

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: P837346

Luminaire Tested: HCSQ415D010-HM40525935-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837346
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: HCSQ415D010-HM40525935-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

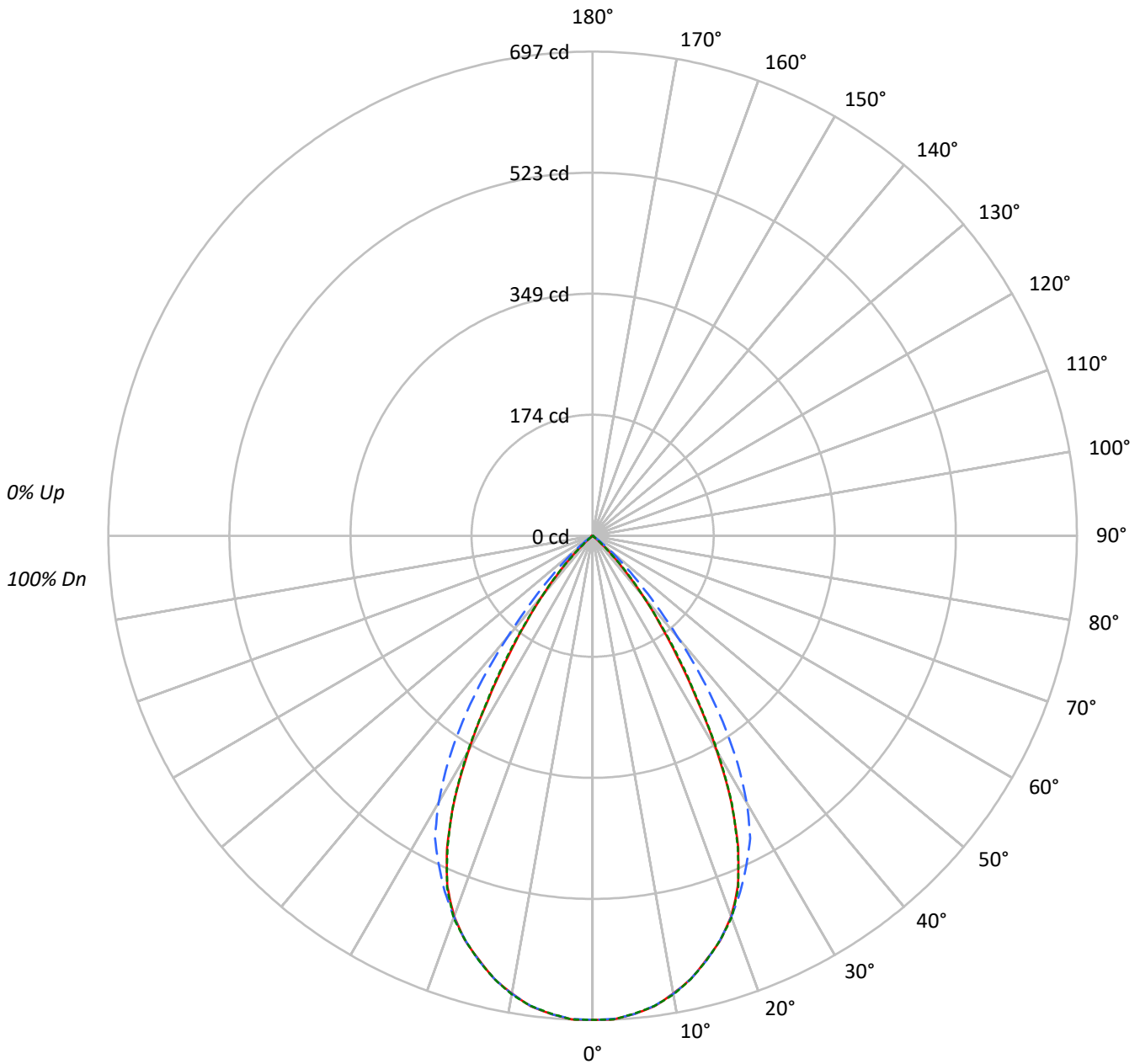
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 695.9 lumens
Efficiency: N/A
Efficacy: 49.7 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): 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

