

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: P837237

Luminaire Tested: HCSQ407D010-HM40525827-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837237
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: HCSQ407D010-HM40525827-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

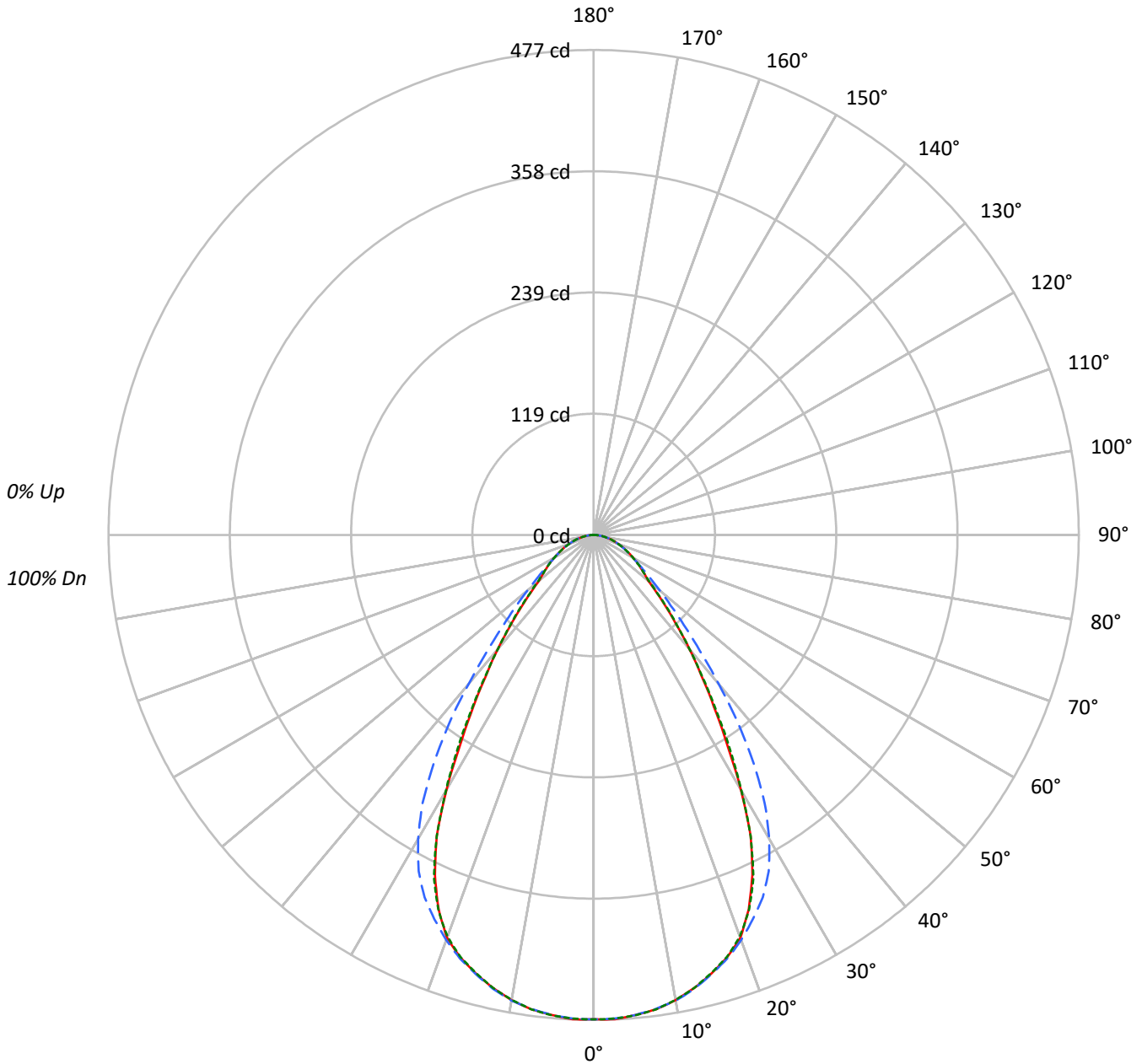
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 691.5 lumens
Efficiency: N/A
Efficacy: 86.4 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): 8
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: P837237
CATALOG NUMBER: HCSQ407D010-HM40525827-41SQMW

