

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: P837437

Luminaire Tested: HCSQ430D010-HM43040827-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837437
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ430D010-HM43040827-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

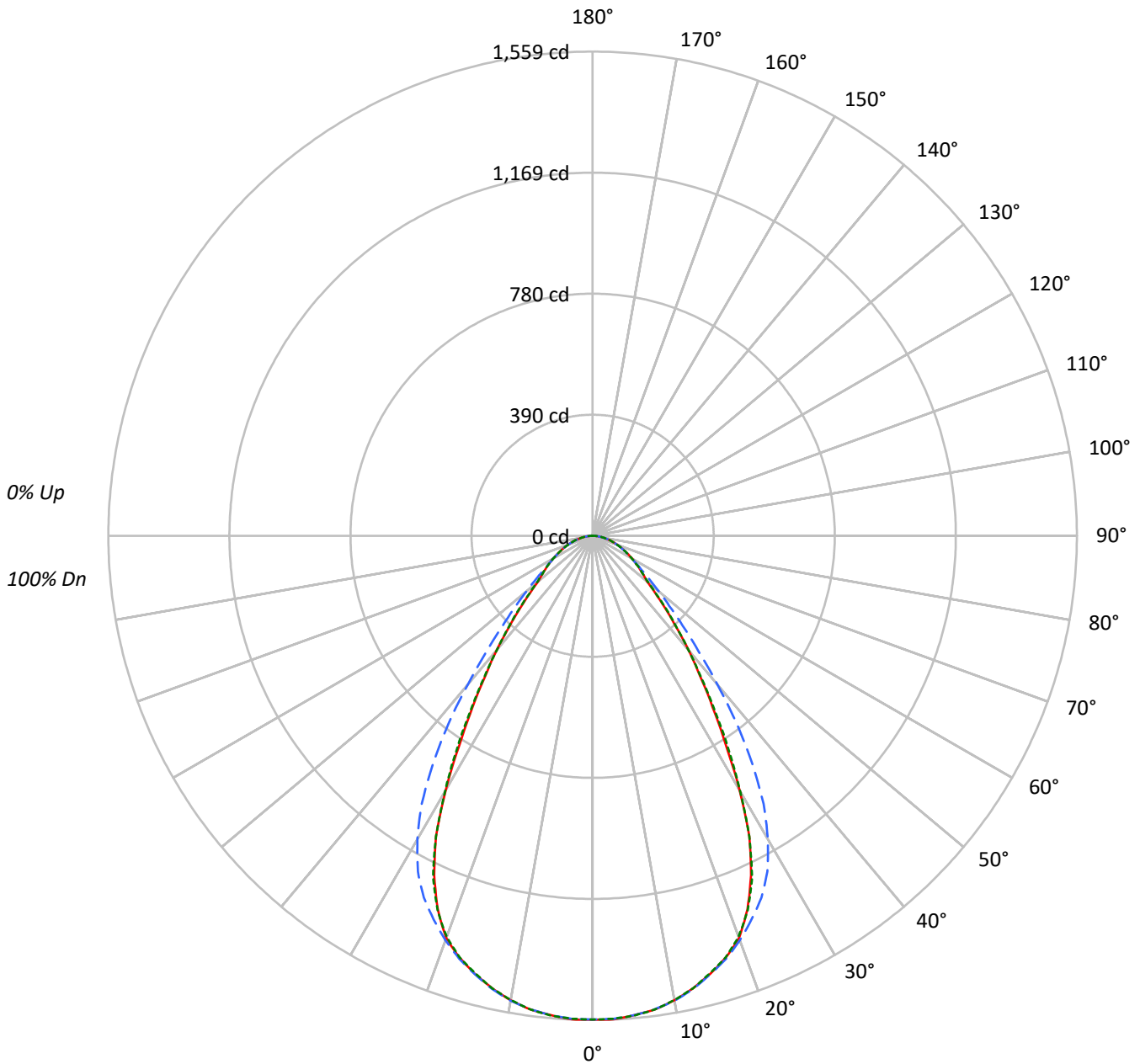
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2260.6 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.07
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

