

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: P838566

Luminaire Tested: HCSQ635D010-HM63040935-61SQLWW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838566
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-HM63040935-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

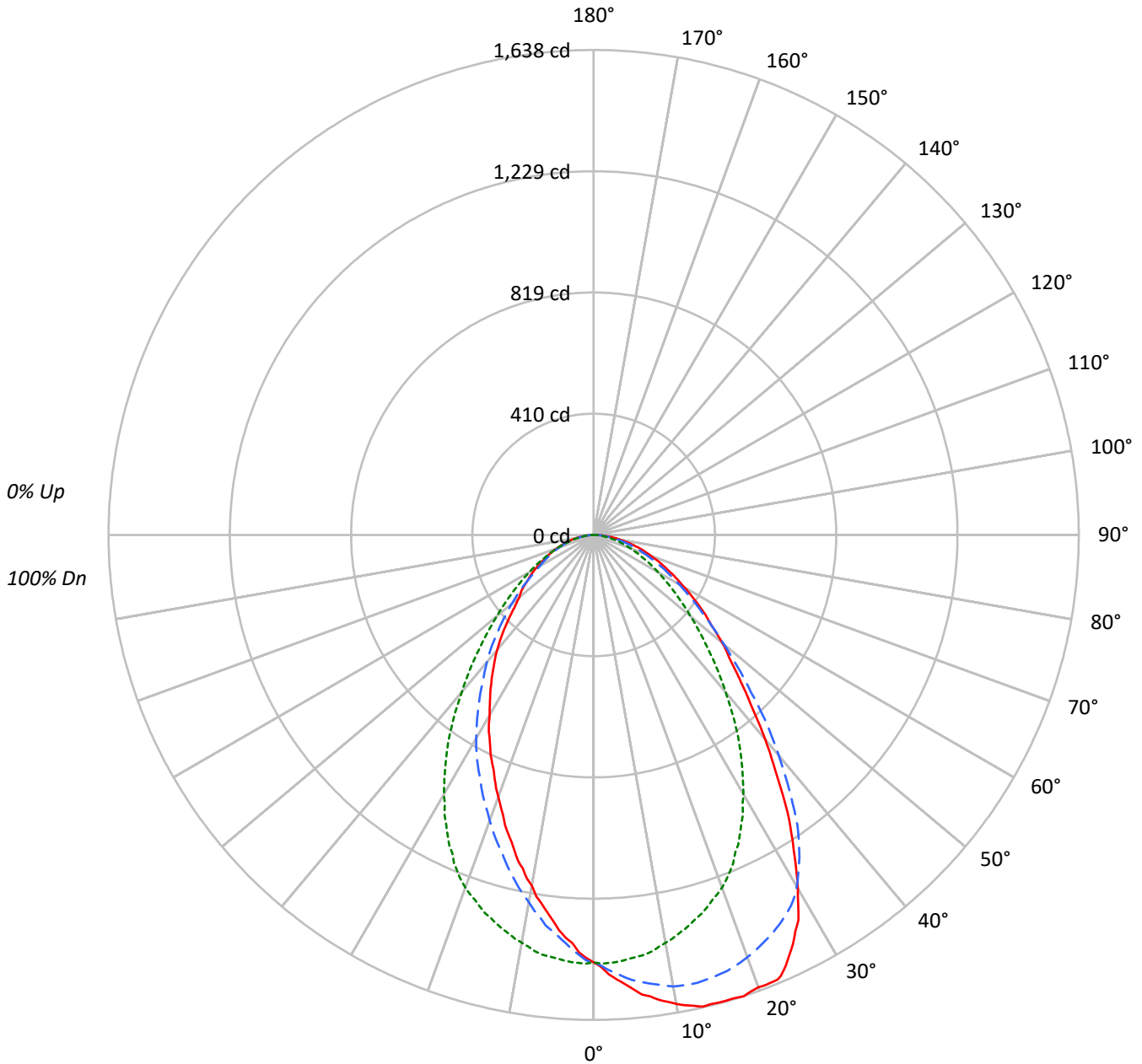
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2730.0 lumens
Efficiency: N/A
Efficacy: 80.3 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_{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	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°	139859	139859	139859	139859	139859
5°	149855	146777	139635	132419	130319
10°	158277	152355	137600	123917	118290
15°	164009	155178	134402	114865	107584
20°	167639	156479	130670	105804	97041
25°	167198	156461	123415	96981	87896
30°	154224	153452	113081	88695	78494
35°	134903	141939	101269	79331	71112
40°	113955	122858	87575	70958	64116
45°	96354	102916	74968	62254	56116
50°	85499	86305	64293	54271	49388
55°	76494	73876	55601	46734	46464
60°	68278	64383	48515	40436	43730
65°	62716	57226	42155	37547	40046
70°	57782	51225	37218	35037	37218
75°	54385	45702	32414	31815	34136
80°	49986	40949	28452	29345	31018
85°	49796	36958	24009	24009	27455

