

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: P838627

Luminaire Tested: HCSQ645D010-HM64560835-61SQMB

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838627
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-HM64560835-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

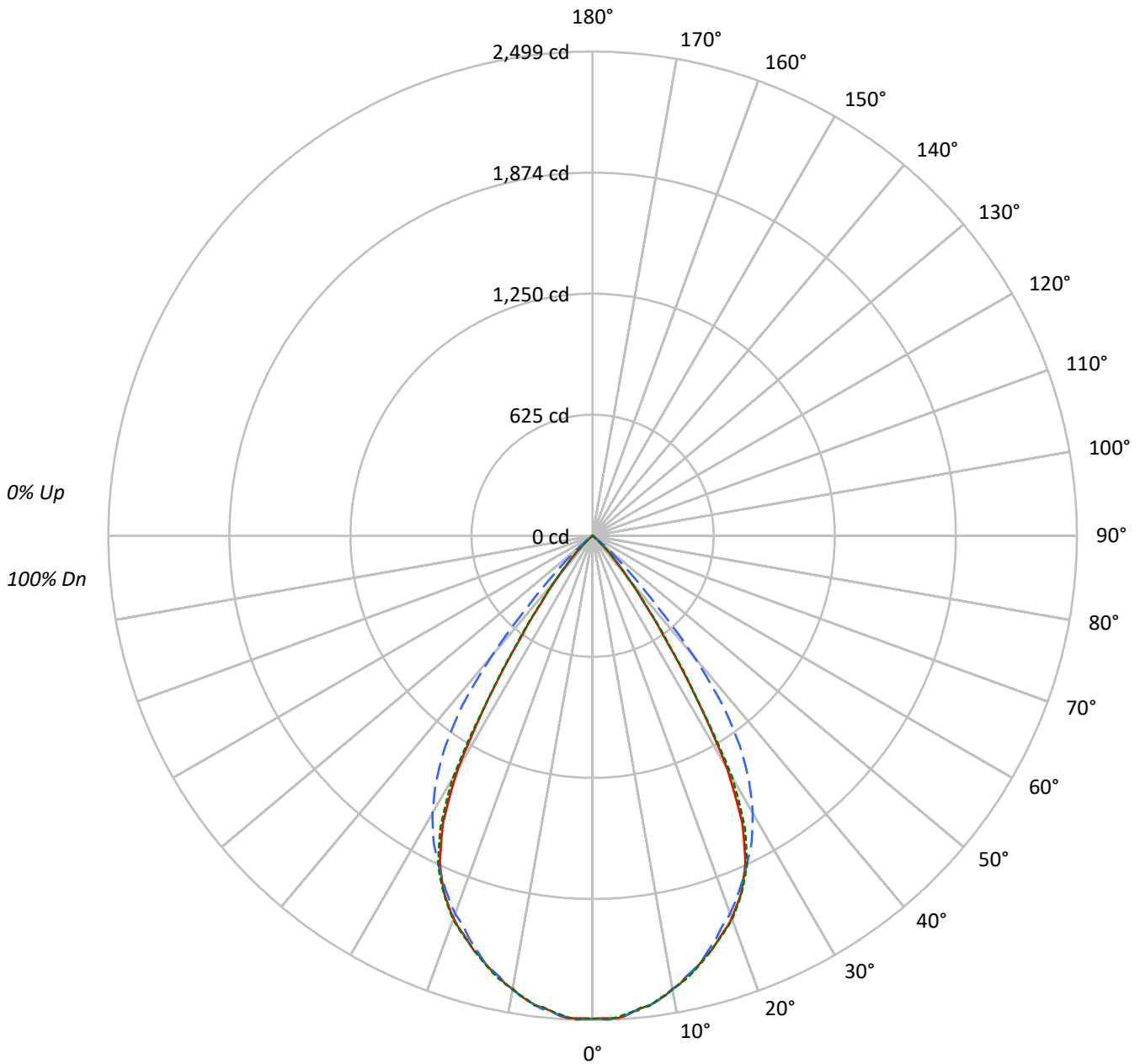
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2477.8 lumens
Efficiency: N/A
Efficacy: 54.0 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 (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	106	104	105	103	101	101	99	98	97	96	95	93																			
2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87																			
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81																			
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75																			
5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70																			
6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65																			
7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60																			
8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56																			
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53																			
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	107321	107321	107321
5°	106417	106507	106417
10°	103756	103931	103931
15°	100186	99914	100458
20°	96210	95097	96490
25°	88595	89270	89460
30°	69061	82146	71676
35°	35016	69607	36294
40°	15934	45521	15934
45°	6162	17141	6040
50°	951	5426	951
55°	300	1066	300
60°	172	172	172
65°	204	0	204
70°	0	0	252
75°	0	0	333
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 17141 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.7	9.4
10°-20°	631.2	25.5
20°-30°	850.9	34.3
30°-40°	598.2	24.1
40°-50°	152.8	6.2
50°-60°	10.5	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°	1714.8	69.2
0°-40°	2313.1	93.4
0°-60°	2476.3	99.9
