

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: P837473

Luminaire Tested: HCSQ435D010-HM43040827-41SQC

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837473
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ435D010-HM43040827-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

Summary

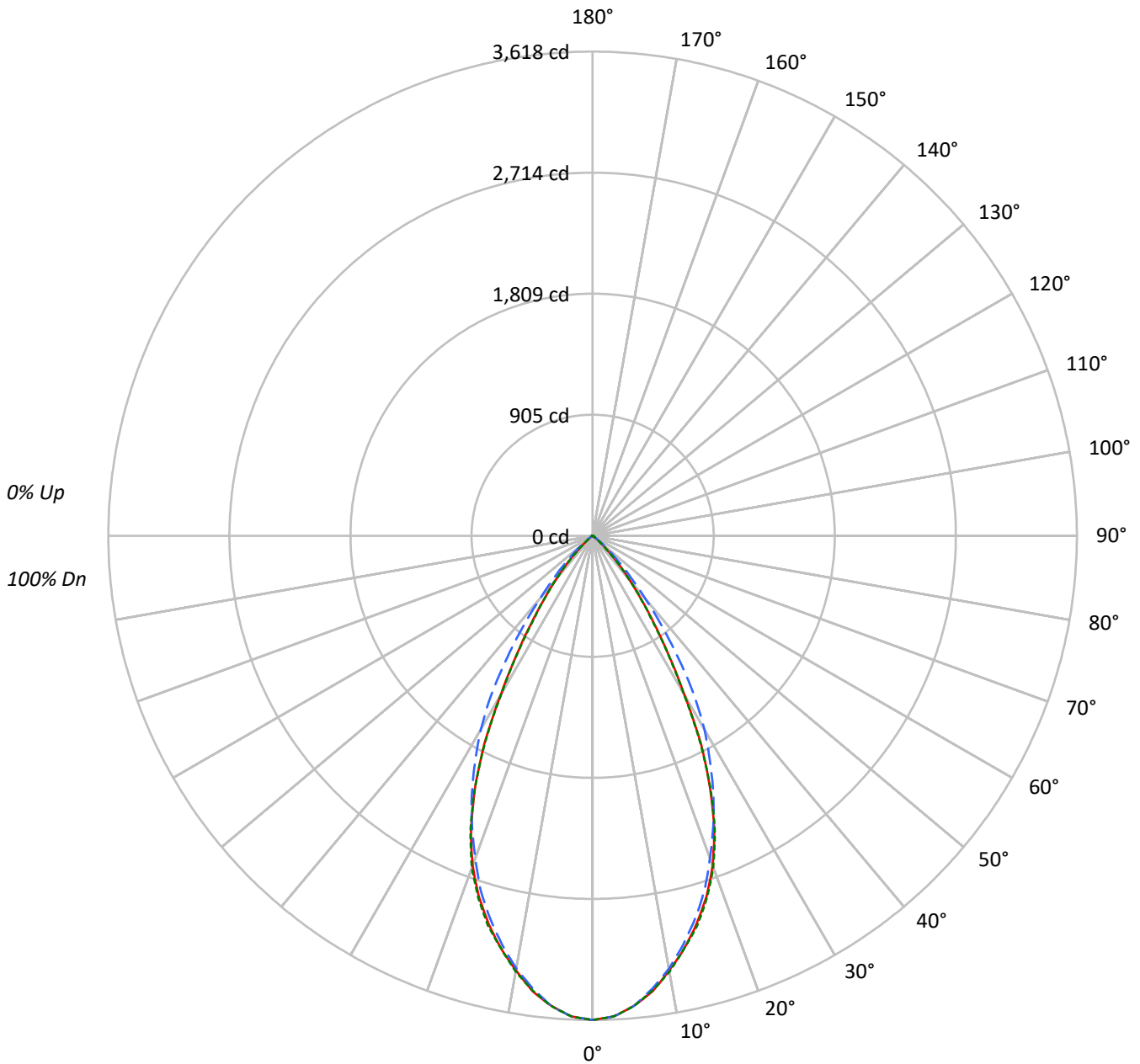
Lumens per Lamp: N/A
Luminaire Lumens: 2923.7 lumens
Efficiency: N/A
Efficacy: 86.0 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 34
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	106	104	105	103	101	101	99	98	97	96	95	94																			
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81																			
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76																			
5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71																			
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66																			
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62																			
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58																			
9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55																			
10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	350495	350495	350495
5°	342975	343121	343121
10°	324414	322968	325280
15°	301009	296887	302624
20°	270206	264144	271866
25°	221925	228360	222716
30°	153408	186586	152256
35°	94469	131804	92210
40°	53291	77066	52924
45°	24345	38621	23332
50°	6194	15493	6420
55°	2973	4712	2736
60°	1996	1705	2267
65°	1673	1352	1673
70°	1246	1246	1671
75°	1085	1085	1647
80°	1618	1618	1618
85°	1667	3223	3223

