

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: P838745

Luminaire Tested: HCSQ660D010-HM64560835-61SQH

Issue Date: 5/21/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P838745  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ660D010-HM64560835-61SQH  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

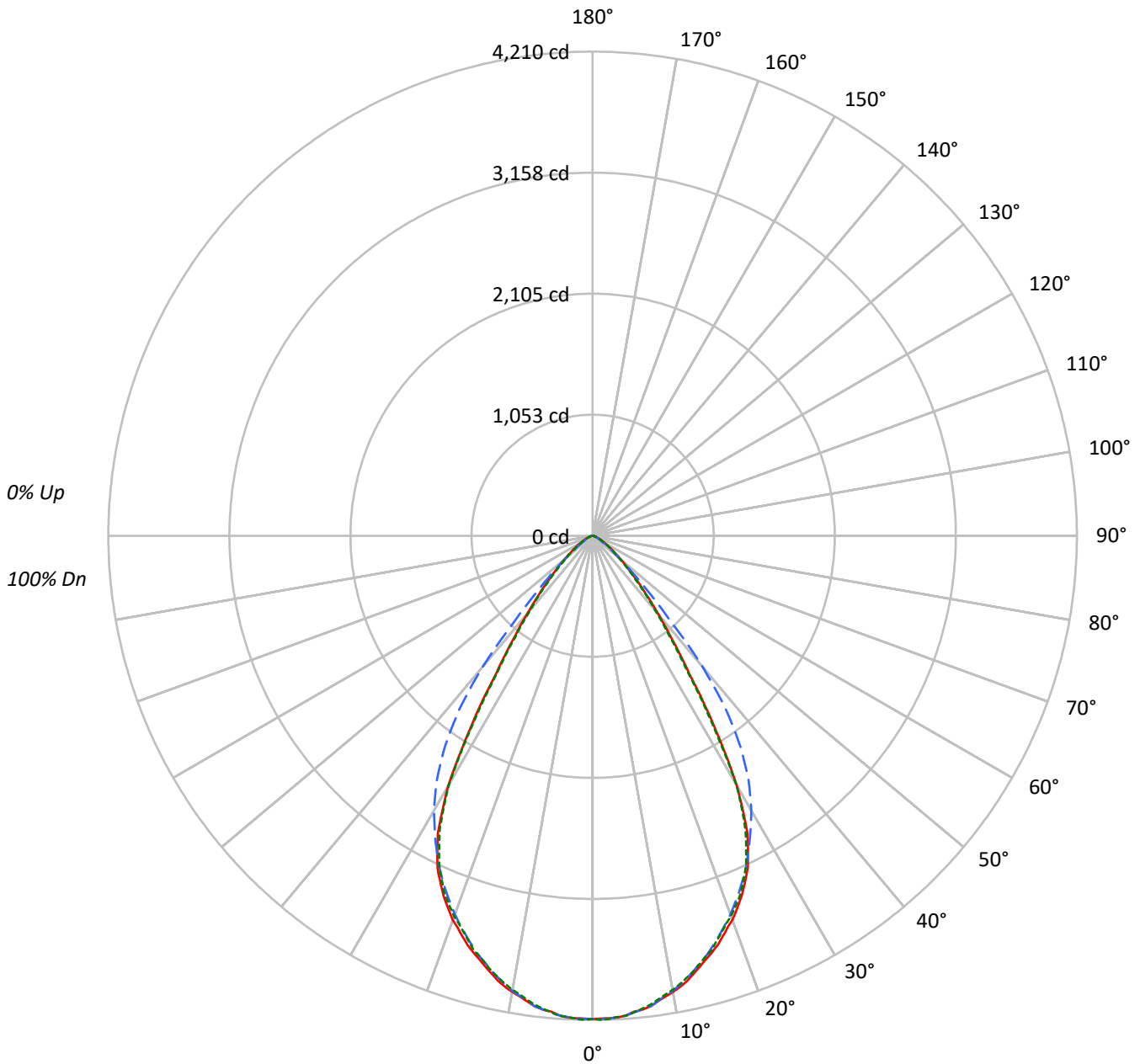
Lumens per Lamp: N/A  
Luminaire Lumens: 4726.7 lumens  
Efficiency: N/A  
Efficacy: 84.4 lumens/watt  
Spacing Criteria (0/90/45): 1.02 / 1.01 / 1.04  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 56  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	97	95	94	92			92																
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85			85																
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78			78																
4	95	87	81	76	93	86	80	76	83	78	75	81	77	74	79	76	73	71			71																
5	90	80	74	69	88	79	74	69	78	72	68	76	71	68	74	70	67	66			66																
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	61			61																
7	80	70	63	59	79	69	63	59	68	62	58	67	62	58	65	61	58	56			56																
8	76	65	59	54	74	65	59	54	64	58	54	63	57	54	62	57	54	52			52																
9	72	61	55	51	70	61	55	50	60	54	50	59	54	50	58	53	50	48			48																
10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45			45																

