

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: P837651

Luminaire Tested: HCSQ455D010-HM44560840-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837651
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ455D010-HM44560840-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

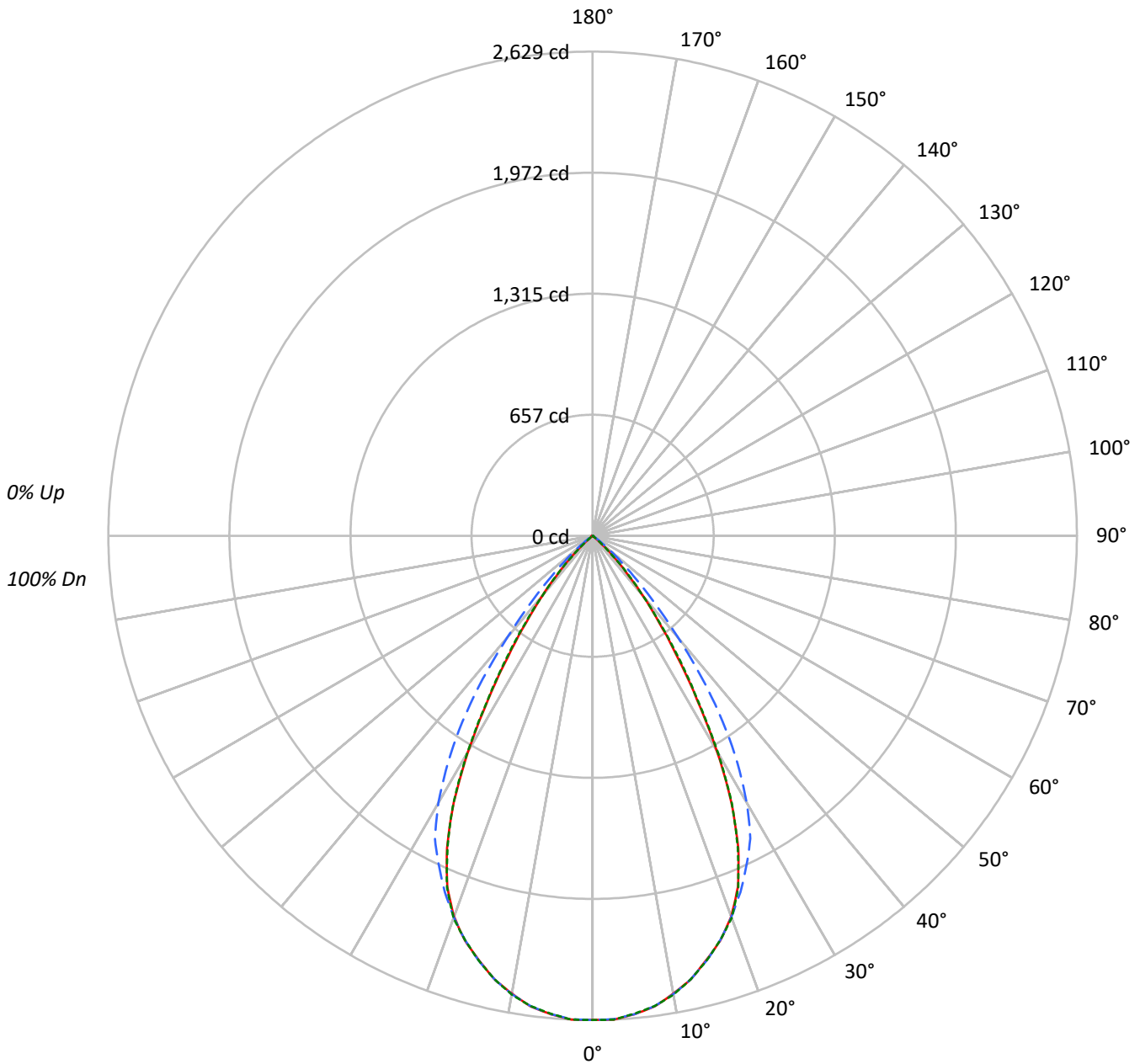
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2626.3 lumens
Efficiency: N/A
Efficacy: 48.6 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.96 / 0.99
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 54
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					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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93					93			
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87					87			
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80					80			
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74					74			
5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69					69			
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64					64			
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60					60			
8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56					56			
9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52					52			
10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49					49			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	254715	254715	254715
5°	253548	253548	253315
10°	248325	248561	248807
15°	239239	239479	239479
20°	226804	227051	227556
25°	199960	211172	199179
30°	150880	187168	152244
35°	94610	145665	97780
40°	53367	90686	53367
45°	22386	45773	22057
50°	1839	17648	2200
55°	828	3716	828
60°	949	465	949
65°	550	550	550
70°	680	680	680
75°	898	898	898
80°	0	1339	1339
85°	0	2668	2668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 45773 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	246.4	9.4
10°-20°	670.4	25.5
20°-30°	869.7	33.1
