

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: P837699

Luminaire Tested: HCSQ460D010-HM44560930-41SQH

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837699
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ460D010-HM44560930-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

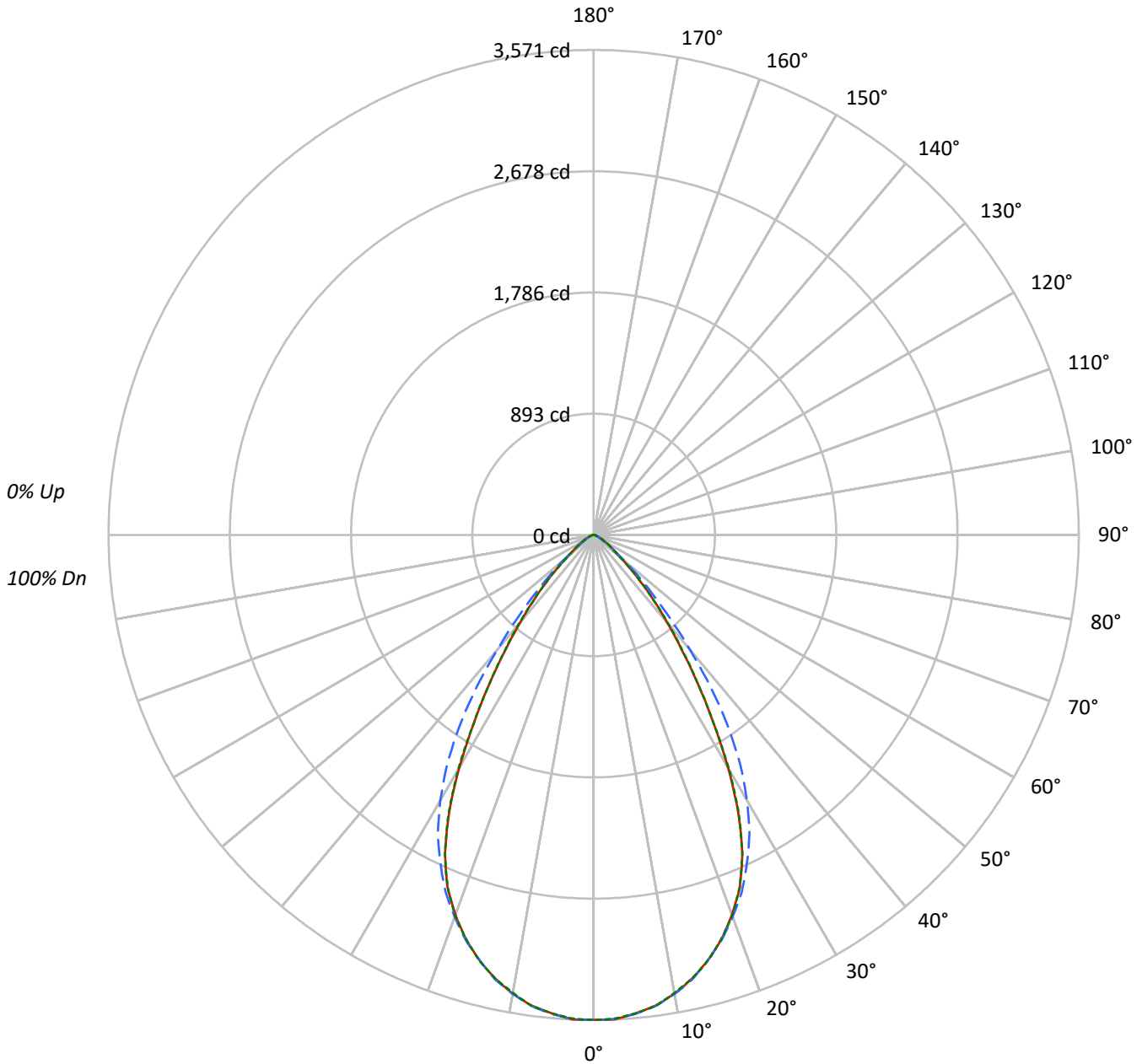
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4014.5 lumens
Efficiency: N/A
Efficacy: 71.7 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 56
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			100																
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92			92																
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85			85																
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77			77																
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71			71																
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65			65																
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60			60																
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56			56																
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52			52																
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48			48																
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45			45																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	345971	345971	345971
5°	343860	344288	343860
10°	337419	337635	336769
15°	325430	325210	325651
20°	306773	308371	307453
25°	276814	285301	276814
30°	221095	252428	222818
35°	157822	204264	158094
40°	106557	138918	108239
45°	67693	82202	67994
50°	38567	43887	37241
55°	25335	21230	24963
60°	17515	12400	17089
65°	12126	9100	12126
70°	8752	6883	8752
75°	5764	5764	5764
80°	3682	4909	4909
85°	4891	4891	4891

