

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: P837383

Luminaire Tested: HCSQ420D010-HM40525935-41SQC

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837383
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-HM40525935-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

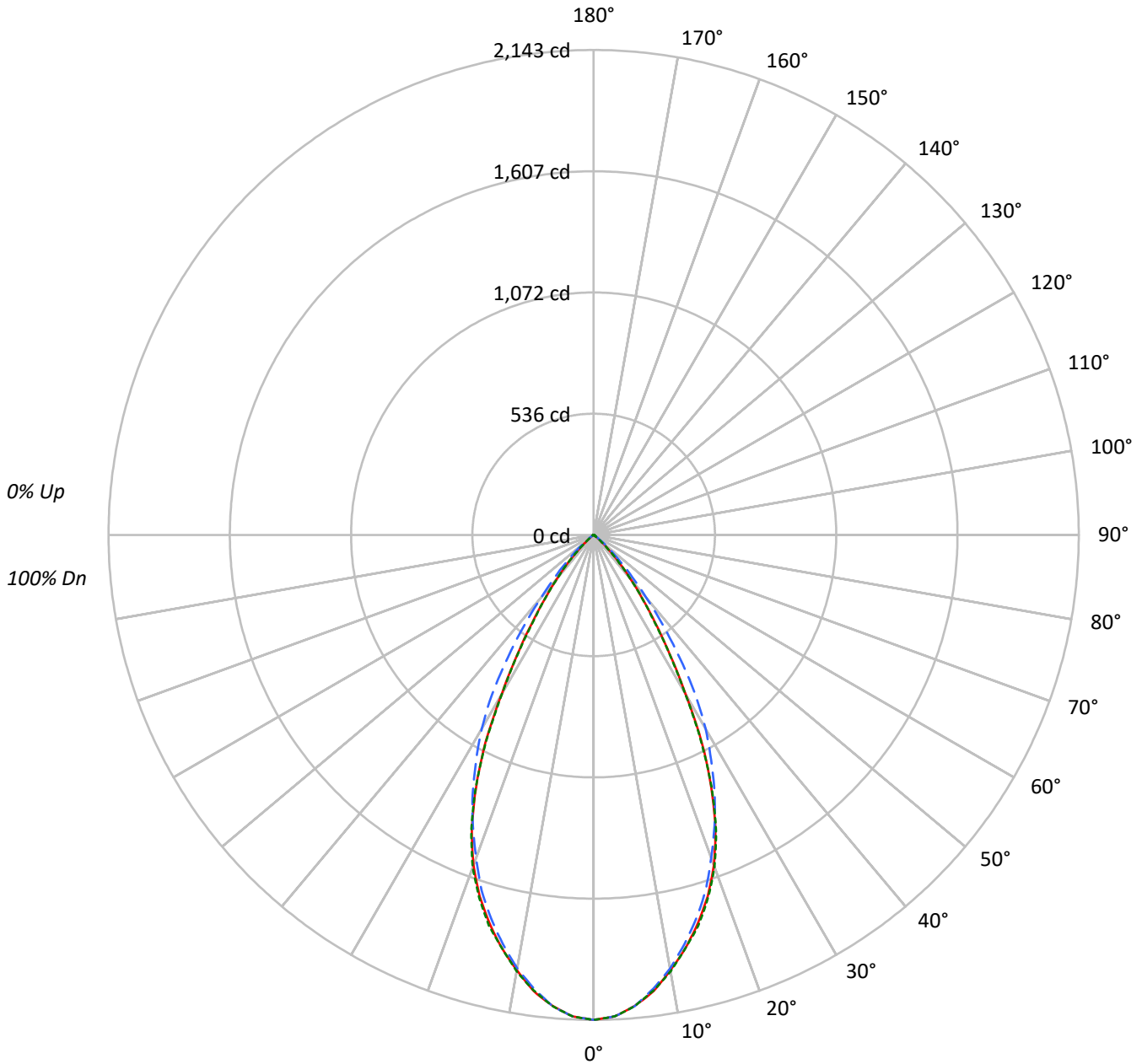
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1731.5 lumens
Efficiency: N/A
Efficacy: 86.6 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	72	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°	207585	207585	207585
5°	203136	203214	203214
10°	192136	191280	192648
15°	178270	175833	179233
20°	160031	156443	161020
25°	131443	135248	131903
30°	90854	110509	90172
35°	55950	78065	54614
40°	31565	45640	31337
45°	14413	22879	13824
50°	3662	9178	3798
55°	1757	2787	1621
60°	1182	1008	1356
65°	986	802	986
70°	736	736	991
75°	636	636	973
80°	948	948	948
85°	1000	1890	1890

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 22879 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.9	11.3
10°-20°	492.3	28.4
20°-30°	562.8	32.5
30°-40°	349.3	20.2
40°-50°	110.1	6.4
50°-60°	14.2	0.8
60°-70°	4.2	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°	1250.0	72.2
0°-40°	1599.3	92.4
0°-60°	1723.6	99.5
0°-90°	1731.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1731.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2143	2143	2143	2143	2143	
5°	2089	2087	2090	2088	2090	195
15°	1778	1764	1753	1764	1787	496
25°	1230	1247	1265	1247	1234	552
35°	473	546	660	533	462	304
45°	105	126	167	127	101	89
55°	10	10	16	10	10	10
65°	4	4	4	4	4	4
75°	2	2	2	2	3	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°	2142.8	2142.8	2142.8	2142.8	2142.8
2.5°	2129.7	2131.5	2129.7	2133.2	2129.7
5°	2088.9	2087.1	2089.7	2088.0	2089.7
7.5°	2033.2	2022.8	2021.9	2028.9	2029.7
10°	1953.2	1950.6	1944.5	1950.6	1958.4
12.5°	1871.4	1861.0	1852.3	1864.5	1871.4
15°	1777.5	1764.5	1753.2	1764.5	1787.1
17.5°	1674.0	1655.8	1646.2	1659.3	1681.0
20°	1552.3	1533.2	1517.5	1528.8	1561.9
22.5°	1406.2	1404.5	1394.0	1400.1	1412.3
25°	1229.7	1247.1	1265.3	1247.1	1234.0
27.5°	1035.7	1082.7	1124.4	1069.6	1027.9
30°	812.2	883.5	987.9	878.3	806.1
32.5°	627.9	702.7	835.7	693.1	622.7
35°	473.1	546.1	660.1	533.1	461.8
37.5°	347.9	402.6	501.8	399.2	347.9
40°	249.6	285.2	360.9	284.4	247.8
42.5°	173.1	196.5	252.2	194.8	167.8
45°	105.2	126.1	167.0	127.0	100.9
47.5°	55.7	80.0	105.2	76.5	55.7
50°	24.3	42.6	60.9	41.7	25.2
52.5°	13.0	18.3	33.0	18.3	13.0
55°	10.4	10.4	16.5	10.4	9.6
57.5°	7.8	7.8	8.7	7.8	7.8
60°	6.1	6.1	5.2	6.1	7.0
62.5°	5.2	5.2	4.3	5.2	5.2
65°	4.3	4.3	3.5	4.3	4.3
67.5°	3.5	3.5	3.5	3.5	3.5
70°	2.6	2.6	2.6	3.5	3.5
72.5°	2.6	2.6	2.6	2.6	2.6
75°	1.7	1.7	1.7	1.7	2.6
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°	0.9	1.7	1.7	1.7	1.7
85°	0.9	1.7	1.7	1.7	1.7
87.5°	0.9	0.9	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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