

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: P838346

Luminaire Tested: HCSQ610D010-HM60525835-61SQLWW

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838346
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-HM60525835-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

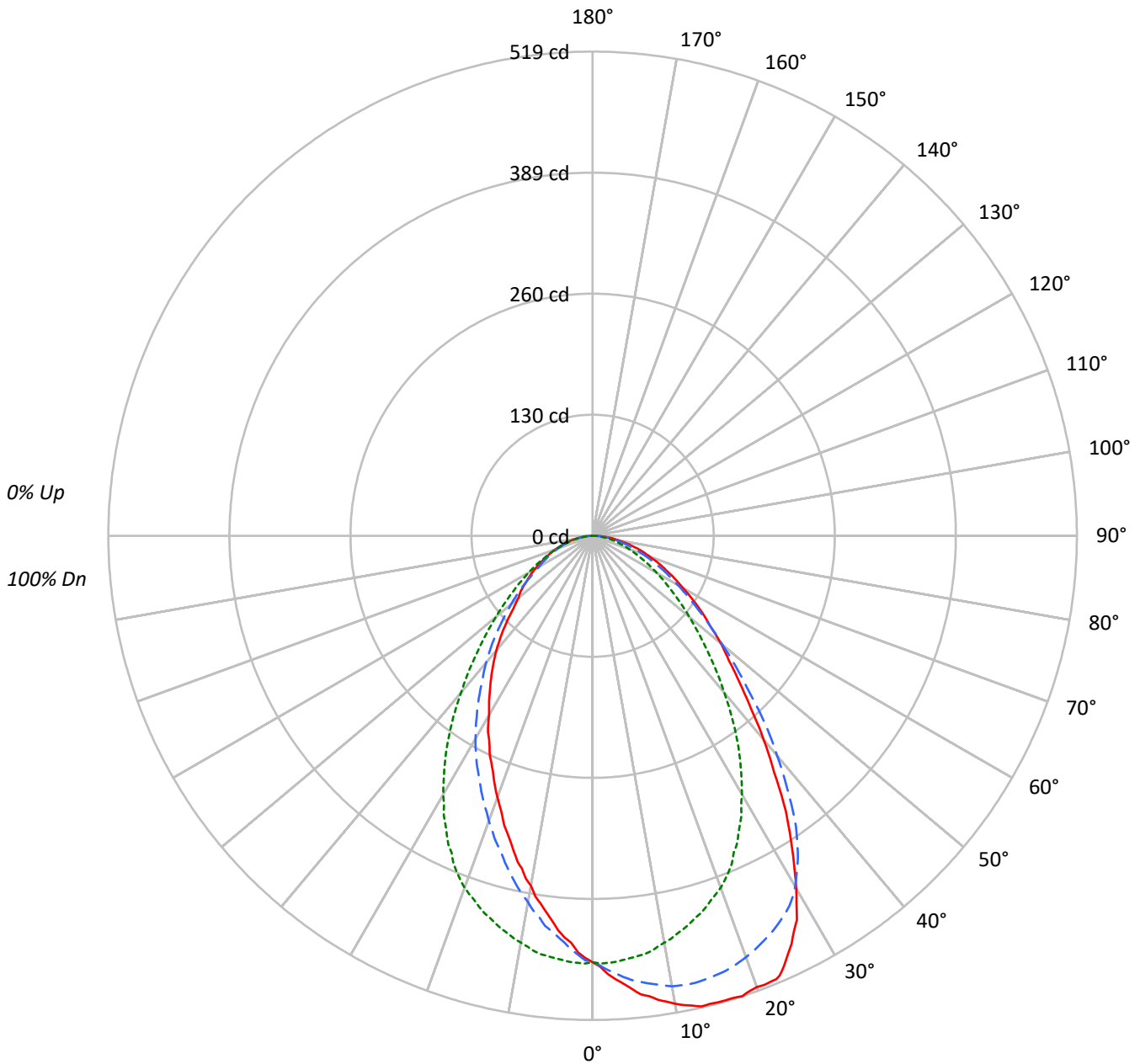
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 864.4 lumens
Efficiency: N/A
Efficacy: 87.3 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 (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°	44282	44282	44282	44282	44282
5°	47446	46474	44218	41932	41261
10°	50119	48241	43568	39240	37459
15°	51932	49133	42554	36366	34059
20°	53082	49541	41371	33505	30722
25°	52943	49538	39079	30710	27834
30°	48828	48587	35807	28089	24856
35°	42717	44946	32061	25119	22517
40°	36080	38900	27733	22472	20297
45°	30510	32586	23729	19715	17769
50°	27068	27324	20361	17181	15644
55°	24220	23392	17599	14795	14711
60°	21623	20392	15364	12807	13853
65°	19851	18109	13341	11897	12676
70°	18298	16216	11783	11103	11783
75°	17218	14467	10256	10069	10817
80°	15844	12971	9038	9261	9819
85°	15784	11727	7669	7669	8670

