

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: P837314

Luminaire Tested: HCSQ415D010-HM40525827-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837314
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: HCSQ415D010-HM40525827-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

Summary

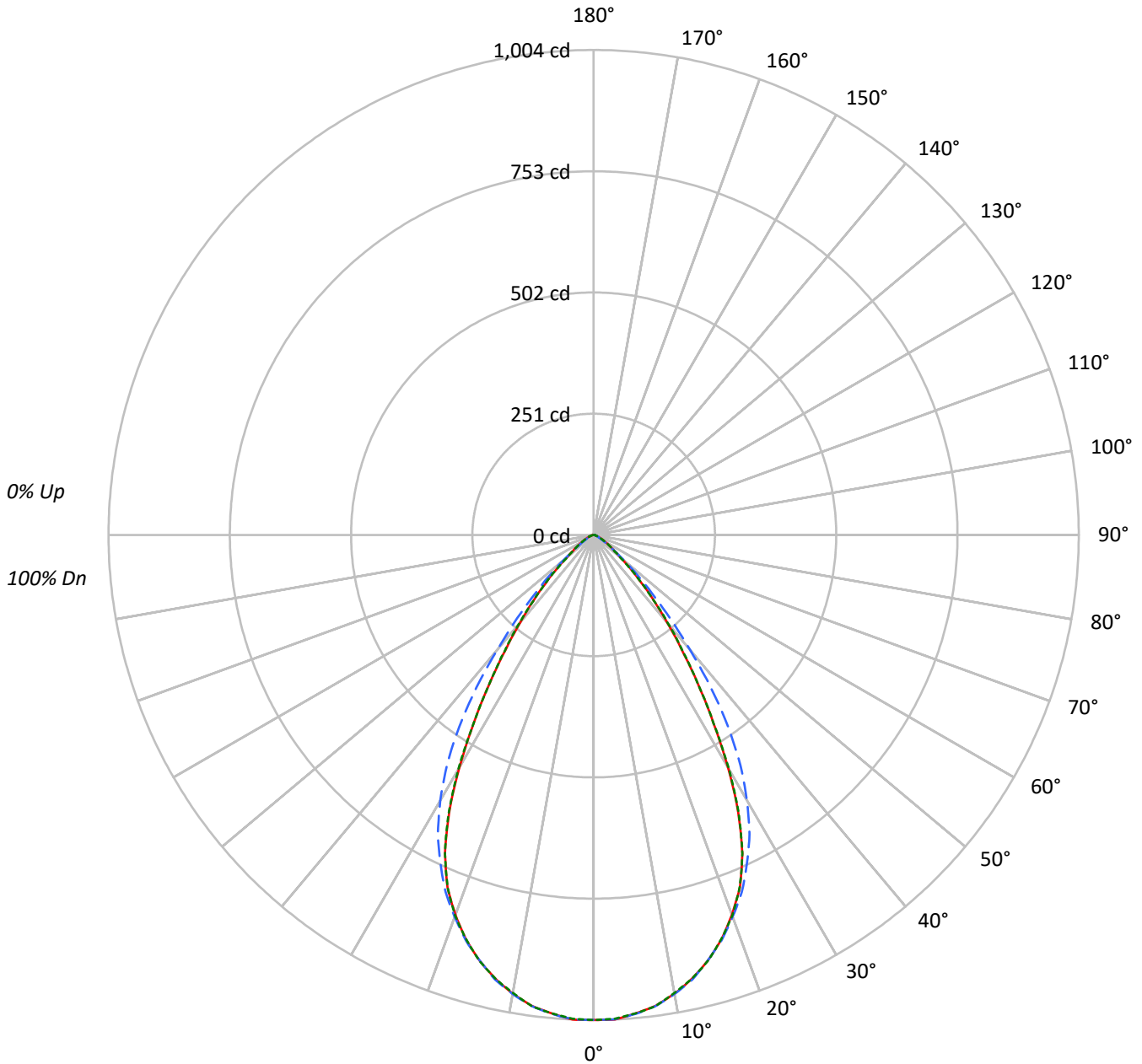
Lumens per Lamp: N/A
Luminaire Lumens: 1128.9 lumens
Efficiency: N/A
Efficacy: 80.6 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 14
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									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°	97292	97292	97292
5°	96701	96818	96701
10°	94888	94947	94701
15°	91517	91457	91577
20°	86268	86711	86464
25°	77837	80232	77837
30°	62173	70988	62654
35°	44384	57440	44455
40°	29971	39064	30439
45°	19030	23112	19126
50°	10851	12343	10474
55°	7127	5979	7026
60°	4921	3488	4805
65°	3415	2567	3415
70°	2464	1926	2464
75°	1609	1609	1609
80°	1060	1395	1395
85°	1334	1334	1334

