

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: P838597

Luminaire Tested: HCSQ640D010-HM63040927-61SQMB

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838597
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ640D010-HM63040927-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

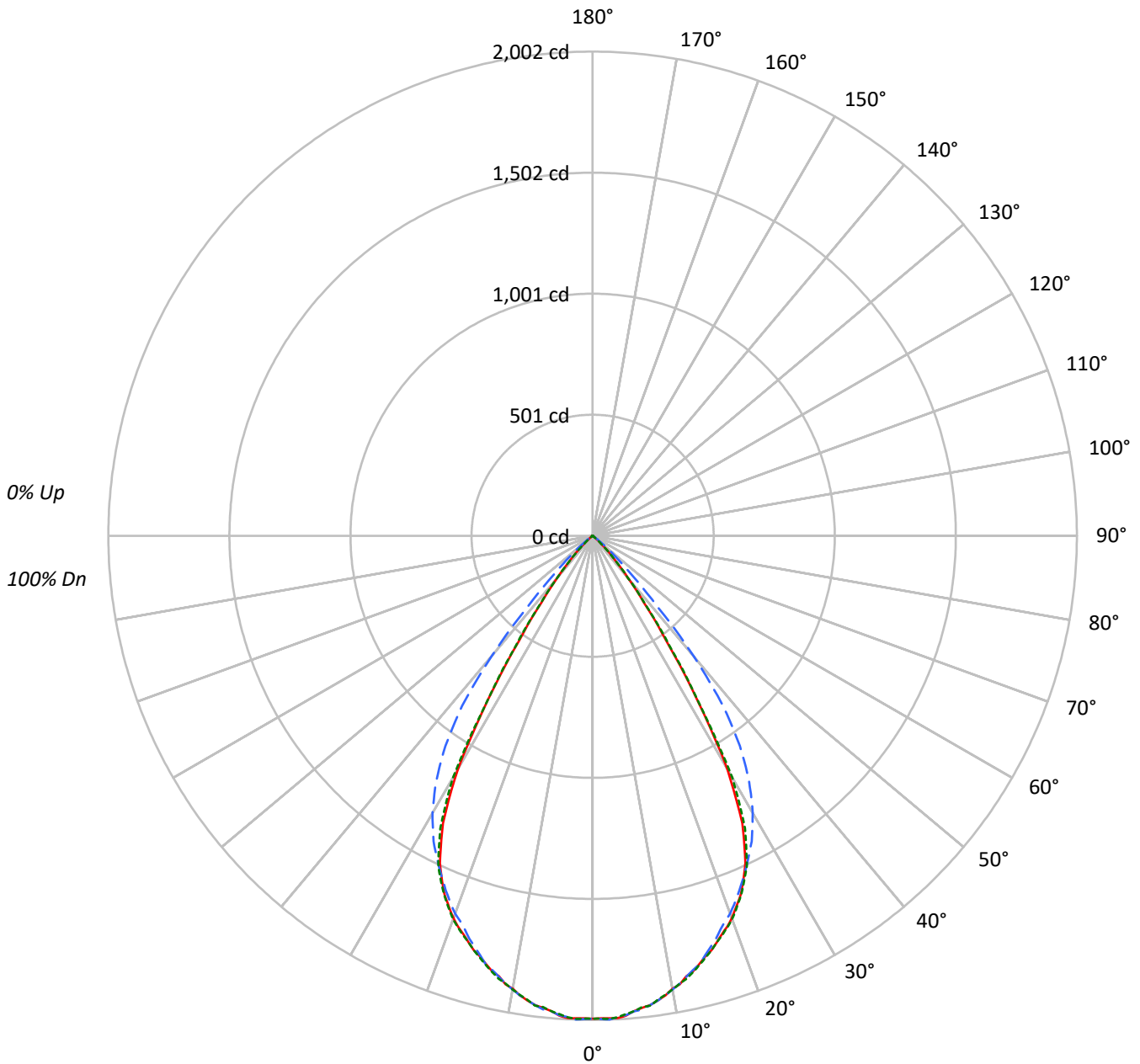
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1985.0 lumens
Efficiency: N/A
Efficacy: 48.4 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.01 / 1.03
Luminous Opening: Rectangular (W 0.5' x L: 0.5' 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	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93								
2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87								
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81								
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75								
5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70								
6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65								
7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60								
8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56								
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53								
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	85978	85978	85978
5°	85252	85325	85252
10°	83120	83260	83260
15°	80261	80042	80479
20°	77077	76183	77296
25°	70975	71517	71669
30°	55324	65810	57422
35°	28052	55762	29077
40°	12764	36472	12764
45°	4938	13731	4841
50°	764	4347	764
55°	240	856	240
60°	138	138	138
65°	163	0	163
70°	0	0	201
75°	0	0	266
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 13731 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.5	9.4
10°-20°	505.7	25.5
20°-30°	681.6	34.3
30°-40°	479.3	24.1
40°-50°	122.4	6.2
50°-60°	8.4	0.4
60°-70°	1.0	0.1
70°-80°	0.1	0.0
80°-90°	0.0	0.0
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°	1373.8	69.2
0°-40°	1853.0	93.4
0°-60°	1983.8	99.9
0°-90°	1985.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1985.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1997	1997	1997	1997	1997	
5°	1972	1976	1974	1976	1972	186
