

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: P838536

Luminaire Tested: HCSQ635D010-HM63040827-61SQLWW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838536
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-HM63040827-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

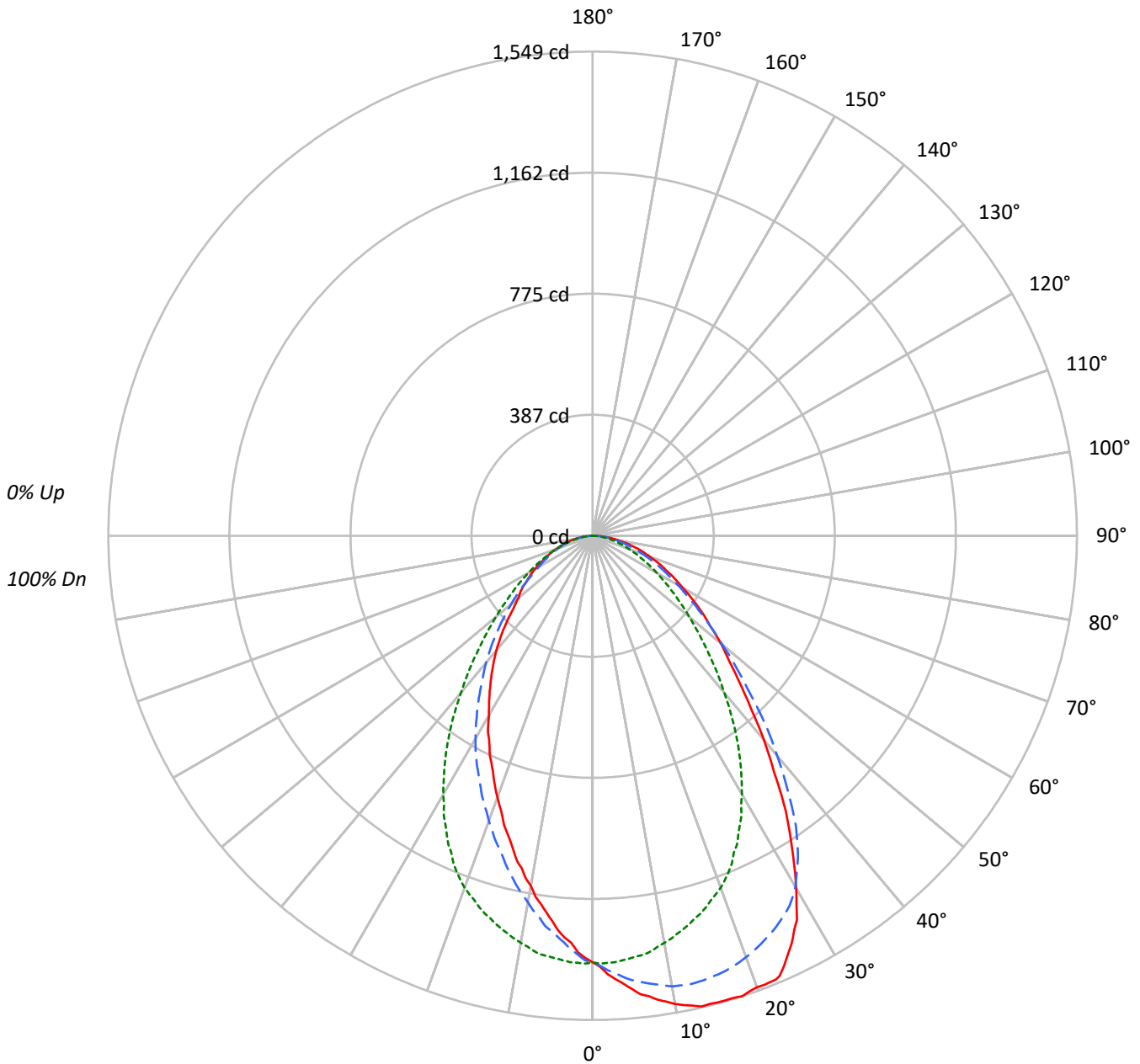
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2580.2 lumens
Efficiency: N/A
Efficacy: 75.9 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					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°	132187	132187	132187	132187	132187
5°	141638	138726	131982	125165	123171
10°	149601	143999	130055	117119	111807
15°	155013	146663	127031	108567	101687
20°	158443	147902	123495	100000	91722
25°	158026	147877	116649	91658	83075
30°	145768	145035	106873	83829	74187
35°	127499	134158	95710	74979	67209
40°	107708	116111	82769	67063	60601
45°	91066	97272	70858	58843	53034
50°	80811	81573	60767	51302	46675
55°	72288	69831	52561	44167	43913
60°	64538	60857	45861	38208	41327
65°	59278	54086	39840	35507	37845
70°	54610	48407	35179	33111	35179
75°	51391	43194	30618	30056	32264
80°	47253	38717	26890	27727	29345
85°	47128	34902	22786	22786	26010

