

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: P838437

Luminaire Tested: HCSQ620D010-HM60525927-61SQMB

Issue Date: 5/21/2024



**Test Information**

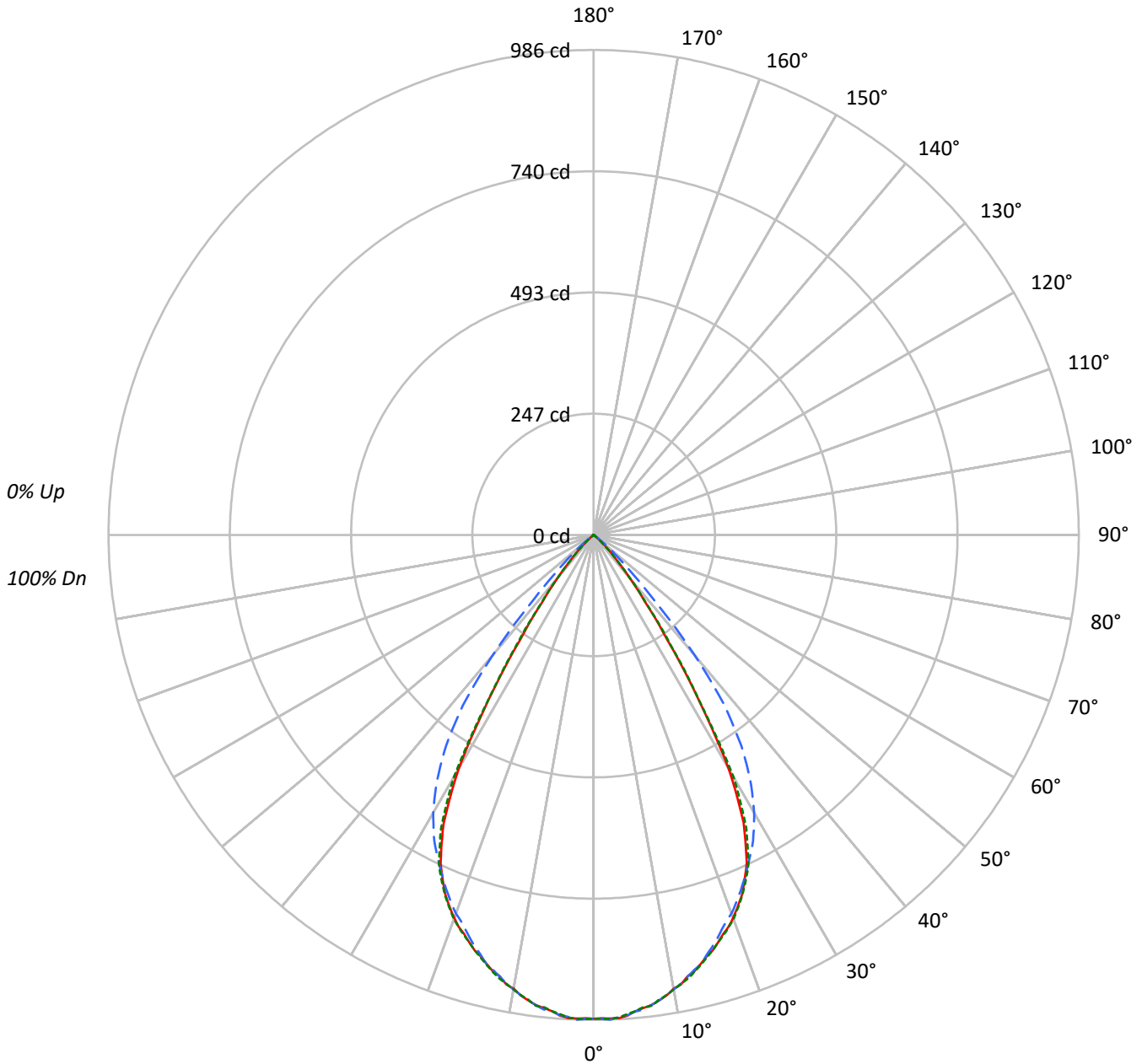
Test Method: LM-79-2019  
Report Number: P838437  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ620D010-HM60525927-61SQMB  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 978.0 lumens  
Efficiency: N/A  
Efficacy: 48.9 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.01 / 1.03  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 20  
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	106	104	105	103	101	101	99	98	97	96	95	93	93	93	93	93	93		
	2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87	87	87	87	87	87		
	3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81	81	81	81	81	81		
	4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75	75	75	75	75	75		
	5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70	70	70	70	70	70		
	6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65	65	65	65	65	65		
	7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60	60	60	60	60	60		
	8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56	56	56	56	56	56		
	9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53	53	53	53	53	53		
	10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50	50	50	50	50	50		

