

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: P837479

Luminaire Tested: HCSQ435D010-HM43040830-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837479
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: HCSQ435D010-HM43040830-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

Summary

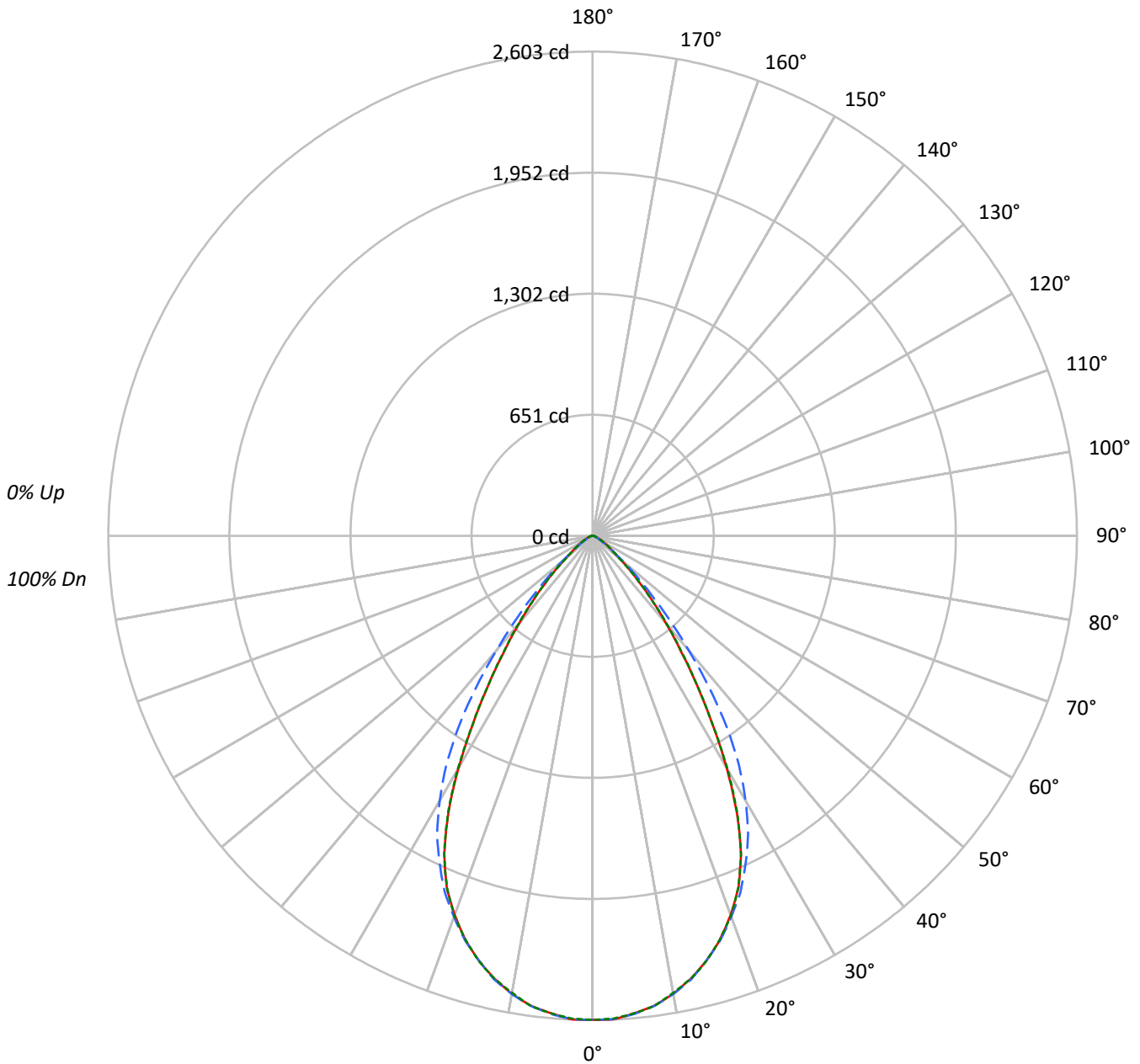
Lumens per Lamp: N/A
Luminaire Lumens: 2925.6 lumens
Efficiency: N/A
Efficacy: 86.0 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): 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°	252128	252128	252128
5°	250592	250903	250592
10°	245895	246053	245423
15°	237162	237002	237323
20°	223567	224721	224062
25°	201723	207912	201723
30°	161115	183957	162379
35°	115023	148858	115212
40°	77660	101245	78874
45°	49335	59898	49554
50°	28108	31981	27128
55°	18460	15471	18190
60°	12768	9029	12458
65°	8848	6625	8848
70°	6373	5013	6373
75°	4230	4230	4230
80°	2678	3570	3570
85°	3557	3557	3557

