

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: P838610

Luminaire Tested: HCSQ640D010-HM63040940-61SQH

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838610
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ640D010-HM63040940-61SQH
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

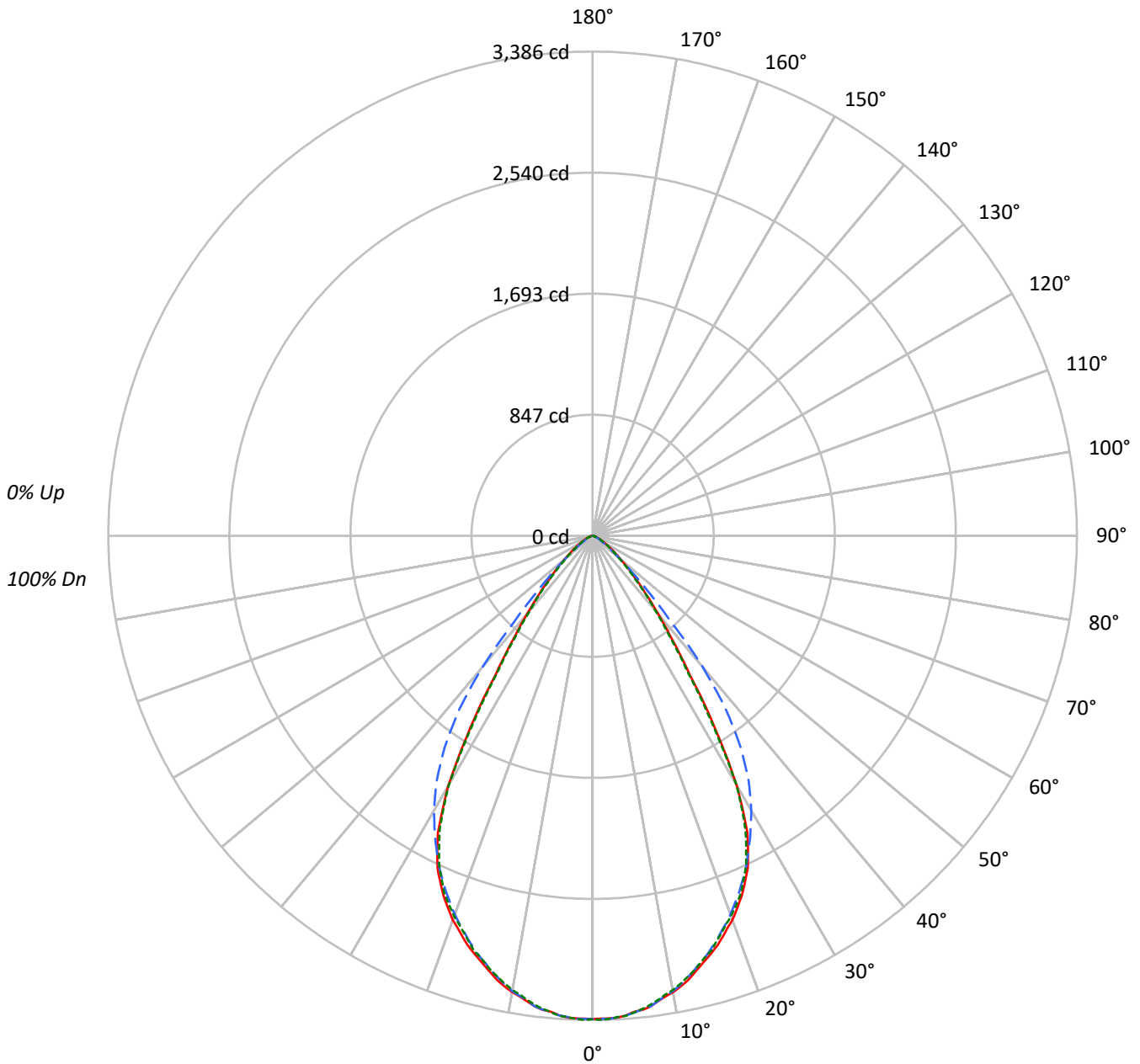
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3802.1 lumens
Efficiency: N/A
Efficacy: 92.7 lumens/watt
Spacing Criteria (0/90/45): 1.02 / 1.01 / 1.04
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 41
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									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				100															
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92				92															
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85				85															
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78				78															
4	95	87	81	76	93	86	80	76	83	78	75	81	77	74	79	76	73	71				71															
5	90	80	74	69	88	79	74	69	78	72	68	76	71	68	74	70	67	66				66															
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	61				61															
7	80	70	63	59	79	69	63	59	68	62	58	67	62	58	65	61	58	56				56															
8	76	65	59	54	74	65	59	54	64	58	54	63	57	54	62	57	54	52				52															
9	72	61	55	51	70	61	55	50	60	54	50	59	54	50	58	53	50	48				48															
10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45				45															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	145554	145554	145554
5°	144407	144649	144571
10°	141652	141324	140997
15°	136648	135894	135810
20°	131010	129122	129722
25°	121940	120871	120605
30°	100208	110276	99930
35°	61891	94710	60414
40°	39731	67131	38360
45°	25915	32540	24660
50°	17208	16203	16076
55°	11680	8445	10839
60°	7914	5167	7268
65°	5542	3820	4961
70°	3537	2832	3298
75°	2495	2179	2179
80°	1860	1389	1389
85°	939	1828	939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 32540 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	315.7	8.3
10°-20°	856.9	22.5
20°-30°	1156.7	30.4
30°-40°	902.8	23.7
40°-50°	378.2	9.9
50°-60°	128.2	3.4
60°-70°	45.7	1.2
70°-80°	14.9	0.4
80°-90°	3.0	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°	2329.3	61.3
0°-40°	3232.1	85.0
0°-60°	3738.5	98.3
0°-90°	3802.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3802.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3381	3381	3381	3381	3381	
5°	3341	3345	3347	3341	3345	316
15°	3066	3058	3049	3045	3047	862
25°	2567	2556	2544	2544	2539	1155
35°	1178	1382	1802	1380	1149	774
