

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: P837306

Luminaire Tested: HCSQ410D010-HM40525935-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837306
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ410D010-HM40525935-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

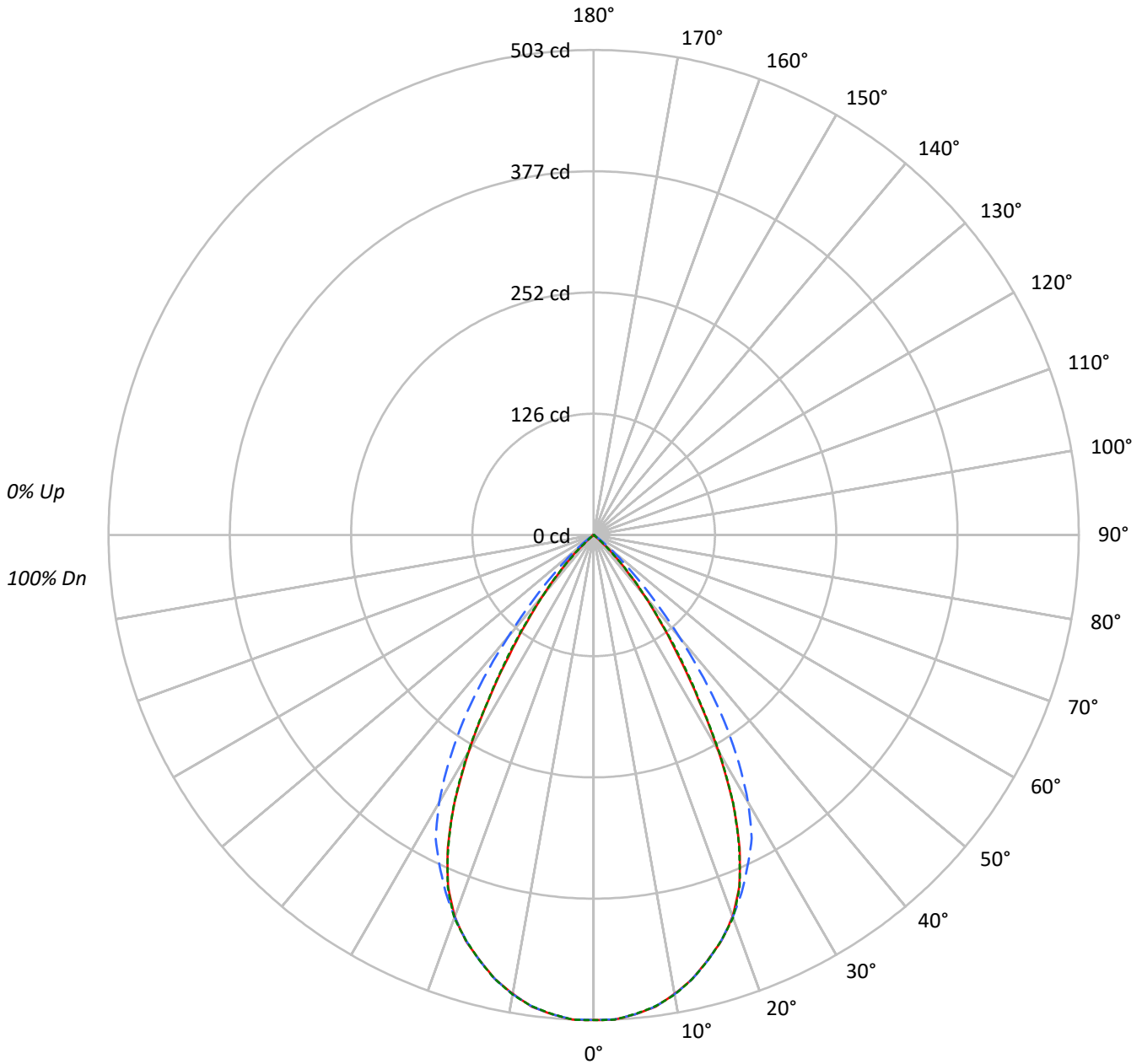
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 502.8 lumens
Efficiency: N/A
Efficacy: 50.8 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.96 / 0.99
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): 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: P837306
CATALOG NUMBER: HCSQ410D010-HM40525935-41SQMB

