

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: P837686

Luminaire Tested: HCSQ460D010-HM44560835-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837686
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: HCSQ460D010-HM44560835-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

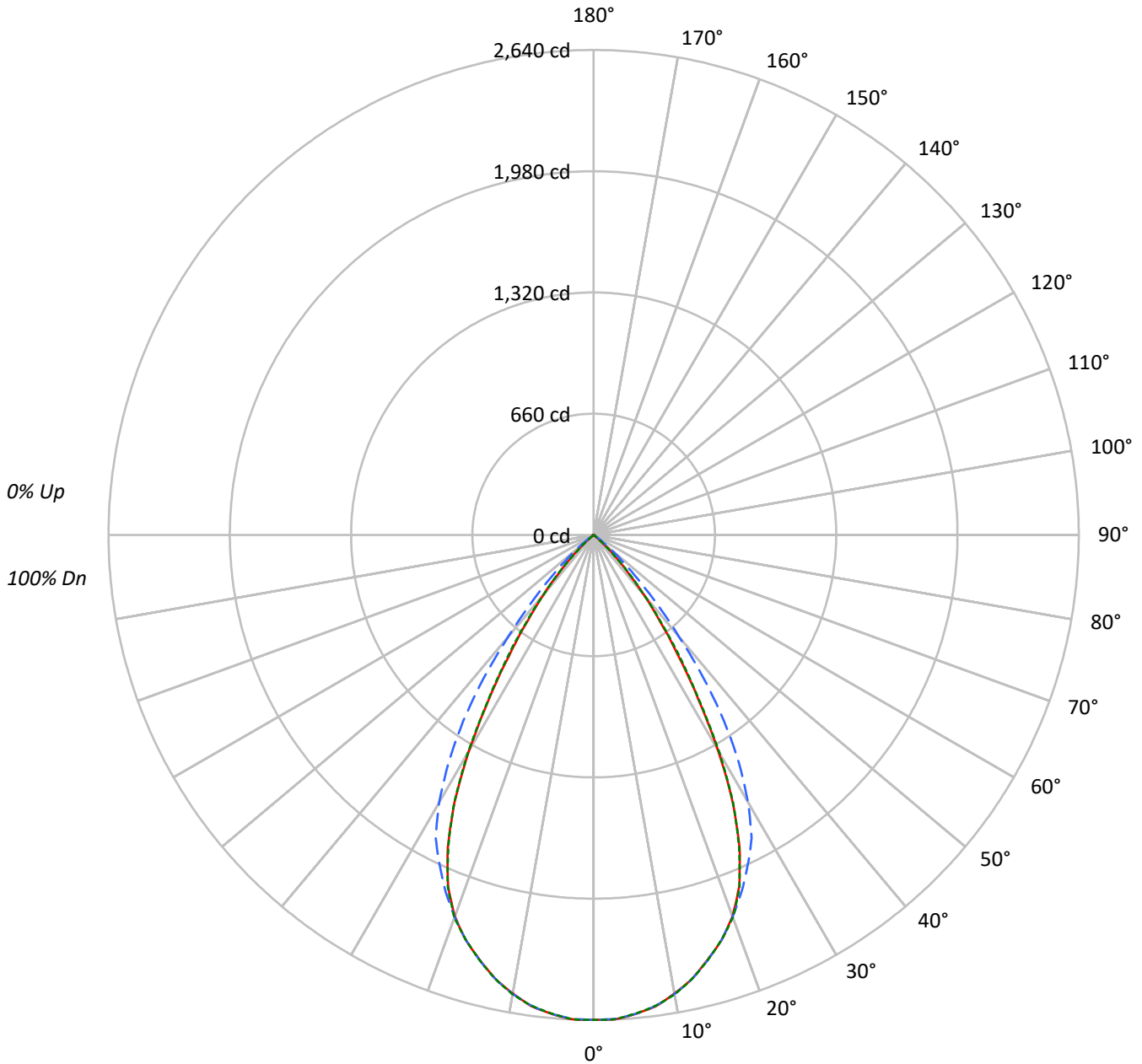
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2637.0 lumens
Efficiency: N/A
Efficacy: 47.1 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): 56
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: P837686
CATALOG NUMBER: HCSQ460D010-HM44560835-41SQMB