45°	426	456	534	435	405	342
55°	156	142	112	135	144	144
65°	54	45	38	43	49	56
75°	15	13	13	13	13	17
85°	2	2	4	2	2	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3380.6	3380.6	3380.6	3380.6	<i>3380.6</i>
1°	<i>3376.8</i>	<i>3382.5</i>	<i>3378.7</i>	<i>3380.6</i>	<i>3386.2</i>
2°	3376.8	3376.8	3380.6	3378.7	<i>3380.6</i>
3°	3373.1	3373.1	3369.3	3369.3	<i>3369.3</i>
4°	3361.8	3361.8	3361.8	3358.1	<i>3365.6</i>
5°	3341.2	3345.0	3346.8	3341.2	<i>3345.0</i>
6°	3333.7	3335.6	3331.8	3330.0	<i>3326.2</i>
7°	3316.8	3311.2	3316.8	3303.7	<i>3305.6</i>
8°	3288.7	3288.7	3285.0	3281.2	<i>3277.5</i>
9°	3262.5	3262.5	3258.7	3253.1	<i>3249.3</i>
10°	3240.0	3234.3	3232.5	3226.8	<i>3225.0</i>
11°	3213.7	3202.5	3200.6	3195.0	<i>3195.0</i>
12°	3181.8	3176.2	3163.1	3161.2	<i>3161.2</i>
13°	3142.5	3136.8	3127.5	3120.0	<i>3127.5</i>
14°	3105.0	3101.2	3084.3	3090.0	<i>3088.1</i>
15°	3065.6	3058.1	3048.7	3045.0	<i>3046.8</i>
16°	3030.0	3016.8	3003.7	3005.6	<i>3016.8</i>
17°	2992.5	2973.7	2960.6	2958.7	<i>2964.3</i>
18°	2945.6	2930.6	2910.0	2917.5	<i>2917.5</i>
19°	2898.7	2878.1	2865.0	2863.1	<i>2870.6</i>
20°	2859.3	2827.5	2818.1	2816.2	<i>2831.2</i>
22.5°	2724.3	2692.5	2685.0	2692.5	<i>2707.5</i>
25°	2566.8	2555.6	2544.3	2544.3	<i>2538.7</i>
27.5°	2343.7	2370.0	2383.1	2356.8	<i>2313.7</i>
30°	2015.6	2126.2	2218.1	2113.1	<i>2010.0</i>
32.5°	1588.1	1816.9	2028.7	1811.2	<i>1550.6</i>
35°	1177.5	1381.9	1801.9	1380.0	<i>1149.4</i>
37.5°	907.5	1038.7	1531.9	1021.9	<i>881.2</i>
40°	706.9	783.7	1194.4	774.4	<i>682.5</i>
42.5°	549.4	598.1	795.0	586.9	<i>530.6</i>
45°	425.6	455.6	534.4	435.0	<i>405.0</i>
47.5°	331.9	345.0	365.6	330.0	<i>313.1</i>
50°	256.9	256.9	241.9	247.5	<i>240.0</i>
52.5°	198.7	191.2	163.1	180.0	<i>183.7</i>
55°	155.6	142.5	112.5	135.0	<i>144.4</i>
57.5°	118.1	105.0	80.6	99.4	<i>108.7</i>
60°	91.9	78.7	60.0	75.0	<i>84.4</i>
62.5°	71.2	60.0	46.9	56.2	<i>63.7</i>
65°	54.4	45.0	37.5	43.1	<i>48.7</i>
67.5°	41.2	33.7	28.1	31.9	<i>37.5</i>
70°	28.1	26.2	22.5	24.4	<i>26.2</i>
72.5°	20.6	18.7	16.9	16.9	<i>18.7</i>
75°	15.0	13.1	13.1	13.1	<i>13.1</i>



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	3.7	3.7	3.7	3.7	3.7
85°	1.9	1.9	3.7	1.9	1.9
87.5°	1.9	1.9	1.9	1.9	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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— 0°-180° - - 45°-225° - - - - 90°-270°

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77.5°	9.4	9.4	9.4	9.4	9.4
80°	7.5	7.5	5.6	5.6	5.6

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Scaled Data Report



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