

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P838669

Luminaire Tested: HCSQ650D010-HM64560840-61SQC

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838669
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-HM64560840-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

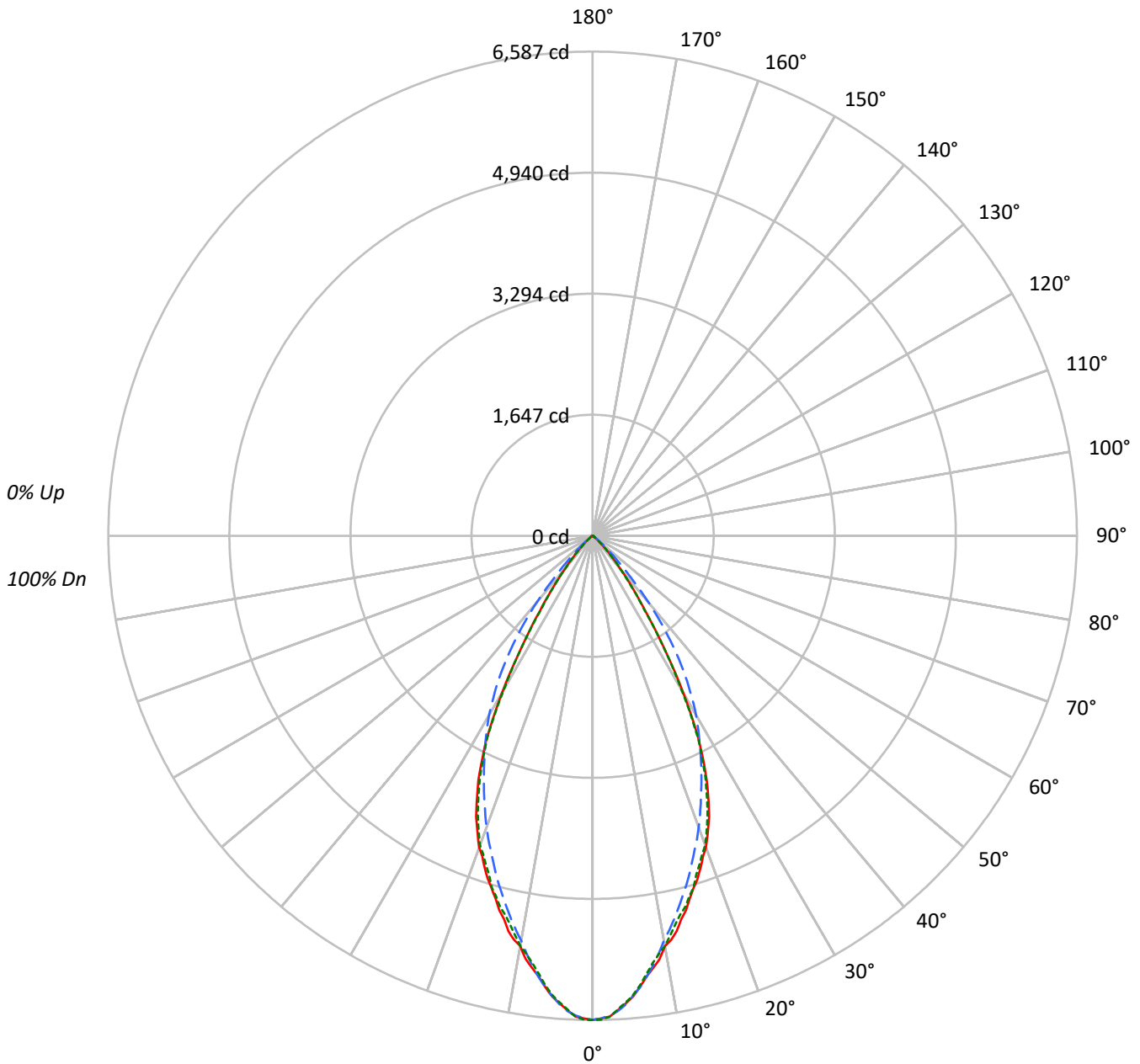
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4934.0 lumens
Efficiency: N/A
Efficacy: 99.3 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 (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																			
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°	283616	283616	283616
5°	272049	271574	271193
10°	247782	244416	247590
15°	227718	219382	226345
20°	206652	193346	205241
25°	174654	166188	172250
30°	122287	139902	120209
35°	65686	107314	64414
40°	32520	66406	32273
45°	14200	27997	13932
50°	4568	10168	4568
55°	2312	3303	2147
60°	1516	1516	1516
65°	1121	1121	1121
70°	831	831	831
75°	732	732	732
80°	545	545	545
85°	1087	1087	1087

