

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: P838342

Luminaire Tested: HCSQ610D010-HM60525830-61SQMB

Issue Date: 5/21/2024

**Test Information**

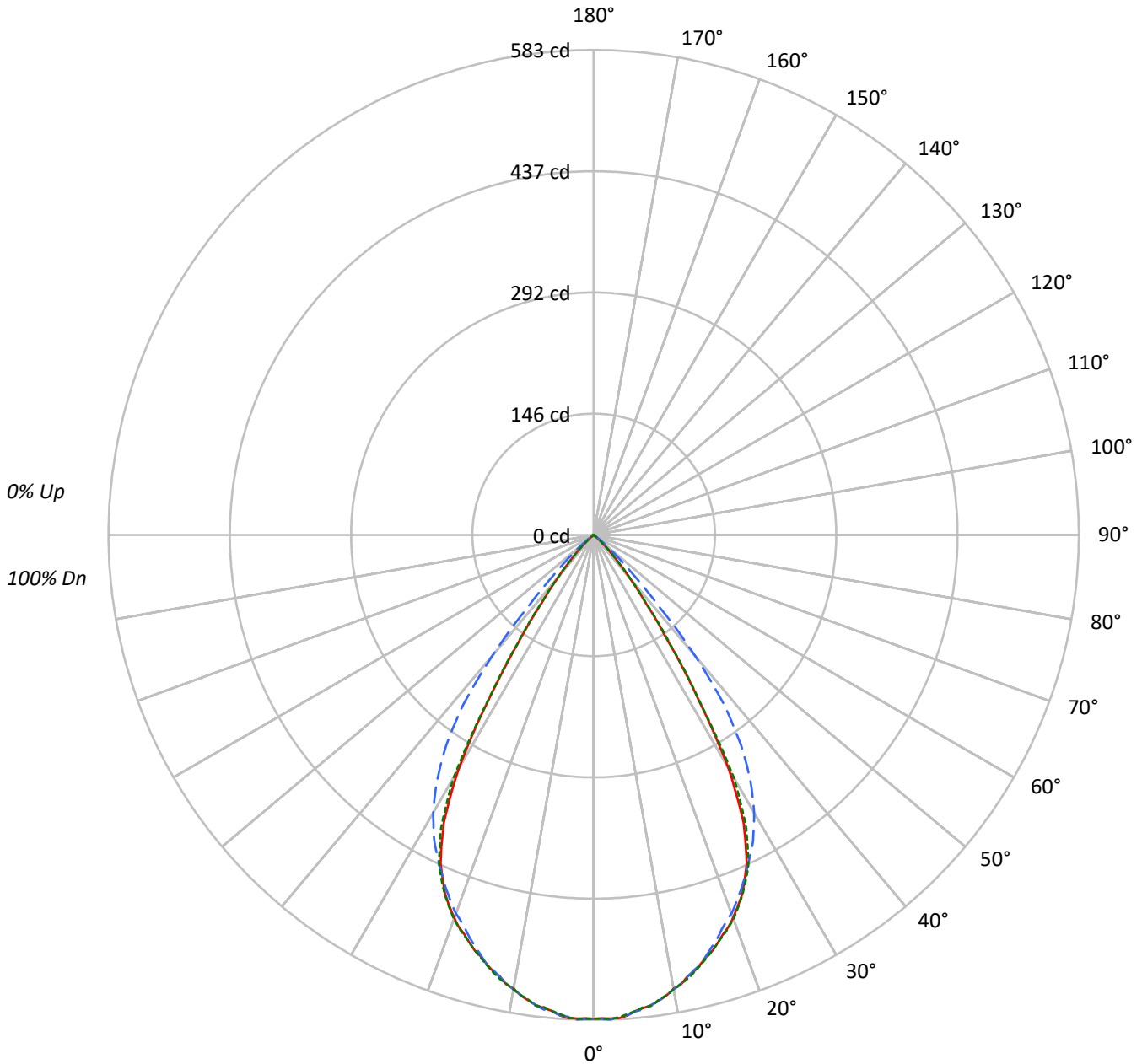
Test Method: LM-79-2019  
Report Number: P838342  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ610D010-HM60525830-61SQMB  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 578.2 lumens  
Efficiency: N/A  
Efficacy: 58.4 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.01 / 1.03  
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					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	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	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93								
2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87								
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81								
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75								
5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70								
6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65								
7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60								
8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56								
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53								
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	25045	25045	25045
5°	24834	24856	24834
10°	24212	24256	24256
15°	23379	23317	23442
20°	22451	22195	22515
25°	20675	20832	20879
30°	16118	19171	16725
35°	8173	16241	8468
40°	3721	10623	3721
45°	1437	4000	1413
50°	221	1266	221
55°	68	248	68
60°	43	43	43
65°	51	0	51
70°	0	0	63
75°	0	0	83
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 4000 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.3	9.4
10°-20°	147.3	25.5
20°-30°	198.6	34.3
30°-40°	139.6	24.1
40°-50°	35.6	6.2
50°-60°	2.5	0.4
60°-70°	0.3	0.1
70°-80°	0.0	0.0
80°-90°	0.0	0.0
