

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: P837299

Luminaire Tested: HCSQ410D010-HM40525930-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837299
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-HM40525930-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

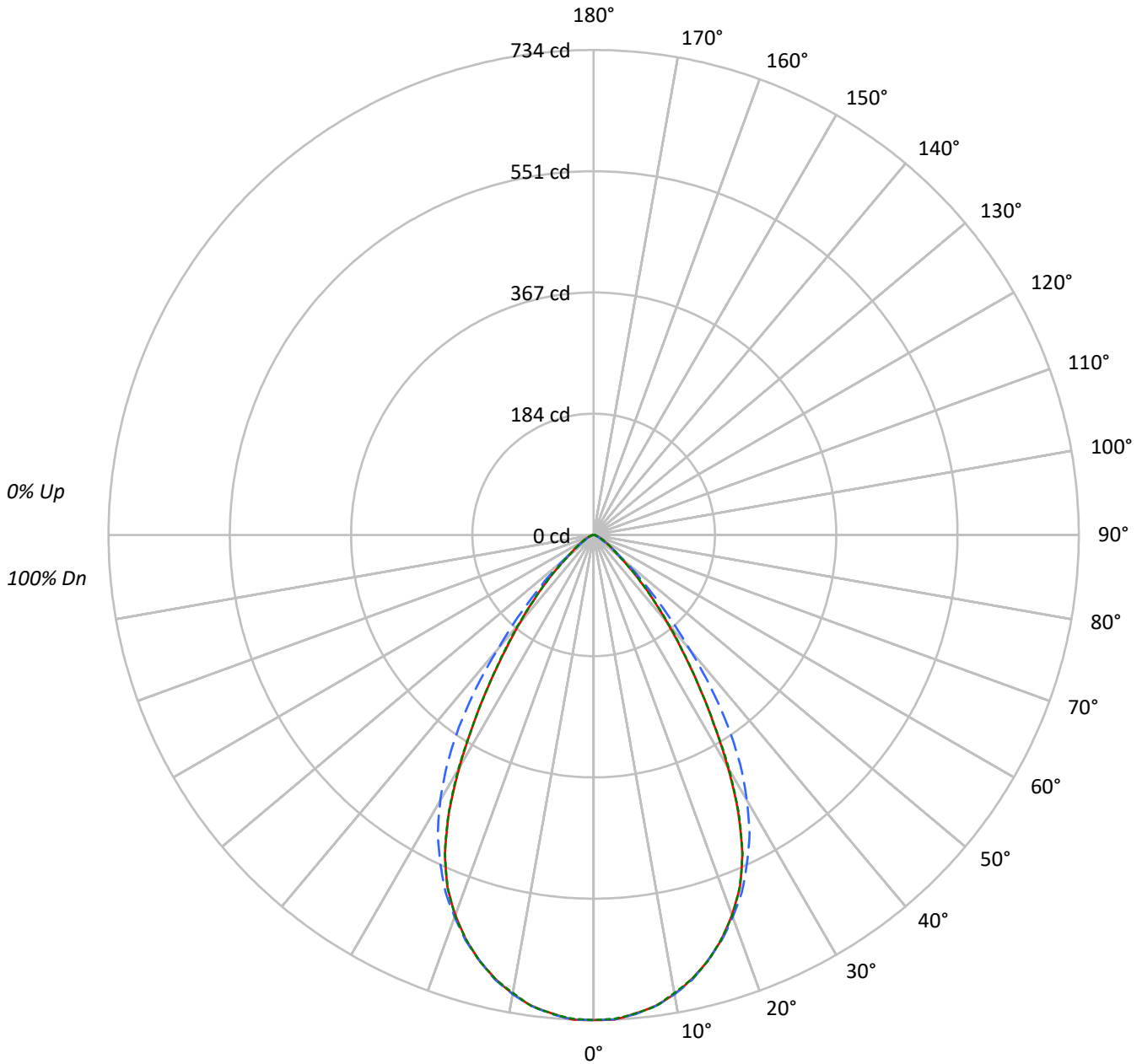
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 825.6 lumens
Efficiency: N/A
Efficacy: 83.4 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): 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																			
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92																			
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85																			
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77																			
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71																			
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65																			
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60																			
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56																			
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52																			
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48																			
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	54	50	46	45																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	71145	71145	71145
5°	70707	70795	70707
10°	69390	69429	69252
15°	66925	66875	66966
20°	63082	63412	63227
25°	56919	58672	56919
30°	45461	51904	45819
35°	32451	42007	32511
40°	21916	28568	22257
45°	13919	16906	13988
50°	7927	9028	7656
55°	5202	4374	5134
60°	3604	2558	3507
65°	2499	1880	2499
70°	1813	1416	1813
75°	1198	1198	1198
80°	781	1004	1004
85°	1000	1000	1000