Luminous Intensity Polar Plot





TEST NUMBER: P837686

CATALOG NUMBER: HCSQ460D010-HM44560835-41SQMB

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	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°	255751	255751	255751
5°	254579	254579	254346
10°	249338	249574	249820
15°	240211	240452	240452
20°	227732	227979	228484
25°	200783	212038	199992
30°	151495	187928	152860
35°	95001	146256	98182
40°	53582	91053	53582
45°	22482	45964	22140
50°	1839	17724	2215
55°	828	3716	828
60°	949	465	949
65°	550	550	550
70°	680	680	680
75°	898	898	898
80°	0	1339	1339
85°	0	2668	2668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 45964 cd/sqm



TEST NUMBER: P837686
 CATALOG NUMBER: HCSQ460D010-HM44560835-41SQMB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	247.4	9.4
10°-20°	673.1	25.5
20°-30°	873.2	33.1
30°-40°	620.8	23.5
40°-50°	201.3	7.6
50°-60°	14.5	0.6
60°-70°	2.5	0.1
70°-80°	2.5	0.1
80°-90°	1.7	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°	1793.7	68.0
0°-40°	2414.5	91.6
0°-60°	2630.3	99.7
0°-90°	2637.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2637.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2640	2640	2640	2640	2640	
5°	2618	2620	2618	2618	2616	247
15°	2395	2402	2398	2402	2398	673
25°	1878	1927	1984	1937	1871	841
35°	803	950	1237	960	830	514
45°	164	233	336	238	162	137
55°	5	5	22	5	5	6
65°	2	2	2	2	2	3
75°	2	2	2	2	2	2
85°	0	0	2	2	2	0
90°	0	0	0	0	0	



TEST NUMBER: P837686

CATALOG NUMBER: HCSQ460D010-HM44560835-41SQMB

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2640.0	2640.0	2640.0	2640.0	2640.0
2.5°	2640.0	2640.0	2637.5	2637.5	2640.0
5°	2617.9	2620.4	2617.9	2617.9	2615.5
7.5°	2588.6	2588.6	2586.1	2586.1	2586.1
10°	2534.7	2537.1	2537.1	2537.1	2539.6
12.5°	2475.9	2475.9	2475.9	2475.9	2475.9
15°	2395.1	2402.4	2397.5	2402.4	2397.5
17.5°	2314.3	2314.3	2311.8	2316.7	2311.8
20°	2209.0	2209.0	2211.4	2216.3	2216.3
22.5°	2069.4	2093.9	2103.7	2098.8	2074.3
25°	1878.4	1927.3	1983.7	1937.1	1871.0
27.5°	1638.4	1731.4	1861.2	1746.1	1643.3
30°	1354.3	1493.9	1680.0	1498.8	1366.5
32.5°	1060.4	1222.0	1469.4	1234.3	1070.2
35°	803.3	950.2	1236.7	960.0	830.2
37.5°	592.6	727.3	982.0	732.2	609.8
40°	423.7	521.6	720.0	531.4	423.7
42.5°	271.8	369.8	506.9	372.2	284.1
45°	164.1	232.7	335.5	237.5	161.6
47.5°	73.5	132.2	208.2	137.1	73.5
50°	12.2	53.9	117.6	56.3	14.7
52.5°	7.3	9.8	56.3	9.8	7.3
55°	4.9	4.9	22.0	4.9	4.9
57.5°	4.9	4.9	4.9	4.9	4.9
60°	4.9	2.4	2.4	2.4	4.9
62.5°	2.4	2.4	2.4	2.4	2.4
65°	2.4	2.4	2.4	2.4	2.4
67.5°	2.4	2.4	2.4	2.4	2.4
70°	2.4	2.4	2.4	2.4	2.4
72.5°	2.4	2.4	2.4	2.4	2.4
75°	2.4	2.4	2.4	2.4	2.4
77.5°	2.4	2.4	2.4	2.4	2.4
80°	0.0	2.4	2.4	2.4	2.4
82.5°	0.0	2.4	2.4	2.4	2.4
85°	0.0	0.0	2.4	2.4	2.4
87.5°	0.0	0.0	2.4	2.4	2.4
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)