

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: P837378

Luminaire Tested: HCSQ420D010-HM40525930-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837378
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: HCSQ420D010-HM40525930-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

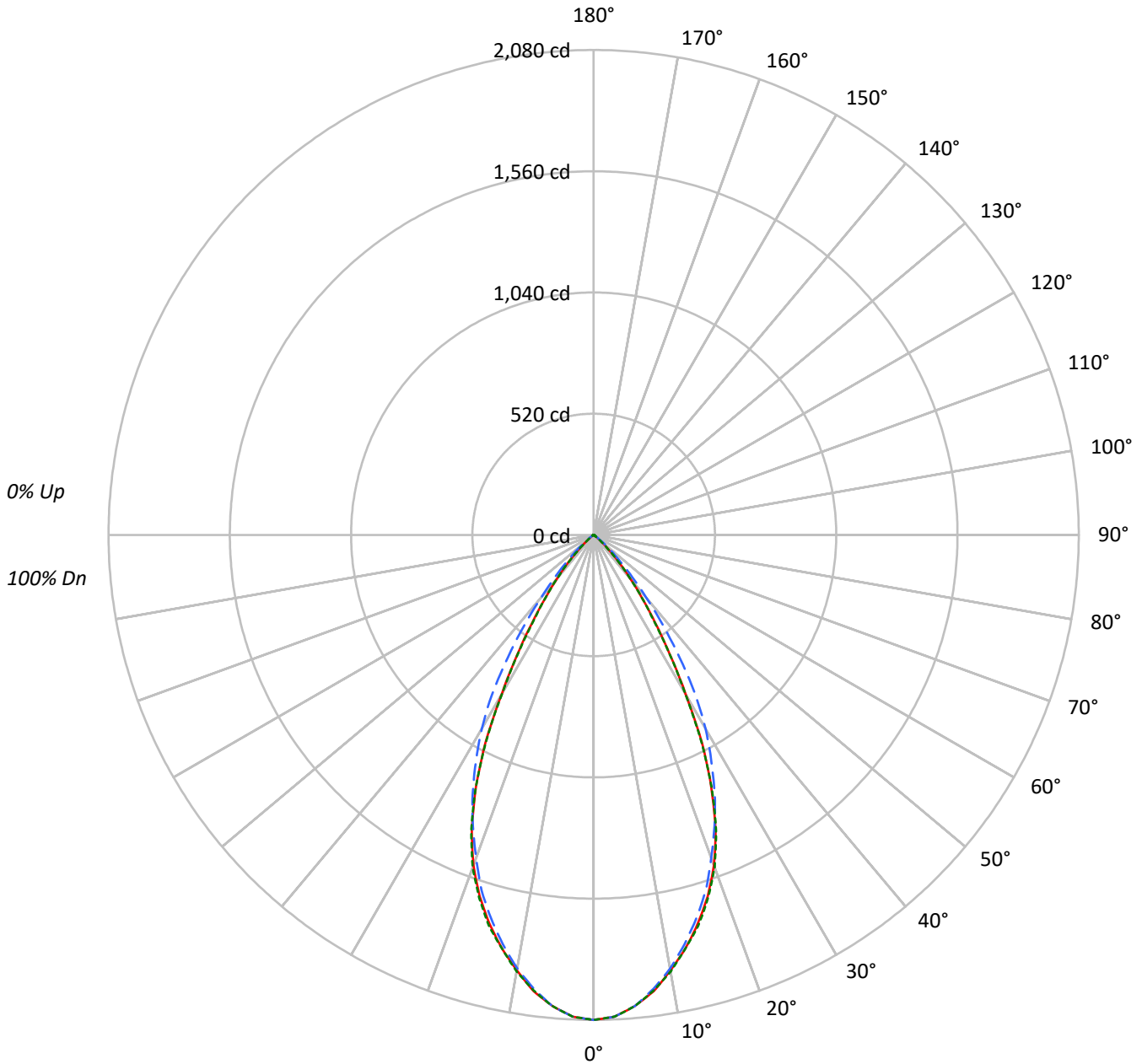
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1681.2 lumens
Efficiency: N/A
Efficacy: 84.1 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): 20
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									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°	201540	201540	201540
5°	197214	197301	197301
10°	186539	185713	187041
15°	173085	170708	174018
20°	155371	151886	156330
25°	127616	131315	128065
30°	88214	107287	87554
35°	54318	75783	53017
40°	30642	44312	30427
45°	14002	22208	13413
50°	3557	8907	3692
55°	1706	2702	1571
60°	1143	988	1318
65°	963	779	963
70°	708	708	963
75°	636	636	936
80°	948	948	948
85°	889	1890	1890

