

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: P838341

Luminaire Tested: HCSQ610D010-HM60525830-61SQLWW

Issue Date: 5/21/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P838341  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-5)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ610D010-HM60525830-61SQLWW  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: -

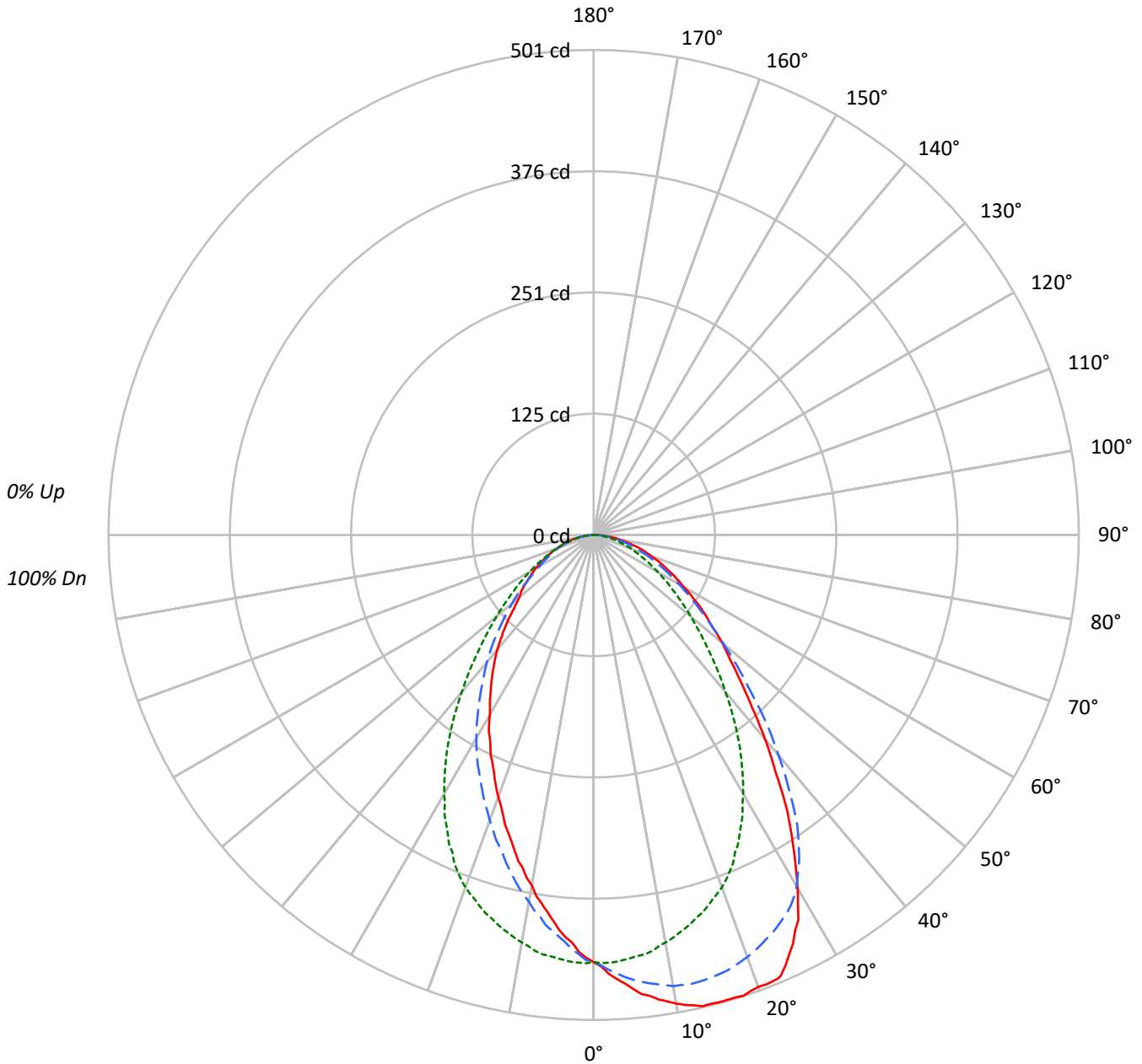
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 834.3 lumens  
Efficiency: N/A  
Efficacy: 84.3 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.08 / 1.17  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' 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	0					
RCR	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100							
	1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87							
	2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75							
	3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66							
	4	87	76	69	63	85	75	68	62	73	66	62	71	65	61	68	64	60	58							
	5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	51							
	6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46							
	7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42							
	8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38							
	9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34							
	10	58	46	39	34	57	45	38	34	44	38	34	44	38	33	43	37	33	32							

