

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: P838371

Luminaire Tested: HCSQ610D010-HM60525940-61SQLWW

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838371
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-HM60525940-61SQLWW
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

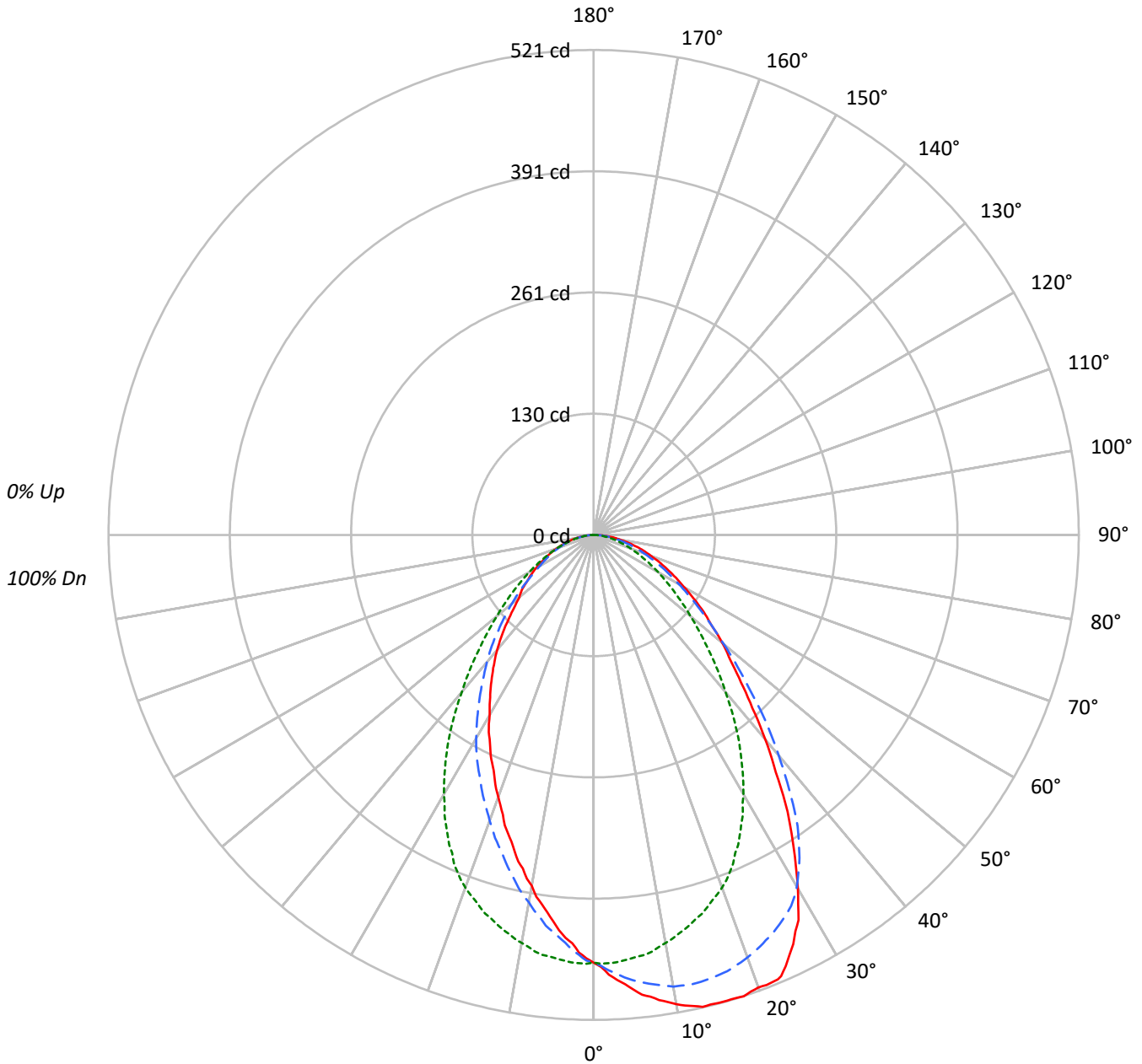
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 868.7 lumens
Efficiency: N/A
Efficacy: 87.7 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_{in}): 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°	44505	44505	44505	44505	44505
5°	47689	46707	44431	42136	41465
10°	50365	48477	43784	39427	37636
15°	52192	49374	42765	36547	34230
20°	53340	49794	41577	33670	30876
25°	53199	49784	39271	30859	27973
30°	49074	48828	35986	28223	24979
35°	42929	45165	32227	25249	22624
40°	36257	39089	27860	22573	20398
45°	30661	32750	23852	19811	17851
50°	27203	27460	20452	17272	15719
55°	24338	23510	17700	14863	14779
60°	21719	20489	15442	12865	13911
65°	19966	18201	13410	11943	12745
70°	18383	16301	11840	11132	11840
75°	17293	14541	10293	10143	10855
80°	15900	13027	9038	9317	9875
85°	15895	11727	7669	7669	8781

