

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: P837336

Luminaire Tested: HCSQ415D010-HM40525927-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837336
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-HM40525927-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

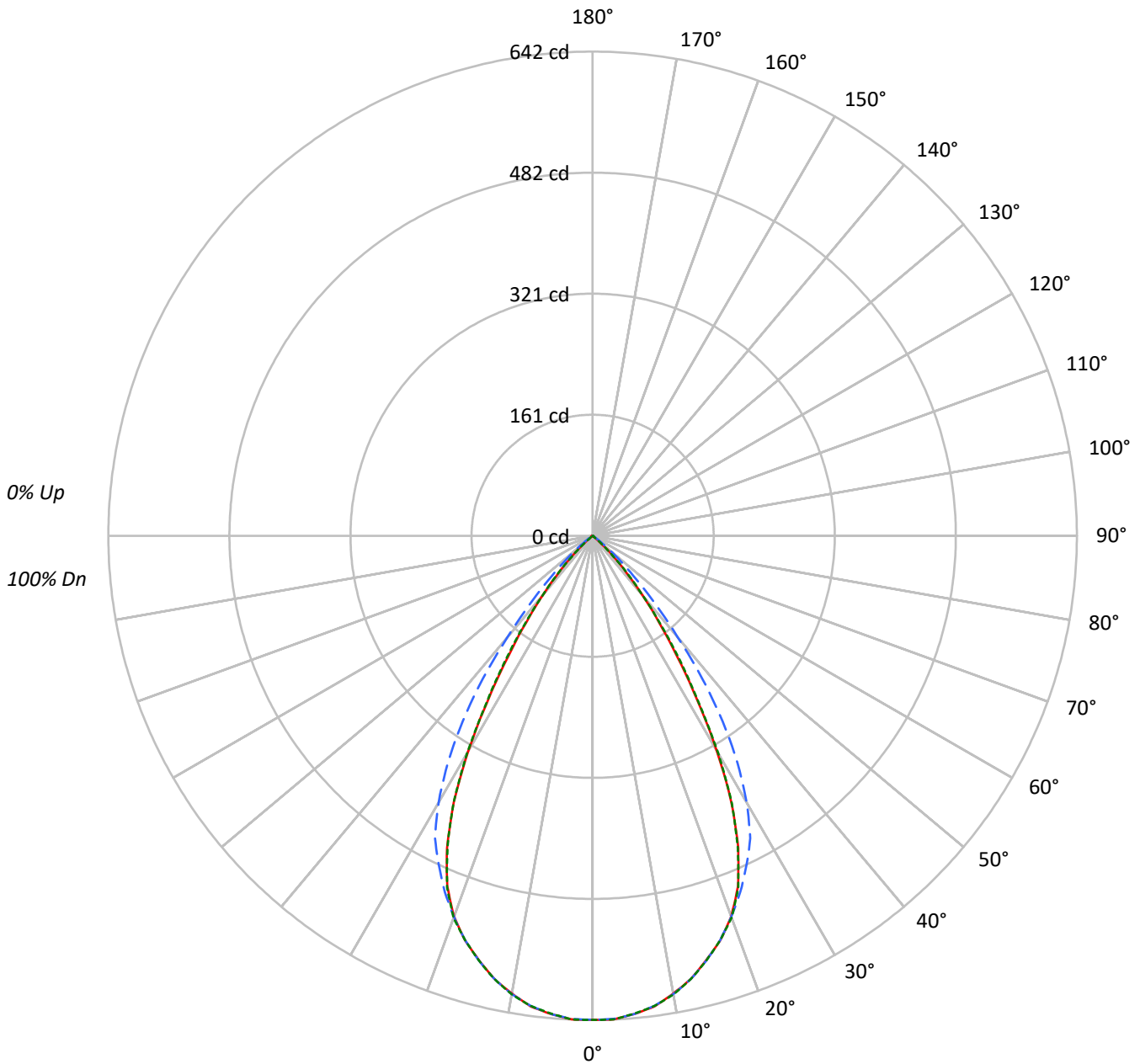
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 641.2 lumens
Efficiency: N/A
Efficacy: 45.8 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

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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°	62184	62184	62184
5°	61897	61897	61838
10°	60625	60684	60743
15°	58411	58461	58461
20°	55371	55433	55557
25°	48817	51553	48624
30°	36836	45696	37172
35°	23097	35562	23877
40°	13026	22143	13026
45°	5466	11179	5384
50°	452	4310	543
55°	203	912	203
60°	233	116	233
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: 11179 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.2	9.4
10°-20°	163.7	25.5
20°-30°	212.3	33.1
30°-40°	150.9	23.5
40°-50°	49.0	7.6
50°-60°	3.5	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°	436.1	68.0
0°-40°	587.1	91.6
0°-60°	639.6	99.7
0°-90°	641.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	641.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	642	642	642	642	642	
5°	636	637	636	636	636	60
15°	582	584	583	584	583	164
25°	457	469	482	471	455	204
35°	195	231	301	233	202	125
45°	40	57	82	58	39	33
55°	1	1	5	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°	641.9	641.9	641.9	641.9	641.9
2.5°	641.9	641.9	641.3	641.3	641.9
5°	636.5	637.1	636.5	636.5	635.9
7.5°	629.4	629.4	628.8	628.8	628.8
10°	616.3	616.9	616.9	616.9	617.5
12.5°	602.0	602.0	602.0	602.0	602.0
15°	582.4	584.1	582.9	584.1	582.9
17.5°	562.7	562.7	562.1	563.3	562.1
20°	537.1	537.1	537.7	538.9	538.9
22.5°	503.2	509.1	511.5	510.3	504.3
25°	456.7	468.6	482.3	471.0	454.9
27.5°	398.4	421.0	452.5	424.6	399.5
30°	329.3	363.2	408.5	364.4	332.3
32.5°	257.8	297.1	357.3	300.1	260.2
35°	195.3	231.0	300.7	233.4	201.9
37.5°	144.1	176.8	238.8	178.0	148.3
40°	103.0	126.8	175.1	129.2	103.0
42.5°	66.1	89.9	123.3	90.5	69.1
45°	39.9	56.6	81.6	57.8	39.3
47.5°	17.9	32.2	50.6	33.3	17.9
50°	3.0	13.1	28.6	13.7	3.6
52.5°	1.8	2.4	13.7	2.4	1.8
55°	1.2	1.2	5.4	1.2	1.2
57.5°	1.2	1.2	1.2	1.2	1.2
60°	1.2	0.6	0.6	0.6	1.2
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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