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°	400.2	69.2
0°-40°	539.8	93.4
0°-60°	577.9	99.9
0°-90°	578.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	578.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	582	582	582	582	582	
5°	575	576	575	576	575	54
15°	524	524	523	524	526	148
25°	435	437	438	440	440	194
35°	156	206	309	211	161	105
45°	24	35	66	36	23	21
55°	1	1	3	1	1	1
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	581.7	581.7	581.7	581.7	581.7
1°	581.2	581.7	582.2	582.2	581.7
2°	581.7	580.3	583.1	581.7	582.2
3°	581.7	578.9	580.3	581.2	580.8
4°	579.3	577.4	578.9	578.4	577.4
5°	574.6	575.6	575.1	575.6	574.6
6°	571.8	572.7	573.7	572.2	570.8
7°	569.4	568.9	569.4	570.4	570.4
8°	565.2	566.1	565.2	565.6	564.2
9°	560.4	560.4	560.4	561.4	560.0
10°	553.8	556.2	554.8	555.7	554.8
11°	550.5	549.6	549.6	550.0	549.6
12°	542.5	543.4	543.0	543.9	545.3
13°	538.2	538.7	536.8	539.2	539.2
14°	531.6	531.1	532.1	531.6	532.6
15°	524.5	523.6	523.1	524.5	525.9
16°	519.3	517.0	515.5	517.4	519.3
17°	511.8	509.4	507.5	511.3	511.8
18°	504.2	503.3	498.5	503.3	505.6
19°	498.1	494.8	490.5	495.7	498.5
20°	490.0	487.2	484.4	487.2	491.4
22.5°	466.9	464.5	462.1	465.5	467.8
25°	435.2	436.6	438.5	439.9	439.5
27.5°	390.3	403.1	414.9	407.3	397.4
30°	324.2	356.3	385.6	361.5	336.4
32.5°	234.9	289.7	350.6	300.5	237.2
35°	155.5	206.0	309.0	211.2	161.1
37.5°	101.1	138.5	258.0	138.9	105.8
40°	66.2	90.3	189.0	92.1	66.2
42.5°	40.6	57.2	114.8	59.5	40.6
45°	23.6	35.4	65.7	35.9	23.2
47.5°	10.9	19.4	37.3	18.9	11.3
50°	3.3	8.5	18.9	8.5	3.3
52.5°	1.4	2.4	9.0	2.4	1.4
55°	0.9	0.9	3.3	0.9	0.9
57.5°	0.9	0.5	0.9	0.9	0.9
60°	0.5	0.5	0.5	0.5	0.5
62.5°	0.5	0.5	0.5	0.5	0.5
65°	0.5	0.5	0.0	0.5	0.5
67.5°	0.5	0.0	0.0	0.0	0.5
70°	0.0	0.0	0.0	0.0	0.5
72.5°	0.0	0.0	0.0	0.0	0.5
75°	0.0	0.0	0.0	0.0	0.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



(END OF REPORT)