Luminous Intensity Polar Plot





TEST NUMBER: P837306

CATALOG NUMBER: HCSQ410D010-HM40525935-41SQMB

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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93								
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87								
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80								
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74								
5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69								
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64								
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60								
8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56								
9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52								
10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	48748	48748	48748
5°	48525	48525	48487
10°	47532	47572	47621
15°	45794	45834	45834
20°	43412	43454	43557
25°	38277	40415	38128
30°	28883	35818	29140
35°	18106	27886	18721
40°	10218	17351	10218
45°	4288	8768	4220
50°	347	3376	422
55°	152	709	152
60°	174	97	174
65°	115	115	115
70°	142	142	142
75°	187	187	187
80°	0	279	279
85°	0	556	556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 8768 cd/sqm



TEST NUMBER: P837306
 CATALOG NUMBER: HCSQ410D010-HM40525935-41SQMB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.2	9.4
10°-20°	128.3	25.5
20°-30°	166.5	33.1
30°-40°	118.3	23.5
40°-50°	38.4	7.6
50°-60°	2.8	0.5
60°-70°	0.5	0.1
70°-80°	0.5	0.1
80°-90°	0.3	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°	341.9	68.0
0°-40°	460.3	91.5
0°-60°	501.4	99.7
0°-90°	502.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	502.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	503	503	503	503	503	
5°	499	500	499	499	499	47
15°	457	458	457	458	457	128
25°	358	367	378	369	357	160
35°	153	181	236	183	158	98
45°	31	44	64	45	31	26
55°	1	1	4	1	1	1
65°	0	0	0	0	0	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P837306

CATALOG NUMBER: HCSQ410D010-HM40525935-41SQMB

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	503.2	503.2	503.2	503.2	503.2
2.5°	503.2	503.2	502.8	502.8	503.2
5°	499.0	499.5	499.0	499.0	498.6
7.5°	493.4	493.4	493.0	493.0	493.0
10°	483.2	483.6	483.6	483.6	484.1
12.5°	472.0	472.0	472.0	472.0	472.0
15°	456.6	458.0	457.0	458.0	457.0
17.5°	441.2	441.2	440.7	441.6	440.7
20°	421.1	421.1	421.5	422.5	422.5
22.5°	394.5	399.1	401.0	400.1	395.4
25°	358.1	367.4	378.1	369.3	356.7
27.5°	312.3	330.1	354.8	332.9	313.2
30°	258.2	284.8	320.2	285.7	260.5
32.5°	202.1	232.9	280.1	235.3	204.0
35°	153.1	181.1	235.8	183.0	158.3
37.5°	113.0	138.6	187.2	139.6	116.2
40°	80.8	99.4	137.2	101.3	80.8
42.5°	51.8	70.5	96.6	71.0	54.2
45°	31.3	44.3	64.0	45.3	30.8
47.5°	14.0	25.2	39.7	26.1	14.0
50°	2.3	10.3	22.4	10.7	2.8
52.5°	1.4	1.9	10.7	1.9	1.4
55°	0.9	0.9	4.2	0.9	0.9
57.5°	0.9	0.9	0.9	0.9	0.9
60°	0.9	0.5	0.5	0.5	0.9
62.5°	0.5	0.5	0.5	0.5	0.5
65°	0.5	0.5	0.5	0.5	0.5
67.5°	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5
75°	0.5	0.5	0.5	0.5	0.5
77.5°	0.5	0.5	0.5	0.5	0.5
80°	0.0	0.5	0.5	0.5	0.5
82.5°	0.0	0.5	0.5	0.5	0.5
85°	0.0	0.0	0.5	0.5	0.5
87.5°	0.0	0.0	0.5	0.5	0.5
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)