

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: P837217

Luminaire Tested: HCSQ405D010-HM40525927-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837217
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: HCSQ405D010-HM40525927-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

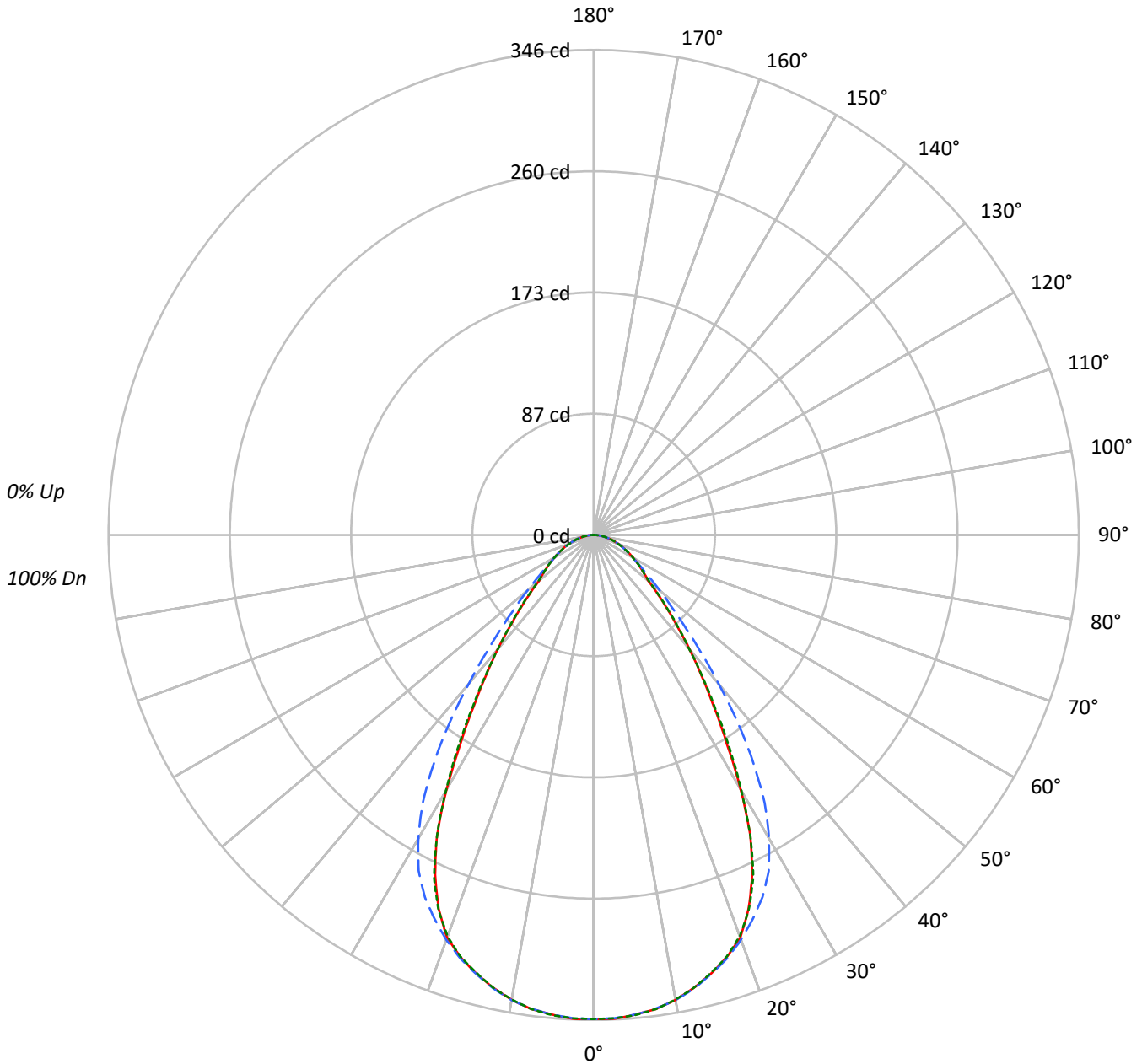
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 501.2 lumens
Efficiency: N/A
Efficacy: 83.5 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): 6
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°	33461	33461	33461
5°	33404	33404	33433
10°	33131	33151	33101
15°	32485	32515	32435
20°	31515	31680	31402
25°	28593	30464	28796
30°	23469	27977	23569
35°	17645	23487	17893
40°	13443	17515	13405
45°	10042	12426	10220
50°	7641	9269	7807
55°	6891	7246	6891
60°	6297	6239	6239
65°	5731	5731	5731
70°	5325	5240	5240
75°	4903	4828	4903
80°	4519	4351	4519
85°	3890	3890	3890

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 12426 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.6	6.5
10°-20°	91.2	18.2
20°-30°	125.4	25.0
30°-40°	106.8	21.3
40°-50°	64.5	12.9
50°-60°	38.0	7.6
60°-70°	24.9	5.0
70°-80°	13.8	2.8
80°-90°	4.0	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°	249.2	49.7
0°-40°	355.9	71.0
0°-60°	458.4	91.5
0°-90°	501.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	501.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	345	345	345	345	345	
5°	344	344	344	343	344	33
15°	324	325	324	324	323	91
25°	268	276	285	276	269	121
35°	149	164	199	169	151	94
45°	73	81	91	82	75	58
55°	41	42	43	42	41	37
65°	25	25	25	25	25	25
75°	13	13	13	13	13	14
85°	4	4	4	4	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	345.4	345.4	345.4	345.4	345.4
2.5°	345.6	344.8	345.1	344.8	345.1
5°	343.5	343.8	343.5	343.2	343.8
7.5°	341.1	340.8	340.8	340.5	341.1
10°	336.8	336.2	337.0	336.5	336.5
12.5°	330.9	331.7	331.4	331.4	330.9
15°	323.9	324.7	324.2	323.9	323.4
17.5°	315.8	316.4	316.7	315.6	315.6
20°	305.7	306.7	307.3	305.4	304.6
22.5°	288.7	293.6	296.5	293.3	289.3
25°	267.5	275.9	285.0	276.4	269.4
27.5°	242.1	253.9	270.2	255.7	242.1
30°	209.8	227.3	250.1	229.2	210.7
32.5°	176.6	195.1	227.0	198.3	180.3
35°	149.2	164.2	198.6	168.8	151.3
37.5°	125.6	138.5	168.8	141.4	126.9
40°	106.3	116.5	138.5	117.8	106.0
42.5°	87.8	97.4	112.2	98.8	88.8
45°	73.3	81.0	90.7	81.8	74.6
47.5°	60.9	67.4	74.3	67.4	61.7
50°	50.7	55.8	61.5	55.8	51.8
52.5°	45.4	47.0	50.7	47.2	45.4
55°	40.8	41.6	42.9	41.6	40.8
57.5°	36.5	37.0	36.8	36.8	36.5
60°	32.5	32.7	32.2	32.5	32.2
62.5°	28.7	28.7	28.2	28.7	28.4
65°	25.0	25.2	25.0	25.0	25.0
67.5°	21.7	21.7	21.5	21.7	21.7
70°	18.8	18.8	18.5	18.8	18.5
72.5°	15.8	15.8	15.6	15.6	15.6
75°	13.1	13.1	12.9	12.9	13.1
77.5°	10.5	10.5	10.2	10.5	10.5
80°	8.1	8.1	7.8	8.1	8.1
82.5°	5.6	5.6	5.6	5.9	5.9
85°	3.5	3.5	3.5	3.5	3.5
87.5°	1.6	1.6	1.6	1.6	1.9
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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