

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: P838541

Luminaire Tested: HCSQ635D010-HM63040830-61SQLWW

Issue Date: 5/21/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P838541  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-5)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ635D010-HM63040830-61SQLWW  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: -

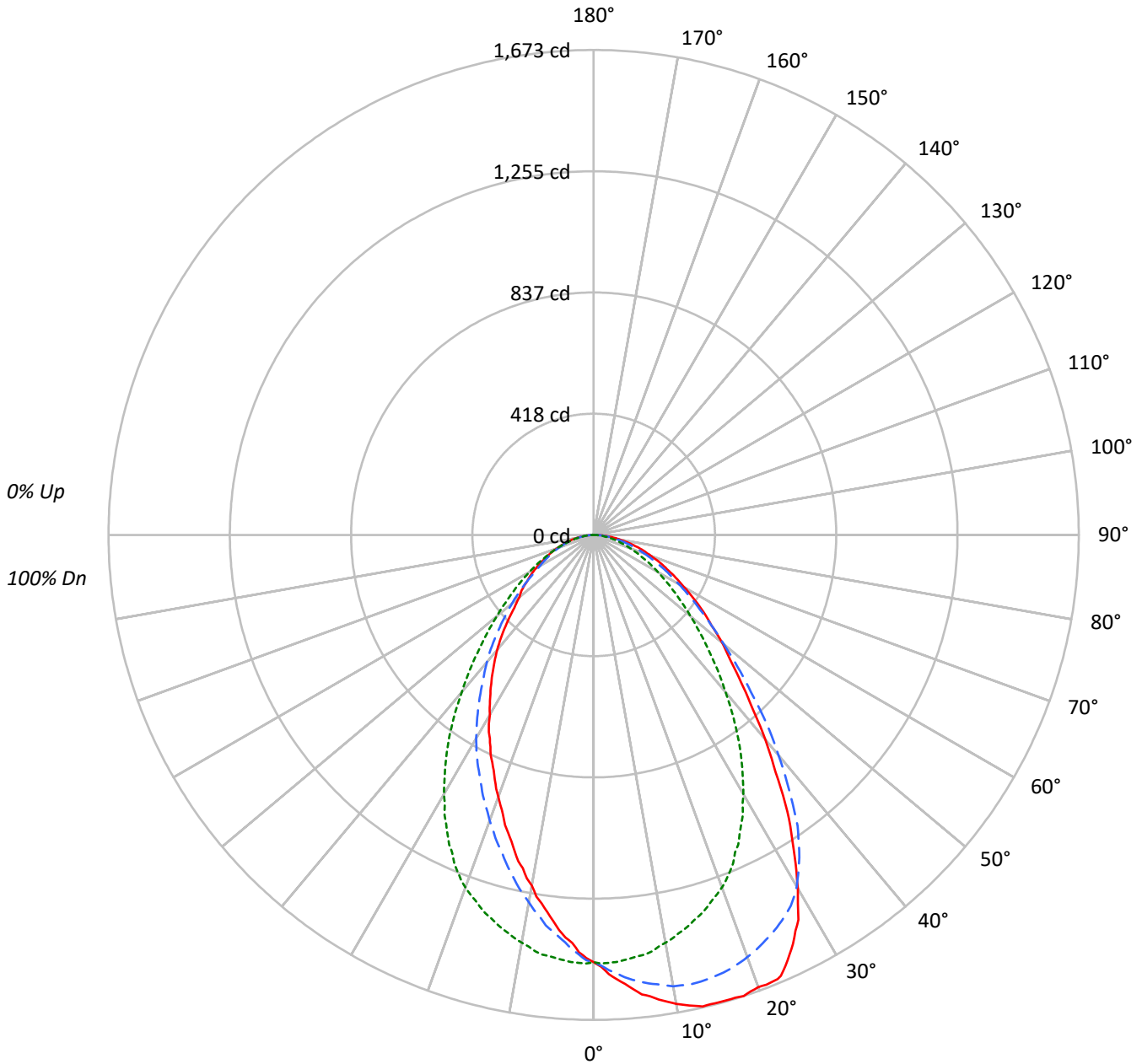
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2787.4 lumens  
Efficiency: N/A  
Efficacy: 82.0 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.08 / 1.17  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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					0
RW	70	50	30	10	70	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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	69	63	85	75	68	62	73	66	62	71	65	61	68	64	60	58								
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	51								
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46								
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42								
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38								
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34								
10	58	46	39	34	57	45	38	34	44	38	34	44	38	33	43	37	33	32								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	142794	142794	142794	142794	142794
5°	153016	149865	142572	135210	133061
10°	161612	155557	140502	126523	120779
15°	167459	158438	137231	117282	109851
20°	171165	159773	133412	108031	99082
25°	170714	159753	126013	99023	89745
30°	157468	156680	115453	90564	80149
35°	137741	144925	103397	80998	72602
40°	116358	125438	89409	72450	65457
45°	98382	105081	76543	63569	57294
50°	87292	88121	65650	55417	50428
55°	78098	75429	56783	47713	47443
60°	69712	65740	49542	41288	44640
65°	64023	58430	43049	38350	40871
70°	59000	52301	37983	35774	37983
75°	55546	46656	33088	32489	34847
80°	51046	41813	29066	29958	31688
85°	50908	37736	24565	24565	28121

