

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: P837527

Luminaire Tested: HCSQ440D010-HM43040835-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837527
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-HM43040835-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

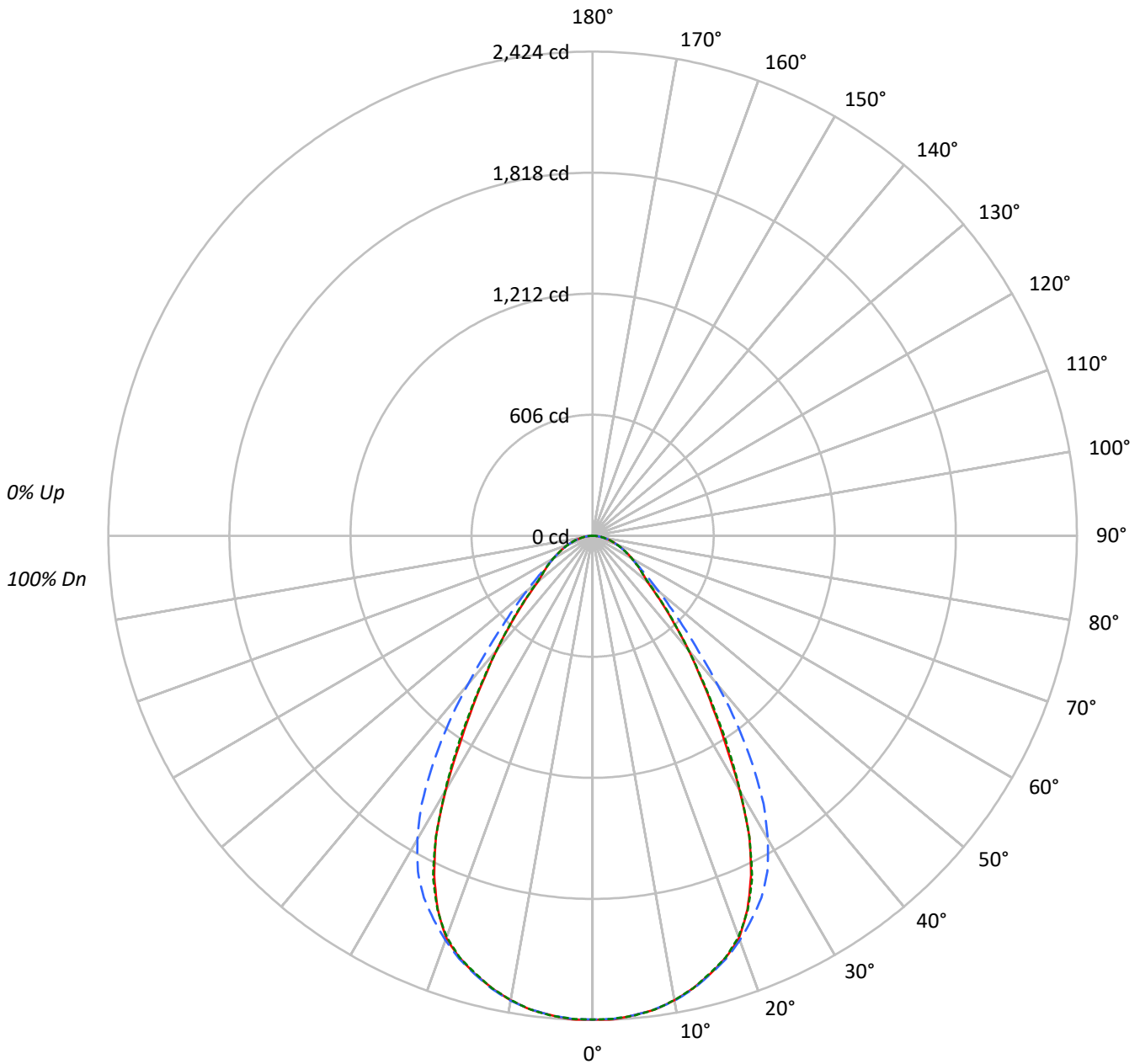
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3514.9 lumens
Efficiency: N/A
Efficacy: 85.7 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°	234642	234642	234642
5°	234255	234255	234439
10°	232330	232517	232153
15°	227815	228006	227434
20°	220979	222144	220206
25°	200558	213631	201969
30°	164627	196206	165254
35°	123750	164693	125524
40°	94252	122807	94012
45°	70392	87147	71680
50°	53608	64957	54738
55°	48321	50855	48321
60°	44117	43749	43749
65°	40115	40115	40115
70°	37303	36794	36794
75°	34510	33799	34510
80°	31520	30460	31520
85°	27232	27232	27232

