

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: P838363

Luminaire Tested: HCSQ610D010-HM60525930-61SQMW

Issue Date: 5/21/2024

**Test Information**

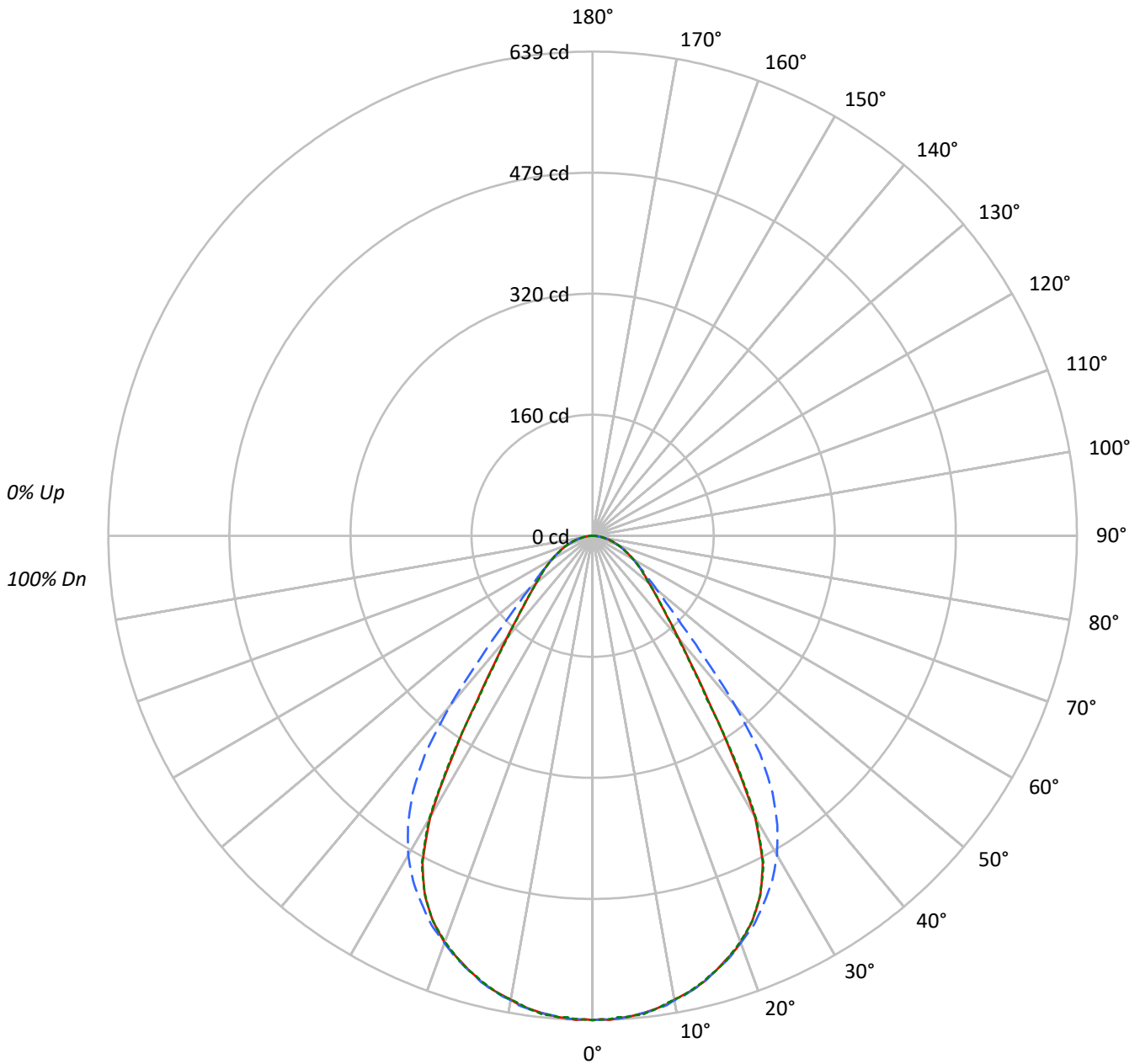
Test Method: LM-79-2019  
Report Number: P838363  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ610D010-HM60525930-61SQMW  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 943.0 lumens  
Efficiency: N/A  
Efficacy: 95.2 lumens/watt  
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.11  
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									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																			
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89																			
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79																			
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71																			
4	91	81	74	69	89	80	73	68	77	72	67	75	70	67	73	69	66	64																			
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58																			
6	80	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53																			
7	75	63	56	51	73	63	56	51	61	55	51	60	54	50	59	54	50	48																			
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44																			
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41																			
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38																			

