

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: P838526

Luminaire Tested: HCSQ630D010-HM63040935-61SQLWW

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838526
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-HM63040935-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

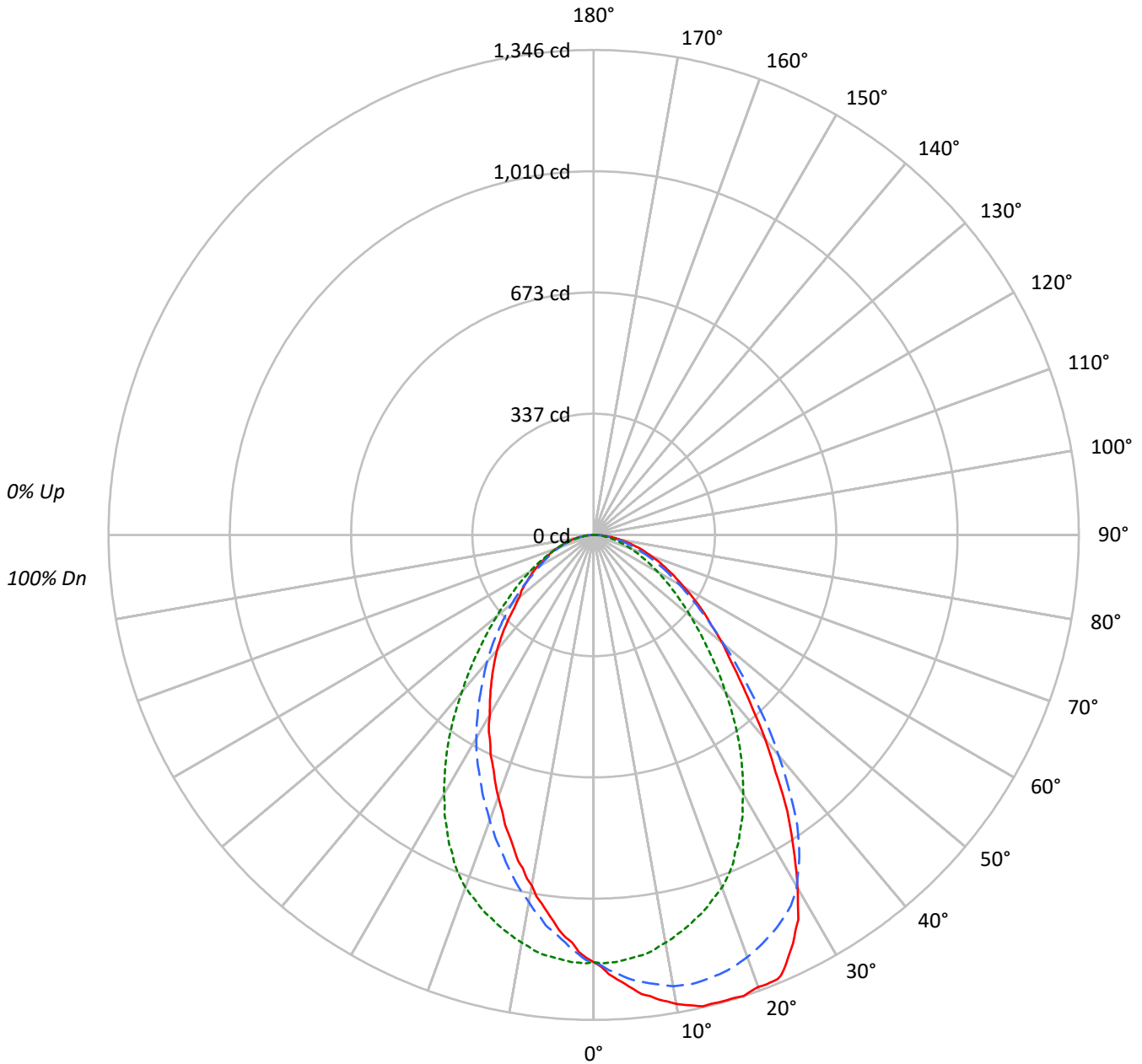
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2242.0 lumens
Efficiency: N/A
Efficacy: 79.5 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 (Ain): 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°	114856	114856	114856	114856	114856
5°	123074	120545	114682	108750	107028
10°	129996	125122	113007	101773	97150
15°	134693	127437	110382	94335	88358
20°	137670	128510	107309	86897	79701
25°	137311	128493	101353	79644	72183
30°	126661	126024	92868	72845	64466
35°	110789	116572	83174	65151	58398
40°	93594	100891	71919	58274	52659
45°	79133	84524	61569	51129	46088
50°	70216	70880	52809	44580	40556
55°	62813	60676	45670	38373	38171
60°	56071	52884	39835	33209	35902
65°	51507	46991	34636	30854	32871
70°	47472	42062	30562	28778	30562
75°	44654	37542	26613	26126	28035
80°	41060	33640	23375	24101	25495
85°	40904	30345	19785	19785	22564

