

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: P838358

Luminaire Tested: HCSQ610D010-HM60525927-61SQMW

Issue Date: 5/21/2024

**Test Information**

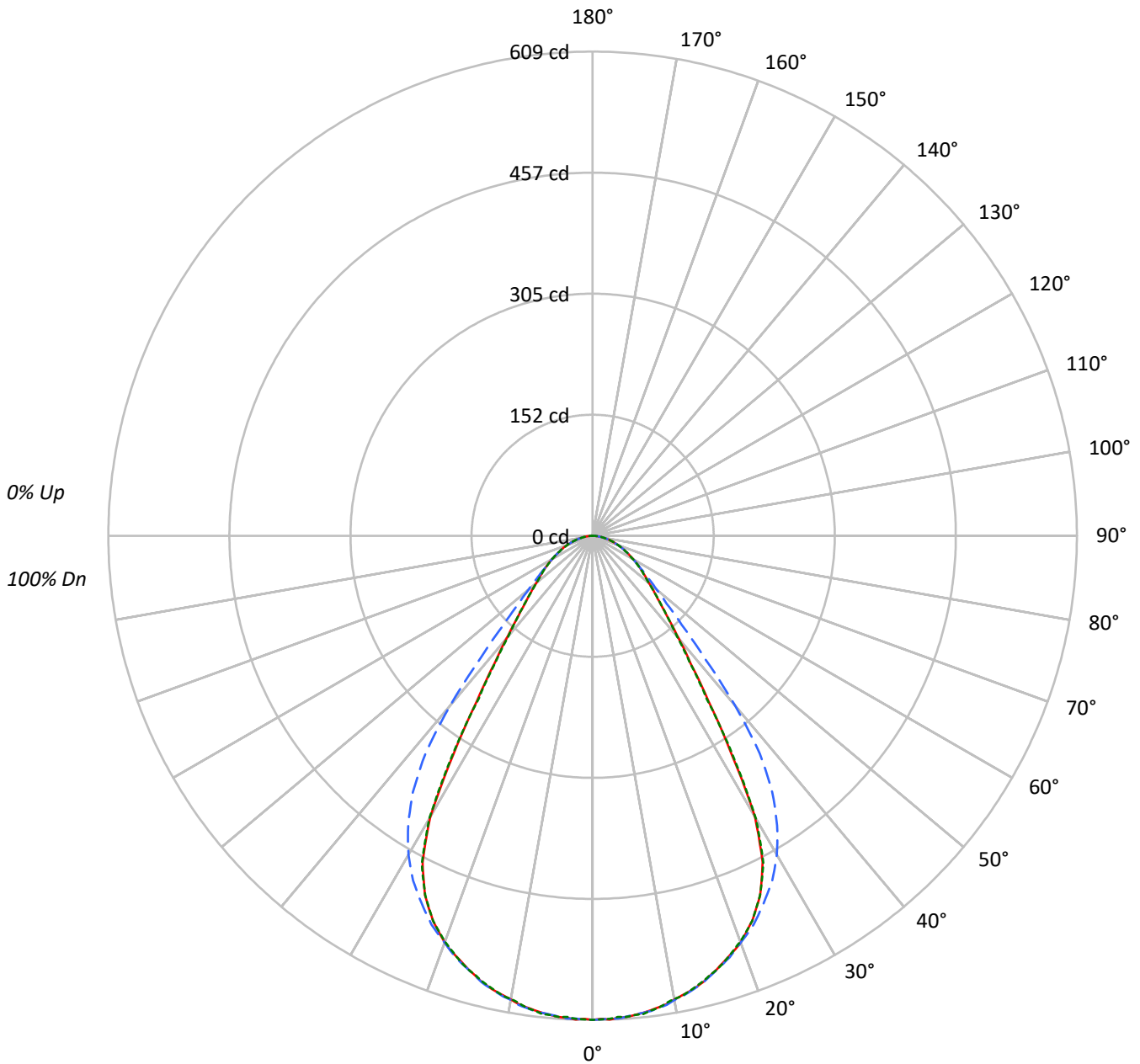
Test Method: LM-79-2019  
Report Number: P838358  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ610D010-HM60525927-61SQMW  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 898.2 lumens  
Efficiency: N/A  
Efficacy: 90.7 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): 9.9  
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									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°	26217	26217	26217
5°	26152	26135	26152
10°	25895	25917	25860
15°	25510	25532	25474
20°	24939	24958	24880
25°	23692	24200	23673
30°	20289	23039	20414
35°	13330	20709	13130
40°	9426	15619	9257
45°	7307	9615	7362
50°	6216	7013	6156
55°	5592	5750	5592
60°	5055	5055	5055
65°	4635	4595	4595
70°	4230	4230	4280
75°	3959	3826	3893
80°	3471	3471	3471
85°	2964	2964	2964

