

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: P838632

Luminaire Tested: HCSQ645D010-HM64560840-61SQMB

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838632
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ645D010-HM64560840-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

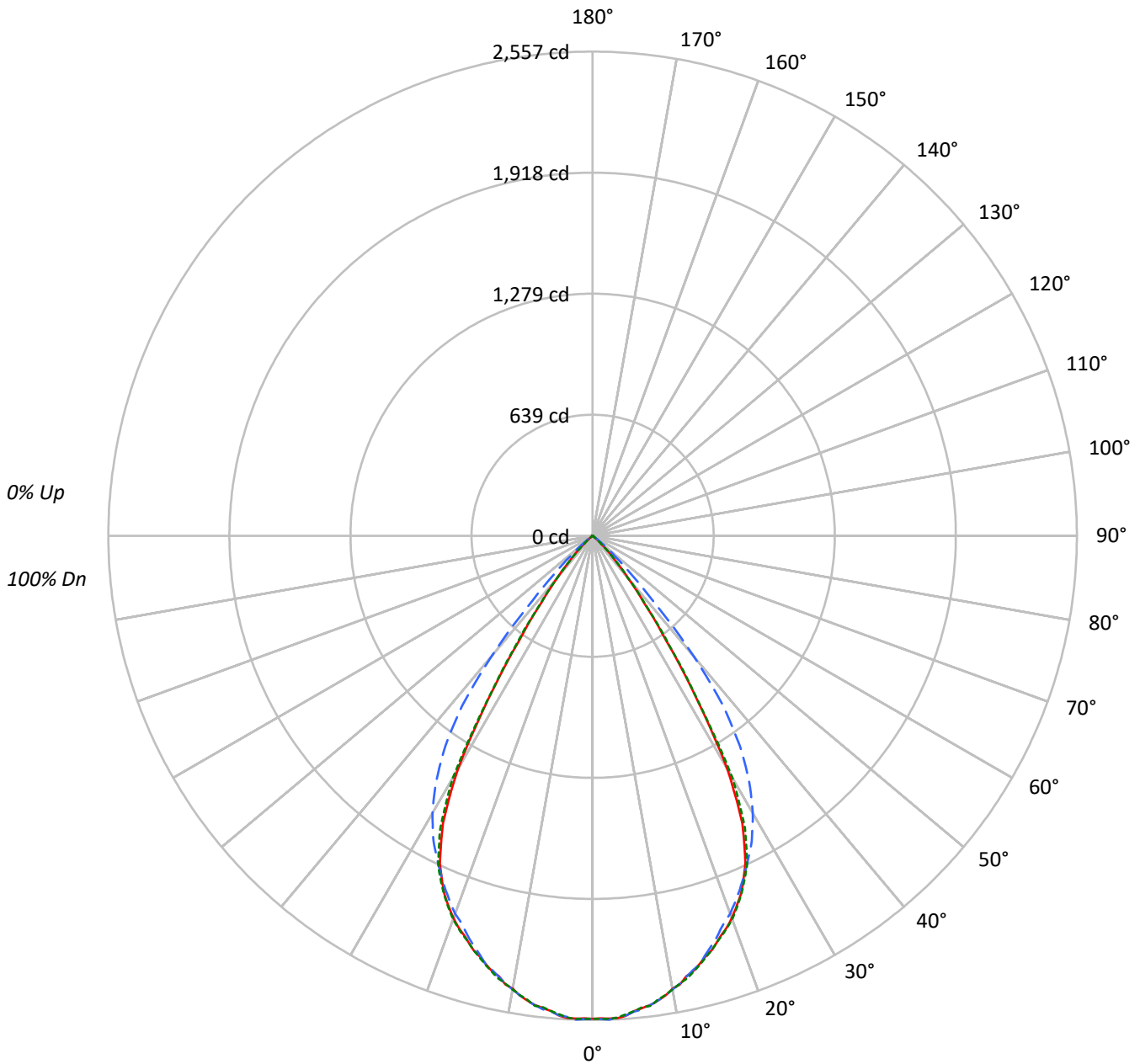
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2535.9 lumens
Efficiency: N/A
Efficacy: 55.2 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.01 / 1.03
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 45.9
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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CATALOG NUMBER: HCSQ645D010-HM64560840-61SQMB

