMW

Issue Date: 5/21/2024

**Test Information**

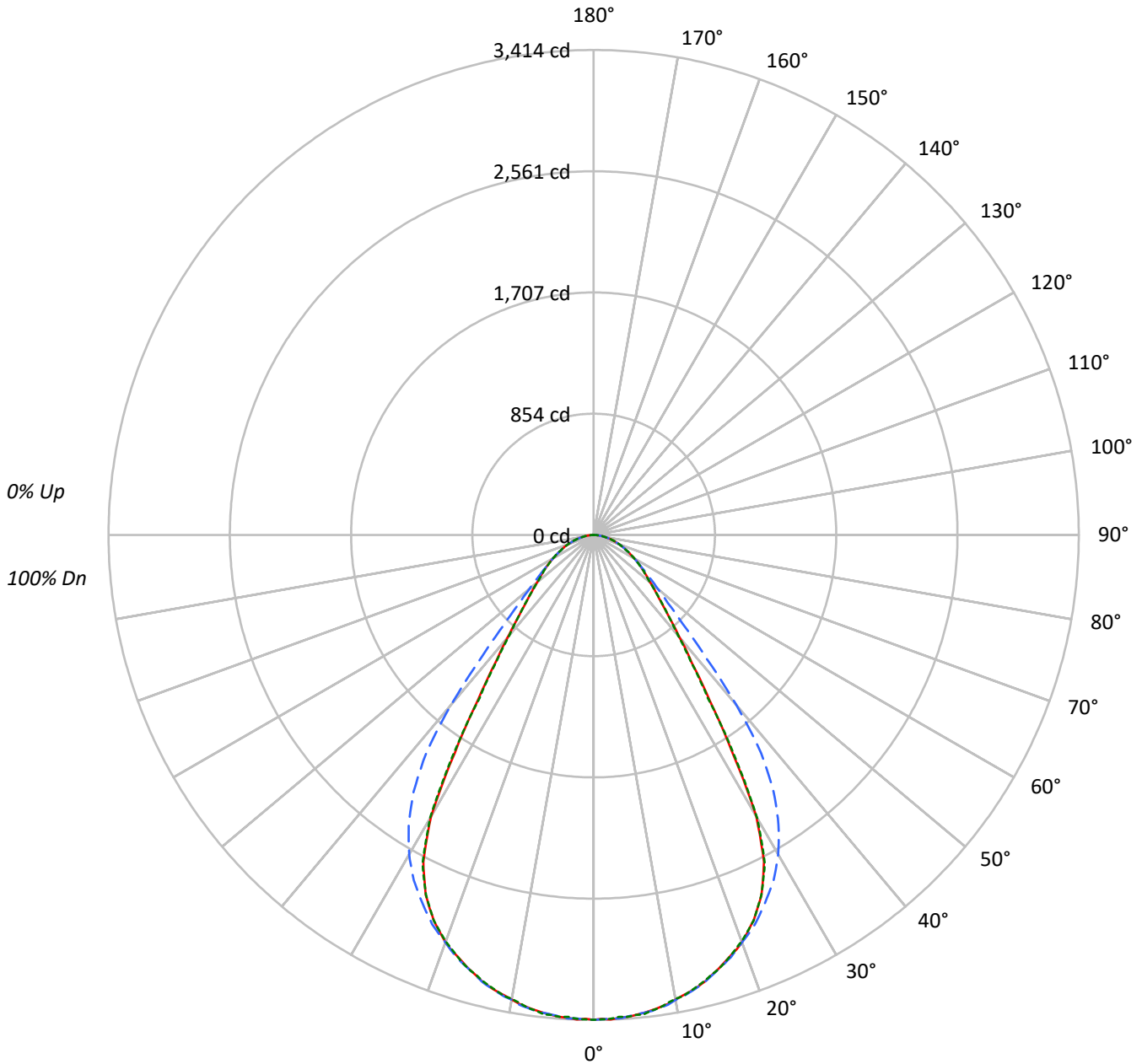
Test Method: LM-79-2019  
Report Number: P838753  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ660D010-HM64560840-61SQMW  
Description: 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: 5035.5 lumens  
Efficiency: N/A  
Efficacy: 89.9 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): 56  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	146983	146983	146983
5°	146620	146516	146620
10°	145185	145290	144975
15°	143026	143133	142812
20°	139803	139913	139477
25°	132829	135660	132715
30°	113741	129158	114452
35°	74732	116113	73607
40°	52827	87556	51889
45°	40961	53894	41253
50°	34838	39312	34516
55°	31340	32233	31340
60°	28348	28348	28348
65°	26010	25765	25765
70°	23730	23730	24032
75°	22225	21426	21826
80°	19513	19513	19513
85°	16500	16500	16500

