

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: P837202

Luminaire Tested: HCSQ405D010-HM40525830-41SQMW

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837202
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ405D010-HM40525830-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

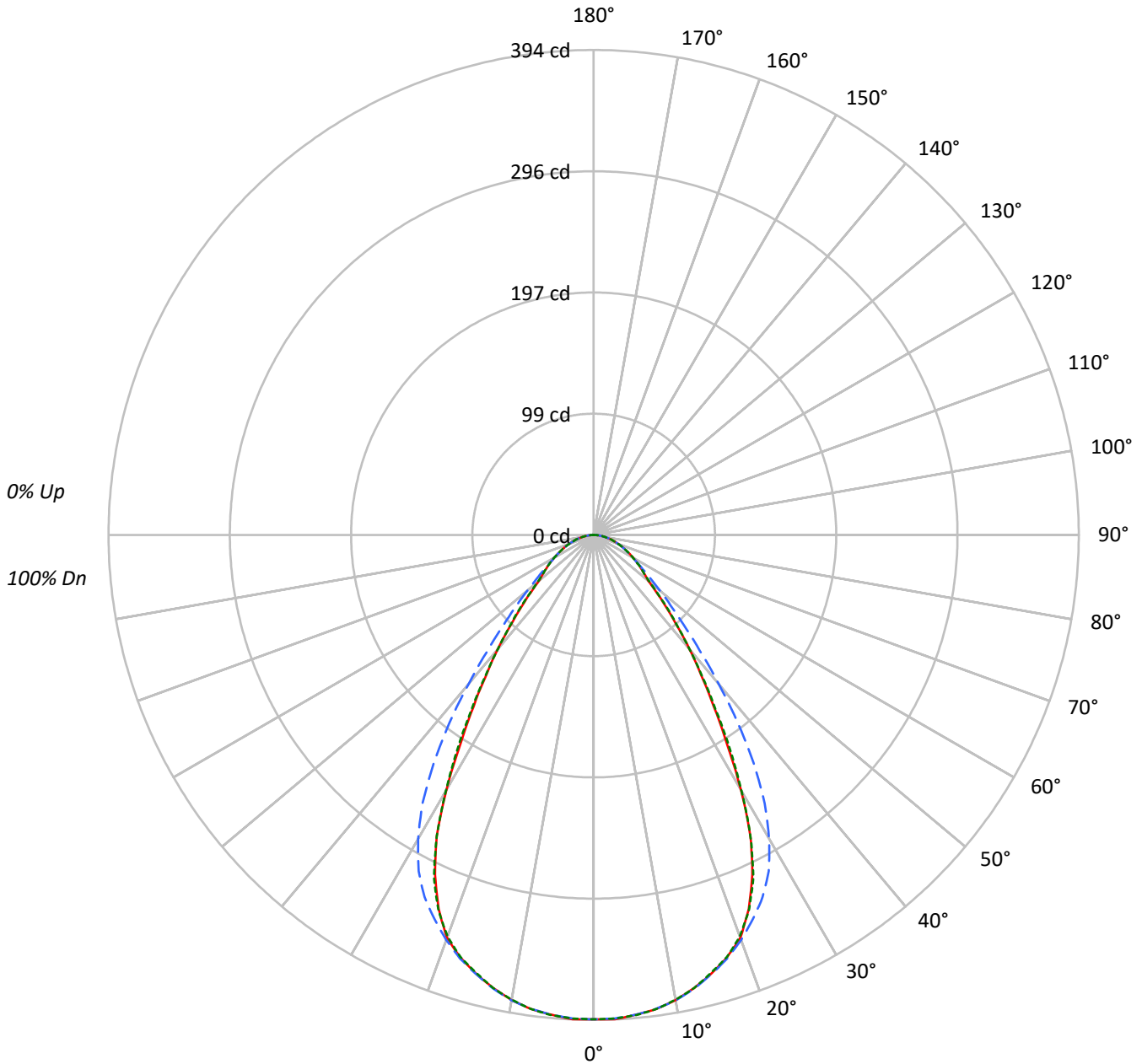
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 571.1 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.07
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 6
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