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 40°

Vertical Angle: 45°

Luminance: 105944 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.0	5.0
10°-20°	387.5	13.9
20°-30°	552.7	19.8
30°-40°	569.6	20.4
40°-50°	458.6	16.5
50°-60°	324.3	11.6
60°-70°	210.2	7.5
70°-80°	112.9	4.1
80°-90°	32.6	1.2
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°	1079.3	38.7
0°-40°	1648.9	59.2
0°-60°	2431.7	87.2
0°-90°	2787.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2787.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1474	1474	1474	1474	1474	
5°	1574	1541	1466	1390	1368	152
15°	1670	1580	1368	1169	1095	472
25°	1597	1495	1179	926	840	727
35°	1165	1225	874	685	614	723
45°	718	767	559	464	418	561
55°	462	447	336	282	281	414
65°	279	255	188	167	178	279
75°	148	125	88	87	93	157
85°	46	34	22	22	25	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	1474.0	1474.0	1474.0	1474.0	1474.0	1474.0	1474.0	1474.0	1474.0	1474.0	1474.0
1°	1489.8	1496.1	1491.4	1491.4	1486.7	1485.1	1488.2	1483.5	1481.9	1478.8	1472.5
2°	1516.6	1511.9	1510.3	1511.9	1502.4	1502.4	1497.7	1488.2	1483.5	1477.2	1459.8
3°	1535.6	1532.4	1529.3	1527.7	1518.2	1510.3	1504.0	1493.0	1483.5	1475.6	1450.4
4°	1552.9	1552.9	1549.8	1543.5	1534.0	1524.5	1511.9	1499.3	1485.1	1470.9	1437.7
5°	1573.5	1575.0	1560.8	1559.3	1548.2	1534.0	1519.8	1502.4	1485.1	1466.1	1429.8
6°	1594.0	1586.1	1582.9	1571.9	1556.1	1543.5	1526.1	1507.2	1483.5	1461.4	1412.5
7°	1603.4	1601.9	1594.0	1582.9	1568.7	1548.2	1530.8	1505.6	1480.3	1458.3	1399.9
8°	1619.2	1619.2	1609.8	1595.6	1575.0	1556.1	1534.0	1504.0	1478.8	1450.4	1382.5
9°	1630.3	1630.3	1617.6	1605.0	1586.1	1560.8	1535.6	1502.4	1470.9	1437.7	1366.7
10°	1642.9	1639.7	1630.3	1611.3	1595.6	1567.1	1535.6	1500.9	1466.1	1428.3	1350.9
11°	1652.4	1647.6	1636.6	1622.4	1597.1	1568.7	1535.6	1500.9	1459.8	1418.8	1335.2
12°	1660.3	1657.1	1642.9	1625.5	1600.3	1571.9	1534.0	1494.5	1448.8	1406.2	1314.6
13°	1669.7	1660.3	1646.1	1630.3	1601.9	1568.7	1527.7	1485.1	1440.9	1395.1	1297.3
14°	1668.1	1666.6	1653.9	1631.9	1600.3	1565.6	1526.1	1475.6	1429.8	1382.5	1276.8
15°	1669.7	1668.1	1653.9	1633.4	1598.7	1560.8	1521.4	1469.3	1418.8	1368.3	1256.2