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 27997 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	578.4	11.7
10°-20°	1396.8	28.3
20°-30°	1613.5	32.7
30°-40°	1007.6	20.4
40°-50°	279.9	5.7
50°-60°	39.2	0.8
60°-70°	11.5	0.2
70°-80°	4.9	0.1
80°-90°	2.1	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°	3588.7	72.7
0°-40°	4596.3	93.2
0°-60°	4915.4	99.6
0°-90°	4934.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4934.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6587	6587	6587	6587	6587	
5°	6294	6277	6284	6275	6275	580
15°	5109	5012	4922	4999	5078	1431
25°	3676	3569	3498	3566	3626	1642
35°	1250	1542	2042	1525	1226	830
45°	233	297	460	295	229	202
55°	31	31	44	31	29	30
65°	11	11	11	11	11	12
75°	4	4	4	4	4	5
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°	6587.2	6587.2	6587.2	6587.2	6587.2
1°	6567.4	6567.4	6567.4	6585.0	6585.0
2°	6547.6	6543.2	6532.2	6545.4	6552.0
3°	6466.2	6475.0	6479.4	6472.8	6457.4
4°	6382.5	6373.7	6397.9	6382.5	6369.3
5°	6294.5	6276.9	6283.5	6274.7	6274.7
6°	6171.3	6193.3	6175.7	6160.3	6151.5
7°	6037.1	6054.7	6043.7	6021.7	6006.3
8°	5931.5	5920.5	5902.9	5898.5	5872.1
9°	5830.3	5790.7	5751.1	5757.7	5764.3
10°	5667.5	5671.9	5590.5	5652.1	5663.1
11°	5599.3	5575.1	5467.3	5517.9	5535.5
12°	5500.3	5423.3	5330.9	5372.7	5405.7
13°	5357.3	5278.1	5194.5	5258.3	5291.3
14°	5249.5	5159.3	5053.7	5135.1	5203.3
15°	5108.7	5011.9	4921.7	4998.7	5077.9
16°	4985.5	4873.3	4783.1	4857.9	4976.7
17°	4877.7	4739.1	4629.1	4708.3	4822.7
18°	4752.3	4591.6	4490.4	4574.0	4703.9
19°	4613.7	4450.8	4360.6	4428.8	4578.4
20°	4510.2	4327.6	4219.8	4285.8	4479.4
22.5°	4140.6	3949.2	3850.2	3929.4	4083.4
25°	3676.4	3568.6	3498.2	3566.4	3625.8
27.5°	3126.4	3126.4	3150.6	3122.0	3104.4
30°	2459.7	2637.9	2814.0	2629.1	2417.9
32.5°	1795.3	2081.3	2435.5	2118.7	1793.1
35°	1249.7	1542.3	2041.7	1524.7	1225.5
37.5°	869.0	1062.7	1610.5	1073.7	858.0
40°	578.6	712.8	1181.5	726.0	574.2
42.5°	378.4	470.8	763.4	473.0	369.6
45°	233.2	297.0	459.8	294.8	228.8
47.5°	136.4	176.0	268.4	178.2	134.2
50°	68.2	103.4	151.8	101.2	68.2
52.5°	39.6	55.0	83.6	52.8	39.6
55°	30.8	30.8	44.0	30.8	28.6
57.5°	24.2	24.2	24.2	24.2	22.0
60°	17.6	19.8	17.6	17.6	17.6
62.5°	15.4	15.4	13.2	15.4	13.2
65°	11.0	11.0	11.0	11.0	11.0
67.5°	8.8	8.8	8.8	8.8	8.8
70°	6.6	6.6	6.6	6.6	6.6
72.5°	4.4	6.6	4.4	6.6	6.6
75°	4.4	4.4	4.4	4.4	4.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	2.2	2.2	2.2	2.2	2.2
85°	2.2	2.2	2.2	2.2	2.2
87.5°	2.2	2.2	2.2	2.2	2.2
90°	0.0	0.0	0.0	0.0	0.0

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

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77.5°	4.4	4.4	4.4	4.4	2.2
80°	2.2	2.2	2.2	2.2	2.2

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(END OF REPORT)