

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: P837276

Luminaire Tested: HCSQ410D010-HM40525827-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837276
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: HCSQ410D010-HM40525827-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

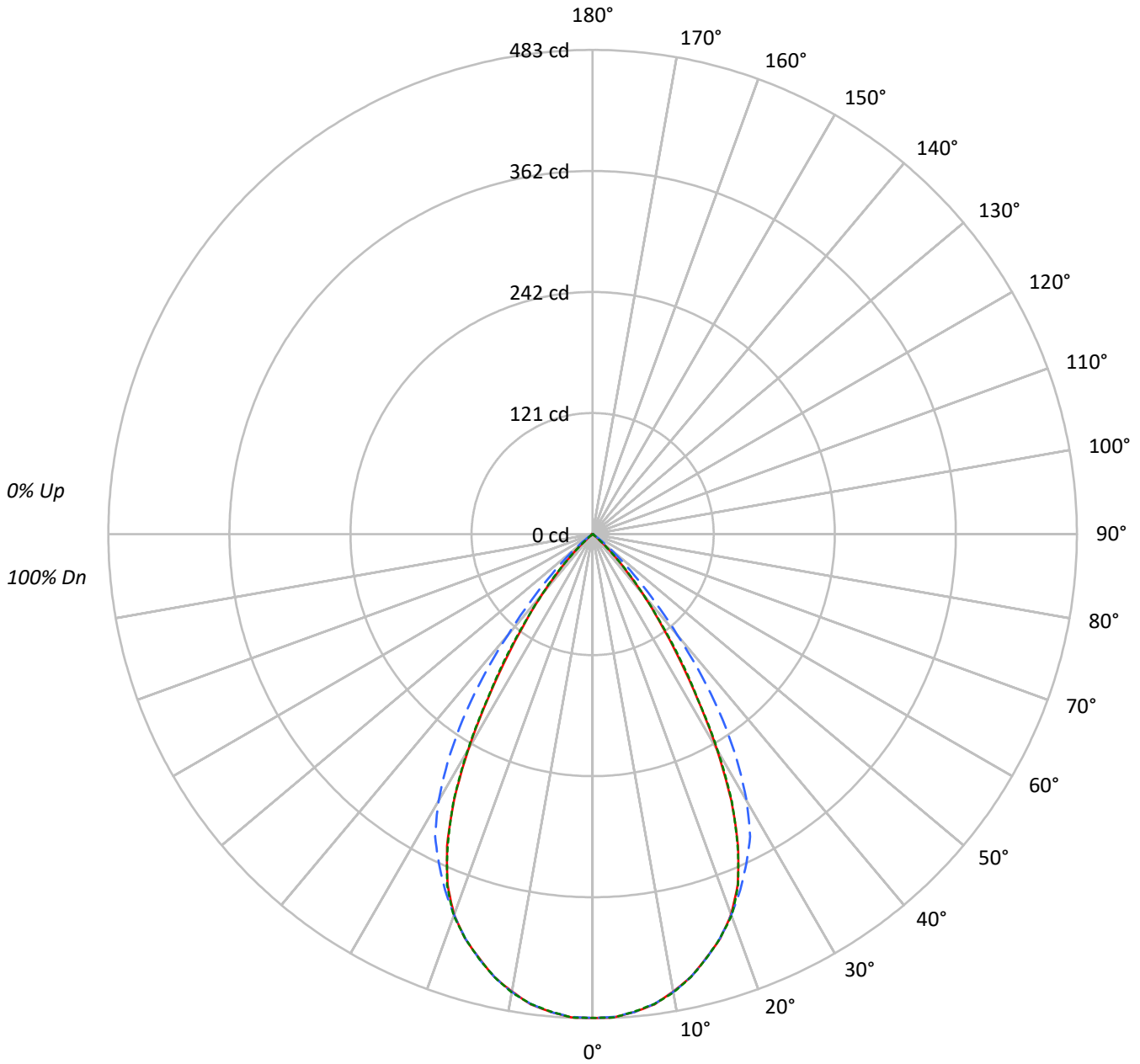
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 481.9 lumens
Efficiency: N/A
Efficacy: 48.7 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): 9.9
Input Voltage (V): NR
Input Current (Ain): 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	67	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°	46752	46752	46752
5°	46532	46532	46493
10°	45575	45624	45663
15°	43908	43948	43948
20°	41629	41670	41763
25°	36695	38758	36556
30°	27686	34353	27943
35°	17361	26739	17952
40°	9788	16642	9788
45°	4110	8398	4042
50°	332	3240	407
55°	152	676	152
60°	174	78	174
65°	92	92	92
70°	113	113	113
75°	150	150	150
80°	0	223	223
85°	0	445	445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 8398 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.2	9.4
10°-20°	123.0	25.5
20°-30°	159.6	33.1
30°-40°	113.5	23.5
40°-50°	36.8	7.6
50°-60°	2.6	0.5
60°-70°	0.4	0.1
70°-80°	0.4	0.1
80°-90°	0.3	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°	327.9	68.0
0°-40°	441.4	91.6
0°-60°	480.8	99.8
0°-90°	481.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	481.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	483	483	483	483	483	
5°	478	479	478	478	478	45
15°	438	439	438	439	438	123
25°	343	352	363	354	342	154
35°	147	174	226	176	152	94
45°	30	42	61	43	30	25
55°	1	1	4	1	1	1
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	482.6	482.6	482.6	482.6	482.6
2.5°	482.6	482.6	482.1	482.1	482.6
5°	478.5	479.0	478.5	478.5	478.1
7.5°	473.2	473.2	472.7	472.7	472.7
10°	463.3	463.8	463.8	463.8	464.2
12.5°	452.6	452.6	452.6	452.6	452.6
15°	437.8	439.1	438.2	439.1	438.2
17.5°	423.0	423.0	422.6	423.5	422.6
20°	403.8	403.8	404.2	405.1	405.1
22.5°	378.3	382.7	384.5	383.6	379.2
25°	343.3	352.3	362.6	354.1	342.0
27.5°	299.5	316.5	340.2	319.2	300.4
30°	247.5	273.1	307.1	274.0	249.8
32.5°	193.8	223.4	268.6	225.6	195.6
35°	146.8	173.7	226.1	175.5	151.8
37.5°	108.3	133.0	179.5	133.8	111.5
40°	77.4	95.3	131.6	97.1	77.4
42.5°	49.7	67.6	92.7	68.0	51.9
45°	30.0	42.5	61.3	43.4	29.5
47.5°	13.4	24.2	38.0	25.1	13.4
50°	2.2	9.8	21.5	10.3	2.7
52.5°	1.3	1.8	10.3	1.8	1.3
55°	0.9	0.9	4.0	0.9	0.9
57.5°	0.9	0.9	0.9	0.9	0.9
60°	0.9	0.4	0.4	0.4	0.9
62.5°	0.4	0.4	0.4	0.4	0.4
65°	0.4	0.4	0.4	0.4	0.4
67.5°	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4
77.5°	0.4	0.4	0.4	0.4	0.4
80°	0.0	0.4	0.4	0.4	0.4
82.5°	0.0	0.4	0.4	0.4	0.4
85°	0.0	0.0	0.4	0.4	0.4
87.5°	0.0	0.0	0.4	0.4	0.4
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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