

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: P837352

Luminaire Tested: HCSQ415D010-HM40525940-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837352
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: HCSQ415D010-HM40525940-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

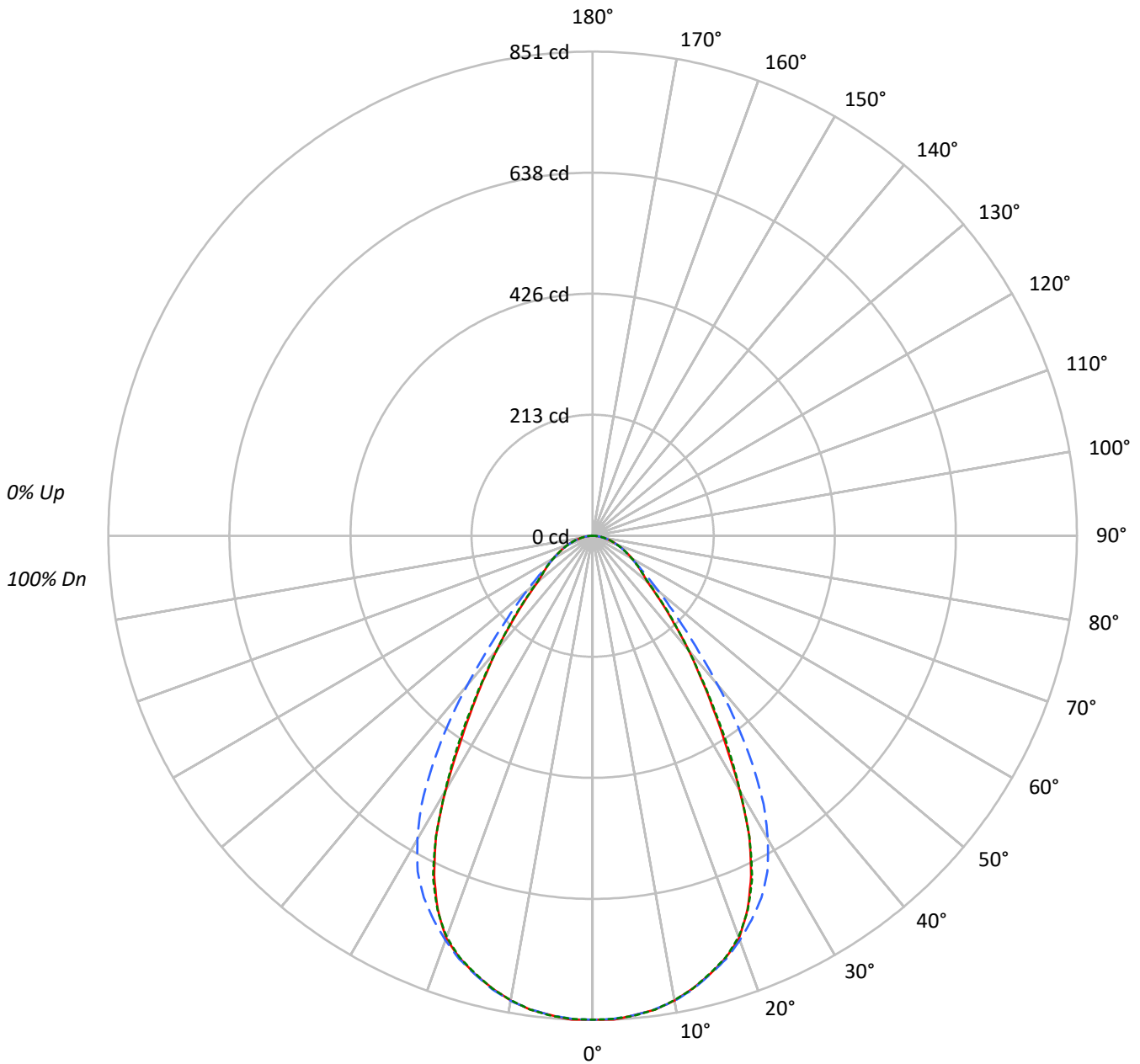
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1234.2 lumens
Efficiency: N/A
Efficacy: 88.2 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): 14
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: P837352
CATALOG NUMBER: HCSQ415D010-HM40525940-41SQMW

