

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: P837388

Luminaire Tested: HCSQ420D010-HM40525940-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837388
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-HM40525940-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

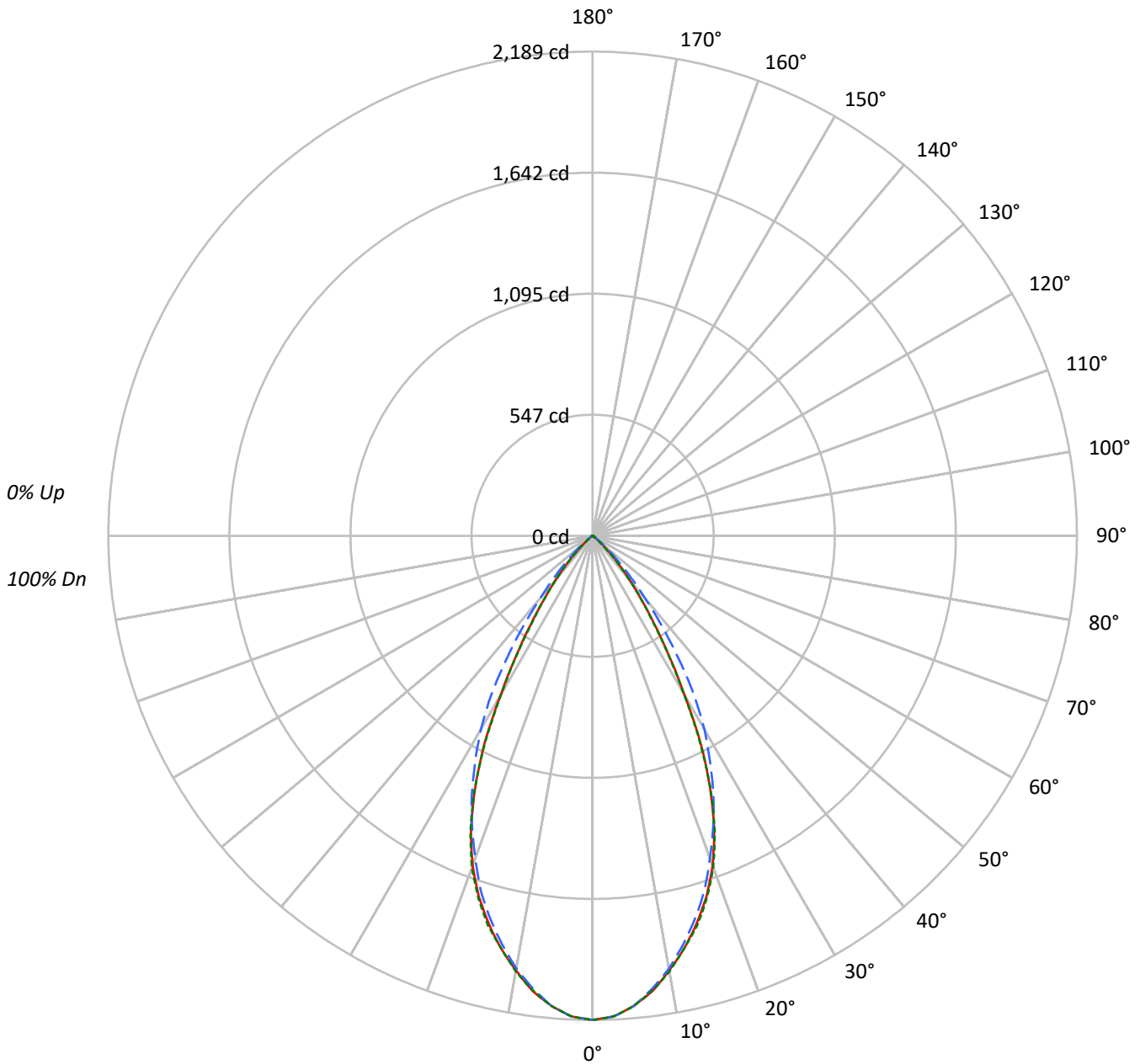
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1768.7 lumens
Efficiency: N/A
Efficacy: 88.4 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				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	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°	212022	212022	212022
5°	207483	207570	207570
10°	196248	195372	196769
15°	182092	179594	183064
20°	163453	159794	164464
25°	134254	138145	134724
30°	92801	112869	92107
35°	57145	79733	55785
40°	32235	46614	32008
45°	14728	23359	14111
50°	3753	9374	3888
55°	1807	2854	1655
60°	1201	1027	1376
65°	1009	825	1009
70°	765	765	1020
75°	674	674	1011
80°	1004	1004	1004
85°	1000	2001	2001

