

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: P838506

Luminaire Tested: HCSQ630D010-HM63040835-61SQLWW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838506
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: HCSQ630D010-HM63040835-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

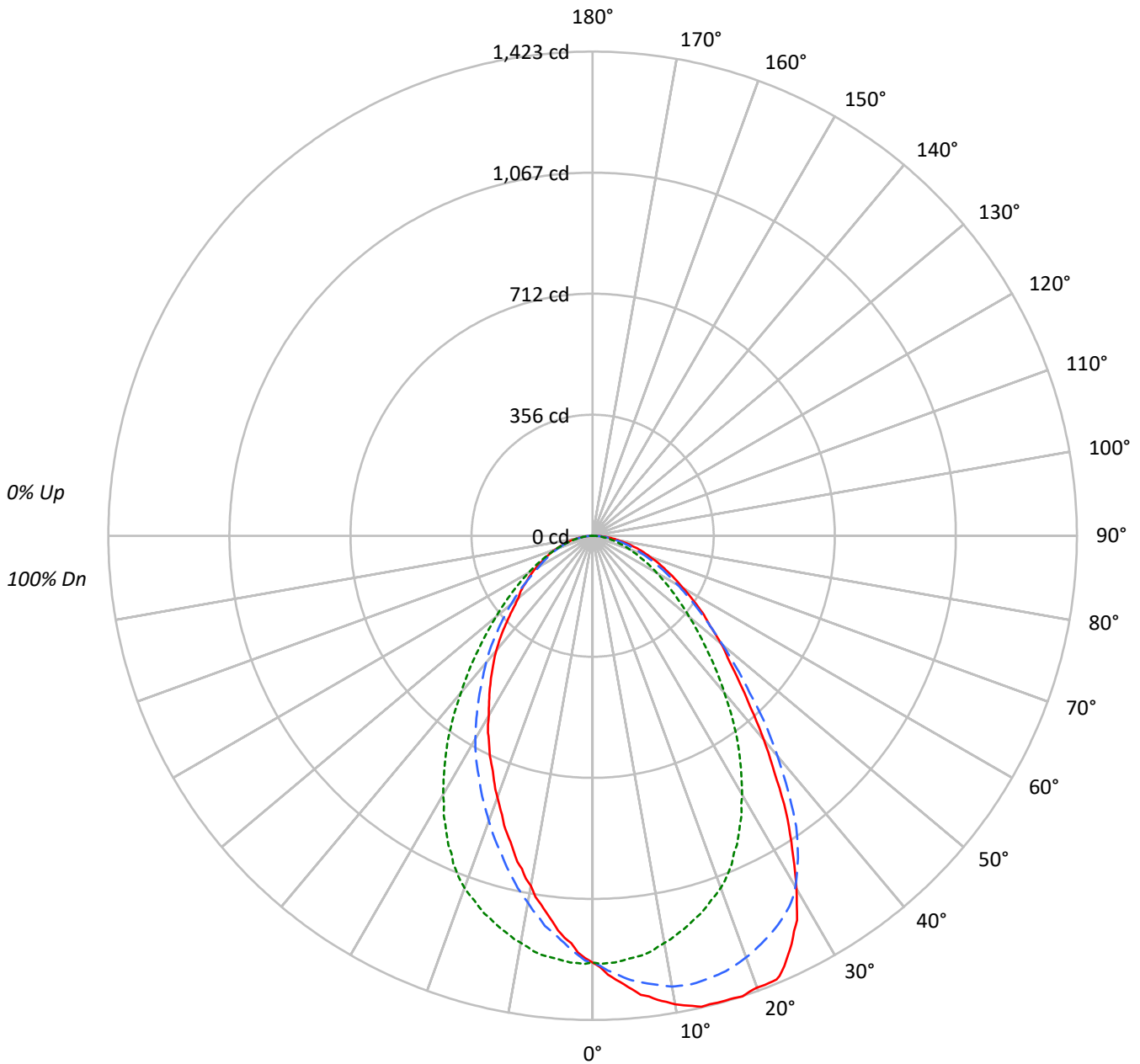
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2371.7 lumens
Efficiency: N/A
Efficacy: 84.1 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): 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				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	100	100	100
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87	87	87	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75	75	75	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66	66	66	66
4	87	76	69	63	85	75	68	62	73	66	62	71	65	61	68	64	60	58	58	58	58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	51	51	51	51
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46	46	46	46
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42	42	42	42
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38	38	38	38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34	34	34	34
10	58	46	39	34	57	45	38	34	44	38	34	44	38	33	43	37	33	32	32	32	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	121501	121501	121501	121501	121501
5°	130192	127513	121314	115041	113213
10°	137511	132357	119549	107656	102767
15°	142486	134814	116761	99791	93463
20°	145639	135948	113515	91917	84309
25°	145264	135932	107222	84262	76362
30°	133988	133317	98237	77062	68202
35°	117199	123313	87976	68924	61781
40°	99007	106734	76079	61650	55706
45°	83709	89415	65131	54089	48759
50°	74271	74986	55854	47158	42908
55°	66461	64189	48305	40603	40366
60°	59327	55936	42141	35127	37995
65°	54487	49708	36630	32619	34774
70°	50219	44498	32318	30420	32318
75°	47236	39713	28147	27661	29644
80°	43459	35593	24714	25495	26946
85°	43238	32123	20897	20897	23898

