

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: P837497

Luminaire Tested: HCSQ435D010-HM43040927-41SQMW

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837497
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: HCSQ435D010-HM43040927-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

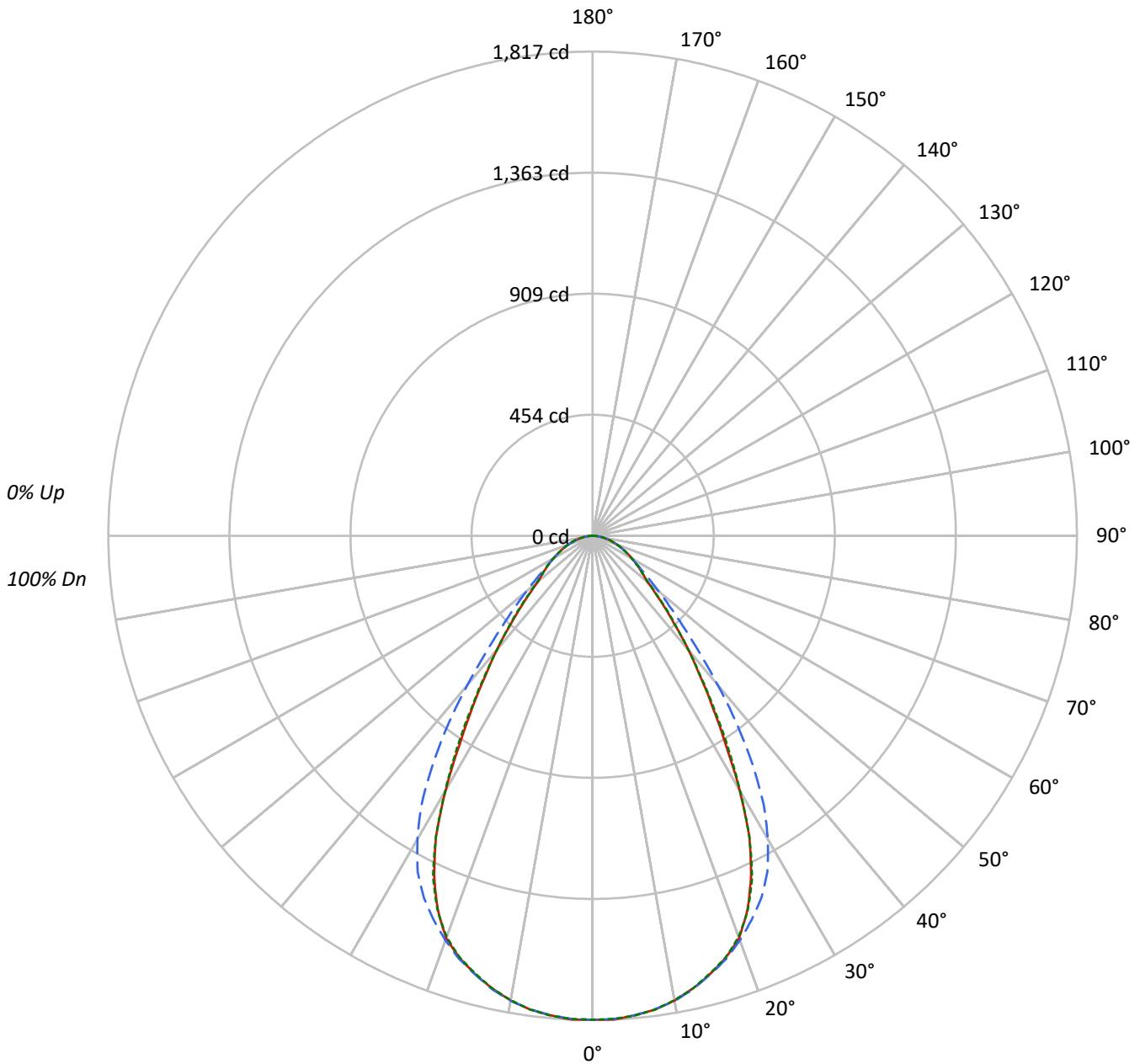
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2635.3 lumens
Efficiency: N/A
Efficacy: 77.5 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): 34
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	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°	175926	175926	175926
5°	175635	175635	175771
10°	174193	174331	174056
15°	170809	170949	170528
20°	165680	166557	165103
25°	150373	160175	151421
30°	123429	147099	123898
35°	92777	123478	94114
40°	70667	92077	70477
45°	52773	65337	53746
50°	40195	48695	41039
55°	36228	38137	36228
60°	33073	32802	32802
65°	30075	30075	30075
70°	27985	27588	27588
75°	25864	25340	25864
80°	23598	22817	23598
85°	20341	20341	20341

