

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: P838499

Luminaire Tested: HCSQ630D010-HM63040830-61SQC

Issue Date: 5/21/2024

**Test Information**

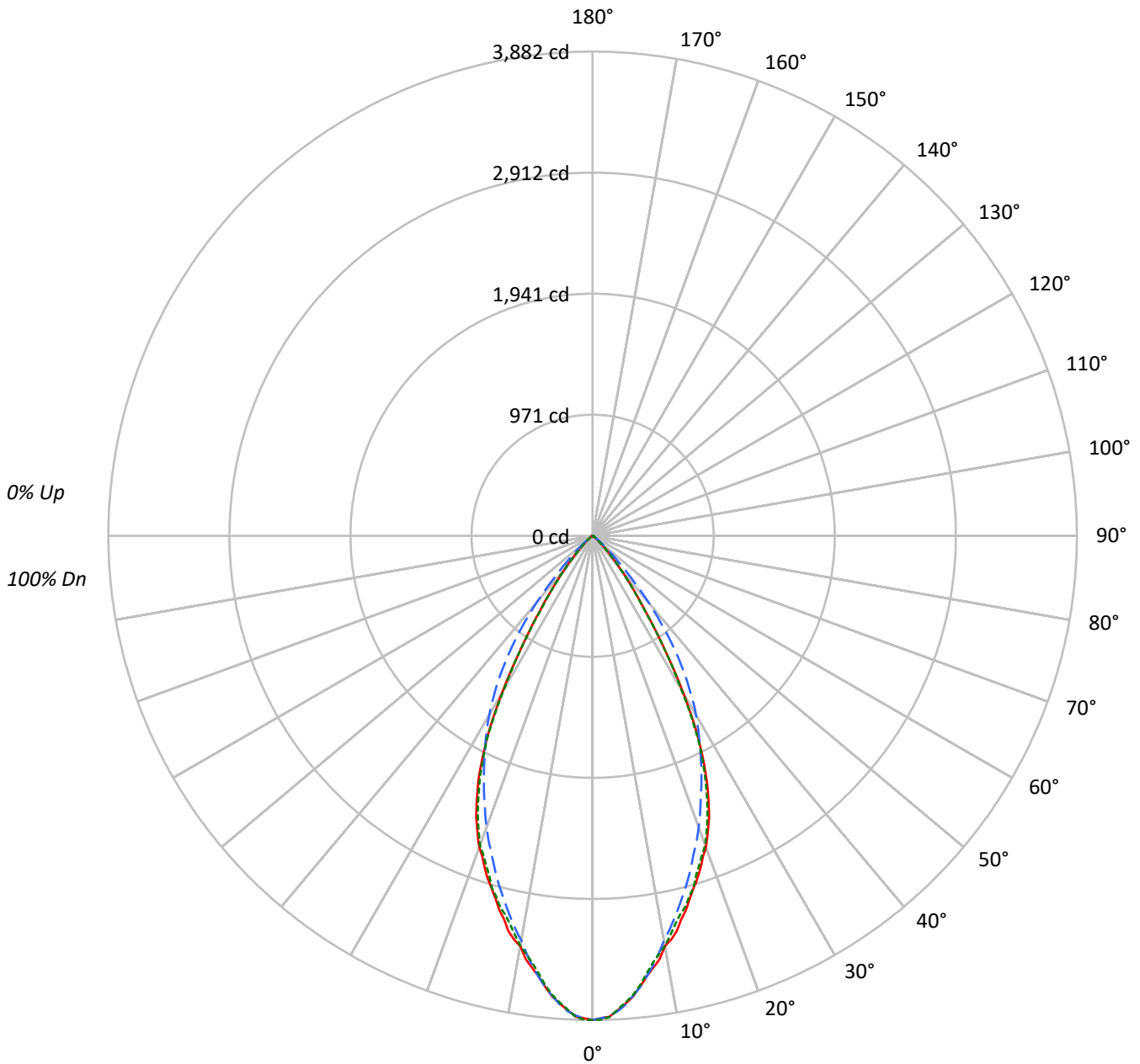
Test Method: LM-79-2019  
Report Number: P838499  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ630D010-HM63040830-61SQC  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2907.5 lumens  
Efficiency: N/A  
Efficacy: 103.1 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.2  
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					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	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	100	100	100	100		
	1	114	111	108	106	111	109	107	105	105	103	101	101	100	98	98	96	95	94	94	94	94	94	94		
	2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87	87	87	87	87	87		
	3	103	97	92	88	101	95	91	87	93	89	86	90	87	84	88	85	83	81	81	81	81	81	81		
	4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	78	76	76	76	76	76	76		
	5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71	71	71	71	71	71		
	6	88	80	74	70	87	79	73	69	77	72	69	76	72	68	75	71	68	66	66	66	66	66	66		
	7	84	75	69	65	83	74	69	65	73	68	64	72	67	64	71	67	64	62	62	62	62	62	62		
	8	80	71	65	61	79	70	65	61	69	64	60	68	64	60	67	63	60	59	59	59	59	59	59		
	9	76	67	61	57	75	66	61	57	65	60	57	65	60	57	64	60	56	55	55	55	55	55	55		
	10	73	63	58	54	72	63	57	54	62	57	54	61	57	53	61	56	53	52	52	52	52	52	52		