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

	0°	45°	90°	135°	180°
0°	42741	42741	42741	42741	42741
5°	45803	44854	42671	40474	39822
10°	48368	46563	42053	37872	36151
15°	50126	47423	41070	35102	32876
20°	51227	47825	39928	32340	29660
25°	51094	47817	37722	29641	26862
30°	47139	46898	34554	27104	23994
35°	41227	43379	30949	24244	21737
40°	34828	37547	26759	21688	19589
45°	29442	31456	22907	19030	17153
50°	26133	26374	19653	16593	15086
55°	23375	22582	16991	14289	14204
60°	20867	19675	14822	12361	13369
65°	19163	17490	12883	11484	12241
70°	17674	15663	11386	10707	11386
75°	16619	13961	9919	9732	10443
80°	15286	12497	8703	8982	9484
85°	15228	11282	7336	7336	8448

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 40°  
 Vertical Angle: 45°  
 Luminance: 31716 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.6	5.0
10°-20°	116.0	13.9
20°-30°	165.4	19.8
30°-40°	170.5	20.4
40°-50°	137.3	16.5
50°-60°	97.1	11.6
60°-70°	62.9	7.5
70°-80°	33.8	4.1
80°-90°	9.8	1.2
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°	323.0	38.7
0°-40°	493.5	59.2
0°-60°	727.8	87.2
0°-90°	834.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	834.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	441	441	441	441	441	
5°	471	461	439	416	410	46
15°	500	473	410	350	328	141
25°	478	447	353	277	251	218
35°	349	367	262	205	184	216
45°	215	230	167	139	125	168
55°	138	134	101	85	84	124
65°	84	76	56	50	53	83
75°	44	37	26	26	28	47
85°	14	10	7	7	8	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	441.2	441.2	441.2	441.2	441.2	441.2	441.2	441.2	441.2	441.2	441.2
1°	445.9	447.8	446.4	446.4	445.0	444.5	445.4	444.0	443.6	442.6	440.7
2°	453.9	452.5	452.1	452.5	449.7	449.7	448.3	445.4	444.0	442.1	436.9
3°	459.6	458.7	457.7	457.3	454.4	452.1	450.2	446.9	444.0	441.7	434.1
4°	464.8	464.8	463.9	462.0	459.1	456.3	452.5	448.8	444.5	440.2	430.3
5°	471.0	471.4	467.2	466.7	463.4	459.1	454.9	449.7	444.5	438.8	428.0
6°	477.1	474.7	473.8	470.5	465.8	462.0	456.8	451.1	444.0	437.4	422.8
7°	479.9	479.5	477.1	473.8	469.5	463.4	458.2	450.6	443.1	436.5	419.0
8°	484.7	484.7	481.8	477.6	471.4	465.8	459.1	450.2	442.6	434.1	413.8
9°	488.0	488.0	484.2	480.4	474.7	467.2	459.6	449.7	440.2	430.3	409.1
10°	491.7	490.8	488.0	482.3	477.6	469.1	459.6	449.2	438.8	427.5	404.3
11°	494.6	493.2	489.8	485.6	478.0	469.5	459.6	449.2	436.9	424.7	399.6
12°	496.9	496.0	491.7	486.5	479.0	470.5	459.1	447.3	433.6	420.9	393.5
13°	499.8	496.9	492.7	488.0	479.5	469.5	457.3	444.5	431.3	417.6	388.3
14°	499.3	498.8	495.0	488.4	479.0	468.6	456.8	441.7	428.0	413.8	382.1
15°	499.8	499.3	495.0	488.9	478.5	467.2	455.4	439.8	424.7	409.5	376.0
16°	499.8	499.8	494.1	488.0	478.0	465.8	452.5	437.9	421.4	406.2	370.8
17°	499.8	499.8	495.0	486.5	476.6	464.8	449.7	434.1	417.6	401.5	363.3
18°	500.7	499.3	493.2	486.1	474.7	462.4	447.8	431.3	414.3	396.3	358.1
19°	498.3	497.4	492.2	483.2	473.3	459.6	445.0	428.0	411.0	392.1	351.9
20°	496.9	498.3	491.3	481.8	470.5	457.3	442.1	424.7	406.2	387.3	345.8
21°	497.4	496.9	489.4	479.5	468.6	453.9	438.8	420.9	401.0	381.7	340.1
22.5°	496.5	495.0	487.0	476.1	462.9	449.7	433.2	414.7	393.5	371.8	329.2
23°	494.6	493.2	487.0	475.2	461.0	447.8	430.3	411.0	390.6	368.4	326.4
24°	487.0	486.5	483.7	471.9	458.7	444.0	427.0	404.8	382.1	359.0	319.3
25°	478.0	479.0	477.6	470.0	454.9	439.8	421.8	397.3	374.1	352.9	310.8
26°	469.5	469.5	468.6	465.8	451.1	435.1	414.3	388.3	366.1	343.9	301.8
27°	458.7	460.6	458.7	457.3	447.3	429.9	406.2	382.1	357.1	335.4	294.3
28°	450.2	450.2	449.2	446.9	443.6	423.7	397.7	373.2	348.6	327.8	285.8
29°	435.1	437.9	438.4	438.8	438.4	415.7	389.7	363.3	339.6	317.0	277.8
30°	421.4	424.2	426.1	429.4	429.9	408.6	380.3	355.2	331.1	308.9	270.7
32.5°	384.0	389.2	394.4	400.1	402.9	387.3	357.1	329.7	305.2	285.3	248.9
35°	348.6	350.0	355.7	368.9	371.8	361.8	329.7	303.7	280.6	261.7	228.6
37.5°	308.5	311.3	319.3	334.4	335.4	327.4	305.2	274.9	253.2	236.7	207.8
40°	275.4	276.8	282.5	295.2	299.5	294.3	274.9	247.5	227.7	211.6	188.0
42.5°	242.3	244.2	251.3	261.2	267.4	261.2	244.2	220.6	201.2	189.4	169.1
45°	214.9	217.3	223.9	229.6	231.5	227.7	212.6	193.2	179.5	167.2	151.6
47.5°	191.3	193.7	198.4	200.8	203.1	199.3	187.5	171.5	157.8	147.9	133.7
50°	173.4	172.9	176.2	177.1	177.1	172.9	163.0	149.7	138.4	130.4	118.6
52.5°	153.0	154.0	156.4	155.4	154.9	151.2	142.7	131.3	121.9	114.8	103.9
55°	138.4	137.0	138.4	137.5	135.6	131.8	124.2	114.8	106.8	100.6	90.7
57.5°	122.3	122.3	122.8	120.9	118.6	114.3	107.7	100.1	93.1	87.9	79.8
60°	107.7	108.6	108.2	106.3	103.9	99.2	94.0	86.4	80.3	76.5	69.0