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 90148 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.3	5.0
10°-20°	329.7	13.9
20°-30°	470.3	19.8
30°-40°	484.7	20.4
40°-50°	390.2	16.5
50°-60°	275.9	11.6
60°-70°	178.8	7.5
70°-80°	96.1	4.0
80°-90°	27.7	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°	918.3	38.7
0°-40°	1403.0	59.2
0°-60°	2069.1	87.2
0°-90°	2371.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2371.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1254	1254	1254	1254	1254	
5°	1339	1311	1248	1183	1164	130
15°	1421	1344	1164	995	932	402
25°	1359	1272	1003	788	714	619
35°	991	1043	744	583	522	615
45°	611	653	475	395	356	477
55°	394	380	286	240	239	352
65°	238	217	160	142	152	237
75°	126	106	75	74	79	134
85°	39	29	19	19	22	43
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°	1254.2	1254.2	1254.2	1254.2	1254.2	1254.2	1254.2	1254.2	1254.2	1254.2	1254.2
1°	1267.6	1273.0	1269.0	1269.0	1265.0	1263.6	1266.3	1262.3	1260.9	1258.2	1252.9
2°	1290.5	1286.4	1285.1	1286.4	1278.4	1278.4	1274.4	1266.3	1262.3	1256.9	1242.1
3°	1306.6	1303.9	1301.2	1299.9	1291.8	1285.1	1279.7	1270.3	1262.3	1255.6	1234.1
4°	1321.4	1321.4	1318.7	1313.3	1305.2	1297.2	1286.4	1275.7	1263.6	1251.5	1223.3
5°	1338.8	1340.2	1328.1	1326.7	1317.3	1305.2	1293.2	1278.4	1263.6	1247.5	1216.6
6°	1356.3	1349.6	1346.9	1337.5	1324.0	1313.3	1298.5	1282.4	1262.3	1243.5	1201.8
7°	1364.3	1363.0	1356.3	1346.9	1334.8	1317.3	1302.6	1281.1	1259.6	1240.8	1191.1
8°	1377.8	1377.8	1369.7	1357.6	1340.2	1324.0	1305.2	1279.7	1258.2	1234.1	1176.3
9°	1387.2	1387.2	1376.4	1365.7	1349.6	1328.1	1306.6	1278.4	1251.5	1223.3	1162.9
10°	1397.9	1395.2	1387.2	1371.0	1357.6	1333.4	1306.6	1277.0	1247.5	1215.3	1149.5
11°	1406.0	1401.9	1392.5	1380.4	1359.0	1334.8	1306.6	1277.0	1242.1	1207.2	1136.0
12°	1412.7	1410.0	1397.9	1383.1	1361.6	1337.5	1305.2	1271.7	1232.7	1196.5	1118.6
13°	1420.7	1412.7	1400.6	1387.2	1363.0	1334.8	1299.9	1263.6	1226.0	1187.1	1103.8
14°	1419.4	1418.0	1407.3	1388.5	1361.6	1332.1	1298.5	1255.6	1216.6	1176.3	1086.4
15°	1420.7	1419.4	1407.3	1389.8	1360.3	1328.1	1294.5	1250.2	1207.2	1164.2	1068.9
