

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P837389

Luminaire Tested: HCSQ420D010-HM40525940-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837389
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ420D010-HM40525940-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

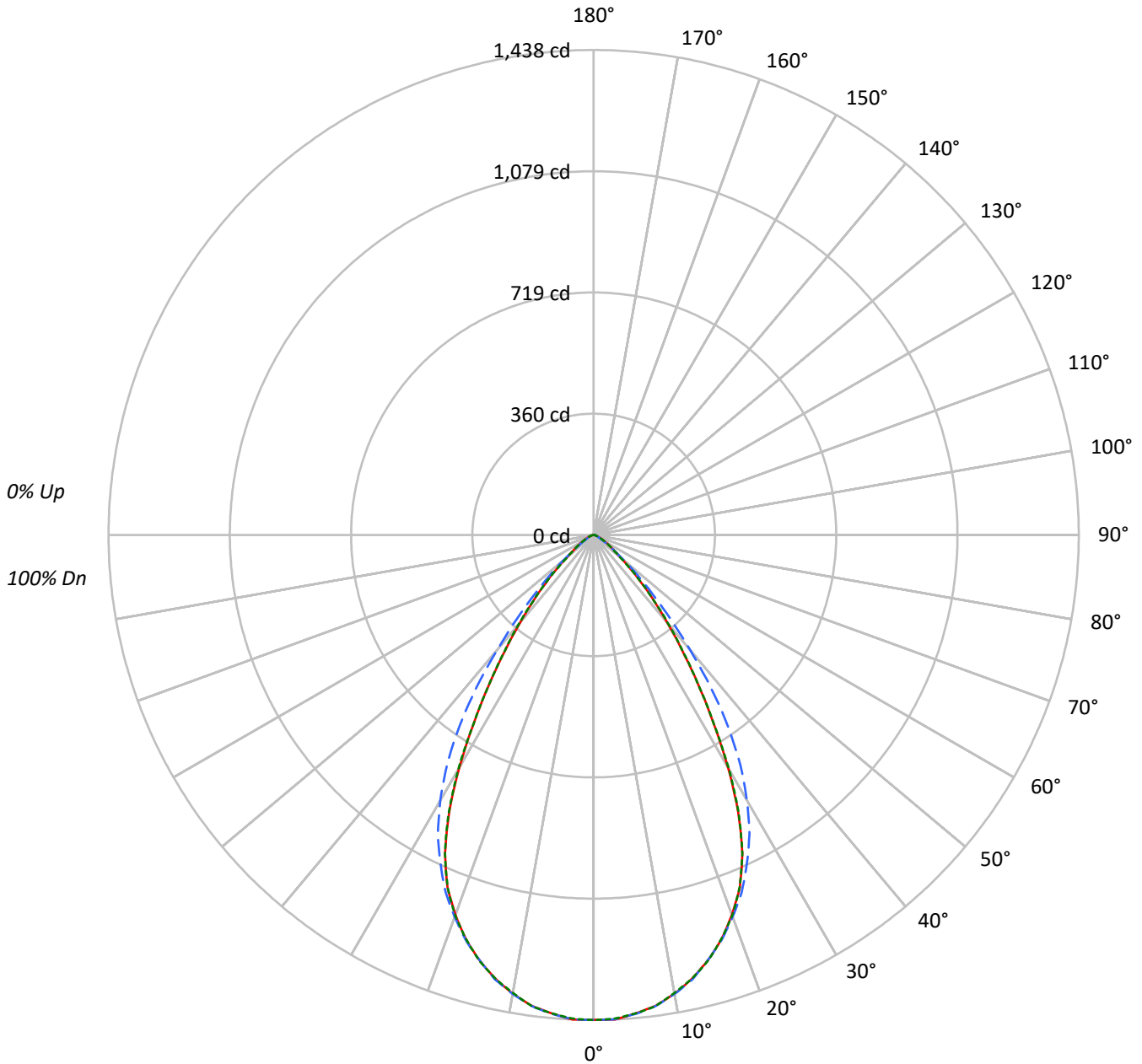
Lumens per Lamp: N/A
Luminaire Lumens: 1616.8 lumens
Efficiency: N/A
Efficacy: 80.8 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 20
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: P837389

