

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: P837451

Luminaire Tested: HCSQ430D010-HM43040840-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837451
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ430D010-HM43040840-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

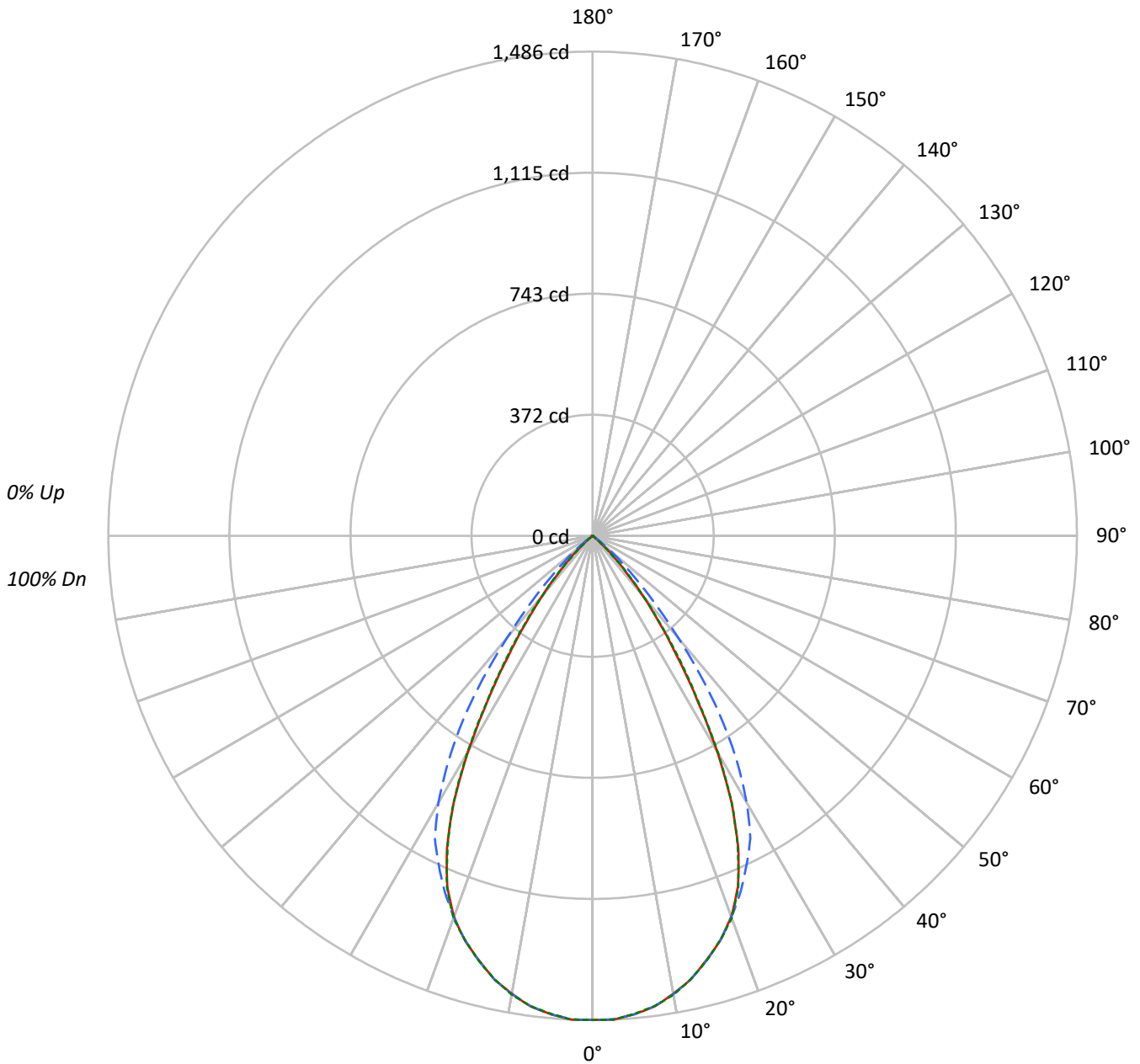
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1484.8 lumens
Efficiency: N/A
Efficacy: 52.7 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.96 / 0.99
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 28.2
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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93					93			
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87					87			
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80					80			
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74					74			
5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69					69			
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64					64			
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60					60			
8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56					56			
9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52					52			
10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49					49			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	143986	143986	143986
5°	143330	143330	143194
10°	140374	140512	140649
15°	135235	135375	135375
20°	128206	128350	128639
25°	113036	119375	112598
30°	85295	105799	86067
35°	53479	82347	55276
40°	30161	51268	30161
45°	12659	25880	12467
50°	1040	9977	1251
55°	473	2094	473
60°	543	271	543
65°	321	321	321
70°	397	397	397
75°	524	524	524
80°	0	781	781
85°	0	1556	1556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 25880 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.3	9.4
10°-20°	379.0	25.5
20°-30°	491.6	33.1
30°-40°	349.5	23.5
