

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: P837214

Luminaire Tested: HCSQ405D010-HM40525927-41SQH

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837214
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: HCSQ405D010-HM40525927-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

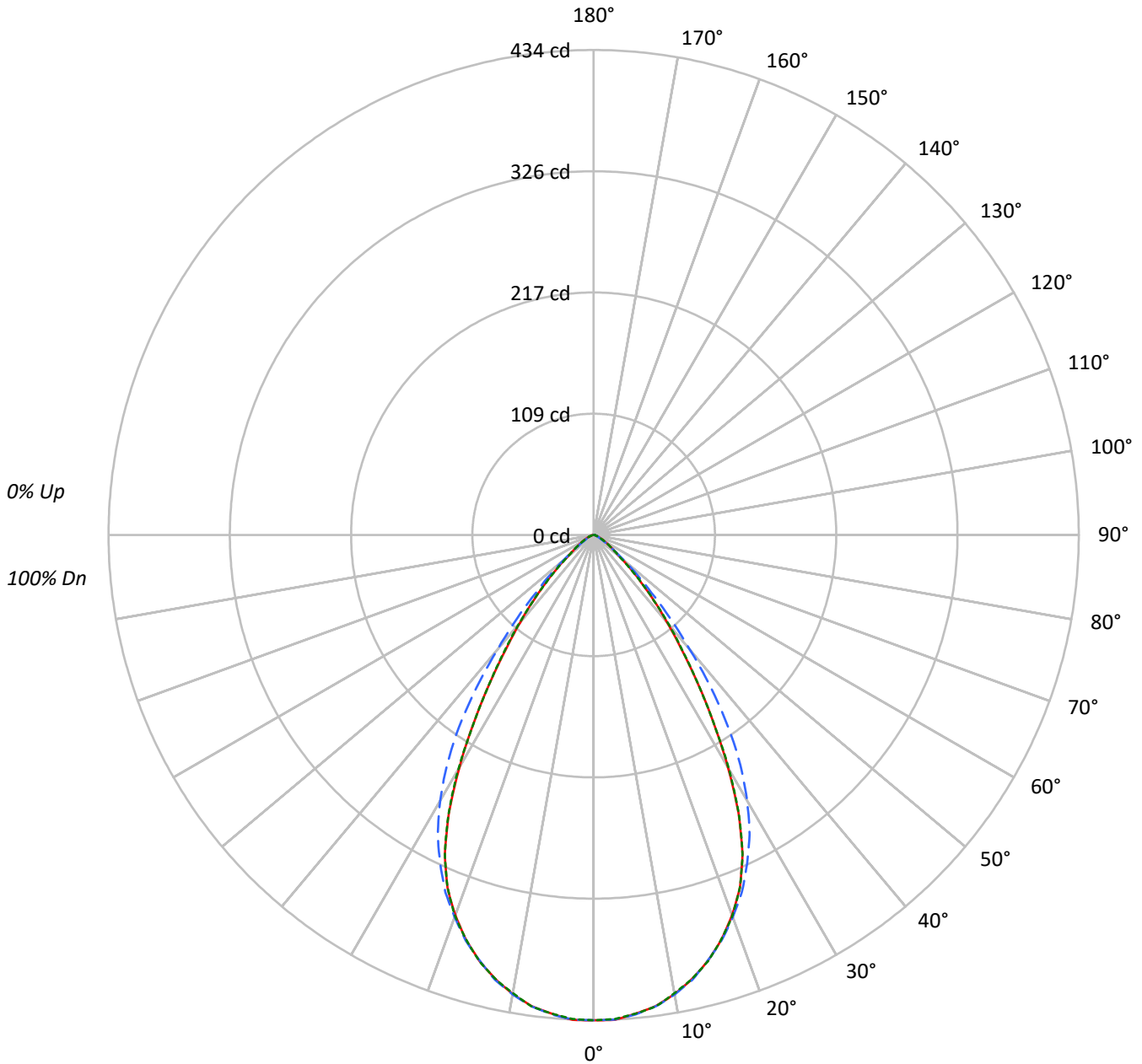
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 488.3 lumens
Efficiency: N/A
Efficacy: 81.4 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): 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				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°	42083	42083	42083
5°	41825	41884	41825
10°	41040	41069	40961
15°	39586	39555	39616
20°	37320	37505	37402
25°	33670	34707	33670
30°	26892	30706	27104
35°	19194	24847	19230
40°	12962	16895	13165
45°	8234	10001	8275
50°	4687	5335	4536
55°	3074	2584	3040
60°	2131	1511	2073
65°	1467	1100	1467
70°	1076	850	1076
75°	711	711	711
80°	446	614	614
85°	556	556	556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 10001 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.7	8.3
10°-20°	110.7	22.7
20°-30°	144.9	29.7
30°-40°	113.9	23.3
40°-50°	53.2	10.9
50°-60°	16.5	3.4
60°-70°	5.9	1.2
70°-80°	2.1	0.4
80°-90°	0.6	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°	296.2	60.7
0°-40°	410.1	84.0
0°-60°	479.8	98.3
0°-90°	488.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	488.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	434	434	434	434	434	
5°	430	430	431	431	430	41
15°	395	395	394	395	395	111
25°	315	319	325	320	315	142
35°	162	177	210	179	163	102
45°	60	67	73	66	60	48
55°	18	17	15	17	18	17
65°	6	6	5	6	6	7
75°	2	2	2	2	2	2
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°	434.4	434.4	434.4	434.4	434.4
2.5°	434.4	433.9	434.1	433.6	433.6
5°	430.1	430.4	430.7	431.2	430.1
7.5°	425.3	425.8	425.6	425.6	425.6
10°	417.2	417.5	417.5	417.5	416.4
12.5°	407.0	407.6	407.8	407.0	407.0
15°	394.7	394.7	394.4	394.7	395.0
17.5°	379.9	380.7	380.7	379.9	379.7
20°	362.0	363.3	363.8	362.8	362.8
22.5°	341.8	343.2	346.4	343.7	341.6
25°	315.0	319.3	324.7	319.6	315.0
27.5°	280.4	289.8	302.1	291.4	281.2
30°	240.4	255.7	274.5	256.5	242.3
32.5°	199.6	216.8	244.4	218.1	199.6
35°	162.3	177.1	210.1	179.2	162.6
37.5°	129.1	143.3	172.3	144.9	130.9
40°	102.5	114.0	133.6	113.8	104.1
42.5°	80.0	88.3	101.2	88.0	79.7
45°	60.1	67.3	73.0	66.0	60.4
47.5°	44.3	49.1	52.3	48.3	43.2
50°	31.1	34.6	35.4	33.8	30.1
52.5°	23.3	23.3	23.6	23.1	22.8
55°	18.2	17.2	15.3	16.9	18.0
57.5°	14.2	13.1	10.7	12.6	14.0
60°	11.0	9.9	7.8	9.7	10.7
62.5°	8.6	7.5	6.2	7.5	8.3
65°	6.4	5.9	4.8	5.6	6.4
67.5°	4.8	4.3	3.8	4.3	4.8
70°	3.8	3.5	3.0	3.2	3.8
72.5°	2.7	2.4	2.4	2.4	2.7
75°	1.9	1.9	1.9	1.9	1.9
77.5°	1.3	1.3	1.3	1.3	1.3
80°	0.8	0.8	1.1	1.1	1.1
82.5°	0.5	0.5	0.8	0.8	0.8
85°	0.5	0.5	0.5	0.5	0.5
87.5°	0.3	0.3	0.3	0.5	0.5
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



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Scaled Data Report





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

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