16°	1420.7	1420.7	1404.6	1387.2	1359.0	1324.0	1286.4	1244.8	1197.8	1154.8	1054.1
17°	1420.7	1420.7	1407.3	1383.1	1354.9	1321.4	1278.4	1234.1	1187.1	1141.4	1032.6
18°	1423.4	1419.4	1401.9	1381.8	1349.6	1314.6	1273.0	1226.0	1177.7	1126.6	1017.9
19°	1416.7	1414.0	1399.2	1373.7	1345.5	1306.6	1265.0	1216.6	1168.3	1114.6	1000.4
20°	1412.7	1416.7	1396.6	1369.7	1337.5	1299.9	1256.9	1207.2	1154.8	1101.1	983.0
21°	1414.0	1412.7	1391.2	1363.0	1332.1	1290.5	1247.5	1196.5	1140.1	1085.0	966.8
22.5°	1411.3	1407.3	1384.5	1353.6	1316.0	1278.4	1231.4	1179.0	1118.6	1056.8	936.0
23°	1406.0	1401.9	1384.5	1350.9	1310.6	1273.0	1223.3	1168.3	1110.5	1047.4	927.9
24°	1384.5	1383.1	1375.1	1341.5	1303.9	1262.3	1213.9	1150.8	1086.4	1020.6	907.8
25°	1359.0	1361.6	1357.6	1336.1	1293.2	1250.2	1199.2	1129.3	1063.5	1003.1	883.6
26°	1334.8	1334.8	1332.1	1324.0	1282.4	1236.8	1177.7	1103.8	1040.7	977.6	858.1
27°	1303.9	1309.3	1303.9	1299.9	1271.7	1222.0	1154.8	1086.4	1015.2	953.4	836.6
28°	1279.7	1279.7	1277.0	1270.3	1260.9	1204.5	1130.7	1060.8	991.0	931.9	812.4
29°	1236.8	1244.8	1246.2	1247.5	1246.2	1181.7	1107.8	1032.6	965.5	901.0	789.6
30°	1197.8	1205.9	1211.2	1220.6	1222.0	1161.6	1081.0	1009.8	941.3	878.2	769.5
32.5°	1091.7	1106.5	1121.3	1137.4	1145.4	1101.1	1015.2	937.3	867.5	811.1	707.7
35°	991.0	995.0	1011.2	1048.8	1056.8	1028.6	937.3	863.5	797.7	743.9	649.9
37.5°	876.9	884.9	907.8	950.7	953.4	930.6	867.5	781.5	719.8	672.8	590.9
40°	782.9	786.9	803.0	839.3	851.4	836.6	781.5	703.7	647.3	601.6	534.5
42.5°	688.9	694.3	714.4	742.6	760.1	742.6	694.3	627.1	572.1	538.5	480.7
45°	611.0	617.7	636.5	652.6	658.0	647.3	604.3	549.2	510.3	475.4	431.1
47.5°	543.9	550.6	564.0	570.7	577.4	566.7	533.1	487.5	448.5	420.3	380.0
50°	492.8	491.5	500.9	503.6	503.6	491.5	463.3	425.7	393.5	370.6	337.1
52.5°	435.1	437.8	444.5	441.8	440.5	429.7	405.5	373.3	346.5	326.3	295.4
55°	393.5	389.4	393.5	390.8	385.4	374.7	353.2	326.3	303.5	286.0	257.8
57.5°	347.8	347.8	349.1	343.8	337.1	325.0	306.2	284.7	264.5	249.8	226.9
60°	306.2	308.9	307.5	302.1	295.4	282.0	267.2	245.7	228.3	217.5	196.1



