

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: P838355

Luminaire Tested: HCSQ610D010-HM60525927-61SQH

Issue Date: 5/21/2024

**Test Information**

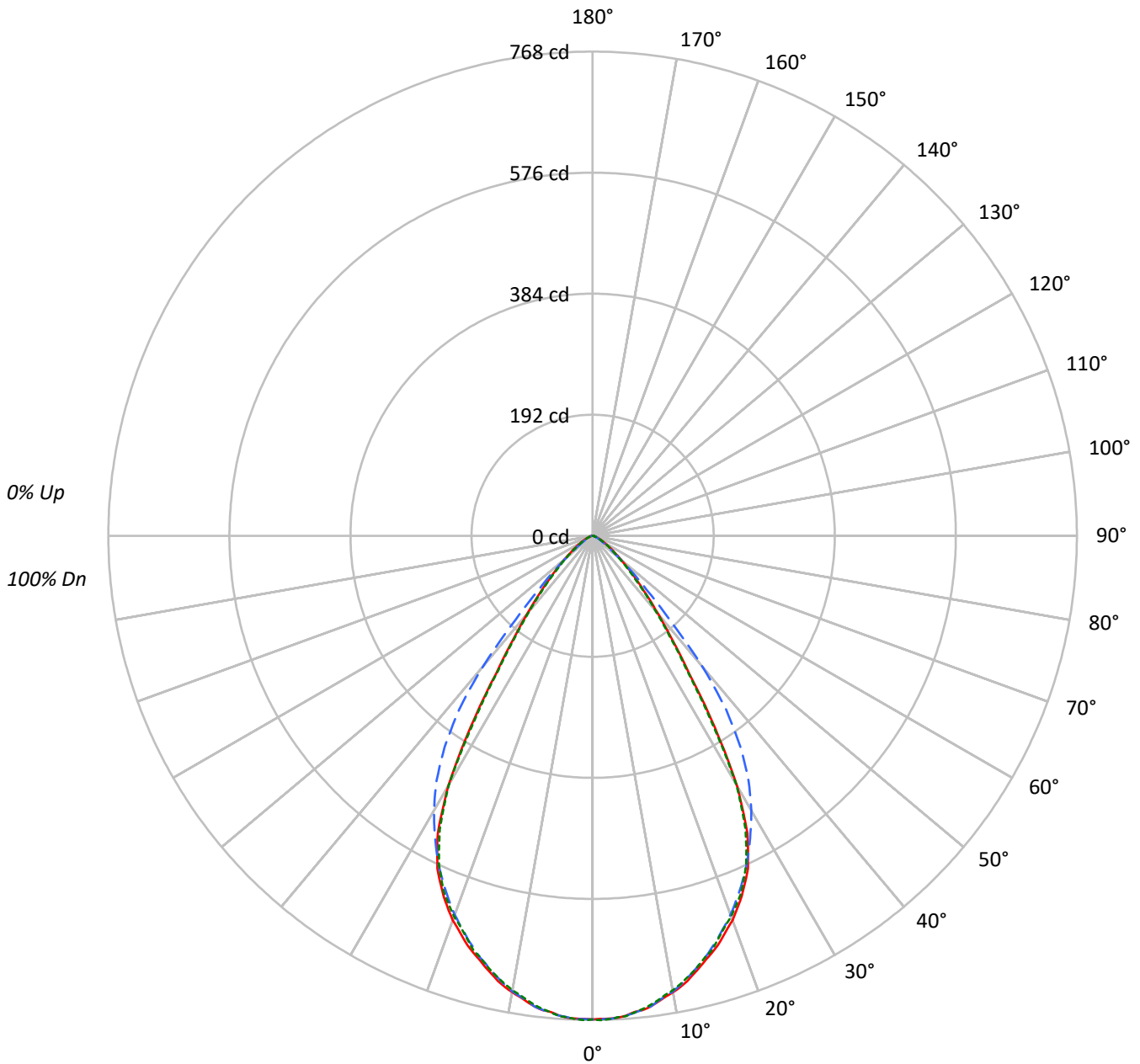
Test Method: LM-79-2019  
Report Number: P838355  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ610D010-HM60525927-61SQH  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 862.9 lumens  
Efficiency: N/A  
Efficacy: 87.2 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): 9.9  
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			
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°	33032	33032	33032
5°	32774	32830	32808
10°	32147	32073	31999
15°	31010	30841	30823
20°	29732	29306	29443
25°	27677	27430	27373
30°	22740	25027	22681
35°	14044	21492	13713
40°	9015	15237	8706
45°	5882	7386	5596
50°	3905	3677	3651
55°	2650	1914	2462
60°	1800	1171	1645
65°	1253	866	1131
70°	806	642	755
75°	566	499	499
80°	422	322	322
85°	198	445	198

