

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: P837416

Luminaire Tested: HCSQ425D010-HM40525927-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837416
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: HCSQ425D010-HM40525927-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

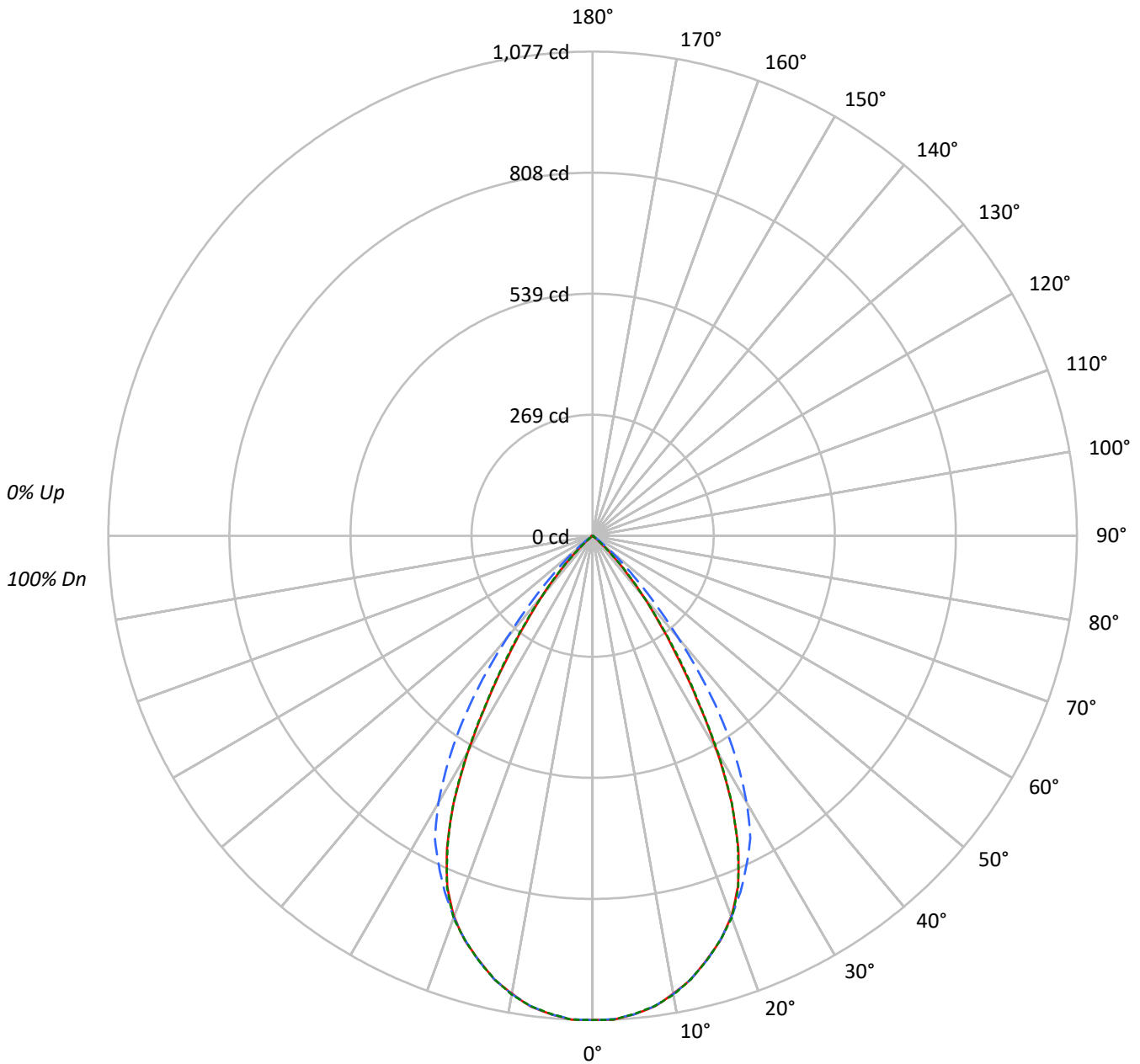
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1076.0 lumens
Efficiency: N/A
Efficacy: 38.8 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): 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

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Luminous Intensity Polar Plot





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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	104354	104354	104354
5°	103878	103878	103780
10°	101734	101833	101931
15°	98016	98116	98116
20°	92917	93021	93227
25°	81921	86517	81600
30°	61815	76681	62374
35°	38755	59676	40056
40°	21865	37155	21865
45°	9165	18756	9028
50°	754	7234	904
55°	338	1520	338
60°	388	194	388
65°	229	229	229
70°	283	283	283
75°	374	374	374
80°	0	558	558
85°	0	1112	1112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 18756 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.0	9.4
10°-20°	274.6	25.5
20°-30°	356.3	33.1
30°-40°	253.3	23.5
40°-50°	82.1	7.6
50°-60°	5.9	0.6
60°-70°	1.0	0.1
70°-80°	1.0	0.1
80°-90°	0.7	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°	731.9	68.0
0°-40°	985.2	91.6
0°-60°	1073.2	99.7
0°-90°	1076.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1076.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1077	1077	1077	1077	1077	
5°	1068	1069	1068	1068	1067	101
15°	977	980	978	980	978	274
25°	766	786	809	790	763	343
35°	328	388	505	392	339	210
45°	67	95	137	97	66	56
55°	2	2	9	2	2	2
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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1077.2	1077.2	1077.2	1077.2	1077.2
2.5°	1077.2	1077.2	1076.2	1076.2	1077.2
5°	1068.2	1069.2	1068.2	1068.2	1067.2
7.5°	1056.2	1056.2	1055.2	1055.2	1055.2
10°	1034.2	1035.2	1035.2	1035.2	1036.2
12.5°	1010.2	1010.2	1010.2	1010.2	1010.2
15°	977.3	980.2	978.3	980.2	978.3
17.5°	944.3	944.3	943.3	945.3	943.3
20°	901.3	901.3	902.3	904.3	904.3
22.5°	844.4	854.3	858.3	856.3	846.4
25°	766.4	786.4	809.4	790.4	763.4
27.5°	668.5	706.5	759.4	712.5	670.5
30°	552.6	609.5	685.5	611.5	557.6
32.5°	432.7	498.6	599.5	503.6	436.7
35°	327.7	387.7	504.6	391.7	338.7
37.5°	241.8	296.8	400.7	298.8	248.8
40°	172.9	212.8	293.8	216.8	172.9
42.5°	110.9	150.9	206.8	151.9	115.9
45°	66.9	94.9	136.9	96.9	65.9
47.5°	30.0	54.0	84.9	56.0	30.0
50°	5.0	22.0	48.0	23.0	6.0
52.5°	3.0	4.0	23.0	4.0	3.0
55°	2.0	2.0	9.0	2.0	2.0
57.5°	2.0	2.0	2.0	2.0	2.0
60°	2.0	1.0	1.0	1.0	2.0
62.5°	1.0	1.0	1.0	1.0	1.0
65°	1.0	1.0	1.0	1.0	1.0
67.5°	1.0	1.0	1.0	1.0	1.0
70°	1.0	1.0	1.0	1.0	1.0
72.5°	1.0	1.0	1.0	1.0	1.0
75°	1.0	1.0	1.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0	1.0
80°	0.0	1.0	1.0	1.0	1.0
82.5°	0.0	1.0	1.0	1.0	1.0
85°	0.0	0.0	1.0	1.0	1.0
87.5°	0.0	0.0	1.0	1.0	1.0
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



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Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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