40°-50°	113.3	7.6
50°-60°	8.2	0.6
60°-70°	1.4	0.1
70°-80°	1.5	0.1
80°-90°	1.0	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°	1009.9	68.0
0°-40°	1359.4	91.6
0°-60°	1480.9	99.7
0°-90°	1484.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1484.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1486	1486	1486	1486	1486	
5°	1474	1475	1474	1474	1472	139
15°	1348	1353	1350	1353	1350	379
25°	1058	1085	1117	1091	1053	473
35°	452	535	696	540	467	289
45°	92	131	189	134	91	77
55°	3	3	12	3	3	3
65°	1	1	1	1	1	2
75°	1	1	1	1	1	1
85°	0	0	1	1	1	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1486.3	1486.3	1486.3	1486.3	1486.3
2.5°	1486.3	1486.3	1484.9	1484.9	1486.3
5°	1473.9	1475.3	1473.9	1473.9	1472.5
7.5°	1457.4	1457.4	1456.0	1456.0	1456.0
10°	1427.0	1428.4	1428.4	1428.4	1429.8
12.5°	1393.9	1393.9	1393.9	1393.9	1393.9
15°	1348.4	1352.6	1349.8	1352.6	1349.8
17.5°	1302.9	1302.9	1301.6	1304.3	1301.6
20°	1243.6	1243.6	1245.0	1247.8	1247.8
22.5°	1165.1	1178.8	1184.4	1181.6	1167.8
25°	1057.5	1085.1	1116.8	1090.6	1053.4
27.5°	922.4	974.8	1047.9	983.1	925.2
30°	762.5	841.0	945.8	843.8	769.4
32.5°	597.0	688.0	827.3	694.9	602.5
35°	452.2	535.0	696.3	540.5	467.4
37.5°	333.7	409.5	552.9	412.3	343.3
40°	238.5	293.7	405.4	299.2	238.5
42.5°	153.0	208.2	285.4	209.6	159.9
45°	92.4	131.0	188.9	133.7	91.0
47.5°	41.4	74.5	117.2	77.2	41.4
50°	6.9	30.3	66.2	31.7	8.3
52.5°	4.1	5.5	31.7	5.5	4.1
55°	2.8	2.8	12.4	2.8	2.8
57.5°	2.8	2.8	2.8	2.8	2.8
60°	2.8	1.4	1.4	1.4	2.8
62.5°	1.4	1.4	1.4	1.4	1.4
65°	1.4	1.4	1.4	1.4	1.4
67.5°	1.4	1.4	1.4	1.4	1.4
70°	1.4	1.4	1.4	1.4	1.4
72.5°	1.4	1.4	1.4	1.4	1.4
75°	1.4	1.4	1.4	1.4	1.4
77.5°	1.4	1.4	1.4	1.4	1.4
80°	0.0	1.4	1.4	1.4	1.4
82.5°	0.0	1.4	1.4	1.4	1.4
85°	0.0	0.0	1.4	1.4	1.4
87.5°	0.0	0.0	1.4	1.4	1.4
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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