

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: P837412

Luminaire Tested: HCSQ425D010-HM40525840-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837412
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: HCSQ425D010-HM40525840-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

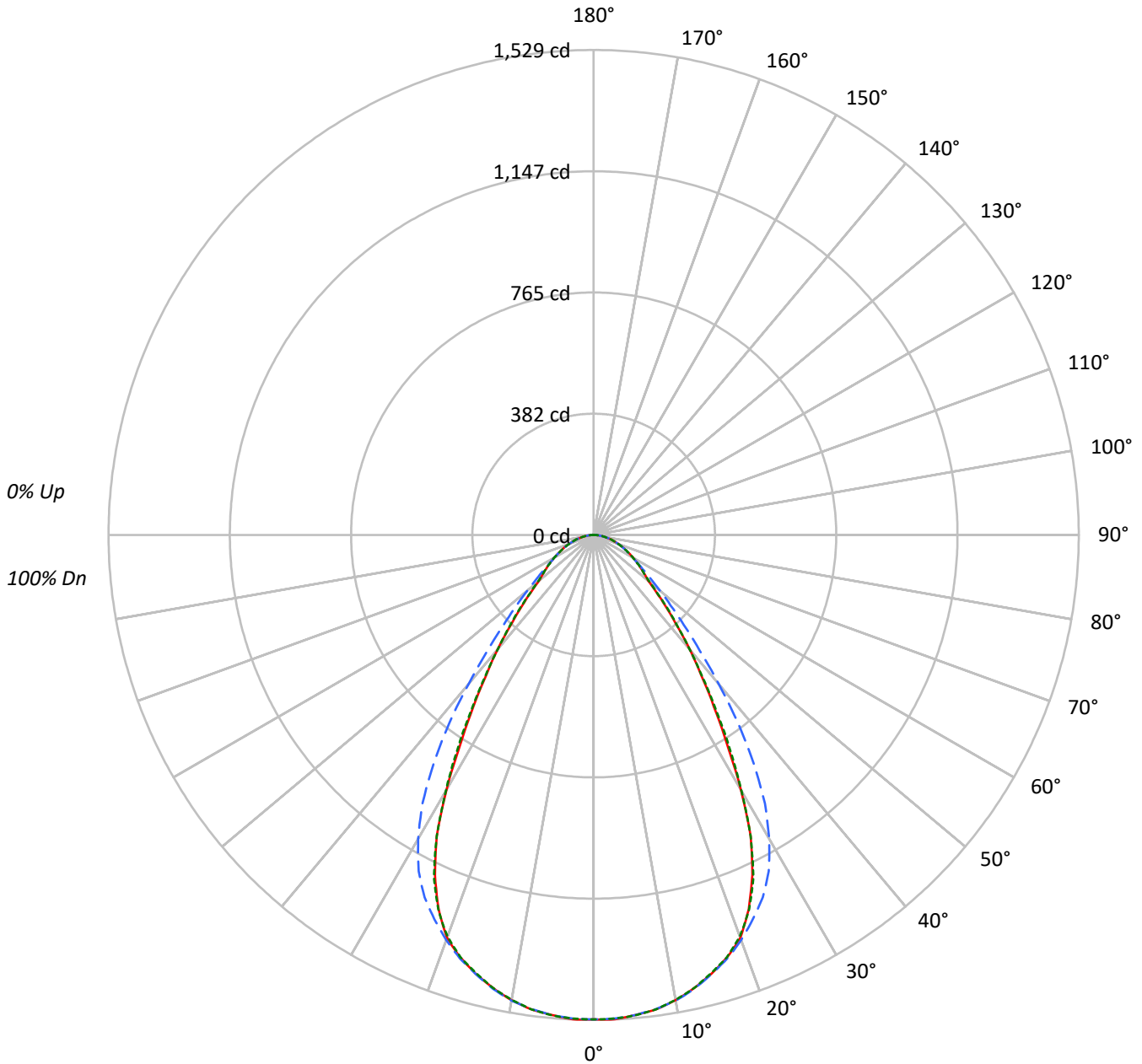
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2216.9 lumens
Efficiency: N/A
Efficacy: 80.0 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): 27.7
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: P837412
CATALOG NUMBER: HCSQ425D010-HM40525840-41SQMW