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	73.2	73.2	71.8	70.4	67.1	62.8	59.0	54.3	51.0	47.7	43.0
70°	62.4	63.3	61.4	59.0	56.7	53.9	49.6	45.8	42.5	40.2	36.4
72.5°	53.9	53.4	52.0	49.6	47.7	44.4	40.6	37.8	35.0	33.1	30.2
75°	44.4	44.4	43.0	41.1	38.7	35.9	33.1	30.7	28.3	26.5	25.0
77.5°	35.4	35.9	34.5	33.1	31.2	28.3	26.0	24.1	22.2	20.8	19.8
80°	27.4	27.9	26.5	25.5	23.1	21.7	19.8	18.0	16.5	15.6	15.1
82.5°	20.8	20.3	19.4	18.9	17.0	15.6	13.7	12.8	11.8	10.9	10.9
85°	13.7	13.2	12.8	12.3	10.9	9.4	9.0	8.0	7.1	6.6	6.6
87.5°	7.1	7.1	6.6	6.1	5.7	4.7	4.3	3.3	2.8	2.8	2.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	441.2	441.2	441.2
1°	439.3	437.4	436.9
2°	433.6	430.8	431.3
3°	428.4	425.1	421.8
4°	421.8	416.6	416.6
5°	416.2	411.0	409.5
6°	411.0	402.5	400.6
7°	406.2	395.8	392.5
8°	398.2	387.8	384.5
9°	392.5	381.2	377.9
10°	385.0	373.6	367.5
11°	378.8	366.1	361.4
12°	372.2	356.6	351.9
13°	364.7	348.6	345.8
14°	357.6	342.0	336.8
15°	350.0	334.0	327.8
16°	342.0	325.9	320.3
17°	335.4	317.4	313.2
18°	328.8	309.9	303.3
19°	320.7	302.8	295.2
20°	313.7	293.8	287.7
21°	306.1	287.2	280.6
22.5°	295.7	274.4	268.3
23°	292.4	270.7	264.1
24°	284.8	263.1	257.4
25°	277.3	257.4	251.3
26°	270.7	248.9	243.3
27°	264.1	242.3	236.2
28°	257.0	235.2	230.5
29°	249.9	227.7	223.0
30°	242.3	222.5	214.5
32.5°	223.4	205.5	198.9
35°	205.0	189.4	183.8
37.5°	187.1	174.3	169.1
40°	171.5	160.1	154.9
42.5°	155.4	145.0	139.8
45°	138.9	130.4	125.2
47.5°	123.8	116.7	111.0
50°	110.1	103.0	100.1
52.5°	96.8	92.1	93.5
55°	84.6	84.6	84.1
57.5°	72.7	76.1	76.5
60°	63.8	68.0	69.0





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
67.5°	43.9	46.3	47.2
70°	37.8	39.7	40.2
72.5°	32.1	33.5	34.5
75°	26.0	27.9	27.9
77.5°	21.3	22.2	22.7
80°	16.1	16.5	17.0
82.5°	11.3	11.8	12.3
85°	6.6	7.1	7.6
87.5°	2.8	2.8	2.8
90°	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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report





— 0°-180°    - - 45°-225°    - - - - 90°-270°

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Scaled Data Report





62.5°	95.4	96.4	94.9	92.6	90.2	86.0	81.2	74.6	69.9	66.1	59.5
65°	83.6	84.1	83.1	80.8	78.4	74.2	69.4	63.8	60.0	56.2	50.5

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62.5°	57.2	60.5	60.9
65°	50.1	52.9	53.4

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Scaled Data Report



(END OF REPORT)