16°	1669.7	1669.7	1650.8	1630.3	1597.1	1556.1	1511.9	1463.0	1407.7	1357.2	1238.9
17°	1669.7	1669.7	1653.9	1625.5	1592.4	1552.9	1502.4	1450.4	1395.1	1341.5	1213.6
18°	1672.9	1668.1	1647.6	1624.0	1586.1	1545.1	1496.1	1440.9	1384.1	1324.1	1196.3
19°	1665.0	1661.8	1644.5	1614.5	1581.3	1535.6	1486.7	1429.8	1373.0	1309.9	1175.8
20°	1660.3	1665.0	1641.3	1609.8	1571.9	1527.7	1477.2	1418.8	1357.2	1294.1	1155.2
21°	1661.8	1660.3	1635.0	1601.9	1565.6	1516.6	1466.1	1406.2	1339.9	1275.2	1136.3
22.5°	1658.7	1653.9	1627.1	1590.8	1546.6	1502.4	1447.2	1385.7	1314.6	1242.0	1100.0
23°	1652.4	1647.6	1627.1	1587.7	1540.3	1496.1	1437.7	1373.0	1305.2	1231.0	1090.5
24°	1627.1	1625.5	1616.1	1576.6	1532.4	1483.5	1426.7	1352.5	1276.8	1199.4	1066.9
25°	1597.1	1600.3	1595.6	1570.3	1519.8	1469.3	1409.3	1327.3	1249.9	1178.9	1038.5
26°	1568.7	1568.7	1565.6	1556.1	1507.2	1453.5	1384.1	1297.3	1223.1	1148.9	1008.5
27°	1532.4	1538.7	1532.4	1527.7	1494.5	1436.2	1357.2	1276.8	1193.1	1120.5	983.2
28°	1504.0	1504.0	1500.9	1493.0	1481.9	1415.6	1328.8	1246.8	1164.7	1095.3	954.8
29°	1453.5	1463.0	1464.6	1466.1	1464.6	1388.8	1302.0	1213.6	1134.7	1059.0	928.0
30°	1407.7	1417.2	1423.5	1434.6	1436.2	1365.1	1270.4	1186.8	1106.3	1032.1	904.3
32.5°	1283.1	1300.4	1317.8	1336.7	1346.2	1294.1	1193.1	1101.6	1019.5	953.2	831.7
35°	1164.7	1169.4	1188.4	1232.6	1242.0	1208.9	1101.6	1014.8	937.4	874.3	763.8
37.5°	1030.6	1040.0	1066.9	1117.4	1120.5	1093.7	1019.5	918.5	845.9	790.7	694.4
40°	920.1	924.8	943.8	986.4	1000.6	983.2	918.5	827.0	760.7	707.0	628.1
42.5°	809.6	815.9	839.6	872.7	893.3	872.7	815.9	737.0	672.3	632.9	565.0
45°	718.1	726.0	748.1	767.0	773.3	760.7	710.2	645.5	599.7	558.7	506.6
47.5°	639.2	647.1	662.8	670.7	678.6	666.0	626.5	572.9	527.1	494.0	446.6
50°	579.2	577.6	588.7	591.8	591.8	577.6	544.5	500.3	462.4	435.6	396.1
52.5°	511.3	514.5	522.4	519.2	517.6	505.0	476.6	438.7	407.2	383.5	347.2
55°	462.4	457.7	462.4	459.3	452.9	440.3	415.1	383.5	356.7	336.2	303.0
57.5°	408.8	408.8	410.3	404.0	396.1	381.9	359.8	334.6	310.9	293.5	266.7
60°	359.8	363.0	361.4	355.1	347.2	331.4	314.1	288.8	268.3	255.7	230.4