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 65337 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.3	6.5
10°-20°	479.4	18.2
20°-30°	659.4	25.0
30°-40°	561.3	21.3
40°-50°	339.1	12.9
50°-60°	199.8	7.6
60°-70°	131.1	5.0
70°-80°	72.6	2.8
80°-90°	21.2	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°	1310.1	49.7
0°-40°	1871.5	71.0
0°-60°	2410.3	91.5
0°-90°	2635.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2635.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1816	1816	1816	1816	1816	
5°	1806	1808	1806	1805	1808	171
15°	1703	1707	1704	1703	1700	479
25°	1407	1450	1498	1453	1417	636
35°	784	864	1044	888	796	497
45°	385	426	477	430	392	303
55°	214	219	226	219	214	193
65°	131	133	131	131	131	131
75°	69	69	68	68	69	73
85°	18	18	18	18	18	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1816.0	1816.0	1816.0	1816.0	1816.0
2.5°	1817.4	1813.1	1814.5	1813.1	1814.5
5°	1806.1	1807.5	1806.1	1804.7	1807.5
7.5°	1793.4	1792.0	1792.0	1790.6	1793.4
10°	1770.8	1768.0	1772.2	1769.4	1769.4
12.5°	1739.8	1744.0	1742.6	1742.6	1739.8
15°	1703.1	1707.3	1704.5	1703.1	1700.3
17.5°	1660.7	1663.6	1665.0	1659.3	1659.3
20°	1607.1	1612.8	1615.6	1605.7	1601.5
22.5°	1518.2	1543.6	1559.2	1542.2	1521.1
25°	1406.8	1450.5	1498.5	1453.3	1416.6
27.5°	1272.7	1334.8	1420.9	1344.7	1272.7
30°	1103.4	1195.1	1315.0	1205.0	1107.6
32.5°	928.4	1025.8	1193.7	1042.7	948.2
35°	784.5	863.5	1044.1	887.5	795.8
37.5°	660.3	728.1	887.5	743.6	667.4
40°	558.8	612.4	728.1	619.4	557.3
42.5°	461.4	512.2	589.8	519.2	467.0
45°	385.2	426.1	476.9	430.4	392.3
47.5°	320.3	354.2	390.8	354.2	324.5
50°	266.7	293.5	323.1	293.5	272.3
52.5°	238.5	246.9	266.7	248.3	238.5
55°	214.5	218.7	225.8	218.7	214.5
57.5°	191.9	194.7	193.3	193.3	191.9
60°	170.7	172.1	169.3	170.7	169.3
62.5°	151.0	151.0	148.2	151.0	149.6
65°	131.2	132.6	131.2	131.2	131.2
67.5°	114.3	114.3	112.9	114.3	114.3
70°	98.8	98.8	97.4	98.8	97.4
72.5°	83.2	83.2	81.8	81.8	81.8
75°	69.1	69.1	67.7	67.7	69.1
77.5°	55.0	55.0	53.6	55.0	55.0
80°	42.3	42.3	40.9	42.3	42.3
82.5°	29.6	29.6	29.6	31.0	31.0
85°	18.3	18.3	18.3	18.3	18.3
87.5°	8.5	8.5	8.5	8.5	9.9
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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