

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: P838337

Luminaire Tested: HCSQ610D010-HM60525827-61SQMB

Issue Date: 5/21/2024



**Test Information**

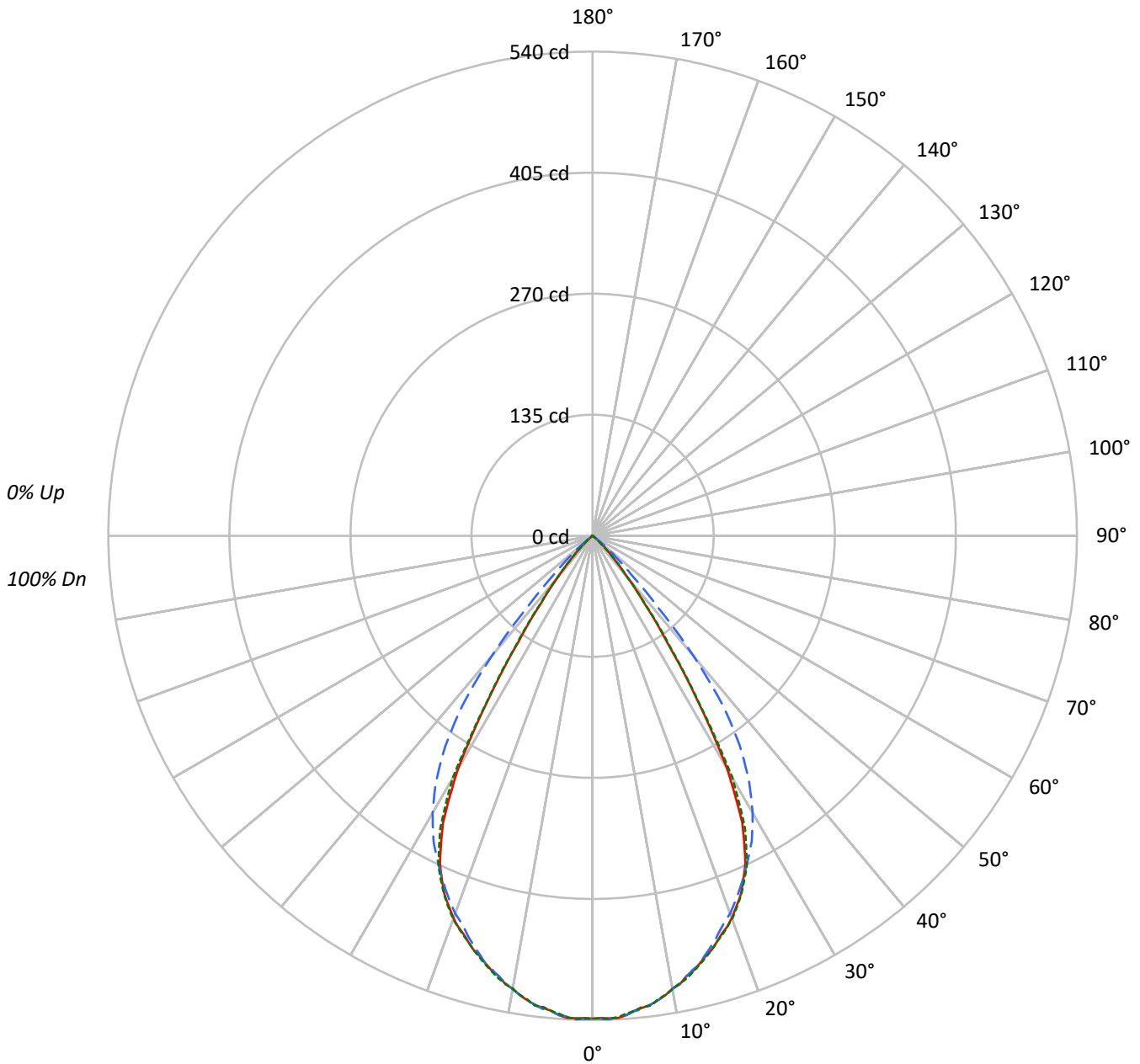
Test Method: LM-79-2019  
Report Number: P838337  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ610D010-HM60525827-61SQMB  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 535.2 lumens  
Efficiency: N/A  
Efficacy: 54.1 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 (Ain): 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	100	100	100	100	100		
	1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93	93	93	93	93	93		
	2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87	87	87	87	87	87		
	3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81	81	81	81	81	81		
	4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75	75	75	75	75	75		
	5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70	70	70	70	70	70		
	6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65	65	65	65	65	65		
	7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60	60	60	60	60	60		
	8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56	56	56	56	56	56		
	9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53	53	53	53	53	53		
	10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50	50	50	50	50	50		

