

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: P837248

Luminaire Tested: HCSQ407D010-HM40525840-41SQC

Issue Date: 5/17/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P837248  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/17/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ407D010-HM40525840-41SQC  
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: -

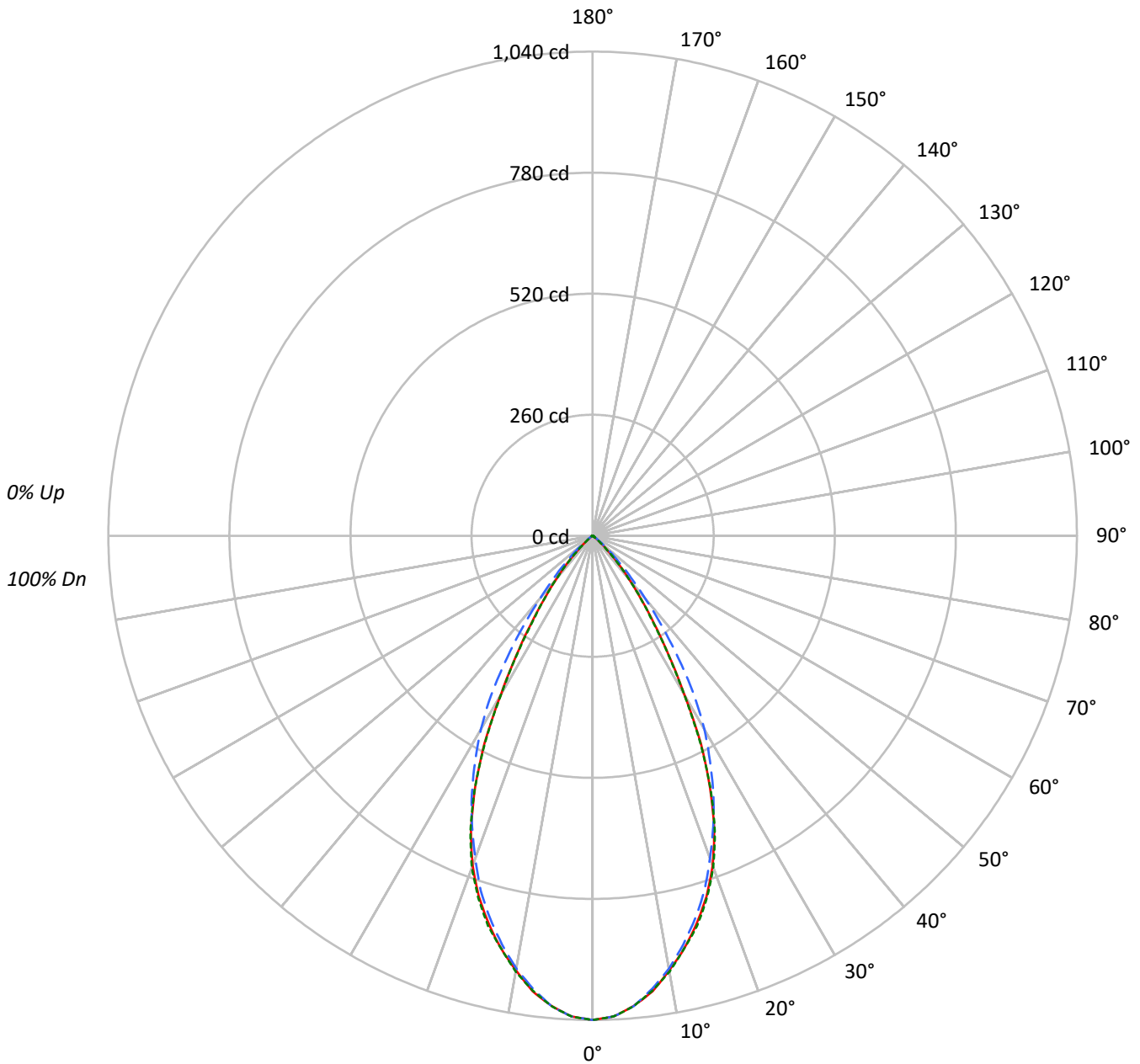
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 840.4 lumens  
Efficiency: N/A  
Efficacy: 105.0 lumens/watt  
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 8  
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

