

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: P837532

Luminaire Tested: HCSQ440D010-HM43040840-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837532
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ440D010-HM43040840-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

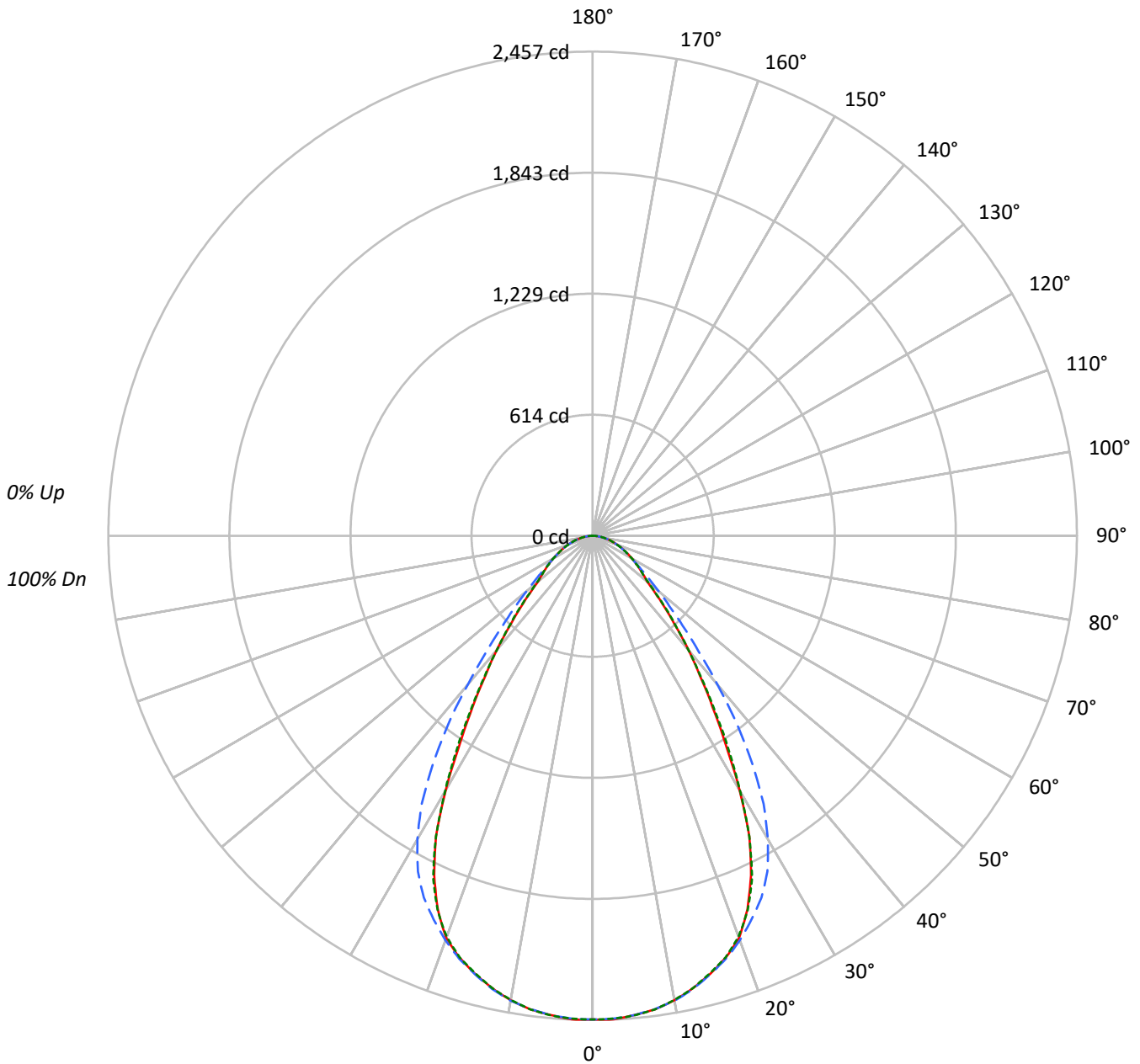
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3562.4 lumens
Efficiency: N/A
Efficacy: 86.9 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.07
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 41
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					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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89								
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71								
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64								
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58								
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53								
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48								
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44								
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41								
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	237800	237800	237800
5°	237415	237415	237600
10°	235468	235655	235281
15°	230894	231085	230503
20°	223969	225144	223175
25°	203262	216517	204695
30°	166842	198846	167491
35°	125418	166916	127216
40°	95517	124464	95276
45°	71337	88326	72639
50°	54331	65831	55477
55°	48963	51547	48963
60°	44718	44350	44350
65°	40665	40665	40665
70°	37813	37275	37275
75°	34997	34286	34997
80°	31911	30851	31911
85°	27566	27566	27566

