

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: P838356

Luminaire Tested: HCSQ610D010-HM60525927-61SQLWW

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838356
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-HM60525927-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

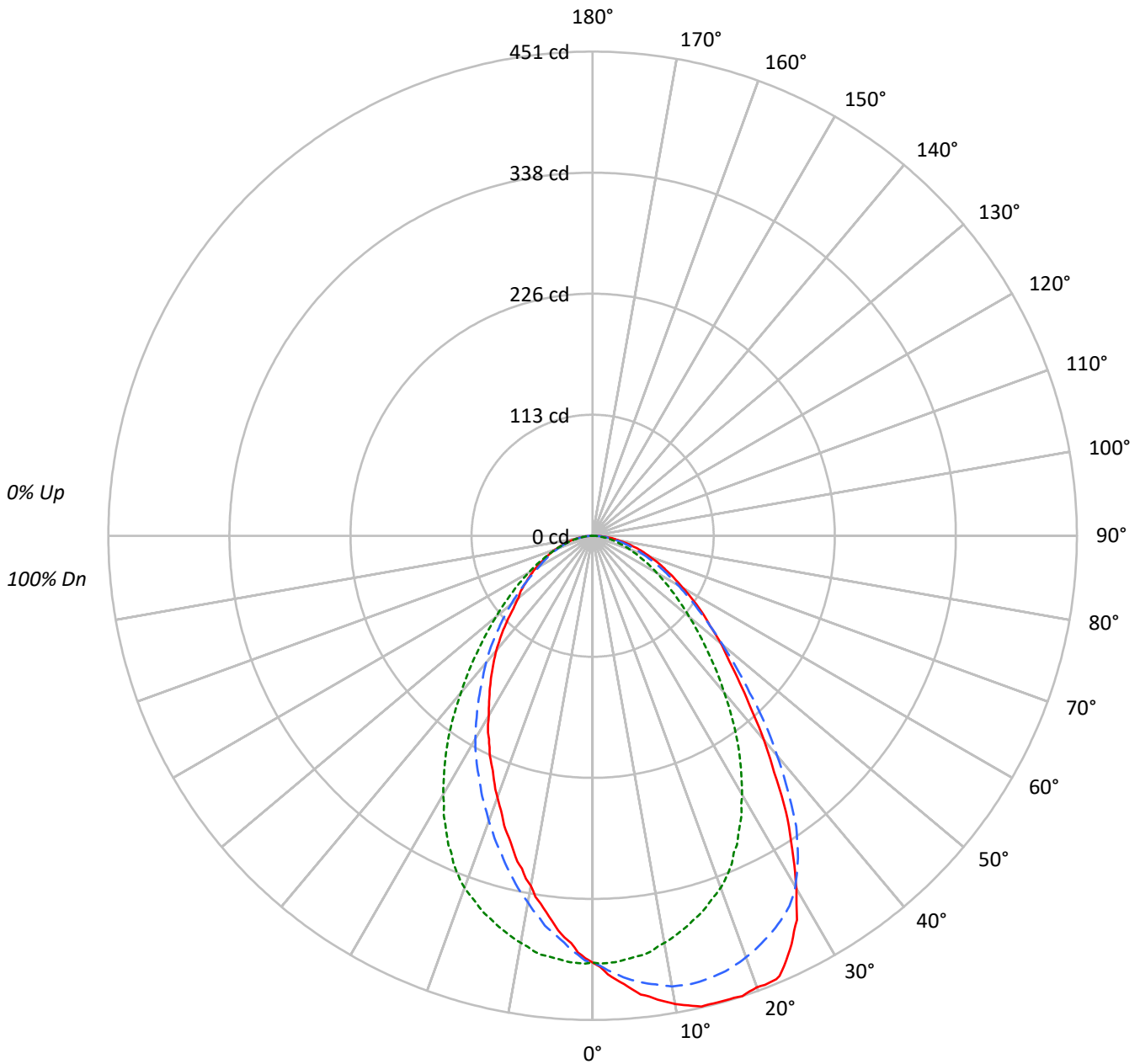
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 751.4 lumens
Efficiency: N/A
Efficacy: 75.9 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 (Ain): 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°	38498	38498	38498	38498	38498
5°	41252	40401	38431	36448	35874
10°	43568	41935	37872	34105	32560
15°	45142	42715	36998	31622	29616
20°	46144	43067	35969	29124	26711
25°	46027	43066	33970	26690	24189
30°	42452	42239	31120	24419	21612
35°	37135	39068	27875	21831	19573
40°	31363	33816	24104	19526	17641
45°	26524	28332	20633	17139	15440
50°	23526	23752	17694	14936	13594
55°	21061	20335	15302	12870	12786
60°	18794	17719	13349	11121	12032
65°	17261	15748	11599	10338	11026
70°	15918	14106	10253	9630	10253
75°	14972	12576	8908	8759	9395
80°	13780	11269	7810	8089	8536
85°	13672	10170	6669	6669	7558

