

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: P837231

Luminaire Tested: HCSQ405D010-HM40525940-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837231
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ405D010-HM40525940-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

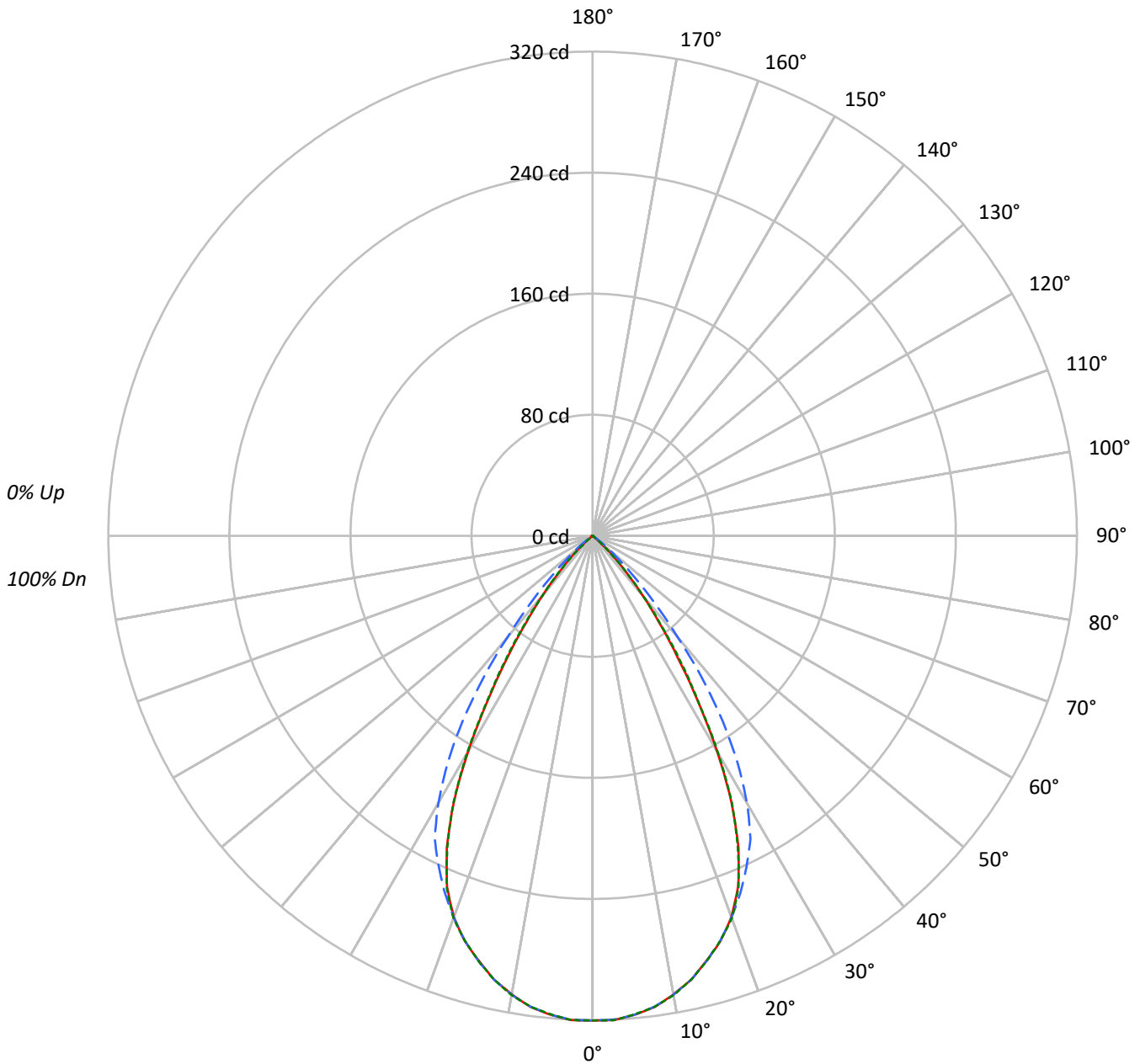
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 320.1 lumens
Efficiency: N/A
Efficacy: 53.3 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.96 / 0.99
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 6
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																			
1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93																			
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87																			
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80																			
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74																			
5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69																			
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64																			
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60																			
8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56																			
9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52																			
10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	31039	31039	31039
5°	30905	30905	30875
10°	30268	30298	30327
15°	29155	29185	29185
20°	27639	27670	27732
25°	24371	25739	24275
30°	18390	22809	18558
35°	11531	17751	11921
40°	6500	11053	6500
45°	2726	5576	2685
50°	226	2155	271
55°	101	456	101
60°	116	58	116
65°	69	69	69
70°	85	85	85
75°	112	112	112
80°	0	167	167
85°	0	333	333

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 5576 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.0	9.4
10°-20°	81.7	25.5
20°-30°	106.0	33.1
30°-40°	75.3	23.5
40°-50°	24.4	7.6
50°-60°	1.8	0.6
60°-70°	0.3	0.1
70°-80°	0.3	0.1
80°-90°	0.2	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°	217.7	68.0
0°-40°	293.1	91.6
0°-60°	319.3	99.7
0°-90°	320.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	320.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	320	320	320	320	320	
5°	318	318	318	318	318	30
15°	291	292	291	292	291	82
25°	228	234	241	235	227	102
35°	98	115	150	116	101	62
45°	20	28	41	29	20	17
55°	1	1	3	1	1	1
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	320.4	320.4	320.4	320.4	320.4
2.5°	320.4	320.4	320.1	320.1	320.4
5°	317.8	318.1	317.8	317.8	317.5
7.5°	314.2	314.2	313.9	313.9	313.9
10°	307.7	308.0	308.0	308.0	308.3
12.5°	300.5	300.5	300.5	300.5	300.5
15°	290.7	291.6	291.0	291.6	291.0
17.5°	280.9	280.9	280.6	281.2	280.6
20°	268.1	268.1	268.4	269.0	269.0
22.5°	251.2	254.2	255.3	254.7	251.8
25°	228.0	233.9	240.8	235.1	227.1
27.5°	198.9	210.2	225.9	211.9	199.5
30°	164.4	181.3	203.9	181.9	165.9
32.5°	128.7	148.3	178.4	149.8	129.9
35°	97.5	115.3	150.1	116.5	100.8
37.5°	71.9	88.3	119.2	88.9	74.0
40°	51.4	63.3	87.4	64.5	51.4
42.5°	33.0	44.9	61.5	45.2	34.5
45°	19.9	28.2	40.7	28.8	19.6
47.5°	8.9	16.1	25.3	16.6	8.9
50°	1.5	6.5	14.3	6.8	1.8
52.5°	0.9	1.2	6.8	1.2	0.9
55°	0.6	0.6	2.7	0.6	0.6
57.5°	0.6	0.6	0.6	0.6	0.6
60°	0.6	0.3	0.3	0.3	0.6
62.5°	0.3	0.3	0.3	0.3	0.3
65°	0.3	0.3	0.3	0.3	0.3
67.5°	0.3	0.3	0.3	0.3	0.3
70°	0.3	0.3	0.3	0.3	0.3
72.5°	0.3	0.3	0.3	0.3	0.3
75°	0.3	0.3	0.3	0.3	0.3
77.5°	0.3	0.3	0.3	0.3	0.3
80°	0.0	0.3	0.3	0.3	0.3
82.5°	0.0	0.3	0.3	0.3	0.3
85°	0.0	0.0	0.3	0.3	0.3
87.5°	0.0	0.0	0.3	0.3	0.3
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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