

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: P837695

Luminaire Tested: HCSQ460D010-HM44560927-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837695
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-5)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ460D010-HM44560927-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

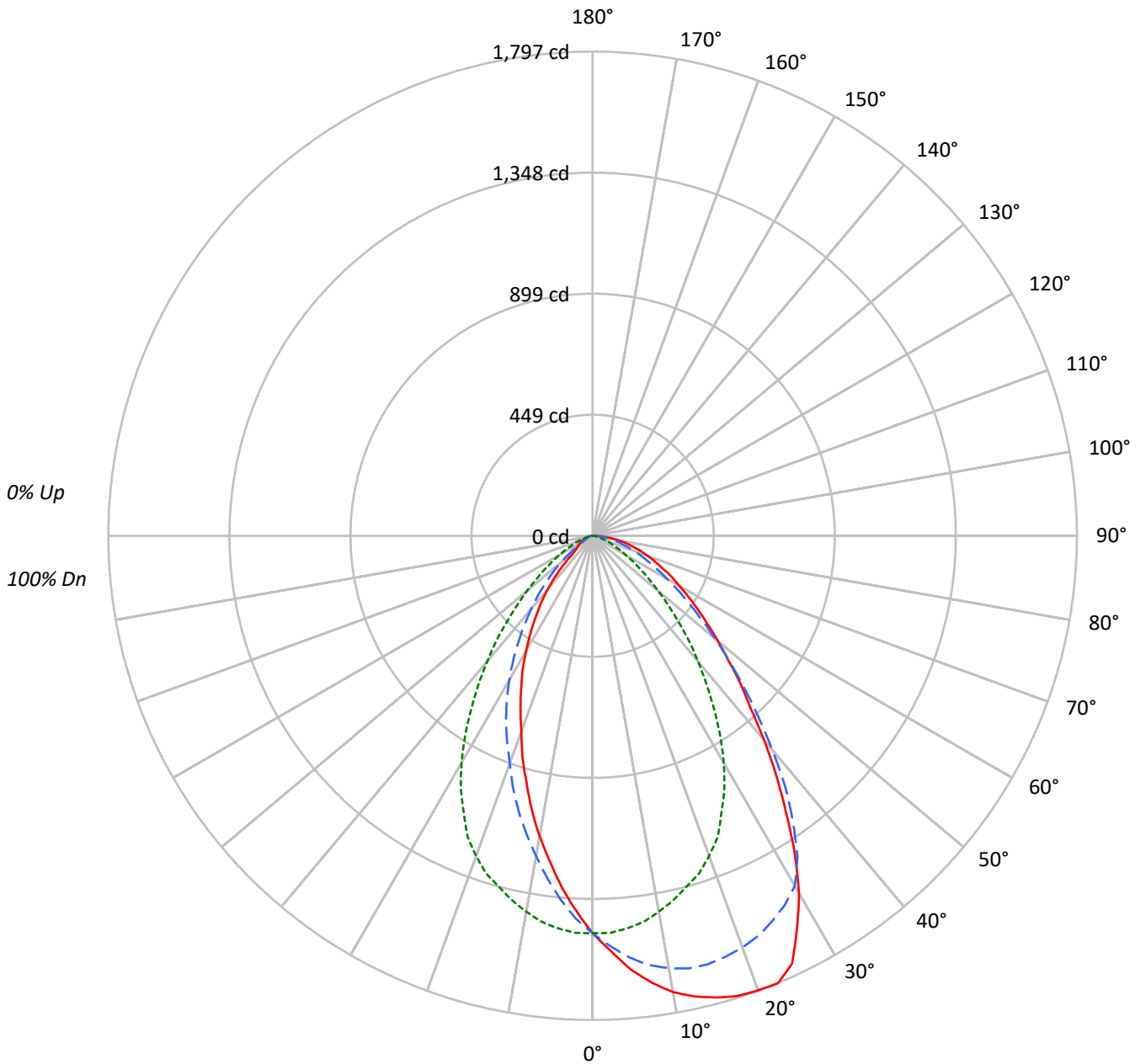
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2385.9 lumens
Efficiency: N/A
Efficacy: 42.6 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.04 / 1.12
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 56
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

TEST NUMBER: P837695
CATALOG NUMBER: HCSQ460D010-HM44560927-41SQLWW

Luminous Intensity Polar Plot





TEST NUMBER: P837695

CATALOG NUMBER: HCSQ460D010-HM44560927-41SQLWW

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				
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89				89				
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78				78				
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69				69				
4	89	79	72	67	87	78	71	66	76	70	65	74	69	64	72	67	64	62				62				
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55				55				
6	78	66	59	53	76	66	58	53	64	57	53	62	57	52	61	56	52	50				50				
7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	45				45				
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42				42				
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38				38				
10	61	49	42	37	60	48	42	37	48	41	37	47	41	37	46	41	37	35				35				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	142901	142901	142901	142901	142901
5°	157071	152802	142222	131845	127372
10°	169186	160333	139341	118752	111345
15°	177950	165142	135135	106180	95058
20°	185072	167598	130278	92536	79804
25°	187186	168630	120989	81183	67095
30°	171317	167816	108831	69041	55003
35°	147722	153162	92789	56660	43544
40°	125147	130977	76737	44717	32551
45°	106054	108643	61336	33251	20920
50°	91452	89236	47610	22396	12615
55°	80564	73504	36397	12363	11316
60°	71746	61613	27164	6898	10133
65°	65696	52768	20149	6235	9123
70°	61039	45631	14814	5920	8894
75°	57155	39938	10181	5465	7823
80°	54840	35035	7029	5858	7029
85°	53464	30233	4668	4668	4668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 110356 cd/sqm