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 28565 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.5	5.0
10°-20°	104.5	13.9
20°-30°	149.0	19.8
30°-40°	153.6	20.4
40°-50°	123.6	16.5
50°-60°	87.4	11.6
60°-70°	56.7	7.5
70°-80°	30.4	4.0
80°-90°	8.8	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°	290.9	38.7
0°-40°	444.5	59.2
0°-60°	655.5	87.2
0°-90°	751.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	751.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	397	397	397	397	397	
5°	424	415	395	375	369	41
15°	450	426	369	315	295	127
25°	431	403	318	250	226	196
35°	314	330	236	185	166	195
45°	194	207	151	125	113	151
55°	125	120	91	76	76	111
65°	75	69	51	45	48	75
75°	40	34	24	23	25	42
85°	12	9	6	6	7	14
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°	397.4	397.4	397.4	397.4	397.4	397.4	397.4	397.4	397.4	397.4	397.4
1°	401.6	403.3	402.0	402.0	400.8	400.3	401.2	399.9	399.5	398.6	396.9
2°	408.9	407.6	407.2	407.6	405.0	405.0	403.7	401.2	399.9	398.2	393.5
3°	414.0	413.1	412.3	411.8	409.3	407.2	405.4	402.5	399.9	397.8	391.0
4°	418.6	418.6	417.8	416.1	413.5	411.0	407.6	404.2	400.3	396.5	387.6
5°	424.2	424.6	420.8	420.3	417.4	413.5	409.7	405.0	400.3	395.2	385.5
6°	429.7	427.6	426.7	423.7	419.5	416.1	411.4	406.3	399.9	394.0	380.8
7°	432.3	431.8	429.7	426.7	422.9	417.4	412.7	405.9	399.1	393.1	377.4
8°	436.5	436.5	434.0	430.1	424.6	419.5	413.5	405.4	398.6	391.0	372.7
9°	439.5	439.5	436.1	432.7	427.6	420.8	414.0	405.0	396.5	387.6	368.4
10°	442.9	442.0	439.5	434.4	430.1	422.5	414.0	404.6	395.2	385.0	364.2
11°	445.4	444.2	441.2	437.4	430.6	422.9	414.0	404.6	393.5	382.5	359.9
12°	447.6	446.7	442.9	438.2	431.4	423.7	413.5	402.9	390.6	379.1	354.4
13°	450.1	447.6	443.7	439.5	431.8	422.9	411.8	400.3	388.4	376.1	349.7
14°	449.7	449.3	445.9	439.9	431.4	422.0	411.4	397.8	385.5	372.7	344.2
15°	450.1	449.7	445.9	440.3	431.0	420.8	410.1	396.1	382.5	368.9	338.7
16°	450.1	450.1	445.0	439.5	430.6	419.5	407.6	394.4	379.5	365.9	334.0
17°	450.1	450.1	445.9	438.2	429.3	418.6	405.0	391.0	376.1	361.6	327.2
18°	451.0	449.7	444.2	437.8	427.6	416.5	403.3	388.4	373.1	356.9	322.5
19°	448.8	448.0	443.3	435.2	426.3	414.0	400.8	385.5	370.1	353.1	317.0
20°	447.6	448.8	442.5	434.0	423.7	411.8	398.2	382.5	365.9	348.9	311.4
21°	448.0	447.6	440.8	431.8	422.0	408.9	395.2	379.1	361.2	343.8	306.3
22.5°	447.1	445.9	438.6	428.8	416.9	405.0	390.1	373.5	354.4	334.8	296.5
23°	445.4	444.2	438.6	428.0	415.2	403.3	387.6	370.1	351.8	331.8	294.0
24°	438.6	438.2	435.7	425.0	413.1	399.9	384.6	364.6	344.2	323.3	287.6
25°	430.6	431.4	430.1	423.3	409.7	396.1	379.9	357.8	337.0	317.8	279.9
26°	422.9	422.9	422.0	419.5	406.3	391.8	373.1	349.7	329.7	309.7	271.9
27°	413.1	414.8	413.1	411.8	402.9	387.2	365.9	344.2	321.6	302.1	265.1
28°	405.4	405.4	404.6	402.5	399.5	381.6	358.2	336.1	314.0	295.3	257.4
29°	391.8	394.4	394.8	395.2	394.8	374.4	351.0	327.2	305.9	285.5	250.2
30°	379.5	382.0	383.8	386.7	387.2	368.0	342.5	319.9	298.2	278.2	243.8
32.5°	345.9	350.6	355.2	360.4	362.9	348.9	321.6	297.0	274.8	257.0	224.2
35°	314.0	315.3	320.4	332.3	334.8	325.9	297.0	273.6	252.7	235.7	205.9
37.5°	277.8	280.4	287.6	301.2	302.1	294.8	274.8	247.6	228.0	213.1	187.2
40°	248.0	249.3	254.4	265.9	269.7	265.1	247.6	222.9	205.1	190.6	169.3
42.5°	218.3	220.0	226.3	235.3	240.8	235.3	220.0	198.7	181.2	170.6	152.3
45°	193.6	195.7	201.7	206.8	208.5	205.1	191.5	174.0	161.7	150.6	136.6
47.5°	172.3	174.4	178.7	180.8	182.9	179.5	168.9	154.4	142.1	133.2	120.4
50°	156.1	155.7	158.7	159.5	159.5	155.7	146.8	134.9	124.7	117.4	106.8
52.5°	137.8	138.7	140.8	140.0	139.5	136.1	128.5	118.3	109.8	103.4	93.6
55°	124.7	123.4	124.7	123.8	122.1	118.7	111.9	103.4	96.2	90.6	81.7
57.5°	110.2	110.2	110.6	108.9	106.8	103.0	97.0	90.2	83.8	79.1	71.9
60°	97.0	97.9	97.4	95.7	93.6	89.3	84.7	77.9	72.3	68.9	62.1