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 98066 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.7	5.0
10°-20°	358.7	13.9
20°-30°	511.7	19.8
30°-40°	527.3	20.4
40°-50°	424.5	16.5
50°-60°	300.2	11.6
60°-70°	194.5	7.5
70°-80°	104.5	4.1
80°-90°	30.2	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°	999.1	38.7
0°-40°	1526.4	59.2
0°-60°	2251.0	87.2
0°-90°	2580.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2580.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1364	1364	1364	1364	1364	
5°	1456	1427	1357	1287	1267	141
15°	1546	1462	1267	1082	1014	437
25°	1478	1383	1091	858	777	673
35°	1078	1134	809	634	568	669
45°	665	710	517	430	387	519
55°	428	413	311	262	260	383
65°	259	236	174	155	165	258
75°	137	115	82	80	86	146
85°	42	31	20	20	23	47
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°	1364.5	1364.5	1364.5	1364.5	1364.5	1364.5	1364.5	1364.5	1364.5	1364.5	1364.5
1°	1379.1	1384.9	1380.6	1380.6	1376.2	1374.7	1377.6	1373.2	1371.8	1368.9	1363.0
2°	1403.9	1399.5	1398.1	1399.5	1390.8	1390.8	1386.4	1377.6	1373.2	1367.4	1351.3
3°	1421.5	1418.5	1415.6	1414.2	1405.4	1398.1	1392.2	1382.0	1373.2	1365.9	1342.6
4°	1437.5	1437.5	1434.6	1428.8	1420.0	1411.2	1399.5	1387.9	1374.7	1361.6	1330.9
5°	1456.5	1458.0	1444.8	1443.4	1433.1	1420.0	1406.8	1390.8	1374.7	1357.2	1323.6
6°	1475.5	1468.2	1465.3	1455.1	1440.5	1428.8	1412.7	1395.2	1373.2	1352.8	1307.5
7°	1484.3	1482.8	1475.5	1465.3	1452.1	1433.1	1417.1	1393.7	1370.3	1349.9	1295.8
8°	1498.9	1498.9	1490.1	1477.0	1458.0	1440.5	1420.0	1392.2	1368.9	1342.6	1279.8
9°	1509.1	1509.1	1497.4	1485.7	1468.2	1444.8	1421.5	1390.8	1361.6	1330.9	1265.1
10°	1520.8	1517.9	1509.1	1491.6	1477.0	1450.7	1421.5	1389.3	1357.2	1322.1	1250.5
11°	1529.6	1525.2	1515.0	1501.8	1478.4	1452.1	1421.5	1389.3	1351.3	1313.4	1235.9
12°	1536.9	1533.9	1520.8	1504.7	1481.4	1455.1	1420.0	1383.5	1341.1	1301.7	1216.9
13°	1545.6	1536.9	1523.7	1509.1	1482.8	1452.1	1414.2	1374.7	1333.8	1291.4	1200.9
14°	1544.2	1542.7	1531.0	1510.6	1481.4	1449.2	1412.7	1365.9	1323.6	1279.8	1181.9
15°	1545.6	1544.2	1531.0	1512.0	1479.9	1444.8	1408.3	1360.1	1313.4	1266.6	1162.9
