

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: P838604

Luminaire Tested: HCSQ640D010-HM63040935-61SQC

Issue Date: 5/21/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P838604  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ640D010-HM63040935-61SQC  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: -

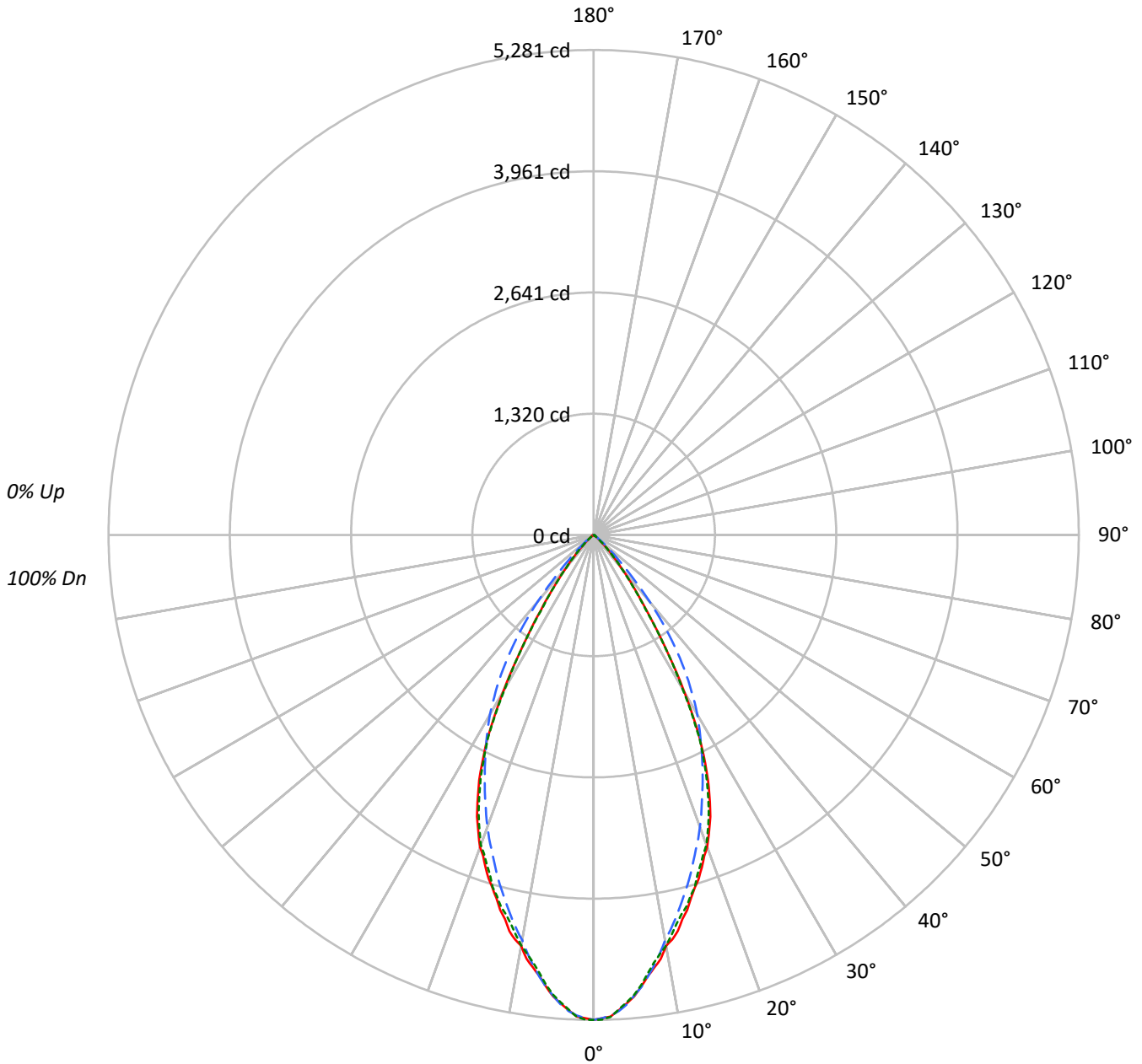
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3955.6 lumens  
Efficiency: N/A  
Efficacy: 96.5 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85  
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<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	114	111	108	106	111	109	107	105	105	103	101	101	100	98	98	96	95	94																			
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	97	92	88	101	95	91	87	93	89	86	90	87	84	88	85	83	81																			
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	78	76																			
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71																			
6	88	80	74	70	87	79	73	69	77	72	69	76	72	68	75	71	68	66																			
7	84	75	69	65	83	74	69	65	73	68	64	72	67	64	71	67	64	62																			
8	80	71	65	61	79	70	65	61	69	64	60	68	64	60	67	63	60	59																			
9	76	67	61	57	75	66	61	57	65	60	57	65	60	57	64	60	56	55																			
10	73	63	58	54	72	63	57	54	62	57	54	61	57	53	61	56	53	52																			

