

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: P837494

Luminaire Tested: HCSQ435D010-HM43040927-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837494
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ435D010-HM43040927-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

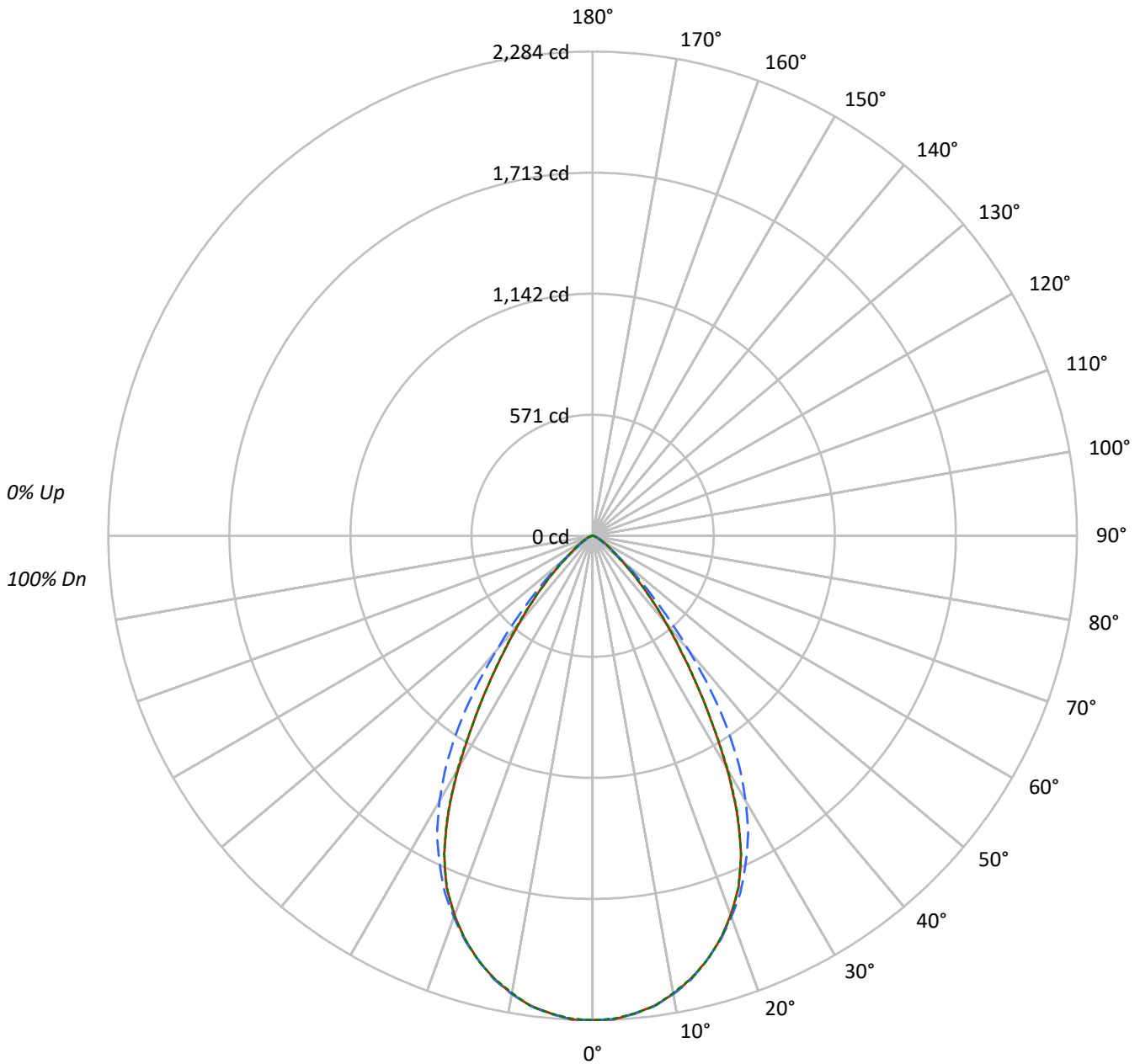
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2567.6 lumens
Efficiency: N/A
Efficacy: 75.5 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 34
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: P837494
CATALOG NUMBER: HCSQ435D010-HM43040927-41SQH