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

	0°	45°	90°
0°	42358	42358	42358
5°	42006	42040	42006
10°	40952	41022	41022
15°	39542	39435	39649
20°	37975	37535	38085
25°	34970	35236	35312
30°	27259	32425	28289
35°	13818	27474	14323
40°	6289	17969	6289
45°	2436	6765	2387
50°	375	2143	375
55°	120	420	120
60°	69	69	69
65°	82	0	82
70°	0	0	101
75°	0	0	133
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 6765 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.9	9.4
10°-20°	249.1	25.5
20°-30°	335.8	34.3
30°-40°	236.1	24.1
40°-50°	60.3	6.2
50°-60°	4.2	0.4
60°-70°	0.5	0.1
70°-80°	0.1	0.0
80°-90°	0.0	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°	676.8	69.2
0°-40°	913.0	93.4
0°-60°	977.4	99.9
0°-90°	978.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	978.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	984	984	984	984	984	
5°	972	974	973	974	972	92
15°	887	886	885	887	890	250
25°	736	738	742	744	743	329
35°	263	348	523	357	272	177
45°	40	60	111	61	39	35
55°	2	2	6	2	2	2
65°	1	1	0	1	1	1
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	983.8	983.8	983.8	983.8	983.8
1°	983.0	983.8	984.6	984.6	983.8
2°	983.8	981.4	986.2	983.8	984.6
3°	983.8	979.1	981.4	983.0	982.2
4°	979.9	976.7	979.1	978.3	976.7
5°	971.9	973.5	972.7	973.5	971.9
6°	967.1	968.7	970.3	967.9	965.5
7°	963.1	962.3	963.1	964.7	964.7
8°	955.9	957.5	955.9	956.7	954.3
9°	947.9	947.9	947.9	949.5	947.1
10°	936.7	940.7	938.3	939.9	938.3
11°	931.1	929.5	929.5	930.3	929.5
12°	917.5	919.1	918.3	919.9	922.3
13°	910.3	911.1	907.9	911.9	911.9
14°	899.1	898.3	899.9	899.1	900.7
15°	887.1	885.5	884.7	887.1	889.5
16°	878.3	874.4	872.0	875.2	878.3
17°	865.6	861.6	858.4	864.8	865.6
18°	852.8	851.2	843.2	851.2	855.2
19°	842.4	836.8	829.6	838.4	843.2
20°	828.8	824.0	819.2	824.0	831.2
22.5°	789.6	785.6	781.6	787.2	791.2
25°	736.1	738.5	741.7	744.1	743.3
27.5°	660.2	681.7	701.7	688.9	672.1
30°	548.3	602.6	652.2	611.4	569.0
32.5°	397.2	489.9	593.0	508.3	401.2
35°	262.9	348.5	522.7	357.3	272.5
37.5°	171.0	234.2	436.4	235.0	179.0
40°	111.9	152.7	319.7	155.8	111.9
42.5°	68.7	96.7	194.2	100.7	68.7
45°	40.0	59.9	111.1	60.7	39.2
47.5°	18.4	32.8	63.1	32.0	19.2
50°	5.6	14.4	32.0	14.4	5.6
52.5°	2.4	4.0	15.2	4.0	2.4
55°	1.6	1.6	5.6	1.6	1.6
57.5°	1.6	0.8	1.6	1.6	1.6
60°	0.8	0.8	0.8	0.8	0.8
62.5°	0.8	0.8	0.8	0.8	0.8
65°	0.8	0.8	0.0	0.8	0.8
67.5°	0.8	0.0	0.0	0.0	0.8
70°	0.0	0.0	0.0	0.0	0.8
72.5°	0.0	0.0	0.0	0.0	0.8
75°	0.0	0.0	0.0	0.0	0.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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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77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0

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(END OF REPORT)