

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: P837551

Luminaire Tested: HCSQ440D010-HM43040940-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837551
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: HCSQ440D010-HM43040940-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

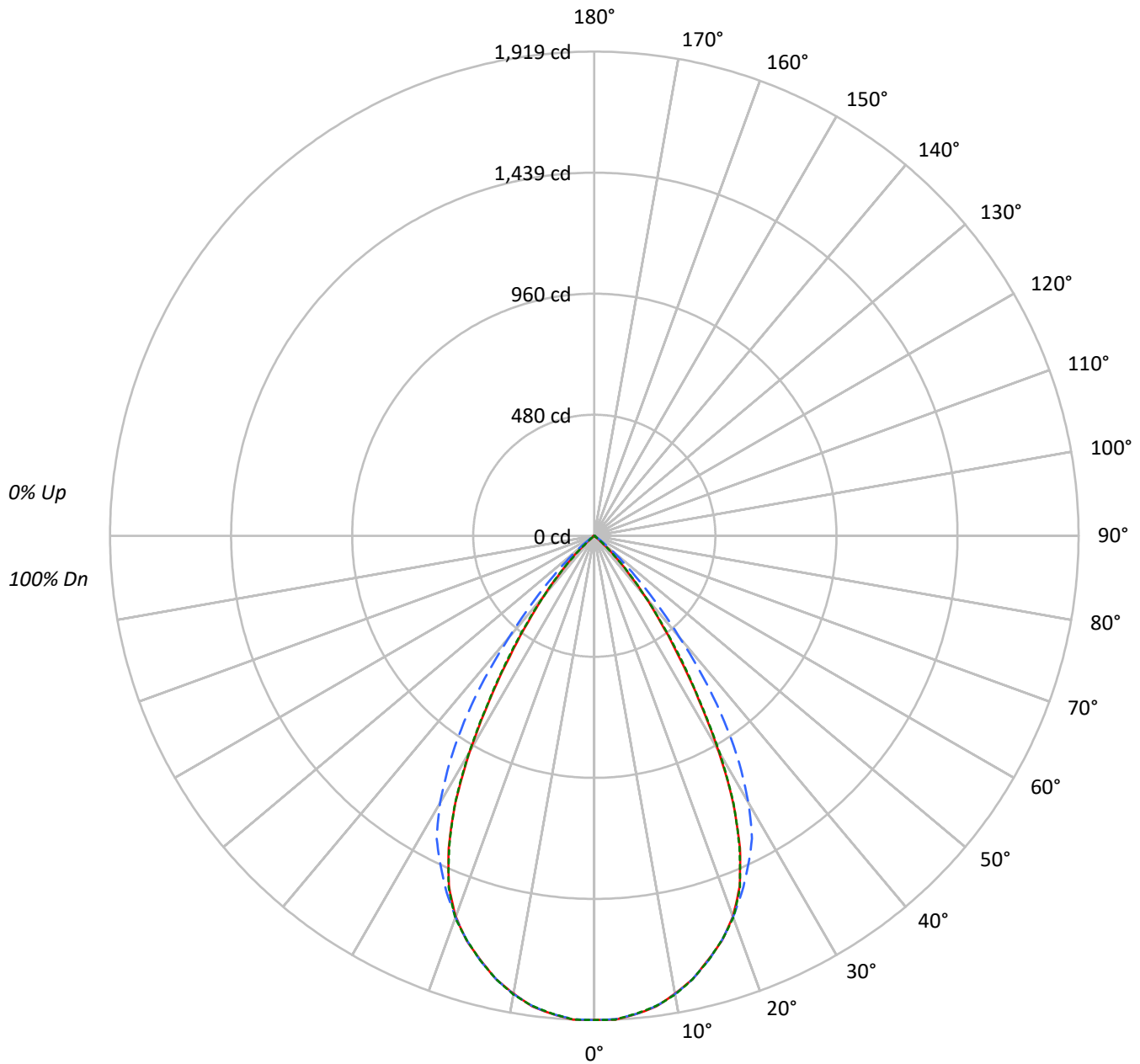
Lumens per Lamp: N/A
Luminaire Lumens: 1917.1 lumens
Efficiency: N/A
Efficacy: 46.8 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.96 / 0.99
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 41
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				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	113	111	108	106	111	108	106	104	104	103	101		101	99	98		97
2	108	103	99	95	105	101	97	94	98	95	92		95	92	90		92
3	102	96	91	87	100	94	90	86	92	88	84		89	86	83		87
4	97	89	83	79	95	88	83	79	86	81	78		84	80	77		82
5	92	83	77	73	90	82	77	73	80	76	72		79	75	71		77
6	87	78	72	67	85	77	71	67	76	70	67		74	70	66		73
7	82	73	67	63	81	72	66	62	71	66	62		70	65	62		69
8	78	69	62	58	77	68	62	58	67	62	58		66	61	58		65
9	74	65	58	54	73	64	58	54	63	58	54		62	57	54		61
10	71	61	55	51	70	60	55	51	60	54	51		59	54	51		58