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	244.6	244.6	239.9	235.2	224.1	209.9	197.3	181.5	170.4	159.4	143.6
70°	208.3	211.5	205.2	197.3	189.4	179.9	165.7	153.1	142.0	134.1	121.5
72.5°	179.9	178.3	173.6	165.7	159.4	148.4	135.7	126.3	116.8	110.5	101.0
75°	148.4	148.4	143.6	137.3	129.4	119.9	110.5	102.6	94.7	88.4	83.6
77.5°	118.4	119.9	115.2	110.5	104.2	94.7	86.8	80.5	74.2	69.4	66.3
80°	91.5	93.1	88.4	85.2	77.3	72.6	66.3	60.0	55.2	52.1	50.5
82.5°	69.4	67.9	64.7	63.1	56.8	52.1	45.8	42.6	39.5	36.3	36.3
85°	45.8	44.2	42.6	41.0	36.3	31.6	30.0	26.8	23.7	22.1	22.1
87.5°	23.7	23.7	22.1	20.5	18.9	15.8	14.2	11.0	9.5	9.5	9.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	1474.0	1474.0	1474.0
1°	1467.7	1461.4	1459.8
2°	1448.8	1439.3	1440.9
3°	1431.4	1420.4	1409.3
4°	1409.3	1392.0	1392.0
5°	1390.4	1373.0	1368.3
6°	1373.0	1344.6	1338.3
7°	1357.2	1322.5	1311.5
8°	1330.4	1295.7	1284.6
9°	1311.5	1273.6	1262.6
10°	1286.2	1248.4	1227.8
11°	1265.7	1223.1	1207.3
12°	1243.6	1191.5	1175.8
13°	1218.4	1164.7	1155.2
14°	1194.7	1142.6	1125.3
15°	1169.4	1115.8	1095.3
16°	1142.6	1089.0	1070.0
17°	1120.5	1060.5	1046.3
18°	1098.4	1035.3	1013.2
19°	1071.6	1011.6	986.4
20°	1047.9	981.6	961.1
21°	1022.7	959.5	937.4
22.5°	987.9	916.9	896.4
23°	976.9	904.3	882.2
24°	951.7	879.1	860.1
25°	926.4	860.1	839.6
26°	904.3	831.7	812.8
27°	882.2	809.6	789.1
28°	858.5	785.9	770.2
29°	834.9	760.7	744.9
30°	809.6	743.3	716.5
32.5°	746.5	686.5	664.4
35°	684.9	632.9	613.9
37.5°	625.0	582.4	565.0
40°	572.9	535.0	517.6
42.5°	519.2	484.5	467.1
45°	464.0	435.6	418.2
47.5°	413.5	389.8	370.9
50°	367.7	344.0	334.6
52.5°	323.5	307.7	312.5
55°	282.5	282.5	280.9
57.5°	243.0	254.1	255.7
60°	213.1	227.3	230.4





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
67.5°	146.8	154.7	157.8
70°	126.3	132.6	134.1
72.5°	107.3	112.1	115.2
75°	86.8	93.1	93.1
77.5°	71.0	74.2	75.8
80°	53.7	55.2	56.8
82.5°	37.9	39.5	41.0
85°	22.1	23.7	25.3
87.5°	9.5	9.5	9.5
90°	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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report





— 0°-180°    - - 45°-225°    - - - 90°-270°

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Scaled Data Report





62.5°	318.8	322.0	317.2	309.3	301.4	287.2	271.4	249.4	233.6	220.9	198.9
65°	279.3	280.9	277.8	269.9	262.0	247.8	232.0	213.1	200.4	187.8	168.9

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62.5°	191.0	202.0	203.6
65°	167.3	176.8	178.3

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Scaled Data Report



(END OF REPORT)