0°-90°	2477.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2477.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2493	2493	2493	2493	2493	
5°	2462	2466	2464	2466	2462	233
15°	2248	2244	2242	2248	2254	633
25°	1865	1871	1879	1885	1883	833
35°	666	883	1324	905	690	448
45°	101	152	282	154	99	88
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°	2492.6	2492.6	2492.6	2492.6	2492.6
1°	2490.6	2492.6	2494.6	2494.6	2492.6
2°	2492.6	2486.5	2498.7	2492.6	2494.6
3°	2492.6	2480.5	2486.5	2490.6	2488.6
4°	2482.5	2474.4	2480.5	2478.4	2474.4
5°	2462.2	2466.3	2464.3	2466.3	2462.2
6°	2450.1	2454.1	2458.2	2452.1	2446.0
7°	2440.0	2437.9	2440.0	2444.0	2444.0
8°	2421.7	2425.8	2421.7	2423.8	2417.7
9°	2401.5	2401.5	2401.5	2405.5	2399.5
10°	2373.2	2383.3	2377.2	2381.3	2377.2
11°	2359.0	2354.9	2354.9	2357.0	2354.9
12°	2324.6	2328.6	2326.6	2330.6	2336.7
13°	2306.3	2308.4	2300.3	2310.4	2310.4
14°	2278.0	2276.0	2280.0	2278.0	2282.0
15°	2247.6	2243.6	2241.5	2247.6	2253.7
16°	2225.3	2215.2	2209.1	2217.2	2225.3
17°	2192.9	2182.8	2174.7	2190.9	2192.9
18°	2160.5	2156.5	2136.2	2156.5	2166.6
19°	2134.2	2120.0	2101.8	2124.1	2136.2
20°	2099.8	2087.6	2075.5	2087.6	2105.9
22.5°	2000.6	1990.5	1980.3	1994.5	2004.6
25°	1864.9	1871.0	1879.1	1885.2	1883.1
27.5°	1672.5	1727.2	1777.8	1745.4	1702.9
30°	1389.1	1526.8	1652.3	1549.0	1441.7
32.5°	1006.4	1241.2	1502.5	1287.8	1016.5
35°	666.2	882.8	1324.3	905.1	690.5
37.5°	433.3	593.3	1105.6	595.3	453.6
40°	283.5	386.8	809.9	394.9	283.5
42.5°	174.1	245.0	492.0	255.1	174.1
45°	101.2	151.9	281.5	153.9	99.2
47.5°	46.6	83.0	160.0	81.0	48.6
50°	14.2	36.4	81.0	36.4	14.2
52.5°	6.1	10.1	38.5	10.1	6.1
55°	4.0	4.0	14.2	4.0	4.0
57.5°	4.0	2.0	4.0	4.0	4.0
60°	2.0	2.0	2.0	2.0	2.0
62.5°	2.0	2.0	2.0	2.0	2.0
65°	2.0	2.0	0.0	2.0	2.0
67.5°	2.0	0.0	0.0	0.0	2.0
70°	0.0	0.0	0.0	0.0	2.0
72.5°	0.0	0.0	0.0	0.0	2.0
75°	0.0	0.0	0.0	0.0	2.0



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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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