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 23359 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.1	11.3
10°-20°	502.8	28.4
20°-30°	574.8	32.5
30°-40°	356.8	20.2
40°-50°	112.4	6.4
50°-60°	14.6	0.8
60°-70°	4.3	0.2
70°-80°	2.3	0.1
80°-90°	1.6	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°	1276.7	72.2
0°-40°	1633.5	92.4
0°-60°	1760.5	99.5
0°-90°	1768.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1768.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2189	2189	2189	2189	2189	
5°	2134	2132	2134	2133	2134	199
15°	1816	1802	1791	1802	1825	506
25°	1256	1274	1292	1274	1260	563
35°	483	558	674	544	472	311
45°	108	129	170	130	103	91
55°	11	11	17	11	10	11
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°	2188.6	2188.6	2188.6	2188.6	2188.6
2.5°	2175.3	2177.1	2175.3	2178.9	2175.3
5°	2133.6	2131.8	2134.5	2132.7	2134.5
7.5°	2076.7	2066.1	2065.2	2072.3	2073.2
10°	1995.0	1992.3	1986.1	1992.3	2000.3
12.5°	1911.5	1900.8	1892.0	1904.4	1911.5
15°	1815.6	1802.2	1790.7	1802.2	1825.3
17.5°	1709.9	1691.2	1681.4	1694.8	1717.0
20°	1585.5	1566.0	1550.0	1561.5	1595.3
22.5°	1436.3	1434.5	1423.9	1430.1	1442.5
25°	1256.0	1273.7	1292.4	1273.7	1260.4
27.5°	1057.9	1105.9	1148.5	1092.5	1049.9
30°	829.6	902.5	1009.0	897.1	823.4
32.5°	641.3	717.7	853.6	707.9	636.0
35°	483.2	557.8	674.2	544.5	471.7
37.5°	355.3	411.3	512.5	407.7	355.3
40°	254.9	291.3	368.6	290.5	253.1
42.5°	176.8	200.7	257.6	199.0	171.4
45°	107.5	128.8	170.5	129.7	103.0
47.5°	56.8	81.7	107.5	78.2	56.8
50°	24.9	43.5	62.2	42.6	25.8
52.5°	13.3	18.7	33.8	18.7	13.3
55°	10.7	10.7	16.9	10.7	9.8
57.5°	8.0	8.0	8.9	8.0	8.0
60°	6.2	6.2	5.3	6.2	7.1
62.5°	5.3	5.3	4.4	5.3	5.3
65°	4.4	4.4	3.6	4.4	4.4
67.5°	3.6	3.6	3.6	3.6	3.6
70°	2.7	2.7	2.7	3.6	3.6
72.5°	2.7	2.7	2.7	2.7	2.7
75°	1.8	1.8	1.8	1.8	2.7
77.5°	1.8	1.8	1.8	1.8	1.8
80°	1.8	1.8	1.8	1.8	1.8
82.5°	0.9	1.8	1.8	1.8	1.8
85°	0.9	1.8	1.8	1.8	1.8
87.5°	0.9	0.9	1.8	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



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Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

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