16°	1545.6	1545.6	1528.1	1509.1	1478.4	1440.5	1399.5	1354.3	1303.1	1256.4	1146.8
17°	1545.6	1545.6	1531.0	1504.7	1474.1	1437.5	1390.8	1342.6	1291.4	1241.8	1123.4
18°	1548.6	1544.2	1525.2	1503.3	1468.2	1430.2	1384.9	1333.8	1281.2	1225.7	1107.4
19°	1541.3	1538.3	1522.3	1494.5	1463.8	1421.5	1376.2	1323.6	1271.0	1212.5	1088.4
20°	1536.9	1541.3	1519.3	1490.1	1455.1	1414.2	1367.4	1313.4	1256.4	1197.9	1069.4
21°	1538.3	1536.9	1513.5	1482.8	1449.2	1403.9	1357.2	1301.7	1240.3	1180.4	1051.8
22.5°	1535.4	1531.0	1506.2	1472.6	1431.7	1390.8	1339.6	1282.7	1216.9	1149.7	1018.2
23°	1529.6	1525.2	1506.2	1469.7	1425.8	1384.9	1330.9	1271.0	1208.2	1139.5	1009.5
24°	1506.2	1504.7	1496.0	1459.4	1418.5	1373.2	1320.7	1252.0	1181.9	1110.3	987.6
25°	1478.4	1481.4	1477.0	1453.6	1406.8	1360.1	1304.6	1228.6	1157.0	1091.3	961.3
26°	1452.1	1452.1	1449.2	1440.5	1395.2	1345.5	1281.2	1200.9	1132.2	1063.5	933.5
27°	1418.5	1424.4	1418.5	1414.2	1383.5	1329.4	1256.4	1181.9	1104.4	1037.2	910.1
28°	1392.2	1392.2	1389.3	1382.0	1371.8	1310.4	1230.1	1154.1	1078.1	1013.9	883.8
29°	1345.5	1354.3	1355.7	1357.2	1355.7	1285.6	1205.2	1123.4	1050.4	980.3	859.0
30°	1303.1	1311.9	1317.7	1328.0	1329.4	1263.7	1176.0	1098.6	1024.1	955.4	837.1
32.5°	1187.7	1203.8	1219.9	1237.4	1246.1	1197.9	1104.4	1019.7	943.7	882.4	769.9
35°	1078.1	1082.5	1100.1	1141.0	1149.7	1119.1	1019.7	939.4	867.8	809.3	707.1
37.5°	954.0	962.7	987.6	1034.3	1037.2	1012.4	943.7	850.2	783.0	731.9	642.8
40°	851.7	856.1	873.6	913.1	926.2	910.1	850.2	765.5	704.2	654.5	581.4
42.5°	749.4	755.3	777.2	807.9	826.9	807.9	755.3	682.2	622.3	585.8	523.0
45°	664.7	672.0	692.5	710.0	715.8	704.2	657.4	597.5	555.1	517.2	468.9
47.5°	591.7	599.0	613.6	620.9	628.2	616.5	580.0	530.3	487.9	457.3	413.4
50°	536.2	534.7	544.9	547.8	547.8	534.7	504.0	463.1	428.0	403.2	366.7
52.5°	473.3	476.3	483.6	480.6	479.2	467.5	441.2	406.1	376.9	355.0	321.4
55°	428.0	423.7	428.0	425.1	419.3	407.6	384.2	355.0	330.2	311.2	280.5
57.5°	378.4	378.4	379.8	374.0	366.7	353.5	333.1	309.7	287.8	271.7	246.9
60°	333.1	336.0	334.5	328.7	321.4	306.8	290.7	267.3	248.4	236.7	213.3