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 85216 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.8	5.0
10°-20°	311.7	13.9
20°-30°	444.6	19.8
30°-40°	458.2	20.4
40°-50°	368.8	16.5
50°-60°	260.8	11.6
60°-70°	169.0	7.5
70°-80°	90.8	4.1
80°-90°	26.2	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°	868.1	38.7
0°-40°	1326.3	59.2
0°-60°	1955.9	87.2
0°-90°	2242.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2242.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1186	1186	1186	1186	1186	
5°	1266	1240	1179	1118	1101	123
15°	1343	1271	1101	941	881	380
25°	1285	1202	948	745	675	585
35°	937	986	703	551	494	582
45°	578	617	449	373	336	451
55°	372	359	270	227	226	333
65°	225	205	151	135	143	224
75°	119	100	71	70	75	127
85°	37	27	18	18	20	40
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°	1185.6	1185.6	1185.6	1185.6	1185.6	1185.6	1185.6	1185.6	1185.6	1185.6	1185.6
1°	1198.3	1203.4	1199.6	1199.6	1195.8	1194.5	1197.1	1193.2	1192.0	1189.4	1184.4
2°	1219.9	1216.1	1214.8	1216.1	1208.5	1208.5	1204.7	1197.1	1193.2	1188.2	1174.2
3°	1235.1	1232.6	1230.1	1228.8	1221.2	1214.8	1209.7	1200.9	1193.2	1186.9	1166.6
4°	1249.1	1249.1	1246.6	1241.5	1233.9	1226.2	1216.1	1205.9	1194.5	1183.1	1156.4
5°	1265.6	1266.9	1255.4	1254.2	1245.3	1233.9	1222.4	1208.5	1194.5	1179.3	1150.1
6°	1282.1	1275.8	1273.2	1264.3	1251.6	1241.5	1227.5	1212.3	1193.2	1175.5	1136.1
7°	1289.7	1288.5	1282.1	1273.2	1261.8	1245.3	1231.3	1211.0	1190.7	1172.9	1126.0
8°	1302.4	1302.4	1294.8	1283.4	1266.9	1251.6	1233.9	1209.7	1189.4	1166.6	1112.0
9°	1311.3	1311.3	1301.1	1291.0	1275.8	1255.4	1235.1	1208.5	1183.1	1156.4	1099.3
10°	1321.5	1318.9	1311.3	1296.1	1283.4	1260.5	1235.1	1207.2	1179.3	1148.8	1086.6
11°	1329.1	1325.3	1316.4	1305.0	1284.6	1261.8	1235.1	1207.2	1174.2	1141.2	1073.9
12°	1335.4	1332.9	1321.5	1307.5	1287.2	1264.3	1233.9	1202.1	1165.3	1131.0	1057.4
13°	1343.0	1335.4	1324.0	1311.3	1288.5	1261.8	1228.8	1194.5	1159.0	1122.2	1043.5
14°	1341.8	1340.5	1330.3	1312.6	1287.2	1259.3	1227.5	1186.9	1150.1	1112.0	1027.0
15°	1343.0	1341.8	1330.3	1313.8	1285.9	1255.4	1223.7	1181.8	1141.2	1100.6	1010.4
16°	1343.0	1343.0	1327.8	1311.3	1284.6	1251.6	1216.1	1176.7	1132.3	1091.7	996.5
17°	1343.0	1343.0	1330.3	1307.5	1280.8	1249.1	1208.5	1166.6	1122.2	1079.0	976.2
18°	1345.6	1341.8	1325.3	1306.2	1275.8	1242.8	1203.4	1159.0	1113.3	1065.0	962.2
19°	1339.2	1336.7	1322.7	1298.6	1271.9	1235.1	1195.8	1150.1	1104.4	1053.6	945.7
20°	1335.4	1339.2	1320.2	1294.8	1264.3	1228.8	1188.2	1141.2	1091.7	1040.9	929.2
21°	1336.7	1335.4	1315.1	1288.5	1259.3	1219.9	1179.3	1131.0	1077.7	1025.7	914.0
22.5°	1334.1	1330.3	1308.8	1279.6	1244.0	1208.5	1164.0	1114.5	1057.4	999.0	884.8
23°	1329.1	1325.3	1308.8	1277.0	1238.9	1203.4	1156.4	1104.4	1049.8	990.1	877.2
24°	1308.8	1307.5	1299.9	1268.1	1232.6	1193.2	1147.5	1087.9	1027.0	964.8	858.1
25°	1284.6	1287.2	1283.4	1263.1	1222.4	1181.8	1133.6	1067.6	1005.4	948.2	835.3
26°	1261.8	1261.8	1259.3	1251.6	1212.3	1169.1	1113.3	1043.5	983.8	924.1	811.2
27°	1232.6	1237.7	1232.6	1228.8	1202.1	1155.2	1091.7	1027.0	959.7	901.3	790.8
28°	1209.7	1209.7	1207.2	1200.9	1192.0	1138.7	1068.8	1002.8	936.8	881.0	768.0
29°	1169.1	1176.7	1178.0	1179.3	1178.0	1117.1	1047.3	976.2	912.7	851.8	746.4
30°	1132.3	1139.9	1145.0	1153.9	1155.2	1098.0	1021.9	954.6	889.9	830.2	727.4
32.5°	1032.0	1046.0	1060.0	1075.2	1082.8	1040.9	959.7	886.0	820.0	766.7	669.0
35°	936.8	940.6	955.9	991.4	999.0	972.4	886.0	816.2	754.0	703.3	614.4
37.5°	828.9	836.5	858.1	898.7	901.3	879.7	820.0	738.8	680.4	636.0	558.5
40°	740.1	743.9	759.1	793.4	804.8	790.8	738.8	665.2	611.9	568.7	505.2
42.5°	651.2	656.3	675.3	702.0	718.5	702.0	656.3	592.8	540.8	509.0	454.4
45°	577.6	583.9	601.7	616.9	622.0	611.9	571.2	519.2	482.4	449.4	407.5
47.5°	514.1	520.5	533.2	539.5	545.8	535.7	504.0	460.8	424.0	397.3	359.2
50°	465.9	464.6	473.5	476.0	476.0	464.6	437.9	402.4	371.9	350.4	318.6
52.5°	411.3	413.8	420.2	417.6	416.4	406.2	383.4	352.9	327.5	308.5	279.3
55°	371.9	368.1	371.9	369.4	364.3	354.2	333.9	308.5	286.9	270.4	243.7
57.5°	328.8	328.8	330.0	325.0	318.6	307.2	289.4	269.1	250.1	236.1	214.5
60°	289.4	292.0	290.7	285.6	279.3	266.6	252.6	232.3	215.8	205.6	185.3