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 38621 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	329.1	11.3
10°-20°	831.2	28.4
20°-30°	950.2	32.5
30°-40°	589.8	20.2
40°-50°	185.9	6.4
50°-60°	24.1	0.8
60°-70°	7.1	0.2
70°-80°	3.8	0.1
80°-90°	2.5	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°	2110.5	72.2
0°-40°	2700.3	92.4
0°-60°	2910.2	99.5
0°-90°	2923.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2923.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3618	3618	3618	3618	3618	
5°	3527	3524	3528	3526	3528	330
15°	3001	2979	2960	2979	3017	837
25°	2076	2106	2136	2106	2084	931
35°	799	922	1114	900	780	513
45°	178	213	282	214	170	150
55°	18	18	28	18	16	17
65°	7	7	6	7	7	7
75°	3	3	3	3	4	4
85°	2	3	3	3	3	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3618.0	3618.0	3618.0	3618.0	3618.0
2.5°	3595.9	3598.9	3595.9	3601.8	3595.9
5°	3526.9	3524.0	3528.4	3525.5	3528.4
7.5°	3433.0	3415.3	3413.9	3425.6	3427.1
10°	3297.9	3293.5	3283.2	3293.5	3306.7
12.5°	3159.9	3142.2	3127.5	3148.1	3159.9
15°	3001.3	2979.2	2960.2	2979.2	3017.4
17.5°	2826.5	2795.7	2779.6	2801.6	2838.3
20°	2621.0	2588.7	2562.2	2581.3	2637.1
22.5°	2374.3	2371.4	2353.7	2364.0	2384.6
25°	2076.2	2105.6	2136.4	2105.6	2083.6
27.5°	1748.8	1828.1	1898.6	1806.0	1735.6
30°	1371.4	1491.8	1668.0	1483.0	1361.1
32.5°	1060.1	1186.4	1411.1	1170.3	1051.3
35°	798.8	922.1	1114.5	900.1	779.7
37.5°	587.3	679.8	847.2	674.0	587.3
40°	421.4	481.6	609.4	480.1	418.5
42.5°	292.2	331.8	425.8	328.9	283.4
45°	177.7	212.9	281.9	214.4	170.3
47.5°	94.0	135.1	177.7	129.2	94.0
50°	41.1	71.9	102.8	70.5	42.6
52.5°	22.0	30.8	55.8	30.8	22.0
55°	17.6	17.6	27.9	17.6	16.2
57.5°	13.2	13.2	14.7	13.2	13.2
60°	10.3	10.3	8.8	10.3	11.7
62.5°	8.8	8.8	7.3	8.8	8.8
65°	7.3	7.3	5.9	7.3	7.3
67.5°	5.9	5.9	5.9	5.9	5.9
70°	4.4	4.4	4.4	5.9	5.9
72.5°	4.4	4.4	4.4	4.4	4.4
75°	2.9	2.9	2.9	2.9	4.4
77.5°	2.9	2.9	2.9	2.9	2.9
80°	2.9	2.9	2.9	2.9	2.9
82.5°	1.5	2.9	2.9	2.9	2.9
85°	1.5	2.9	2.9	2.9	2.9
87.5°	1.5	1.5	2.9	2.9	2.9
90°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report





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

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