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					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	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	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93					93			
2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87					87			
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81					81			
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75					75			
5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70					70			
6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65					65			
7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60					60			
8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56					56			
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53					53			
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50					50			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	109835	109835	109835
5°	108915	109001	108915
10°	106187	106366	106366
15°	102535	102258	102811
20°	98465	97324	98749
25°	90671	91360	91560
30°	70677	84070	73357
35°	35836	71236	37145
40°	16305	46588	16305
45°	6308	17542	6180
50°	971	5553	971
55°	308	1088	308
60°	181	181	181
65°	214	0	214
70°	0	0	264
75°	0	0	349
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 17542 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	238.2	9.4
10°-20°	646.0	25.5
20°-30°	870.8	34.3
30°-40°	612.3	24.1
40°-50°	156.3	6.2
50°-60°	10.8	0.4
60°-70°	1.3	0.1
70°-80°	0.2	0.0
80°-90°	0.0	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°	1755.0	69.2
0°-40°	2367.3	93.4
0°-60°	2534.4	99.9
0°-90°	2535.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2535.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2551	2551	2551	2551	2551	
5°	2520	2524	2522	2524	2520	238
15°	2300	2296	2294	2300	2306	647
25°	1909	1915	1923	1929	1927	853
35°	682	904	1355	926	707	459
45°	104	155	288	158	102	90
55°	4	4	14	4	4	5
65°	2	2	0	2	2	2
75°	0	0	0	0	2	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2551.0	2551.0	2551.0	2551.0	2551.0
1°	2549.0	2551.0	2553.1	2553.1	2551.0
2°	2551.0	2544.8	2557.3	2551.0	2553.1
3°	2551.0	2538.6	2544.8	2549.0	2546.9
4°	2540.7	2532.4	2538.6	2536.5	2532.4
5°	2520.0	2524.1	2522.0	2524.1	2520.0
6°	2507.5	2511.7	2515.8	2509.6	2503.4
7°	2497.2	2495.1	2497.2	2501.3	2501.3
8°	2478.5	2482.7	2478.5	2480.6	2474.4
9°	2457.8	2457.8	2457.8	2461.9	2455.7
10°	2428.8	2439.1	2432.9	2437.1	2432.9
11°	2414.3	2410.1	2410.1	2412.2	2410.1
12°	2379.0	2383.2	2381.1	2385.3	2391.5
13°	2360.4	2362.5	2354.2	2364.5	2364.5
14°	2331.4	2329.3	2333.4	2331.4	2335.5
15°	2300.3	2296.1	2294.1	2300.3	2306.5
16°	2277.5	2267.1	2260.9	2269.2	2277.5
17°	2244.3	2234.0	2225.7	2242.3	2244.3
18°	2211.2	2207.0	2186.3	2207.0	2217.4
19°	2184.2	2169.7	2151.1	2173.9	2186.3
20°	2149.0	2136.6	2124.1	2136.6	2155.2
22.5°	2047.5	2037.1	2026.7	2041.2	2051.6
25°	1908.6	1914.8	1923.1	1929.3	1927.3
27.5°	1711.7	1767.7	1819.5	1786.3	1742.8
30°	1421.6	1562.5	1691.0	1585.3	1475.5
32.5°	1029.9	1270.3	1537.7	1318.0	1040.3
35°	681.8	903.5	1355.3	926.3	706.7
37.5°	443.5	607.2	1131.5	609.3	464.2
40°	290.1	395.8	828.9	404.1	290.1
42.5°	178.2	250.8	503.6	261.1	178.2
45°	103.6	155.4	288.1	157.5	101.5
47.5°	47.7	85.0	163.7	82.9	49.7
50°	14.5	37.3	82.9	37.3	14.5
52.5°	6.2	10.4	39.4	10.4	6.2
55°	4.1	4.1	14.5	4.1	4.1
57.5°	4.1	2.1	4.1	4.1	4.1
60°	2.1	2.1	2.1	2.1	2.1
62.5°	2.1	2.1	2.1	2.1	2.1
65°	2.1	2.1	0.0	2.1	2.1
67.5°	2.1	0.0	0.0	0.0	2.1
70°	0.0	0.0	0.0	0.0	2.1
72.5°	0.0	0.0	0.0	0.0	2.1
75°	0.0	0.0	0.0	0.0	2.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0

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