TEST NUMBER: P837695

CATALOG NUMBER: HCSQ460D010-HM44560927-41SQLWW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.3	5.8
10°-20°	380.8	16.0
20°-30°	532.4	22.3
30°-40°	520.4	21.8
40°-50°	377.6	15.8
50°-60°	227.7	9.5
60°-70°	128.0	5.4
70°-80°	63.4	2.7
80°-90°	17.4	0.7
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°	1051.5	44.1
0°-40°	1572.0	65.9
0°-60°	2177.2	91.3
0°-90°	2385.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2385.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1475	1475	1475	1475	1475	
5°	1615	1571	1462	1356	1310	157
15°	1774	1647	1347	1059	948	502
25°	1751	1578	1132	760	628	789
35°	1249	1295	785	479	368	782
45°	774	793	448	243	153	600
55°	477	435	216	73	67	429
65°	287	230	88	27	40	287
75°	153	107	27	15	21	164
85°	48	27	4	4	4	53
90°	0	0	0	0	0	



TEST NUMBER: P837695

CATALOG NUMBER: HCSQ460D010-HM44560927-41SQLWW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1
2.5°	1542.0	1537.8	1525.3	1500.2	1475.1	1445.8	1422.7	1406.0	1393.5
5°	1615.2	1606.9	1571.3	1519.0	1462.5	1406.0	1355.8	1326.5	1309.8
7.5°	1671.7	1657.1	1606.9	1533.6	1445.8	1360.0	1282.6	1236.5	1217.7
10°	1719.9	1694.7	1629.9	1531.5	1416.5	1303.5	1207.2	1152.8	1131.9
12.5°	1751.2	1724.0	1644.5	1529.5	1385.1	1247.0	1134.0	1062.9	1042.0
15°	1774.3	1740.8	1646.6	1512.7	1347.4	1188.4	1058.7	975.0	947.8
17.5°	1791.0	1745.0	1638.3	1493.9	1314.0	1127.7	981.3	891.3	864.1
20°	1795.2	1745.0	1625.7	1466.7	1263.7	1067.1	897.6	807.6	774.1
22.5°	1797.3	1738.7	1606.9	1433.2	1211.4	998.0	828.5	734.4	698.8
25°	1751.2	1717.8	1577.6	1376.7	1131.9	922.7	759.5	657.0	627.7
27.5°	1642.4	1640.3	1544.1	1301.4	1058.7	841.1	688.4	590.0	562.8
30°	1531.5	1533.6	1500.2	1217.7	972.9	763.7	617.2	521.0	491.7
32.5°	1395.5	1416.5	1414.4	1123.6	880.8	690.5	548.2	458.2	428.9
35°	1249.1	1286.8	1295.1	1016.8	784.6	606.8	479.1	397.5	368.2
37.5°	1117.3	1154.9	1173.8	922.7	694.6	533.5	414.3	343.1	313.8
40°	989.6	1021.0	1035.7	813.9	606.8	458.2	353.6	286.6	257.4
42.5°	866.2	912.2	908.0	721.8	529.3	397.5	299.2	232.2	203.0
45°	774.1	805.5	793.0	625.6	447.7	334.8	242.7	179.9	152.7
47.5°	682.1	705.1	686.3	544.0	378.7	276.2	196.7	131.8	102.5
50°	606.8	617.2	592.1	462.4	315.9	226.0	148.6	87.9	83.7
52.5°	535.6	541.9	506.3	393.3	261.5	182.0	108.8	69.0	73.2
55°	477.0	474.9	435.2	332.7	215.5	140.2	73.2	62.8	67.0
57.5°	420.5	414.3	374.5	276.2	175.8	108.8	43.9	54.4	58.6
60°	370.3	364.1	318.0	228.1	140.2	81.6	35.6	48.1	52.3
62.5°	330.6	315.9	269.9	188.3	113.0	58.6	31.4	41.8	46.0
65°	286.6	274.1	230.2	152.7	87.9	41.8	27.2	35.6	39.8
67.5°	251.1	236.4	194.6	125.5	71.1	29.3	25.1	31.4	35.6
70°	215.5	203.0	161.1	100.4	52.3	18.8	20.9	27.2	31.4
72.5°	186.2	171.6	133.9	79.5	39.8	14.6	18.8	23.0	25.1
75°	152.7	140.2	106.7	60.7	27.2	12.6	14.6	18.8	20.9
77.5°	127.6	115.1	83.7	46.0	18.8	10.5	12.6	16.7	16.7
80°	98.3	87.9	62.8	31.4	12.6	6.3	10.5	12.6	12.6
82.5°	71.1	62.8	43.9	20.9	6.3	6.3	6.3	8.4	8.4
85°	48.1	41.8	27.2	12.6	4.2	4.2	4.2	4.2	4.2
87.5°	27.2	20.9	12.6	4.2	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	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

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





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

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)