

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: P838720

Luminaire Tested: HCSQ655D010-HM64560930-61SQH

Issue Date: 5/21/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P838720  
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: HCSQ655D010-HM64560930-61SQH  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

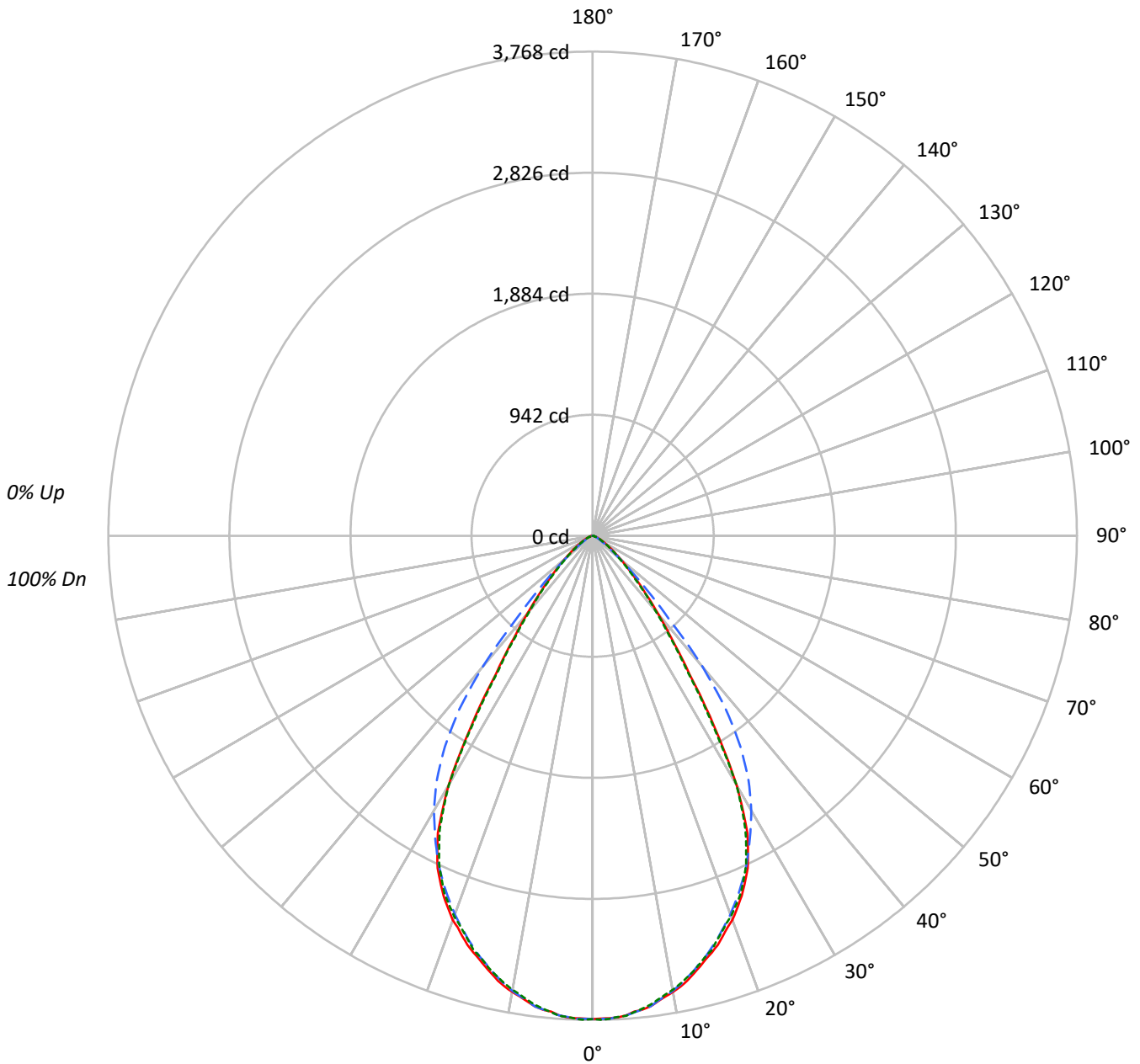
Lumens per Lamp: N/A  
Luminaire Lumens: 4230.3 lumens  
Efficiency: N/A  
Efficacy: 78.3 lumens/watt  
Spacing Criteria (0/90/45): 1.02 / 1.01 / 1.04  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 54  
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					20					
RC	80					70					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	78	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°	161945	161945	161945
5°	160671	160943	160852
10°	157606	157238	156876
15°	152039	151201	151108
20°	145768	143665	144334
25°	135674	134487	134192
30°	111494	122695	111186
35°	68861	105375	67215
40°	44205	74691	42682
45°	28837	36205	27437
50°	19144	18025	17884
55°	13001	9398	12055
60°	8801	5752	8086
65°	6164	4248	5522
70°	3940	3147	3676
75°	2778	2429	2429
80°	2058	1562	1562
85°	1037	2075	1037

