

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P837351

Luminaire Tested: HCSQ415D010-HM40525940-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837351
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-HM40525940-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

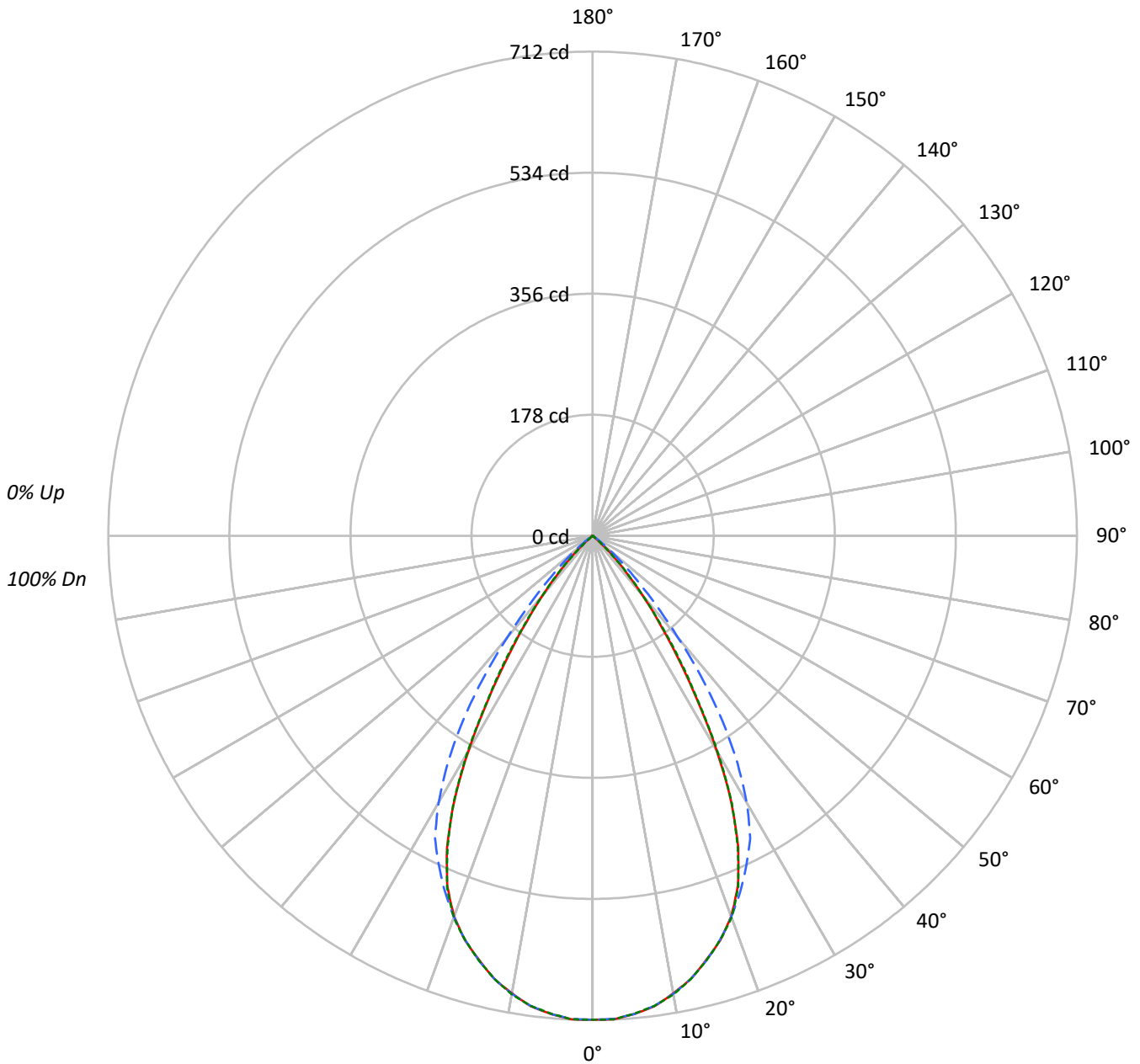
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 711.0 lumens
Efficiency: N/A
Efficacy: 50.8 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): 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: P837351
CATALOG NUMBER: HCSQ415D010-HM40525940-41SQMB

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°	68946	68946	68946
5°	68636	68636	68568
10°	67216	67285	67344
15°	64759	64819	64819
20°	61392	61464	61598
25°	54129	57165	53915
30°	40841	50662	41210
35°	25604	39429	26467
40°	14442	24546	14442
45°	6056	12385	5973
50°	497	4778	603
55°	220	996	220
60°	252	136	252
65°	160	160	160
70°	198	198	198
75°	262	262	262
80°	0	391	391
85°	0	778	778

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 12385 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	9.4
10°-20°	181.5	25.5
20°-30°	235.4	33.1
30°-40°	167.4	23.5
40°-50°	54.3	7.6
50°-60°	3.9	0.5
60°-70°	0.7	0.1
70°-80°	0.7	0.1
80°-90°	0.5	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°	483.6	68.0
0°-40°	650.9	91.5
0°-60°	709.1	99.7
0°-90°	711.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	711.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	712	712	712	712	712	
5°	706	706	706	706	705	67
15°	646	648	646	648	646	181
25°	506	520	535	522	504	227
35°	216	256	333	259	224	139
45°	44	63	90	64	44	37
55°	1	1	6	1	1	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°	711.7	711.7	711.7	711.7	711.7
2.5°	711.7	711.7	711.0	711.0	711.7
5°	705.8	706.4	705.8	705.8	705.1
7.5°	697.8	697.8	697.2	697.2	697.2
10°	683.3	684.0	684.0	684.0	684.6
12.5°	667.5	667.5	667.5	667.5	667.5
15°	645.7	647.7	646.3	647.7	646.3
17.5°	623.9	623.9	623.2	624.6	623.2
20°	595.5	595.5	596.2	597.5	597.5
22.5°	557.9	564.5	567.1	565.8	559.2
25°	506.4	519.6	534.8	522.2	504.4
27.5°	441.7	466.8	501.8	470.7	443.0
30°	365.1	402.7	452.9	404.0	368.4
32.5°	285.9	329.4	396.1	332.7	288.5
35°	216.5	256.2	333.4	258.8	223.8
37.5°	159.8	196.1	264.7	197.4	164.4
40°	114.2	140.6	194.1	143.3	114.2
42.5°	73.3	99.7	136.7	100.4	76.6
45°	44.2	62.7	90.4	64.0	43.6
47.5°	19.8	35.7	56.1	37.0	19.8
50°	3.3	14.5	31.7	15.2	4.0
52.5°	2.0	2.6	15.2	2.6	2.0
55°	1.3	1.3	5.9	1.3	1.3
57.5°	1.3	1.3	1.3	1.3	1.3
60°	1.3	0.7	0.7	0.7	1.3
62.5°	0.7	0.7	0.7	0.7	0.7
65°	0.7	0.7	0.7	0.7	0.7
67.5°	0.7	0.7	0.7	0.7	0.7
70°	0.7	0.7	0.7	0.7	0.7
72.5°	0.7	0.7	0.7	0.7	0.7
75°	0.7	0.7	0.7	0.7	0.7
77.5°	0.7	0.7	0.7	0.7	0.7
80°	0.0	0.7	0.7	0.7	0.7
82.5°	0.0	0.7	0.7	0.7	0.7
85°	0.0	0.0	0.7	0.7	0.7
87.5°	0.0	0.0	0.7	0.7	0.7
90°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report





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

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