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 23112 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.1	8.3
10°-20°	255.8	22.7
20°-30°	335.0	29.7
30°-40°	263.3	23.3
40°-50°	123.0	10.9
50°-60°	38.1	3.4
60°-70°	13.6	1.2
70°-80°	4.8	0.4
80°-90°	1.3	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°	684.9	60.7
0°-40°	948.1	84.0
0°-60°	1109.2	98.3
0°-90°	1128.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1128.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1004	1004	1004	1004	1004	
5°	994	995	996	997	994	94
15°	912	912	912	912	913	256
25°	728	738	751	739	728	327
35°	375	409	486	414	376	237
45°	139	156	169	153	140	111
55°	42	40	35	39	42	39
65°	15	14	11	13	15	16
75°	4	4	4	4	4	5
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1004.3	1004.3	1004.3	1004.3	1004.3
2.5°	1004.3	1003.0	1003.7	1002.4	1002.4
5°	994.4	995.0	995.6	996.8	994.4
7.5°	983.2	984.4	983.8	983.8	983.8
10°	964.6	965.2	965.2	965.2	962.7
12.5°	941.0	942.3	942.9	941.0	941.0
15°	912.5	912.5	911.9	912.5	913.1
17.5°	878.4	880.2	880.2	878.4	877.7
20°	836.8	839.9	841.1	838.7	838.7
22.5°	790.3	793.4	800.8	794.6	789.7
25°	728.2	738.2	750.6	738.8	728.2
27.5°	648.2	669.9	698.5	673.7	650.1
30°	555.8	591.2	634.6	593.0	560.1
32.5°	461.5	501.2	565.1	504.3	461.5
35°	375.3	409.4	485.7	414.4	375.9
37.5°	298.4	331.2	398.2	335.0	302.7
40°	237.0	263.6	308.9	263.0	240.7
42.5°	184.9	204.1	233.9	203.5	184.2
45°	138.9	155.7	168.7	152.6	139.6
47.5°	102.4	113.5	121.0	111.7	99.9
50°	72.0	80.0	81.9	78.2	69.5
52.5°	54.0	54.0	54.6	53.3	52.7
55°	42.2	39.7	35.4	39.1	41.6
57.5°	32.9	30.4	24.8	29.2	32.3
60°	25.4	23.0	18.0	22.3	24.8
62.5°	19.8	17.4	14.3	17.4	19.2
65°	14.9	13.6	11.2	13.0	14.9
67.5°	11.2	9.9	8.7	9.9	11.2
70°	8.7	8.1	6.8	7.4	8.7
72.5°	6.2	5.6	5.6	5.6	6.2
75°	4.3	4.3	4.3	4.3	4.3
77.5°	3.1	3.1	3.1	3.1	3.1
80°	1.9	1.9	2.5	2.5	2.5
82.5°	1.2	1.2	1.9	1.9	1.9
85°	1.2	1.2	1.2	1.2	1.2
87.5°	0.6	0.6	0.6	1.2	1.2
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



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Scaled Data Report





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

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