

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



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: P837284

Luminaire Tested: HCSQ410D010-HM40525835-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837284
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: HCSQ410D010-HM40525835-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

Summary

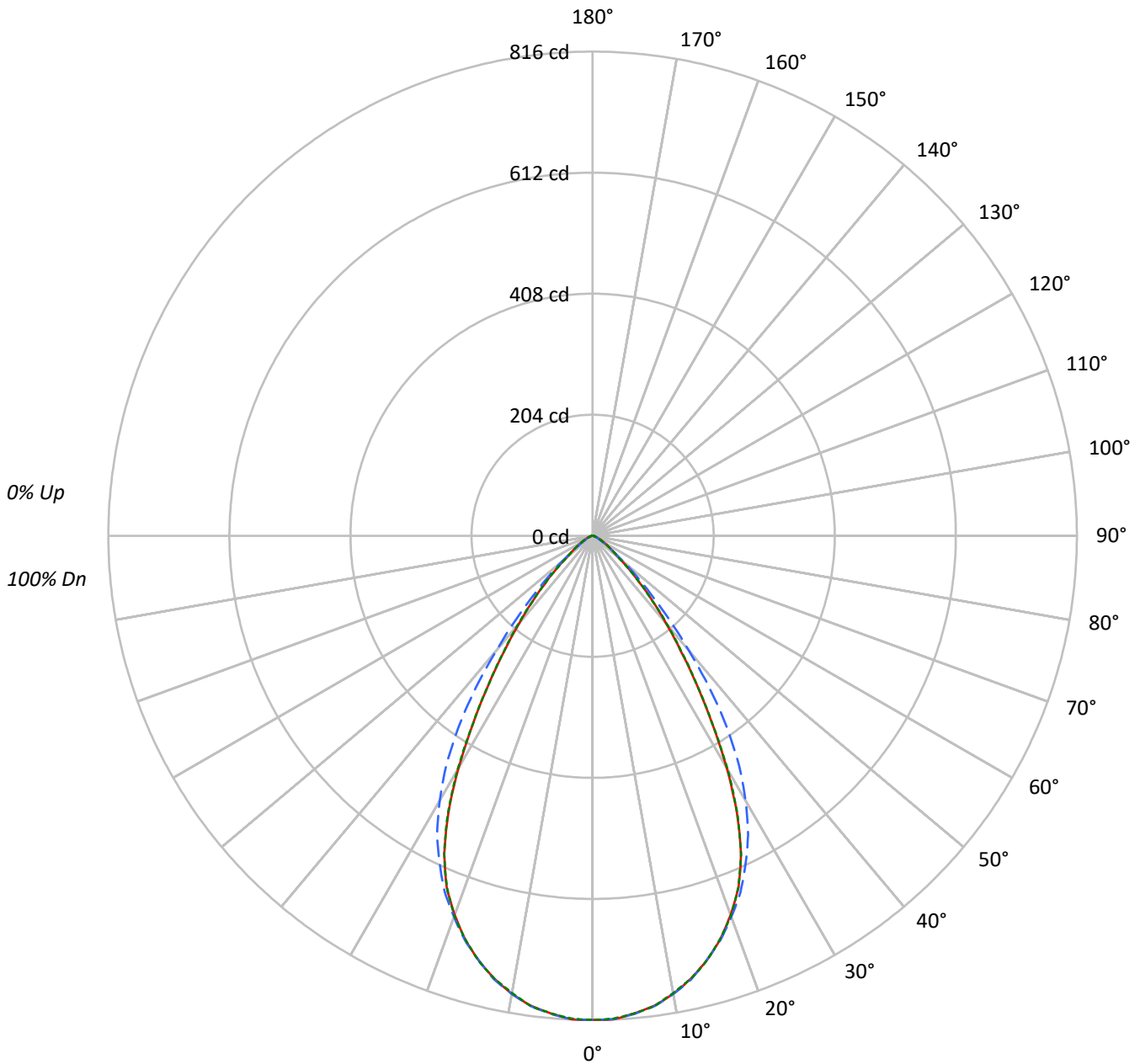
Lumens per Lamp: N/A
Luminaire Lumens: 917.2 lumens
Efficiency: N/A
Efficacy: 92.6 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.9
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°	79050	79050	79050
5°	78565	78662	78565
10°	77092	77142	76945
15°	74357	74307	74407
20°	70093	70454	70247
25°	63247	65192	63247
30°	50517	57676	50908
35°	36058	46667	36118
40°	24344	31742	24736
45°	15468	18783	15536
50°	8817	10022	8500
55°	5793	4847	5709
60°	4011	2829	3914
65°	2774	2086	2774
70°	2011	1558	2011
75°	1310	1310	1310
80°	837	1116	1116
85°	1112	1112	1112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 18783 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.4	8.3
10°-20°	207.9	22.7
20°-30°	272.2	29.7
30°-40°	213.9	23.3
40°-50°	99.9	10.9
50°-60°	31.0	3.4
60°-70°	11.1	1.2
70°-80°	3.9	0.4
80°-90°	1.1	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°	556.5	60.7
0°-40°	770.4	84.0
0°-60°	901.2	98.3
0°-90°	917.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	917.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	816	816	816	816	816	
5°	808	808	809	810	808	76
15°	741	741	741	741	742	208
25°	592	600	610	600	592	266
35°	305	333	395	337	305	192
45°	113	126	137	124	113	90
55°	34	32	29	32	34	32
65°	12	11	9	11	12	13
75°	4	4	4	4	4	4
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°	816.0	816.0	816.0	816.0	816.0
2.5°	816.0	815.0	815.5	814.5	814.5
5°	807.9	808.4	808.9	810.0	807.9
7.5°	798.9	799.9	799.4	799.4	799.4
10°	783.7	784.2	784.2	784.2	782.2
12.5°	764.6	765.6	766.1	764.6	764.6
15°	741.4	741.4	740.9	741.4	741.9
17.5°	713.7	715.2	715.2	713.7	713.2
20°	679.9	682.4	683.4	681.4	681.4
22.5°	642.1	644.6	650.7	645.6	641.6
25°	591.7	599.8	609.9	600.3	591.7
27.5°	526.7	544.3	567.5	547.4	528.2
30°	451.6	480.3	515.6	481.8	455.1
32.5°	375.0	407.2	459.2	409.8	375.0
35°	304.9	332.6	394.6	336.7	305.4
37.5°	242.4	269.1	323.6	272.2	246.0
40°	192.5	214.2	251.0	213.7	195.6
42.5°	150.2	165.8	190.0	165.3	149.7
45°	112.9	126.5	137.1	124.0	113.4
47.5°	83.2	92.2	98.3	90.7	81.1
50°	58.5	65.0	66.5	63.5	56.4
52.5°	43.8	43.8	44.4	43.3	42.8
55°	34.3	32.3	28.7	31.8	33.8
57.5°	26.7	24.7	20.2	23.7	26.2
60°	20.7	18.6	14.6	18.1	20.2
62.5°	16.1	14.1	11.6	14.1	15.6
65°	12.1	11.1	9.1	10.6	12.1
67.5°	9.1	8.1	7.1	8.1	9.1
70°	7.1	6.6	5.5	6.0	7.1
72.5°	5.0	4.5	4.5	4.5	5.0
75°	3.5	3.5	3.5	3.5	3.5
77.5°	2.5	2.5	2.5	2.5	2.5
80°	1.5	1.5	2.0	2.0	2.0
82.5°	1.0	1.0	1.5	1.5	1.5
85°	1.0	1.0	1.0	1.0	1.0
87.5°	0.5	0.5	0.5	1.0	1.0
90°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report





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

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