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

	0°	45°	90°
0°	23185	23185	23185
5°	22989	23006	22989
10°	22415	22450	22450
15°	21641	21583	21703
20°	20783	20545	20843
25°	19140	19283	19326
30°	14920	17744	15482
35°	7564	15038	7842
40°	3440	9836	3440
45°	1333	3702	1303
50°	208	1172	208
55°	68	233	68
60°	34	34	34
65°	41	0	41
70°	0	0	50
75°	0	0	67
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 3702 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.3	9.4
10°-20°	136.4	25.5
20°-30°	183.8	34.3
30°-40°	129.2	24.1
40°-50°	33.0	6.2
50°-60°	2.3	0.4
60°-70°	0.3	0.0
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°	370.4	69.2
0°-40°	499.7	93.4
0°-60°	535.0	99.9
0°-90°	535.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	535.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	538	538	538	538	538	
5°	532	533	532	533	532	50
15°	486	485	484	486	487	137
25°	403	404	406	407	407	180
35°	144	191	286	196	149	97
45°	22	33	61	33	21	19
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°	538.5	538.5	538.5	538.5	538.5
1°	538.0	538.5	538.9	538.9	538.5
2°	538.5	537.2	539.8	538.5	538.9
3°	538.5	535.8	537.2	538.0	537.6
4°	536.3	534.5	535.8	535.4	534.5
5°	531.9	532.8	532.3	532.8	531.9
6°	529.3	530.2	531.0	529.7	528.4
7°	527.1	526.7	527.1	528.0	528.0
8°	523.2	524.0	523.2	523.6	522.3
9°	518.8	518.8	518.8	519.7	518.3
10°	512.7	514.8	513.5	514.4	513.5
11°	509.6	508.7	508.7	509.2	508.7
12°	502.2	503.0	502.6	503.5	504.8
13°	498.2	498.7	496.9	499.1	499.1
14°	492.1	491.7	492.5	492.1	493.0
15°	485.5	484.7	484.2	485.5	486.9
16°	480.7	478.5	477.2	479.0	480.7
17°	473.7	471.5	469.8	473.3	473.7
18°	466.7	465.9	461.5	465.9	468.0
19°	461.0	458.0	454.0	458.9	461.5
20°	453.6	451.0	448.4	451.0	454.9
22.5°	432.2	430.0	427.8	430.9	433.0
25°	402.9	404.2	405.9	407.2	406.8
27.5°	361.3	373.1	384.1	377.1	367.9
30°	300.1	329.8	356.9	334.6	311.4
32.5°	217.4	268.1	324.6	278.2	219.6
35°	143.9	190.7	286.1	195.5	149.2
37.5°	93.6	128.2	238.8	128.6	98.0
40°	61.2	83.5	175.0	85.3	61.2
42.5°	37.6	52.9	106.3	55.1	37.6
45°	21.9	32.8	60.8	33.2	21.4
47.5°	10.1	17.9	34.6	17.5	10.5
50°	3.1	7.9	17.5	7.9	3.1
52.5°	1.3	2.2	8.3	2.2	1.3
55°	0.9	0.9	3.1	0.9	0.9
57.5°	0.9	0.4	0.9	0.9	0.9
60°	0.4	0.4	0.4	0.4	0.4
62.5°	0.4	0.4	0.4	0.4	0.4
65°	0.4	0.4	0.0	0.4	0.4
67.5°	0.4	0.0	0.0	0.0	0.4
70°	0.0	0.0	0.0	0.0	0.4
72.5°	0.0	0.0	0.0	0.0	0.4
75°	0.0	0.0	0.0	0.0	0.4



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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)