

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: P837331

Luminaire Tested: HCSQ415D010-HM40525840-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837331
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-HM40525840-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

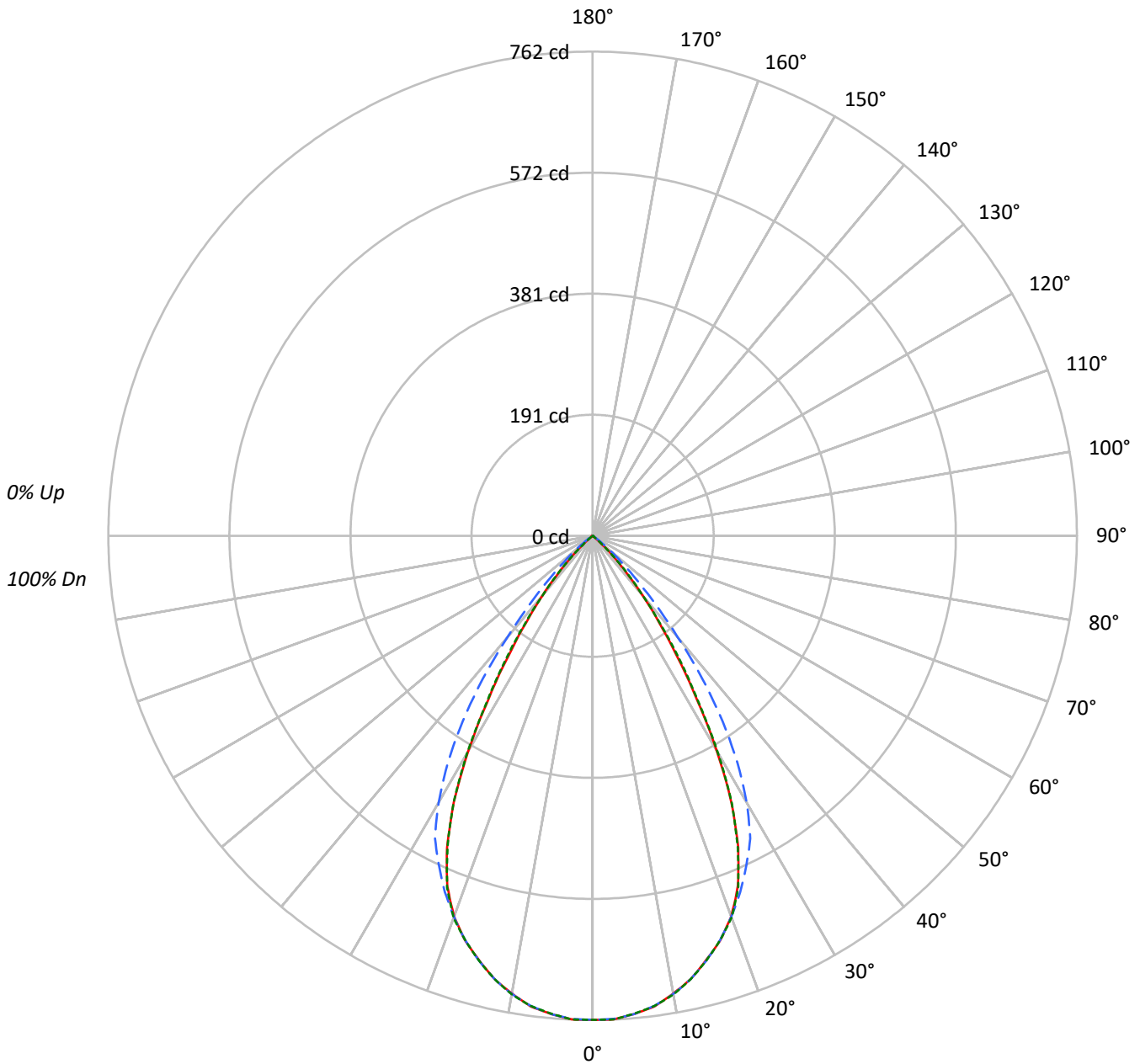
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 761.0 lumens
Efficiency: N/A
Efficacy: 54.4 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								
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°	73800	73800	73800
5°	73459	73459	73391
10°	71948	72017	72085
15°	69312	69383	69383
20°	65711	65783	65938
25°	57934	61184	57710
30°	43716	54231	44107
35°	27413	42208	28336
40°	15466	26279	15466
45°	6480	13262	6384
50°	527	5109	633
55°	236	1081	236
60°	271	136	271
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: 13262 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.4	9.4
10°-20°	194.2	25.5
20°-30°	252.0	33.1
30°-40°	179.1	23.5
40°-50°	58.1	7.6
50°-60°	4.2	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°	517.6	68.0
0°-40°	696.8	91.6
0°-60°	759.0	99.7
0°-90°	761.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	761.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	762	762	762	762	762	
5°	755	756	755	755	755	71
15°	691	693	692	693	692	194
25°	542	556	572	559	540	243
35°	232	274	357	277	240	148
45°	47	67	97	68	47	39
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°	761.8	761.8	761.8	761.8	761.8
2.5°	761.8	761.8	761.1	761.1	761.8
5°	755.4	756.2	755.4	755.4	754.7
7.5°	747.0	747.0	746.3	746.3	746.3
10°	731.4	732.1	732.1	732.1	732.8
12.5°	714.5	714.5	714.5	714.5	714.5
15°	691.1	693.3	691.8	693.3	691.8
17.5°	667.8	667.8	667.1	668.5	667.1
20°	637.4	637.4	638.1	639.6	639.6
22.5°	597.2	604.2	607.0	605.6	598.6
25°	542.0	556.2	572.4	559.0	539.9
27.5°	472.8	499.6	537.1	503.9	474.2
30°	390.8	431.1	484.8	432.5	394.3
32.5°	306.0	352.6	424.0	356.2	308.8
35°	231.8	274.2	356.9	277.0	239.6
37.5°	171.0	209.9	283.4	211.3	176.0
40°	122.3	150.5	207.8	153.4	122.3
42.5°	78.4	106.7	146.3	107.4	82.0
45°	47.3	67.1	96.8	68.5	46.6
47.5°	21.2	38.2	60.1	39.6	21.2
50°	3.5	15.5	33.9	16.3	4.2
52.5°	2.1	2.8	16.3	2.8	2.1
55°	1.4	1.4	6.4	1.4	1.4
57.5°	1.4	1.4	1.4	1.4	1.4
60°	1.4	0.7	0.7	0.7	1.4
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

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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