

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: P837521

Luminaire Tested: HCSQ440D010-HM43040830-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837521
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-HM43040830-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

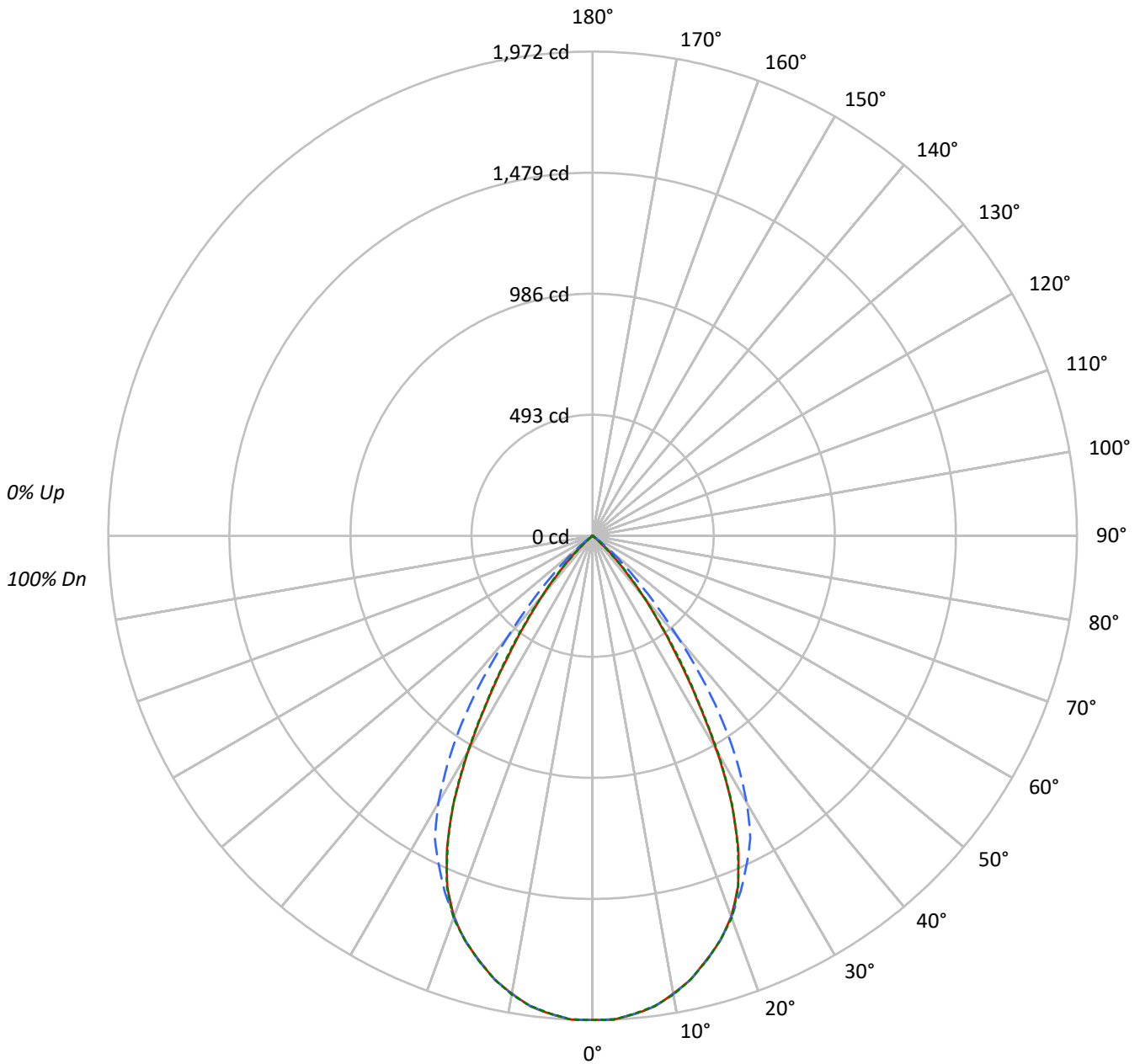
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1970.0 lumens
Efficiency: N/A
Efficacy: 48.0 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): 41
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					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								
1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93								
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87								
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80								
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74								
5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69								
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64								
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60								
8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56								
9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52								
10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	191058	191058	191058
5°	190183	190183	190008
10°	186263	186440	186627
15°	179444	179634	179634
20°	170124	170309	170691
25°	149988	158401	149400
30°	113171	140387	114200
35°	70970	109263	73347
40°	40025	68024	40025
45°	16797	34333	16536
50°	1371	13232	1658
55°	625	2787	625
60°	717	349	717
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: 34333 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.8	9.4
10°-20°	502.8	25.5
20°-30°	652.3	33.1
30°-40°	463.8	23.5
40°-50°	150.4	7.6
50°-60°	10.9	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°	1340.0	68.0
0°-40°	1803.8	91.6
0°-60°	1965.0	99.7
0°-90°	1970.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1970.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1972	1972	1972	1972	1972	
5°	1956	1958	1956	1956	1954	185
15°	1789	1795	1791	1795	1791	502
25°	1403	1440	1482	1447	1398	628
35°	600	710	924	717	620	384
45°	123	174	251	178	121	102
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°	1972.2	1972.2	1972.2	1972.2	1972.2
2.5°	1972.2	1972.2	1970.4	1970.4	1972.2
5°	1955.7	1957.5	1955.7	1955.7	1953.9
7.5°	1933.8	1933.8	1931.9	1931.9	1931.9
10°	1893.5	1895.3	1895.3	1895.3	1897.2
12.5°	1849.6	1849.6	1849.6	1849.6	1849.6
15°	1789.2	1794.7	1791.1	1794.7	1791.1
17.5°	1728.9	1728.9	1727.0	1730.7	1727.0
20°	1650.2	1650.2	1652.0	1655.7	1655.7
22.5°	1545.9	1564.2	1571.5	1567.9	1549.6
25°	1403.2	1439.8	1481.9	1447.1	1397.7
27.5°	1223.9	1293.4	1390.4	1304.4	1227.6
30°	1011.7	1116.0	1255.0	1119.6	1020.9
32.5°	792.2	912.9	1097.7	922.1	799.5
35°	600.1	709.8	923.9	717.2	620.2
37.5°	442.7	543.4	733.6	547.0	455.5
40°	316.5	389.7	537.9	397.0	316.5
42.5°	203.1	276.3	378.7	278.1	212.2
45°	122.6	173.8	250.6	177.5	120.7
47.5°	54.9	98.8	155.5	102.5	54.9
50°	9.1	40.2	87.8	42.1	11.0
52.5°	5.5	7.3	42.1	7.3	5.5
55°	3.7	3.7	16.5	3.7	3.7
57.5°	3.7	3.7	3.7	3.7	3.7
60°	3.7	1.8	1.8	1.8	3.7
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

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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