

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: P838501

Luminaire Tested: HCSQ630D010-HM63040830-61SQLWW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838501
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-HM63040830-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

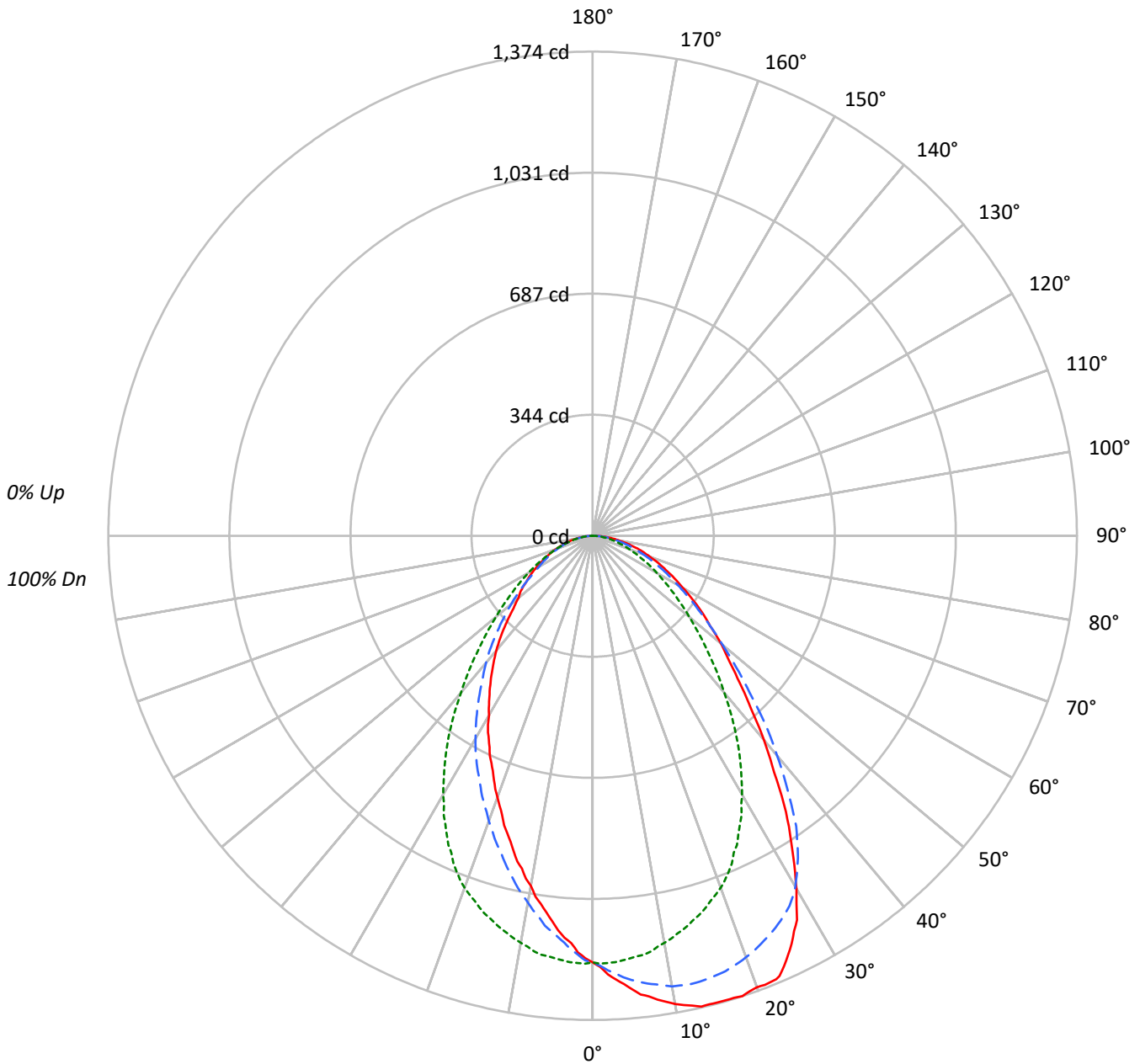
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2289.2 lumens
Efficiency: N/A
Efficacy: 81.2 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										
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	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	100	100		
	1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87	87	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	75	75		
	3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66	66	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	58	58		
	5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	51	51	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	46	46		
	7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42	42	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	38	38		
	9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34	34	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	32	32		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	117277	117277	117277	117277	117277
5°	125661	123079	117093	111045	109275
10°	132730	127753	115388	103908	99196
15°	137532	130125	112699	96321	90213
20°	140567	131211	109567	88722	81371
25°	140208	131202	103491	81322	73701
30°	129324	128675	94826	74377	65820
35°	113119	119020	84913	66523	59628
40°	95555	103016	73436	59500	53759
45°	80790	86298	62857	52212	47060
50°	71693	72372	53909	45515	41415
55°	64147	61951	46633	39184	38965
60°	57253	53989	40688	33906	36658
65°	52585	47989	35347	31496	33582
70°	48463	42954	31214	29372	31214
75°	45589	38328	27174	26687	28634
80°	41953	34338	23877	24603	26053
85°	41793	30956	20119	20119	23008