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	185914	185914	185914
5°	185068	185068	184893
10°	181247	181424	181601
15°	174620	174800	174800
20°	165546	165732	166093
25°	145948	154136	145381
30°	110128	136606	111124
35°	69054	106318	71372
40°	38950	66190	38950
45°	16344	33415	16098
50°	1341	12886	1613
55°	608	2702	608
60°	698	349	698
65°	413	413	413
70°	510	510	510
75°	674	674	674
80°	0	1004	1004
85°	0	2001	2001

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 33415 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.9	9.4
10°-20°	489.3	25.5
20°-30°	634.8	33.1
30°-40°	451.3	23.5
40°-50°	146.3	7.6
50°-60°	10.6	0.6
60°-70°	1.8	0.1
70°-80°	1.9	0.1
80°-90°	1.3	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°	1303.9	68.0
0°-40°	1755.2	91.6
0°-60°	1912.1	99.7
0°-90°	1917.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1917.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1919	1919	1919	1919	1919	
5°	1903	1905	1903	1903	1901	180
15°	1741	1746	1743	1746	1743	489
25°	1365	1401	1442	1408	1360	611
35°	584	691	899	698	604	374
45°	119	169	244	173	118	99
55°	4	4	16	4	4	4
65°	2	2	2	2	2	2
75°	2	2	2	2	2	2
85°	0	0	2	2	2	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1919.1	1919.1	1919.1	1919.1	1919.1
2.5°	1919.1	1919.1	1917.3	1917.3	1919.1
5°	1903.1	1904.9	1903.1	1903.1	1901.3
7.5°	1881.7	1881.7	1879.9	1879.9	1879.9
10°	1842.5	1844.3	1844.3	1844.3	1846.1
12.5°	1799.8	1799.8	1799.8	1799.8	1799.8
15°	1741.1	1746.4	1742.9	1746.4	1742.9
17.5°	1682.3	1682.3	1680.5	1684.1	1680.5
20°	1605.8	1605.8	1607.6	1611.1	1611.1
22.5°	1504.3	1522.1	1529.2	1525.7	1507.9
25°	1365.4	1401.0	1442.0	1408.2	1360.1
27.5°	1191.0	1258.6	1353.0	1269.3	1194.5
30°	984.5	1085.9	1221.2	1089.5	993.4
32.5°	770.8	888.3	1068.1	897.2	778.0
35°	583.9	690.7	899.0	697.9	603.5
37.5°	430.8	528.7	713.9	532.3	443.3
40°	308.0	379.2	523.4	386.3	308.0
42.5°	197.6	268.8	368.5	270.6	206.5
45°	119.3	169.1	243.9	172.7	117.5
47.5°	53.4	96.1	151.3	99.7	53.4
50°	8.9	39.2	85.5	40.9	10.7
52.5°	5.3	7.1	40.9	7.1	5.3
55°	3.6	3.6	16.0	3.6	3.6
57.5°	3.6	3.6	3.6	3.6	3.6
60°	3.6	1.8	1.8	1.8	3.6
62.5°	1.8	1.8	1.8	1.8	1.8
65°	1.8	1.8	1.8	1.8	1.8
67.5°	1.8	1.8	1.8	1.8	1.8
70°	1.8	1.8	1.8	1.8	1.8
72.5°	1.8	1.8	1.8	1.8	1.8
75°	1.8	1.8	1.8	1.8	1.8
77.5°	1.8	1.8	1.8	1.8	1.8
80°	0.0	1.8	1.8	1.8	1.8
82.5°	0.0	1.8	1.8	1.8	1.8
85°	0.0	0.0	1.8	1.8	1.8
87.5°	0.0	0.0	1.8	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0



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Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°







(END OF REPORT)