

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: P838594

Luminaire Tested: HCSQ640D010-HM63040927-61SQC

Issue Date: 5/21/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P838594  
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-HM63040927-61SQC  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: -

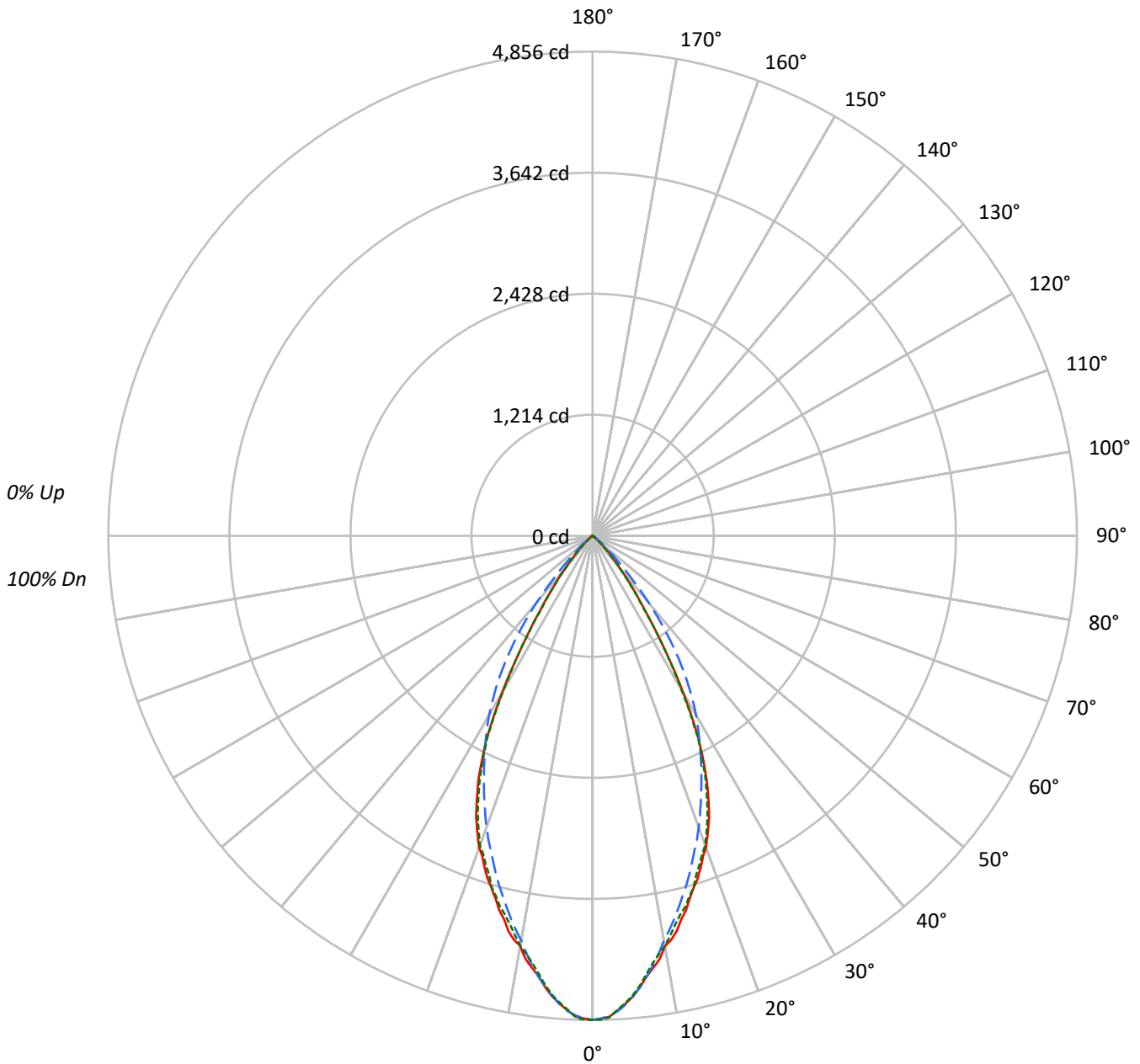
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3637.5 lumens  
Efficiency: N/A  
Efficacy: 88.7 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°	209091	209091	209091
5°	200567	200217	199936
10°	182675	180196	182535
15°	167881	161739	166869
20°	152357	142543	151312
25°	128762	122520	126990
30°	90156	103142	88624
35°	48425	79115	47489
40°	23977	48955	23792
45°	10467	20642	10272
50°	3369	7495	3369
55°	1704	2432	1584
60°	1119	1119	1119
65°	825	825	825
70°	617	617	617
75°	532	532	532
80°	397	397	397
85°	790	790	790