CATALOG NUMBER: HCSQ420D010-HM40525940-41SQH

Luminous Intensity Polar Plot





TEST NUMBER: P837389

CATALOG NUMBER: HCSQ420D010-HM40525940-41SQH

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				100															
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92				92															
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85				85															
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77				77															
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71				71															
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65				65															
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60				60															
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56				56															
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52				52															
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48				48															
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45				45															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	139336	139336	139336
5°	138487	138653	138487
10°	135888	135977	135632
15°	131063	130972	131153
20°	123546	124185	123825
25°	111476	114896	111476
30°	89042	101660	89736
35°	63566	82264	63673
40°	42921	55947	43591
45°	27264	33100	27387
50°	15538	17678	14996
55°	10201	8546	10049
60°	7053	4999	6878
65°	4883	3668	4883
70°	3512	2776	3512
75°	2321	2321	2321
80°	1506	2008	2008
85°	2001	2001	2001

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 33100 cd/sqm



TEST NUMBER: P837389

CATALOG NUMBER: HCSQ420D010-HM40525940-41SQH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.7	8.3
10°-20°	366.4	22.7
20°-30°	479.7	29.7
30°-40°	377.0	23.3
40°-50°	176.1	10.9
50°-60°	54.6	3.4
60°-70°	19.5	1.2
70°-80°	6.8	0.4
80°-90°	1.9	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°	980.8	60.7
0°-40°	1357.8	84.0
0°-60°	1588.5	98.3
0°-90°	1616.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1616.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1438	1438	1438	1438	1438	
5°	1424	1425	1426	1428	1424	135
15°	1307	1307	1306	1307	1308	366
25°	1043	1057	1075	1058	1043	469
35°	538	586	696	593	538	339
45°	199	223	242	218	200	158
55°	60	57	51	56	60	57
65°	21	20	16	19	21	22
75°	6	6	6	6	6	7
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



TEST NUMBER: P837389

CATALOG NUMBER: HCSQ420D010-HM40525940-41SQH

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1438.3	1438.3	1438.3	1438.3	1438.3
2.5°	1438.3	1436.5	1437.4	1435.6	1435.6
5°	1424.1	1425.0	1425.8	1427.6	1424.1
7.5°	1408.1	1409.8	1409.0	1409.0	1409.0
10°	1381.4	1382.3	1382.3	1382.3	1378.8
12.5°	1347.7	1349.4	1350.3	1347.7	1347.7
15°	1306.8	1306.8	1305.9	1306.8	1307.7
17.5°	1257.9	1260.6	1260.6	1257.9	1257.0
20°	1198.4	1202.9	1204.6	1201.1	1201.1
22.5°	1131.8	1136.2	1146.9	1138.0	1130.9
25°	1042.9	1057.2	1074.9	1058.1	1042.9
27.5°	928.3	959.4	1000.3	964.8	931.0
30°	796.0	846.6	908.8	849.3	802.2
32.5°	660.9	717.8	809.3	722.2	660.9
35°	537.5	586.3	695.6	593.4	538.4
37.5°	427.3	474.4	570.3	479.7	433.5
40°	339.4	377.6	442.4	376.7	344.7
42.5°	264.7	292.3	334.9	291.4	263.8
45°	199.0	223.0	241.6	218.5	199.9
47.5°	146.6	162.6	173.2	159.9	143.0
50°	103.1	114.6	117.3	111.9	99.5
52.5°	77.3	77.3	78.2	76.4	75.5
55°	60.4	56.9	50.6	56.0	59.5
57.5°	47.1	43.5	35.5	41.8	46.2
60°	36.4	32.9	25.8	32.0	35.5
62.5°	28.4	24.9	20.4	24.9	27.5
65°	21.3	19.5	16.0	18.7	21.3
67.5°	16.0	14.2	12.4	14.2	16.0
70°	12.4	11.5	9.8	10.7	12.4
72.5°	8.9	8.0	8.0	8.0	8.9
75°	6.2	6.2	6.2	6.2	6.2
77.5°	4.4	4.4	4.4	4.4	4.4
80°	2.7	2.7	3.6	3.6	3.6
82.5°	1.8	1.8	2.7	2.7	2.7
85°	1.8	1.8	1.8	1.8	1.8
87.5°	0.9	0.9	0.9	1.8	1.8
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)