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 103766 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.2	5.0
10°-20°	379.5	13.9
20°-30°	541.4	19.8
30°-40°	557.9	20.4
40°-50°	449.1	16.5
50°-60°	317.6	11.6
60°-70°	205.8	7.5
70°-80°	110.6	4.0
80°-90°	31.9	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°	1057.0	38.7
0°-40°	1614.9	59.2
0°-60°	2381.6	87.2
0°-90°	2730.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2730.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1444	1444	1444	1444	1444	
5°	1541	1509	1436	1362	1340	149
15°	1635	1547	1340	1145	1073	462
25°	1564	1464	1155	907	822	712
35°	1141	1200	856	671	601	708
45°	703	751	547	454	410	549
55°	453	437	329	277	275	405
65°	274	250	184	164	175	273
75°	145	122	87	85	91	154
85°	45	33	22	22	25	49
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°	1443.7	1443.7	1443.7	1443.7	1443.7	1443.7	1443.7	1443.7	1443.7	1443.7	1443.7
1°	1459.1	1465.3	1460.7	1460.7	1456.0	1454.5	1457.6	1452.9	1451.4	1448.3	1442.1
2°	1485.4	1480.8	1479.2	1480.8	1471.5	1471.5	1466.8	1457.6	1452.9	1446.8	1429.8
3°	1503.9	1500.9	1497.8	1496.2	1486.9	1479.2	1473.0	1462.2	1452.9	1445.2	1420.5
4°	1520.9	1520.9	1517.9	1511.7	1502.4	1493.1	1480.8	1468.4	1454.5	1440.6	1408.1
5°	1541.0	1542.6	1528.7	1527.1	1516.3	1502.4	1488.5	1471.5	1454.5	1435.9	1400.4
6°	1561.1	1553.4	1550.3	1539.5	1524.0	1511.7	1494.7	1476.1	1452.9	1431.3	1383.4
7°	1570.4	1568.9	1561.1	1550.3	1536.4	1516.3	1499.3	1474.6	1449.8	1428.2	1371.0
8°	1585.9	1585.9	1576.6	1562.7	1542.6	1524.0	1502.4	1473.0	1448.3	1420.5	1354.0
9°	1596.7	1596.7	1584.3	1572.0	1553.4	1528.7	1503.9	1471.5	1440.6	1408.1	1338.6
10°	1609.0	1606.0	1596.7	1578.1	1562.7	1534.9	1503.9	1469.9	1435.9	1398.8	1323.1
11°	1618.3	1613.7	1602.9	1589.0	1564.2	1536.4	1503.9	1469.9	1429.8	1389.6	1307.6
12°	1626.1	1623.0	1609.0	1592.0	1567.3	1539.5	1502.4	1463.8	1418.9	1377.2	1287.5
13°	1635.3	1626.1	1612.1	1596.7	1568.9	1536.4	1496.2	1454.5	1411.2	1366.4	1270.5
14°	1633.8	1632.2	1619.9	1598.2	1567.3	1533.3	1494.7	1445.2	1400.4	1354.0	1250.5
15°	1635.3	1633.8	1619.9	1599.8	1565.8	1528.7	1490.0	1439.0	1389.6	1340.1	1230.4
16°	1635.3	1635.3	1616.8	1596.7	1564.2	1524.0	1480.8	1432.8	1378.7	1329.3	1213.4
17°	1635.3	1635.3	1619.9	1592.0	1559.6	1520.9	1471.5	1420.5	1366.4	1313.8	1188.6
18°	1638.4	1633.8	1613.7	1590.5	1553.4	1513.2	1465.3	1411.2	1355.6	1296.8	1171.6
19°	1630.7	1627.6	1610.6	1581.2	1548.8	1503.9	1456.0	1400.4	1344.7	1282.9	1151.5
20°	1626.1	1630.7	1607.5	1576.6	1539.5	1496.2	1446.8	1389.6	1329.3	1267.5	1131.4
21°	1627.6	1626.1	1601.3	1568.9	1533.3	1485.4	1435.9	1377.2	1312.3	1248.9	1112.9
22.5°	1624.5	1619.9	1593.6	1558.0	1514.8	1471.5	1417.4	1357.1	1287.5	1216.4	1077.3
23°	1618.3	1613.7	1593.6	1555.0	1508.6	1465.3	1408.1	1344.7	1278.3	1205.6	1068.1
24°	1593.6	1592.0	1582.8	1544.1	1500.9	1452.9	1397.3	1324.6	1250.5	1174.7	1044.9
25°	1564.2	1567.3	1562.7	1537.9	1488.5	1439.0	1380.3	1299.9	1224.2	1154.6	1017.1
26°	1536.4	1536.4	1533.3	1524.0	1476.1	1423.6	1355.6	1270.5	1197.9	1125.3	987.7
27°	1500.9	1507.0	1500.9	1496.2	1463.8	1406.6	1329.3	1250.5	1168.5	1097.4	963.0
28°	1473.0	1473.0	1469.9	1462.2	1451.4	1386.5	1301.5	1221.1	1140.7	1072.7	935.1
29°	1423.6	1432.8	1434.4	1435.9	1434.4	1360.2	1275.2	1188.6	1111.3	1037.1	908.9
30°	1378.7	1388.0	1394.2	1405.0	1406.6	1337.0	1244.3	1162.3	1083.5	1010.9	885.7
32.5°	1256.6	1273.6	1290.6	1309.2	1318.5	1267.5	1168.5	1078.9	998.5	933.6	814.6
35°	1140.7	1145.3	1163.9	1207.2	1216.4	1184.0	1078.9	993.9	918.1	856.3	748.1
37.5°	1009.3	1018.6	1044.9	1094.3	1097.4	1071.2	998.5	899.6	828.5	774.4	680.1
40°	901.1	905.8	924.3	966.0	980.0	963.0	899.6	809.9	745.0	692.5	615.2
42.5°	792.9	799.1	822.3	854.8	874.9	854.8	799.1	721.8	658.5	619.8	553.4
45°	703.3	711.0	732.7	751.2	757.4	745.0	695.6	632.2	587.4	547.2	496.2
47.5°	626.0	633.7	649.2	656.9	664.6	652.3	613.6	561.1	516.3	483.8	437.4
50°	567.3	565.7	576.5	579.6	579.6	565.7	533.3	490.0	452.9	426.6	388.0
52.5°	500.8	503.9	511.6	508.5	507.0	494.6	466.8	429.7	398.8	375.6	340.0
55°	452.9	448.2	452.9	449.8	443.6	431.2	406.5	375.6	349.3	329.2	296.8
57.5°	400.3	400.3	401.9	395.7	388.0	374.1	352.4	327.7	304.5	287.5	261.2
60°	352.4	355.5	354.0	347.8	340.0	324.6	307.6	282.9	262.8	250.4	225.7