30°-40°	618.3	23.5
40°-50°	200.5	7.6
50°-60°	14.5	0.6
60°-70°	2.5	0.1
70°-80°	2.5	0.1
80°-90°	1.7	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°	1786.4	68.0
0°-40°	2404.7	91.6
0°-60°	2619.7	99.7
0°-90°	2626.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2626.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2629	2629	2629	2629	2629	
5°	2607	2610	2607	2607	2605	246
15°	2385	2393	2388	2393	2388	670
25°	1871	1920	1976	1929	1863	838
35°	800	946	1232	956	827	512
45°	163	232	334	237	161	136
55°	5	5	22	5	5	6
65°	2	2	2	2	2	3
75°	2	2	2	2	2	2
85°	0	0	2	2	2	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2629.3	2629.3	2629.3	2629.3	2629.3
2.5°	2629.3	2629.3	2626.8	2626.8	2629.3
5°	2607.3	2609.7	2607.3	2607.3	2604.9
7.5°	2578.0	2578.0	2575.6	2575.6	2575.6
10°	2524.4	2526.8	2526.8	2526.8	2529.3
12.5°	2465.8	2465.8	2465.8	2465.8	2465.8
15°	2385.4	2392.7	2387.8	2392.7	2387.8
17.5°	2304.9	2304.9	2302.4	2307.3	2302.4
20°	2200.0	2200.0	2202.4	2207.3	2207.3
22.5°	2061.0	2085.4	2095.1	2090.2	2065.8
25°	1870.7	1919.5	1975.6	1929.3	1863.4
27.5°	1631.7	1724.4	1853.7	1739.0	1636.6
30°	1348.8	1487.8	1673.2	1492.7	1361.0
32.5°	1056.1	1217.1	1463.4	1229.3	1065.9
35°	800.0	946.3	1231.7	956.1	826.8
37.5°	590.2	724.4	978.0	729.3	607.3
40°	422.0	519.5	717.1	529.3	422.0
42.5°	270.7	368.3	504.9	370.7	282.9
45°	163.4	231.7	334.1	236.6	161.0
47.5°	73.2	131.7	207.3	136.6	73.2
50°	12.2	53.7	117.1	56.1	14.6
52.5°	7.3	9.8	56.1	9.8	7.3
55°	4.9	4.9	22.0	4.9	4.9
57.5°	4.9	4.9	4.9	4.9	4.9
60°	4.9	2.4	2.4	2.4	4.9
62.5°	2.4	2.4	2.4	2.4	2.4
65°	2.4	2.4	2.4	2.4	2.4
67.5°	2.4	2.4	2.4	2.4	2.4
70°	2.4	2.4	2.4	2.4	2.4
72.5°	2.4	2.4	2.4	2.4	2.4
75°	2.4	2.4	2.4	2.4	2.4
77.5°	2.4	2.4	2.4	2.4	2.4
80°	0.0	2.4	2.4	2.4	2.4
82.5°	0.0	2.4	2.4	2.4	2.4
85°	0.0	0.0	2.4	2.4	2.4
87.5°	0.0	0.0	2.4	2.4	2.4
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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