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 40°
 Vertical Angle: 45°
 Luminance: 33018 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.3	5.0
10°-20°	120.8	13.9
20°-30°	172.3	19.8
30°-40°	177.5	20.4
40°-50°	142.9	16.5
50°-60°	101.0	11.6
60°-70°	65.5	7.5
70°-80°	35.2	4.0
80°-90°	10.2	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°	336.3	38.7
0°-40°	513.9	59.2
0°-60°	757.8	87.2
0°-90°	868.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	868.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	459	459	459	459	459	
5°	490	480	457	433	426	47
15°	520	492	426	364	341	147
25°	498	466	367	289	262	227
35°	363	382	272	214	191	225
45°	224	239	174	145	130	175
55°	144	139	105	88	88	129
65°	87	79	58	52	56	87
75°	46	39	28	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°	459.4	459.4	459.4	459.4	459.4	459.4	459.4	459.4	459.4	459.4	459.4
1°	464.3	466.3	464.8	464.8	463.3	462.8	463.8	462.3	461.8	460.8	458.9
2°	472.7	471.2	470.7	471.2	468.2	468.2	466.8	463.8	462.3	460.4	454.9
3°	478.6	477.6	476.6	476.1	473.1	470.7	468.7	465.3	462.3	459.9	452.0
4°	484.0	484.0	483.0	481.0	478.1	475.1	471.2	467.2	462.8	458.4	448.1
5°	490.4	490.9	486.4	485.9	482.5	478.1	473.6	468.2	462.8	456.9	445.6
6°	496.8	494.3	493.3	489.9	484.9	481.0	475.6	469.7	462.3	455.4	440.2
7°	499.7	499.2	496.8	493.3	488.9	482.5	477.1	469.2	461.3	454.5	436.3
8°	504.6	504.6	501.7	497.2	490.9	484.9	478.1	468.7	460.8	452.0	430.8
9°	508.1	508.1	504.1	500.2	494.3	486.4	478.6	468.2	458.4	448.1	425.9
10°	512.0	511.0	508.1	502.2	497.2	488.4	478.6	467.7	456.9	445.1	421.0
11°	515.0	513.5	510.0	505.6	497.7	488.9	478.6	467.7	454.9	442.2	416.1
12°	517.4	516.4	512.0	506.6	498.7	489.9	478.1	465.8	451.5	438.2	409.7
13°	520.4	517.4	513.0	508.1	499.2	488.9	476.1	462.8	449.0	434.8	404.3
14°	519.9	519.4	515.4	508.6	498.7	487.9	475.6	459.9	445.6	430.8	397.9
15°	520.4	519.9	515.4	509.0	498.2	486.4	474.1	457.9	442.2	426.4	391.5
16°	520.4	520.4	514.5	508.1	497.7	484.9	471.2	455.9	438.7	423.0	386.1
17°	520.4	520.4	515.4	506.6	496.3	484.0	468.2	452.0	434.8	418.1	378.2
18°	521.3	519.9	513.5	506.1	494.3	481.5	466.3	449.0	431.3	412.6	372.8
19°	518.9	517.9	512.5	503.1	492.8	478.6	463.3	445.6	427.9	408.2	366.4
20°	517.4	518.9	511.5	501.7	489.9	476.1	460.4	442.2	423.0	403.3	360.0
21°	517.9	517.4	509.5	499.2	487.9	472.7	456.9	438.2	417.6	397.4	354.1
22.5°	516.9	515.4	507.1	495.8	482.0	468.2	451.0	431.8	409.7	387.1	342.8
23°	515.0	513.5	507.1	494.8	480.0	466.3	448.1	427.9	406.7	383.6	339.9
24°	507.1	506.6	503.6	491.3	477.6	462.3	444.6	421.5	397.9	373.8	332.5
25°	497.7	498.7	497.2	489.4	473.6	457.9	439.2	413.6	389.5	367.4	323.6
26°	488.9	488.9	487.9	484.9	469.7	453.0	431.3	404.3	381.2	358.1	314.3
27°	477.6	479.5	477.6	476.1	465.8	447.6	423.0	397.9	371.8	349.2	306.4
28°	468.7	468.7	467.7	465.3	461.8	441.2	414.1	388.5	363.0	341.3	297.6
29°	453.0	455.9	456.4	456.9	456.4	432.8	405.8	378.2	353.6	330.0	289.2
30°	438.7	441.7	443.6	447.1	447.6	425.4	395.9	369.9	344.8	321.7	281.8
32.5°	399.9	405.3	410.7	416.6	419.5	403.3	371.8	343.3	317.7	297.1	259.2
35°	363.0	364.4	370.4	384.1	387.1	376.7	343.3	316.2	292.1	272.5	238.0
37.5°	321.2	324.1	332.5	348.2	349.2	340.8	317.7	286.2	263.6	246.4	216.4
40°	286.7	288.2	294.1	307.4	311.8	306.4	286.2	257.7	237.1	220.3	195.8
42.5°	252.3	254.3	261.7	272.0	278.4	272.0	254.3	229.7	209.5	197.2	176.1
45°	223.8	226.2	233.1	239.0	241.0	237.1	221.3	201.2	186.9	174.1	157.9
47.5°	199.2	201.7	206.6	209.0	211.5	207.6	195.3	178.5	164.3	153.9	139.2
50°	180.5	180.0	183.5	184.4	184.4	180.0	169.7	155.9	144.1	135.7	123.5
52.5°	159.4	160.3	162.8	161.8	161.3	157.4	148.5	136.7	126.9	119.5	108.2
55°	144.1	142.6	144.1	143.1	141.2	137.2	129.4	119.5	111.2	104.8	94.4
57.5°	127.4	127.4	127.9	125.9	123.5	119.0	112.1	104.3	96.9	91.5	83.1
60°	112.1	113.1	112.6	110.7	108.2	103.3	97.9	90.0	83.6	79.7	71.8