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 32853 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.1	5.0
10°-20°	120.2	13.9
20°-30°	171.4	19.8
30°-40°	176.6	20.4
40°-50°	142.2	16.5
50°-60°	100.6	11.6
60°-70°	65.2	7.5
70°-80°	35.0	4.1
80°-90°	10.1	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°	334.7	38.7
0°-40°	511.3	59.2
0°-60°	754.1	87.2
0°-90°	864.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	864.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	457	457	457	457	457	
5°	488	478	455	431	424	47
15°	518	490	424	363	340	146
25°	495	463	366	287	260	226
35°	361	380	271	212	190	224
45°	223	238	173	144	130	174
55°	143	138	104	88	87	128
65°	87	79	58	52	55	86
75°	46	39	27	27	29	49
85°	14	11	7	7	8	16
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°	457.1	457.1	457.1	457.1	457.1	457.1	457.1	457.1	457.1	457.1	457.1
1°	462.0	464.0	462.5	462.5	461.0	460.5	461.5	460.0	459.5	458.6	456.6
2°	470.3	468.8	468.4	468.8	465.9	465.9	464.4	461.5	460.0	458.1	452.7
3°	476.2	475.2	474.2	473.7	470.8	468.4	466.4	463.0	460.0	457.6	449.8
4°	481.6	481.6	480.6	478.6	475.7	472.8	468.8	464.9	460.5	456.1	445.8
5°	487.9	488.4	484.0	483.5	480.1	475.7	471.3	465.9	460.5	454.7	443.4
6°	494.3	491.8	490.9	487.4	482.5	478.6	473.3	467.4	460.0	453.2	438.0
7°	497.2	496.7	494.3	490.9	486.5	480.1	474.7	466.9	459.1	452.2	434.1
8°	502.1	502.1	499.2	494.8	488.4	482.5	475.7	466.4	458.6	449.8	428.7
9°	505.6	505.6	501.6	497.7	491.8	484.0	476.2	465.9	456.1	445.8	423.8
10°	509.5	508.5	505.6	499.7	494.8	486.0	476.2	465.4	454.7	442.9	418.9
11°	512.4	510.9	507.5	503.1	495.3	486.5	476.2	465.4	452.7	440.0	414.0
12°	514.9	513.9	509.5	504.1	496.3	487.4	475.7	463.5	449.3	436.1	407.7
13°	517.8	514.9	510.4	505.6	496.7	486.5	473.7	460.5	446.8	432.6	402.3
14°	517.3	516.8	512.9	506.0	496.3	485.5	473.3	457.6	443.4	428.7	395.9
15°	517.8	517.3	512.9	506.5	495.8	484.0	471.8	455.6	440.0	424.3	389.6
16°	517.8	517.8	511.9	505.6	495.3	482.5	468.8	453.7	436.5	420.9	384.2
17°	517.8	517.8	512.9	504.1	493.8	481.6	465.9	449.8	432.6	416.0	376.3
18°	518.8	517.3	510.9	503.6	491.8	479.1	464.0	446.8	429.2	410.6	371.0
19°	516.3	515.3	510.0	500.7	490.4	476.2	461.0	443.4	425.8	406.2	364.6
20°	514.9	516.3	509.0	499.2	487.4	473.7	458.1	440.0	420.9	401.3	358.2
21°	515.3	514.9	507.0	496.7	485.5	470.3	454.7	436.1	415.5	395.4	352.4
22.5°	514.4	512.9	504.6	493.3	479.6	465.9	448.8	429.7	407.7	385.2	341.1
23°	512.4	510.9	504.6	492.3	477.7	464.0	445.8	425.8	404.7	381.7	338.2
24°	504.6	504.1	501.1	488.9	475.2	460.0	442.4	419.4	395.9	371.9	330.8
25°	495.3	496.3	494.8	487.0	471.3	455.6	437.0	411.6	387.6	365.6	322.0
26°	486.5	486.5	485.5	482.5	467.4	450.7	429.2	402.3	379.3	356.3	312.7
27°	475.2	477.2	475.2	473.7	463.5	445.4	420.9	395.9	370.0	347.5	304.9
28°	466.4	466.4	465.4	463.0	459.5	439.0	412.1	386.6	361.2	339.6	296.1
29°	450.7	453.7	454.2	454.7	454.2	430.7	403.8	376.3	351.9	328.4	287.8
30°	436.5	439.5	441.4	444.9	445.4	423.3	394.0	368.0	343.1	320.1	280.4
32.5°	397.9	403.3	408.7	414.5	417.5	401.3	370.0	341.6	316.2	295.6	257.9
35°	361.2	362.6	368.5	382.2	385.2	374.9	341.6	314.7	290.7	271.1	236.9
37.5°	319.6	322.5	330.8	346.5	347.5	339.2	316.2	284.8	262.3	245.2	215.3
40°	285.3	286.8	292.7	305.9	310.3	304.9	284.8	256.4	235.9	219.3	194.8
42.5°	251.1	253.0	260.4	270.6	277.0	270.6	253.0	228.6	208.5	196.2	175.2
45°	222.7	225.1	232.0	237.8	239.8	235.9	220.2	200.2	186.0	173.2	157.1
47.5°	198.2	200.7	205.5	208.0	210.4	206.5	194.3	177.7	163.5	153.2	138.5
50°	179.6	179.1	182.5	183.5	183.5	179.1	168.8	155.1	143.4	135.1	122.8
52.5°	158.6	159.5	162.0	161.0	160.5	156.6	147.8	136.1	126.3	118.9	107.7
55°	143.4	141.9	143.4	142.4	140.5	136.5	128.7	118.9	110.6	104.2	94.0
57.5°	126.8	126.8	127.2	125.3	122.8	118.4	111.6	103.8	96.4	91.0	82.7
60°	111.6	112.6	112.1	110.1	107.7	102.8	97.4	89.6	83.2	79.3	71.5



