

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: P838532

Luminaire Tested: HCSQ630D010-HM63040940-61SQMB

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838532
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: HCSQ630D010-HM63040940-61SQMB
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

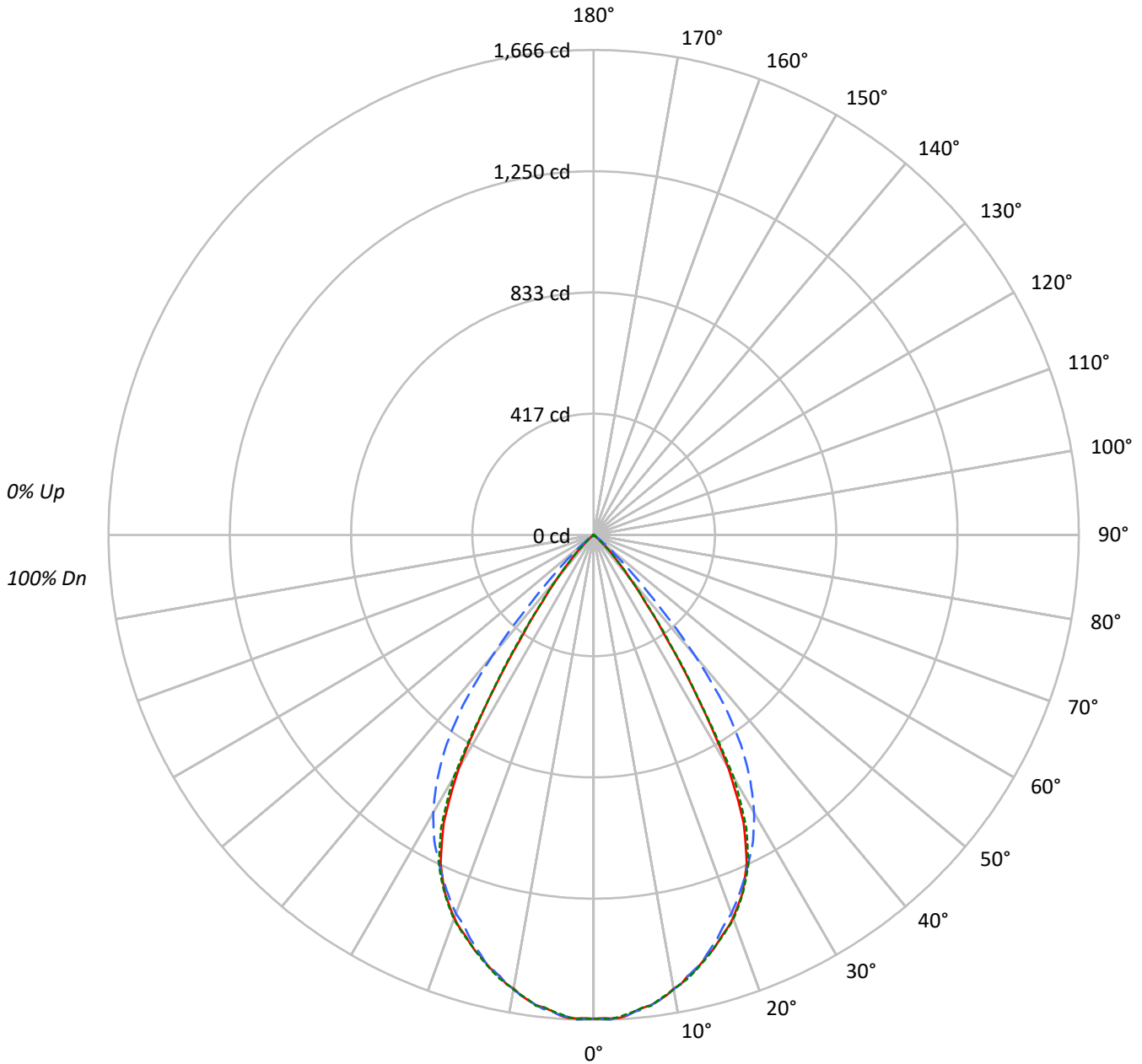
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1652.1 lumens
Efficiency: N/A
Efficacy: 58.6 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): 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										
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	109	106	104	105	103	101	101	99	98	97	96	95	93	93	93	93	93	93		
	2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87	87	87	87	87	87		
	3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81	81	81	81	81	81		
	4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75	75	75	75	75	75		
	5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70	70	70	70	70	70		
	6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65	65	65	65	65	65		
	7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60	60	60	60	60	60		
	8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56	56	56	56	56	56		
	9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53	53	53	53	53	53		
	10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50	50	50	50	50	50		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	71554	71554	71554
5°	70950	71011	70950
10°	69174	69292	69292
15°	66795	66617	66978
20°	64146	63404	64330
25°	59070	59516	59645
30°	46042	54768	47787
35°	23348	46406	24199
40°	10623	30351	10623
45°	4110	11429	4031
50°	636	3617	636
55°	203	713	203
60°	121	121	121
65°	143	0	143
70°	0	0	176
75°	0	0	233
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 11429 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.2	9.4
10°-20°	420.8	25.5
20°-30°	567.3	34.3
30°-40°	398.9	24.1
40°-50°	101.9	6.2
50°-60°	7.1	0.4
60°-70°	0.9	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°	1143.3	69.2
0°-40°	1542.2	93.3
0°-60°	1651.1	99.9