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	196.8	196.8	193.0	189.1	180.3	168.8	158.7	146.0	137.1	128.2	115.5
70°	167.6	170.1	165.0	158.7	152.3	144.7	133.3	123.1	114.2	107.9	97.7
72.5°	144.7	143.4	139.6	133.3	128.2	119.3	109.2	101.6	93.9	88.9	81.2
75°	119.3	119.3	115.5	110.4	104.1	96.5	88.9	82.5	76.2	71.1	67.3
77.5°	95.2	96.5	92.7	88.9	83.8	76.2	69.8	64.7	59.7	55.9	53.3
80°	73.6	74.9	71.1	68.5	62.2	58.4	53.3	48.2	44.4	41.9	40.6
82.5°	55.9	54.6	52.0	50.8	45.7	41.9	36.8	34.3	31.7	29.2	29.2
85°	36.8	35.5	34.3	33.0	29.2	25.4	24.1	21.6	19.0	17.8	17.8
87.5°	19.0	19.0	17.8	16.5	15.2	12.7	11.4	8.9	7.6	7.6	7.6
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°	1185.6	1185.6	1185.6
1°	1180.6	1175.5	1174.2
2°	1165.3	1157.7	1159.0
3°	1151.4	1142.5	1133.6
4°	1133.6	1119.6	1119.6
5°	1118.3	1104.4	1100.6
6°	1104.4	1081.5	1076.5
7°	1091.7	1063.8	1054.9
8°	1070.1	1042.2	1033.3
9°	1054.9	1024.4	1015.5
10°	1034.6	1004.1	987.6
11°	1018.1	983.8	971.1
12°	1000.3	958.4	945.7
13°	980.0	936.8	929.2
14°	960.9	919.1	905.1
15°	940.6	897.5	881.0
16°	919.1	875.9	860.7
17°	901.3	853.0	841.6
18°	883.5	832.7	815.0
19°	861.9	813.7	793.4
20°	842.9	789.6	773.1
21°	822.6	771.8	754.0
22.5°	794.7	737.5	721.0
23°	785.8	727.4	709.6
24°	765.5	707.1	691.8
25°	745.1	691.8	675.3
26°	727.4	669.0	653.7
27°	709.6	651.2	634.7
28°	690.6	632.2	619.5
29°	671.5	611.9	599.2
30°	651.2	597.9	576.3
32.5°	600.4	552.2	534.4
35°	550.9	509.0	493.8
37.5°	502.7	468.4	454.4
40°	460.8	430.3	416.4
42.5°	417.6	389.7	375.7
45°	373.2	350.4	336.4
47.5°	332.6	313.5	298.3
50°	295.8	276.7	269.1
52.5°	260.2	247.5	251.3
55°	227.2	227.2	226.0
57.5°	195.5	204.4	205.6
60°	171.4	182.8	185.3



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	118.1	124.4	126.9
70°	101.6	106.6	107.9
72.5°	86.3	90.1	92.7
75°	69.8	74.9	74.9
77.5°	57.1	59.7	60.9
80°	43.2	44.4	45.7
82.5°	30.5	31.7	33.0
85°	17.8	19.0	20.3
87.5°	7.6	7.6	7.6
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°	256.4	259.0	255.2	248.8	242.5	231.0	218.3	200.6	187.9	177.7	159.9
65°	224.7	226.0	223.4	217.1	210.7	199.3	186.6	171.4	161.2	151.1	135.8

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Scaled Data Report



62.5°	153.6	162.5	163.8
65°	134.6	142.2	143.4

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Scaled Data Report



(END OF REPORT)