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 20642 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	426.4	11.7
10°-20°	1029.8	28.3
20°-30°	1189.5	32.7
30°-40°	742.9	20.4
40°-50°	206.4	5.7
50°-60°	28.9	0.8
60°-70°	8.5	0.2
70°-80°	3.6	0.1
80°-90°	1.5	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°	2645.7	72.7
0°-40°	3388.6	93.2
0°-60°	3623.8	99.6
0°-90°	3637.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3637.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4856	4856	4856	4856	4856	
5°	4641	4628	4632	4626	4626	428
15°	3766	3695	3628	3685	3744	1055
25°	2710	2631	2579	2629	2673	1211
35°	921	1137	1505	1124	904	612
45°	172	219	339	217	169	149
55°	23	23	32	23	21	22
65°	8	8	8	8	8	9
75°	3	3	3	3	3	3
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°	4856.3	4856.3	4856.3	4856.3	4856.3
1°	4841.8	4841.8	4841.8	4854.7	4854.7
2°	4827.2	4823.9	4815.8	4825.5	4830.4
3°	4767.1	4773.6	4776.9	4772.0	4760.6
4°	4705.5	4699.0	4716.9	4705.5	4695.8
5°	4640.6	4627.6	4632.5	4626.0	4626.0
6°	4549.8	4566.0	4553.0	4541.7	4535.2
7°	4450.8	4463.8	4455.7	4439.5	4428.1
8°	4373.0	4364.9	4351.9	4348.7	4329.2
9°	4298.4	4269.2	4240.0	4244.8	4249.7
10°	4178.3	4181.6	4121.6	4167.0	4175.1
11°	4128.1	4110.2	4030.7	4068.0	4081.0
12°	4055.1	3998.3	3930.2	3961.0	3985.3
13°	3949.6	3891.2	3829.6	3876.6	3901.0
14°	3870.2	3803.7	3725.8	3785.8	3836.1
15°	3766.3	3695.0	3628.5	3685.2	3743.6
16°	3675.5	3592.8	3526.3	3581.4	3669.0
17°	3596.0	3493.8	3412.7	3471.1	3555.5
18°	3503.6	3385.2	3310.6	3372.2	3467.9
19°	3401.4	3281.4	3214.9	3265.1	3375.4
20°	3325.2	3190.5	3111.0	3159.7	3302.4
22.5°	3052.7	2911.5	2838.5	2896.9	3010.5
25°	2710.4	2630.9	2579.0	2629.3	2673.1
27.5°	2304.9	2304.9	2322.7	2301.7	2288.7
30°	1813.4	1944.8	2074.6	1938.3	1782.6
32.5°	1323.6	1534.4	1795.6	1562.0	1322.0
35°	921.3	1137.0	1505.2	1124.1	903.5
37.5°	640.7	783.4	1187.3	791.5	632.6
40°	426.6	525.5	871.0	535.3	423.3
42.5°	279.0	347.1	562.8	348.7	272.5
45°	171.9	219.0	339.0	217.4	168.7
47.5°	100.6	129.8	197.9	131.4	98.9
50°	50.3	76.2	111.9	74.6	50.3
52.5°	29.2	40.6	61.6	38.9	29.2
55°	22.7	22.7	32.4	22.7	21.1
57.5°	17.8	17.8	17.8	17.8	16.2
60°	13.0	14.6	13.0	13.0	13.0
62.5°	11.4	11.4	9.7	11.4	9.7
65°	8.1	8.1	8.1	8.1	8.1
67.5°	6.5	6.5	6.5	6.5	6.5
70°	4.9	4.9	4.9	4.9	4.9
72.5°	3.2	4.9	3.2	4.9	4.9
75°	3.2	3.2	3.2	3.2	3.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	1.6	1.6	1.6	1.6	1.6
85°	1.6	1.6	1.6	1.6	1.6
87.5°	1.6	1.6	1.6	1.6	1.6
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°	3.2	3.2	3.2	3.2	1.6
80°	1.6	1.6	1.6	1.6	1.6

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Scaled Data Report



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