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	208.1	208.1	204.1	200.1	190.7	178.6	167.9	154.4	145.0	135.6	122.2
70°	177.3	179.9	174.6	167.9	161.1	153.1	141.0	130.3	120.9	114.1	103.4
72.5°	153.1	151.7	147.7	141.0	135.6	126.2	115.5	107.4	99.4	94.0	85.9
75°	126.2	126.2	122.2	116.8	110.1	102.1	94.0	87.3	80.6	75.2	71.2
77.5°	100.7	102.1	98.0	94.0	88.6	80.6	73.9	68.5	63.1	59.1	56.4
80°	77.9	79.2	75.2	72.5	65.8	61.8	56.4	51.0	47.0	44.3	43.0
82.5°	59.1	57.7	55.1	53.7	48.3	44.3	38.9	36.3	33.6	30.9	30.9
85°	38.9	37.6	36.3	34.9	30.9	26.9	25.5	22.8	20.1	18.8	18.8
87.5°	20.1	20.1	18.8	17.5	16.1	13.4	12.1	9.4	8.1	8.1	8.1
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°	1254.2	1254.2	1254.2
1°	1248.8	1243.5	1242.1
2°	1232.7	1224.7	1226.0
3°	1218.0	1208.6	1199.2
4°	1199.2	1184.4	1184.4
5°	1183.0	1168.3	1164.2
6°	1168.3	1144.1	1138.7
7°	1154.8	1125.3	1115.9
8°	1132.0	1102.5	1093.1
9°	1115.9	1083.7	1074.3
10°	1094.4	1062.2	1044.7
11°	1077.0	1040.7	1027.3
12°	1058.2	1013.8	1000.4
13°	1036.7	991.0	983.0
14°	1016.5	972.2	957.4
15°	995.0	949.4	931.9
16°	972.2	926.6	910.4
17°	953.4	902.4	890.3
18°	934.6	880.9	862.1
19°	911.8	860.8	839.3
20°	891.6	835.3	817.8
21°	870.2	816.5	797.7
22.5°	840.6	780.2	762.7
23°	831.2	769.5	750.7
24°	809.7	748.0	731.9
25°	788.3	731.9	714.4
26°	769.5	707.7	691.6
27°	750.7	688.9	671.4
28°	730.5	668.7	655.3
29°	710.4	647.3	633.8
30°	688.9	632.5	609.7
32.5°	635.2	584.1	565.3
35°	582.8	538.5	522.4
37.5°	531.8	495.5	480.7
40°	487.5	455.2	440.5
42.5°	441.8	412.3	397.5
45°	394.8	370.6	355.9
47.5°	351.8	331.7	315.6
50°	312.9	292.7	284.7
52.5°	275.3	261.9	265.9
55°	240.4	240.4	239.0
57.5°	206.8	216.2	217.5
60°	181.3	193.4	196.1



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	124.9	131.6	134.3
70°	107.4	112.8	114.1
72.5°	91.3	95.3	98.0
75°	73.9	79.2	79.2
77.5°	60.4	63.1	64.5
80°	45.7	47.0	48.3
82.5°	32.2	33.6	34.9
85°	18.8	20.1	21.5
87.5°	8.1	8.1	8.1
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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62.5°	271.3	273.9	269.9	263.2	256.5	244.4	231.0	212.2	198.7	188.0	169.2
65°	237.7	239.0	236.3	229.6	222.9	210.8	197.4	181.3	170.5	159.8	143.7

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62.5°	162.5	171.9	173.2
65°	142.3	150.4	151.7

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Scaled Data Report



(END OF REPORT)