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 87010 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.2	5.0
10°-20°	318.2	13.9
20°-30°	453.9	19.8
30°-40°	467.8	20.4
40°-50°	376.6	16.5
50°-60°	266.3	11.6
60°-70°	172.6	7.5
70°-80°	92.7	4.1
80°-90°	26.8	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°	886.4	38.7
0°-40°	1354.2	59.2
0°-60°	1997.1	87.2
0°-90°	2289.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2289.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1211	1211	1211	1211	1211	
5°	1292	1266	1204	1142	1124	125
15°	1371	1297	1124	960	900	388
25°	1312	1227	968	761	690	597
35°	956	1006	718	562	504	594
45°	590	630	459	381	344	461
55°	380	367	276	232	231	340
65°	229	209	154	137	146	229
75°	122	102	73	71	76	129
85°	38	28	18	18	21	41
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°	1210.6	1210.6	1210.6	1210.6	1210.6	1210.6	1210.6	1210.6	1210.6	1210.6	1210.6
1°	1223.5	1228.7	1224.8	1224.8	1220.9	1219.6	1222.2	1218.3	1217.1	1214.5	1209.3
2°	1245.6	1241.7	1240.4	1241.7	1233.9	1233.9	1230.0	1222.2	1218.3	1213.2	1198.9
3°	1261.1	1258.5	1255.9	1254.6	1246.9	1240.4	1235.2	1226.1	1218.3	1211.9	1191.1
4°	1275.4	1275.4	1272.8	1267.6	1259.8	1252.0	1241.7	1231.3	1219.6	1208.0	1180.8
5°	1292.2	1293.5	1281.9	1280.6	1271.5	1259.8	1248.2	1233.9	1219.6	1204.1	1174.3
6°	1309.1	1302.6	1300.0	1290.9	1278.0	1267.6	1253.3	1237.8	1218.3	1200.2	1160.0
7°	1316.9	1315.6	1309.1	1300.0	1288.3	1271.5	1257.2	1236.5	1215.8	1197.6	1149.7
8°	1329.8	1329.8	1322.0	1310.4	1293.5	1278.0	1259.8	1235.2	1214.5	1191.1	1135.4
9°	1338.9	1338.9	1328.5	1318.1	1302.6	1281.9	1261.1	1233.9	1208.0	1180.8	1122.4
10°	1349.3	1346.7	1338.9	1323.3	1310.4	1287.0	1261.1	1232.6	1204.1	1173.0	1109.5
11°	1357.0	1353.1	1344.1	1332.4	1311.7	1288.3	1261.1	1232.6	1198.9	1165.2	1096.5
12°	1363.5	1360.9	1349.3	1335.0	1314.3	1290.9	1259.8	1227.4	1189.8	1154.8	1079.7
13°	1371.3	1363.5	1351.8	1338.9	1315.6	1288.3	1254.6	1219.6	1183.4	1145.8	1065.4
14°	1370.0	1368.7	1358.3	1340.2	1314.3	1285.7	1253.3	1211.9	1174.3	1135.4	1048.6
15°	1371.3	1370.0	1358.3	1341.5	1313.0	1281.9	1249.5	1206.7	1165.2	1123.7	1031.7