TEST NUMBER: P837248  
CATALOG NUMBER: HCSQ407D010-HM40525840-41SQC

### Luminous Intensity Polar Plot





TEST NUMBER: P837248

CATALOG NUMBER: HCSQ407D010-HM40525840-41SQC

**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	106	104	105	103	101	101	99	98	97	96	95	94																			
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81																			
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76																			
5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71																			
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66																			
7	84	75	69	65	82	74	68	64	73	68	64	72	67	64	70	66	63	62																			
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58																			
9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55																			
10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52																			

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

	0°	45°	90°
0°	100750	100750	100750
5°	98587	98626	98626
10°	93255	92832	93501
15°	86523	85339	86994
20°	77670	75928	78144
25°	63792	65641	64017
30°	44096	53638	43772
35°	27153	37891	26503
40°	15315	22156	15213
45°	7001	11097	6713
50°	1778	4446	1839
55°	861	1351	777
60°	581	484	659
65°	481	390	481
70°	368	368	482
75°	299	299	487
80°	446	446	446
85°	445	889	889

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 11097 cd/sqm



TEST NUMBER: P837248

CATALOG NUMBER: HCSQ407D010-HM40525840-41SQC

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.6	11.3
10°-20°	238.9	28.4
20°-30°	273.1	32.5
30°-40°	169.5	20.2
40°-50°	53.4	6.4
50°-60°	6.9	0.8
60°-70°	2.0	0.2
70°-80°	1.1	0.1
80°-90°	0.7	0.1
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°	606.6	72.2
0°-40°	776.2	92.4
0°-60°	836.5	99.5
0°-90°	840.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	840.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1040	1040	1040	1040	1040	
5°	1014	1013	1014	1013	1014	95
15°	863	856	851	856	867	241
25°	597	605	614	605	599	268
35°	230	265	320	259	224	148
45°	51	61	81	62	49	43
55°	5	5	8	5	5	5
65°	2	2	2	2	2	2
75°	1	1	1	1	1	1
85°	0	1	1	1	1	0
90°	0	0	0	0	0	



TEST NUMBER: P837248

CATALOG NUMBER: HCSQ407D010-HM40525840-41SQC

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1040.0	1040.0	1040.0	1040.0	1040.0
2.5°	1033.6	1034.5	1033.6	1035.3	1033.6
5°	1013.8	1013.0	1014.2	1013.4	1014.2
7.5°	986.8	981.7	981.3	984.7	985.1
10°	948.0	946.7	943.7	946.7	950.5
12.5°	908.3	903.2	899.0	904.9	908.3
15°	862.7	856.4	850.9	856.4	867.4
17.5°	812.5	803.6	799.0	805.3	815.9
20°	753.4	744.1	736.5	742.0	758.0
22.5°	682.5	681.6	676.6	679.5	685.4
25°	596.8	605.2	614.1	605.2	598.9
27.5°	502.7	525.5	545.7	519.1	498.9
30°	394.2	428.8	479.5	426.3	391.3
32.5°	304.7	341.0	405.6	336.4	302.2
35°	229.6	265.1	320.4	258.7	224.1
37.5°	168.8	195.4	243.5	193.7	168.8
40°	121.1	138.4	175.2	138.0	120.3
42.5°	84.0	95.4	122.4	94.5	81.5
45°	51.1	61.2	81.0	61.6	49.0
47.5°	27.0	38.8	51.1	37.1	27.0
50°	11.8	20.7	29.5	20.3	12.2
52.5°	6.3	8.9	16.0	8.9	6.3
55°	5.1	5.1	8.0	5.1	4.6
57.5°	3.8	3.8	4.2	3.8	3.8
60°	3.0	3.0	2.5	3.0	3.4
62.5°	2.5	2.5	2.1	2.5	2.5
65°	2.1	2.1	1.7	2.1	2.1
67.5°	1.7	1.7	1.7	1.7	1.7
70°	1.3	1.3	1.3	1.7	1.7
72.5°	1.3	1.3	1.3	1.3	1.3
75°	0.8	0.8	0.8	0.8	1.3
77.5°	0.8	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.8	0.8
82.5°	0.4	0.8	0.8	0.8	0.8
85°	0.4	0.8	0.8	0.8	0.8
87.5°	0.4	0.4	0.8	0.8	0.8
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



Report Generated By 670245859 / DESKTOP-T8S5UU9

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report







— 0°-180°    - - 45°-225°    - - - - 90°-270°

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)