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 7386 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.7	8.3
10°-20°	194.5	22.5
20°-30°	262.5	30.4
30°-40°	204.9	23.7
40°-50°	85.8	9.9
50°-60°	29.1	3.4
60°-70°	10.4	1.2
70°-80°	3.4	0.4
80°-90°	0.7	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°	528.7	61.3
0°-40°	733.5	85.0
0°-60°	848.5	98.3
0°-90°	862.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	862.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	767	767	767	767	767	
5°	758	759	760	758	759	72
15°	696	694	692	691	692	196
25°	583	580	577	577	576	262
35°	267	314	409	313	261	176
45°	97	103	121	99	92	78
55°	35	32	26	31	33	33
65°	12	10	8	10	11	13
75°	3	3	3	3	3	4
85°	0	0	1	0	0	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	767.2	767.2	767.2	767.2	767.2
1°	766.4	767.7	766.8	767.2	768.5
2°	766.4	766.4	767.2	766.8	767.2
3°	765.5	765.5	764.7	764.7	764.7
4°	763.0	763.0	763.0	762.1	763.8
5°	758.3	759.1	759.6	758.3	759.1
6°	756.6	757.0	756.2	755.7	754.9
7°	752.8	751.5	752.8	749.8	750.2
8°	746.4	746.4	745.5	744.7	743.8
9°	740.4	740.4	739.6	738.3	737.4
10°	735.3	734.0	733.6	732.3	731.9
11°	729.4	726.8	726.4	725.1	725.1
12°	722.1	720.9	717.9	717.4	717.4
13°	713.2	711.9	709.8	708.1	709.8
14°	704.7	703.8	700.0	701.3	700.9
15°	695.7	694.0	691.9	691.1	691.5
16°	687.7	684.7	681.7	682.1	684.7
17°	679.1	674.9	671.9	671.5	672.8
18°	668.5	665.1	660.4	662.1	662.1
19°	657.9	653.2	650.2	649.8	651.5
20°	648.9	641.7	639.6	639.1	642.6
22.5°	618.3	611.1	609.4	611.1	614.5
25°	582.6	580.0	577.4	577.4	576.2
27.5°	531.9	537.9	540.9	534.9	525.1
30°	457.4	482.6	503.4	479.6	456.2
32.5°	360.4	412.3	460.4	411.1	351.9
35°	267.2	313.6	408.9	313.2	260.9
37.5°	206.0	235.7	347.7	231.9	200.0
40°	160.4	177.9	271.1	175.7	154.9
42.5°	124.7	135.7	180.4	133.2	120.4
45°	96.6	103.4	121.3	98.7	91.9
47.5°	75.3	78.3	83.0	74.9	71.1
50°	58.3	58.3	54.9	56.2	54.5
52.5°	45.1	43.4	37.0	40.9	41.7
55°	35.3	32.3	25.5	30.6	32.8
57.5°	26.8	23.8	18.3	22.6	24.7
60°	20.9	17.9	13.6	17.0	19.1
62.5°	16.2	13.6	10.6	12.8	14.5
65°	12.3	10.2	8.5	9.8	11.1
67.5°	9.4	7.7	6.4	7.2	8.5
70°	6.4	6.0	5.1	5.5	6.0
72.5°	4.7	4.3	3.8	3.8	4.3
75°	3.4	3.0	3.0	3.0	3.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	0.9	0.9	0.9	0.9	0.9
85°	0.4	0.4	0.9	0.4	0.4
87.5°	0.4	0.4	0.4	0.4	0.4
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°	2.1	2.1	2.1	2.1	2.1
80°	1.7	1.7	1.3	1.3	1.3

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Scaled Data Report



(END OF REPORT)