

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: P837287

Luminaire Tested: HCSQ410D010-HM40525835-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837287
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ410D010-HM40525835-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

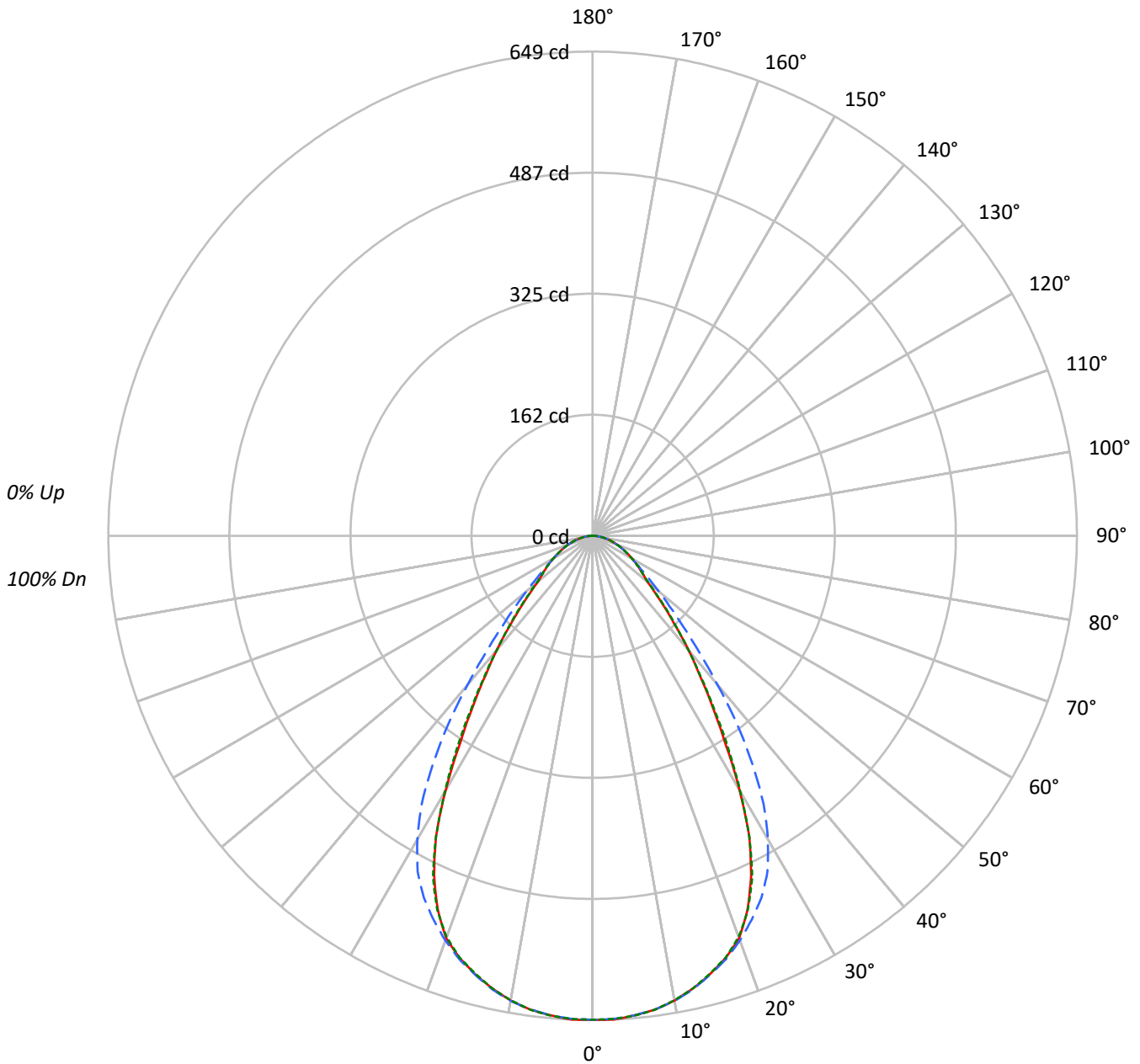
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 941.5 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.07
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 (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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89								
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71								
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64								
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58								
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53								
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48								
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44								
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41								
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	62843	62843	62843
5°	62743	62743	62791
10°	62229	62278	62180
15°	61018	61068	60918
20°	59186	59505	58979
25°	53723	57218	54097
30°	44096	52553	44264
35°	33149	44112	33622
40°	25242	32893	25179
45°	18852	23345	19194
50°	14363	17392	14664
55°	12938	13630	12938
60°	11819	11722	11722
65°	10751	10751	10751
70°	9999	9857	9857
75°	9245	9058	9245
80°	8424	8145	8424
85°	7336	7336	7336

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 23345 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.2	6.5
10°-20°	171.3	18.2
20°-30°	235.6	25.0
30°-40°	200.5	21.3
40°-50°	121.1	12.9
50°-60°	71.4	7.6
60°-70°	46.8	5.0
70°-80°	26.0	2.8
80°-90°	7.6	0.8
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°	468.0	49.7
0°-40°	668.6	71.0
0°-60°	861.1	91.5
0°-90°	941.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	941.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	649	649	649	649	649	
5°	645	646	645	645	646	61
15°	608	610	609	608	607	171
25°	503	518	535	519	506	227
35°	280	308	373	317	284	177
45°	138	152	170	154	140	108
55°	77	78	81	78	77	69
65°	47	47	47	47	47	47
75°	25	25	24	24	25	26
85°	7	7	7	7	7	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	648.7	648.7	648.7	648.7	648.7
2.5°	649.2	647.7	648.2	647.7	648.2
5°	645.2	645.7	645.2	644.7	645.7
7.5°	640.7	640.2	640.2	639.7	640.7
10°	632.6	631.6	633.1	632.1	632.1
12.5°	621.5	623.0	622.5	622.5	621.5
15°	608.4	609.9	608.9	608.4	607.4
17.5°	593.3	594.3	594.8	592.8	592.8
20°	574.1	576.1	577.2	573.6	572.1
22.5°	542.4	551.4	557.0	550.9	543.4
25°	502.6	518.2	535.3	519.2	506.1
27.5°	454.7	476.8	507.6	480.4	454.7
30°	394.2	426.9	469.8	430.5	395.7
32.5°	331.7	366.5	426.4	372.5	338.7
35°	280.3	308.5	373.0	317.1	284.3
37.5°	235.9	260.1	317.1	265.6	238.4
40°	199.6	218.8	260.1	221.3	199.1
42.5°	164.8	183.0	210.7	185.5	166.8
45°	137.6	152.2	170.4	153.7	140.1
47.5°	114.4	126.5	139.6	126.5	115.9
50°	95.3	104.8	115.4	104.8	97.3
52.5°	85.2	88.2	95.3	88.7	85.2
55°	76.6	78.1	80.7	78.1	76.6
57.5°	68.6	69.6	69.1	69.1	68.6
60°	61.0	61.5	60.5	61.0	60.5
62.5°	53.9	53.9	52.9	53.9	53.4
65°	46.9	47.4	46.9	46.9	46.9
67.5°	40.8	40.8	40.3	40.8	40.8
70°	35.3	35.3	34.8	35.3	34.8
72.5°	29.7	29.7	29.2	29.2	29.2
75°	24.7	24.7	24.2	24.2	24.7
77.5°	19.7	19.7	19.2	19.7	19.7
80°	15.1	15.1	14.6	15.1	15.1
82.5°	10.6	10.6	10.6	11.1	11.1
85°	6.6	6.6	6.6	6.6	6.6
87.5°	3.0	3.0	3.0	3.0	3.5
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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