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	76.2	76.2	74.8	73.3	69.8	65.4	61.5	56.6	53.1	49.7	44.8
70°	64.9	65.9	63.9	61.5	59.0	56.1	51.6	47.7	44.3	41.8	37.9
72.5°	56.1	55.6	54.1	51.6	49.7	46.2	42.3	39.3	36.4	34.4	31.5
75°	46.2	46.2	44.8	42.8	40.3	37.4	34.4	32.0	29.5	27.5	26.1
77.5°	36.9	37.4	35.9	34.4	32.5	29.5	27.1	25.1	23.1	21.6	20.7
80°	28.5	29.0	27.5	26.6	24.1	22.6	20.7	18.7	17.2	16.2	15.7
82.5°	21.6	21.1	20.2	19.7	17.7	16.2	14.3	13.3	12.3	11.3	11.3
85°	14.3	13.8	13.3	12.8	11.3	9.8	9.3	8.4	7.4	6.9	6.9
87.5°	7.4	7.4	6.9	6.4	5.9	4.9	4.4	3.4	3.0	3.0	3.0
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°	459.4	459.4	459.4
1°	457.4	455.4	454.9
2°	451.5	448.6	449.0
3°	446.1	442.7	439.2
4°	439.2	433.8	433.8
5°	433.3	427.9	426.4
6°	427.9	419.0	417.1
7°	423.0	412.2	408.7
8°	414.6	403.8	400.4
9°	408.7	396.9	393.5
10°	400.8	389.0	382.6
11°	394.5	381.2	376.3
12°	387.6	371.3	366.4
13°	379.7	363.0	360.0
14°	372.3	356.1	350.7
15°	364.4	347.7	341.3
16°	356.1	339.4	333.5
17°	349.2	330.5	326.1
18°	342.3	322.6	315.8
19°	334.0	315.3	307.4
20°	326.6	305.9	299.5
21°	318.7	299.0	292.1
22.5°	307.9	285.8	279.4
23°	304.4	281.8	274.9
24°	296.6	274.0	268.0
25°	288.7	268.0	261.7
26°	281.8	259.2	253.3
27°	274.9	252.3	245.9
28°	267.6	244.9	240.0
29°	260.2	237.1	232.1
30°	252.3	231.7	223.3
32.5°	232.6	213.9	207.1
35°	213.5	197.2	191.3
37.5°	194.8	181.5	176.1
40°	178.5	166.7	161.3
42.5°	161.8	151.0	145.6
45°	144.6	135.7	130.3
47.5°	128.9	121.5	115.6
50°	114.6	107.2	104.3
52.5°	100.8	95.9	97.4
55°	88.0	88.0	87.5
57.5°	75.7	79.2	79.7
60°	66.4	70.8	71.8



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
67.5°	45.7	48.2	49.2
70°	39.3	41.3	41.8
72.5°	33.4	34.9	35.9
75°	27.1	29.0	29.0
77.5°	22.1	23.1	23.6
80°	16.7	17.2	17.7
82.5°	11.8	12.3	12.8
85°	6.9	7.4	7.9
87.5°	3.0	3.0	3.0
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°	99.4	100.3	98.9	96.4	93.9	89.5	84.6	77.7	72.8	68.9	62.0
65°	87.1	87.5	86.6	84.1	81.6	77.2	72.3	66.4	62.5	58.5	52.6

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62.5°	59.5	63.0	63.4
65°	52.1	55.1	55.6

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Scaled Data Report



(END OF REPORT)