Luminous Intensity Polar Plot





TEST NUMBER: P837412
 CATALOG NUMBER: HCSQ425D010-HM40525840-41SQMW

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	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°	147987	147987	147987
5°	147745	147745	147862
10°	146542	146660	146424
15°	143690	143810	143449
20°	139381	140113	138886
25°	126494	134746	127381
30°	103830	123753	104233
35°	78054	103882	79177
40°	59437	77458	59298
45°	44389	54965	45211
50°	33805	40963	34528
55°	30469	32074	30469
60°	27823	27590	27590
65°	25307	25307	25307
70°	23538	23198	23198
75°	21784	21335	21784
80°	19861	19191	19861
85°	17117	17117	17117

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 54965 cd/sqm



TEST NUMBER: P837412

CATALOG NUMBER: HCSQ425D010-HM40525840-41SQMW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.1	6.5
10°-20°	403.3	18.2
20°-30°	554.7	25.0
30°-40°	472.2	21.3
40°-50°	285.2	12.9
50°-60°	168.1	7.6
60°-70°	110.2	5.0
70°-80°	61.1	2.8
80°-90°	17.9	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°	1102.1	49.7
0°-40°	1574.3	71.0
0°-60°	2027.7	91.5
0°-90°	2216.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2216.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1528	1528	1528	1528	1528	
5°	1519	1520	1519	1518	1520	144
15°	1433	1436	1434	1433	1430	403
25°	1183	1220	1261	1223	1192	535
35°	660	726	878	747	670	418
45°	324	358	401	362	330	255
55°	180	184	190	184	180	162
65°	110	112	110	110	110	111
75°	58	58	57	57	58	62
85°	15	15	15	15	15	18
90°	0	0	0	0	0	



TEST NUMBER: P837412

CATALOG NUMBER: HCSQ425D010-HM40525840-41SQMW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1527.6	1527.6	1527.6	1527.6	1527.6
2.5°	1528.8	1525.3	1526.5	1525.3	1526.5
5°	1519.3	1520.5	1519.3	1518.2	1520.5
7.5°	1508.7	1507.5	1507.5	1506.3	1508.7
10°	1489.7	1487.3	1490.9	1488.5	1488.5
12.5°	1463.6	1467.1	1465.9	1465.9	1463.6
15°	1432.7	1436.3	1433.9	1432.7	1430.3
17.5°	1397.1	1399.5	1400.6	1395.9	1395.9
20°	1352.0	1356.7	1359.1	1350.8	1347.2
22.5°	1277.2	1298.6	1311.6	1297.4	1279.6
25°	1183.4	1220.2	1260.6	1222.6	1191.7
27.5°	1070.7	1122.9	1195.3	1131.2	1070.7
30°	928.2	1005.4	1106.3	1013.7	931.8
32.5°	781.0	862.9	1004.2	877.2	797.7
35°	660.0	726.4	878.4	746.6	669.5
37.5°	555.5	612.5	746.6	625.5	561.4
40°	470.0	515.2	612.5	521.1	468.9
42.5°	388.1	430.9	496.2	436.8	392.9
45°	324.0	358.5	401.2	362.0	330.0
47.5°	269.4	297.9	328.8	297.9	273.0
50°	224.3	246.9	271.8	246.9	229.1
52.5°	200.6	207.7	224.3	208.9	200.6
55°	180.4	184.0	189.9	184.0	180.4
57.5°	161.4	163.8	162.6	162.6	161.4
60°	143.6	144.8	142.4	143.6	142.4
62.5°	127.0	127.0	124.6	127.0	125.8
65°	110.4	111.6	110.4	110.4	110.4
67.5°	96.1	96.1	95.0	96.1	96.1
70°	83.1	83.1	81.9	83.1	81.9
72.5°	70.0	70.0	68.8	68.8	68.8
75°	58.2	58.2	57.0	57.0	58.2
77.5°	46.3	46.3	45.1	46.3	46.3
80°	35.6	35.6	34.4	35.6	35.6
82.5°	24.9	24.9	24.9	26.1	26.1
85°	15.4	15.4	15.4	15.4	15.4
87.5°	7.1	7.1	7.1	7.1	8.3
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)