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

	0°	45°	90°
0°	227373	227373	227373
5°	218102	217721	217415
10°	198646	195948	198493
15°	182559	175878	181458
20°	165672	155005	164540
25°	140016	133232	138092
30°	98041	112155	96370
35°	52661	86032	51636
40°	26074	53238	25877
45°	11386	22444	11167
50°	3664	8152	3664
55°	1854	2650	1719
60°	1214	1214	1214
65°	897	897	897
70°	667	667	667
75°	582	582	582
80°	446	446	446
85°	889	889	889

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 22444 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	463.7	11.7
10°-20°	1119.8	28.3
20°-30°	1293.5	32.7
30°-40°	807.8	20.4
40°-50°	224.4	5.7
50°-60°	31.4	0.8
60°-70°	9.2	0.2
70°-80°	3.9	0.1
80°-90°	1.7	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°	2877.0	72.7
0°-40°	3684.8	93.2
0°-60°	3940.7	99.6
0°-90°	3955.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3955.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5281	5281	5281	5281	5281	
5°	5046	5032	5038	5030	5030	465
15°	4096	4018	3946	4007	4071	1147
25°	2947	2861	2804	2859	2907	1316
35°	1002	1236	1637	1222	982	666
45°	187	238	369	236	183	162
55°	25	25	35	25	23	24
65°	9	9	9	9	9	9
75°	4	4	4	4	4	4
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5280.9	5280.9	5280.9	5280.9	5280.9
1°	5265.0	5265.0	5265.0	5279.1	5279.1
2°	5249.1	5245.6	5236.8	5247.4	5252.7
3°	5183.9	5190.9	5194.5	5189.2	5176.8
4°	5116.8	5109.8	5129.2	5116.8	5106.3
5°	5046.3	5032.2	5037.5	5030.4	5030.4
6°	4947.5	4965.2	4951.0	4938.7	4931.6
7°	4839.9	4854.0	4845.2	4827.6	4815.2
8°	4755.3	4746.4	4732.3	4728.8	4707.6
9°	4674.1	4642.4	4610.6	4615.9	4621.2
10°	4543.6	4547.1	4481.9	4531.3	4540.1
11°	4488.9	4469.5	4383.1	4423.7	4437.8
12°	4409.6	4347.8	4273.7	4307.3	4333.7
13°	4294.9	4231.4	4164.4	4215.5	4242.0
14°	4208.5	4136.2	4051.5	4116.8	4171.4
15°	4095.6	4018.0	3945.7	4007.4	4070.9
16°	3996.8	3906.9	3834.5	3894.5	3989.8
17°	3910.4	3799.3	3711.1	3774.6	3866.3
18°	3809.9	3681.1	3600.0	3667.0	3771.1
19°	3698.7	3568.2	3495.9	3550.6	3670.5
20°	3615.8	3469.4	3383.0	3435.9	3591.1
22.5°	3319.5	3166.1	3086.7	3150.2	3273.7
25°	2947.3	2860.9	2804.5	2859.2	2906.8
27.5°	2506.4	2506.4	2525.8	2502.9	2488.8
30°	1972.0	2114.8	2255.9	2107.8	1938.4
32.5°	1439.3	1668.6	1952.6	1698.6	1437.5
35°	1001.9	1236.4	1636.8	1222.3	982.4
37.5°	696.7	851.9	1291.1	860.7	687.9
40°	463.9	571.5	947.2	582.1	460.4
42.5°	303.4	377.5	612.0	379.2	296.3
45°	187.0	238.1	368.6	236.4	183.4
47.5°	109.4	141.1	215.2	142.9	107.6
50°	54.7	82.9	121.7	81.1	54.7
52.5°	31.7	44.1	67.0	42.3	31.7
55°	24.7	24.7	35.3	24.7	22.9
57.5°	19.4	19.4	19.4	19.4	17.6
60°	14.1	15.9	14.1	14.1	14.1
62.5°	12.3	12.3	10.6	12.3	10.6
65°	8.8	8.8	8.8	8.8	8.8
67.5°	7.1	7.1	7.1	7.1	7.1
70°	5.3	5.3	5.3	5.3	5.3
72.5°	3.5	5.3	3.5	5.3	5.3
75°	3.5	3.5	3.5	3.5	3.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	1.8	1.8	1.8	1.8	1.8
85°	1.8	1.8	1.8	1.8	1.8
87.5°	1.8	1.8	1.8	1.8	1.8
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°	3.5	3.5	3.5	3.5	1.8
80°	1.8	1.8	1.8	1.8	1.8

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