

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: P838674

Luminaire Tested: HCSQ650D010-HM64560927-61SQC

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838674
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ650D010-HM64560927-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

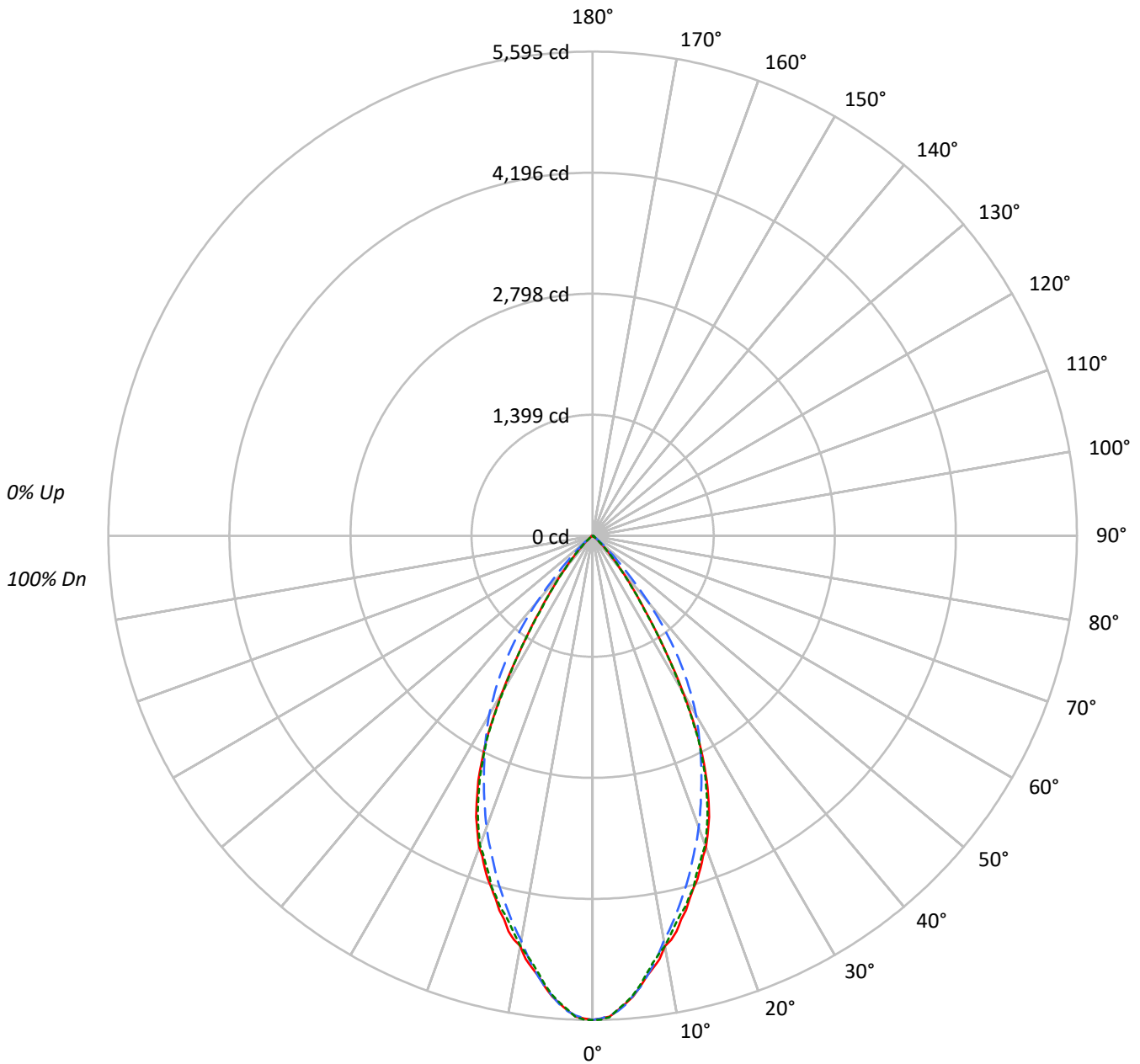
Lumens per Lamp: N/A
Luminaire Lumens: 4191.0 lumens
Efficiency: N/A
Efficacy: 84.3 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 49.7
Input Voltage (V): NR
Input Current (Ain): 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																			
1	114	111	108	106	111	109	107	105	105	103	101	101	100	98	98	96	95	94																			
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	97	92	88	101	95	91	87	93	89	86	90	87	84	88	85	83	81																			
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	78	76																			
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71																			
6	88	80	74	70	87	79	73	69	77	72	69	76	72	68	75	71	68	66																			
7	84	75	69	65	83	74	69	65	73	68	64	72	67	64	71	67	64	62																			
8	80	71	65	61	79	70	65	61	69	64	60	68	64	60	67	63	60	59																			
9	76	67	61	57	75	66	61	57	65	60	57	65	60	57	64	60	56	55																			
10	73	63	58	54	72	63	57	54	62	57	54	61	57	53	61	56	53	52																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	240905	240905	240905
5°	231081	230679	230355
10°	210467	207608	210306
15°	193427	186344	192259
20°	175532	164233	174336
25°	148354	141161	146311
30°	103872	118832	102108
35°	55794	91152	54711
40°	27625	56402	27417
45°	12062	23784	11837
50°	3878	8634	3878
55°	1967	2807	1824
60°	1292	1292	1292
65°	947	947	947
70°	705	705	705
75°	616	616	616
80°	471	471	471
85°	939	939	939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 23784 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	491.3	11.7
10°-20°	1186.4	28.3
20°-30°	1370.5	32.7
30°-40°	855.9	20.4
40°-50°	237.8	5.7
50°-60°	33.3	0.8
60°-70°	9.8	0.2
70°-80°	4.2	0.1
80°-90°	1.8	0.0
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°	3048.3	72.7
0°-40°	3904.2	93.2
0°-60°	4175.2	99.6
0°-90°	4191.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4191.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5595	5595	5595	5595	5595	