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	75.9	75.9	74.4	72.9	69.5	65.1	61.2	56.3	52.9	49.4	44.5
70°	64.6	65.6	63.6	61.2	58.7	55.8	51.4	47.5	44.0	41.6	37.7
72.5°	55.8	55.3	53.8	51.4	49.4	46.0	42.1	39.2	36.2	34.3	31.3
75°	46.0	46.0	44.5	42.6	40.1	37.2	34.3	31.8	29.4	27.4	25.9
77.5°	36.7	37.2	35.7	34.3	32.3	29.4	26.9	25.0	23.0	21.5	20.6
80°	28.4	28.9	27.4	26.4	24.0	22.5	20.6	18.6	17.1	16.2	15.7
82.5°	21.5	21.0	20.1	19.6	17.6	16.2	14.2	13.2	12.2	11.3	11.3
85°	14.2	13.7	13.2	12.7	11.3	9.8	9.3	8.3	7.3	6.9	6.9
87.5°	7.3	7.3	6.9	6.4	5.9	4.9	4.4	3.4	2.9	2.9	2.9
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°	457.1	457.1	457.1
1°	455.1	453.2	452.7
2°	449.3	446.3	446.8
3°	443.9	440.5	437.0
4°	437.0	431.7	431.7
5°	431.2	425.8	424.3
6°	425.8	417.0	415.0
7°	420.9	410.1	406.7
8°	412.6	401.8	398.4
9°	406.7	394.9	391.5
10°	398.9	387.1	380.8
11°	392.5	379.3	374.4
12°	385.6	369.5	364.6
13°	377.8	361.2	358.2
14°	370.5	354.3	348.9
15°	362.6	346.0	339.6
16°	354.3	337.7	331.8
17°	347.5	328.9	324.5
18°	340.6	321.0	314.2
19°	332.3	313.7	305.9
20°	325.0	304.4	298.0
21°	317.1	297.6	290.7
22.5°	306.4	284.3	278.0
23°	302.9	280.4	273.6
24°	295.1	272.6	266.7
25°	287.3	266.7	260.4
26°	280.4	257.9	252.0
27°	273.6	251.1	244.7
28°	266.2	243.7	238.8
29°	258.9	235.9	231.0
30°	251.1	230.5	222.2
32.5°	231.5	212.9	206.0
35°	212.4	196.2	190.4
37.5°	193.8	180.6	175.2
40°	177.7	165.9	160.5
42.5°	161.0	150.2	144.9
45°	143.9	135.1	129.7
47.5°	128.2	120.9	115.0
50°	114.0	106.7	103.8
52.5°	100.3	95.4	96.9
55°	87.6	87.6	87.1
57.5°	75.4	78.8	79.3
60°	66.1	70.5	71.5



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	45.5	48.0	48.9
70°	39.2	41.1	41.6
72.5°	33.3	34.7	35.7
75°	26.9	28.9	28.9
77.5°	22.0	23.0	23.5
80°	16.6	17.1	17.6
82.5°	11.7	12.2	12.7
85°	6.9	7.3	7.8
87.5°	2.9	2.9	2.9
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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Scaled Data Report





62.5°	98.9	99.8	98.4	95.9	93.5	89.1	84.2	77.3	72.4	68.5	61.7
65°	86.6	87.1	86.1	83.7	81.2	76.8	71.9	66.1	62.2	58.2	52.4

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62.5°	59.2	62.6	63.1
65°	51.9	54.8	55.3

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(END OF REPORT)