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 59898 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.8	8.3
10°-20°	663.0	22.7
20°-30°	868.0	29.7
30°-40°	682.2	23.3
40°-50°	318.7	10.9
50°-60°	98.8	3.4
60°-70°	35.2	1.2
70°-80°	12.4	0.4
80°-90°	3.4	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°	1774.8	60.7
0°-40°	2457.1	84.0
0°-60°	2874.5	98.3
0°-90°	2925.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2925.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2603	2603	2603	2603	2603	
5°	2577	2578	2580	2583	2577	244
15°	2365	2365	2363	2365	2366	662
25°	1887	1913	1945	1915	1887	849
35°	973	1061	1259	1074	974	613
45°	360	404	437	396	362	287
55°	109	103	92	101	108	102
65°	39	35	29	34	39	40
75°	11	11	11	11	11	13
85°	3	3	3	3	3	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2602.6	2602.6	2602.6	2602.6	2602.6
2.5°	2602.6	2599.4	2601.0	2597.8	2597.8
5°	2576.9	2578.5	2580.1	2583.3	2576.9
7.5°	2547.9	2551.2	2549.5	2549.5	2549.5
10°	2499.7	2501.3	2501.3	2501.3	2494.9
12.5°	2438.6	2441.8	2443.4	2438.6	2438.6
15°	2364.7	2364.7	2363.1	2364.7	2366.3
17.5°	2276.3	2281.1	2281.1	2276.3	2274.7
20°	2168.6	2176.6	2179.8	2173.4	2173.4
22.5°	2048.0	2056.0	2075.3	2059.2	2046.4
25°	1887.2	1913.0	1945.1	1914.6	1887.2
27.5°	1679.9	1736.1	1810.1	1745.8	1684.7
30°	1440.3	1532.0	1644.5	1536.8	1451.6
32.5°	1196.0	1298.9	1464.5	1306.9	1196.0
35°	972.6	1061.0	1258.7	1073.8	974.2
37.5°	773.2	858.4	1032.0	868.1	784.5
40°	614.1	683.2	800.6	681.6	623.7
42.5°	479.0	528.9	606.0	527.3	477.4
45°	360.1	403.5	437.2	395.5	361.7
47.5°	265.2	294.2	313.5	289.4	258.8
50°	186.5	207.4	212.2	202.5	180.0
52.5°	139.9	139.9	141.5	138.2	136.6
55°	109.3	102.9	91.6	101.3	107.7
57.5°	85.2	78.8	64.3	75.6	83.6
60°	65.9	59.5	46.6	57.9	64.3
62.5°	51.4	45.0	37.0	45.0	49.8
65°	38.6	35.4	28.9	33.8	38.6
67.5°	28.9	25.7	22.5	25.7	28.9
70°	22.5	20.9	17.7	19.3	22.5
72.5°	16.1	14.5	14.5	14.5	16.1
75°	11.3	11.3	11.3	11.3	11.3
77.5°	8.0	8.0	8.0	8.0	8.0
80°	4.8	4.8	6.4	6.4	6.4
82.5°	3.2	3.2	4.8	4.8	4.8
85°	3.2	3.2	3.2	3.2	3.2
87.5°	1.6	1.6	1.6	3.2	3.2
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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