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 22208 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.2	11.3
10°-20°	477.9	28.4
20°-30°	546.4	32.5
30°-40°	339.2	20.2
40°-50°	106.9	6.4
50°-60°	13.8	0.8
60°-70°	4.1	0.2
70°-80°	2.2	0.1
80°-90°	1.5	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°	1213.6	72.2
0°-40°	1552.7	92.4
0°-60°	1673.4	99.5
0°-90°	1681.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1681.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2080	2080	2080	2080	2080	
5°	2028	2026	2029	2027	2029	190
15°	1726	1713	1702	1713	1735	481
25°	1194	1211	1228	1211	1198	536
35°	459	530	641	518	448	295
45°	102	122	162	123	98	86
55°	10	10	16	10	9	10
65°	4	4	3	4	4	4
75°	2	2	2	2	2	2
85°	1	2	2	2	2	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2080.4	2080.4	2080.4	2080.4	2080.4
2.5°	2067.7	2069.4	2067.7	2071.1	2067.7
5°	2028.0	2026.4	2028.9	2027.2	2028.9
7.5°	1974.0	1963.9	1963.0	1969.8	1970.6
10°	1896.3	1893.8	1887.9	1893.8	1901.4
12.5°	1817.0	1806.8	1798.4	1810.2	1817.0
15°	1725.8	1713.1	1702.1	1713.1	1735.1
17.5°	1625.3	1607.6	1598.3	1611.0	1632.1
20°	1507.1	1488.5	1473.3	1484.3	1516.4
22.5°	1365.3	1363.6	1353.4	1359.4	1371.2
25°	1193.9	1210.8	1228.5	1210.8	1198.1
27.5°	1005.6	1051.2	1091.7	1038.5	998.0
30°	788.6	857.8	959.1	852.8	782.7
32.5°	609.6	682.2	811.4	672.9	604.5
35°	459.3	530.2	640.8	517.6	448.3
37.5°	337.7	390.9	487.2	387.5	337.7
40°	242.3	276.9	350.4	276.1	240.6
42.5°	168.0	190.8	244.9	189.1	163.0
45°	102.2	122.4	162.1	123.3	97.9
47.5°	54.0	77.7	102.2	74.3	54.0
50°	23.6	41.4	59.1	40.5	24.5
52.5°	12.7	17.7	32.1	17.7	12.7
55°	10.1	10.1	16.0	10.1	9.3
57.5°	7.6	7.6	8.4	7.6	7.6
60°	5.9	5.9	5.1	5.9	6.8
62.5°	5.1	5.1	4.2	5.1	5.1
65°	4.2	4.2	3.4	4.2	4.2
67.5°	3.4	3.4	3.4	3.4	3.4
70°	2.5	2.5	2.5	3.4	3.4
72.5°	2.5	2.5	2.5	2.5	2.5
75°	1.7	1.7	1.7	1.7	2.5
77.5°	1.7	1.7	1.7	1.7	1.7
80°	1.7	1.7	1.7	1.7	1.7
82.5°	0.8	1.7	1.7	1.7	1.7
85°	0.8	1.7	1.7	1.7	1.7
87.5°	0.8	0.8	1.7	1.7	1.7
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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