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 88326 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.5	6.5
10°-20°	648.1	18.2
20°-30°	891.4	25.0
30°-40°	758.8	21.3
40°-50°	458.3	12.9
50°-60°	270.1	7.6
60°-70°	177.2	5.0
70°-80°	98.2	2.8
80°-90°	28.7	0.8
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°	1771.0	49.7
0°-40°	2529.8	71.0
0°-60°	3258.2	91.5
0°-90°	3562.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3562.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2455	2455	2455	2455	2455	
5°	2441	2443	2441	2440	2443	232
15°	2302	2308	2304	2302	2298	648
25°	1902	1961	2026	1965	1915	859
35°	1060	1167	1411	1200	1076	671
45°	521	576	645	582	530	409
55°	290	296	305	296	290	261
65°	177	179	177	177	177	178
75°	94	94	92	92	94	99
85°	25	25	25	25	25	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2454.7	2454.7	2454.7	2454.7	2454.7
2.5°	2456.7	2450.9	2452.8	2450.9	2452.8
5°	2441.4	2443.3	2441.4	2439.5	2443.3
7.5°	2424.2	2422.3	2422.3	2420.4	2424.2
10°	2393.7	2389.9	2395.6	2391.8	2391.8
12.5°	2351.7	2357.5	2355.6	2355.6	2351.7
15°	2302.2	2307.9	2304.1	2302.2	2298.3
17.5°	2244.9	2248.8	2250.7	2243.0	2243.0
20°	2172.5	2180.1	2183.9	2170.6	2164.8
22.5°	2052.3	2086.6	2107.6	2084.7	2056.1
25°	1901.6	1960.7	2025.6	1964.6	1915.0
27.5°	1720.4	1804.3	1920.7	1817.7	1720.4
30°	1491.5	1615.5	1777.6	1628.9	1497.3
32.5°	1255.0	1386.6	1613.6	1409.5	1281.7
35°	1060.5	1167.3	1411.4	1199.7	1075.7
37.5°	892.6	984.2	1199.7	1005.2	902.2
40°	755.3	827.8	984.2	837.3	753.4
42.5°	623.7	692.4	797.3	701.9	631.3
45°	520.7	576.0	644.7	581.7	530.2
47.5°	433.0	478.7	528.3	478.7	438.7
50°	360.5	396.7	436.8	396.7	368.1
52.5°	322.3	333.8	360.5	335.7	322.3
55°	289.9	295.6	305.2	295.6	289.9
57.5°	259.4	263.2	261.3	261.3	259.4
60°	230.8	232.7	228.9	230.8	228.9
62.5°	204.1	204.1	200.3	204.1	202.2
65°	177.4	179.3	177.4	177.4	177.4
67.5°	154.5	154.5	152.6	154.5	154.5
70°	133.5	133.5	131.6	133.5	131.6
72.5°	112.5	112.5	110.6	110.6	110.6
75°	93.5	93.5	91.6	91.6	93.5
77.5°	74.4	74.4	72.5	74.4	74.4
80°	57.2	57.2	55.3	57.2	57.2
82.5°	40.1	40.1	40.1	42.0	42.0
85°	24.8	24.8	24.8	24.8	24.8
87.5°	11.4	11.4	11.4	11.4	13.4
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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