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 36205 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	351.3	8.3
10°-20°	953.4	22.5
20°-30°	1287.0	30.4
30°-40°	1004.4	23.7
40°-50°	420.8	9.9
50°-60°	142.6	3.4
60°-70°	50.9	1.2
70°-80°	16.5	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°	2591.7	61.3
0°-40°	3596.1	85.0
0°-60°	4159.5	98.3
0°-90°	4230.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4230.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3761	3761	3761	3761	3761	
5°	3718	3722	3724	3718	3722	352
15°	3411	3402	3392	3388	3390	959
25°	2856	2843	2831	2831	2825	1285
35°	1310	1538	2005	1535	1279	862
45°	474	507	595	484	451	380
55°	173	158	125	150	161	160
65°	60	50	42	48	54	62
75°	17	15	15	15	15	18
85°	2	2	4	2	2	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3761.3	3761.3	3761.3	3761.3	3761.3
1°	3757.2	3763.4	3759.2	3761.3	3767.6
2°	3757.2	3757.2	3761.3	3759.2	3761.3
3°	3753.0	3753.0	3748.8	3748.8	3748.8
4°	3740.5	3740.5	3740.5	3736.3	3744.6
5°	3717.5	3721.7	3723.8	3717.5	3721.7
6°	3709.2	3711.3	3707.1	3705.0	3700.8
7°	3690.4	3684.1	3690.4	3675.8	3677.9
8°	3659.1	3659.1	3654.9	3650.8	3646.6
9°	3629.9	3629.9	3625.7	3619.5	3615.3
10°	3604.9	3598.6	3596.5	3590.3	3588.2
11°	3575.7	3563.2	3561.1	3554.8	3554.8
12°	3540.2	3533.9	3519.3	3517.3	3517.3
13°	3496.4	3490.1	3479.7	3471.4	3479.7
14°	3454.7	3450.5	3431.7	3438.0	3435.9
15°	3410.9	3402.5	3392.1	3387.9	3390.0
16°	3371.2	3356.6	3342.0	3344.1	3356.6
17°	3329.5	3308.6	3294.0	3292.0	3298.2
18°	3277.3	3260.7	3237.7	3246.1	3246.1
19°	3225.2	3202.2	3187.6	3185.6	3193.9
20°	3181.4	3145.9	3135.5	3133.4	3150.1
22.5°	3031.2	2995.7	2987.4	2995.7	3012.4
25°	2855.9	2843.4	2830.9	2830.9	2824.7
27.5°	2607.7	2636.9	2651.5	2622.3	2574.3
30°	2242.6	2365.7	2467.9	2351.1	2236.4
32.5°	1767.0	2021.5	2257.2	2015.2	1725.2
35°	1310.1	1537.5	2004.8	1535.4	1278.8
37.5°	1009.7	1155.7	1704.4	1137.0	980.5
40°	786.5	872.0	1328.9	861.6	759.4
42.5°	611.2	665.5	884.5	653.0	590.4
45°	473.6	506.9	594.6	484.0	450.6
47.5°	369.2	383.9	406.8	367.2	348.4
50°	285.8	285.8	269.1	275.4	267.0
52.5°	221.1	212.8	181.5	200.3	204.4
55°	173.2	158.5	125.2	150.2	160.6
57.5°	131.4	116.8	89.7	110.6	121.0
60°	102.2	87.6	66.8	83.4	93.9
62.5°	79.3	66.8	52.2	62.6	70.9
65°	60.5	50.1	41.7	48.0	54.2
67.5°	45.9	37.6	31.3	35.5	41.7
70°	31.3	29.2	25.0	27.1	29.2
72.5°	22.9	20.9	18.8	18.8	20.9
75°	16.7	14.6	14.6	14.6	14.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	4.2	4.2	4.2	4.2	4.2
85°	2.1	2.1	4.2	2.1	2.1
87.5°	2.1	2.1	2.1	2.1	2.1
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°	10.4	10.4	10.4	10.4	10.4
80°	8.3	8.3	6.3	6.3	6.3

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Scaled Data Report



(END OF REPORT)