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 9615 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.4	6.4
10°-20°	161.2	17.9
20°-30°	229.7	25.6
30°-40°	195.9	21.8
40°-50°	108.4	12.1
50°-60°	68.3	7.6
60°-70°	45.3	5.0
70°-80°	24.9	2.8
80°-90°	7.1	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°	448.4	49.9
0°-40°	644.3	71.7
0°-60°	820.9	91.4
0°-90°	898.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	898.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	609	609	609	609	609	
5°	605	606	605	604	605	57
15°	572	572	573	572	572	161
25°	499	505	509	504	498	225
35°	254	299	394	300	250	165
45°	120	132	158	131	121	95
55°	74	76	77	75	74	67
65°	46	46	45	46	45	45
75°	24	23	23	23	23	25
85°	6	6	6	6	6	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	608.9	608.9	608.9	608.9	608.9
1°	607.7	608.5	608.5	608.1	608.5
2°	608.9	607.7	607.7	607.7	608.1
3°	607.2	608.1	608.1	606.8	606.0
4°	606.8	606.4	606.4	607.7	606.8
5°	605.1	606.0	604.7	603.8	605.1
6°	603.4	603.8	603.4	603.8	605.1
7°	601.3	602.6	602.1	601.7	601.7
8°	598.7	600.4	599.6	599.6	599.2
9°	596.2	596.6	597.5	597.5	594.9
10°	592.3	593.6	592.8	593.2	591.5
11°	588.9	590.6	590.2	589.4	589.8
12°	586.0	586.8	586.4	585.1	585.5
13°	582.1	583.0	582.6	582.6	581.3
14°	577.9	577.0	578.3	577.5	577.0
15°	572.3	572.3	572.8	572.3	571.5
16°	567.2	567.7	567.7	567.2	567.7
17°	561.3	563.0	562.6	561.7	562.1
18°	555.8	557.0	557.5	557.0	555.8
19°	550.6	551.5	551.1	549.4	549.4
20°	544.3	544.7	544.7	543.8	543.0
22.5°	524.3	527.2	529.4	527.7	524.3
25°	498.7	504.7	509.4	504.3	498.3
27.5°	463.0	474.9	488.9	476.2	465.1
30°	408.1	435.3	463.4	437.9	410.6
32.5°	324.7	378.3	431.9	383.4	329.8
35°	253.6	299.2	394.0	299.6	249.8
37.5°	202.6	234.9	345.5	232.8	200.4
40°	167.7	189.4	277.9	188.5	164.7
42.5°	140.0	156.6	208.1	154.9	140.0
45°	120.0	131.5	157.9	130.6	120.9
47.5°	105.1	112.3	126.4	111.9	105.1
50°	92.8	97.0	104.7	96.6	91.9
52.5°	83.0	85.5	88.5	84.7	82.1
55°	74.5	75.7	76.6	75.3	74.5
57.5°	66.4	67.2	66.8	66.4	66.0
60°	58.7	59.1	58.7	59.1	58.7
62.5°	51.9	52.3	51.5	51.9	51.5
65°	45.5	46.0	45.1	45.5	45.1
67.5°	39.6	39.6	39.6	39.6	39.1
70°	33.6	34.0	33.6	34.0	34.0
72.5°	28.5	28.5	28.1	28.5	28.5
75°	23.8	23.4	23.0	23.4	23.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	10.2	10.2	9.8	10.2	10.2
85°	6.0	6.0	6.0	6.4	6.0
87.5°	3.0	2.6	2.6	3.0	3.0
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°	18.7	18.7	18.3	18.7	18.7
80°	14.0	14.5	14.0	14.5	14.0

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Scaled Data Report



(END OF REPORT)