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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					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	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	100	100	100	100		
	1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93	93	93	93	93	93		
	2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87	87	87	87	87	87		
	3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80	80	80	80	80	80		
	4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74	74	74	74	74	74		
	5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69	69	69	69	69	69		
	6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64	64	64	64	64	64		
	7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60	60	60	60	60	60		
	8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56	56	56	56	56	56		
	9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52	52	52	52	52	52		
	10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49	49	49	49	49	49		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	67503	67503	67503
5°	67197	67197	67129
10°	65809	65868	65937
15°	63395	63465	63465
20°	60103	60175	60309
25°	52996	55968	52782
30°	39980	49600	40349
35°	25072	38601	25911
40°	14138	24028	14138
45°	5932	12138	5850
50°	482	4672	588
55°	220	980	220
60°	252	116	252
65°	138	138	138
70°	170	170	170
75°	225	225	225
80°	0	335	335
85°	0	667	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 12138 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.3	9.4
10°-20°	177.7	25.5
20°-30°	230.5	33.1
30°-40°	163.9	23.5
40°-50°	53.1	7.6
50°-60°	3.8	0.6
60°-70°	0.6	0.1
70°-80°	0.6	0.1
80°-90°	0.4	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°	473.4	68.0
0°-40°	637.3	91.6
0°-60°	694.2	99.8
0°-90°	695.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	695.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	697	697	697	697	697	
5°	691	692	691	691	690	65
15°	632	634	633	634	633	178
25°	496	509	524	511	494	222
35°	212	251	326	253	219	136
45°	43	61	89	63	43	36
55°	1	1	6	1	1	1
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°	696.8	696.8	696.8	696.8	696.8
2.5°	696.8	696.8	696.1	696.1	696.8
5°	691.0	691.6	691.0	691.0	690.3
7.5°	683.2	683.2	682.6	682.6	682.6
10°	669.0	669.6	669.6	669.6	670.3
12.5°	653.5	653.5	653.5	653.5	653.5
15°	632.1	634.1	632.8	634.1	632.8
17.5°	610.8	610.8	610.2	611.5	610.2
20°	583.0	583.0	583.7	585.0	585.0
22.5°	546.2	552.6	555.2	553.9	547.5
25°	495.8	508.7	523.6	511.3	493.8
27.5°	432.4	457.0	491.2	460.9	433.7
30°	357.4	394.3	443.4	395.6	360.7
32.5°	279.9	322.5	387.8	325.8	282.5
35°	212.0	250.8	326.4	253.4	219.1
37.5°	156.4	192.0	259.2	193.3	160.9
40°	111.8	137.7	190.0	140.3	111.8
42.5°	71.7	97.6	133.8	98.2	75.0
45°	43.3	61.4	88.6	62.7	42.7
47.5°	19.4	34.9	54.9	36.2	19.4
50°	3.2	14.2	31.0	14.9	3.9
52.5°	1.9	2.6	14.9	2.6	1.9
55°	1.3	1.3	5.8	1.3	1.3
57.5°	1.3	1.3	1.3	1.3	1.3
60°	1.3	0.6	0.6	0.6	1.3
62.5°	0.6	0.6	0.6	0.6	0.6
65°	0.6	0.6	0.6	0.6	0.6
67.5°	0.6	0.6	0.6	0.6	0.6
70°	0.6	0.6	0.6	0.6	0.6
72.5°	0.6	0.6	0.6	0.6	0.6
75°	0.6	0.6	0.6	0.6	0.6
77.5°	0.6	0.6	0.6	0.6	0.6
80°	0.0	0.6	0.6	0.6	0.6
82.5°	0.0	0.6	0.6	0.6	0.6
85°	0.0	0.0	0.6	0.6	0.6
87.5°	0.0	0.0	0.6	0.6	0.6
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



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Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

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