

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: P837441

Luminaire Tested: HCSQ430D010-HM43040830-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837441
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: HCSQ430D010-HM43040830-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

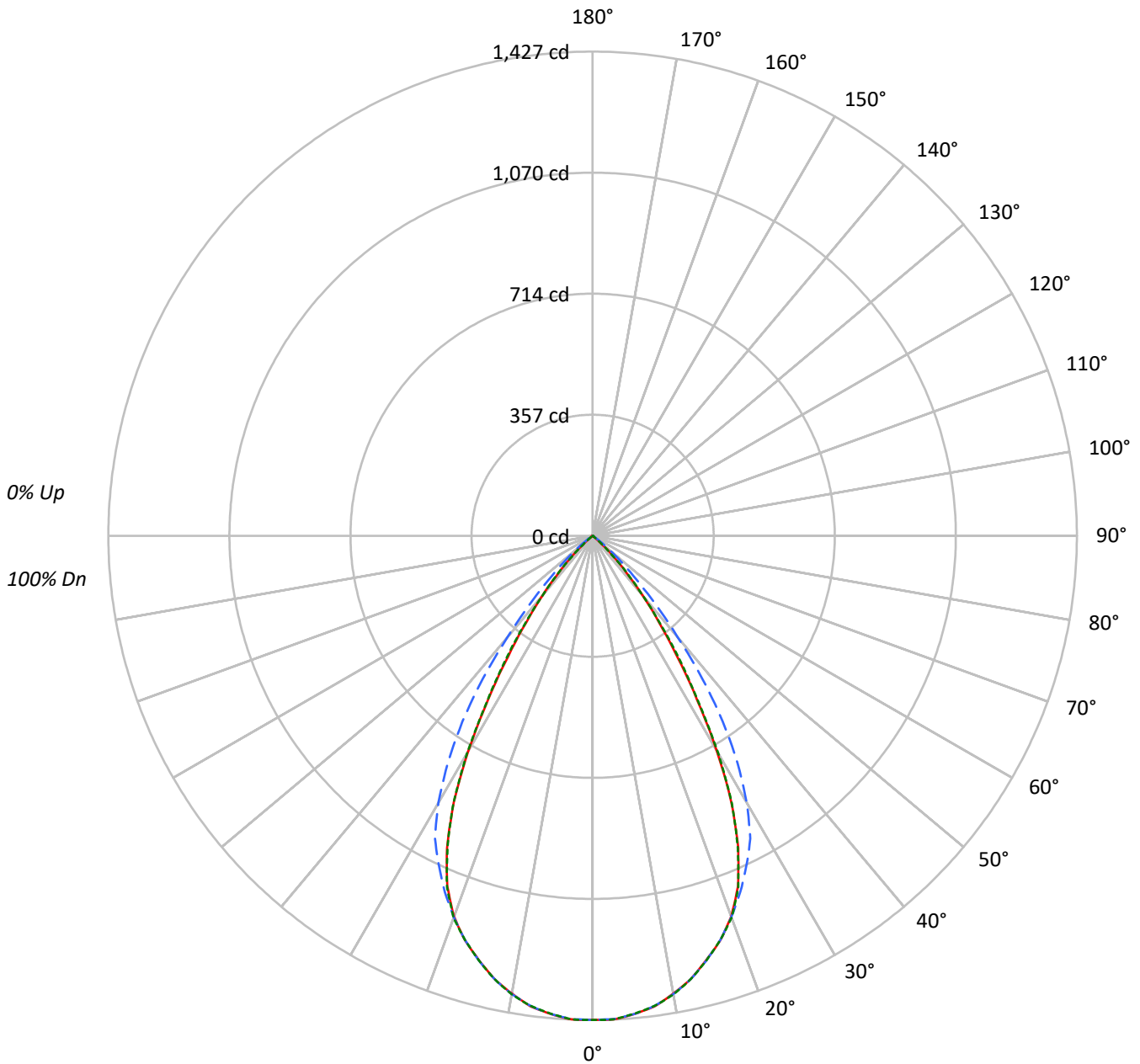
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1425.3 lumens
Efficiency: N/A
Efficacy: 50.5 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): 28.2
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: P837441
CATALOG NUMBER: HCSQ430D010-HM43040830-41SQMB