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

	0°	45°	90°
0°	27525	27525	27525
5°	27458	27436	27458
10°	27189	27207	27150
15°	26785	26803	26745
20°	26181	26199	26117
25°	24874	25407	24851
30°	21299	24187	21433
35°	13997	21745	13782
40°	9892	16395	9718
45°	7672	10089	7727
50°	6524	7361	6464
55°	5870	6035	5870
60°	5313	5313	5313
65°	4870	4829	4829
70°	4444	4444	4494
75°	4159	4009	4092
80°	3645	3645	3645
85°	3112	3112	3112

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 10089 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.3	6.4
10°-20°	169.3	17.9
20°-30°	241.2	25.6
30°-40°	205.7	21.8
40°-50°	113.8	12.1
50°-60°	71.7	7.6
60°-70°	47.6	5.0
70°-80°	26.1	2.8
80°-90°	7.4	0.8
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°	470.7	49.9
0°-40°	676.4	71.7
0°-60°	861.8	91.4
0°-90°	943.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	943.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	639	639	639	639	639	
5°	635	636	635	634	635	60
15°	601	601	601	601	600	169
25°	524	530	535	529	523	237
35°	266	314	414	314	262	173
45°	126	138	166	137	127	100
55°	78	80	80	79	78	70
65°	48	48	47	48	47	48
75°	25	25	24	25	25	26
85°	6	6	6	7	6	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	639.3	639.3	639.3	639.3	639.3
1°	638.0	638.8	638.8	638.4	638.8
2°	639.3	638.0	638.0	638.0	638.4
3°	637.5	638.4	638.4	637.1	636.2
4°	637.1	636.6	636.6	638.0	637.1
5°	635.3	636.2	634.8	633.9	635.3
6°	633.5	633.9	633.5	633.9	635.3
7°	631.3	632.6	632.1	631.7	631.7
8°	628.6	630.4	629.5	629.5	629.0
9°	625.9	626.3	627.2	627.2	624.6
10°	621.9	623.2	622.3	622.8	621.0
11°	618.3	620.1	619.6	618.7	619.2
12°	615.2	616.1	615.6	614.3	614.7
13°	611.1	612.0	611.6	611.6	610.3
14°	606.7	605.8	607.1	606.2	605.8
15°	600.9	600.9	601.3	600.9	600.0
16°	595.5	596.0	596.0	595.5	596.0
17°	589.3	591.0	590.6	589.7	590.2
18°	583.5	584.8	585.2	584.8	583.5
19°	578.1	579.0	578.5	576.7	576.7
20°	571.4	571.8	571.8	570.9	570.0
22.5°	550.4	553.5	555.8	554.0	550.4
25°	523.6	529.8	534.8	529.4	523.1
27.5°	486.1	498.6	513.3	499.9	488.3
30°	428.4	457.0	486.5	459.7	431.1
32.5°	340.9	397.2	453.4	402.5	346.2
35°	266.3	314.1	413.7	314.5	262.2
37.5°	212.7	246.6	362.8	244.4	210.4
40°	176.0	198.8	291.7	197.9	172.9
42.5°	147.0	164.4	218.5	162.6	147.0
45°	126.0	138.0	165.7	137.2	126.9
47.5°	110.3	117.9	132.7	117.5	110.3
50°	97.4	101.9	109.9	101.4	96.5
52.5°	87.1	89.8	92.9	88.9	86.2
55°	78.2	79.5	80.4	79.1	78.2
57.5°	69.7	70.6	70.1	69.7	69.2
60°	61.7	62.1	61.7	62.1	61.7
62.5°	54.5	54.9	54.1	54.5	54.1
65°	47.8	48.2	47.4	47.8	47.4
67.5°	41.5	41.5	41.5	41.5	41.1
70°	35.3	35.7	35.3	35.7	35.7
72.5°	29.9	29.9	29.5	29.9	29.9
75°	25.0	24.6	24.1	24.6	24.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	10.7	10.7	10.3	10.7	10.7
85°	6.3	6.3	6.3	6.7	6.3
87.5°	3.1	2.7	2.7	3.1	3.1
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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77.5°	19.7	19.7	19.2	19.7	19.7
80°	14.7	15.2	14.7	15.2	14.7

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Scaled Data Report



(END OF REPORT)