0°-90°	1652.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1652.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1662	1662	1662	1662	1662	
5°	1642	1644	1643	1644	1642	155
15°	1498	1496	1494	1498	1503	422
25°	1243	1247	1253	1257	1256	556
35°	444	589	883	604	460	299
45°	68	101	188	103	66	59
55°	3	3	10	3	3	3
65°	1	1	0	1	1	1
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1661.9	1661.9	1661.9	1661.9	1661.9
1°	1660.5	1661.9	1663.2	1663.2	1661.9
2°	1661.9	1657.8	1665.9	1661.9	1663.2
3°	1661.9	1653.8	1657.8	1660.5	1659.2
4°	1655.1	1649.7	1653.8	1652.4	1649.7
5°	1641.6	1644.3	1643.0	1644.3	1641.6
6°	1633.5	1636.2	1638.9	1634.9	1630.8
7°	1626.8	1625.4	1626.8	1629.5	1629.5
8°	1614.6	1617.3	1614.6	1616.0	1611.9
9°	1601.1	1601.1	1601.1	1603.8	1599.8
10°	1582.2	1589.0	1584.9	1587.6	1584.9
11°	1572.8	1570.1	1570.1	1571.4	1570.1
12°	1549.8	1552.5	1551.2	1553.9	1557.9
13°	1537.7	1539.0	1533.6	1540.4	1540.4
14°	1518.8	1517.4	1520.1	1518.8	1521.5
15°	1498.5	1495.8	1494.5	1498.5	1502.6
16°	1483.7	1476.9	1472.9	1478.3	1483.7
17°	1462.1	1455.3	1449.9	1460.7	1462.1
18°	1440.5	1437.8	1424.3	1437.8	1444.5
19°	1422.9	1413.5	1401.3	1416.2	1424.3
20°	1400.0	1391.9	1383.8	1391.9	1404.0
22.5°	1333.8	1327.1	1320.3	1329.8	1336.5
25°	1243.4	1247.4	1252.8	1256.9	1255.5
27.5°	1115.1	1151.6	1185.3	1163.7	1135.4
30°	926.1	1017.9	1101.6	1032.8	961.2
32.5°	671.0	827.6	1001.7	858.6	677.7
35°	444.2	588.6	882.9	603.5	460.4
37.5°	288.9	395.6	737.1	396.9	302.4
40°	189.0	257.9	540.0	263.3	189.0
42.5°	116.1	163.4	328.1	170.1	116.1
45°	67.5	101.3	187.7	102.6	66.2
47.5°	31.1	55.4	106.7	54.0	32.4
50°	9.5	24.3	54.0	24.3	9.5
52.5°	4.1	6.8	25.7	6.8	4.1
55°	2.7	2.7	9.5	2.7	2.7
57.5°	2.7	1.4	2.7	2.7	2.7
60°	1.4	1.4	1.4	1.4	1.4
62.5°	1.4	1.4	1.4	1.4	1.4
65°	1.4	1.4	0.0	1.4	1.4
67.5°	1.4	0.0	0.0	0.0	1.4
70°	0.0	0.0	0.0	0.0	1.4
72.5°	0.0	0.0	0.0	0.0	1.4
75°	0.0	0.0	0.0	0.0	1.4



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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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Scaled Data Report





— 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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