

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: P837697

Luminaire Tested: HCSQ460D010-HM44560927-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837697
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: HCSQ460D010-HM44560927-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

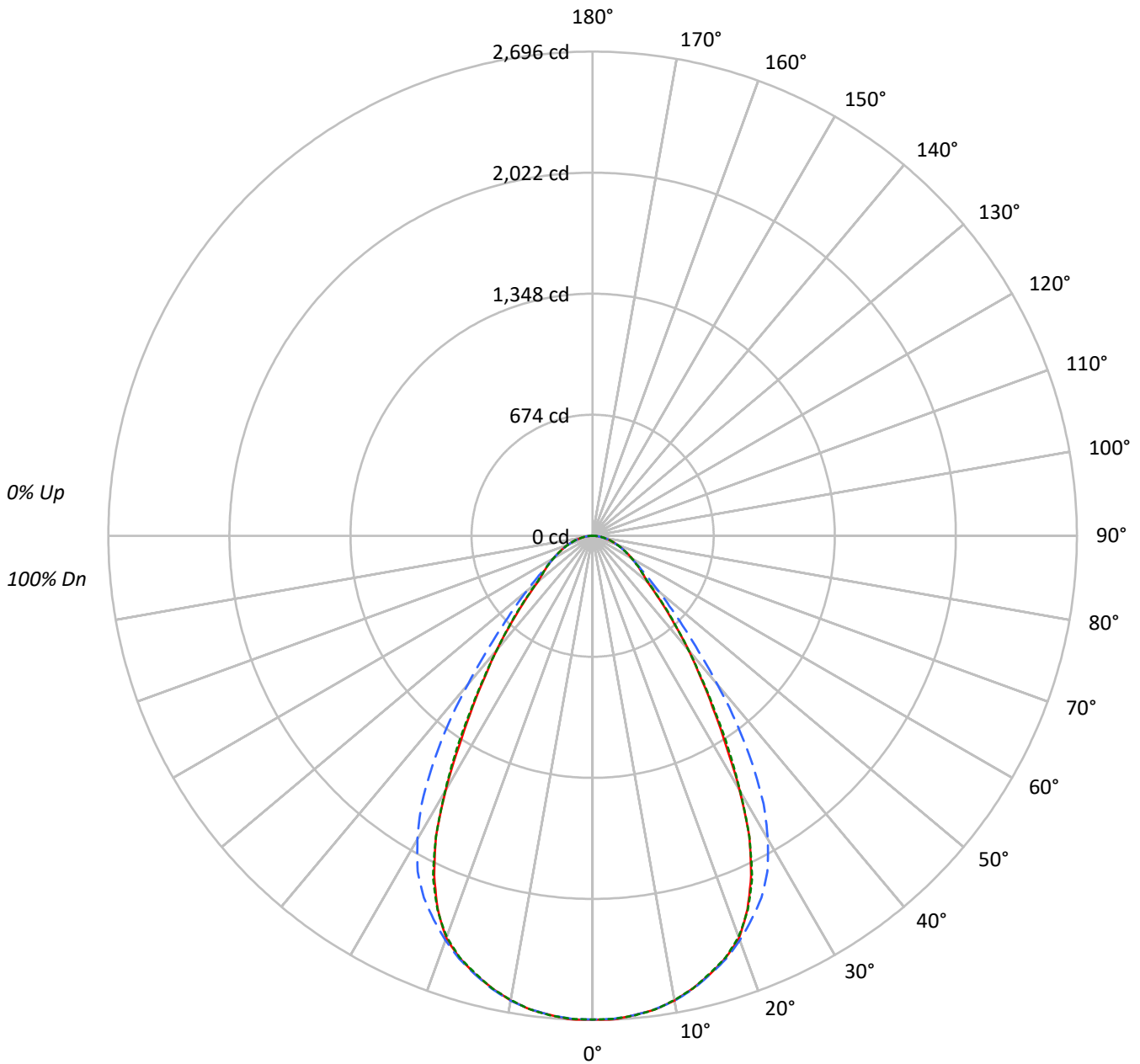
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3909.6 lumens
Efficiency: N/A
Efficacy: 69.8 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): 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: P837697
CATALOG NUMBER: HCSQ460D010-HM44560927-41SQMW