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	180950	180950	180950
5°	179528	179830	179727
10°	176099	175693	175282
15°	169878	168942	168839
20°	162872	160522	161269
25°	151599	150268	149936
30°	124579	137093	124231
35°	76939	117737	75105
40°	49393	83453	47690
45°	32217	40449	30658
50°	21388	20142	19988
55°	14525	10502	13474
60°	9834	6424	9033
65°	6887	4748	6174
70°	4406	3525	4104
75°	3094	2712	2712
80°	2306	1736	1736
85°	1136	2322	1136

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 40449 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	392.5	8.3
10°-20°	1065.3	22.5
20°-30°	1438.0	30.4
30°-40°	1122.3	23.7
40°-50°	470.1	9.9
50°-60°	159.4	3.4
60°-70°	56.8	1.2
70°-80°	18.5	0.4
80°-90°	3.8	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°	2895.8	61.3
0°-40°	4018.1	85.0
0°-60°	4647.6	98.3
0°-90°	4726.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4726.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4203	4203	4203	4203	4203	
5°	4154	4158	4161	4154	4158	393
15°	3811	3802	3790	3786	3788	1072
25°	3191	3177	3163	3163	3156	1435
35°	1464	1718	2240	1716	1429	963
45°	529	566	664	541	504	425
55°	194	177	140	168	180	179
65°	68	56	47	54	61	70
75°	19	16	16	16	16	21
85°	2	2	5	2	2	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4202.7	4202.7	4202.7	4202.7	4202.7
1°	4198.0	4205.0	4200.4	4202.7	4209.7
2°	4198.0	4198.0	4202.7	4200.4	4202.7
3°	4193.4	4193.4	4188.7	4188.7	4188.7
4°	4179.4	4179.4	4179.4	4174.7	4184.1
5°	4153.8	4158.4	4160.8	4153.8	4158.4
6°	4144.4	4146.8	4142.1	4139.8	4135.1
7°	4123.5	4116.5	4123.5	4107.1	4109.5
8°	4088.5	4088.5	4083.8	4079.2	4074.5
9°	4055.9	4055.9	4051.2	4044.2	4039.5
10°	4027.9	4020.9	4018.6	4011.6	4009.2
11°	3995.3	3981.3	3978.9	3971.9	3971.9
12°	3955.6	3948.6	3932.3	3930.0	3930.0
13°	3906.7	3899.7	3888.0	3878.7	3888.0
14°	3860.1	3855.4	3834.4	3841.4	3839.1
15°	3811.1	3801.8	3790.1	3785.5	3787.8
16°	3766.8	3750.5	3734.2	3736.5	3750.5
17°	3720.2	3696.9	3680.6	3678.2	3685.2
18°	3661.9	3643.3	3617.6	3627.0	3627.0
19°	3603.7	3578.0	3561.7	3559.4	3568.7
20°	3554.7	3515.1	3503.4	3501.1	3519.7
22.5°	3386.9	3347.3	3337.9	3347.3	3365.9
25°	3191.1	3177.1	3163.1	3163.1	3156.1
27.5°	2913.7	2946.3	2962.6	2930.0	2876.4
30°	2505.8	2643.3	2757.5	2627.0	2498.8
32.5°	1974.3	2258.7	2522.1	2251.7	1927.7
35°	1463.8	1717.9	2240.0	1715.6	1428.9
37.5°	1128.2	1291.3	1904.4	1270.4	1095.5
40°	878.8	974.3	1484.8	962.7	848.5
42.5°	683.0	743.6	988.3	729.6	659.7
45°	529.1	566.4	664.3	540.8	503.5
47.5°	412.6	428.9	454.5	410.2	389.3
50°	319.3	319.3	300.7	307.7	298.4
52.5°	247.1	237.8	202.8	223.8	228.4
55°	193.5	177.2	139.9	167.8	179.5
57.5°	146.9	130.5	100.2	123.5	135.2
60°	114.2	97.9	74.6	93.2	104.9
62.5°	88.6	74.6	58.3	69.9	79.3
65°	67.6	55.9	46.6	53.6	60.6
67.5°	51.3	42.0	35.0	39.6	46.6
70°	35.0	32.6	28.0	30.3	32.6
72.5°	25.6	23.3	21.0	21.0	23.3
75°	18.6	16.3	16.3	16.3	16.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	4.7	4.7	4.7	4.7	4.7
85°	2.3	2.3	4.7	2.3	2.3
87.5°	2.3	2.3	2.3	2.3	2.3
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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Scaled Data Report





77.5°	11.7	11.7	11.7	11.7	11.7
80°	9.3	9.3	7.0	7.0	7.0

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Scaled Data Report



(END OF REPORT)