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

	0°	45°	90°
0°	167129	167129	167129
5°	160312	160035	159811
10°	146011	144031	145902
15°	134187	129275	133380
20°	121777	113938	120944
25°	102918	97930	101503
30°	72064	82440	70836
35°	38706	63236	37954
40°	19166	39130	19020
45°	8366	16501	8208
50°	2693	5995	2693
55°	1366	1944	1269
60°	896	896	896
65°	662	662	662
70°	491	491	491
75°	433	433	433
80°	322	322	322
85°	642	642	642

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 16501 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	340.9	11.7
10°-20°	823.1	28.3
20°-30°	950.8	32.7
30°-40°	593.8	20.4
40°-50°	165.0	5.7
50°-60°	23.1	0.8
60°-70°	6.8	0.2
70°-80°	2.9	0.1
80°-90°	1.2	0.0
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°	2114.7	72.7
0°-40°	2708.5	93.2
0°-60°	2896.6	99.6
0°-90°	2907.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2907.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3882	3882	3882	3882	3882	
5°	3709	3699	3703	3698	3698	342
15°	3010	2953	2900	2946	2992	843
25°	2166	2103	2061	2102	2137	968
35°	736	909	1203	898	722	489
45°	137	175	271	174	135	119
55°	18	18	26	18	17	18
65°	6	6	6	6	6	7
75°	3	3	3	3	3	3
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°	3881.7	3881.7	3881.7	3881.7	3881.7
1°	3870.0	3870.0	3870.0	3880.4	3880.4
2°	3858.3	3855.7	3849.3	3857.0	3860.9
3°	3810.4	3815.6	3818.2	3814.3	3805.2
4°	3761.1	3755.9	3770.2	3761.1	3753.3
5°	3709.2	3698.9	3702.8	3697.6	3697.6
6°	3636.6	3649.6	3639.2	3630.2	3625.0
7°	3557.6	3567.9	3561.4	3548.5	3539.4
8°	3495.3	3488.8	3478.5	3475.9	3460.3
9°	3435.7	3412.4	3389.0	3392.9	3396.8
10°	3339.7	3342.3	3294.4	3330.7	3337.2
11°	3299.6	3285.3	3221.8	3251.6	3262.0
12°	3241.2	3195.8	3141.4	3166.0	3185.5
13°	3156.9	3110.3	3061.0	3098.6	3118.0
14°	3093.4	3040.3	2978.0	3026.0	3066.2
15°	3010.4	2953.4	2900.2	2945.6	2992.3
16°	2937.8	2871.7	2818.6	2862.6	2932.7
17°	2874.3	2792.6	2727.8	2774.5	2841.9
18°	2800.4	2705.8	2646.1	2695.4	2771.9
19°	2718.7	2622.8	2569.6	2609.8	2698.0
20°	2657.8	2550.2	2486.7	2525.6	2639.6
22.5°	2440.0	2327.2	2268.9	2315.5	2406.3
25°	2166.4	2102.9	2061.4	2101.6	2136.6
27.5°	1842.3	1842.3	1856.6	1839.7	1829.3
30°	1449.5	1554.5	1658.2	1549.3	1424.8
32.5°	1057.9	1226.5	1435.2	1248.5	1056.6
35°	736.4	908.8	1203.1	898.5	722.1
37.5°	512.1	626.2	949.0	632.7	505.6
40°	341.0	420.1	696.2	427.8	338.4
42.5°	223.0	277.4	449.9	278.7	217.8
45°	137.4	175.0	271.0	173.7	134.8
47.5°	80.4	103.7	158.2	105.0	79.1
50°	40.2	60.9	89.5	59.6	40.2
52.5°	23.3	32.4	49.3	31.1	23.3
55°	18.2	18.2	25.9	18.2	16.9
57.5°	14.3	14.3	14.3	14.3	13.0
60°	10.4	11.7	10.4	10.4	10.4
62.5°	9.1	9.1	7.8	9.1	7.8
65°	6.5	6.5	6.5	6.5	6.5
67.5°	5.2	5.2	5.2	5.2	5.2
70°	3.9	3.9	3.9	3.9	3.9
72.5°	2.6	3.9	2.6	3.9	3.9
75°	2.6	2.6	2.6	2.6	2.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	1.3	1.3	1.3	1.3	1.3
85°	1.3	1.3	1.3	1.3	1.3
87.5°	1.3	1.3	1.3	1.3	1.3
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°	2.6	2.6	2.6	2.6	1.3
80°	1.3	1.3	1.3	1.3	1.3

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Scaled Data Report



(END OF REPORT)