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 53894 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	321.8	6.4
10°-20°	903.8	17.9
20°-30°	1288.0	25.6
30°-40°	1098.2	21.8
40°-50°	607.6	12.1
50°-60°	382.7	7.6
60°-70°	254.1	5.0
70°-80°	139.6	2.8
80°-90°	39.8	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°	2513.6	49.9
0°-40°	3611.8	71.7
0°-60°	4602.0	91.4
0°-90°	5035.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5035.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3414	3414	3414	3414	3414	
5°	3392	3397	3390	3385	3392	322
15°	3209	3209	3211	3209	3204	903
25°	2796	2829	2856	2827	2794	1263
35°	1422	1677	2209	1680	1400	924
45°	673	737	885	732	678	533
55°	418	425	429	422	418	375
65°	255	258	253	255	253	254
75°	134	131	129	131	131	140
85°	33	33	33	36	33	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3413.8	3413.8	3413.8	3413.8	3413.8
1°	3406.7	3411.4	3411.4	3409.1	3411.4
2°	3413.8	3406.7	3406.7	3406.7	3409.1
3°	3404.3	3409.1	3409.1	3401.9	3397.1
4°	3401.9	3399.5	3399.5	3406.7	3401.9
5°	3392.4	3397.1	3390.0	3385.2	3392.4
6°	3382.8	3385.2	3382.8	3385.2	3392.4
7°	3370.9	3378.0	3375.7	3373.3	3373.3
8°	3356.6	3366.1	3361.3	3361.3	3359.0
9°	3342.3	3344.6	3349.4	3349.4	3335.1
10°	3320.8	3327.9	3323.2	3325.6	3316.0
11°	3301.7	3311.2	3308.9	3304.1	3306.5
12°	3285.0	3289.8	3287.4	3280.2	3282.6
13°	3263.5	3268.3	3265.9	3265.9	3258.8
14°	3239.7	3234.9	3242.1	3237.3	3234.9
15°	3208.7	3208.7	3211.1	3208.7	3203.9
16°	3180.0	3182.4	3182.4	3180.0	3182.4
17°	3146.6	3156.2	3153.8	3149.0	3151.4
18°	3115.6	3122.8	3125.2	3122.8	3115.6
19°	3087.0	3091.8	3089.4	3079.8	3079.8
20°	3051.2	3053.6	3053.6	3048.8	3044.1
22.5°	2939.1	2955.8	2967.7	2958.2	2939.1
25°	2796.0	2829.4	2855.6	2827.0	2793.6
27.5°	2595.6	2662.4	2741.1	2669.5	2607.5
30°	2287.8	2440.5	2597.9	2454.8	2302.1
32.5°	1820.2	2120.8	2421.4	2149.4	1848.9
35°	1421.8	1677.1	2209.1	1679.5	1400.4
37.5°	1135.6	1316.9	1937.1	1304.9	1123.6
40°	939.9	1061.6	1557.8	1056.8	923.2
42.5°	784.9	877.9	1166.6	868.4	784.9
45°	672.7	737.2	885.1	732.4	677.5
47.5°	589.2	629.8	708.5	627.4	589.2
50°	520.1	543.9	586.9	541.5	515.3
52.5°	465.2	479.5	496.2	474.7	460.4
55°	417.5	424.6	429.4	422.3	417.5
57.5°	372.2	376.9	374.5	372.2	369.8
60°	329.2	331.6	329.2	331.6	329.2
62.5°	291.0	293.4	288.7	291.0	288.7
65°	255.3	257.6	252.9	255.3	252.9
67.5°	221.9	221.9	221.9	221.9	219.5
70°	188.5	190.9	188.5	190.9	190.9
72.5°	159.8	159.8	157.5	159.8	159.8
75°	133.6	131.2	128.8	131.2	131.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	57.3	57.3	54.9	57.3	57.3
85°	33.4	33.4	33.4	35.8	33.4
87.5°	16.7	14.3	14.3	16.7	16.7
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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Scaled Data Report





77.5°	105.0	105.0	102.6	105.0	105.0
80°	78.7	81.1	78.7	81.1	78.7

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Scaled Data Report



(END OF REPORT)