16°	1371.3	1371.3	1355.7	1338.9	1311.7	1278.0	1241.7	1201.5	1156.1	1114.7	1017.4
17°	1371.3	1371.3	1358.3	1335.0	1307.8	1275.4	1233.9	1191.1	1145.8	1101.7	996.7
18°	1373.9	1370.0	1353.1	1333.7	1302.6	1268.9	1228.7	1183.4	1136.7	1087.4	982.5
19°	1367.4	1364.8	1350.6	1325.9	1298.7	1261.1	1220.9	1174.3	1127.6	1075.8	965.6
20°	1363.5	1367.4	1348.0	1322.0	1290.9	1254.6	1213.2	1165.2	1114.7	1062.8	948.8
21°	1364.8	1363.5	1342.8	1315.6	1285.7	1245.6	1204.1	1154.8	1100.4	1047.3	933.2
22.5°	1362.2	1358.3	1336.3	1306.5	1270.2	1233.9	1188.5	1138.0	1079.7	1020.0	903.4
23°	1357.0	1353.1	1336.3	1303.9	1265.0	1228.7	1180.8	1127.6	1071.9	1011.0	895.6
24°	1336.3	1335.0	1327.2	1294.8	1258.5	1218.3	1171.7	1110.8	1048.6	985.0	876.2
25°	1311.7	1314.3	1310.4	1289.6	1248.2	1206.7	1157.4	1090.0	1026.5	968.2	852.8
26°	1288.3	1288.3	1285.7	1278.0	1237.8	1193.7	1136.7	1065.4	1004.5	943.6	828.2
27°	1258.5	1263.7	1258.5	1254.6	1227.4	1179.5	1114.7	1048.6	979.9	920.2	807.5
28°	1235.2	1235.2	1232.6	1226.1	1217.1	1162.6	1091.3	1023.9	956.5	899.5	784.1
29°	1193.7	1201.5	1202.8	1204.1	1202.8	1140.6	1069.3	996.7	931.9	869.7	762.1
30°	1156.1	1163.9	1169.1	1178.2	1179.5	1121.1	1043.4	974.7	908.6	847.7	742.7
32.5°	1053.7	1068.0	1082.3	1097.8	1105.6	1062.8	979.9	904.7	837.3	782.9	683.1
35°	956.5	960.4	976.0	1012.3	1020.0	992.8	904.7	833.4	769.9	718.0	627.3
37.5°	846.4	854.1	876.2	917.6	920.2	898.2	837.3	754.3	694.7	649.4	570.3
40°	755.6	759.5	775.1	810.1	821.7	807.5	754.3	679.2	624.7	580.7	515.9
42.5°	664.9	670.1	689.5	716.8	733.6	716.8	670.1	605.3	552.1	519.7	464.0
45°	589.7	596.2	614.4	629.9	635.1	624.7	583.3	530.1	492.5	458.8	416.1
47.5°	524.9	531.4	544.4	550.8	557.3	547.0	514.6	470.5	432.9	405.7	366.8
50°	475.7	474.4	483.5	486.0	486.0	474.4	447.2	410.9	379.8	357.7	325.3
52.5°	419.9	422.5	429.0	426.4	425.1	414.8	391.4	360.3	334.4	315.0	285.1
55°	379.8	375.9	379.8	377.2	372.0	361.6	340.9	315.0	292.9	276.1	248.9
57.5°	335.7	335.7	337.0	331.8	325.3	313.7	295.5	274.8	255.3	241.1	219.0
60°	295.5	298.1	296.8	291.6	285.1	272.2	257.9	237.2	220.3	210.0	189.2