Luminous Intensity Polar Plot





TEST NUMBER: P837494

CATALOG NUMBER: HCSQ435D010-HM43040927-41SQH

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			100																
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92			92																
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85			85																
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77			77																
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71			71																
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65			65																
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60			60																
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56			56																
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52			52																
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48			48																
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45			45																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	221283	221283	221283
5°	219930	220203	219930
10°	215814	215951	215391
15°	208148	208007	208288
20°	196206	197227	196649
25°	177042	182472	177042
30°	141405	161451	142512
35°	100949	130645	101115
40°	68150	88852	69225
45°	43293	52582	43485
50°	24671	28062	23812
55°	16197	13579	15961
60°	11199	7924	10928
65°	7771	5822	7771
70°	5608	4390	5608
75°	3706	3706	3706
80°	2343	3124	3124
85°	3112	3112	3112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 52582 cd/sqm



TEST NUMBER: P837494

CATALOG NUMBER: HCSQ435D010-HM43040927-41SQH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.0	8.3
10°-20°	581.9	22.7
20°-30°	761.8	29.7
30°-40°	598.8	23.3
40°-50°	279.7	10.9
50°-60°	86.7	3.4
60°-70°	30.9	1.2
70°-80°	10.9	0.4
80°-90°	3.0	0.1
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°	1557.7	60.7
0°-40°	2156.5	84.0
0°-60°	2522.8	98.3
0°-90°	2567.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2567.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2284	2284	2284	2284	2284	
5°	2262	2263	2264	2267	2262	214
15°	2075	2075	2074	2075	2077	581
25°	1656	1679	1707	1680	1656	745
35°	854	931	1105	942	855	538
45°	316	354	384	347	317	252
55°	96	90	80	89	94	90
65°	34	31	25	30	34	35
75°	10	10	10	10	10	11
85°	3	3	3	3	3	2
90°	0	0	0	0	0	



TEST NUMBER: P837494

CATALOG NUMBER: HCSQ435D010-HM43040927-41SQH

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2284.2	2284.2	2284.2	2284.2	2284.2
2.5°	2284.2	2281.3	2282.8	2279.9	2279.9
5°	2261.6	2263.0	2264.4	2267.2	2261.6
7.5°	2236.2	2239.0	2237.6	2237.6	2237.6
10°	2193.9	2195.3	2195.3	2195.3	2189.6
12.5°	2140.3	2143.1	2144.5	2140.3	2140.3
15°	2075.4	2075.4	2074.0	2075.4	2076.8
17.5°	1997.8	2002.0	2002.0	1997.8	1996.4
20°	1903.2	1910.3	1913.1	1907.5	1907.5
22.5°	1797.4	1804.5	1821.4	1807.3	1796.0
25°	1656.3	1678.9	1707.1	1680.3	1656.3
27.5°	1474.3	1523.7	1588.6	1532.2	1478.6
30°	1264.1	1344.5	1443.3	1348.8	1274.0
32.5°	1049.7	1140.0	1285.3	1147.0	1049.7
35°	853.6	931.2	1104.7	942.4	855.0
37.5°	678.6	753.4	905.8	761.9	688.5
40°	538.9	599.6	702.6	598.2	547.4
42.5°	420.4	464.2	531.9	462.8	419.0
45°	316.0	354.1	383.8	347.1	317.4
47.5°	232.8	258.2	275.1	254.0	227.1
50°	163.7	182.0	186.2	177.8	158.0
52.5°	122.7	122.7	124.2	121.3	119.9
55°	95.9	90.3	80.4	88.9	94.5
57.5°	74.8	69.1	56.4	66.3	73.4
60°	57.8	52.2	40.9	50.8	56.4
62.5°	45.1	39.5	32.4	39.5	43.7
65°	33.9	31.0	25.4	29.6	33.9
67.5°	25.4	22.6	19.8	22.6	25.4
70°	19.8	18.3	15.5	16.9	19.8
72.5°	14.1	12.7	12.7	12.7	14.1
75°	9.9	9.9	9.9	9.9	9.9
77.5°	7.1	7.1	7.1	7.1	7.1
80°	4.2	4.2	5.6	5.6	5.6
82.5°	2.8	2.8	4.2	4.2	4.2
85°	2.8	2.8	2.8	2.8	2.8
87.5°	1.4	1.4	1.4	2.8	2.8
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)