Luminous Intensity Polar Plot





TEST NUMBER: P837352

CATALOG NUMBER: HCSQ415D010-HM40525940-41SQMW

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°	82393	82393	82393
5°	82250	82250	82318
10°	81578	81647	81519
15°	79994	80064	79863
20°	77598	78000	77320
25°	70419	75016	70922
30°	57810	68896	58023
35°	43450	57831	44077
40°	33095	43124	33007
45°	24715	30606	25167
50°	18824	22803	19216
55°	16957	17852	16957
60°	15500	15364	15364
65°	14097	14097	14097
70°	13114	12916	12916
75°	12127	11865	12127
80°	11046	10711	11046
85°	9559	9559	9559

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 30606 cd/sqm



TEST NUMBER: P837352

CATALOG NUMBER: HCSQ415D010-HM40525940-41SQMW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.2	6.5
10°-20°	224.5	18.2
20°-30°	308.8	25.0
30°-40°	262.9	21.3
40°-50°	158.8	12.9
50°-60°	93.6	7.6
60°-70°	61.4	5.0
70°-80°	34.0	2.8
80°-90°	10.0	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°	613.6	49.7
0°-40°	876.5	71.0
0°-60°	1128.8	91.5
0°-90°	1234.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1234.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	850	850	850	850	850	
5°	846	846	846	845	846	80
15°	798	800	798	798	796	224
25°	659	679	702	681	664	298
35°	367	404	489	416	373	233
45°	180	200	223	202	184	142
55°	100	102	106	102	100	90
65°	62	62	62	62	62	62
75°	32	32	32	32	32	34
85°	9	9	9	9	9	10
90°	0	0	0	0	0	



TEST NUMBER: P837352

CATALOG NUMBER: HCSQ415D010-HM40525940-41SQMW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	850.5	850.5	850.5	850.5	850.5
2.5°	851.1	849.1	849.8	849.1	849.8
5°	845.8	846.5	845.8	845.2	846.5
7.5°	839.9	839.2	839.2	838.6	839.9
10°	829.3	828.0	830.0	828.7	828.7
12.5°	814.8	816.8	816.1	816.1	814.8
15°	797.6	799.6	798.3	797.6	796.3
17.5°	777.8	779.1	779.8	777.1	777.1
20°	752.7	755.3	756.6	752.0	750.0
22.5°	711.0	722.9	730.2	722.3	712.4
25°	658.8	679.3	701.8	680.6	663.5
27.5°	596.0	625.1	665.4	629.8	596.0
30°	516.8	559.7	615.9	564.3	518.7
32.5°	434.8	480.4	559.0	488.3	444.1
35°	367.4	404.4	489.0	415.6	372.7
37.5°	309.3	341.0	415.6	348.2	312.6
40°	261.7	286.8	341.0	290.1	261.0
42.5°	216.1	239.9	276.2	243.2	218.7
45°	180.4	199.6	223.4	201.5	183.7
47.5°	150.0	165.9	183.0	165.9	152.0
50°	124.9	137.4	151.3	137.4	127.5
52.5°	111.7	115.6	124.9	116.3	111.7
55°	100.4	102.4	105.7	102.4	100.4
57.5°	89.9	91.2	90.5	90.5	89.9
60°	80.0	80.6	79.3	80.0	79.3
62.5°	70.7	70.7	69.4	70.7	70.0
65°	61.5	62.1	61.5	61.5	61.5
67.5°	53.5	53.5	52.9	53.5	53.5
70°	46.3	46.3	45.6	46.3	45.6
72.5°	39.0	39.0	38.3	38.3	38.3
75°	32.4	32.4	31.7	31.7	32.4
77.5°	25.8	25.8	25.1	25.8	25.8
80°	19.8	19.8	19.2	19.8	19.8
82.5°	13.9	13.9	13.9	14.5	14.5
85°	8.6	8.6	8.6	8.6	8.6
87.5°	4.0	4.0	4.0	4.0	4.6
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)