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 87147 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.4	6.5
10°-20°	639.5	18.2
20°-30°	879.5	25.0
30°-40°	748.7	21.3
40°-50°	452.2	12.9
50°-60°	266.5	7.6
60°-70°	174.8	5.0
70°-80°	96.9	2.8
80°-90°	28.4	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°	1747.4	49.7
0°-40°	2496.1	71.0
0°-60°	3214.8	91.5
0°-90°	3514.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3514.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2422	2422	2422	2422	2422	
5°	2409	2411	2409	2407	2411	229
15°	2272	2277	2273	2272	2268	639
25°	1876	1935	1999	1938	1890	848
35°	1046	1152	1393	1184	1061	662
45°	514	568	636	574	523	404
55°	286	292	301	292	286	257
65°	175	177	175	175	175	175
75°	92	92	90	90	92	98
85°	24	24	24	24	24	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2422.1	2422.1	2422.1	2422.1	2422.1
2.5°	2423.9	2418.3	2420.2	2418.3	2420.2
5°	2408.9	2410.8	2408.9	2407.0	2410.8
7.5°	2392.0	2390.1	2390.1	2388.2	2392.0
10°	2361.8	2358.1	2363.7	2360.0	2360.0
12.5°	2320.4	2326.1	2324.2	2324.2	2320.4
15°	2271.5	2277.2	2273.4	2271.5	2267.7
17.5°	2215.1	2218.8	2220.7	2213.2	2213.2
20°	2143.5	2151.1	2154.8	2141.7	2136.0
22.5°	2025.0	2058.9	2079.6	2057.0	2028.7
25°	1876.3	1934.6	1998.6	1938.4	1889.5
27.5°	1697.5	1780.3	1895.1	1793.5	1697.5
30°	1471.7	1594.0	1754.0	1607.2	1477.3
32.5°	1238.3	1368.2	1592.1	1390.8	1264.7
35°	1046.4	1151.8	1392.6	1183.7	1061.4
37.5°	880.8	971.1	1183.7	991.8	890.2
40°	745.3	816.8	971.1	826.2	743.4
42.5°	615.4	683.1	786.7	692.6	622.9
45°	513.8	568.3	636.1	574.0	523.2
47.5°	427.2	472.4	521.3	472.4	432.8
50°	355.7	391.4	431.0	391.4	363.2
52.5°	318.0	329.3	355.7	331.2	318.0
55°	286.1	291.7	301.1	291.7	286.1
57.5°	255.9	259.7	257.8	257.8	255.9
60°	227.7	229.6	225.8	227.7	225.8
62.5°	201.4	201.4	197.6	201.4	199.5
65°	175.0	176.9	175.0	175.0	175.0
67.5°	152.4	152.4	150.6	152.4	152.4
70°	131.7	131.7	129.9	131.7	129.9
72.5°	111.0	111.0	109.2	109.2	109.2
75°	92.2	92.2	90.3	90.3	92.2
77.5°	73.4	73.4	71.5	73.4	73.4
80°	56.5	56.5	54.6	56.5	56.5
82.5°	39.5	39.5	39.5	41.4	41.4
85°	24.5	24.5	24.5	24.5	24.5
87.5°	11.3	11.3	11.3	11.3	13.2
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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