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	226.4	226.4	222.1	217.7	207.4	194.3	182.6	168.0	157.8	147.6	132.9
70°	192.8	195.8	189.9	182.6	175.3	166.5	153.4	141.7	131.5	124.2	112.5
72.5°	166.5	165.1	160.7	153.4	147.6	137.3	125.6	116.9	108.1	102.3	93.5
75°	137.3	137.3	132.9	127.1	119.8	111.0	102.3	95.0	87.7	81.8	77.4
77.5°	109.6	111.0	106.6	102.3	96.4	87.7	80.3	74.5	68.7	64.3	61.4
80°	84.7	86.2	81.8	78.9	71.6	67.2	61.4	55.5	51.1	48.2	46.7
82.5°	64.3	62.8	59.9	58.4	52.6	48.2	42.4	39.4	36.5	33.6	33.6
85°	42.4	40.9	39.4	38.0	33.6	29.2	27.8	24.8	21.9	20.5	20.5
87.5°	21.9	21.9	20.5	19.0	17.5	14.6	13.1	10.2	8.8	8.8	8.8
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°	1364.5	1364.5	1364.5
1°	1358.6	1352.8	1351.3
2°	1341.1	1332.3	1333.8
3°	1325.0	1314.8	1304.6
4°	1304.6	1288.5	1288.5
5°	1287.1	1271.0	1266.6
6°	1271.0	1244.7	1238.8
7°	1256.4	1224.2	1214.0
8°	1231.5	1199.4	1189.2
9°	1214.0	1178.9	1168.7
10°	1190.6	1155.6	1136.6
11°	1171.6	1132.2	1117.6
12°	1151.2	1103.0	1088.4
13°	1127.8	1078.1	1069.4
14°	1105.9	1057.7	1041.6
15°	1082.5	1032.9	1013.9
16°	1057.7	1008.0	990.5
17°	1037.2	981.7	968.6
18°	1016.8	958.4	937.9
19°	992.0	936.4	913.1
20°	970.0	908.7	889.7
21°	946.7	888.2	867.8
22.5°	914.5	848.8	829.8
23°	904.3	837.1	816.6
24°	880.9	813.7	796.2
25°	857.5	796.2	777.2
26°	837.1	769.9	752.4
27°	816.6	749.4	730.5
28°	794.7	727.5	712.9
29°	772.8	704.2	689.5
30°	749.4	688.1	663.2
32.5°	691.0	635.5	615.0
35°	634.0	585.8	568.3
37.5°	578.5	539.1	523.0
40°	530.3	495.2	479.2
42.5°	480.6	448.5	432.4
45°	429.5	403.2	387.1
47.5°	382.8	360.8	343.3
50°	340.4	318.5	309.7
52.5°	299.5	284.9	289.3
55°	261.5	261.5	260.0
57.5°	225.0	235.2	236.7
60°	197.2	210.4	213.3



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	135.9	143.2	146.1
70°	116.9	122.7	124.2
72.5°	99.3	103.7	106.6
75°	80.3	86.2	86.2
77.5°	65.7	68.7	70.1
80°	49.7	51.1	52.6
82.5°	35.1	36.5	38.0
85°	20.5	21.9	23.4
87.5°	8.8	8.8	8.8
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



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Scaled Data Report





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

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Scaled Data Report





62.5°	295.1	298.0	293.6	286.3	279.0	265.9	251.3	230.8	216.2	204.5	184.1
65°	258.6	260.0	257.1	249.8	242.5	229.4	214.8	197.2	185.5	173.8	156.3

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Scaled Data Report



62.5°	176.8	187.0	188.5
65°	154.9	163.6	165.1

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Scaled Data Report



(END OF REPORT)