Luminous Intensity Polar Plot





TEST NUMBER: P837441

CATALOG NUMBER: HCSQ430D010-HM43040830-41SQMB

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					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	100	100	100	100	100		
	1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93	93	93	93	93	93		
	2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87	87	87	87	87	87		
	3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80	80	80	80	80	80		
	4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74	74	74	74	74	74		
	5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69	69	69	69	69	69		
	6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64	64	64	64	64	64		
	7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60	60	60	60	60	60		
	8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56	56	56	56	56	56		
	9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52	52	52	52	52	52		
	10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49	49	49	49	49	49		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	138241	138241	138241
5°	137602	137602	137476
10°	134767	134904	135032
15°	129839	129969	129969
20°	123093	123227	123505
25°	108526	114608	108098
30°	81883	101582	82621
35°	51350	79059	53065
40°	28960	49219	28960
45°	12152	24839	11974
50°	995	9570	1191
55°	439	2010	439
60°	504	252	504
65°	298	298	298
70°	368	368	368
75°	487	487	487
80°	0	725	725
85°	0	1445	1445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 24839 cd/sqm



TEST NUMBER: P837441

CATALOG NUMBER: HCSQ430D010-HM43040830-41SQMB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.7	9.4
10°-20°	363.8	25.5
20°-30°	472.0	33.1
30°-40°	335.5	23.5
40°-50°	108.8	7.6
50°-60°	7.8	0.5
60°-70°	1.3	0.1
70°-80°	1.4	0.1
80°-90°	0.9	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°	969.6	68.0
0°-40°	1305.1	91.6
0°-60°	1421.7	99.7
0°-90°	1425.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1425.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1427	1427	1427	1427	1427	
5°	1415	1416	1415	1415	1414	134
15°	1295	1299	1296	1299	1296	364
25°	1015	1042	1072	1047	1011	455
35°	434	514	668	519	449	278
45°	89	126	181	128	87	74
55°	3	3	12	3	3	3
65°	1	1	1	1	1	1
75°	1	1	1	1	1	1
85°	0	0	1	1	1	0
90°	0	0	0	0	0	



TEST NUMBER: P837441

CATALOG NUMBER: HCSQ430D010-HM43040830-41SQMB

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1427.0	1427.0	1427.0	1427.0	1427.0
2.5°	1427.0	1427.0	1425.6	1425.6	1427.0
5°	1415.0	1416.4	1415.0	1415.0	1413.7
7.5°	1399.2	1399.2	1397.8	1397.8	1397.8
10°	1370.0	1371.4	1371.4	1371.4	1372.7
12.5°	1338.3	1338.3	1338.3	1338.3	1338.3
15°	1294.6	1298.6	1295.9	1298.6	1295.9
17.5°	1250.9	1250.9	1249.6	1252.2	1249.6
20°	1194.0	1194.0	1195.3	1198.0	1198.0
22.5°	1118.5	1131.8	1137.1	1134.4	1121.2
25°	1015.3	1041.8	1072.2	1047.0	1011.3
27.5°	885.6	935.9	1006.0	943.8	888.2
30°	732.0	807.5	908.1	810.1	738.6
32.5°	573.2	660.5	794.2	667.1	578.5
35°	434.2	513.6	668.5	518.9	448.7
37.5°	320.3	393.1	530.8	395.8	329.6
40°	229.0	281.9	389.2	287.2	229.0
42.5°	146.9	199.9	274.0	201.2	153.5
45°	88.7	125.8	181.3	128.4	87.4
47.5°	39.7	71.5	112.5	74.1	39.7
50°	6.6	29.1	63.5	30.4	7.9
52.5°	4.0	5.3	30.4	5.3	4.0
55°	2.6	2.6	11.9	2.6	2.6
57.5°	2.6	2.6	2.6	2.6	2.6
60°	2.6	1.3	1.3	1.3	2.6
62.5°	1.3	1.3	1.3	1.3	1.3
65°	1.3	1.3	1.3	1.3	1.3
67.5°	1.3	1.3	1.3	1.3	1.3
70°	1.3	1.3	1.3	1.3	1.3
72.5°	1.3	1.3	1.3	1.3	1.3
75°	1.3	1.3	1.3	1.3	1.3
77.5°	1.3	1.3	1.3	1.3	1.3
80°	0.0	1.3	1.3	1.3	1.3
82.5°	0.0	1.3	1.3	1.3	1.3
85°	0.0	0.0	1.3	1.3	1.3
87.5°	0.0	0.0	1.3	1.3	1.3
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)