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	200.9	200.9	197.0	193.1	184.0	172.4	162.0	149.1	140.0	130.9	117.9
70°	171.1	173.7	168.5	162.0	155.5	147.8	136.1	125.7	116.7	110.2	99.8
72.5°	147.8	146.5	142.6	136.1	130.9	121.8	111.5	103.7	95.9	90.7	83.0
75°	121.8	121.8	117.9	112.8	106.3	98.5	90.7	84.2	77.8	72.6	68.7
77.5°	97.2	98.5	94.6	90.7	85.5	77.8	71.3	66.1	60.9	57.0	54.4
80°	75.2	76.5	72.6	70.0	63.5	59.6	54.4	49.3	45.4	42.8	41.5
82.5°	57.0	55.7	53.1	51.8	46.7	42.8	37.6	35.0	32.4	29.8	29.8
85°	37.6	36.3	35.0	33.7	29.8	25.9	24.6	22.0	19.4	18.1	18.1
87.5°	19.4	19.4	18.1	16.8	15.6	13.0	11.7	9.1	7.8	7.8	7.8
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°	1210.6	1210.6	1210.6
1°	1205.4	1200.2	1198.9
2°	1189.8	1182.1	1183.4
3°	1175.6	1166.5	1157.4
4°	1157.4	1143.2	1143.2
5°	1141.9	1127.6	1123.7
6°	1127.6	1104.3	1099.1
7°	1114.7	1086.1	1077.1
8°	1092.6	1064.1	1055.0
9°	1077.1	1046.0	1036.9
10°	1056.3	1025.2	1008.4
11°	1039.5	1004.5	991.5
12°	1021.3	978.6	965.6
13°	1000.6	956.5	948.8
14°	981.2	938.4	924.1
15°	960.4	916.4	899.5
16°	938.4	894.3	878.8
17°	920.2	871.0	859.3
18°	902.1	850.3	832.1
19°	880.1	830.8	810.1
20°	860.6	806.2	789.3
21°	839.9	788.0	769.9
22.5°	811.4	753.0	736.2
23°	802.3	742.7	724.5
24°	781.6	721.9	706.4
25°	760.8	706.4	689.5
26°	742.7	683.1	667.5
27°	724.5	664.9	648.1
28°	705.1	645.5	632.5
29°	685.6	624.7	611.8
30°	664.9	610.5	588.4
32.5°	613.1	563.8	545.7
35°	562.5	519.7	504.2
37.5°	513.3	478.3	464.0
40°	470.5	439.4	425.1
42.5°	426.4	397.9	383.6
45°	381.1	357.7	343.5
47.5°	339.6	320.1	304.6
50°	302.0	282.6	274.8
52.5°	265.7	252.7	256.6
55°	232.0	232.0	230.7
57.5°	199.6	208.7	210.0
60°	175.0	186.6	189.2



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	120.5	127.0	129.6
70°	103.7	108.9	110.2
72.5°	88.1	92.0	94.6
75°	71.3	76.5	76.5
77.5°	58.3	60.9	62.2
80°	44.1	45.4	46.7
82.5°	31.1	32.4	33.7
85°	18.1	19.4	20.7
87.5°	7.8	7.8	7.8
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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62.5°	261.8	264.4	260.5	254.0	247.6	235.9	222.9	204.8	191.8	181.5	163.3
65°	229.4	230.7	228.1	221.6	215.2	203.5	190.5	175.0	164.6	154.2	138.7

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62.5°	156.8	165.9	167.2
65°	137.4	145.2	146.5

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Scaled Data Report



(END OF REPORT)