TEST NUMBER: P837437
CATALOG NUMBER: HCSQ430D010-HM43040827-41SQMW

Luminous Intensity Polar Plot





TEST NUMBER: P837437

CATALOG NUMBER: HCSQ430D010-HM43040827-41SQMW

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89																			
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79																			
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71																			
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64																			
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58																			
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53																			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48																			
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44																			
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41																			
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	150903	150903	150903
5°	150662	150662	150779
10°	149424	149542	149306
15°	146518	146638	146277
20°	142124	142876	141629
25°	128984	137397	129893
30°	105877	126192	106280
35°	79591	105928	80726
40°	60613	78975	60461
45°	45266	56048	46101
50°	34483	41777	35206
55°	31077	32715	31077
60°	28385	28133	28133
65°	25811	25811	25811
70°	23991	23651	23651
75°	22196	21747	22196
80°	20251	19582	20251
85°	17451	17451	17451

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 56048 cd/sqm



TEST NUMBER: P837437

CATALOG NUMBER: HCSQ430D010-HM43040827-41SQMW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.9	6.5
10°-20°	411.3	18.2
20°-30°	565.6	25.0
30°-40°	481.5	21.3
40°-50°	290.9	12.9
50°-60°	171.4	7.6
60°-70°	112.4	5.0
70°-80°	62.3	2.8
80°-90°	18.2	0.8
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°	1123.8	49.7
0°-40°	1605.4	71.0
0°-60°	2067.6	91.5
0°-90°	2260.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2260.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1558	1558	1558	1558	1558	
5°	1549	1550	1549	1548	1550	147
15°	1461	1464	1462	1461	1458	411
25°	1207	1244	1285	1247	1215	545
35°	673	741	896	761	683	426
45°	330	366	409	369	336	260
55°	184	188	194	188	184	165
65°	113	114	113	113	113	113
75°	59	59	58	58	59	63
85°	16	16	16	16	16	18
90°	0	0	0	0	0	



TEST NUMBER: P837437

CATALOG NUMBER: HCSQ430D010-HM43040827-41SQMW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1557.7	1557.7	1557.7	1557.7	1557.7
2.5°	1559.0	1555.3	1556.5	1555.3	1556.5
5°	1549.3	1550.5	1549.3	1548.1	1550.5
7.5°	1538.4	1537.2	1537.2	1536.0	1538.4
10°	1519.0	1516.6	1520.2	1517.8	1517.8
12.5°	1492.4	1496.0	1494.8	1494.8	1492.4
15°	1460.9	1464.5	1462.1	1460.9	1458.5
17.5°	1424.6	1427.0	1428.2	1423.4	1423.4
20°	1378.6	1383.5	1385.9	1377.4	1373.8
22.5°	1302.4	1324.1	1337.5	1322.9	1304.8
25°	1206.7	1244.3	1285.4	1246.7	1215.2
27.5°	1091.8	1145.0	1218.8	1153.5	1091.8
30°	946.5	1025.2	1128.1	1033.7	950.1
32.5°	796.4	879.9	1024.0	894.5	813.4
35°	673.0	740.7	895.7	761.3	682.6
37.5°	566.5	624.5	761.3	637.9	572.5
40°	479.3	525.3	624.5	531.4	478.1
42.5°	395.8	439.4	505.9	445.4	400.6
45°	330.4	365.5	409.1	369.2	336.5
47.5°	274.8	303.8	335.3	303.8	278.4
50°	228.8	251.8	277.2	251.8	233.6
52.5°	204.6	211.8	228.8	213.0	204.6
55°	184.0	187.6	193.7	187.6	184.0
57.5°	164.6	167.0	165.8	165.8	164.6
60°	146.5	147.7	145.2	146.5	145.2
62.5°	129.5	129.5	127.1	129.5	128.3
65°	112.6	113.8	112.6	112.6	112.6
67.5°	98.0	98.0	96.8	98.0	98.0
70°	84.7	84.7	83.5	84.7	83.5
72.5°	71.4	71.4	70.2	70.2	70.2
75°	59.3	59.3	58.1	58.1	59.3
77.5°	47.2	47.2	46.0	47.2	47.2
80°	36.3	36.3	35.1	36.3	36.3
82.5°	25.4	25.4	25.4	26.6	26.6
85°	15.7	15.7	15.7	15.7	15.7
87.5°	7.3	7.3	7.3	7.3	8.5
90°	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)