5°	5347	5332	5337	5330	5330	493
15°	4339	4257	4180	4246	4313	1215
25°	3123	3031	2971	3029	3080	1395
35°	1062	1310	1734	1295	1041	705
45°	198	252	391	250	194	172
55°	26	26	37	26	24	26
65°	9	9	9	9	9	10
75°	4	4	4	4	4	4
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5595.2	5595.2	5595.2	5595.2	5595.2
1°	5578.4	5578.4	5578.4	5593.3	5593.3
2°	5561.6	5557.8	5548.5	5559.7	5565.3
3°	5492.4	5499.9	5503.6	5498.0	5484.9
4°	5421.4	5413.9	5434.5	5421.4	5410.2
5°	5346.6	5331.7	5337.3	5329.8	5329.8
6°	5242.0	5260.7	5245.7	5232.7	5225.2
7°	5128.0	5142.9	5133.6	5114.9	5101.8
8°	5038.3	5029.0	5014.0	5010.3	4987.8
9°	4952.3	4918.7	4885.1	4890.7	4896.3
10°	4814.0	4817.8	4748.6	4801.0	4810.3
11°	4756.1	4735.5	4644.0	4687.0	4701.9
12°	4672.0	4606.6	4528.1	4563.6	4591.7
13°	4550.5	4483.3	4412.2	4466.4	4494.5
14°	4459.0	4382.3	4292.6	4361.8	4419.7
15°	4339.4	4257.1	4180.5	4245.9	4313.2
16°	4234.7	4139.4	4062.8	4126.3	4227.2
17°	4143.1	4025.4	3932.0	3999.2	4096.4
18°	4036.6	3900.2	3814.2	3885.2	3995.5
19°	3918.9	3780.6	3704.0	3761.9	3889.0
20°	3831.0	3675.9	3584.4	3640.4	3804.9
22.5°	3517.1	3354.5	3270.4	3337.7	3468.5
25°	3122.8	3031.2	2971.4	3029.3	3079.8
27.5°	2655.6	2655.6	2676.1	2651.8	2636.9
30°	2089.3	2240.7	2390.2	2233.2	2053.8
32.5°	1524.9	1767.9	2068.8	1799.7	1523.1
35°	1061.5	1310.0	1734.2	1295.1	1040.9
37.5°	738.2	902.6	1368.0	912.0	728.8
40°	491.5	605.5	1003.5	616.7	487.8
42.5°	321.4	399.9	648.5	401.8	314.0
45°	198.1	252.3	390.6	250.4	194.4
47.5°	115.9	149.5	228.0	151.4	114.0
50°	57.9	87.8	128.9	86.0	57.9
52.5°	33.6	46.7	71.0	44.9	33.6
55°	26.2	26.2	37.4	26.2	24.3
57.5°	20.6	20.6	20.6	20.6	18.7
60°	15.0	16.8	15.0	15.0	15.0
62.5°	13.1	13.1	11.2	13.1	11.2
65°	9.3	9.3	9.3	9.3	9.3
67.5°	7.5	7.5	7.5	7.5	7.5
70°	5.6	5.6	5.6	5.6	5.6
72.5°	3.7	5.6	3.7	5.6	5.6
75°	3.7	3.7	3.7	3.7	3.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	1.9	1.9	1.9	1.9	1.9
85°	1.9	1.9	1.9	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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Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

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77.5°	3.7	3.7	3.7	3.7	1.9
80°	1.9	1.9	1.9	1.9	1.9

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