Luminous Intensity Polar Plot





TEST NUMBER: P837697

CATALOG NUMBER: HCSQ460D010-HM44560927-41SQMW

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°	260982	260982	260982
5°	260560	260560	260764
10°	258418	258624	258211
15°	253400	253610	252979
20°	245794	247093	244928
25°	223080	237617	224640
30°	183107	218232	183812
35°	137646	183189	139621
40°	104824	136591	104559
45°	78297	96929	79722
50°	59621	72251	60887
55°	53743	56564	53743
60°	49077	48670	48670
65°	44630	44630	44630
70°	41495	40901	40901
75°	38403	37617	38403
80°	35035	33864	35035
85°	30233	30233	30233

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 96929 cd/sqm



TEST NUMBER: P837697

CATALOG NUMBER: HCSQ460D010-HM44560927-41SQMW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	254.1	6.5
10°-20°	711.3	18.2
20°-30°	978.2	25.0
30°-40°	832.8	21.3
40°-50°	503.0	12.9
50°-60°	296.5	7.6
60°-70°	194.5	5.0
70°-80°	107.8	2.8
80°-90°	31.6	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°	1943.6	49.7
0°-40°	2776.4	71.0
0°-60°	3575.8	91.5
0°-90°	3909.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3909.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2694	2694	2694	2694	2694	
5°	2679	2682	2679	2677	2682	254
15°	2527	2533	2529	2527	2522	711
25°	2087	2152	2223	2156	2102	943
35°	1164	1281	1549	1317	1181	737
45°	572	632	708	638	582	449
55°	318	324	335	324	318	286
65°	195	197	195	195	195	195
75°	103	103	100	100	103	109
85°	27	27	27	27	27	31
90°	0	0	0	0	0	



TEST NUMBER: P837697

CATALOG NUMBER: HCSQ460D010-HM44560927-41SQMW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2694.0	2694.0	2694.0	2694.0	2694.0
2.5°	2696.1	2689.8	2691.9	2689.8	2691.9
5°	2679.4	2681.5	2679.4	2677.3	2681.5
7.5°	2660.5	2658.4	2658.4	2656.3	2660.5
10°	2627.0	2622.9	2629.1	2624.9	2624.9
12.5°	2581.0	2587.3	2585.2	2585.2	2581.0
15°	2526.6	2532.8	2528.7	2526.6	2522.4
17.5°	2463.8	2468.0	2470.0	2461.7	2461.7
20°	2384.2	2392.6	2396.8	2382.1	2375.8
22.5°	2252.3	2290.0	2313.0	2287.9	2256.5
25°	2087.0	2151.9	2223.0	2156.1	2101.6
27.5°	1888.1	1980.2	2107.9	1994.9	1888.1
30°	1636.9	1773.0	1950.9	1787.6	1643.2
32.5°	1377.4	1521.8	1770.9	1546.9	1406.7
35°	1163.9	1281.1	1549.0	1316.7	1180.6
37.5°	979.6	1080.1	1316.7	1103.1	990.1
40°	828.9	908.5	1080.1	918.9	826.8
42.5°	684.5	759.9	875.0	770.3	692.9
45°	571.5	632.2	707.5	638.4	581.9
47.5°	475.2	525.4	579.8	525.4	481.4
50°	395.6	435.4	479.4	435.4	404.0
52.5°	353.8	366.3	395.6	368.4	353.8
55°	318.2	324.5	334.9	324.5	318.2
57.5°	284.7	288.9	286.8	286.8	284.7
60°	253.3	255.4	251.2	253.3	251.2
62.5°	224.0	224.0	219.8	224.0	221.9
65°	194.7	196.8	194.7	194.7	194.7
67.5°	169.6	169.6	167.5	169.6	169.6
70°	146.5	146.5	144.4	146.5	144.4
72.5°	123.5	123.5	121.4	121.4	121.4
75°	102.6	102.6	100.5	100.5	102.6
77.5°	81.6	81.6	79.5	81.6	81.6
80°	62.8	62.8	60.7	62.8	62.8
82.5°	44.0	44.0	44.0	46.1	46.1
85°	27.2	27.2	27.2	27.2	27.2
87.5°	12.6	12.6	12.6	12.6	14.7
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)