

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: P837446

Luminaire Tested: HCSQ430D010-HM43040835-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837446
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-HM43040835-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

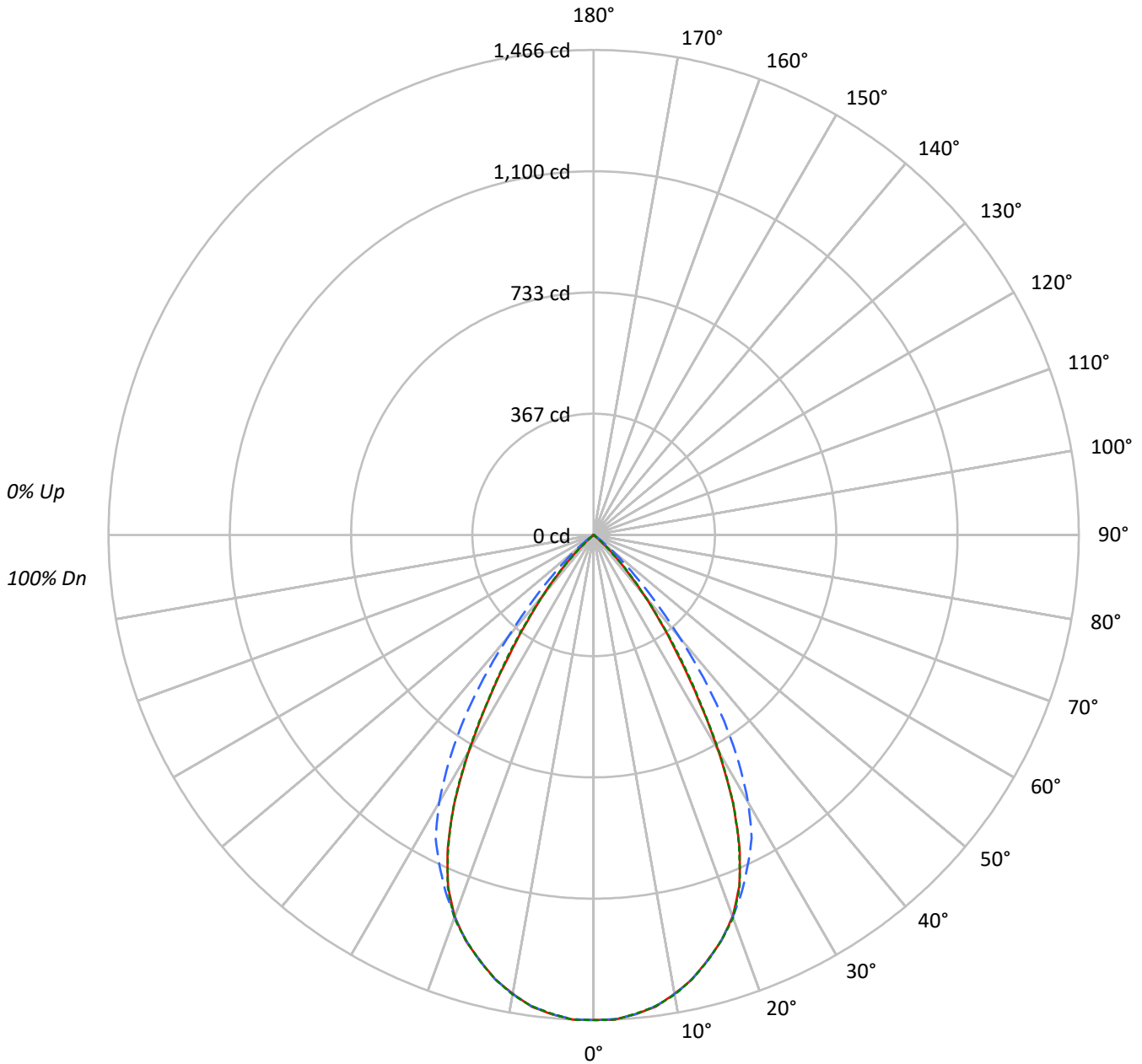
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1465.0 lumens
Efficiency: N/A
Efficacy: 52.0 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 (Ain): 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	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	100	100	100	100		
	1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93	93	93	93	93	93		
	2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87	87	87	87	87	87		
	3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80	80	80	80	80	80		
	4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74	74	74	74	74	74		
	5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69	69	69	69	69	69		
	6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64	64	64	64	64	64		
	7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60	60	60	60	60	60		
	8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56	56	56	56	56	56		
	9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52	52	52	52	52	52		
	10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49	49	49	49	49	49		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	142068	142068	142068
5°	141424	141424	141288
10°	138505	138643	138770
15°	133440	133570	133570
20°	126505	126649	126928
25°	111529	117782	111102
30°	84154	104390	84915
35°	52769	81247	54543
40°	29769	50585	29769
45°	12481	25537	12303
50°	1025	9841	1236
55°	456	2061	456
60°	523	271	523
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: 25537 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.4	9.4
10°-20°	373.9	25.5
20°-30°	485.1	33.1
30°-40°	344.8	23.5
40°-50°	111.8	7.6
50°-60°	8.1	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°	996.4	68.0
0°-40°	1341.3	91.6
0°-60°	1461.2	99.7
0°-90°	1465.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1465.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1466	1466	1466	1466	1466	
5°	1454	1456	1454	1454	1453	137
15°	1330	1335	1332	1335	1332	374
25°	1043	1071	1102	1076	1039	467
35°	446	528	687	533	461	286
45°	91	129	186	132	90	76
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°	1466.5	1466.5	1466.5	1466.5	1466.5
2.5°	1466.5	1466.5	1465.2	1465.2	1466.5
5°	1454.3	1455.6	1454.3	1454.3	1452.9
7.5°	1438.0	1438.0	1436.6	1436.6	1436.6
10°	1408.0	1409.4	1409.4	1409.4	1410.7
12.5°	1375.4	1375.4	1375.4	1375.4	1375.4
15°	1330.5	1334.6	1331.8	1334.6	1331.8
17.5°	1285.6	1285.6	1284.2	1287.0	1284.2
20°	1227.1	1227.1	1228.5	1231.2	1231.2
22.5°	1149.5	1163.2	1168.6	1165.9	1152.3
25°	1043.4	1070.6	1101.9	1076.1	1039.4
27.5°	910.1	961.8	1033.9	970.0	912.8
30°	752.3	829.9	933.2	832.6	759.1
32.5°	589.1	678.8	816.2	685.6	594.5
35°	446.2	527.8	687.0	533.3	461.2
37.5°	329.2	404.0	545.5	406.8	338.7
40°	235.4	289.8	400.0	295.2	235.4
42.5°	151.0	205.4	281.6	206.8	157.8
45°	91.1	129.2	186.4	132.0	89.8
47.5°	40.8	73.5	115.6	76.2	40.8
50°	6.8	29.9	65.3	31.3	8.2
52.5°	4.1	5.4	31.3	5.4	4.1
55°	2.7	2.7	12.2	2.7	2.7
57.5°	2.7	2.7	2.7	2.7	2.7
60°	2.7	1.4	1.4	1.4	2.7
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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