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 82202 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	334.6	8.3
10°-20°	909.7	22.7
20°-30°	1191.1	29.7
30°-40°	936.2	23.3
40°-50°	437.3	10.9
50°-60°	135.5	3.4
60°-70°	48.4	1.2
70°-80°	17.0	0.4
80°-90°	4.7	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°	2435.4	60.7
0°-40°	3371.6	84.0
0°-60°	3944.4	98.3
0°-90°	4014.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4014.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3571	3571	3571	3571	3571	
5°	3536	3538	3540	3545	3536	334
15°	3245	3245	3243	3245	3247	909
25°	2590	2625	2669	2627	2590	1165
35°	1334	1456	1727	1474	1337	841
45°	494	554	600	543	496	394
55°	150	141	126	139	148	140
65°	53	48	40	46	53	55
75°	15	15	15	15	15	18
85°	4	4	4	4	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3571.3	3571.3	3571.3	3571.3	3571.3
2.5°	3571.3	3566.9	3569.1	3564.7	3564.7
5°	3536.0	3538.2	3540.4	3544.8	3536.0
7.5°	3496.3	3500.7	3498.5	3498.5	3498.5
10°	3430.1	3432.3	3432.3	3432.3	3423.5
12.5°	3346.3	3350.7	3352.9	3346.3	3346.3
15°	3244.8	3244.8	3242.6	3244.8	3247.0
17.5°	3123.5	3130.1	3130.1	3123.5	3121.3
20°	2975.7	2986.7	2991.2	2982.3	2982.3
22.5°	2810.3	2821.3	2847.8	2825.7	2808.1
25°	2589.7	2625.0	2669.1	2627.2	2589.7
27.5°	2305.1	2382.3	2483.8	2395.6	2311.7
30°	1976.5	2102.2	2256.6	2108.8	1991.9
32.5°	1641.2	1782.3	2009.5	1793.4	1641.2
35°	1334.5	1455.9	1727.2	1473.5	1336.8
37.5°	1061.0	1177.9	1416.2	1191.2	1076.5
40°	842.6	937.5	1098.5	935.3	855.9
42.5°	657.3	725.7	831.6	723.5	655.1
45°	494.1	553.7	600.0	542.6	496.3
47.5°	364.0	403.7	430.1	397.1	355.1
50°	255.9	284.6	291.2	277.9	247.1
52.5°	191.9	191.9	194.1	189.7	187.5
55°	150.0	141.2	125.7	139.0	147.8
57.5°	116.9	108.1	88.2	103.7	114.7
60°	90.4	81.6	64.0	79.4	88.2
62.5°	70.6	61.8	50.7	61.8	68.4
65°	52.9	48.5	39.7	46.3	52.9
67.5°	39.7	35.3	30.9	35.3	39.7
70°	30.9	28.7	24.3	26.5	30.9
72.5°	22.1	19.9	19.9	19.9	22.1
75°	15.4	15.4	15.4	15.4	15.4
77.5°	11.0	11.0	11.0	11.0	11.0
80°	6.6	6.6	8.8	8.8	8.8
82.5°	4.4	4.4	6.6	6.6	6.6
85°	4.4	4.4	4.4	4.4	4.4
87.5°	2.2	2.2	2.2	4.4	4.4
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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