15°	1801	1797	1796	1801	1806	507
25°	1494	1499	1505	1510	1509	668
35°	534	707	1061	725	553	359
45°	81	122	226	123	80	71
55°	3	3	11	3	3	4
65°	2	2	0	2	2	1
75°	0	0	0	0	2	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1996.9	1996.9	1996.9	1996.9	1996.9
1°	1995.2	1996.9	1998.5	1998.5	1996.9
2°	1996.9	1992.0	2001.7	1996.9	1998.5
3°	1996.9	1987.1	1992.0	1995.2	1993.6
4°	1988.8	1982.3	1987.1	1985.5	1982.3
5°	1972.5	1975.8	1974.2	1975.8	1972.5
6°	1962.8	1966.0	1969.3	1964.4	1959.6
7°	1954.7	1953.1	1954.7	1957.9	1957.9
8°	1940.1	1943.3	1940.1	1941.7	1936.8
9°	1923.9	1923.9	1923.9	1927.1	1922.2
10°	1901.2	1909.3	1904.4	1907.7	1904.4
11°	1889.8	1886.6	1886.6	1888.2	1886.6
12°	1862.2	1865.5	1863.9	1867.1	1872.0
13°	1847.6	1849.3	1842.8	1850.9	1850.9
14°	1824.9	1823.3	1826.5	1824.9	1828.2
15°	1800.6	1797.3	1795.7	1800.6	1805.5
16°	1782.7	1774.6	1769.8	1776.3	1782.7
17°	1756.8	1748.7	1742.2	1755.2	1756.8
18°	1730.8	1727.6	1711.4	1727.6	1735.7
19°	1709.7	1698.4	1683.8	1701.6	1711.4
20°	1682.2	1672.4	1662.7	1672.4	1687.0
22.5°	1602.7	1594.6	1586.5	1597.8	1605.9
25°	1494.0	1498.9	1505.4	1510.2	1508.6
27.5°	1339.9	1383.7	1424.2	1398.3	1364.2
30°	1112.8	1223.1	1323.7	1240.9	1155.0
32.5°	806.2	994.4	1203.6	1031.7	814.3
35°	533.7	707.3	1060.9	725.1	553.2
37.5°	347.1	475.3	885.7	476.9	363.4
40°	227.1	309.8	648.9	316.3	227.1
42.5°	139.5	196.3	394.2	204.4	139.5
45°	81.1	121.7	225.5	123.3	79.5
47.5°	37.3	66.5	128.1	64.9	38.9
50°	11.4	29.2	64.9	29.2	11.4
52.5°	4.9	8.1	30.8	8.1	4.9
55°	3.2	3.2	11.4	3.2	3.2
57.5°	3.2	1.6	3.2	3.2	3.2
60°	1.6	1.6	1.6	1.6	1.6
62.5°	1.6	1.6	1.6	1.6	1.6
65°	1.6	1.6	0.0	1.6	1.6
67.5°	1.6	0.0	0.0	0.0	1.6
70°	0.0	0.0	0.0	0.0	1.6
72.5°	0.0	0.0	0.0	0.0	1.6
75°	0.0	0.0	0.0	0.0	1.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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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— 0°-180° - - 45°-225° - - - - 90°-270°

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77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



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