TEST NUMBER: P837202
CATALOG NUMBER: HCSQ405D010-HM40525830-41SQMW

Luminous Intensity Polar Plot





TEST NUMBER: P837202

CATALOG NUMBER: HCSQ405D010-HM40525830-41SQMW

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	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89																			
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79																			
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71																			
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64																			
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58																			
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53																			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48																			
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44																			
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41																			
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	38120	38120	38120
5°	38062	38062	38091
10°	37745	37774	37715
15°	37018	37048	36948
20°	35907	36093	35773
25°	32580	34707	32815
30°	26746	31881	26847
35°	20105	26763	20389
40°	15315	19956	15277
45°	11440	14152	11645
50°	8711	10550	8892
55°	7854	8259	7854
60°	7169	7111	7111
65°	6510	6510	6510
70°	6061	5976	5976
75°	5614	5502	5614
80°	5133	4965	5133
85°	4446	4446	4446

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 14152 cd/sqm



TEST NUMBER: P837202
 CATALOG NUMBER: HCSQ405D010-HM40525830-41SQMW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.1	6.5
10°-20°	103.9	18.2
20°-30°	142.9	25.0
30°-40°	121.6	21.3
40°-50°	73.5	12.9
50°-60°	43.3	7.6
60°-70°	28.4	5.0
70°-80°	15.7	2.8
80°-90°	4.6	0.8
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°	283.9	49.7
0°-40°	405.5	71.0
0°-60°	522.3	91.5
0°-90°	571.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	571.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	394	394	394	394	394	
5°	391	392	391	391	392	37
15°	369	370	369	369	368	104
25°	305	314	325	315	307	138
35°	170	187	226	192	172	108
45°	84	92	103	93	85	66
55°	46	47	49	47	46	42
65°	28	29	28	28	28	28
75°	15	15	15	15	15	16
85°	4	4	4	4	4	5
90°	0	0	0	0	0	



TEST NUMBER: P837202

CATALOG NUMBER: HCSQ405D010-HM40525830-41SQMW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	393.5	393.5	393.5	393.5	393.5
2.5°	393.8	392.9	393.2	392.9	393.2
5°	391.4	391.7	391.4	391.1	391.7
7.5°	388.6	388.3	388.3	388.0	388.6
10°	383.7	383.1	384.0	383.4	383.4
12.5°	377.0	377.9	377.6	377.6	377.0
15°	369.1	370.0	369.4	369.1	368.4
17.5°	359.9	360.5	360.8	359.6	359.6
20°	348.3	349.5	350.1	348.0	347.0
22.5°	329.0	334.5	337.9	334.2	329.6
25°	304.8	314.3	324.7	314.9	307.0
27.5°	275.8	289.2	307.9	291.4	275.8
30°	239.1	259.0	285.0	261.1	240.0
32.5°	201.2	222.3	258.7	226.0	205.5
35°	170.0	187.1	226.3	192.3	172.4
37.5°	143.1	157.8	192.3	161.1	144.6
40°	121.1	132.7	157.8	134.2	120.8
42.5°	100.0	111.0	127.8	112.5	101.2
45°	83.5	92.3	103.3	93.3	85.0
47.5°	69.4	76.7	84.7	76.7	70.3
50°	57.8	63.6	70.0	63.6	59.0
52.5°	51.7	53.5	57.8	53.8	51.7
55°	46.5	47.4	48.9	47.4	46.5
57.5°	41.6	42.2	41.9	41.9	41.6
60°	37.0	37.3	36.7	37.0	36.7
62.5°	32.7	32.7	32.1	32.7	32.4
65°	28.4	28.7	28.4	28.4	28.4
67.5°	24.8	24.8	24.5	24.8	24.8
70°	21.4	21.4	21.1	21.4	21.1
72.5°	18.0	18.0	17.7	17.7	17.7
75°	15.0	15.0	14.7	14.7	15.0
77.5°	11.9	11.9	11.6	11.9	11.9
80°	9.2	9.2	8.9	9.2	9.2
82.5°	6.4	6.4	6.4	6.7	6.7
85°	4.0	4.0	4.0	4.0	4.0
87.5°	1.8	1.8	1.8	1.8	2.1
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)