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 16906 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.8	8.3
10°-20°	187.1	22.7
20°-30°	244.9	29.7
30°-40°	192.5	23.3
40°-50°	89.9	10.9
50°-60°	27.9	3.4
60°-70°	10.0	1.2
70°-80°	3.5	0.4
80°-90°	1.0	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°	500.8	60.7
0°-40°	693.3	84.0
0°-60°	811.1	98.2
0°-90°	825.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	825.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	734	734	734	734	734	
5°	727	728	728	729	727	69
15°	667	667	667	667	668	187
25°	532	540	549	540	532	239
35°	274	299	355	303	275	173
45°	102	114	123	112	102	81
55°	31	29	26	29	30	29
65°	11	10	8	10	11	11
75°	3	3	3	3	3	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°	734.4	734.4	734.4	734.4	734.4
2.5°	734.4	733.5	733.9	733.0	733.0
5°	727.1	727.6	728.0	729.0	727.1
7.5°	719.0	719.9	719.4	719.4	719.4
10°	705.4	705.8	705.8	705.8	704.0
12.5°	688.1	689.0	689.5	688.1	688.1
15°	667.3	667.3	666.8	667.3	667.7
17.5°	642.3	643.7	643.7	642.3	641.9
20°	611.9	614.2	615.1	613.3	613.3
22.5°	577.9	580.2	585.6	581.1	577.4
25°	532.5	539.8	548.9	540.3	532.5
27.5°	474.0	489.9	510.8	492.6	475.4
30°	406.4	432.3	464.0	433.7	409.6
32.5°	337.5	366.5	413.2	368.8	337.5
35°	274.4	299.4	355.2	303.0	274.9
37.5°	218.2	242.2	291.2	245.0	221.4
40°	173.3	192.8	225.9	192.3	176.0
42.5°	135.2	149.2	171.0	148.8	134.7
45°	101.6	113.9	123.4	111.6	102.1
47.5°	74.8	83.0	88.5	81.7	73.0
50°	52.6	58.5	59.9	57.2	50.8
52.5°	39.5	39.5	39.9	39.0	38.6
55°	30.8	29.0	25.9	28.6	30.4
57.5°	24.0	22.2	18.1	21.3	23.6
60°	18.6	16.8	13.2	16.3	18.1
62.5°	14.5	12.7	10.4	12.7	14.1
65°	10.9	10.0	8.2	9.5	10.9
67.5°	8.2	7.3	6.4	7.3	8.2
70°	6.4	5.9	5.0	5.4	6.4
72.5°	4.5	4.1	4.1	4.1	4.5
75°	3.2	3.2	3.2	3.2	3.2
77.5°	2.3	2.3	2.3	2.3	2.3
80°	1.4	1.4	1.8	1.8	1.8
82.5°	0.9	0.9	1.4	1.4	1.4
85°	0.9	0.9	0.9	0.9	0.9
87.5°	0.5	0.5	0.5	0.9	0.9
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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