Luminous Intensity Polar Plot





TEST NUMBER: P837237

CATALOG NUMBER: HCSQ407D010-HM40525827-41SQMW

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	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	77	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°	46161	46161	46161
5°	46085	46085	46124
10°	45712	45752	45673
15°	44821	44861	44751
20°	43474	43711	43330
25°	39464	42029	39742
30°	32395	38604	32518
35°	24350	32404	24693
40°	18539	24167	18501
45°	13851	17153	14098
50°	10550	12780	10776
55°	9509	9999	9509
60°	8680	8603	8603
65°	7885	7885	7885
70°	7336	7223	7223
75°	6775	6663	6775
80°	6193	5969	6193
85°	5335	5335	5335

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 17153 cd/sqm



TEST NUMBER: P837237

CATALOG NUMBER: HCSQ407D010-HM40525827-41SQMW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.9	6.5
10°-20°	125.8	18.2
20°-30°	173.0	25.0
30°-40°	147.3	21.3
40°-50°	89.0	12.9
50°-60°	52.4	7.6
60°-70°	34.4	5.0
70°-80°	19.1	2.8
80°-90°	5.6	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°	343.8	49.7
0°-40°	491.1	71.0
0°-60°	632.5	91.5
0°-90°	691.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	691.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	476	476	476	476	476	
5°	474	474	474	474	474	45
15°	447	448	447	447	446	126
25°	369	381	393	381	372	167
35°	206	227	274	233	209	130
45°	101	112	125	113	103	79
55°	56	57	59	57	56	51
65°	34	35	34	34	34	34
75°	18	18	18	18	18	19
85°	5	5	5	5	5	6
90°	0	0	0	0	0	



TEST NUMBER: P837237

CATALOG NUMBER: HCSQ407D010-HM40525827-41SQMW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	476.5	476.5	476.5	476.5	476.5
2.5°	476.9	475.8	476.2	475.8	476.2
5°	473.9	474.3	473.9	473.6	474.3
7.5°	470.6	470.2	470.2	469.9	470.6
10°	464.7	463.9	465.1	464.3	464.3
12.5°	456.5	457.7	457.3	457.3	456.5
15°	446.9	448.0	447.3	446.9	446.2
17.5°	435.8	436.5	436.9	435.4	435.4
20°	421.7	423.2	424.0	421.4	420.3
22.5°	398.4	405.1	409.1	404.7	399.2
25°	369.2	380.6	393.2	381.4	371.8
27.5°	334.0	350.3	372.9	352.9	334.0
30°	289.6	313.6	345.1	316.2	290.7
32.5°	243.6	269.2	313.2	273.6	248.8
35°	205.9	226.6	274.0	232.9	208.8
37.5°	173.3	191.1	232.9	195.1	175.1
40°	146.6	160.7	191.1	162.5	146.3
42.5°	121.1	134.4	154.8	136.3	122.6
45°	101.1	111.8	125.2	112.9	102.9
47.5°	84.1	92.9	102.6	92.9	85.2
50°	70.0	77.0	84.8	77.0	71.5
52.5°	62.6	64.8	70.0	65.2	62.6
55°	56.3	57.4	59.2	57.4	56.3
57.5°	50.4	51.1	50.7	50.7	50.4
60°	44.8	45.2	44.4	44.8	44.4
62.5°	39.6	39.6	38.9	39.6	39.2
65°	34.4	34.8	34.4	34.4	34.4
67.5°	30.0	30.0	29.6	30.0	30.0
70°	25.9	25.9	25.5	25.9	25.5
72.5°	21.8	21.8	21.5	21.5	21.5
75°	18.1	18.1	17.8	17.8	18.1
77.5°	14.4	14.4	14.1	14.4	14.4
80°	11.1	11.1	10.7	11.1	11.1
82.5°	7.8	7.8	7.8	8.1	8.1
85°	4.8	4.8	4.8	4.8	4.8
87.5°	2.2	2.2	2.2	2.2	2.6
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



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)