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	65.9	65.9	64.7	63.4	60.4	56.6	53.2	48.9	45.9	43.0	38.7
70°	56.2	57.0	55.3	53.2	51.1	48.5	44.7	41.3	38.3	36.2	32.8
72.5°	48.5	48.1	46.8	44.7	43.0	40.0	36.6	34.0	31.5	29.8	27.2
75°	40.0	40.0	38.7	37.0	34.9	32.3	29.8	27.7	25.5	23.8	22.5
77.5°	31.9	32.3	31.1	29.8	28.1	25.5	23.4	21.7	20.0	18.7	17.9
80°	24.7	25.1	23.8	23.0	20.8	19.6	17.9	16.2	14.9	14.0	13.6
82.5°	18.7	18.3	17.4	17.0	15.3	14.0	12.3	11.5	10.6	9.8	9.8
85°	12.3	11.9	11.5	11.1	9.8	8.5	8.1	7.2	6.4	6.0	6.0
87.5°	6.4	6.4	6.0	5.5	5.1	4.3	3.8	3.0	2.6	2.6	2.6
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°	397.4	397.4	397.4
1°	395.7	394.0	393.5
2°	390.6	388.0	388.4
3°	385.9	382.9	379.9
4°	379.9	375.2	375.2
5°	374.8	370.1	368.9
6°	370.1	362.5	360.8
7°	365.9	356.5	353.5
8°	358.7	349.3	346.3
9°	353.5	343.3	340.4
10°	346.7	336.5	331.0
11°	341.2	329.7	325.5
12°	335.3	321.2	317.0
13°	328.4	314.0	311.4
14°	322.1	308.0	303.3
15°	315.3	300.8	295.3
16°	308.0	293.6	288.5
17°	302.1	285.9	282.1
18°	296.1	279.1	273.1
19°	288.9	272.7	265.9
20°	282.5	264.6	259.1
21°	275.7	258.7	252.7
22.5°	266.3	247.2	241.7
23°	263.4	243.8	237.8
24°	256.5	237.0	231.9
25°	249.7	231.9	226.3
26°	243.8	224.2	219.1
27°	237.8	218.3	212.7
28°	231.4	211.9	207.6
29°	225.1	205.1	200.8
30°	218.3	200.4	193.2
32.5°	201.2	185.1	179.1
35°	184.6	170.6	165.5
37.5°	168.5	157.0	152.3
40°	154.4	144.2	139.5
42.5°	140.0	130.6	125.9
45°	125.1	117.4	112.7
47.5°	111.5	105.1	100.0
50°	99.1	92.7	90.2
52.5°	87.2	83.0	84.2
55°	76.2	76.2	75.7
57.5°	65.5	68.5	68.9
60°	57.4	61.3	62.1



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	39.6	41.7	42.5
70°	34.0	35.7	36.2
72.5°	28.9	30.2	31.1
75°	23.4	25.1	25.1
77.5°	19.1	20.0	20.4
80°	14.5	14.9	15.3
82.5°	10.2	10.6	11.1
85°	6.0	6.4	6.8
87.5°	2.6	2.6	2.6
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



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Scaled Data Report





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

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62.5°	85.9	86.8	85.5	83.4	81.3	77.4	73.2	67.2	63.0	59.6	53.6
65°	75.3	75.7	74.9	72.8	70.6	66.8	62.5	57.4	54.0	50.6	45.5

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62.5°	51.5	54.5	54.9
65°	45.1	47.6	48.1

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(END OF REPORT)