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	239.6	239.6	234.9	230.3	219.5	205.6	193.2	177.8	166.9	156.1	140.7
70°	204.0	207.1	200.9	193.2	185.5	176.2	162.3	149.9	139.1	131.4	119.0
72.5°	176.2	174.7	170.0	162.3	156.1	145.3	132.9	123.7	114.4	108.2	98.9
75°	145.3	145.3	140.7	134.5	126.7	117.5	108.2	100.5	92.7	86.6	81.9
77.5°	115.9	117.5	112.8	108.2	102.0	92.7	85.0	78.8	72.6	68.0	64.9
80°	89.6	91.2	86.6	83.5	75.7	71.1	64.9	58.7	54.1	51.0	49.5
82.5°	68.0	66.5	63.4	61.8	55.6	51.0	44.8	41.7	38.6	35.6	35.6
85°	44.8	43.3	41.7	40.2	35.6	30.9	29.4	26.3	23.2	21.6	21.6
87.5°	23.2	23.2	21.6	20.1	18.5	15.5	13.9	10.8	9.3	9.3	9.3
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°	1443.7	1443.7	1443.7
1°	1437.5	1431.3	1429.8
2°	1418.9	1409.7	1411.2
3°	1401.9	1391.1	1380.3
4°	1380.3	1363.3	1363.3
5°	1361.7	1344.7	1340.1
6°	1344.7	1316.9	1310.7
7°	1329.3	1295.3	1284.5
8°	1303.0	1269.0	1258.2
9°	1284.5	1247.4	1236.5
10°	1259.7	1222.6	1202.5
11°	1239.6	1197.9	1182.4
12°	1218.0	1167.0	1151.5
13°	1193.3	1140.7	1131.4
14°	1170.1	1119.1	1102.1
15°	1145.3	1092.8	1072.7
16°	1119.1	1066.5	1048.0
17°	1097.4	1038.7	1024.8
18°	1075.8	1014.0	992.3
19°	1049.5	990.8	966.0
20°	1026.3	961.4	941.3
21°	1001.6	939.8	918.1
22.5°	967.6	898.0	877.9
23°	956.8	885.7	864.0
24°	932.0	860.9	842.4
25°	907.3	842.4	822.3
26°	885.7	814.6	796.0
27°	864.0	792.9	772.8
28°	840.8	769.7	754.3
29°	817.7	745.0	729.6
30°	792.9	728.0	701.7
32.5°	731.1	672.4	650.7
35°	670.8	619.8	601.3
37.5°	612.1	570.4	553.4
40°	561.1	524.0	507.0
42.5°	508.5	474.5	457.5
45°	454.4	426.6	409.6
47.5°	405.0	381.8	363.2
50°	360.1	337.0	327.7
52.5°	316.9	301.4	306.0
55°	276.7	276.7	275.1
57.5°	238.0	248.9	250.4
60°	208.7	222.6	225.7



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	143.7	151.5	154.6
70°	123.7	129.8	131.4
72.5°	105.1	109.7	112.8
75°	85.0	91.2	91.2
77.5°	69.6	72.6	74.2
80°	52.6	54.1	55.6
82.5°	37.1	38.6	40.2
85°	21.6	23.2	24.7
87.5°	9.3	9.3	9.3
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°	312.2	315.3	310.7	303.0	295.2	281.3	265.9	244.2	228.8	216.4	194.8
65°	273.6	275.1	272.0	264.3	256.6	242.7	227.2	208.7	196.3	183.9	165.4

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62.5°	187.0	197.8	199.4
65°	163.8	173.1	174.7

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Scaled Data Report



(END OF REPORT)